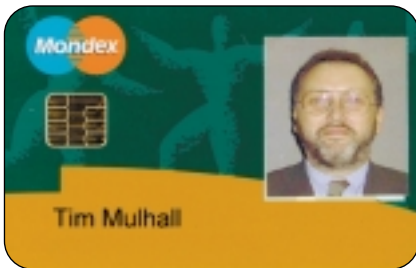




## Smart Cards and Biometrics for Israeli Border Crossings

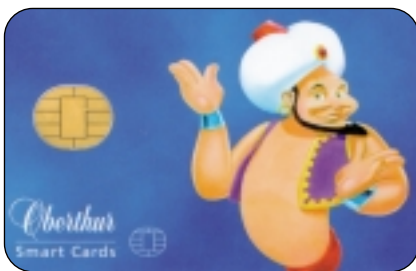
Israel has announced plans to combine Smart Card and biometric technologies in a major scheme to control border crossings on the Gaza Strip, one of the most security-sensitive areas in the world.

The checkpoints, heavily patrolled by Israeli soldiers, are used by thousands of Palestinian workers who cross into Israel each morning to work and are required to return each evening to their homes.



Now the Israeli Ministry of Defense (MOD) has awarded a contract to develop and install a biometric identification border crossing system to an international consortium headed by EDS Israel with Oberthur Smart Cards USA and On Track Innovations as the prime Smart Card contractors.

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Don't Forget!

Our On-Line Website, containing On-Line News, a Library of Smart Cards and information about the full range of SCN services, can be found at the following addresses: [www.smartcard.co.uk](http://www.smartcard.co.uk) • [news.smartcard.co.uk](http://news.smartcard.co.uk)

## Israeli Border Crossings

*Continued from page 161*

The new system, expected to be in place within a year, will enable daily workers to automatically enter and exit Israeli territory through an integrated ID gate system.

The system will authenticate an individual's identity by incorporating the use of contactless microprocessor-based Smart Cards and two biometrics - face recognition technology from Visionics Corporation and hand geometry from Recognition Systems Inc. The system will expand to several million Smart Cards.

Philippe Tartavull, President & CEO of Oberthur Smart Cards USA, said: "This technology, once reserved for high-security military or defense clients, can now provide individuals with security and convenience when crossing international borders. We imagine this system could be used globally at any country's entry point to expedite customs and security procedures as well."

"The use of the microprocessor based contactless Smart Cards will shorten the waiting time at the borders while maintaining the highest levels of security required in such systems," said Shai Ziv, Business Development Manager for On Track Innovations (OTI).

The combined Smart Card/biometric system was designed by a consortium led by EDS (EDS Israel and EDS Access Control Solutions Division), and features contactless technological expertise of On Track Innovations (OTI), Oberthur Smart Cards USA, Credentia (a DataCard group company), Visionics Corporation and Team Computers.

"This project is a result of several years of the most in-depth research in the field of ID control by one of the most demanding organisations in the world - the Israeli MOD. The Israeli borders are one of the most sensitive and challenging security environments," said both Rick Pratt, Senior Project Manager, EDS Access Control Solutions Division and Yossi Dagan, Government Services Manager, EDS Israel.

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## Top Security Rating for MULTOS

The first implementation of the MULTOS Smart Card operating system on Hitachi's 8K bytes EEPROM H8/3112 chip has been awarded ITSEC Level E6 certification - the highest security rating achievable in ITSEC (Information Technology Security Evaluation Criteria), security evaluation.

The announcement was made by Hitachi and Dai Nippon Printing (DNP), founding members of the MAOSCO consortium promoting MULTOS.

In another announcement, Mondex International said that Mondex electronic cash has become the first MULTOS application to also attain ITSEC Level E6.

Together with Mondex International, platform seven, formerly the NatWest Development Team, was responsible for the original technical design and development of Mondex and MULTOS.

John Beric, Mondex International's Head of Security, said: "It is hard to emphasize enough the scale of this success."

The UK ITSEC Scheme is managed by the Communications-Electronics Security Group which is the UK Government's National Technical Authority for the use of cryptography and for Information Security (Infosec) more generally.

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## Student Card Contract for IC One

IC One has been awarded a contract by Utah Valley State College (UVSC) to provide a Smart Card ID for the 20,000 full and part-time students and 2,000 faculty and staff. Students will be able to use the new ID card at on-campus libraries, student activities, food service and bookstore purchases.

Douglas Lloyd, IC One's Senior Vice President of Marketing, said they were also negotiating with the UVSC Alumni Association to make the card a membership card for that organisation's 120,000 members as well.

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## Portugal to Issue Smart Card ID

Portugal is to issue a Smart Card ID which will help to electronically deliver a range of government services to over five million citizens.

Certipor, a consortium of Portuguese businesses, will issue digital certificates as the country's National Certification Authority (CA) on behalf of Imprensa Nacional (the Portuguese National Mint), which will establish the infrastructure to support the government's electronic services initiatives.

CyberTrust, a GTE company, says it is negotiating a partnership agreement with the consortium to provide the electronic credentials under a long-term contract.

Fernando Mendez, CEO of Certipor, and Vice President of ParaRede, said that by the year 2000, the consortium expects to support a shift in government services and programs, such as national identification cards, healthcare records, and driver's licenses, to a secure on-line environment, or "extranet."

Each citizen will receive a Smart Card with identification information to be used for voting, health services, library access, school and college activities.

Portuguese citizens will then be able to electronically send and receive their most personal information with the confidence that it will remain confidential. This will enable the Portuguese government to improve efficiency and trust in government services, while ensuring that all transactions are protected by confidentiality, tamper-resistance, and other essential security services.

ParaRede is one of several companies working on the project. Other partners include: Hewlett Packard, the Portuguese National Mint, the Chapalimaud Group (bank consortium), Cimpor, EGC, the Portuguese Post, Bundesdruckerei (the printer of currency in Germany and the country's national CA), and the Portuguese Chamber of Commerce.

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## Symantec VisualCafe for Gemplus

Gemplus is co-operating with leading Java software vendor Symantec in the development of the latest

version of GemXplore CASE, the SIM software development environment.

Last month, Gemplus launched GemXplore CASE V2.0 and its exclusive SIM development plug-ins: Object Designer and Advanced Development Tools. It is using Symantec's VisualCafe 3.0 Professional Edition in its Object Designer plug-in to offer millions of Java developers the possibility to design and develop Java Card applets for SIM cards in a familiar and complete environment.

Symantec's VisualCafe is used by 50% of the Java developer's community totalling more than 900,000 registered users.

"Now, developers can design Java Card applets, using a similar syntax and a familiar tool, that can be downloaded onto SIM cards and used to create Value Added Services for the GSM industry, representing a total of 250 million users by the end of 1999," said Philippe Martineau, Director of the Wireless Communications Marketing at Gemplus.

GemXplore CASE is a SIM card development tool designed for Value Added Service application developments onto GemXplore 98 SIM cards or GemXplore eXpresso SIM cards.

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## MEI Appoints Data Dialogue

Mars Electronics International (MEI) has appointed Data Dialogue as an approved distributor in the UK of Multi-Card Smart, a Smart Card-based system which is already in use in more than 200 corporate and educational sites throughout Europe, where more than 300,000 cards have been issued.

The system comprises a complete package of vending card readers, catering point-of-sale terminals, Smart Cards, a variety of methods for loading value onto cards and a Windows-based management system.

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## De La Rue Sells Card Business

As revealed by SCN, last month, De La Rue has conditionally agreed to sell its Card Systems division to Francois-Charles Oberthur Fiduciaire of France. The £200 million deal involves a cash payment of £170 million and Oberthur taking over debts of around £30 million.

The decision to sell off the card business followed the appointment of Ian Much as Chief Executive in September last year and the Board's strategic review of Group activities and the allocation of resources needed to fund development opportunities. The Board decided that De La Rue should concentrate on its two largest business areas, Cash Systems and Security Paper and Print, where it enjoys world leadership positions and that it should seek offers for the card business.

De La Rue is retaining the IDS (Identity Systems) and Transaction Services businesses, which have been included within the Card Systems division and these will now form an important part of the new Services division announced in June. IDS and Transaction Services had combined sales in the year ended 31 March 1999 of £21 million and operating profits of £1.6 million.

The Company's card business involves the production and personalisation of Smart Cards and magnetic stripe cards for applications requiring authentication, identification or security of transactions, and provides products and services to the banking, GSM, e-commerce, pay-TV, retail, transport, loyalty, health and identity markets. In the year ended 31 March 1999, sales totalled £140 million (of which £58.5 million was generated by Smart Card activities). Profit before tax was £3.1 million and net assets were £61 million.

The estimated net cash proceeds (after tax and expenses) of the Disposal will be £188 million. The profit on the Disposal is expected to be approximately £55 million after tax and expenses and net of goodwill of £72 million previously written off.

The Board says that after the Disposal, the Group will have more capital than it requires to fund its growth and will return surplus capital to shareholders. The exact amount, which will be not less than £100 million (44 pence per share), and the method of payment will be announced later.

Based upon net debt at 31 March 1999 of £126 million, following completion and assuming a capital repayment of £100 million, De La Rue would have had pro forma net debt of £38 million as at that date.

On completion of the Disposal, Kevin Loosemore, Managing Director of the Card Systems division and a Board director of De La Rue, will leave the Group.

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## Paying via Home Phones

Chipper Netherlands started a pilot last month using the Chipper electronic purse for payment through home phones. Fleurop, the leading Dutch flower-delivery service, is co-operating with Chipper in the three-week pilot.

Customers taking part, receive a HomeChipper (a trusted card reader), which they connect to their home phone. They can call Fleurop's call center to order a bouquet of flowers and payments are made using the HomeChipper and the Chipper purse. Fleurop will deliver the flowers at the given address anywhere in The Netherlands.

The application has been developed in co-operation with KPN Telecom and the Postbank. A general market introduction is planned for the Autumn with several service providers.

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## Prepaid Internet services for China

AmTec, Inc has announced that its subsidiary, Hebei Equipment, has launched Internet services in four Chinese markets - Beijing, Tianjin, Shijiazhuang, and Chengdu (Sichuan) - and will market and sell Internet fax services, prepaid Internet access cards and prepaid Internet phonecards.

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## Post Office Horizon Project

The 19,000 post offices in the UK, which deal with some 28 million people every week, are being viewed by the government as key players in the electronic delivery of government services.

In 1996, ICL Pathway won a contract to automate the Post Office which included modernising the system of paying DSS benefits.

In May this year, the UK Treasury approved the £1 billion ICL Post Office automation scheme called the Horizon Project, but axed plans to move all benefit payments onto magnetic stripe cards in favour of direct payment into bank accounts.

The benefits payment card element of the original contract was no longer required by the Benefits Agency under the terms of the revised agreement and the DSS had to withdraw from the contract. This left ICL and the Post Office working together to modernise the Post Office network.

Although the change of heart mid-stream has raised further media speculation on technical and specification hiccups which has held back the project by two years, ICL stressed the hold-up was more policy than technology.

“There was never a technology issue. The system was working as early as October 1996. We never missed a payment and hit all of our service targets,” said Anna Campopiano, Head of Marketing Communication at ICL Pathway.

“We are still automating the services provided by every post office in the land. It is still a £1 billion deal. The difference is that we now have one customer instead of two and the payment mechanism has been changed to reflect this, moving from a payment per transaction to a fixed payment for the delivery of the service.”

The Horizon project involves building a vast infrastructure of hardware and software. “In Spring 2001, every post office will be automated. The 19,000 post offices will then be linked by one of the largest and most secure networks in the UK, equipped with the latest Smart Card technology,” she said.

“Commentators suggest that there are several things holding back the use of Smart Cards - there is the lack of infrastructure and the lack of application.

Automation of the Post Office will build the infrastructure. We are offering the best of breed enabling technology.”

ICL Pathway’s technology will enable post offices to update government departments on address changes, requests for benefit information, lodging of tax returns; buying licenses, claiming grants and concessions and enquiries and booking for education, health and local amenity services.

Keith Todd, Chief Executive of ICL sees post offices as the heart of community life. “With our investment fully provided for, we have opened up the prospect of an exciting partnership with the Post Office in developing its strategy for Modernising Government and Networking Banking services,” he said.

The contract, although impressive, has already cost ICL £180 million, which the company has written off. It was spent in developing the benefits payment card since 1996. This is the price of the tangle of customer policies and differing agendas. The fixed price contract will run until March 2005.

MPs on the other hand, have disclosed that the project has cost the government £140 million and currently there is a select committee of the Department of Trade and Industry (DTI) investigating the write off. As the Benefits Agency is pulling out of its contract with the Post Office to pay benefits, the Post Office could lose 40 per cent of its revenue in 2003.

“There are 19 million welfare claimants and the payment card was meant to replace the giro cheques and order books. Over 37,000 customers used the payment card which worked successfully from October 1996. The system prevented over £2 million in potential fraud.” Campopiano said.

The decision to use magnetic stripe cards in the first place dismayed the Smart Card industry at the time. In fact, SCN’s headline on the story was “Swipe not Smart” which echoed the feelings of most experts.

Although the government has now abandoned the idea of paying benefits by card, it may yet see the wisdom of adopting Smart Card technology as fraud levels rise and take advantage of the new IT structures being put in place at the Post Office and, through the Accord Project, by the Benefits Agency.

## GSA Launches US Open Platform

The US government's General Services Administration (GSA) has launched the first Open Platform Smart Card programme in the US using Sun's Java Card technology. It is partnering Citigroup's e-Citi unit and Visa USA in the scheme.

Through the use of Smart Card technology, the GSA will refine core financial and identification practices and significantly increase efficiency, flexibility and security while setting a new standard for government agencies.

The multi-application GSA Smart Cards have been issued to 500 of GSA's Federal Technology Service employees. The cards combine official GSA employee identification with applications such as access to buildings and IT resources, secure e-mail and property management, and with the standard credit payment of a government travel and purchase card. Technology components include magnetic strip, contact and contactless Smart chips and fingerprint biometrics.

"Smart Cards are a key way to provide government employees with new levels of convenience and security, while achieving government objectives of maximising efficiency," said Bob Suda, Controller for the Federal Technology Service.

He explained that the GSA Smart Card programme would undergo a nine-month introductory period before expanding functionality and participants to other government agencies.

Citigroup's e-Citi unit has provided the card issuance systems, project management and customer service for Federal Technology Service employees, as well as the financial applications on the card.

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## Disposable Banking Card

French company Infonie has announced a disposable banking card which operates in a similar way to traveller's cheques that are bought and pre-paid before use. The card is thrown away when the credit on it runs out.

The idea is that the card can be used for payments and for cash withdrawals. Users can also decide the amount loaded onto the card and give them to their children for travel or for their studies. The card is protected by an encoded electronic signature which limits access to the owner.

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## Oberthur Prepaid Telephone Card

Oberthur Smart Cards has announced a prepaid scratch-off telephone card called O'scratch.

"People who want to be in control of their telephone budgets or occasionally use mobile phones represent a new market opportunity for telecom operators," explained Philippe Tartavull, of Oberthur.

He added that the card guaranteed immediate payment for the operators with no risk of fraud."

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## Mobile Office in Healthcare

ORGA Card Systems has announced a Smart Card-based mobile office for use in healthcare, enabling portable data collection and storage of records. The system provides Smart Cards for people receiving care at home or at regional health centres. Their personal details and treatment records are stored in the card's micro-chip, and visiting healthcare practitioners are equipped with Mobile Office, a compact unit incorporating ORGA's handy Smart Card reader and a printer, housed in a shoulder bag.

Diagnosis, treatment, prescription and other details can be written onto the Smart Card which is only accessible by authorised healthcare practitioners. The system can connect to laptop and desktop computers and to central healthcare systems so data from each visit can be stored centrally.

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## Mexican Vehicle Registration

Mexico has selected Smart Card technology for its national vehicle registration system starting early in 2000.

A consortium - yet to be named - including Gemplus, Talsud and Mexican entrepreneur Henry Davis, won the contract to supply and operate the system. It was chosen from a field of 22 competitors and was the only one to propose Smart Card technology.

The consortium will provide Smart Cards and readers and maintain a database for vehicles registered in Mexico in a ten year contract with projected revenues estimated at \$90 million per year.

Smart Cards will provide the Mexican government with a secure method to identify vehicles and continuously update its database. Gemplus says that the system will also significantly increase the success rate in the collection of tax payments and fine revenues.

Each Smart Card will store information about each vehicle, such as serial number, year of production and manufacturer. An estimate of over 15 million Gemplus GemClub cards will be issued to vehicle operators, starting in early 2000 the consortium plans to have all vehicles registered and identified in the database by the end of that year.

"Talsud has already proven its ability to manage a programme of this magnitude through our work with the Smart Card-based drivers license and vehicle identification programs in Argentina and El Salvador," said Victor Taiariol, President of Talsud.

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## Fingertip in Volume Production

Infineon Technologies has announced that it has gone into volume production of its Fingertip integrated biometric fingerprint sensor chip.

The miniaturised fingerprint sensor allows biometric authentication on a portable device and could replace passwords and PIN numbers currently used to access data and services from laptop

computers, cell phones, PDAs or chip cards.

Infineon says in future, the human fingerprint could be used to replace house or hotel door keys as well as a car ignition key.

Fingertip features a 288 x 224 pixel contact sensor array, which images the fingerprint with a resolution of 20 pixels per millimetre (513 dpi) in less than 100 ms. The surface area is less than 200 square millimetres, making it suitable for very small devices such as Smart Cards.

An evaluation kit comprises a Fingertip module, a power supply, PC drivers and a software development kit including biometric algorithms for fingerprint recognition. It runs on any PC supporting the Microsoft Windows (Windows 95, 98 and NT) operating system.

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## AXENT Adds PKI to PassGo SSO

Information security specialists AXENT Technologies, Inc has announced that it has chosen Baltimore Technologies to supply public key infrastructure (PKI) technology for its single sign-on solution, PassGo SSO.

Baltimore's PKI-Plus is a software development toolkit designed to PKI-enable any application. PKI systems use digital certificate technology to authenticate individuals or businesses and to enable the secure electronic exchange of confidential data. AXENT's PKI-enabled SSO solution allows users to access PassGo SSO by means of a Smart Card that contains a certificate and a private key. Users enter their PIN or "PassPhrase" which unlocks the contents of the Smart Card. Once the client is satisfied with the PKI credentials, it performs a secure single sign-on to a company's business information within the PassGo environment.

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## Terminals Becoming Smarter

Payment terminals are becoming smarter all the time. SmartICE introduced by Hypercom Corporation is handheld, wireless and takes the payment system direct to the consumer.

Not only does it support a range of payment options, including credit, debit and Smart Card transactions, fuel cards, cheque and cash payments, it also enables a waiter in a restaurant, for example, to send a customer's order direct to the kitchen.

It works like this. The menu is downloaded from a PC into the SmartICE. The waiter uses its graphical touch-screen to input the customer's order, and sends it to the kitchen by striking the enter key. A printer in the kitchen prints out the order and table number.

When the order is ready, the kitchen staff signal the waiter's SmartICE terminal for him to collect it.

When the customers finish their meal, the waiter uses the terminal to make the cash or card payment transaction at their table.

Hypercom says the new terminal will be available for shipping in January 2000.

### Record sales

Hypercom's CEO, George Wallner, last month announced that the company has shipped its three millionth point-of-sale terminal. He said their worldwide terminal shipments in 1998 jumped 29% to 646,149. This included dramatic 45% and 167% increases in the US and Europe, respectively.

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## Keycorp Internet EFTPOS terminal

Australian Smart Card and electronic commerce company, Keycorp, has released the K23, the first of a new family of Internet-enabled EFTPOS terminals.

Rob Douglas, Keycorp's General Manager, Marketing, said: "Internet-enabled terminals are the most significant revolution for retail since EFTPOS. By combining traditional payment methods such as

debit and credit, with access to Internet services at the point-of-sale, the new Keycorp terminals will change the nature of retail sales."

The K23 is based on Microsoft's Windows CE operating system and the standard TCP/IP Internet communication protocol. It is designed to take full advantage of Keycorp's Nobil Internet payment gateway which ensures security and privacy for merchants and consumers.

The K23 is also Smart Card-enabled. By incorporating the K23 with its Smart Card technology, Keycorp will be able to extend the Internet further. One use will be electronic ticketing. For example, a Smart Card holder can purchase tickets for an event and have those tickets delivered to their card which then becomes the means of entry at the event.

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## PKI in Distance Learning Pilot

Schlumberger, in conjunction with the University of Illinois, is launching a multi-application Smart Card pilot program designed to enable students and other authorised university personnel based either inside or outside the campus environment to securely access course materials and other University developed applications via the Internet using public key PKI Smart Card-based technology.

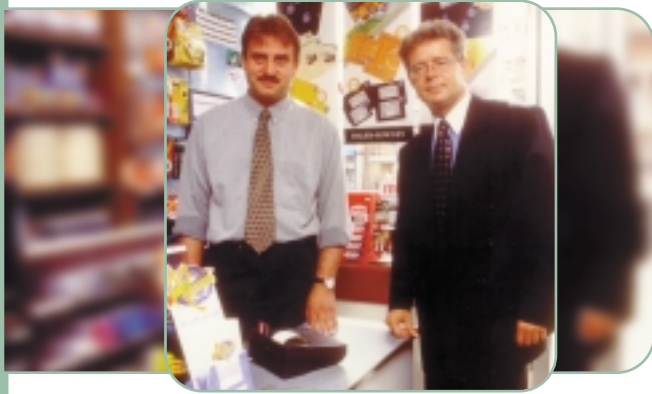
"The Schlumberger network security solution allows the University of Illinois to expand its student population through a borderless, worldwide virtual campus," said Gary Brinkley, Director, Business Systems Analysis for the University of Illinois office of cash management and investments.

"The University expects nearly a tenfold increase in their distance enrollment (UI On-Line) while at the same time achieving a drastic reduction in unauthorised access to valuable information and course materials by utilising this revolutionary new Smart Card system."

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## Polish Banks Move to Chip Cards



PKO BP Bank is the first in Poland to start issuing Visa chip cards based on the EMV (Europay/MasterCard/Visa) specifications. Several other Polish banks are also preparing to issue chip cards within the next few months.

The cards will be Visa Smart Debit and Visa Smart Credit with a chip added to operate alongside the magnetic stripe so that they can be used all over the world.

In the first phase about 20,000 cards will be issued, including 10,000 Visa Electron Smart Debit chip cards to be issued by PKO BP. The chip function will initially be accepted at around 200 merchants in Warsaw. A wider introduction of the chip cards is envisaged for next year.

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## Visa and ERG Alliance

Visa International and Australia's ERG Group have announced the signing of a Memorandum of Understanding to integrate chip card-based transit applications with the Visa Cash electronic purse application using the Common Electronic Purse Specifications (CEPS). The initial development will be supported by Proton World. ERG said it would also work with its alliance partner Motorola.

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## US Navy Selects Rainbow

Rainbow Technologies has announced that its Mykotronx FORTEZZA Crypto Card has been chosen by the US Navy's Space and Naval Warfare Systems Command (SPAWAR) System Center at Charleston as the key component for personal identification, authentication, and encryption functions in the US Department of Defense's Defense Messaging System (DMS).

During the five-year contract, the US Navy will purchase up to 150,000 FORTEZZA Crypto Cards to secure digitally signed and encrypted messages throughout the Department of Defence.

"Secure messaging is integral to the day-to-day operations of corporations and Government," said John Linden, Head of Business Development, Intelligence and Information Warfare Department, SPAWAR. "The Rainbow Mykotronx security and token technology plans are a common enabler that combines encryption, digital certificates and other technologies to authenticate a user's identity and to ensure that data and transactions are not tampered with during transmission over the Internet.

"As hardware token technology continues to mature via the DOD's public-key infrastructure (PKI) road map, our focus is on integrating PKI into the overall Information Assurance Defense-in-Depth strategy. The relationship with Rainbow Mykotronx is a great opportunity for the Navy to meet these PKI standards."

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## Conference Registration System

Precis Smart Card Systems, of Oklahoma City, provided a Smart Card registration system for TELUS Communications, Canada's second largest communications company. Attendees registering for a conference sponsored by TELUS in Edmonton, Alberta, Canada, received Smart Cards to register their visits to individual exhibitor booths. The system from Precis included the cards, card readers and a transaction reporting system for conference management and exhibitors.

### Contact

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## US Government Order for Datakey

Datakey has announced that it has received a \$325,000 order from a US government agency for 10,000 special Smart Card microprocessor chips based on Datakey's Cryptographic Card Operating System (DKCCOS). Datakey will fulfil half the order by the end of 1999.

The government agency, which cannot be named for security reasons, plans to develop secure applications using the features of the DKCCOS operating system.

The order calls for Smart Cards that incorporate these DKCCOS chips, which will enable Datakey and the agency to meet Federal Information Processing Standards (FIPS) certification requirement 140-1 Level 3.

Datakey's technology can be used to encrypt sensitive information during on-line communications, identify parties to an electronic transaction through the use of digital signatures, and verify the integrity of data within the transaction.

### Contact

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## SIM for Digital Signatures

Setec Oy of Finland has introduced a special SIM card for digital signatures in GSM wireless networks, the SetSIM 16K/RSA.

The SIM contains a crypto controller and keys enabling digital signature and encryption over the air. Setec says it is the first Smart Card supplier to combine GSM and an RSA crypto controller on one platform.

Setec says this concept enables the provider to offer a reliable and non-repudiative identification service over the network. It also encrypts the contents of messages.

Pekka Santanen, Senior Vice President, Setec's Mobile Communications unit, said one group that will benefit from this solution is the banking and financial sector.

"It is now possible to pay invoices through mobile phones," he explained. "The bank can send its customer an SMS message of a due invoice and all

the customer needs to do is to accept or decline the payment with a single response.

"To have a reliable and legally binding electronic signature is essential. The SetSIM 16K/RSA system makes the signature over the air, which opens huge commercial opportunities to the banking and finance sector as well as to other industries handling electronic value. It is a secure and fraud proof way to use electronic payment in our every day life."

The SetSIM 16K/RSA's technology is based on Public Key Infrastructure (PKI), which is supported by the world's leading banking and finance institutions, such as Chase Manhattan, Citigroup and Deutsche Bank.

### Contact

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## Nottingham Card Order for ORGA

ORGA Card Systems has won a contract to supply Smart Cards for Nottingham, UK's civic reward scheme run by the city council and Touch. The scheme combines a loyalty reward card with a discount facility for public leisure amenities.

Over 70,000 cards have been issued with over 190 participating outlets ranging from restaurants to clothing shops.

This month, the scheme is being extended to Nottingham Trent University with 30,000 students. In a later development, a concessionary fares application will be added to the card.



### Contact

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## Atmel Expansion Plan

Semiconductor manufacturer Atmel Corporation, is to set up a new facility in Lanarkshire, Scotland.

The move follows Atmel's acquisition, in April this year, of Motorola's Smart Card chip operation - also based in Scotland at East Kilbride - and made Atmel the third largest Smart Card IC provider in the world.

Atmel Smart Card ICs, the company formed as a result of the acquisition, is currently operating with the 70-strong workforce it inherited from Motorola, at the Scottish Enterprise Technology Park in East Kilbride. Its plans for expansion, however, mean that this location can only be temporary and it intends to move to a new site within a year.

Atmel predicts that by 2002 it will employ up to 200 people in the Lanarkshire area in the design, development and marketing of Smart Card ICs.

### Contact

[www.microelectronics-scot.co.uk](http://www.microelectronics-scot.co.uk)

## Thyron US \$9.6m Investment

Thyron, UK provider of secure payment solutions for electronic and mobile commerce applications has received a US \$9.6million (£6million) investment by US-based Warburg Pincus Equity Partners and Warburg Pincus Ventures International.

As well as providing capital, Warburg Pincus will have three directors on the Thyron board.

The company now plans to expand its sales force and create a global network of international sales and support offices in Northern and Central Europe, Asia, the Far East and the USA.

Chandra Patni, Thyron's Chairman and CEO, said: "The market for e- and m-commerce secure payment applications worldwide is growing at a rapid pace, particularly with the increased use of the Internet and mobile phones."

He said they already had a significant presence in 18 countries with established partners but the new investment would enable Thyron to develop a substantial international network.

In the first stage of its expansion programme, Thyron has opened a new sales and support centre in Copenhagen, Denmark, which will target the

markets in the Nordic countries and Northern Europe.

Heading the management team for the new office will be Managing Director Stig Plougmand, formerly of PA Consulting, who will be supported by Sales & Marketing Director Niels Boje Lund, also ex-PA Consulting and Tele Denmark, and Technical Director Henrik Hansen, previously with Incase Consulting and Cap Gemini.

### Contacts

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## Uruguay Extends Phone Network

Uruguay's telephone operator Antel has extended its contract with Schlumberger to include a further 3,500 Smart Card payphones.

Antel's move to a Smart Card system is aimed at reducing fraud and vandalism and providing customers with a reliable countrywide payphone network.

Work to replace the previous token and magnetic stripe card network started early in 1998, and in the first year alone repair rates were cut by 95% while network usage increased by 90% - confirming customer acceptance and improving revenues.

Under the extension of the contract Schlumberger is installing 3,500 additional payphones, 1,500 additional payphone booths and supplying a further five million Smart phone cards, to give Antel a network of 10,500 payphones - almost one for every 300 people in Uruguay.

Schlumberger is providing a complete public payphone solution, including payphones, Smart Cards, a payphone management system, a prepaid card security management system, installation and associated services, including operational maintenance and project management, for five years.

### Contact

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## Amdahl Joins Mondex Korea

Amdahl's Smart Card Group has expanded its operation to South Korea through an investment in the Mondex Korea franchise, joining MasterCard Korea, Kookmin Bank, Korea Credit Communication Inc, KDB Capital and TeraSource Venture Capital.

Joe Casola, General Manager of Amdahl's Smart Card Group, said: "South Korea is Asia's second largest Smart Card market and we look forward to establishing a state-of-the-art payment system that will allow merchants and consumers to easily conduct electronic transactions."

A multi-application card, including electronic cash, MasterCard credit and employee identification will be launched at the COEX high-tech building complex in Samsung-don, Kangnam-ku in Q1 2000. It will be used by 50,000 employees as well as by 200,000 daily trade center visitors.

Hanyang University will also issue cards to more than 35,000 students as student ID and for purchases at the university's cafeteria, bookstores and other stores off-campus. Korea Telecom will participate in this project, giving students Smart Card access to public telephones.

In another development, Cheju Island, a popular tourist destination, will begin using Smart Cards at resorts, hotels and gift shops early next year.

### Contact

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## Cheap fare system from Coincard

Coincard International says it has supplied three more cities in British Columbia - Kamloops, Prince George and Vernon - with automatic fare collection systems for transit operator BC Transit.

At under 25 cents per card, Coincard says its fare systems utilise the least expensive secure memory card in addition to an optional contactless Smart Card.

The company is targeting smaller cities with under 500 transit vehicles where transit authorities typically purchase the basic configuration using the disposable coincards, in multi-ride and time-based pass formats. As their needs increase they can elect

to install the optional Smart Card interface board in a matter of minutes at some later date.

Coincards are manufactured by laser etching an inexpensive metallized polyester which the company says allows transit operators an affordable entry point with room for growth. Coincard also supplies an automatic passenger counting system (APC), receipt and transfer printers, and a full data logging and software package to analyse and report on every card transaction.

The company says it will be releasing hybrid systems in the near future, such as chip/capacitive and magnetic/capacitive by working with major manufacturers such as ITT Industries.

### Contact

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## Smart Card for Lottery Schemes

Norway's national lottery operator, Norsk Tipping AS, has demonstrated a new multi-application Smart Card, which it claims will revolutionise lottery schemes worldwide.

Norsk Tipping is working with a number of project partners, including Automated Wagering Inc. (AWI), Hitachi Europe, Mondex International, Posten SDS, and Telenor Conax AS, to demonstrate the system.

The card uses Posten SDS ID application and Mondex electronic cash, to make payments and receive lottery winnings. The card runs on the Hitachi chip which houses the multi-application operating system MULTOS.

Mondex allows remote payment via kiosk, mobile telephone and the Internet. The two-way payment capability lets operators pay out low winnings electronically, at near zero marginal cost. Coupled with ID, the solution allows controlled access and can restrict under-age players.

Norsk Tipping plans to launch the Smart Card concept as one of its gaming alternatives.

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## Smart Hits

Roland Moreno's company Innovatron, is focusing on e-business and more specifically on music copy-right, its protection and remuneration with the help of a Smart Card. The concept is called Audionet.

Audionet is based around a simple idea: to allow a web surfer to create his/her own music library by buying tracks of favourite artists from a centralised mass storage juke box-like web site. Listening to music and downloading it is possible thanks to MP3, a standard for compression of data in the music industry.

Imagine searching on the Internet, via an individual computer equipped with an external Smart Card reader, a TV set-top box, or a special dedicated stereo tuner, for Virgin Megastores, or HMV web-sites which offer you a choice of 25 million tunes, the entire worldwide discography. Then enter the name of the track you want to have or the name of your favourite artist, and the tunes will be yours!

The Smart Card acts as an identification device. It stores the music library's inventory (the references of the recording and of the tracks purchased). The terminal downloads the encrypted file corresponding to the selected track and the card decompresses and decrypts it. The card will also feature an electronic purse function.

The capital investment to build a "DiscoSite" of such a size is put at between 50 to 100 million FFr by Moreno. However the Smart Card based jukebox needs a heavy infrastructure. The music is stored for a limited amount of time only. Moreover the system does not allow its user to be mobile: a track can only be listened to with similar equipment and cannot be burnt onto a blank CD without being re-digitalised.

In locating the buyer, and in ensuring that copyrights are duly paid, the proposition could seduce large music outlets and record companies who are puzzled by the growing rise of music piracy in open environments

But, is Audionet late for the party? On 28 June 1999 the Secure Digital Music Initiative (SDMI) guidelines were released. They aim to stop the unauthorised copying of CDS into MP3 files and their downloading off the Internet by building security measures such as watermarking, encryption

and decryption into compact discs, electronic music distribution (EMD), personal computer hosts and portable players. SDMI was instantly backed up by the Five majors (Warners, EMI, Virgin, Sony, BMG). The announcement coincided with the release by Texas Instruments, Liquid Audio, Fraunhofer and San Disk of the SDMI compliant interoperable Digital Signal Processors (DSPs)-based solution for secure music downloads. In parallel EMI one of the five majors, and Liquid Audio have partnered to encode the record company's back catalogue.

The music industry is confronted with a real dilemma: no matter whether it embraces the Internet or not, it is unlikely to get away unscathed. Industry observers say that SDMI might or might not limit the damages: it arrived too late and won't push consumers to want to buy SDMI while free MP3 files can be found on the web. Moreover major bands could decide to bypass record labels and music retailers and directly sell their music on the Internet. Public Enemy, a popular USA rap group took this decision recently and now sells its albums for 8 dollars on its web site. The Public Enemy site has had 10 million visitors so far!

Even if the industry chooses to move into direct and customised selling on the Internet with/or without protecting itself and their clients' copyrights, they are still condemned to become simple agents, and to go through major restructuring (i.e. the shedding of a major part of their staff).

The race is on and as SDMI, Audionet might already be hamstrung in only addressing the problem from the music outlets' point of view. Innovatron is reportedly negotiating with Canal + and La Fnac (the French equivalent of HMV) whilst Gemplus, IBM, France Télécom, and Vivendi are showing a strong interest. A live demonstration should take place in September with a selection of 200 titles. The building of the library will be gradual. Innovatron will make 500,000 selections available in 2000 with the first consumer use of Audionet, and hopes to expand this to 3 million two years after the launch. Access will at first be possible with personal computers, then TV set-top boxes, and finally with a tuner - but this has yet to be designed.

### Contact

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## Top Applications: GSM

After reviewing the main micro-controller card based applications worldwide in the July issue, Smart Card News looks into the most successful one so far, the GSM application. Italy, China, Germany, the United Kingdom and France have the highest number of GSM subscribers. These markets are in the hands of two to four telecommunication operators, who obtain the majority of their SIM cards from at least two suppliers. The volume of SIM cards produced is higher than the number of

subscribers, with the sales of "duo packs", pre-paid cards, and the presence of stock at operators and mobile phone retailers



Countries & total number of subscribers in millions	Telecomms Operators	Subscribers	Supplier (s) of SIM cards
<b>Italy: 25</b>	Omnitel Prontel Italia	8+	Gemplus/Schlumberger/G&D
	TIM	>16	Schlumberger/De La Rue (DLR)
	Wind Telecomunicazioni	400,000	ORGA
<b>China: 20</b>	China Telecom	18.5	} Gemplus, ORGA, Schlumberger
	China Unicom	1.5	
<b>Germany: 17.6</b>	T Mobil TDI	7	ORGA/G&D/Gemplus
	E.Plus Mobilfunk	+2.8	ORGA/Gemplus/G&D/Schlumberger
	Mannesmann Mobilfunk	7.5	Gemplus/G&D
	Viag Interkom	300,000	Schlumberger
<b>United Kingdom: 16.21</b>	BT Cellnet	5.02	Gemplus/ORGA
	One2One	2.65	Gemplus/ORGA
	Orange	3.14	ORGA/Gemplus
	Vodafone	5.4	ORGA/Gemplus
<b>France: 15</b>	Bouygues Telecom	2	ORGA (Nomad), Gemplus, Schlumberger
	France Telecom Mobile	7.5	Gemplus (Itineris)/DLR/ORGA/ Schlumberger
	SFR	5.5	Schlumberger/ Gemplus

ORCA is supplying Click GSM  
with 50,000 SIM cards

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## Airtime Reload by Mobile Phone

A new system of reloading airtime through the mobile phone could make the hugely successful prepaid scratch cards redundant.

The new system is being piloted in Denmark by Mobilix and PBS. Before the end of the year it is expected to make scratch cards redundant, since the purchase of airtime will be made through an extra menu in each mobile phone and the money will be drawn automatically through PBS from the Dankort debit card account of the customer.

The user must enter into a payment agreement with the telecom operator, either for payment through Dankort, Visa/Dankort or Eurocard. When the PIN code has been accepted, a new menu is available in the mobile phone. By pushing a button the user can buy airtime in the usual amounts of 100 and 250 DKK. The SIM (Subscriber Identity Module) Smart Cards are supplied by Gemplus which was involved in the development of the new system.

### Contact

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## Norway Goes for Proton

BBS (Bankenes BetalingsSentral AS) acting on behalf of the Norwegian banks have signed an agreement with Proton World for the pilot implementation of an electronic purse based on the Proton Smart Card technology.

It is planned to issue the cards to pay-TV subscribers who will load value into the e-purse from their bank accounts to pay for pay-per-view television programmes via the existing set-top boxes.

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## Industry Briefs

Australia's fare collection, telecommunications and Smart Card technology group, ERG Limited, has announced record earnings for the financial year to 30 June 1999. Group profit jumped 47% to \$20.3 million, up from \$13.8 million in 1998.

Funtastic Travelling Shows, one of the largest carnival operators in the US, is to start a two-week pilot in California next month with Smart Cards

replacing paper tickets. The Pathways Group will implement the system and supply the Smart Cards and hardware, including terminals and receipt printers. Customers can add any amount of money onto the rechargeable card and use it at terminals located at rides, games and food concessions.

### Contact

- **Joe Schuler, Sr.** The Pathways Group  
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French Smart Card manufacturer Schlumberger has been authorised by Banksys to produce cards for the Proton electronic purse in Belgium, and received certification for eurocheque cards from Europay International.

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Hypercom Corporation and MasterCard International have teamed up to issue MasterCard ScoreCard Smart Cards to the 80,000 fans attending the Major League Baseball John Hancock All-Star Game FanFest giving them the chance to win prizes using Hypercom ICE 5000 interactive, touch-screen terminals.

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The former Siemens microchip plant on North Tyneside, England, which was closed last year following a slump in the price of semiconductors, has found a temporary occupant. Orange is to use the nearly-new £680 million plant, which received £18 million in government grants, as a call centre for its GSM phone network.

Ecash Technologies, based in Seattle, Washington, has acquired the technologies of DigiCash, including the patented "blind signature" encryption scheme for providing electronic cash on the Internet.

### Contact

- ✉ www.ecashtechnologies.com

Hypercom Corporation has appointed Thomas E Koch as General Manager of Hypercom GmbH, its new office in Frankfurt, Germany. Formerly Sales and Marketing Manager of Citibank's European Card Acceptance Department, he will introduce Hypercom's value-added card payment products to Germany's banking, retail and business communities.

## JV for Transaction Processing

Telstra, ERG and ANZ have agreed non-binding principles for the development of an open common platform for the processing of Smart Card transactions in Australia.

To facilitate the development of electronic commerce, they have agreed to negotiate the establishment of a Smart Card joint operating venture company, to which they will contribute capital and resources.

The company, yet to be named, will establish and run a transaction centre, open to all players, to handle transaction processing utilising both Telstra's and ERG's respective Smart Card platforms. In due course, the joint venture company will develop a migration path for the existing platforms to meet global multi-application Smart Card standards. Further shareholders, particularly other banks, will be encouraged to participate.

Ted Pretty, Group Managing Director, Convergent Business, Telstra, said the agreement was a watershed in the development of Smart Cards in Australia as it was intended to achieve universality of application.

ERG Chief Executive Officer, Peter Fogarty, commented: "Importantly the new company is not focussed on just electronic purse. The new company will provide total processing capabilities for organisations wanting to implement Smart Card systems supporting multiple applications."

ANZ Head of Technology, E-commerce and Payments, David Boyles said the demand for Smart Cards in Australia was likely to be driven initially by mass transit and telephony applications followed by business to business e-commerce.

"We are a strong supporter of an open industry Smart Card platform in which all players can participate and which enables transactions between member applications. The joint venture is a means to share the technology investment risk, development and operating costs," Boyles said.

### Contacts

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## FT Trials e-commerce Access

France Telecom is piloting "Iti Achat", a secure mobile e-commerce service which enables customers of FT's Itineris GSM service to make purchases from their mobile phones or via the Internet.

Transaction security is provided by a special Smart bank Card reader integrated in the handset. The technical application complies with the specifications defined by Groupement Cartes Bancaires, an interbank consortium responsible for "CB" bank cards in France.

The solution uses a Motorola StarTAC-D handset, the SIMphonIC SIM Toolkit solution from De La Rue Card Systems and a Carte Bancaires CB microprocessor Smart bank Card.

The project's first two partner banks (Crédit Commercial de France and Crédit Mutuel) are joined by five vendors, spanning a variety of typical e-commerce products and services.

Itineris customers taking part in the trial can contact the merchant (by phone, Minitel or Internet) and place an order. The merchant sends back a GSM short message with the price that is displayed on the screen of the handset equipped with the De La Rue SIMphonIC card.

The customer then inserts the CB bank card into the handset and enters the password. Transaction data is sent securely to one of the participating banks.

FT says the service should be ready for full-scale commercial launch in about six months, following a second trial phase to begin on 20 September with several more banks joining the programme - BNP, Caisse d'Épargne, Crédit Lyonnais and Société Générale - along with 20 more merchants.

### Contact

✉ [www.francetelecom.com](http://www.francetelecom.com)

## ORGA Moves to New Premises

ORGA Card Systems (UK) moves to new premises as of 13 September.

### The new address

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- ✉ [info@orga.co.uk](mailto:info@orga.co.uk) • [www.orga.co.uk](http://www.orga.co.uk)

## Super ATM "Bank Shop"

A new Super ATM which creates a "One Stop Bank Shop" offering customers 17 different fee-based transactions has been unveiled by Capital Security Systems Inc (CSS).

The company says it has been designed to help banks fund the conversion to the e-commerce, Smart Card-based society of the future.

Robin Gustin, CEO of CSS, explained: "It will enable customers to cash bank notes, checks, pay bills, wire funds and buy items like stamps - all from one terminal."

Called the ATM PowerBuilder transaction payment platform, it merges three different banking segments - regular banking customers, electronic benefit transfers (EBT) for government-entitled customers, and fringe banking customers.

By offering services to all types of bank customers, the bank networks would increase fee revenues tremendously, and retain entitlement customers when they move off welfare into regular banking and fringe banking market segments.

"This will greatly help offset the costs of converting to an e-commerce-based, Smart Card society and help implement Federal mandates for EBT by the year 2002," said Gustin

CSS is currently in the process of securing buyers for its Super ATM patents.

### Contact

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## Philips Controller for Visa Cash

Philips Semiconductors' high security Smart Card controller P8WE5032 has been chosen by Visa International for its second generation merchant card developed to support Visa Cash.

"The built in high-speed triple DES processing option has the potential of allowing Visa Cash terminals to be used for secure contactless transactions, using dual interface card IC technology," explained Philip Yen, Senior Vice President, Emerging Technology, Visa International.

Philips Semiconductors' new WE range features a high-speed triple-DES co-processor as well as Philips 32-bit co-processor FameX for public key

encryption. It offers a memory capacity of up to 32K byte EEPROM, 64K byte ROM and 2.3K byte RAM as well as a contactless MIFARE interface option according to ISO 14443 A.

The P8WE5032 chip has already been approved by ZKA (Zentraler Kredit Ausschuss) for the German GeldKarte project. An ITSEC E 4 high evaluation is planned by the end of this year.

## New Smart Card Platform

STMicroelectronics will be presenting a new Smart Card platform at the CarteS '99 show in November.

Developed under the MASSC (Multi-Application Secure Smart Card) project, the new platform is being designed to provide cost-effective and secure processing over global networks.

Partners in the project include Bull Smart Cards & Terminals (project leader), Banksys, De La Rue Card Systems, Dyade, Ocard, Philips Digital Video Systems STMicroelectronics and Telecom Italia Mobile.

The MASSC software is currently implemented on STMicroelectronics' SmartJ (ST22) microprocessor. The SmartJ core is a Reduced Instruction Set Computer (RISC) designed to execute both native RISC instructions and Java technology instructions directly.

According to the company, this approach not only delivers higher performance than processors that emulate the Java bytecode instruction set, but also optimises the Operating System and other support functions that are best implemented in native code.

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## Telstra support for MULTOS

Telstra, Australia's leading telecommunications company, has announced that it is supporting the development of the MULTOS Smart Card operating system as an open industry standard and becoming a member of the MAOSCO Consortium which promotes MULTOS.

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## Heading for CARTES Show in Paris

Leaders in the Smart Card industry, including SCN, will be heading for Paris for the CARTES show running from 16-18 November. Once regarded as basically a "French show", it has now expanded into a truly international affair attracting delegates, exhibitors and visitors from all over the world.

A measure of its success is the fact that this is the venue where companies choose to announce new developments and launch new products.

And what other show has the pulling power to attract so many top people in the industry for a day-long session to present their forecasts and development strategies on markets on the Internet for Smart Card applications? Will the major manufacturers and users agree or disagree with each other?

Embedded Systems is another day-long conference for the more technically minded and will look at what the market has to offer in the way of on-board systems and how they can be used.

Transport too has a whole day to itself and brings together several project leaders from around the world who will no doubt be looking at the advantages of contactless cards in public transport and the move towards combined contact and contactless cards offering additional functions.

Topics covered at the conference include multi-application cards, contactless cards, electronic money, telecoms cards, loyalty cards, integrated systems, cards and identification, campus cards, city cards, cards and healthcare.

While there is much to talk about, there is a great deal to see in the exhibition area where there are new products on view and demonstrations of the latest technologies. A new area made available for identification/security exhibitors was fully booked by June. It will be showing a variety of systems on the market from photos, sophisticated imprinting, Smart Cards and a variety of biometric products.

During the gala dinner, the SESAMES awards will be announced for the best technological innovation and best applications.

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- Uses Java as processor natural language
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- Execute directly most Java byte codes
- Very powerful native instruction set for data management and memory access control
- Architecture extensions for optimised hardware and software
- Ideal for portable and contactless Smartcard applications.



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