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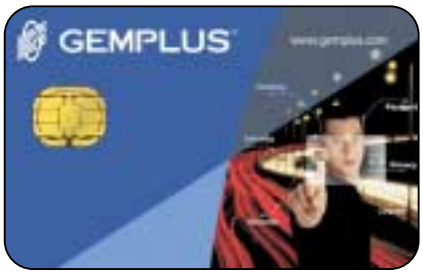

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Dear Subscribers,

October is the month of Elsevier's annual biometric conference and exhibition held in London. At this exhibition one of the items that I found particularly interesting were the findings by Dr. Itiel Dror, a psychology lecturer at Southampton Universality (UK). He said that fingerprint analysis is not infallible because the human brain makes mistakes in the way it processes the information. He backs up his statement by pointing out the case of the American Muslim who was wrongly identified as one of the Madrid bombers after his prints appeared to match those taken at the crime scene.

Dr. Dror's research team tested whether experts can be effected by outside influences, in other words what happens if they are pre-conditioned with the expected result. In such a case they may be persuaded that the result of the test will be negative because the person couldn't have been there. Five expert examiners were tested with examples of prints that they had previously identified as positive matches in court five years earlier. Only one of the experts agreed with their previous decision. Very worrying and confirms the need for more than one biometric.

The Cambridge Computer Laboratory has, over the past four years been studying over 200 billion iris cross-comparisons with the cooperation of the Abu Dhabi General Directorate of Police. Back in 2001 Abu Dhabi Police launched a national border-crossing security programme based on mathematical analysis of the random patterns visible in the iris. Nearly 2 trillion iris comparisons have been performed and some 46,000 persons found to be carrying false documents. According to officials there have been no False Matches. Apparently their iris data base is the largest in the world.

The November newsletter will carry more news from this important event. On a different subject, for those in the Multos fan club, we hear that the arrangements to form the new company taking it out of Master Card's control with help from Keycorp, Hitachi and Oak Hill Venture Partners is now about to be announced, we may be able to glean more information when we are at CarteS in Paris. I hope to see some of you there.

Patsy

Australia and New Zealand Poised to Get Smarter

The Smart Cards market in Australia and New Zealand has been lagging behind other neighbouring Asian countries. The high cost of Smart Cards when compared to other automatic identification data capture technologies is the main barrier to the higher uptake of the product in the market. In addition, the lack of standards and the interoperability across both systems and state boundaries have contributed to the slow uptake of Smart Cards.

However, the Smart Cards market in Australia and New Zealand is likely to experience growth driven by the migration of banks toward becoming Europay, Mastercard, Visa (EMV) compliant by 2006. The establishment of multi-application Smart Cards and the associated sharing of costs among market participants are projected to lead to a critical mass that would increase the uptake of Smart Cards in the future. Smart Card adoption is gaining speed as governments and corporate entities are currently deploying a wealth of projects ranging from national identity to telecommunications, banking, e-commerce and healthcare. Card transactions are progressively displacing cash and cheques as the preferred payment methods in Australia and New Zealand. The key end-user markets in Australia are telecommunications, government and healthcare, financial, transit and others.

In New Zealand, the main application is telecommunications, with 90% of the unit shipments, while transport /security and access control comprise the remaining 10%.In Australia telecommunications is benefiting greatly from changes in the mobile phone network infrastructure, with a sizeable contribution coming from the global system for mobile (GSM) phone market. "The move toward EMV compliance is set to strengthen the Smart Cards markets -- particularly the financial segment -- in the Australian and New Zealand regions by 2006, with the final deadline fixed at 2008," notes the analyst of this research by Frost and Sullivan. "In New Zealand, banks and retailers associations are advising the countrys retailers to speed-up their adoption of point-of-sale (POS) terminals that support EMV."

The usage of Smart Cards in Australia and New Zealand is likely to rise once the banks sign the EMV mandate. With New Zealand making a total move toward EMV in the next 2 to 3 years, Australia is also likely to accept it completely. The technology also needs government approval for functioning as a viable business-to-business (B2B) solution, serve as credit cards and identification tools, and for securing IT networks and information. Overall, the market condition is likely to improve with the unit shipment of Smart Cards growing at a compound annual growth rate (CAGR) of 22.3% from 2004 to 2009. During the same period the usage in the telecommunications segment is set to go up at a CAGR of 9.4%.

In other plans, the Australian government is working on a proposal to deploy Smart Cards to millions of its citizens. They are working towards a project in whichSmart Cards incorporating a photograph of the bearer will replace the vast range of government services and concession-cards, such as the Medicare cards, that are currently in place. The project under consideration is believed to cost around 500 million Australian dollars ($380 million)--two and a half times the figure quoted in some news reports on the topic. The government is hoping to launch the first cards by the end of 2007. The aim of this new single Smart Card scheme would be to cut the current costs of running 26 different schemes and to help prevent identity theft.

This demand from the government and healthcare segment for government related projects and hospitals respectively and transit segment, especially from electronic toll collection (ETC) and transport ticketing systems-- and university students is further set to boost the market demand.

Smart Cards

Hacked Payments Platform Sold

Back in June this year we reported that CardSystems Solutions had suffered a security breach perpetrated by a lone hacker that could have exposed 40 million credit card holders to fraud, the outcome of which lead MasterCard, American Express and Visa to stop using them. After the disclosure, CardSystems CEO John Perry admitted that the company had not destroyed credit card information therefore breaching data protection and storage rules set by MasterCard and Visa. Recently the company has reported that they had had an audit and that they now meet the Payment Card Industry data security standards.CardSystems Solutions have now had their assets bought by the US biometric authentication vendor Pay By Touch for an undisclosed amount, the assets include the firm's payments platform which processes credit card transactions for more than 120,000 merchants. .

Goznak Selects Axalto for E-Passport

Axalto has announced it has been selected by Goznak - the national printing agency of the Russian Federation - to participate in the pilot phase of the national electronic passport program. The government of the Russian Federation plans to first deliver electronic passports to its citizens traveling abroad. There are approximately 10 million international passports in circulation in Russia, delivered to international travellers. In addition the Russian government intends, in a second phase, to replace the current domestic passport with an electronic passport that will be delivered to all Russian citizens. Initial quantities of international electronic passports will be produced and delivered before the end of 2005.

Nanjing Contactless Fare Collection

The first line of the new metro in Nanjing, China, equipped with a contactless Smart Card fare collection system provided by Thales and its Chinese partner company, Panda Electronics, has gone operational. Since the official inauguration on 3rd September, an average of 100,000 fares per day, with peaks up to 150,000 on busy days, are managed by the Smart Card system. The contract for the fare collection system for Line 1 is worth more than 18 million Euros. Nanjing city plans to have a massive metro network to be completed by 2050 that will include 150 stations for 14 lines.

The system is compatible with Nanjing City Card which allows for payment of public transport, including buses and taxis, and could be extended to payment of non-transport services in the future.

Danish e-Ticketing Rollout

Rejsekort A/S, a company established by Denmark's public transport industry, has selected the EastWest Consortium, led by Thales and Accenture, to provide Denmark with a national e-ticketing Travel Card scheme. The contract value is more than 200m euros. The new Travel Card uses contactless Smart Card technology and will replace the various ticketing systems used by Denmark's different transport providers.

Oberthur Certified for Chinese EMV

Oberthur Card Systems has announced the certification of its Moneytic Chrysalis payment card product range by the Chinese Bank Card Test Centre (BCTC). This new product is fully compliant with the recently PBOC1 V2 Debit Credit card specifications which will be used by Chinese Banks in the forthcoming EMV migration. In addition, both Visa and MasterCard current EMV card specifications are supported in order to manage the requirements from 'dual currency' issuers.

Intelligent Badges to Berlin Police

Axalto and PPC Card Systems GmbH have supplied a badge solution to the Berlin Police Department in Germany. The Berlin Police Department uses these badges for identification and for ensuring secure access to networks and information. The smart ID cards replace the conventional ID badges previously used. The chip on the ID enables the Berlin Police Department to significantly upgrade the security of the department's computers, networks and confidential Web sites.

Oberthur Acquires Africard

Oberthur Card Systems has acquired Africard (Pty) Ltd, a Labat Africa Limited company and a South African card manufacturer, for a purchase price of 20 million ZAR (around 2.5 million euros), debt and cash free. The transaction will take place after the approval at the next Labat shareholders' general meeting. Africard, which will be renamed Oberthur Card Systems South Africa, will address the South African domestic market and other English speaking African countries. Oberthur Card Systems will make available its Smart Card technology and provid manufacturing and personalisation capabilities.

Smart ID Cards Promised by 2012

Israel's Interior Ministry official Oscar Abuzrak has announced that by 2007, the ministry will begin distributing smart identification cards to replace today's laminated photo ID which may be fraudulently duplicated with relative ease. According to Abuzrak, the electronic chip on the card can ensure necessary security clearance to view stored information, permitting the card to replace many other cards carried by Israelis . In accordance with the projected timetable, activation and distribution will be accomplished by 2012.

Contactless National ID for Morocco

The Kingdom of Morocco's national security service (DGSN - Direction Générale de la Sécurité Nationale) has awarded Thales a contract to supply a complete system to produce and personalise national identity cards. This will be the world's first ID system of this scale to be based on contactless Smart Card technologies. This type of technology ensures maximum document security for a guaranteed lifespan of ten years. This advanced ID system includes both personal details and biometric data and meets new security requirements concerning travel documents and control of migration flows.

Gemplus Thrives in Middle East

Gemplus has continued its successful delivery of Smart Card technology and services to its government customers in the Middle East. In the Sultanate of Oman several hundred thousand smart national ID cards enhanced with biometrics (fingerprints) have been rolled-out to date, with new applications such as driver's license, electronic purse, airport border control and e-gate check-in, being added over time. In the United Arab Emirates Gemplus has delivered Smart Cards to the Identity Authority for mass-deployment of its national ID program.

QNB Acquires ACI's Chip Manager

The Qatar National Bank (QNB), Qatar's leading bank, has announced that it has acquired the licensing of ACI Smart Chip Manager solution. As Qatar's retail banking industry continues to develop, ACI Smart Chip Manager will pave the way for QNB customers to receive simpler and more convenient bank-issued card services with multiple applications on a single Smart Card when the market is ready. An ACI customer for over six years, QNB currently employs ACI's flagship BASE24 payments software to handle over seven million transactions each year.

T7Plus for Canada's SmartCity

Hypercom Corporation has announced that Coinamatic, Canada's largest multi-housing laundry route operator, has agreed to purchase Hypercom's new T7Plus credit/debit card terminals for use with their SmartCity Smart Card platform. SmartCity, developed by Coinamatic, is Canada's largest reloadable Smart Card system, providing a variety of micropayment services.

Axalto Introduces Protiva

Directly addressing the security weakness of passwords in enterprises, financial institutions and electronic commerce portals, Axalto has launched Protiva, a two-factor authentication product suite for protecting network identities and information. Protiva protects identities, defends against phishing attacks and takes information system security to the next level. Protiva is a set of products that provides a flexible end-to-end solution to securely establish a user's network identity at home, at work or on the road.

Gemplus Delivers SIMs Direct to Yallo

Gemplus has won the contract to be the sole supplier of yallo, the new Swiss mobile offering via the Internet from TDC Switzerland AG. TDC Switzerland with its main brand sunrise is the leading independent Swiss full-service provider. Since the launch of yallo in May 2005, Gemplus has been providing yallo SIM cards and personalisation services which were delivered direct to yallo customers through Swiss PostExpress.

SAGEM Acquires ORGA

SAGEM Defense Securite, part of the Safran Group has purchased the whole of ORGA from the Gunther Group for an undisclosed amount. The new company will operate as SAGEM ORGA and the combination of the Smart Card activities of SAGEM and ORGA should create a unit aggregate of over 300 million Euros in 2006. There will be no personnel changes at ORGA but Oliver Jaster will be replaced by Philippe D'Andrea as CEO of SAGEM ORGA.

ACG Awarded ITSO Certification

ACG Identification Technologies GmbH has received ITSO certification for five types of its Smart Cards, namely the Philips Mifare Ultralight, Philips Mifare DesFire, Philips Mifare 1k, Philips Mifare 4k and Infineon Mifare 1k.

US Bank Selects GemInstant

One of the top ten leading banks in North America has selected Gemplus' GemInstant cards for its contactless payment program. GemInstant cards leverage contactless technology to simplify payment for small value transactions in venues where speed is essential. The cards are MasterCard PayPass compliant and contain a built-in chip and antenna that uses short range radio waves to allow cardholders to simply tap their card on a specially-equipped terminal to securely transmit account details.

New Axalto Card Center in Canada

Axalto has opened its new advanced payment card personalisation center outside of Toronto, Ontario in Canada. The ultra-secure facility, which enables bankers to add Smart Card technology to credit and debit cards, will start deliveries immediately to one of Canada's largest financial institutions.

Daon Wins F&S Award

Frost & Sullivan has selected Daon as the recipient of the 2005 Emerging Company Award for its leadership status, high quality products and services and technology expertise in the identity assurance industry. Each year this Award is given to a company that has a unique and revolutionary product solution with significant market potential. Additionally the Award certifies that a company's marketing strategy is sound and poised for success.

GemLucence Cards for French Bank

Gemplus has delivered limited edition GemLucence cards to the French bank, Groupe Caisse d'Epargne. The volume roll-out of the translucent payments cards, which began in September 2005, is a first for the French market as well as for Gemplus. In a bid to attract new customers to Groupe Caisse d'Epargne, the GemLucence card, with its mandarin tinted transparent card body, has been specifically designed to appeal to the youth market (from 16 to 25 year-olds). In addition, to promote exclusivity, availability has been restricted to 100,000 units.

New Cross-Licensing Agreement

Axalto and Infineon Technologies have announced they have entered into a non-exclusive cross-licensing agreement, granting each other license rights regarding some of their respective patents in the field of Smart Cards with enhanced connectivity.

This agreement illustrates the willingness of both parties to develop and market new USB-enabled Smart Cards. This agreement will enable Infineon to provide all its customers with new smart ICs and modules and Axalto to provide its customers with new Smart Cards and applications. Further information on the terms and conditions of the agreement was not disclosed.

New Integrated Bezel Reader

Amphenol-Tuchel Electronics GmbH has launched of their new PCI protected Hybrid Card Connector, which has been designed for convenient card handling and a reliable card reading. The special shape of the bezel helps to ease the card handling and ensures a secure card guiding. Designed specifically for space critical applications the new low profile magnetic head offers even more flexibility. With a total height of only 12,8mm this is one of the the most compact hybrid reader on the market today.

TTA Melbourne Project Awarded

The Transport Ticketing Authority (TTA) in Melbourne Australia, has announced it will order the design, installation and operation of a highly innovative public transport fare collection system for the State of Victoria (the "Melbourne Project"). The contract has been awarded to Keane Australia Micropayment Consortium Pty Ltd (Kamco). The total project volume amounts to USD 380 million.

First Batch of Thai ID Smart Cards

Thailand's Information and Communications Technology Minister, Sora-at Klinprathum, has said that the first 1.3 million smart citizen ID cards, out of a total of 12 million, should be ready for distribution to residents of Yala, Pattani and Narathiwat provinces of Thailand by Oct 1. Mr Sora-at denied the ministry is rushing the production of Smart Cards to meet the October deadline set by Prime Minister Thaksin Shinawatra. About 4 million Smart Cards would then be produced monthly after that, Mr Sora-at said.

Zebra Opens New Training Centre

Zebra Technologies Europe Ltd have opened their first Training Centre in Dubai to support and drive growth through the Middle East Channel Partners. The opening of this new facility in the Jebel Ali will ensure that Zebra Channel Partners in the region are trained and educated on the range and the applications of Zebra products.

TotalIDOne for US Clear Program

Oberthur Card Systems has been selected by Verified Identity Pass and Lockheed Martin to issue the TotalIDOne Smart Card solution for use in Orlando International Airport's "Clear" registered traveller pilot program. Lockheed Martin, the technology integrator on the project, has selected Oberthur Card Systems to manufacture and issue all the IDOne Cosmo cards based on Philips Semiconductors' highly secure SmartMX Smart Card IC platform.

Smart Cards for Franch e-Services

Axalto and ChamberSign France, the certification authority for French Chambers of Commerce and Industry (CCI), have formed a partnership aimed at providing an e-services solution secured by Axalto Smart Cards. Under this agreement, Axalto is ChamberSign France's sole supplier, while LD Systemes is responsible for Smart Card integration and customisation. Several thousand French companies have already acquired this solution, and in the long term the two million companies registered with the Register of Commerce and Companies could be concerned.

ITG Acquires Tag Technology

ASSA ABLOY Identification Technology Group (ITG) has aquired Tag Technology, a Italian distributor of advanced auto ID components to the RFID systems and Smart Card solutions industry. Based in Milan, Tag Technology serves OEM clients, system integrators, software houses and public institutions, and offers a complete portfolio of high-quality RFID transponders, inlays, reader ICs, reader modules and industrial data collection terminals.

LEGIC Opens Office in France

LEGIC Identsystems Ltd has opened a sales office in Paris to meet the needs of the French market. Large growth in the demand for LEGIC's 13.56 MHz Smart Card technology in secure applications such as access control systems, contactless payments, time & attendance and other applications has warranted their commitment to the French market.

T2100 Debuts in Russia

Hypercom Corporation has announced that Visa in Russia is now offering Hypercom's Optimum T2100 card payment terminal to banks and retailers throughout Russia and the Commonwealth of Independent States.

The decision reflects the rapid growth of electronic payments in Russia and the earlier selection of the T2100 for the Visa Smart Breakthrough Acceptance Device Program, established to promote the use of point-of-sale devices that comply with the global EMV standard for chip-based debit and credit cards.

Biometrics

US Air Force Deploys iGuard

Artemis Solutions Group (ASG) has announced that the United States Air Force is deploying 80 units of Lucky Technologies iGuard LM Series fingerprint and Smart Card IP security devices to secure Information Technology assets within the US. Through ASG's authorised government reseller, Patriot Solutions, Inc. of Baltimore Maryland

US Biometric Entry Expanded

The U.S. Department of Homeland Security (DHS) has announced the scheduled expansion of the US VISIT program's biometric entry procedures to additional land border ports of entry (POE). US-VISIT entry procedures have been operational in the secondary inspection areas of the 50 busiest land border ports of entry since December 29, 2004, and are also in place at 115 airports and 15 seaports. The deployment will be completed by December 31, 2005.

Biometrics Help Track Vehicles

Secured Digital has announced that Innospective had completed the development of an integrated vehicle tracking and security application using biometric and Smart Card devices. The company reported that it had jointly developed devices using Smart Card authentication that provide real-time tracking of vehicles and are also integrated with the vehicle ignition system and capable of remotely disabling a vehicle to help guard against theft, hijacking or unauthorised usage. The tracking and security application is expected to be in use by 1,000 vehicles by early 2006.

Canada's Fastest Growing Company

Bioscrypt Inc has been recognised as a 2005 Canadian Technology Fast 50 company, an annual ranking by Deloitte of the 50 fastest growing companies in Canada based on the percentage of growth from 2000-2004. Having 4,724 % revenue growth over the past five year period, Bioscrypt ranked 5th overall in the 2005 Canadian Technology Fast 50.

BioSchool Targets School Attandance

Schools around the world will now be able to use its BioSchool solution for monitoring and reporting student attendance. After a positive customer response for two systems installed at the First Toa Payoh Secondary School in Singapore, BioGuard is launching its school attendance biometric solution starting October 1st, and offering it to schools worldwide.

The UK launch of the product will start with the implementation of BioGuard's technology by Redland County Primary School based in Chippenham, Wiltshire.The solution is based on check-in stations. The students are required to 'check in' with their fingerprints at these stations on a daily basis. The system automatically identifies and positively verifies the student's identity and stores it in the database.

A student that has not been reported to be in school 30 minutes after school begins will be recorded in an absence report. Parents and guardians are automatically alerted via SMS messages to their mobile phones. The system is also connected to payment systems in the school canteen, allowing students to purchase goods and be charged by simply identifying themselves against a biometric point-of-sale post. The system can be further integrated into the personal locker system where the lock/unlock system can be identified using a biometric fingerprint interface.

Radio Frequency Indentification

RFID Ticketing Chip for Australian

Innovision Research & Technology has launched Jewel, its low-cost contactless smart ticketing chip for mass transit, into the Australian market. The launch coincides with a huge surge in activity by Australia's Smart Card industry, combined with the development and trialling of a number of smart ticketing projects in cities like Perth, Sydney, Melbourne and Brisbane. The company is working closely with a number of key partners - including ticket manufacturers, Giesecke & Devrient, KSW and Bemrose Booth and ticket reader manufacturers, Empresa 1, Almex and Kentkart - to educate the market and drive adoption. In fact, G&D is one of the members of a winning consortium supplying a new Smart Card system to Melbourne, and more opportunities are anticipated in the coming months.

UPM Rafsec Ahead of Schedule

UPM Rafsec's new RFID tag production facility in Fletcher, North Carolina (USA) has begun operations ahead of schedule and is now supplying RFID tags to the company's customers in North America. Ramp up of production was originally planned for the latter part of Q4 2005. The tags coming out of the Fletcher facility are manufactured with UPM Rafsec's technology for volume production of EPC (electronic product code) compliant UHF tags. The yields of this new, high volume production technique provide UPM Rafsec with a competitive advantage among suppliers of low-cost RFID tags.

Jewel Gets UK ITSO Approval

Jewel, the world's smallest low-cost contactless ticketing chip from Innovision Research & Technology, has become one of the first ITSO approved Limited Use media in the UK. The announcement means that the UK transport sector now has access to a fully approved ITSO Limited Use media for the first time, enabling operators, authorities and systems integrators to roll out fully contactless ITSO approved ticketing systems across all fare structures and media.

Organic RFID Chip Lowers Prices

Sun-chan university in Korea have developed an organic RFIDs which will cut down the chips price. Prices are currently high due to the complicated RFID manufacturing process, and this resulted in high prices. The chip will cost 0.5 cents to produce, much lower than what Wal Mart predicted. The new RFID Tag chip is able to function on the 30 kHz frequency by only using 100% organic compounds and an inkjet printer. By cutting down the price considerably it will allow for mass production through the printing process. The chip can also be printed on any paper, plastic and wood standard.

RFID/Biometric Markets to Expand

Electronic methods of personal identification - e-passports, visas, driver's licenses, national ID cards, and government access badges - which exist today only in limited numbers if at all, will become a huge global phenomenon (and market) by the end of the decade.

Prompted largely by the current wave of terrorism, countries around the world - not just large, high-tech nations such as the US, but even poor, obscure countries such as Myanmar - are putting electronic identification security systems in place.

According to a new study from ABI Research, the push to issue electronic identification and its backing infrastructure will result in a rapid expansion of the global markets for RFID and biometric technologies. "RFID Border Security Markets" evaluates these homeland security initiatives and forecasts market performance by region and by application for the period 2003-2009.

In 1998, Malaysia was the first country in the world to issue e-passports, supplied by IRIS Corporation. Much of the impetus today comes from the US Visa Waiver program: all countries wishing to continue their participation must switch to e-passports containing biometric information by October, 2006. That also means that an interoperable worldwide infrastructure to encode and access document data must be established by then. But it is in 2007 and 2008, says ABI Research analyst Sara Shah, that higher-volume implementations -- ID cards in France and the UK, driver's licenses in the US, and many more - will have a major impact.

Financial Results

Ingenco Report Sales Figures

Ingenico has reported a sales figure of 207.4 million euros in the first half of 2005, up 1% over the first half of 2004. Following 6.1% growth during Q1 2005 in relation to Q1 2004 (98 million euros, vs. 92.4 million euros), second-quarter sales slipped 3.3% (109.4 million euros, vs. 113.2 million euros in Q2 of the previous year). Consolidated operating income in the first quarter of 2005 was 1.1 million euros, as opposed to 8.4 million euros in Q1 2004.

SCM Updates 3rd Quarter Revenue

Based on its preliminary review, SCM Microsystems expects revenues for the fiscal third quarter ended September 30, 2005 of between $13 million and $14 million, which is above the guidance previously given by the company of $8 million to $12 million.

On the Move

Gemplus Adopts New Structure

In keeping with its strategy to further improve customer centricity, Gemplus is moving to a regionally based organisation. All members of the existing Management Committee remain in place. Effective 1 January 2006, the company will organise around 3 geographical regions.

- The Americas under Ernie Berger, Executive Vice President.
- Asia, under Martin McCourt, Executive Vice President.
- EMEA (Europe, Middle East and Africa) under Jacques Seneca, Executive Vice President.

In addition, Gemplus has introduced a new function of Chief Technology Officer, which will be taken on by Philippe Vallée, supervising Product and Marketing Management. All remaining members of the Gemplus Management Committee stay the same with:

- Philippe Combes as Executive Vice President, Operations
- Philippe Duranton as Executive Vice President, Human Resources
- Stephen Juge as Executive Vice President & General Counsel
- Frans Spaargaren as Executive Vice President & Chief Financial Officer.

New Smart Destinations Managers

Smart Destinations Inc., a provider of technology-based destination travel solutions, has announced the addition of two seasoned business veterans to its senior management team. Joining Smart Destinations are Steve Boulanger as chief financial officer and Paul Fraser as senior vice president of business development. Smart Destinations continues to expand its market presence in the U.S. at a rapid pace.

First Data Elects New Directors

First Data Corp, a provider of electronic commerce and payment services, has announced that Peter B. Ellwood has been unanimously elected to the company's Board of Directors. The company also announced that Bernard L. Schwartz, a Director since 1992, has resigned from First Data's Board of Directors, effective September 27, 2005.

NEC Appoints New MD

NEC (UK) Ltd has appointed David Payette to the post of Managing Director, heading up the company's business units which span, IT, fixed and mobile communications, security solutions and display technologies. .He brings extensive international blue-chip sales experience to NEC UK along with significant channel contacts and in-depth knowledge of the telecoms industry.

America's Smart Card Market

The Smart Card Alliance, in collaboration with Frost & Sullivan, undertook an exercise this year to evaluate the North and Latin American microcontroller Smart Card markets. The resulting report concluded that the Smart Card market will grow rapidly over the next five years throughout the Americas. The key finidngs are: *(1)* 132.2 million Smart Cards are expected to be shipped in North America in 2005, with over 27% compound annual growth rate projected through 2010. *(2)* SIM is the largest market segment in 2005 followed by payments, pay TV, government & ID and access control. SIM share of market is expected to drop dramatically over the next 5 years as other applications become more widely deployed. *(3)* HSPD-12 is a key driver for the government & ID market. The deployment of FIPS 201-compliant ID applications within federal agencies, as well as the U.S. e-passport project, will be the key growth factors in this market. *(4)* Enterprise access control applications will feature a marked convergence between physical & logical access control. This, in turn, is driving Smart Card-based ID badges that combine physical and logical access

Within Latin America, growth is expected to be even more spectacular. Key findings for the Latin America microcontroller Smart Card market: are: (*1)* 136.4 million Smart Cards are expected to be shipped in Latin America in 2005, with over 59% compound annual growth rate projected through 2010. *(2)* The SIM mobile telecommunications market is the largest Smart Card market in Latin America comprising 86.4 % of the total market in 2004. *(3)* The migration of the financial industry to EMV in Mexico as well as Brazil will continue to grow at a steady rate in the short and medium term. Additional countries have also begun pilot projects for chip-based banking and payment cards.

The Smart Card market will grow rapidly over the next five years throughout the Americas, according to research announced by Frost & Sullivan and the Smart Card Alliance. North American Smart Card microcontroller shipments will top 132 million units in 2005 and grow at a rapid 27.7% compound annual rate through 2010. In Latin America, growth will be even more spectacular. Frost & Sullivan forecasts a 59.1% Icompound annual growth rate for shipments during the same period. Shipments in the region were 136.4 million microcontroller Smart Cards in 2005. "It's an exciting time to be in the Smart Card market anywhere in the Americas," said Randy Vanderhoof, executive director of the Smart Card Alliance.

U.S./Canadian Market Trend: The SIM mobile telecommunications market was the largest U.S. market segment in 2004, followed by pay TV, payment/loyalty, government/ID and access control. It is expected that the SIM card share of total market to drop dramatically over the next five years as other applications become more widely deployed. The fastest growing sectors will be payment and government/ID. Interest in contactless payment will drive U.S. payment market growth and the migration to EMV will be a factor in Canada. HSPD-12 is a key driver for the government and ID market. The deployment of FIPS 201-compliant ID applications within federal agencies, as well as the U.S. e-passport project, will be the primary engines for growth in this market. Enterprise access control applications in the forecast period will feature a marked convergence between physical and logical access control. This, in turn, is driving organisations to adopt Smart Card-based ID badges that combine physical and logical access.

Latin American Market Trend: The GSM mobile telecommunications market was the largest Smart Card market in Latin America in 2004. Payment/loyalty accounted for virtually all of the rest of the market. These two applications will continue to lead shipments in the region. Over the next five years, growth in SIM card shipments will be the main driver. Replacement of older handsets and networks with newer technology, along with penetration of new subscribers using prepaid SIM card options will keep shipments growing rapidly. In payment/loyalty, the migration of the financial industry to EMV in Brazil and Mexico will fuel growth at a steady rate in the short and medium term. Additional countries have also begun pilot projects for chip-based banking and payment cards and are expected to contribute to growth. "Both the North and the Latin American Smart Card markets are currently on the verge of high growth for numerous applications," said Prianka Chopra, industry manager - Smart Cards, for Frost & Sullivan. "As a result, Smart Card technology will play a more significant role in the day-to-day affairs of end-users in these regions."

Leveraging Biometric Technology

By Fiona D'Arcy, Director, Communications & Marketing, Daon

Fiona D'Arcy

The increasing threat of terrorist attacks, the fraudulent use of travel documentation and illegal immigration, as well as the issue of expediting legitimate travelers through borders are just some of the challenges facing governments today when trying to protect their national security at air, sea and land ports. Border management processes include the pre-entry, entry, stay and exit processes to manage individuals from the moment individuals request entry through a border to the moment they exit. Governments have a requirement to implement strong authentication for all citizens and visitors at each point in these processes.

As such governments are demanding complex and highly flexible systems that leverage multiple authentication technologies and are proven to be highly scalable, available and robust and can integrate with existing platforms, systems and applications. Although it can be argued that the recent bombings in Madrid and London could not have been avoided even with the use of biometrics, national security and the benefits of using emerging technologies such as biometrics are high on federal agendas. Following the Sept. 11 attacks, the U.S. Congress passed the USA PATRIOT Act and the Enhanced Border Security and Visa Entry Reform Act of 2002. These laws mandate more-extensive use of biometric identifiers to augment machine-readable, tamper-resistant passports for supporting border security entry and exit applications, and for all "visa-waiver" countries - 27 nations including Ireland and the UK, whose citizens are not required to obtain visas prior to entering the United States. The legislation requires biometric-enabled passports for visa-waiver countries October 26th, 2006 Since September 2004 however all visa waiver travelers to the USA are now being asked for their biometric data at immigration points and since January 2004 all non-waiver visitors must provide facial and finger biometrics at border points.

Biometric Appeal? Major border security and international identity initiatives such as these are driving the increase in worldwide biometrics adoption. As a result we would expect to see reduced identity document fraud, enhanced security and reduced risks of terrorist attacks. However biometrically enabled identity credentials are just one part of the equation which must be coupled with improved management processes, better interagency communication, improved data capture and sharing and enhanced intelligence gathering services and cross border initiatives. Reports from legislative and standards bodies have revealed that governments implementing biometric technologies acknowledge the need for a multi-disciplined approach.

Benefits? By and large biometric technology is being deployed in conjunction with different types of credentials in day-to-day use. To date the world's largest deployments of biometrics have included multiple biometric types (typically finger, face and iris) and multiple credential types such as employee ID cards, national ID cards, passports and visas. Biometrics are the enabling technology to enhance security, reduce the risk of fraudulent credentials, positively identify authorised individuals and protect the physical and IT assets of governments, commercial organisations and citizens. In border control and immigration management systems biometrics serve to increase speed and efficiency of identity verification at air, sea and land ports. This enables improved management and utilisation of resources, offers expanded e-government potential while leveraging current security investment and legacy systems. For the traveling public it offers an expedited travel experience and enhanced convenience.

When discussing border and immigration management US-VISIT is one of the largest biometric programs in the world and is part of a continuum of security measures that begins overseas, when a person applies for a visa to travel to the United States, and continues on through entry and exit at U.S. air and seaports and, eventually, at land border crossings. The US-VISIT program aims to enhance the security of U.S. citizens and visitors by verifying the identity of visitors with visas. At the same time, it facilitates legitimate travel and trade by leveraging technology and biometrics to expedite processing at borders. Goals of the program are to (i) Enhance the security of citizens and visitors (ii) Facilitate legitimate travel and trade (iii) Ensure the integrity of the immigration system and (iv) Protect the privacy of visitors.

On January 5, 2004, US-VISIT entry procedures were operational at 115 airports and 14 seaports, this will now be expanded to 50 of the busiest land ports of entry in the USA. In addition the European Commission are spearheading the implementation of two large-scale information systems namely the Schengen Information System II(SIS II) to replace the current Schengen Information System and the Visa Information System(VIS).

SIS is a joint information system that enables administrative authorities, by means of an automated search procedure, to have access to alerts on persons and property for the purposes of border checks and other police and customs checks carried out within the countries, and, to a certain limit, for the purposes of issuing Visa and residence permits. The new SIS II system will benefit from the latest developments in the field of information technology. SIS II will respond to the need to service an increased number of participating countries and other users. VIS is a European information system to be set up for the exchange of Visa information between EU Member States. The objective of VIS is to facilitate the fight against fraud, to contribute to the prevention of "Visa shopping", to improve Visa Consultation, to facilitate checks and the application of the EC Regulation N° 343/2003 (Dublin II Regulation), to assist a return policy and contribute towards improving the administration of the common Visa policy, and towards internal security and the combating of terrorism. Biometric technologies have been cited for use in both systems.

2006 is predicted to see further advancements in industry standards and in particular interoperability standards which will assist in driving large scale deployments of biometric technology. In 2004/2005 we have seen advancements in the BioAPI standard, INCITS M1(ANSI) and globally the SC37 standards which have been positively received by bodies such as ICAO as well as industry. Companies, such as Daon, who use COTS building blocks and provide open, standards based software infrastructure are currently taking a leading position in biometric border and immigration systems deployments. A recent report from Frost & Sullivan predicts that the world Non-AFIS fingerprint biometric market will grow from $190.4m revenue in 2004 to $3008.0m in 2011 with growth drivers including government projects globally, lowering prices of hardware, further adoption amongst the financial services sector and the combined physical and logical access control stirring demand.

Events Diary

November 2005

01- 03	The Fall 2005 Biometrics Summit - *New York - www.aliconferences.com*
03 - 04	ID World - *Rome, Italy - www.idworldonline.com*
07- 08	The Financial and Payment Services Leadership Summit - *Toronto, Canada - www.source mediaconferences.com/conferences/FSLS05/en/*
09 - 10	Infosecurity - *Utrecht, the Netherlands - www.infosecurity.nl*
15 - 17	CARTES 2005 - *Paris-Nord Villepinte Exibition Center - www.cartes.com/en/2005/index.htm*
28 - 29	Prepaid Cards in Europe 2005 - *Le Meridien Piccadilly, London - www.prepaidcardseurope.com*
29th	European "RFID Solutions Today" Conference - *De Kuip, Ameterdam*
30th -Dec 01	GSM Africa - *Cape Town, South Africa - www.gsmconferences.com/gsmafrica/main_default.asp*

December 2005

06	Third Annual Micro and Small Payments Conference - *New York, USA - www.sourcemedia-confere nces.com/conferences/MSP05/*

January 2006

18-20	Omnicard 2006 - *Berlin - www.omnicard.de*

A Combined Credential - Driving Increased Security in Logical and Physical Access

By Gary Klinefelter, VP of Technology, Fargo Electronics.

The following is an excerpt of a presentation delivered by Gary Klinefelter to the Biometric Consortium.

Gary Klinefelter

Is your security program moving at the pace of technology, or moving to defend against the threat of terrorism? When it comes to a secure card identity program, both technology and terrorism are driving the market to a holistic solution - the combined credential. A combined credential unites both physical and IT access into a single, machine-readable identification card. Who needs a sophisticated badge like this? The U.S. federal government for one, and many other organisations that are following its lead.

Through the Homeland Security Presidential Directive 12, George Bush has mandated a new form of identification for U.S. government employees and contractors. This new form combines physical and IT access into a single Smart Card and will likely become a default standard for credentials to come. Most of us probably have an ID card for school or work. A simple photo ID will identify you and maybe even unlock a door for you. But that's only half the battle when it comes to access control. IT managers understand that protecting access to an organisation's logical assets is equally important to protecting its physical access. Since most of our valuable assets are stored on computers, why wouldn't you want to use a computerised combined credential to protect them?

Step up to Smart Cards - Smart Cards add security and guard privacy. Magnetic stripe security mechanisms are in use today, but they are old technology. Advances in photo printing and low-cost electronics make a simple badge easy to counterfeit. A combined credential utilising Smart Card technology goes a step further. The computer on the card facilitates higher security through electronic authentication.A combined credential has a contact computer chip to facilitate electronic authentication for IT security and a contactless computer chip to facilitate electronic authentication for physical security. Photos and visual security elements like holograms are used when electronic authentication isn't available, like during a power outage. Visual security features that make counterfeit badges obvious are essential.

Two and three factor authentication - If a simple photo ID card with a magnetic stripe gets lost, anyone who picks it up can walk through an unguarded door. The next question is would that person also find a vacant computer with a password written down? Simple technology can offer a façade of security, but more sophisticated IDs are needed to stay ahead of those intent on doing harm. If instead of a simple photo ID, a combined credential that requires a pin or a biometric is lost, the risk of entry into either the building or computer system by an outsider is much lower. This is the foundation for the new federal ID cards. Government security officials can be much better assured that federal records and buildings are not being accessed using stolen cards and passwords.

We've all heard of security breaches at major corporations. How do security officials in those organisations begin to investigate? Do they know who was in the building, because those individuals needed more than just a card to get in? Do they know who had access to company assets because they were electronically authenticated? One solution to help ensure the right people have access is to implement two- or three-factor access authentication. Two-factor authentication includes "something you have", such as your combined credential and "something you know", such as a PIN. If a third factor is required for very high security, a biometric, or "something you are" is added. Several of the members of the Convergence Council (an end-user forum within the Open Security Exchange) would like to go even further. They want to securely share data with their strategic partners. For this to happen, standardised authentication between organisations is needed.

Directory of privileges - In addition to a combined credential, it's important to have a single directory of privileges shared between physical security and IT systems. One of the common gaps in our systems today is between the physical and IT realm. You may be able to determine physical or IT access, but not the combination of the two. Worse yet, when someone's employment is terminated, access privileges may not be revoked in a coordinated fashion. By using a single combined credential with a single directory of privileges, de-provisioning employees is more automated.

Next steps - The benefit of using a combined credential is that it lays the foundation for a trusted identification process. If employees use a combined credential for everything they do, the credential becomes a way of life, raising security awareness. Consolidation of physical and IT functions is likely to result in added efficiency and security.

If you are considering deploying a security program using a combined credential, keep in mind the following points:

- ❒ Get top management support to help lead the process throughout the organisation
- ❒ Get the physical security and IT security directors working together
- ❒ Set up a combined directory of physical and IT privileges
- ❒ Use standards where ever possible.

The Chinese RFID Market

In a recent study by Research and Markets, which focuses on RFID market development in China, it shows that the size of the RFID market exceeded 1.2 billion Yuan in 2004, among which 933 million went to the tag market, 185 million to reader market and 85 million for the software and service market. RFID software and services only accounted for 7.1% of the total market. It is estimated that the RFID market size in China will grow to 5.059 billion Yuan by the year 2009, with a compounded annual growth rate of 33.2%. This will result in 3.807 billion Yuan for RFID tag products, 684 million Yuan for readers, and 567 million for software and services.

Government support and promotion are the prime factors for rapid development of the RFID market in China. There are several programs that drove the market to its current state. The Chinese government initiated a program for generating a new ID card that implemented RFID technology. The development of the Chinese RFID market has also been restricted by a couple of factors. The high price of the technology has lessened the warm welcome of the industries that could most benefit from its development. Also having inconsistent standards has created issues of interoperability between venders leaving the implementing industries locked into a single proprietary version of the technology. These problems will have to be overcome before RFID is considered a mature technology good for use by the masses.

The study shows that, in fact, the current RFID market is based on two technologies - low and high frequency. These have been under development in China since the 1990s and have recently become relatively mature in terms of technology and market. However, the application of UHF-based technologies desired for the fields of logistics and supply chain management is only just beginning. Beijing, Shanghai and the Pearl River Delta have become the three central areas for development of RFID applications in China. They are constantly being improved and developed for the high-tech industries. The RFID technology is continually improving with the area, with the rate of improvement varying on other local conditions and co-operation.

To conclude, RFID applications in government, transportation, and parts of the manufacture industry are the priority development areas in the near future. In three to 5 years the logistics and manufacturing industries will become more important. CRM or Customer Relation Management will also become a vital sector for the development of RFID application during that time. However the large-scale deployment of RFID applications in retail products is unrealisable in the retail industry in the next five years. Those interested in seeing that a reality may have to wait 5 to 10 years.

Contactless Cards

By Steve Carter, Senior Consultant, Savantor

Steve Carter

In the card market we are witnessing a period of unprecedented change particularly with the emergence of a global EMV chip infrastructure with Europe in the vanguard. Issuers are looking to leverage this infrastructure with added value business propositions, which differentiate their card offerings to customers. Their customers are now more likely than ever to switch loyalties in large numbers to those banks which offer the best value proposition whether it be balance transfer rates, interest free purchase rates, loyalty point schemes, cash back, personal card designs etc.

The opportunities which the chip gives for customising products with personal data and tailored applications means customers will be reluctant to switch cards once they have found a product which meets the needs of their particular lifestyle. Thus there may be window of opportunity for issuers to attract large numbers of new customers who will be more likely to stick with them and buck the recent trend of 'rate tarts'. One development which may become key in the issuers marketing campaigns is the spread of 'contactless cards'. What has previously been the preserve of the 'closed environments' such as the university campus, schools, clubs or local councils is now spreading into the open payment market. So what is a contactless card? The standard definition is 'a Smart Card that allows energy to flow between the card and the interfacing device without use of a contact. Instead, induction or high frequency transmission techniques are used through a radio frequency interface'. So unlike the mag stripe card which is 'swiped' or the chip card which is 'dipped' the contactless card is 'waved'. How far away from the terminal you can be when waving varies according to the type of contactless chip in use.

The contactless card arena suffers from a confusion of terminology. Many terms are used interchangeably but essentially a contactless card is one form of Radio Frequency Identification (RFID) which consists of a microprocessor chip connected to an antenna which is embedded usually into a plastic card body. You also hear about a Dual Interface (or combi) card which is a microprocessor card with two interfaces: contact and contactless. These cards are based on a single chip allowing access to both interfaces. A solitary operating system manages transactions in both modes with a high level of security. There are basically 3 types of RFID chips that are most widely used in the world:

1. Smart Labels: A smart label transponder is a thin, consumable device with a programmable microchip and an antenna. Data can be read or written with a reader device, without a direct line of sight. Transponders embedded inside paper labels or plastic tags help solve problems in product identification, control, tracking and security and can be used in a wide variety of applications. Smart labels are seen as a significant driver for RFID usage in a wide range of application areas, including:Airline baggage management, Library systems and rental services, Retail, including electronic article surveillance, Supply chain logistics, Postal and parcel tracking services, Personnel identification and ticketing, Animal tagging, Waste management,Vehicle identification and Fraud control and identification Smart labels can be used in different formats to suit different applications. As a replacement for barcodes and other auto identification technologies, smart labels can potentially bring large savings in staff and infrastructure costs.

2. Contactless Tickets: Contactless tickets cost much less than contactless cards and are useful for temporary applications. The have all the advantages of contactless cards with the added option to be discarded after use. They are also meant to replace the traditional magnetic stripe tickets, which are fast phasing out due to slow speed of reading and high cost of maintenance. They are used in mass transport where season, stored value or single trip tickets are needed; access control for temporary employees, club members or visitors; conventions or exhibitions where there is a need to identify and control the visitors by attaching contactless tickets to badges or brochures.

3. Contactless Cards: This is the most common type of chip in the market. They are mainly used in mass transport applications, access control, banks and security applications. Their main advantage over their contact variety is their speed, control, their ease of use and their low cost of maintenance. They are most effective in applications where high speed and accurate identification of people are needed. Whilst RFID technology started in retail as a stock tracking to replace bar codes it is increasingly being used in other areas. In the USA the CIO of Boston's CareGroup Healthcare System, has had himself chipped. The product is a VeriChip which carries a 16-digit ID number that can be matched to a medical database, allowing doctors to scan him and pull up his records. While he is apparently the first person to test an RFID chip for medical purposes, there are about 40 other people in the U.S. with implanted VeriChips, who are testing them for ID and security-access purposes.

In the UK Kevin Warwick, the cybernetics professor at Reading University, has had an RFID chip implanted in order for a door entry system to recognise him and allow entry to his office, turn on lights etc without any physical intervention. He has also gone one step further and had a chip implanted into his nervous system to communicate directly with a computer and has managed to manipulate prosthetic limbs using this link. He has done this over the internet and has also managed to communicate via the pc with his wife who also had an implant. Banks are a little more conservative and whilst they are unlikely to be injecting chips into their customers they are looking to use contactless payment to break into the cash payment market. What this provides to the card issuer is increased customer transaction volume, and improved customer retention and loyalty. Retailers also obtain benefits from faster transaction times, increased revenue, improved operational efficiency, and lower operating costs. The Cardholders get the convenience of hands-free payment, most likely a reduction in the need to carry cash, and the security of not having to display a card for payment.

Contactless payment applications are particularly attractive to retail segments where speed and convenience of payment are essential (e.g. fast service restaurants, petrol stations, convenience stores, parking meters, transport services, entertainment venues and unattended vending machines). Other sectors of the market have also invested in this technology notably Premiership football clubs. Manchester City FC introduced the Smart Stadium card (as have Liverpool FC) in the 2004/5 season. This is a contactless card aimed at reducing fraud and touting with functions such as: allowing advertising to box holders via screens on card readers, e-purse capability for in ground purchasing, indicating the status of the cardholder e.g. under 16 or over 65. Interestingly it has no PIN, photo or biometric information on it. The system relies on cardholder information gathered during application to identify genuine cardholders. Other functions include a link to PDA's to download information and it can be inserted into kiosks around the ground (and soon outside it in the city centre) to display points and e-purse balances and load up the card.

In the payments industry we have already seen the introduction of contactless cards with the American Express Blue credit card which includes a high-frequency RFID tag, a feature American Express branded ExpressPay. Mastercard are rolling out a similar scheme in the US with Paypass and more recently Visa have introduced their contactless card - Visa Wave. Cards embedded with RFID chips are widely used within the transport industry, e.g. Octopus Card in Hong Kong and the Netherlands and the London Underground Oyster Card in the UK which is now looking for partners to offer an e-cash payment facility at stores around London. Nokia has released a shell for its series 3220 mobile phone that will enable consumers to use the hand set for making contactless payments. The shell uses near field communications (NFC) technology and allows customers to make payments by pointing the phone at a point-of-sale terminal. Payment information, such as debit and credit card details, is stored in an integrated smart chip in the shell. This type of technology is bound to take off with younger generations who are becoming increasingly dependent on mobile phones and see them as an essential rather than a luxury.

So there would seem to be a real business opportunity for contactless payment cards but how big is it? According to Visa EU statistics, in the UK there is a cash market of 27.2 billion transactions to a value of £268 billion. 20.7 billion of these transactions are for less than £ 10 and 8billion are for less than £1. Half of all cash transactions with value below £15 are accounted for by just eight spending categories many of which are popular with the younger consumers: Top up groceries, Spending at newsagents outlets, payments in pubs and bar, fast food, Taxis, Mobile top-up, Transportation .and Off-license sales.

That is an attractive market if cardholders can be persuaded to use card rather than cash. Previous pilots such as Mondex failed to convince the public of its viability but maybe now in a world where we are frequently told we are 'cash rich and time poor' the time is right for a speedier payments system. We can see that across Europe Chip & PIN will boost the deployment of offline/unattended acceptance infrastructure and the new offerings of ExpressPay and PayPass and Visa Wave will look to leverage this investment. Visa's offering is particularly developed to target face-to-face low value payments aimed at transactions below £15 with no PIN required as it is set up with pre loaded funds and is always transacting offline which offers less than 1 second transition times. The one cloud on the horizon is that the mixture of standards for contactless smart cards could restrain the growth of the technology at the point-of-sale, according to the latest market analysis from Frost & Sullivan. The consultancy says 121.7 million contactless smart cards were shipped in 2004, and this figure is expected to reach 847.3 million in 2009.

Clear and unequivocal standards are essential for growth of this market. However, as far as existing standards are concerned even ISO 14443 - the most prominent standard - has Type A and Type B varieties. The ISO 14443 Type A (ISO 14443A) contactless card was originally intended to be a memory card only. However, microprocessor and cryptographic cards have been developed for Type A. The most common Type A cards are the MIFARE cards which is a contactless Smart Card technology owned by Philips. MIFARE is an open architecture platform and has about 250 million cards in the field. ISO 14443 Type B (ISO 14443B) contactless card was originally intended to be microprocessor version of Type A. Again, the memory and cryptographic options have been added for Type B thereby creating competition between Type A and Type B cards. The Type B cards are not as commonly deployed as Type A cards.

ISO 15693 vicinity card technology was developed in response to the industry's need for a greater operational distance than ISO 14443 cards with a minimum read range of 10 cm. The data rate, however, is somewhat slower. We can see signs of clarity in standards when in May 2005 both MasterCard and Visa agreed to share a common communications protocol for radio frequency-based contactless payments at the point of sale, based on the MasterCard PayPass spec. If the standards come together and the well known deployments (McDonalds, 7-11, Octopus, Oyster etc) continue to develop and expand functionality we could soon see the wide spread introduction of contactless technology in the form of not only cards but key fobs, watches, mobile phones and anything else a chip can be attached to. You could end up paying for your purchases with your chipped underwear!

Is Consolidation a Possibility?

By Jason Smith, Staff Reporter, Smart Card News Ltd

Jason Smith

The Smart Card market is growing at an amazingly healthy pace! Over the last decade the industry has averagely grown by about 10-20% per annum. In 2004 the global Smart Card industry generated revenues totaling $2,098.9 million in 2004 and it is predicted to reach $4,188.1 million in 2010. The drivers of this continued growth continue to take the form of prepaid phone cards and subscriber identity module (SIM) cards for GSM-mobile phones in Western Europe, China and elsewhere.

As the industry rapidly matures, Smart Cards are beginning to make serious in-roads into financial-related applications. Europe and Asia have been fairly successful in promoting the uptake of EMV (Europay, MasterCard, Visa) chip cards through mandatory migration exercises. A spurt of government driven activities such as national ID schemes, driving licenses, government employee ID access card, and health cards are also boosting the uptake of Smart Cards. Furthermore, the rising appeal of pay TV has led to a corresponding increase in conditional access modules (CAMs) that require protection against hacking. According to Frost & Sullivan there is a requirement of 3.75 billion cards across the world.

Presently, Europe accounts for 68% of the demand for Smart Cards, but by the end of this decade Europe, Asia, and the United States are expected to equally share one third of the total demand. Frost & Sullivan forecasts that Smart Card shipments in North America will top 132 million units in 2005 and grow at a rapid 27.7% compound annual rate through 2010. In Latin America, growth will be even more spectacular.with a 59.1% compound annual growth rate for shipments during the same period. Shipments in the region were 136.4 million Smart Cards in 2005. "Both the North and the Latin American Smart Card markets are currently on the verge of high growth for numerous applications," said Prianka Chopra, industry manager for Frost & Sullivan. According to other market researchers, 75% of the Smart Card market is basically owned by four players; Gemplus International, Axalto, Oberthur Card Systems and Giesecke & Devrient. The rest, such as Orga and (ST) Incard and others are seen as second-tier players. Gemplus is estimated to own 27-28% of the global Smart Card market, closely followed by Axalto with around 24 % of the market share. Because of this vast dominance by the big four it is hard for smaller Smart Card companies to compete within this arena. "From our point of view, unless you are well positioned in this market, it is difficult for you to be the global leader in the Smart Card industry, " said Alex Mandl, chief executive officer (CEO) of Gemplus.

The Smart Card industry is not without its problems. Recently there has been a sharp slowdown in SIM card demand, coupled with falling unit prices. However the industry has recovered from this and now according to market research from Frost & Sullivan, the world market for SIM cards is expected to start to grow again by 14% annually within the next few years. One area that industry experts anticipate will see major growth is within the eastern europe region. These problems seen over the past few years have exposed conditions of overcapacity and structural weakness in certain segments of the industry. As a result, some consolidation and downsizing has been predicted over the intermediate term. Most of the restructuring will be concentrated in western europe where the bulk of production capacity presently lies. However, by contrast Smart Card industries in Asia, North America and other high-growth areas are likely to expand further as we saw from the figures earlier. One telling sign of this comes from Giesecke & Devrient (G&D) who have been forced to move their card body production facility in Bavaria, Germany to Slovakia, in eastern europe, to cut costs in order to secure their long-term competitiveness. "Competition within the card industry has become more ruthless, with prices being slashed to the bone. There is no way G&D can avoid being influenced by these conditions." says Dr. Karsten Ottenberg, Chairman of the Management Board at Giesecke & Devrient.

The Smart Card industry is also facing changes in the value chain that threaten to spark off volatile relationships among the participants. The traditional horizontal value chain of semiconductor vendors to Smart Card manufacturers to card issuers is changing as some semiconductor manufacturers are directly approaching card issuers without the consent of their traditional customers, the Smart Card manufacturers, which would normally be one of the big 4. "These major customers no longer account for the bulk of IC shipments in the banking arena," observes Senior Industry Analyst Anoop Ubhey of Frost & Sullivan "This trend appears to be particularly visible in regions such as Eastern Europe, Latin America, and some parts of Asia, all of which hold substantial opportunities for semiconductor manufacturers." While these changes bring increased opportunities for smaller participants, the larger ones need to monitor the potential threat they pose very closely. Underestimating the smaller participants is not a wise move, keeping in mind the dynamics of this evolving market. "Companies will have to focus not only on beating the competition in terms of price, volume, and innovation, they will also have to identify promising new customers," says Ubhey. "Relying on the big 4 customers is not likely to guarantee leadership in this market anymore."

To over come any potential threats and to continue their success in the Smart Card industry, the main players have already started to looked to strengthen their positions. At the start of 2005, Gemplus and Axalto, the two biggest players within the Smart Card industy entered into a cross-licensing agreement, granting each other broad rights under their respective patents in the areas of Smart Cards and related devices. The agreement enabled each company to continue developing their respective technologies and to compete more freely in the growing markets for their products. The terms of the agreement were kept confidential. But with the two biggest players conspiring with each other, where does that leave the smaller companies. Surely this agreement restricts their competitive ability? In June 2005, Gemplus flexed their muscle further over the industry by acqiring Setec.

This purchase increased their scope within the ID and Security sector of the Smart Card industry and opened up new markets and regions for them. Gemplus wish to reduce their reliance on phone and wireless cards, which accounted for three-quarters of last year's 865 million euros ($1 billion) in sales. With a kitty of 388 million euros in cash on their balance sheet at the end of 2004, Alex Mandl, the CEO of Gemplus has not ruled out further consolidatary purchases. ``We think that in the identity security business there are certain segments that could further strengthen our overall systems and solutions approach." He didn't state who they had their eye on but he did confirm ``There could well be additional acquisitions,"

Is this a surprise that Gemplus are targeting this specific section of the Smart Card industy? Of course not! According to Datamonitor the security/access sector of the industry is set to experience the strongest growth in revenues, rising to $137 million in 2006. However, on the contrary, Randy Vanderhoof, executive director of the Smart Card Alliance says that he's not expecting a rush of entries into the Smart Card-based security market, despite the high growth numbers that have been projected. He cites high cost barriers to entering the market at this stage of the game, noting that as card technology becomes more commoditised, "Companies getting in now are going to have a harder time to recoup their investments."

SAGEM Defense Securite is a Smart Card Company ranked eighth in the industry in terms of revenue and ninth in volume-with over 53.5 million microprocessor cards shipped in 2004-according to the Card Technology survey. In September 2005 Sagem consolidated part of the Smart Card market by purchasing Orga from the Gunther Group for an undisclosed amount. Orga was ranked No. 5 in industry in 2004 by anlaysts both in terms of revenue and shipments. With this acquisition, SAGEM have increased their presence within the telecommunication sector as well as having a very strong competitive lead in the ID and Biometrics sectors of the industry. It has been precdicted that this merger will create a unit aggregate of over 300 million Euros for Segem in 2006. However even with these two companies combining their Smart Card operations, SAGEM still has a lomg way to go to catch the leaders.

Another step towards consolidation in September 2005 came from Oberthur Card Systems who acquired Africard (Pty) Ltd, a leading South African card manufacturer for around 2.5 million euros. This purchase gave Oberthur access to a Visa & MasterCard certified plant with a production capacity of 30 million cards per year and which holds over 40% of the banking card South African market. This purchase also gave Oberthur stronger growth leverage which will allow them to benefit from the dynamic demand for GSM cards and emerging ID programs within Africa.

So the question is, who can challenge these Smart Card giants from their supremacy? Well, on the SIM front some commotion is already occuring which has got the main players shifting in their seats. In the Chinese Media it has been rumoured that the Chinese government's Assets Supervision and Administration Commission is trying to restructure China's IT industry in the wake of the third generation mobile network in China.

It is said to be encouraging the creation of a "super" conglomerate by combining large state-owned telecom equipment supplier China Putian Corp with Datang Telecom Technology Co, Alcatel Shanghai Bell and FiberHome Technologies Group. This new conglomerate would be in a better position to export their combined SIM products and capture a large portion of business outside of China from Western SIM card manufacturers.This would increase competition and force other companies to further strenghtern their positions within the Smart Card Industry.

So is further consolidation in the Smart Card industry on the hoizen? Will the bigger players continue to extend their dominance? Mr Mandl of Gemplus says it's``certainly a possibility."` but he would not elaberate on any future mergers by saying `Who's the best match and who would be the best combination is a matter of speculation,". But in an enviroment that is flourishing and expending rapidly, one thing is for sure, standing still is not an option! When things are moving fast you need to react just as quick to keep up. Consolidation of the market is one way to achieve this. "To ensure a company's future in this difficult market environment, it has become absolutely essential that they take special steps to boost competitiveness." concluded Mr Mandl.