SMART CARD NEWS

*Subscribers will receive Touch's "**Nottingham's Citycard"** free with this issue of Smart Card News.*

UK Post Office Waiting for the Bus

The UK Post Office has signed an agreement with Prepayment Cards Ltd (PCL) to issue public transport Smart Cards and provide a recharging service at 800 outlets. If successful, the Post Office says, the scheme will expand to all 18,500 offices throughout the UK.

But the Post Office may be left waiting at the bus stop. PCL is not rolling out what is described as its "first major card base" in Greater Manchester until early next year when it plans to issue some 750,000 cards to concessionary travellers, and to passengers of the major private transit operators - hardly big business for Britain's largest retailer. More promising is the Post Office's announcement that it "will evaluate the introduction of its own card to its customer base" although it has been a long time thinking about it.

August 2000

News

Smart Card Tutorial

Cards on the Cover

Main Photograph

UK Post Office (library photograph)

Don't Forget!
Our Website containing daily News On-Line, and information about the full range
of SCN services, can be found at the following address: **www.smartcard.co.uk**

Waiting for the Bus

The agreement with the Post Office is a good deal for PCL, widely regarded as a group that will lead the way in turning paper ticketing on the UK public transit systems into automatic electronic ticketing using contactless Smart Cards - outside of London where the TranSys consortium is implementing London Transport's Prestige Smart Card ticketing and revenue collection system to be introduced in 2002.

PCL shareholders are ERG Limited of Australia, Sema Group UK, and bus rivals Stagecoach Holdings, FirstGroup and National Express Group.

Chairman Peter Fogarty said: "The extent of the Post Office network and customer reach will contribute greatly to achieving PCL's and the Government's stated goal of having a nationwide, integrated multi-modal Smart Card solution for transport and other applications."

PO becoming Smart Card ready

Post Offices generally have been even slower than the banks to introduce Smart Card technology, but back in mid-1966, La Poste, the French Post Office launched a customer loyalty bank card, called Adésio. It was designed to attract new customers, and encourage those with a La Post account and a card with another bank to use more Post Office products and services by rewarding them with points, for example, each time they used a La Poste ATM to withdraw money or use the various Post Office services.

Then the first "self-service Post Office" opened in the Danish capital of Copenhagen with a self-service communication wall providing payphone, facsimile, stamp postage machine, personal computer (to access the Internet) and photo-copying machine for customers using the DANMØNT electronic purse card.

However, the UK's Post Office is rapidly becoming Smart Card ready in a £1 billion automation scheme being implemented by ICL.

Called the Horizon project, it involves a vast infrastructure of hardware and software leading to every Post Office being automated by Spring next year. The 18,500 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.

However, the Post Office is facing a serious blow with the Benefits Agency pulling out of its contract for benefit payments in favour of direct payment into bank accounts. As a result it is estimated that the Post Office could lose 40 per cent of its revenue in 2003.

Yet the UK Post Office could be ideally positioned to form a partnership with the government in its "modernising government" programme. It has, or will have, the technology to enable customers to update government departments on address changes, request benefit information, submit tax returns, buy licenses, claim grants as well as make bookings for education, health and local amenity services.

Its best deal could be: "give us back the benefits payments and we will help you in providing government information and services via a Smart Card."

Contacts
- **Post Office**
  - ☎ +44 (0)20 7250 2468
  - 🖥 www.postoffice-counters.co.uk
- **PCL**
  - ☎ +44 (0)161 935 8314

Collectors' Corner

In 1998 Touch, in association with Nottingham City Council, launched Citycard. Currently, there are approximately 200,000 Citycard holders, making the scheme the largest civic reward scheme in Britain.

Functions incorporated on the card to date include: retail loyalty, a leisure card, the Nottingham Trent University student card, the Nottingham City Transport card and the DfEE "Connexions Card".

Touch provides business to business services and systems for Smart Card schemes and portal software (intranet, extranet, web pages and e-commerce) to the corporate community and institutional marketplace throughout the UK.

For further information on Touch services and systems contact 020 7452 5300 or visit the website: www.touch.co.uk

Amex Blue to Launch in the UK

The success of the American Express Blue Smart Card credit card in the US is to be followed by a launch onto the UK market. As in the US, Amex will, towards the end of this year, be giving customers on-line wallets to make shopping easier and Smart Card readers to connect to their PC for secure on-line trading.

Cardholders can enter their purchase information in the wallet and click on a button to automatically fill in the merchant's purchase form. The reader "unlocks" the wallet when the card is inserted and the cardholder enters a PIN.

Contact
- **Doug Smith**
  - ☎ +44 (0)20 7976 4418

BoA Licenses MONAD System

ACI Worldwide has announced the licensing of its MONAD multi-application Smart Card management system to Bank of America. The MONAD product suite will enable the bank to manage the complete life cycle of Smart Cards and applications including enrollment, application management, card issuing, personalisation, post-issuance of multi-application Smart Cards and security.

Contact
- **Gene Hinkle** ACI Worldwide
  - ☎ +1 402 390 8906
  - ⌨ hinkleg@tsainc.com

Gemplus & Inprise/Borland Team

Inprise Corporation and Gemplus have agreed that the research and development laboratories of Gemplus will employ Inprise/Borland JBuilder 3.5 in its Java Card-based developments, including the latest GemXpresso development kits.

Jean Claude Chataignier, Card Enabling Software Director, at Gemplus, said: "This agreement will significantly improve our capability to support our customers using Java Card-based solutions, enabling developers to create Smart Card applications with a new level of interoperability."

Contact
- **Amanda Williams** Inprise
  - ☎ +44 (0)118 932 0022
  - ⌨ awilliams@inprise.com

Visa Launch in Ghana

Visa International and Standard Chartered Bank Ghana have launched the first domestic Visa card program in the West African country and the first public use of Visa Horizon, a chip-based, pre-authorised, offline payment card. The initial roll-out starts in the capital city, Accra, with plans to expand to other major Ghanaian cities - Takoradi and Kumasi - soon.

Contact
- **Colin Baptie** Visa International
  - ☎ +1 650 432 4671
  - ⌨ cbaptie@visa.com

Global Cash Cruise Line Contracts

Six ships of Norwegian Cruise Line, Miami, Florida, have signed a multi-year contract to use Global Cash Access' QuikCash POS debit/credit card cash advance.

Using a client-server platform, the GCA QuikCash devices are Smart Card ready, feature touch-screen technology and can provide credit card or POS debit cash advances in less than 15 seconds.

GCA has also signed agreements with three casinos - Nooksack River Casino, Deming, Washington; Spotlight 29 Casino, Cochella, California; and Cash Casino, Calgary, Alberta, Canada.

Global Cash Access was formed in 1998 through a joint venture of Bank of America, First Data Corp. and USA Processing.

Contact
- **Mollie Henry** Katcher Vaughn & Bailey
  - ☎ +1 615 248 8202
  - ⌨ mhenry@kvbpr.com

Funding for Welcome Real-time

Welcome Real-time has announced funding from three new shareholders - Gemplus, Avenir Telecom and Dassault Multimedia. The company says this capital increase will significantly accelerate its development and secure a key role in the electronic and mobile commerce markets.

Contact
- **Marjorie Banès** Welcome Real-time
  - ☎ +33 (0)4 42 97 58 62
  - ⌨ m.banes@welcome-rt.com

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£400 Million Partnership Deal

UK-based easi Solutions, a leading supplier of Smart Card-driven guest room technology for hotels, has announced an exclusive £400 million contract with Acer UK, the world's third largest PC manufacturer.

The companies are partnering to develop a range of equipment for use with the e@si System which offers hotel guests a complete PC-based information, communications and entertainment system incorporating e-mail, the Internet and Microsoft Office (Small Business Edition). (See SCN June 2000, page 101)

Acer will provide the latest in computer technology, including the Veriton FP range, including an all-in-one flat panel computer, for use with the e@si Room, which can be found in leading hotel chains such as Hilton International Hotels, Crowne Plaza, Inter-Continental, Golden Tulip, Choice Hotels Scandinavia and Summit Hotels and Resorts.

Audun Lekve, founder and CEO of easi Solutions, headquartered in Abingdon, Oxfordshire, explained: "The advanced level of technology expertise that Acer brings to the partnership offers easi Solutions the chance to further develop and continually upgrade the e@si System.

"We are also very excited to have the opportunity to influence and be involved in future product designs. Through our partnership with Acer, we can offer travellers the cutting edge in design and PC performance."

Dion Weisler, Acer UK's Managing Director, said: "easi Solutions brings a personalised Internet experience to the business traveller and Acer is committed to providing the enabling technology. They have designed a business model and bespoke solution that takes the burden away from the hotels whilst increasing loyalty and fulfilling ever increasing customer demands. This opportunity makes so much sense to us that we have invested in the company."

Contacts
- **Alice More O'Ferrall** easi Solutions
  ☎ +44 (0)1235 467900
  🖳 Alice.more.oferrall@easico.com
- **Dion Weisler** Acer
  ☎ +44 (0)1753 699200
  🖹 +44 (0)1753 699201

Italian Banks Plan Smart Card

Italian banks are planning to launch a nationwide Smart Card payment system. The news came in an announcement by Gemplus that it has been chosen by the Associazione Progetto Microcircuito, an initiative promoted by ABI - Associazione Bancaria Italiana - to be one of the official partners in the Smart Card project.

Progetto Mircocircuito brings together the Italian banking industry to design and implement a national card payment system based on Smart Card technology.

The project will enhance the security of the Italian banking system by migrating the country's payment cards from magnetic strip to Smart Cards, involving the updating of every payment card in the Italian banking system, as well as all terminals and communications software, to comply with EMV (Europay/MasterCard/Visa) specifications.

Gemplus will develop and supply Smart Card technology, defining the system specifications and working with ABI and its members to establish an agreed security level.

As a first step, Progetto Microcircuito has specified the use of 8K byte Smart Cards for the introduction of new payment card based services. Besides the potential for new services and enhanced security, the Smart Card system means that many transactions can be carried out offline with greater speed and reduced management and communication costs.

Contact
- **Severine Percetti** Gemplus Corporate
  ☎ +33 (0)4 42 36 67 67
  🖳 severine.percetti@gemplus.com

Visa Plans Teen Card in US

Visa USA is reported to be planning the launch of a reloadable payment card for teenagers. Called Buxx, the card can be used to make purchases on the Internet or at the local shopping mall as well as to download cash from ATMs.

The idea is that parents will set a spending limit and prepay that amount into a special account. Parents can monitor the child's spending on-line or use a toll-free phone number. They will also be able to reload the card with more cash as needed.

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Contactless Ticketing for Paris

Schlumberger is to implement an upgradeable contactless Smart Card ticketing solution in the Paris region for the SNCF (French Railways) and RATP (Paris Transport) for access to all the networks (bus, metro, suburban trains).

SNCF has signed a 6.5 million Euro contract with Schlumberger for reworking the existing ticket validation system - with 1000 gates provided for automatic ticket control in the suburbs - and the processing centre. The deal includes the staggered supply of cards with a first batch of 90,000 cards.

In the RATP project, Schlumberger will provide contactless card customisation for the RATP and supply the necessary cards. Aside from fraud prevention, the card offers the operator enhanced marketing tools and network analyses. The card will eventually hold new applications for users, such as e-purse or customer loyalty schemes.

The first passengers to use the new card by the end of 2001 will be the 170,000 holders of the "Carte Intégrale" which is the annual pass for travel on the Ile de France network. In 2002 the 550,000 holders of cards for young people will join the new system as well as the holders of senior citizen passes. Following this the card will be rolled out to those holding monthly passes and purchasers of multiple tickets. When the project is fully deployed around one million users will have a contactless card.

Contact
- **Dirk Hinze** Schlumberger
  - ☎ +33 (0)1 47 46 79 50
  - 🖳 hinze@montrouge.tt.slb.com

Bull / iD2 Team on Authentication

iD2 Technologies is to support Bull's new TBC 80 Smart Card through its iD2 Certificate Manager solution. Recently, the two companies signed an agreement to provide turn-key security solutions to provide customers with strong user authentication and electronic signatures.

Contacts
- **Tim Smith** iD2 Technologies
  - ☎ +44 (0)7957 311189
  - 🖳 tim.smith@iD2tech.com
- **Roger Crocombe** Bull
  - ☎ +33 (0)6 07 28 91 04
  - 🖳 Roger.Crocombe@bull.net

Development Kit for Windows

ThinkPulse has announced the availability of the smartX software engine and development kit for the Microsoft Windows environment. smartX is billed as the industry's first solution that separates application development from the complexity of Smart Card device management and integration, allowing easy implementation of the same application on different types and generations of Smart Card.

Mike Dusche, Product Manager of Windows for Smart Cards, Microsoft, said: "The smartX technology will enable an easy migration to advanced systems like Windows for Smart Cards."

ThinkPulse provides a Smart Card software platform that enables any terminal - PC, point of sale, set-top box, or mobile handset - to work with any future application or card operating system via an updateable on-line library. "smartX makes it simple for applications to support current and future Smart Cards," said Michel Roux, CEO, ThinkPulse.

Contact
- **Robert Wise** ThinkPulse Inc.
  - ☎ +1 650 654 2962
  - 🖳 robert.wise@thinkpulse.com

Face-Recognition in GSA Program

Viisage Technology is to provide face-recognition biometric technology to Logicon for the US General Service Administration (GSA) Smart Access ID Program.

Logicon, one of the five prime contractors selected for the ten-year, $1.5 billion program, will use Viisage's MIT-developed, patented, face-recognition technology for identification, authentication, physical and virtual access-control applications.

Thomas J. Colatosti, Viisage President and CEO, said: "We believe the leadership from GSA will help raise the level of awareness in the marketplace for the advantages of face biometrics to deliver personal and convenient physical and virtual security."

Contact
- **Pamela Roderick** Porter, LeVay & Rose
  - ☎ +1 212 564 4700
- **Thomas Colatosti** Viisage Technology
  - ☎ +1 978 952 2211

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CashMouse Home Terminals

Over 50 million GeldKarte holders - Germany's national electronic purse - will be targeted by SCM Microsystems and Giesecke & Devrient (G&D) for a new home PC-based terminal.

The two companies have signed an agreement for the joint development and marketing of the terminal called CashMouse which will allow users to securely download cash onto their GeldKarte Smart Cards from the convenience of home or office. As the electronic purse does not attract transaction fees it is viewed as ideal for making micropayments on the Internet.

Willy Berchtold, G&D's CEO, said the agreement with SCM was an important step forward in the development and acceptance of e-commerce for consumer applications like home banking and Internet shopping.

"With CashMouse, we can offer secure e-commerce over the Internet and be in full compliance with the German Signature Law," he said. "SCM brings to the partnership the technology and security expertise we need to develop this terminal for the home. As the leading German supplier of payment terminals, we have brought our own extensive security expertise to both the card reader and the necessary background system."

CashMouse reads all ISO 7816 Smart Cards and can connect to the standard serial port of all Microsoft/Intel-compatible computers running Windows 95, 98, NT4 and 2000. It is also said to meet the security standards for Internet e-commerce and home banking applications imposed by ZKA (Zentraler Kreditausschuss) representing the German banking industry.

Contact
■ **Darby Dye** SCM Microsystems
  ☎ +1 408 364 8402
  🖵 ddye@scmmicro.com

Rainbow Joins Smart Card Forum

Rainbow Technologies has joined the Smart Card Forum, the industry group aimed at accelerating the acceptance of Smart Card technology.

Contact
■ **Olivia Mang** Rainbow Technologies
  ☎ +1 949 450 7386
  🖵 omang@rainbow.com

Schlumberger White Paper

Schlumberger has published a comprehensive White Paper explaining how Smart Cards can enhance computer and network security in Windows 2000 systems. The 28-page document describes secure transactions, Windows 2000 security and the contribution of Smart Cards.

Schlumberger's Cryptoflex Smart Card and Reflex readers - both "plug-and-play" within the Windows 2000 environment - are used to illustrate the workings of the security chain. The company says that its Cryptoflex Smart Card with an embedded cryptographic processor and sufficient memory to store a number of certificates and their private keys, makes an ideal token for Windows 2000 implementations while Reflex Smart Card readers are PC/SC Workgroup-approved for Windows 2000 host environments.

Smart Cards Enhanced Security for Windows 2000 Systems can be downloaded from the Schlumberger web site at www.slb.com/smartcards

Contact
■ **Emmanuelle Saby** Schlumberger
  ☎ +33 (0)1 47 46 71 04
  🖵 saby@montrouge.tt.slb.com

Keppel Invests in First Access

First Access, a developer of wireless authentication technology, has raised $4.7 million in second round funding from several firms including lead investor Keppel Telecommunications & Transportation, an Asian-based technology solutions provider and developer of managed Internet services.

This latest infusion of capital will enable First Access to continue developing wireless Bluetooth technologies. The company's VicinID Enterprise wireless authentication solution transmits an encrypted radio frequency signal between a wireless Smart Card carried by the user and a corresponding workstation, providing "hands free," secure access to in-house networks through workstations configured to "sense" a user's presence. Presently the solution has an open API framework that can be easily integrated with physical access capabilities.

Contact
■ **Renee Himelhoch** First Access
  ☎ +1 732 748 4383
  🖵 Reneeh@access-1.com

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Korea Contactless Transport Card

Philips Semiconductors' MIFARE PRO dual interface ICs are being used in a major multi-application Smart Card project in Pusan, Korea.

The Digital Pusan Card is one of the first transport schemes to support both contact and contactless applications. It combines credit, debit and prepaid card functions and digital signature for security.

The card's contactless interface can be used in transport payment applications including buses, taxis and subway systems, as well as tollgates and car parks within the existing MIFARE-based Hanaro Transportation system. The card can also be used for payment in shops, e-commerce, ticket reservations and a range of municipal services.

Developed by Korea Electronic Banking Technology, the Digital Pusan Card will be launched on 1 September, 2000 with an initial roll-out of one million dual interface cards.

Users will have access to 300,000 readers, 20,000 points of sale and 40,000 vending machines and will be able to recharge their e-purses at 600 reloading machines and 500 ATMs. About 100 kiosks will enable citizens to receive official documents, check tax information and pay public taxes.

Contact
- **Elisabeth Doerner** Philips
  - ☎ +43 3124 299760
  - 🖳 Elisabeth.Doerner@philips.com

Datakey Cards RSA Keon Ready

Datakey has announced that its PKI Smart Cards have been certified as "RSA Keon Ready" by RSA Security. Certification ensures RSA Keon users that Datakey Smart Cards will plug-and-play with their PKI architecture to provide strong, two-factor protection for their digital credentials.

Datakey's Model 330 Smart Card is the only 32K card to earn FIPS 140-1 Level 2 certification. The card also features 2048-bit public key encryption strength and an extensible operating system for multi-function capability.

Visit
- 🖳 www.datakey.com
- 🖳 www.rsasecurity.com

Octopus for Parking

Wilson Parking and Creative Star have entered into an agreement to accept Hong Kong's Octopus transit Smart Card to pay for hourly car parking fees at about 200 car parks. The programme to install the new Octopus parking equipment will start in the second half of this year and will take two years. Total investment in the programme is $60 million.

The car park access control equipment is being manufactured by SkiData of Austria and will be distributed in Hong Kong through SkiData Parking Systems.

Rob Noble, Creative Star's CEO, said: "Our surveys show some 88 per cent of car owners already have an Octopus, and soon they will be able to enjoy the card's convenience not only on public transport but also parking their car at Wilson car parks as well."

Contacts
- **Ms Joan Ng** Creative Star
  - ☎ +832 2266 2226
  - 🖳 +832 2266 2254
- **Samuel Sham** Wilson Parking (Hong Kong)
  - ☎ +832 2830 3888
  - 🖳 +832 2882 3869

Infineon Partnership Program

Infineon Technologies has announced the Silicon Trust, a global partnership program focusing on the company's security ICs and complete solutions for companies planning to introduce security systems based on chip card, biometrics or encryption technology.

Initial partners include: Astro Datensysteme, Biometric Identification, CE Infosys, Dermalog, Faktum, Mytec Technologies, Precise Biometrics, Siemens Information and Communications Mobile, Siemens PSE Austria, and Veritouch.

Ulrich Hamann, General Manager of Infineon's business group Security and Chip Card ICs, said: "In order to be accepted and used within the market, new technologies call for complete solutions."

Contact
- **Monika Sonntag** Infineon
  - ☎ • 🖳 +49 89 234 24497/28482
  - 🖳 monika.sonntag@infineon.com
- **The Silicon Trust**
  - 🖳 www.silicon-trust.com

VeriFone and L&G Partnership

VeriFone and Landis & Gyr Communications are partnering to develop an EMV-compliant solution for the unattended payment market.

L&G's CADix card-accepting device will be coupled with VeriFone's EMV software and libraries to enable chip based card payment at unattended payment stations such as parking meters, vending and ticketing machines.

Nick Kerridge, VeriFone's UK General Manager, said: "The implementation of EMV in the unattended payment market is a positive move to combat counterfeit card fraud."

Contact
- **David Foley** Companycare
  - ☎ +44 (0)118 939 5900
  - ✉ davidf@companycare.com

New Internet Payment Architecture

Banksys of Belgium is planning an architecture offering totally secure Internet payment trans-actions on any user Smart Card. Globeset (USA) SET technology will be customised for the Banksys architecture by Element (Belgium) and integrated into solutions securing all payments products for consumers using their bank Smart Cards.

Contact
- **Marina De Moerlooze** Banksys
  - ☎ +32 2 727 6822
  - ✉ marina.demoerlooze@banksys.be

Gemplus and MIPS Partner

Gemplus has joined with MIPS Technologies, a provider of industry standard processor architectures and cores for digital consumer and network applications, to create a new standard architecture for next generation Smart Card chips tailored for open operating system platforms such as Sun Microsystems' Java Card and Microsoft's Smart Card for Windows.

The companies intend to establish an industry standard microprocessor architecture to be known as SmartMIPS. MIPS Technologies will license the SmartMIPS architecture to the Smart Card industry.

They are also jointly developing a new ultra low power, high performance embedded 32-bit processor core that implements the new architecture. The two companies will work with one or more silicon partners to manufacture a family of Smart Card chips based on the new core.

"The increasing sophistication of new Smart Card applications will require substantially greater functionality and processing power than is available with current technology," explained Bertrand Cambou, COO of Gemplus.

Contact
- **Constance Sweeney** MIPS Technologies
  - ☎ +1 650 567 5059
  - ✉ cks@mips.com
- **Severine Percetti** Gemplus Corporate
  - ☎ +33 (0)4 42 36 67 67
  - ✉ severine.percetti@gemplus.com

Cardis Solution for South Africa

Cardis Enterprises International and Altech Smart Card Technologies (ASCT) have signed an exclusive licensing agreement to commercialise the deployment of Cardis' Ultimus Smart Card payment system into South Africa and neighbouring territories of Kenya, Zimbabwe, Namibia, Mozambique, Botswana, Lesotho and Swaziland.

Ultimus enables the extension of the Europay, MasterCard, Visa (EMV) credit and debit card products into micropayment and the same card can be used for all transactions, irrespective of the value, and in all payment environments, for example, vending machines, mobile phones and Internet points of sale.

Robin Townend, CEO of Cardis, said: "Ultimus, coupled with the new delivery channels of the Internet and WAP based GSM telephony, will put South Africans at the forefront of e- and m-commerce."

ASCT is a subsidiary of Altech, a R3.1 billion South African electronics giant.

Contact
- **Ms Batya Pilcer** Cardis R&D
  - ☎ +972 9 764 4888
  - ✉ info@sidrac.com
- **Henk Horak** Altech Smart Card
  - ☎ +27 11 804 3226
  - ✉ info@asct.altron.co.za

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In-room Information System

Orlando, Florida-based InnHanse is to test a new in-room network information system using Smart Cards and Sun Microsystems' Sun Ray information appliances at the Orlando StudioPLUS hotel, an Extended StayAmerica, Inc. property.

InnHanse has purchased 500 Sun Ray appliances which includes a flat-screen monitor that will be installed in guest rooms and will be connected to one main server at the host hotel.

The Sun Ray system utilises a Smart Card and Sun's Hot Desk technology to enable hotel guests to securely access information from any Sun Ray system in the hotel or on the InnHanse network.

The new systems also allows guests to use the hotel's network to access the Internet.

Contact
- **Will Wellons** YP&B
  - ☎ +1 407 875 1111
  - 🖳 will_wellons@ypb.com

Smart Ticketing for Amex Blue

American Express has teamed up with SFX and Ticketmaster to launch "Summer Concerts in Blue," a new program that enables Amex Blue cardholders to buy concert tickets on-line at ticketmaster.com, a unit of Ticketmaster Online-Citysearch, Inc.

Cardholders will receive a free compact disc featuring the artists who perform the concerts they are attending. The promotion, which runs until 15 October, is valid for concerts at SFX amphitheaters throughout the US.

Richard Quigley, Vice President, Credit Card Marketing, American Express, said: "For the first time, cardmembers with Blue will be able to use Smart Card readers at the point of sale."

Contact
- **Judy Tenzer** American Express
  - ☎ +1 212 640 7552
- **Jay Winuk** Winuk Communications for SFX
  - ☎ +1 914 277 1160
  - 🖳 jwincom@rcn.com
- **Hannah Kampf** Ticketmaster
  - ☎ +1 213 639 6160
  - 🖳 hannah.kampf@ticketmaster.com

ORGA 100,000 Smart Card Order

ORGA has won an order to provide personalised Smart Cards for access at kiosks for the on-line entertainment service, WebZone, and for making cashless payments.

WebZone has placed an initial order for 100,000 rechargeable memory cards, which will be personalised with each customer's identity for access to WebZone's services which include video chat and dating, quizzes, video games, scratch cards and Net surfing. ORGA will also be supplying kiosk-integrated card readers and technical support.

Contact
- **Darren Brown** ORGA Card Systems (UK)
  - ☎ +44 (0)118 377 6029
  - 🖳 dbrown@orga.co.uk

Chicago Rolls-out Contactless Cards

Commuters in Chicago are the first in the US to travel throughout their city and suburbs using an intermodal (train and bus), multi-agency contactless Smart Card with the roll-out of the Chicago Transit Authority's (CTA) new Smart Card system, developed by Cubic Transportation Systems.

The contactless Smart Cards are available for use on more than 1,800 buses and at 143 rail stations. The CTA Smart Card roll-out is part of its existing $106 million farecard contract with Cubic., makes Chicago the second major city in the US to use Smart Cards for mass transportation.

The Washington Metropolitan Area Transit Authority, which, like Chicago, uses the Cubic Go Card, provides Smart Card access to trains and parking facilities in the Washington, DC area.

Contact
- **Kelly Williams** Cubic Corp.
  - ☎ +1 858 505 2378
  - 🖳 Kelly.Williams@cubic.com

Omnikey Board Appointment

Guy Challen has been appointed to the Board of Omnikey AG as Chief Financial Officer. Previously he was International Financial Controller with Controlware GmbH, in Dietzenbach.

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Interest in Chinese Smart Card Co

Southland Financial, Inc has signed a memorandum of intent to acquire a 100% interest in Gold Phoenix Associates Limited (Gold Phoenix) by way of a Southland shares only transaction. Gold Phoenix has a 60% interest in "Ai Wei" Information Technology Corporation, a Chinese company with an exclusive right to distribute identification Smart Cards across China for the Health Card Registration and Management System, (HCRM).

The HCRM system has already been successfully trialed in Hubei province with over 10,000 Smart Cards. The Health Department requires all people in the food and/or food related industries - 240 million people, (20% of the PRC population) - to have an identification Smart Card over the next five years. The cards will be used to gather, process, store and transmit data timely and accurately, replacing a paper only system.

Southland and Gold Phoenix Director, Willie Lo said: "This very exciting project is operational and ahead of schedule. The software for the HCRM system has been developed and is proprietary. There are considerable cross-industry business opportunities, for example, child care, education, etc., as well as export potential."

Contact
- **David A Turik** Southland Financial, Inc.,
  - ☎ +61 410 59-8885
  - 🖥 www.sincsfi.com
- **Mrs. Yennie Yan** Gold Phoenix Associates Ltd
  - ☎ +86 10 8812 0519
  - 🖥 www.chinahealthcard.com

£2m CardBASE Software Centre

CardBASE Technologies, Smart Card and e-commerce software solutions provider, is to invest over £2 million to establish a software development centre in Belfast employing up to 100 skilled software engineers over the next twelve months.

The company says the move is being driven by the rapid growth of the Smart Card industry, and the demand for secure e-commerce payment systems for the Internet and mobile commerce markets.

Contact
- **Ms Leonie Stevenson** Gibney Communications
  - ☎ +353 1 661 0402

SmartNet Network for Brazil

SmartNet has selected Hypercom transaction software, Internet-enabled card payment appliances and networking equipment for a nationwide payment trans-actions network in Brazil. Its first two customers - the VR Group and SETRANSP - anticipate deploying more than 120,000 Hypercom contactless Smart Card ePic ICE 5500 card payment terminals within the next 24 months.

The SmartNet network will offer services such as voucher and ERC (electronic receipt capture) to merchants throughout Brazil and streamline the processing of customer transactions by eliminating the use of paper vouchers. The network will support payment options such as magnetic stripe, Smart Cards, contactless Smart Cards, stored value and hybrid card technologies plus electronic benefits transfer (EBT), financial transactions, entertainment, identification and loyalty schemes.

The VR Group and SETRANSP, will use the network to automate the distribution and authorised use of government transportation stamps. The first phase of this effort will focus on delivering 400,000 cards and deploying 2,500 Hypercom card payment devices.

"This project is changing the landscape of benefits transfer and other Smart Card transactions in Brazil, said Cid Antao, General Director, SmartNet, adding that SmartNet will eliminate the inconvenience and problems associated with carrying benefits checkbooks. Cardholders will be able to download partial or full benefits to contactless Smart Cards, check their benefits balance and use the card to pay for purchases at any VR Group accredited merchant equipped with Hypercom terminals.

"We are working with SmartNet to provide an end-to-end solution that brings chip card technology to a whole new level," said German Cardenas, President of Hypercom Latin America.

The VR Group is one of the largest private issuers of food, transport and petrol stamps in Brazil. Last year it served more than two million workers and has 16,000 accredited merchants using its services.

Contact
- **Pete Schuddekopf** Hypercom Corporation
  - ☎ +1 602 504 5383
  - 🖥 pschuddekopf@hypercom.com

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Sense Unveils BioCard

Sense Holdings, through its wholly owned subsidiary Sense Technologies, has announced the BioCard, a fingerprint-based Smart Card biometric program that provides enhanced security for storing and accessing portable data.

Sense Technologies plans to implement its Smart Card technology into medical facilities, universities and corporate America. The BioCard applications include securing and managing medication disbursement, test results, treatment schedules, student meal plans, library privileges, computer lab usage, and advanced corporate security systems. A retail version of BioCard is also in development for loyalty and frequency programs.

"Our ability to store and unlock data with a fingerprint should be of great interest to the medical, financial and education markets," said Dore Perler, CEO and founder of Sense Technologies. "Smart Card technology offers a reliable yet secure method of storing and accessing portable data."

Contact
- **Dore Perler** Sense Technologies
  - ☎ +1 954 726 1422
  - 🖥 dore@senseme.com

ZKA Certifies New GeldKarte

Germany's central credit committee, The Zentraler Kreditausschuss (ZKA), has certified the new type 1 GeldKarte developed by Gemplus with Philips Semiconductors for use in Germany's electronic purse system.

ZKA has certified the hardware/software combination that consists of the operating system for the new GeldKarte, developed by ODS prior to its takeover by Gemplus, and Philips Semiconductors secure chip card ICP8WE6017.

With the new operating system the GeldKarte type 1 is ready for the introduction of the Euro and the growing internationalisation of payment methods. A cross-border pilot project called PACE (Purse Application for Cross border Use in Euro) has started.

Contact
- **Elisabeth Doerner** Philips Semiconductors
  - ☎ +43 3124 299760
  - 🖥 Elisabeth.Doerner@philips.com

Ingenico £1m Data Centre

Ingenico Fortronic, provider of electronic payment solutions and Smart Card terminals, has unveiled a £1 million investment package to create a new state-of-the-art data centre at the company's headquarters in Fife, Scotland.

The data centre will support EMS, Ingenico's client/server based information system designed to lower the cost of ownership and improve efficiency across an 'estate' of terminals. Database management, stock control and maintenance of terminals can all be managed remotely through this system.

The company says that the data centre will also support the growth of e-purse and loyalty schemes plus new products currently in development.

Contact
- **Graham Wright** Ingenico Fortronic
  - ☎ +44 (0)131 459 8800
  - 🖥 info@ingenicofortronic.com

PenOp Digital Signature Patent

PenOp has been awarded its 6th US patent for digital signature processing covering recording and confirming the legal intent behind an electronic transaction that is signed and sealed using any combination of biometrics, passwords, Smart Cards and PKI-based security.

"We are licensing PenOp technology to bring electronic signature capabilities to millions of business users on the Internet," said David Webber, head of development for XMLGlobal, a leading XML solution provider and PenOp partner.

"The key is providing ordinary people with a solution as familiar and easy as their current pen signature today, while allowing business to be able to quickly, securely and easily add digital signatures to their web sites and electronic trading areas."

PenOp's patented invention, in US Patent number 6,091,835, embraces multiple signature types (PINs, cryptographic keys, biometrics) and even anticipates the use of voice and video as a signature.

Contact
- **Kirk LeCompte** PenOp
  - ☎ +1 212 997 8800 ext. 124
  - 🖥 kirk@penop.com

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Biometric Technology for GSA

Keyware, a provider of biometric identification solutions, has announced it is to partner on Litton PRC's team to provide Smart Card technology to the US government. Litton is one of five vendors selected by the General Services Administration (GSA) for its government-wide Smart Access Common ID program.

Keyware's layered biometric solutions, mixing traditional authentication tools with one or more biometric elements, will offer agencies both high security and convenience. The focus initially will be to provide employee identification and building access, as well as computer network access to federal agencies.

"Keyware's biometric Smart Card technology will be an integral part of helping us bring advanced security offerings to federal agencies," said Barry Rhine, President of Litton PRC.

Danny Chu, Managing Director of Keyware, said: "As Smart Cards grow in popularity it is vital that appropriate security measures be included to assure their proper usage. The government is playing a leading role by securing Smart Cards with biometric technology such as Keyware's."

Contact
- **Elizabeth Marshall** Keyware
  - ☎ +1 781 933 1311 ext. 235
  - 🖳 emarshall@keyware.com
- **Roberta Chagnot** Litton PRC
  - ☎ +1 703 556 2503
  - 🖳 chagnot_roberta@prc.com

Leapfrog Appointments

Leapfrog Smart Products, a Smart Card software development company, has made four appointments to its Sales and Marketing department:

Thomas Delaney joins from American Express following a key business development role in the launch of the Blue card; Michael Williams who previously worked with Smart Card integrator CyberMark; Kevin Guy who worked several years for Canadian biometric technology company Opus Biometric Technologies; and Jim Dustin previously Strategy Director with Creative Change, an Internet consultant on distance learning, healthcare Web sites and corporate business simulation games.

Security Solution for Identrus

Gemplus has completed the development of GemSafe IS, a comprehensive security solution for members of the Identrus global internetwork of trust.

Built on Gemplus' GemSafe PKI-based security technology, the company says that GemSafe IS will enable Identrus participants to obtain the highest level of security for their on-line B2B transactions and benefit from the simplicity and portability of a secure Smart Card-based solution.

According to the company, GemSafe IS provides the key elements needed to design and implement a robust, global Smart Card-based solution, including consulting services, Card Issuance Management System, client-side software, card and reader package, and personalisation services. It is designed to minimize Smart Card integration issues and speed time to market.

Contact
- **Tarvinder Karsandh** Gemplus
  - ☎ +1 650 654 2917
  - 🖳 tarvinder.karsandh@gemplus.com

Fortress Cards on the Internet

SmartAxis, the creator of the first global payment service that facilitates cash-like payments on the Internet and other digital networks, will be incorporating support for the new card scheme initiated by Fortress GB in the UK, initially focusing on closed user groups.

Fortress GB plans to have a card base of over two million cards in the UK by the end of 2001 including over 100,000 cards in UK university campuses, in addition to loyalty and corporate cards.

Beatrice Larregle, SmartAxis Senior Vice President Marketing and Distribution said: "The agreement with Fortress GB brings another scheme and technology platform to our cash payment service. All Internet merchants enabled with SmartAxis will now automatically be able to accept payments from Fortress GB cardholders."

Contact
- **Adrian Weston**
  - ☎ +44 (001273 506655
  - 🖳 pr@smartaxis.com

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$227.5m Contracts for Motorola

Contracts valued at $227.5 million for GSM network expansions have been won by Motorola's Network Solutions Sector (NSS) in China, Indonesia and Oman.

Three new digital cellular network expansion contracts worth about US $190 million have been awarded by China Unicom for Motorola to expand China Unicom's GSM 900 networks in Shandong, Jiangsu and Hunan provinces, which together boast a population of 220 million people.

Unicom's network capacity will be increased by 2.3 million subscribers when the expansion is completed by year-end.

Another contract worth $27 million has come from Indonesia's largest cellular network operator, Telkomsel, to upgrade its nationwide GSM900 cellular network.

Telkomsel currently operates in major consumer areas such as Jakarta, West Java, Kalimantan, and Menado. Its plan for the year 2000 is to deploy 400 new base transceiver station (BTS) sites in Indonesia and to increase subscriber base.

Steve Shanck, Vice President and General Manager of Motorola's South Asia Network Systems Division, said: "The BSS technology being implemented here will allow cellular access to hundreds of thousands of new people, and will also be the groundwork for future networks."

Oman's Ministry of Posts, Telegraphs and Telephones General Telecommunications Organisation (GTO) has awarded a $10.5 million contract to Motorola for the expansion of its GSM digital cellular network.

Motorola will deploy its M-Cell GSM infrastructure to provide extra capacity for up to 35,000 cellular subscribers and enhance coverage in the Batinah Coast area of Oman.

The GTO GSM network currently serves some 120,000 subscribers and is growing at a rate of between 3,000 - 4,000 subscribers per month.

Contact
- **Joe Arimond** Motorola NSS
  - ☎ +1 847 632 3889
  - 🖳 Jarimoni@email.mot.com

SILA / Schlumberger Partnership

Aether Systems' European venture with Reuters, SILA Communications, has signed a worldwide licensing agreement with Schlumberger for its Simera Java SIM cards to host SILA's software allowing large volumes of data to be transmitted to mobile phones and other wireless devices quickly and at minimal cost.

The compression software means that high volumes of data, such as market and share changes, and broadband services can be compressed into small packages and sent to any device over the limited amounts of bandwidth currently available.

Eric Claudel, Vice President Mobile Communications for Schlumberger in Europe, predicted: "In less than a year, most mobile devices will be fitted with the capability to receive and display a range of information in a format that is cost effective for operators to provide and easy for customers to use."

Contact
- **Greg Abel** Aether Systems
  - ☎ +1 410 654 6400
  - 🖳 gabel@aethersystems.com
- **Emma Hibbett** Key Communications for SILA
  - ☎ +44 (0)20 7580 0222
  - 🖳 emmah@keycommunications.co.uk
- **Emmanuelle Saby** Schlumberger
  - ☎ +33 (0)1 47 46 71 04
  - 🖳 saby@montrouge.tt.slb.com

Secure SIM for m-Commerce

Gemplus and Diversinet Corp., a provider of m-commerce security infrastructure solutions, have completed a joint development project embedding Diversinet PKI technology in Gemplus' GemXplore Trust PK-enabled SIM cards.

The product is expected to be commercially available at the end of September.

Contact
- **Brendan Lewis** Edelman PR Worldwide
  - ☎ +1 212 704 8176
  - 🖳 Brendan_lewis@edelman.com
- **Severine Percetti** Gemplus
  - ☎ +33 4 42 36 67 67
  - 🖳 Severine.percetti@gemplus.com

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GPRS Network Trials

Alcatel has delivered China's first WAP over GPRS (General Packet Radio Services) trial network to China Mobile Communications Corp (CMCC), the biggest mobile operator in China. The trial network was installed in Hangzhou, the capital city of Zhejiang Province, for Zhejiang Mobile Communications Co. (ZMCC), a provincial subsidiary of CMCC.

"We are confident that ZMCC will be the first operator to provide WAP over GPRS services to customers in China," said Hu Songling, Deputy General Manager of ZMCC. "Today, few people in China access the Internet via GSM because it is far from being reliable, efficient and cost-effective for mobile Internet users. But WAP over GPRS will change the situation significantly by offering high speed for data, high reliability and cost- effectiveness - only the volume of data transmitted is chargeable," he explained.

In Taiwan, the country's largest mobile operator, Chunghwa Telecom, has signed an agreement for the delivery of the Nokia GPRS Core network solution which will enable Chunghwa to provide mobile Internet access to more than one million of its subscribers - offering packet switched data via its GSM network. Chunghwa will be ready to launch commercial applications using the new technology at the beginning of next year.

Nokia has also been chosen by Optimus, one of the largest mobile operators in Portugal, for the provision of its GPRS core network. The three year deal will mean subscribers to the Optimus network will have the possibility of continuous connectivity to the Internet and faster access to new services. The Nokia solution will be integrated into the existing Optimus GSM network allowing the roll-out of packet-based Mobile Internet services to around 85 per cent of the population in Portugal.

In addition, Lucent Technologies is to trial GPRS wireless communications technology with Malaysia's GSM digital network Celcom. The Lucent technology complements Celcom's circuit- switched voice network with the ability to efficiently carry packets of data in accordance with Internet Protocols (IP). It is also seen as paving the way to enhanced applications accessed over third generation (3G) UMTS (Universal Mobile Telecommunications Services) wireless systems.

John Hughes, President of Lucent's GSM/UMTS business, said: "We have already demonstrated our ability to rapidly deploy the base station software needed to launch a large-scale GPRS service in Germany. We will now be able to apply this experience in Malaysia by delivering both the network backbone and base station enhancements and helping define and develop new revenue-generating applications enabled by this exciting Mobile Internet capability."

Contacts

■ **Brian Murphy** Alcatel
 ☎ +1 972 519 6677
 ⌨ Brian.murphy@usa.alcatel.com

■ **Communications Department** Nokia Networks
 ☎ + 358 9 5113 8195
 ⌨ nokia.networks@nokia.com

■ **Marissa Sin** Lucent Technologies
 ☎ +60 3 2164 3380
 ⌨ marissasin@lucent.com

Flat rate GSM Worldwide

Mint Telecom have announced a simple pre-pay service it claims will save UK businesses millions on international roaming calls. It will offer its customers a single tariff covering 114 countries over 240 networks, with savings of up to 80 per cent on their roaming calls.

There will be no contract or registration costs, no roaming deposits or monthly fees. The customer purchases a pre-paid Mint BasicCard, inserts it into the phone and the service is enabled.

Every call made, regardless of origin or destination, is charged at 85p per minute and every call received is charged at 42p. To top up with credits Mint RefreshCards can be purchased over the Web, by phone or at outlets across the country.

Mint's service comes equipped for mobile Internet, sending and receiving e-mail, SMS, information services (weather, breaking news, stock exchange, currencies etc) and Internet access. Receiving e-mail, SMS, refresh calls, credit balances are at no charge and sending SMS or e-mail costs 0.09p per message from any country to any country worldwide.

Contact

■ **Adrian Wood**
 ☎ +44 (0)7867 804 804
 ⌨ www.mint-tele.com

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Five Million Transactions in a Day

Hong Kong's mass transit card Octopus set a new record on 9 August when it was used more than five million times during the day. Creative Star, the joint venture company representing the major transit operators in Hong Kong, also reported that the average daily number of Octopus transactions had increased by 30 per cent compared with August 1999.

This record use of the Octopus contactless Smart Card may have resulted partly from extra journeys by students following the release of their examination results, and partly from the recent installation of the Octopus system on more Kowloon Motor Bus (KMB) buses. All KMB buses are scheduled to be equipped with Octopus readers by the end of this year.

Launched in September 1997, the Octopus system now has more than 6.4 million cards in circulation. After becoming a Deposit Taking Company in April, Creative Star is now extending the Octopus to other low-value, high-volume transaction businesses, but says its core focus will remain on public transport-ation.

Contact
- **Ms Joan Ng** Creative Star
    - ☎ +852 2266 2226
    - ▤ +852 2266 2254

Precis Reports Loss

Precis Smart Card Systems has reported a loss of $127,093 for the three months ended 30 June, 2000 compared with a loss of $227,298 for the same period in 1999.

Larry Howell, Precis' CEO, said: "During the second quarter, Precis has made significant progress in its introduction of the Instacare Emergency Card." The Smart Card-based technology, is described as an innovative healthcare application designed to help paramedics and emergency room personnel save lives by providing instant access to a patient's vital medical information.

The company's products also include stored value solutions and loyalty programs.

Visit
- ▥ www.precis-scs.com

CardsEurope Show in London

Donald Tapscott, Chairman, Alliance for Converging Technologies, will give the keynote presentation at CardsEurope 2000, billed as Europe's most important Smart Cards conference, which will be held at the London Arena from 26-28 September.

An internationally recognised authority on e-commerce, he will examine the key factors for competing in the digital economy, discuss how the Internet and wireless new media are transforming business, government and society and provide an insight into business webs and the creation of wealth.

Conference topics include secure e- and m-commerce, convergence, Smart Card operating systems, Public Key Infrastructure, digital money, Smart Cards, mobility and the Internet; and applications - the key to the Smart Card business case.

There are optional pre-conference workshops on 25 September run by members of the industry's leading security forum, Radicchio, on how to apply PKI (Public Key Infrastructure) to your business.

Contact
- **AiC Worldwide**
    - ☎ +44 (0)20 7242
    - ▤ +44 (0)20 7242 2320
    - ▥ www.cards-worldwide.com

Smart Cards for the Macintosh

SmartAxis has announced what it describes as a technical breakthrough by co-operating with Apple and Smart Card reader manufacturers to develop a MacOS version of the industry standard PC/SC Smart Card reader driver framework.

The company has also developed a Macintosh version of its electronic cash software, underpinned by the MacOS PC/SC components, which will allow Macintosh users to shop using electronic cash on a Smart Card for the first time.

The SmartAxis is a payment service for prepaid services on the Internet and other digital networks.

Contact
- **Adrian Weston**
    - ☎ +44(0)1273 506655
    - ▥ pr@smartaxis.com

Briefing Notes on Multi-Application Smart Cards - Part 9

The software provided with the SCN Multi–Application Toolkit provides a simple interface that allows us to send commands to the card. The installation process sets up the environment shown in Figure 19.

The scripts necessary to communicate with the card will be written in the Python language. This is a simple object orientated (OO) interpreted language like on 'OO' version of the Basic language. It has much in common with C++ and Java but without the complexity. In fact it acts as a popular rapid prototyping tool. We will be using JPython which is a version of Python written entirely in Java. This offers the particular advantage that it can easily interface with externally provided Java Classes which is one of the most effective ways of adding the GUI (Graphics User Interface). This enables the development of full applications apart from the command line scripting approach that we will use in these briefing notes. There must be a snag and yes, in one, it is performance. The JPython interpreter acts at a fraction of the speed of a compiled C or C++ program. Sometimes this doesn't matter but when it does you can separate out the time critical code for implementation in a more efficient language.

The way that we will use our development environment is to open Microsoft's Wordpad as the editor on the workbench and also to open Beanshell Desktop which is our interface to the JPython interpreter. We will write and edit our Python source file in the Wordpad editor and execute the programs through the Beanshell Desktop.

To actually send and receive messages with the Smart Card there are four more levels we need to know about. JPython interfaces to the Open Card Frame-work (OCF) which is a platform independent inter-face to Smart Cards. Unfortunately OCF drivers for Smart Card readers are often problematic so we have chosen to use a bridge to the windows PCSC API. The PCSC Smart Card reader drivers are far more stable and we have included a driver for the Towitoko card reader as part of the toolkit installation.

Let us first familiarise ourselves with the Beanshell Desktop environment. After starting the program we are presented with the command line prompt:

```
>>>
```

At this stage we can type any valid Python expression. It is important to note that Python is case sensitive, the correct use of capitals is essential. Let's try a few examples:

```
(press return after each line)
```

```
>>>print 'Welcome to the SCN toolkit'
Welcome to the SCN toolkit
>>>1111*1111
1234321
>>># This is a comment line
>>># For X to the Power Y mod N
>>> x=3
>>> y=4
>>> n=11
>>> pow(x,y) % n
4
>>>
```

Clearly this is a little tedious so let's create a Python file in the Microsoft Wordpad editor. Start the editor and type the following:

```
print ' A Simple Python example'

x=33
y=3
n=55
print pow (x,y) % n
print 'End of Program'
```

Indentation is an important part of the Python syntax so each of the previous lines must start in column 1.

Now save the program under the following path which is the default installation

C:\Program Files\SCN Toolkit\JPython1.1\Lib\test.py

Where test.py is the name of our new Python source file.

Assuming the Beanshell is still on the desktop (if not reload it) we can type:

```
>>> import test
A simple Python example
22
End of Program
>>>
```

We can now go back to the Wordpad editor and change the program. Let's change the line y=3 to become y=5. Save the program and reselect the Beanshell.

```
>>> reload (test)
A simple Python example
33
End of Program
<module test at xxxx>
>>>
```

Once we have imported the file into the Beanshell, successive runs require us to reload as shown in the example.

Now we can start talking to the Smart Card. We will begin by reading the ATR (answer to reset) from the card. This function should work with any Smart Card, even a GSM SIM card. In the editor create the following Python program (note the use of capital letters and indentation).

```
from opencard.core.service import *       # Import the OCF servicesfrom
opencard.core.util import HexString

def start():
    global sm                             # Name for Smart Card object
    global cid                            # Name for the Card ID object
    SmartCard.start()                     # Start OpenCard
    cr = CardRequest()                    # Sets up kind of Card object
    print 'Please Insert card if not already in slot'
    sm = SmartCard.waitForCard(cr)        # Gets the Smart Card object
    cid = sm.getCardID()                  # Gets the Card ID object


def stop():
    SmartCard.close(sm)                   # Closes Card Object
    return SmartCard.shutdown()           # Shuts down the OCF


def testCard():

    start()
    print "ATR bytes are     ", HexString.hexify(cid.getATR())
    print "Historical bytes ", HexString.hexify(cid.getHistoricals())
    stop()
```

Here we have defined 3 functions:

-start ()
- stop ()
- testCard () (Note the capital C)

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Where the empty bracket signify there are no parameters. The main function that we want to use is test card which will print out the complete ATR of the card and on a separate line, that part of the ATR that represents the historical bytes. Save this program as before in the same path with a file name of atr.py.

Another way of using the import statement is to type:

```
>>> from atr import testCard
```

this allows us to identify individual functions without having to type the full definition (in this case atr.testCard ()) so now we can type:

```
>>> testCard ()
```

which for the SCN toolkit Schlumberger card will return:

```
Please insert card if not already in slot
ATR bytes are      3B 16 94 81 10 06 01 81 3F
Historical bytes   81 10 06 01 81 3F
```

The ATR may be interpreted as follows:

```
TS = 3B      Direct Convention
T0 = 16      MSB001 means TA1 is present
             LSB 6 means there are 6
             historical bytes

TA1 = 94
```

Now go ahead and try some different Smart Cards.

To Be Continued

David B Everett and Jon Barber.

Reference:

The Quick Python Book, Daryl Harms & Kenneth McDonald, ISBN 1-884777-74-0

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■ TRUSTWORTHY TRANSACTIONS

Confidence and confidentiality are the two essentials of any financial transaction. ST smartcard chips utilize many proprietary and standard security innovations. ST products for Banking, Health, Pay TV and other applications have been certified to both ITSEC level E3 High and the new ISO 15408 Common Criteria level EAL4+ making ST products as trustworthy as the transactions they enable.

Working in partnership with leaders in both industry and commerce, STMicroelectronics designs and produces some of the world's most advanced Systems-on-Silicon for smartcard applications.

www.st.com/smartcard

■ CONTACTLESS

Opening up a world of free-flow access, contactless smartcards offer both security and convenience. ST contactless chips use the new ISO 14443 Type B RF protocol which supports full MCU functionality for security and 424 Kbits/sec data rates for fast transactions. Latest generation devices are designed for multi-application use reliably combining functions like ticketing with electronic purse applications for purely contactless transactions.

■ CONFIGURABLE

The challenge of smartcard implementations demands a platform with a powerful CPU and large memory capacity - a platform able to support applications in languages such as JavaCard. Designed to ensure high security and maximum asset protection, ST smartcard chips, such as the 32-bit SmartJ™, feature powerful cryptography, advanced firewall architectures and proprietary memory management techniques, allowing dedicated application downloading and configuration.

THE PEOPLE WHO MAKE SYSTEMS-ON-SILICON WORK FOR YOU