

### Smart Card & Identity News

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## Our Comments



**Patsy Everett**

Dear Subscribers

Once more the Mobile World Convention in Barcelona has come and gone. It's always interesting to reflect after the event, I don't know about you but at the time I often get a bit enthused and sometimes get embroiled with detail at the expense of the bigger picture.

So first to the show itself, it was quiet compared with last year, perhaps down by 20% on attendance figures. You can tell this by the size of the queues for coffee and toilets and quite a few stands volunteered the same information. I wasn't there on the Monday but apparently it was dead as one exhibitor put it to me. The show was also missing the glitz normally only bettered by the broadcasting conventions. Recession is obviously taking its toll and companies are clearly cutting back on travel expenditure. This was no reflection on the convention organisers just the reality of the times.

In terms of conference theme I would say this year was devoted to mobile advertising I guess reflecting the problems in the media industry generally. From my point of view there were two particular areas of interest, NFC and the semiconductor manufacturers.

Last month we heard about the death of Qimonda after a failed re-financing operation of €325 million involving the German State of Saxony and an unnamed bank in Portugal. Qimonda was the hive off from Infineon's loss making DRAM division in 2006 for which it still owns 77.5% of the equity. Of course this is a pretty bleak picture for Infineon which has been struggling generally over the last couple of years. If you look at the semiconductor top 10 by sales in millions of US dollars,

1	<a href="#">Intel Corporation</a>	<a href="#">USA</a>	33 973
2	<a href="#">Samsung Electronics</a>	<a href="#">South Korea</a>	20 137
3	<a href="#">Toshiba Semiconductors</a>	<a href="#">Japan</a>	12 590
4	<a href="#">Texas Instruments</a>	<a href="#">USA</a>	12 172
5	<a href="#">STMicroelectronics</a>	<a href="#">ItalyFrance</a>	9 991
6	<a href="#">Hynix</a>	<a href="#">South Korea</a>	9 614
7	<a href="#">Renesas Technology</a>	<a href="#">Japan</a>	8 137
8	<a href="#">Sony</a>	<a href="#">Japan</a>	8 040
9	<a href="#">NXP</a>	<a href="#">Netherlands</a>	6 038
10	<a href="#">Infineon</a>	<a href="#">Germany</a>	5 864

We know that the European companies, Infineon, NXP and ST Microelectronics are all having a hard time, clearly consolidation is needed and it's been suggested before and why not again? Perhaps there is some form of merger in sight between the three big players. NXP already have a joint venture with STM for their wireless activities giving NXP a much needed cash injection now with a little





more since STM has just bought out NXP's remaining 20% stake. Just to add interest we have seen reports this month of EC audits of some big European silicon manufacturers suspected of operating a cartel?

On NFC I feel more relaxed, there seems to be a much better acceptance of reality in that NFC is not going to suddenly dominate the business. It's still 4 or 5 years away and there are still a few serious commercial problems to be solved. It's still all about how the banks and the network operators get to agree on sharing the SIM and security domains. There seems to be agreement that it will happen but not just yet, what really interests me is the idea of the card manufacturers acting as the trusted 3rd party for security. I remain to be convinced.

Patsy Everett

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## Events Diary

### March 2009

- 9-11 ID 09, Leeds, UK - [www.id09.co.uk](http://www.id09.co.uk)
- 9-11 Photonics in Surveillance and Biometrics 2009, Washington DC, USA - [www.securityphotonics.com](http://www.securityphotonics.com)
- 16-17 Central & Eastern European Card Markets, Budapest, Hungary - [www.smi-online.co.uk/09ceecards.asp](http://www.smi-online.co.uk/09ceecards.asp)
- 26-27 Security Document World 2009, London, UK - [www.securitydocumentworld.com](http://www.securitydocumentworld.com)
- 30-2 MetroRail 2009, London, UK - [www.terrapinn.com/2009/metrorail/](http://www.terrapinn.com/2009/metrorail/)

### April 2009

- 1-2 6th Pan European High Security Printing Conference, Warsaw, Poland - [www.cross-conferences.com](http://www.cross-conferences.com)
- 20-24 RSA Conference 2009, San Francisco, USA - [www.rsaconference.com](http://www.rsaconference.com)
- 21-24 Card Asia 2009, Singapore - [www.terrapinn.com/2009/cardsasia/](http://www.terrapinn.com/2009/cardsasia/)
- 22-24 WiMA 3rd NFC Business & Technical Developers, Monaco - [www.wima-nfc.com](http://www.wima-nfc.com)
- 28-30 Infosecurity Europe 2009, London, UK - [www.infosec.co.uk](http://www.infosec.co.uk)

Source: [www.smartcard.co.uk/calendar/](http://www.smartcard.co.uk/calendar/)



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However, the decision has left the internet industry somewhat perplexed, with concerns over legal and privacy implications. Although the bill requires all ISPs to store every form of electronic communication made over their networks, some providers are not expected to comply for the simple reason of not having enough customers to justify spending money on. If you're one of the lucky few who won't be spied on, congratulations, that slow broadband connection was definitely worth it.

The internet industry is now bracing itself for the next inevitability. Intelligence chiefs have called for a vast central government database in conjunction with the private sector, pooling retained data and monitoring national communications to the tune of billions of pounds. Providers should not be surprised. The head-in-the-sand mentality adopted by ISP's towards the Data Retention Act has contributed to the blurring of boundaries between government and QUANGO's (basically a non-governmental organisation).

Even social-networking giant Facebook have introduced new privacy policy, which enable the site to maintain and control a member's information forever, even after their accounts have been cancelled.

On a positive note for customers, there are ways to defend yourself against the threat of having your online activities recorded. Tor is a software project that already works with web browsers & instant messaging clients. The technology allows computer users to communicate anonymously over the Internet. The Tor network protects users by bouncing traffic around a distributed network of relays, preventing companies such as BT learning what sites are visited. Another technique to avoid being spotted is known as 'encrypted tunnelling', a process which encrypts all data from one network and creates a tunnel to a server or gateway outside the European Union, where the connections are unpacked and decrypted.

The public reaction to the government's announcement has been one of fierce opposition. Forums and blogs across the UK have branded the measures as another step towards a 'Big Brother' state. The question remains: will the measures help the government to clamp down on unlawful activity online?

Retaining data is undoubtedly a valuable tool against terrorism and organised crime if the level of investment is sufficient. But the negative impact upon providers is sure to cause concern for the industry. As well as the financial strain (although the government have promised to reimburse all costs eventually) ISP's also risk the trust of their customer base. This could result in a loss of revenue streams as advertisers and consumers flock to the uncharted waters of free unmonitored networks.

ISPs must continue to be viewed as providing a neutral infrastructure; after all, they have the power to know the intimate details of our lives. Therefore, they should be prevented from abusing that power, and shielded from the power of the Home Office, whose involvement has led to diminished consumer-product confidence. If this does not happen, it is not only the digital economy that will suffer, but the internet industry as a whole.

Tom Tainton

## World News In Brief

### Suspects Arrested in Heartland Fraud

Three men have been arrested and charged with credit card fraud in connection with the recent Heartland hack.

The men are accused of using stolen card details to encode Visa Gift Cards, which were then allegedly used to buy goods locally.

A statement issued by Leon County Sheriff's Office, confirmed the card numbers used, were stolen from the Heartland Processing Centre in New Jersey.

Payments processor Heartland has formed a dedicated internal department exclusively to the development of end-to-end encryption to protect

merchant and consumer data used in financial transactions.

"Heartland has been working on the development of end-to-end encryption, but in light of our recent data breach and the impact cyber fraud has had on the public and processors nationwide, we are ramping up our efforts," said Robert O. Carr, Heartland's Chairman and CEO, "To do this, we are forming a dedicated internal department and have named Steven M. Elefant, a well-known expert in point-of-sale payments, executive director."

Steven Elefant is a member of the US Secret Service Electronic Crimes Task Force and Infragard, a public/private partnership of the Federal Bureau of Investigation. He is the co-founder and former CEO of ICVerify Inc.



## Study Reveals Each Lost Customer Record Costs UK Firms £60

The "2008 Annual Study: UK Cost of a Data Breach," undertaken by the Ponemon Institute and sponsored by PGP Corporation Research found that the average total cost per incident had risen to £1.7 million in 2008, up from last year's figure of £1.4 million. On average, each lost customer record costs firms £60, a 28% increase on 2007's figure of £47. For the second year running, lost business due to reduced consumer trust was the main contributor to overall data breach costs.

"2008 saw no slow down to the stream of data breaches started in 2007 - if anything they've gotten bigger and more costly," said Phil Dunkelberger, president and CEO of PGP Corporation. "In this current climate, organisations are taking desperate measures to preserve their reputation and retain customers; this study shows they simply cannot afford to lose out to competitors as a result of poor data security."

A copy of the "2008 Annual Study: UK Cost of a Data Breach" may be obtained from PGP Corporation via this weblink: [www.encryptionreports.com](http://www.encryptionreports.com)

## RBS WorldPay Lost \$9 Million in 30 minutes on ATM Fraud

RBS WorldPay, is now thought to have lost \$9 million in a 30-minute period during a global ATM heist that involved 100 cloned cards in 49 cities worldwide in November last year.

The breach of its computer systems and the fraudulent use of 100 cards were first reported in a press release issued two days before Christmas.

Certain personal information of approximately 1.5 million cardholders and other individuals may have been affected and, of this group, Social Security numbers of 1.1 million people may have been accessed.

So far there no arrests have been made.

## Who In the UK Can Read The New ID Card?

Thousands of ID Cards have been issued to foreign residents in the UK, but no one has a reader to read them.

The discovery is a result of the Freedom of

Information request made by silicon.com.

A Home Office spokesman said: "The timetable for the roll out of scanners of biometric chips will be in incremental stages. Scanners capable of reading electronic chips for foreign nationals will become more readily available as we ramp up the issuing of cards."

Until then officials will be forced to continue to use traditional methods to confirm a cardholder's identity by taking a fresh set of prints and checking them against existing databases.

"Once again ministers have shown that the ID card project is absolutely farcical. What is the point of spending billions of pounds on cards that can't be read in the UK?" said Chris Grayling, Shadow Home Secretary.

## Gender Spectrum UK Launch National ID Card Petition

Gender Spectrum UK launched an on-line petition aimed at ensuring the safety of Transsexuals. The petition is asking the Government to address the current issues surrounding the draft guidelines for the National ID Card.

These guidelines require people to have their gender (determined as either Male or Female as reflected by their Birth Certificate) announced on the ID Card. If a person wishes to present in a manner that is not the same as their Birth Certificate they will have to undergo a process to obtain a Gender Recognition Certificate (GRC) or hold 2 ID cards. This means that unless a GRC is obtained, the person will need to have two ID cards. Both will be in the person's legal name, but one will identify the person as male, the other as female. The one in the birth gender will be valid for travel throughout Europe, the other will not.

The guidelines also state that the database will also keep details of your birth gender, even after a GRC has been issued.

We believe that there are a number of issues that need to be addressed. We believe that a person carrying two ID cards, each bearing details that conflict with the other, will become vulnerable and at risk from harm from foreign security services or members of the public, particularly in volatile countries and/or situations. We believe that this puts many people's lives at risk and those who do not have a GRC vulnerable.





## Data Retention Protestors Hack German Interior Minister Website

The hacked website (<http://www.wolfgang-schaeuble.de/>) contained a link to a site protesting against the new biometric passports and telecommunications data retention legislation.

After unidentified hackers used a Typo3 bug to deface the minister's website, its front page greeted visitors with a message in capital letters reading "VISIT: ---> Vorratsdatenspeicherung <---" The link directed users to a site protesting against the legislative initiatives of the minister regarding telecommunications data retention.

## SCM Microsystems Japan Joins SSFC

SCM Microsystems Japan, Inc., a subsidiary of SCM Microsystems, Inc. announced that it has joined the Shared Security Formats Cooperation (SSFC), an alliance of leading Japanese technology companies that aims to establish a securely shared new data format for contactless smart cards, enabling multiple security applications to be managed using a single smart card. SCM has joined at the customer partner level.

The SSFC alliance advances the use of contactless smart card technology in the enterprise environment by defining standards and specifications that promote interoperability between different smart card-based devices and applications. The organisation's standards and specifications are shared exclusively among its member companies, and SSFC alliance members develop their access control systems, printers, CCTV surveillance cameras, PC software and other smart card-based solutions for the enterprise in line with these standards. To date, SSFC standards support FeliCa(®), the primary contactless technology used in Japan.

## Is 'A Cashless Society' an Opportunity or Threat for the Prepaid Industry?

According to APACs, by 2015, the number of payments made by cash in the UK will be overtaken for the first time by other ways of paying, as innovation points towards a cashless society. However, the British Retail Consortium (BRC) maintains that cash has a significant present and future role, especially during the current tough economic climate when people are looking to budget and find cash easier to control.

## STS partner with Tailwind Solutions create Contactless Payment Paddle



Tailwind Solutions and Smart Technology Solutions Limited released this month a solution to aid the roll out of contactless Payment technology. Retailers utilise their existing Chip and PIN device by attaching the Tailwind's PoS Paddle.

## Tuxedo Launches the UK's First Corporate MasterCard Prepaid Card

Tuxedo Money Solutions launched the UK's first ever Corporate MasterCard Prepaid Card developed exclusively for business use.

The Tuxedo Corporate Card has enhanced security as it can be instantly blocked and unblocked by the user online or by sending a text message, whilst the administrator of the service, usually a senior person in the finance department, can instantly load funds onto or take funds off the card whenever needed either online or by sending a text message from their mobile - this is a great feature when money is urgently needed. Funds can also be moved from one card to another when needed to optimise cash management.

## iPhone turns into Credit Card Terminal

An application produced by Innerfence enables the Apple iPhone to become a freestanding credit card processing terminal.

Using an iPhone means there's no additional hardware to rent and no additional monthly fees for being able to accept mobile payments. You need an Authorize.net account and your mobile and your ecommerce transactions show up in the Authorize.net reporting interface.



## Amazon announce flexible Payments Service

Amazon Payments announced the general availability of Amazon Flexible Payments Service (Amazon FPS) and the launch of Amazon FPS Quick Starts. Amazon FPS Quick Starts aggregate various Amazon FPS APIs into a simplified set of APIs that substantially reduce the steps a developer must take to enable transaction processing on their websites. Now, developers can enable common payment transactions such as one-time payments, recurring payments and pre-payments in hours rather than days.

## Sybase purchase Paybox Solutions AG

Sybase, Inc., has acquired Paybox Solutions AG, a mobile payment solutions provider. With this acquisition Sybase continues to bolster its Unwired Enterprise strategy by extending its leading mobile infrastructure to mobile payments.

"Mobile payments are an increasingly critical part of mobile computing, a core component of our Unwired Enterprise strategy," said Marty Beard, president of Sybase. "The sheer number of people with access to a mobile phone in both developed and emerging markets around the world, means the mobile device has the potential to become a dominant vehicle for consumers to connect and transact conveniently, anytime, anywhere, fuelling the mobile economy."

A privately held company founded in 1999 and headquartered in Raunheim, Germany, Paybox will be integrated into Sybase 365, a wholly owned subsidiary of Sybase, Inc. As a provider of the broadest mobile commerce offering, Paybox also brings Sybase a proven track record and a solid customer base.

## Inside Contactless & Qualcomm to Accelerate NFC Mobile Rollout

INSIDE Contactless, announced this month that it is working with Qualcomm Incorporated to accelerate the growth of the Near Field Communication (NFC) handset market by jumpstarting the product development cycle, speeding time to market and significantly reducing development costs.

As part of the collaboration, the two companies will develop two 3G handset reference designs—one each for UMTS and CDMA2000 networks—that combine

Qualcomm's Mobile Station Modem chipsets with INSIDE's MicroRead multi-standard NFC chip.

The reference designs are expected to be available starting in the second half of 2009 and will be among the first NFC handset reference designs available to the market.

According to Rémy de Tonnac, chief executive officer, the availability of these reference designs will also likely encourage some handset makers to enter the market more quickly than they would if they had to develop this kind of solution themselves from scratch.

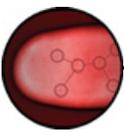
## Aconite & Datacard to supply ICBC with Smartcard Management System

Aconite, has announced that their strategic partner, Datacard Asia Pacific, has been awarded the contract to supply Aconite's smart card management solution, Affina.

Affina solutions enable banks to migrate to the EMV (Chip & PIN) standard and to implement post-EMV solutions in the areas of risk and fraud management, contactless and prepaid applications and mobile payments.

Industrial Commercial Bank of China (ICBC) is China's largest bank, offering corporate and personal banking services to 2.72 million corporate customers and 170 million retail customers internationally. They were looking for a post-issuance card solution that would enable them to personalise cards services at both the regional and individual level through the upload of new smart card applications onto the cards after issuance. Following an extensive review and evaluation of the available solutions, Datacard Asia Pacific was selected to supply Aconite's Affina Enterprise as a part of their complete card management solution as it met ICBC's functional requirements and offered the desired levels of service and security.





# Security at your fingertips

By John Elliott, Principal Consultant, Consult Hyperion.



*John Elliott*

Because biometrics can offer a degree of identification well beyond other technologies, the future of digital identity has become closely linked with this fast-growing area, says Consult Hyperion's John Elliott. Although there are many biometric technologies from which to choose, mobile fingerprinting offers a compelling argument for the widespread use of this technology right now.

Automatic fingerprint identification technology is already mature, and has in fact been used in law enforcement domains for several years now. In terms of law enforcement, the ability to identify people effectively at the point of encounter – without having to return to the station – is becoming increasingly important.

Having this ability not only saves the police a significant amount of time, but also has an impact on virtually all aspects of operational policing. For example, by confirming someone's identity whilst out in the field, the police can instantly know whether they have already met a suspect before, and also can review what they know about him, such as whether he has a criminal record, whether he is likely to be armed and violent, and so on.

In addition, there are several knock-on effects that make mobile fingerprinting a very compelling prospect indeed. By being able to ID suspects quickly, there is no need to house suspects in cells until they can be identified. Mobile ID also makes it much easier to verify that the correct person reports on bail – leading to improved offender compliance – and also gives the police the ability to help focus more quickly on the individuals of interest.

The net result of all this is that more police officers can be kept on the street, and bureaucracy overheads can be reduced along with the number of refused charges, wrongful arrests, and subsequent detention payments and litigation. Mobile ID will also allow for the earlier release of innocent parties without the need for them to attend at police stations.

We know that using this approach to identify people works well because fingerprint details are unique to each person – and indeed each finger. In recent years, activity in the area of electronic fingerprint scanning has therefore focused on improving ease, accuracy and security of fingerprint capture.

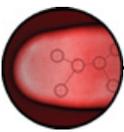
Recent developments in sensing technology have resulted in several ink-less (often referred to as 'livescan') fingerprint scanners. Compared to the ink and paper-based methods traditionally used in law-enforcement environments, this technology is extremely easy to use, and the introduction of integrated circuits and other technologies has made it possible to shrink the sensor size to the area of a postage stamp, which means that sensors can now be fitted into laptops, mobile telephones and personal digital assistants easily.

However, compared to rolled prints and ten-print cards, these 'flat-print' sensors produce less information about a finger. Automatic identification of images of such small fingerprint portions requires complex algorithms similar to the algorithms used for conventional latent fingerprint identification used for marks found at the crime scenes.

Novel fingerprint capture techniques have been gaining attention to overcome the ease with which traditional 'capacitance fingerprint-capture' systems have been spoofed. Such systems – including a non-contact 3-D imaging of all ten fingerprints in a single reading – are claiming to be able to collect prints of quality equivalent to traditional 'rolled' fingerprints used in policing. Fingerprint systems using ultra-sound claim to accurately image a fingerprint and overcome problems with contaminants (i.e. dirt and grease transferred from finger in the normal course of fingerprint capture).

For all of these reasons, recent news reports have revealed that every police force in the UK will soon be equipped with mobile fingerprint scanners – handheld devices that allow police to carry out identity checks on people in the street – as part of a scheme called Project MIDAS (an acronym for Mobile Identification At Scene). Consult Hyperion worked closely with the police to devise the roadmap for the introduction of the technology used in this scheme, and helped them demonstrate the outline business case for conducting identity





checks on people in the street.

This technology is likely to be in widespread use within the next 18 months, and may eventually be able to receive pictures of suspects, as well. In order to roll this technology out to the greatest number of police officers, tens of thousands of mobile readers – each about the size of a deck of cards - are expected to be distributed to police forces across the UK as part of the Project MIDAS scheme.

For obvious reasons, these devices need to be robust, with size and weight kept to a minimum, and yet must be able to deliver speed and accuracy. At the same time, officers don't want to be bogged down with too many different devices, and so manufacturers will increasingly need to focus on multi-functional devices that will help to rationalise and reduce the number of devices carried by officers.

Back in October, the National Policing Improvement Agency (NPIA) went public with details of the type of equipment that the scheme will embrace, as well as the full scope of the project. The initial phase of MIDAS will enable officers to perform checks on the fingerprints of people arrested or detained with amazing speed. By contrast, at the moment, officers have to take suspects to custody suites if they need to check fingerprints. On average, this procedure takes 67 minutes, according to a presentation given by the NPIA at Biometrics 2008.

The marks will be compared against records on Ident1, the national police database which holds information on 7.5 million individuals. For this reason, Project MIDAS is expected to save enormous amounts of police time and reduce the number of wrongful arrests.

Some US police forces are already using the technology. Thomas Smith, an officer from the Los Angeles police department, spoke at the Biometrics 2008 conference about the success of his force's use of mobile ID devices which send images and fingerprint matches back to officers on the street. He said they had become so powerful that once the machines were produced some suspects admitted they were lying about their identity.

In the US, there is a biometric smart card standard for Federal staff called PIV (FIPS 201). Consult Hyperion also worked with UK Police to recommend this standard for adoption by UK Police forces as a smart ID card and this was accepted. In the future, we believe that this whole system could be joined up so that UK Police can be identified through their smart card in a mobile device and use their fingerprint stored on the card, rather than have to link back to the national fingerprint system over GPRS.

In the UK, mobile fingerprinting will give the police a full, mobile national capability to check identities. Project MIDAS has been designed to have the capacity to beam images of suspects back to officers on the streets to help confirm identifications. Unsurprisingly, Project MIDAS has already raised concerns regarding civil liberties and privacy concerns, but the police insist that fingerprints taken by the scanners will not be stored or added to databases. Unfortunately, however, because police cannot store fingerprints beyond their immediate use, the process for presenting evidence in court will need to be thought through more carefully.

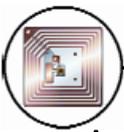
According to an article recently published in the Guardian, a limited trial of mobile police fingerprint devices, called Project Lantern, started in 2006, with 200 devices distributed and 30,000 checks performed. They were deployed in police cars using automatic number plate recognition technology - stopping vehicles that were logged as stolen, having no insurance, no MOT or simply unknown. Fingerprint checks often showed they were carrying falsified documents, or had no license, no insurance, and so on.

This same article went on to say that the electronic searches, encrypted and sent over public networks, were usually returned to the mobile devices within two minutes; 97% of searches were completed in five minutes. Responses are graded as "high" or "medium". If high, it shows the system is confident of a match; if medium, it could display up to three potential identities. The returned data includes the name, age and gender of the suspect if there is a match.

Aside from its use out in the field, there is a huge range of opportunities for police to use mobile ID in other ways. For example, mobile fingerprinting could be used on the deceased at the scene of a crime, on suspects for intelligence in the early part of an investigation, to check the identities of prisoners in transit, or even in a mortuary.

The technology to support all of these uses exists right now. As is often the case, the real challenge will be to change behaviours, overcome objections, and maximise the benefits of this powerful way of ensuring an accurate – and instant – way of identifying people, for those working in the criminal justice sector and beyond.





# Adding business value - the case for low-cost, high-volume Active RFID solutions

By Ken Robertson, Innovision Research & Technology plc.



*Ken Robertson*

The key enablers of any fast-growth technology market are lower costs and a rapid rate of development. This is certainly the case with active RFID (Radio Frequency Identification), an emerging market which is dependent upon reducing costs and the physical size of RFID tags - and, more importantly, the ability to customise them cost-effectively.

## Well-established RFID

RFID is already a relatively well-established technology whose evolution and successes have been well documented over recent years – particularly around high-volume, high profile applications such as Electronic Product Code (EPC) supply chain and inventory tracking. We have also seen the technology widely used in smart ticketing and access control and increasingly at sports grounds and entertainment venues.

According to market analysts, IDTechEx, the value of the RFID market was due to increase from \$4.93 billion in 2007 to \$5.29 billion last year. This includes tags, readers, software and services for RFID cards, labels, fobs and other form factors. While the biggest segment by far is still RFID cards, \$2.26 billion of the \$5.29 billion is spent on other forms of RFID - from passive RFID labels to active RFID tags. Incredibly, IDTechEx predicts that by 2017 the worldwide RFID market will grow five-fold to just under US \$27 billion.

## Active participation

With the market continuing to grow at such a rapid pace, what is becoming clear is that while passive RFID still has a very strong role to play, the potential for active RFID technology to add real value across a range of applications and to deliver growth across these and other markets is now being recognised.

Unlike passive RFID tags, which draw their power supply from the reader, active RFID tags have their own on-board power supply in the form of the battery, which is used to power the tag's circuitry and transmit a signal to the reader. It also means they transmit at higher power levels than passive tags.

Communication between active RFID tag and reader tends to be more reliable than those from passive tags due to the ability for active tags to conduct a 'session' with a reader. Active RFID tags can also communicate up to longer distances (up to 30m), and may include larger memories, as well as the ability to store additional information received from the reader.

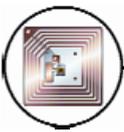
Advances in RF design, combined with the falling cost of integrated chip designs, are helping drive active RFID technology's expansion into new, ever-more intelligent applications that go beyond the simple identification of an item using passive RFID tags. We are already seeing deployment in applications that require some form of data capture or interactivity with users and external systems, including other devices such as mobile phones.

Now with the ability to incorporate sensors to provide sensing and monitoring capabilities, we are also seeing active RFID tags able to provide information not just on an item's location, but also data relating to its environmental and physical state.

## RTLS capabilities

This is helping to drive the market for Real-Time Locating Systems (RTLS) - which tracks and identifies the location of objects in real time using inexpensive tags attached to or embedded into the objects. In this use case, RFID tags communicate with external sensors to monitor critical information like humidity,





temperature and even vibration levels, making them particularly suitable for the storage and transportation of environmentally-sensitive goods like food and drink, or high-value goods like computers and other electronics equipment. This information can be logged, updated and managed in real time as part of an intelligent network of tags and devices.

In the healthcare sector, RTLS can play an important role in improving operational efficiency and enhancing patient safety. Knowing the location, status and movement of equipment and people, can help improve hospital processes and asset utilisation, reduce capital expenditure and improve productivity. The main high-growth sectors though are expected to be in supply chain management, healthcare and pharmaceuticals, where RTLS can be used for drug tracking, disposal of medicines and potentially for preventing counterfeit prescription drugs entering the legitimate supply chain.

Active RFID tags need to be available for a variety of RF bands to meet a wide range of application needs. An active RFID tag in these use cases could offer a powerful combination of high-frequency (13.56MHz), Ultra High Frequency (UHF) (approx. 900MHz) and the 2.45GHz band – enabling near field reading/writing capabilities up to just a few tens of centimetres away, as well as the ability to read over distances of several metres.

Tags with these multi-frequency capabilities have the potential to provide a unique 'bridge' between the RFID and emerging Near Field Communication (NFC) worlds and enable a variety of new and existing legacy systems and infrastructures to be integrated.

### **Part of the connected world**

Earlier we talked about the need for falling costs and tag size - this is vital for the industry, as the uptake of active RFID solutions demands well-adapted tags at the right price and size.

As many solutions are highly specialised, 'closed' systems, standardisation is not an issue, and should not hold back the development of novel RFID applications. RFID tag technology is now available that can be implemented as custom chip implementations – according to the requirements for memory, size and power. For instance, there may be a requirement to integrate RFID-based environmental sensing in food logistics applications to a Bluetooth connection for onward transmission.

Assuming there is sufficient volume to justify the development costs, custom IC design – whether for stand-alone or System-on-Chip (SoC) implementations – can focus on meeting customer requirements in a way that cannot be achieved using standard products.

As we move towards an increasingly connected world, smart, networked devices increase the opportunities for information sharing, automation and intelligence. In this environment, something more than passive RFID technology is needed and active RFID is developing its role from that of straightforward identification to one of greater interactivity and data sharing.

This creates a demand for greater numbers of small, low-cost active RFID tags, and also for ever-greater levels of integration and adaptation to more sophisticated, smaller-scale applications.

## **World News In Brief**

### **SMARTRAC begins Volume Production in the US**

SMARTRAC N.V., has completed the build-up of its factory in Chanhassen, Minnesota, and started volume production of secure RFID components.

Approximately 800,000 RFID inlays have already been produced in the company's certified high security production facility. Significant production quantities thereof have been delivered for

Government applications.

"We are glad that the ramp-up and certification stage has been successfully completed and that we are now able to meet the market demand," says Manfred Rietzler, Chief Technology Officer.

SMARTRAC acquired HEI Inc.'s RFID division in the U.S. in 2007. The production site subsequently has been converted to the specific requirements and furnished with the machinery and equipment necessary for mass production of RFID.





# NFC payments are calling

By Tony Saunders, Marketing Director for UK & MEA, VeriFone



*Tony Saunders*

The next evolution in electronic payment is already in our hands. Near Field Communication (NFC) is about to transform the billions of mobile phones in use today into convenient contactless payment devices. This rapidly emerging short-range wireless technology is ringing major changes for consumer card payments – and creating a market set to be worth an estimated \$75 billion within five years.

## Dialing into fast, ubiquitous payment

When the first clunky mobile phones made their inauspicious debuts in the 1980s, few people could have predicted that, by 2007, there would be more than 3.25 billion users of mobile phones worldwide. Today, the mass adoption of the cell phone is providing the impetus for another life-changing, technology-driven shift. The billions of cell phones in use globally are now being harnessed in conjunction with Near Field Communication (NFC) technology, and moving the world into the next phase in payment evolution: mobile payment, or m-payment.

The NFC wireless connectivity standard provides intuitive, simple and safe communication between electronic devices. When two NFC-enabled devices – such as a mobile phone and contactless payment device – are brought within approximately 10 cm (4 inches) of one another, a connection is made. With a simple wave or touch of a mobile phone, electronic payment transactions can be processed quickly and securely. The unprecedented possibilities of this technology to deliver fast, ubiquitous payment is creating a rapidly emerging market, one that is predicted to reach \$75 billion by 2013.

## Delivering the cashless society vision

NFC technology offers a variety of applications – from downloading coupons off posters on underground trains, to functioning as an electronic key to a hotel room or home – but it is ideally suited to transform mobile phones into next generation m-payment devices. Given the sheer ubiquity of mobile phone adoption across key markets, NFC-enabled m-payment could hold the key to making the much vaunted vision of the “cashless society” an achievable reality.

The transformation of yesteryear’s first-generation cell phones to today’s richly functional, sophisticated multimedia platforms has been exceptionally fast. The evolution began with the availability of SMS text messaging services in addition to standard voice calling. Then came Internet browsing and email capabilities, made possible by the roll-out of newer data-capable wireless networks. Most recently we have seen the launch of GPS navigation services, which are enabling a raft of new and emerging location-based services, including mobile social networking.

With the youth market leading the way as early adopters, mobile phones have also become digital cameras, video cameras and MP3 music players – in addition to morphing into wireless handheld smartphones such as the popular BlackBerry devices. The accommodation of m-payment capability is simply the next stage of the mobile phone’s transformation into an ever-more functional – and indispensable – lifestyle device.

## NFC m-payments: the future is here

With many emerging technologies, “hype” often precedes reality by several years. Not in the case of NFC. NFC-enabled contactless m-payments are growing now in markets around the world. Since 2005, Tokyo-based NTT DoCoMo, Inc. (in conjunction with Sumitomo Mitsui Card Co. and Sumitomo Mitsui Banking Corporation) has offered a popular credit-payment service using DoCoMo NFC-enabled “Mobile Wallet” phones equipped with smart-card functions for cashless payment.<sup>3</sup>

Again in Asia, Japan’s All Nippon Airways (ANA) and Japan Airlines (JAL) are currently allowing passengers





to proceed to the boarding gate by simply waving their wallet phones at the entrance to the jetway, if their tickets have been reserved and paid for in advance using their wallet phone.

In the US San Francisco Bay area, the Bay Area Rapid Transit (BART) system is piloting an m-payment solution with Sprint and Nokia in which participants can walk up to any fare gate with their NFC-enabled cell phones and pay for their journey by “tagging” the phone on a reader located on top of the gate. Once through the gate, passengers can hold their phone up to certain Jack in the Box or Sprint “smart advertisements” on BART station walls and download directions to the nearest restaurant or information about special offers. Once at the Jack in the Box restaurant, BART passengers can also pay for their meals with their specially equipped phones. As a result of a successful pilot, more than 80 percent of trial participants confirmed that the mobile wallet was easy to use.

M-payment is especially well-suited to low-value cash transactions not currently being captured by electronic payment providers, including those made at vending machines, parking meters, turnstiles and small purchases in retail stores and fast food restaurants. Beyond m-payment, NFC-enabled card-based contactless payment applications are also expanding quickly in nearly every region worldwide. As an example, NXP’s MiFare is currently the largest public transit electronic ticketing application in the world, with more than 10 million contactless readers and over one billion contactless and dual-interface chip cards distributed to consumers in London, Seattle, Sao Paulo and over 130 cities in China.<sup>6</sup>

Based on similar ISO standards, applications such as these could be very quickly and economically converted to accept m-payments from phones.

#### ***Benefits to banks, issuers and retailers:***

- Ubiquitous reach of cell phones – 3.25 billion worldwide; 480 million in a largely untapped market such as China; 150 million mobile users in India
- Opportunity to tap into the estimated \$200 billion in cash transactions annually in the US alone
- Faster transaction times to speed customer throughput
- Greater spend at checkout because consumers are not limited by the cash they carry
- Ability to provide a value-add in the form of coupons, advertising and promotional content delivery
- Competitive differentiation that can be created by offering m-payment to customers

#### ***Benefits to consumers:***

- Overall speed and convenience of m-payment
- Elimination of the need to carry cash
- Choice of credit and debit card options – multiple cards can easily be loaded onto a single NFC-enabled phone
- Value-add offers – discount coupons and other promotional programs are common

#### **Tapping into competitive advantage**

At the top of a long list of benefits, the level of security afforded by NFC-enabled cell phones is attractive for banks, card issuers, retailers and consumers alike. Contactless payment relies on variations of Dynamic Card Validation Value, or DCVV, meaning that an internal counter rolls over every time the phone is waved or tapped. This feature very effectively eliminates a common card-skimming practice known as “replay fraud.” Multiple additional security features are also being built into the latest NFC-enabled m-payment phones, which promise extra robustness and an advantage even over EMV-approved smart cards.

Given the wealth of revenue opportunities being unlocked by NFC m-payments, it is not surprising that market demand worldwide is growing at a very rapid pace. As of today, there are many more pilots or “stage 2” implementations underway in Asia, from Taiwan to Thailand, in the UK, across continental Europe, in Latin America and in North America, including both the US and Canada.

So how interested are end-users in m-payment? In a recent US survey, 57 per cent percent of those polled said they were interested in a mobile phone that could handle m-payments. 90 per cent of those people said they would pay more for a phone with m-payment capabilities, and approximately 6 in 10 would switch banks





or mobile phone carriers to get the service.

In addition, the confidence that m-payment will happen sooner rather than later seems to be rising quickly, with the number of respondents predicting that m-payment will be here in two to five years increasing from 12 per cent to 29 per cent between 2006 and 2007.

### **The future is in our hands**

It is clear that NFC contactless mobile payment represents a very significant market opportunity for the entire payment value chain. What is also clear is that a wide-ranging ecosystem will be required to support m-payment's phenomenal growth potential. For banks and merchants to be able to gain greatest advantage from this fast-evolving payment trend, technology vendors will need to provide future-proof, integrated solutions that connect customers to multiple channels quickly, and with the flexibility to evolve as the market develops. As the momentum for NFC solutions accelerates, banks and retailers will be looking to payment solution providers that can minimise costs and time-to-market for deploying contactless devices.

Mobile-initiated payment is not just a possibility; mass market roll-out is just around the corner. Major cardholder associations, carriers, financial institutions and payment providers are actively implementing NFC strategies today. The vast reach of mobile phones and the proven willingness of consumers to embrace new phone functionality bode extremely well for the success and widespread take-up of m-payment. The potential gains for first-movers in this market are enormous. The next evolution in electronic payment is undoubtedly in our hands.

## **World News In Brief**

### **Gemalto, NXP and Infineon demonstrate MIFARE Mobile Phone**

Gemalto, NXP and Infineon demonstrated at Mobile World Congress the first mobile contactless solution compliant with the Single Wire Protocol standard and compatible with MIFARE infrastructures. The solution will enable users to benefit from any contactless service on his/her mobile phone.

The handset is embedding an NFC controller from NXP and complemented by Gemalto's secure SWP SIM card incorporating an Infineon flash microcontroller compatible with MIFARE Classic technology.

### **Precise Biometrics awarded 1st prize at GSMA World Mobile Congress**

Precise Biometrics came in first place in the global SIMagine competition, held annually at the GSMA World Mobile Congress held in Barcelona. The awarded mobile aviation solution is based on Precise Match-on-SIM.

The Queue-less Travel Experience", BioXpress enables automated identity check supporting airline services through the SIM card and NFC (Near Field Communication). It enables remote ticket purchase, automatic baggage drop, self-service boarding and baggage reconciliation. All these services are secured by automated Match-on-Card biometric verification to enable a fully automated passenger flow.

### **University of Florida Notifies Thousands of Possible Breach**

University of Florida (UF) officials are making every effort to notify more than 97,200 people that an intruder gained access to a computer system containing files with their personal information.

The files included the names and Social Security numbers of students, faculty and staff who used the "Grove" computer system between 1996 and 2009. When it was created, this system provided an online location for faculty to host course materials and class information, and it supported one of the few free e-mail services available to those on campus. Users of the computer system were required to verify their identification with their UF ID numbers, which in most cases were Social Security numbers.

An information technology staff member discovered the breach January 14th during a systems review. The system was immediately shut down, and an investigation began. The investigation confirmed unauthorised access to the system, but it could not determine if files containing private information were accessed. The University Police Department was notified of the incident.

Letters explaining what happened and how to guard against identity theft are being sent to those whose mailing addresses have been identified. Most of those are in Florida. The university has no contact information for more than 5,000 people.





# Transport Ticketing 09



*Peter Tomlinson*

By Peter Tomlinson, Iosis Associates

This two day conference and exhibition (27th and 28th January), organised by Clarion Events, was held in the classiest setting so far for the season's transport ticketing events – the Marriott Hotel just off Grosvenor Square. Amazing food, wonderful service. Matching that was the international spread of the topics and the presenters, and the excellent group of exhibitors.

Curiously missing was any heavyweight contribution from the UK public sector – speakers were invited, said the organisers, but declined to appear on the stage, although two members of DfT's ticketing strategy study team were in the audience throughout. From the front line there was just one scheduled UK contribution, by Passenger Focus, about its rail passenger survey results, but nothing about what, if anything, they are able to do to improve matters or are even pressing for. And there was one important but informal English contribution from the Chair of the second day, David Hytch of GMPTE, explaining the complexity of the English public sector that everywhere except London makes it so difficult to make progress. The UK fumbling, not able to tell us what happens next because of the trials and tribulations of decision making, makes it all the more important that those of us outside the tent learn from other countries, and that we press for our public transport to be brought up to the level of the best of the rest.

International contributions came from Holland, Germany, Denmark, France, Belgium, USA, Japan, and from the new EU cross-border interoperability architecture and travel information regulatory projects: the European Interoperable Fare Management Project, and Telematic Applications for Passengers. And there was one tangential academic contribution, from Andy Stevens, University of East London, about ticketing for sports events.

Varieties of paying as you go rather than buying a ticket in advance were featured. Visa Pay Wave, MasterCard PayPass, Sony Felica, Charge to Account – all were on offer. The bankers were much in evidence, or at least the payment systems companies and their agents, offering direct contactless payment (in the trials in London using mobile phones, one with the general public, the other with students, the customers love it). Germany has a very interesting implementation of the same architectural standards as are behind ITSO, but using much simpler terminals: passive with RFID chips embedded (like those posters that have NFC tags), and the NFC mobile phone reads them and does the transaction for you over the phone to the central server – you Check In and Check Out.

There is one major lesson from the conference: each country is different as far as local public transport arrangements for payment and travel management are concerned. At the same time, global suppliers of ticketing equipment and of payment methodologies don't always adapt their offerings before they try to sell to you. Maybe that was why the panel sessions at which speakers lined up to take questions were not the best part, or perhaps the UK based members of the audience were gob-smacked at the quality of material thrown at us, and perhaps the foreign visitors were being polite.

## World News In Brief

### Moscow Metro runs 100% on Contactless

NXP, this month announced that the Moscow underground is the world's first public transport system to run a 100% contactless automatic fare collection (AFC) system based on MIFARE technology. Moscow Metro is one of the most heavily used public mass transport schemes in the world, carrying on average nine million passengers per day, and standardising on MIFARE has helped

improve the overall passenger experience and drive operational efficiencies.

The Moscow Metro AFC system, implemented by system integrator Smart Technologies Group, has extended its existing smart card based electronic ticketing solution in the beginning of 2008 by replacing the magnetic stripe tickets for 1,2 and 5 trips with smart paper tickets based on MIFARE Ultralight ICs to serve ad hoc users. Since the introduction Moscow Metro has sold over 300 million tickets within one year.





# How prepaid could dictate in the payment space war recession

By Aurelia Bonito, credEcard Limited.



*Aurelia Bonito*

The doom and gloom of the impending recession isn't totally negative in some sectors, especially within the payment space. In fact, in the world of specialist prepaid card providers, a consumer payment trend is opening a large door of opportunity as more and more companies are searching for payment solutions to resolve the growing amount of consumers preferring to opt away from credit and enter a more controlled and restricted method of paying for their lifestyle goods with a prepaid tool called a prepaid card.

The aggressiveness from banks and financial service operators bombarding credit cards at consumers and employing sophisticated tactics of aggregating interest on profiting from cards are now being exhausted.

Consumers are biting back and companies within the retail space recognise the urgent need to offer their customers 'added value' and at the same time, sustain brand loyalty and deliver excellent customer service. The birth of retail prepaid branded card applications are aimed directly at a captive audience demanding a payment tool with flexibility, added value, benefits with no interest – a more versatile and cost conscious way to spend in the current climate!

Prepaid originally was created to serve the un-banked. It still caters for a large proportion of the un-banked market, however, a prepaid card programme represents so many advantages that deliver cost effective and revenue churning opportunities for companies that the payment industry is being turned upside down to embrace this new phenomenon.

The changing world of financial service tools currently do not provide all the answers in fulfilling consumers concerns over how they manage their spend in the current economical downturn. Prepaid may well just deliver a good deal of promises.

Still in its infancy, the prepaid industry is set to change with the number of cards in circulation estimated to grow at over 110% a year for the next four years. It is predicted that by the end of 2010 the use of prepaid cards across the eurozone will generate 2.3 billion transactions with a €75 billion turnover (James Le Brocq, Alliance Leicester Commercial Bank).

This movement towards debit payments and away from credit shifted by the tightening credit environment will accelerate the increasing adoption of prepaid instruments. Financially distressed consumers are trying to gain control over their budgets and protect themselves from overdraft and other retail banking fees. Households are focusing on frugal spend management and account balance monitoring. Tightening credit coupled with rising unemployment may not bode well for overall consumer spending and retailers are more and more conscious in the battle to win over the consumer's pocket.

## **Where does this place the impact and opportunity for companies?**

Bank branches are closing, limitation to cash is ubiquitous as more banks have over leveraged borrowing and as a result, the entire financial world is stepping into a grave of dead skeletons of useless financial tools. In turn, consumers are faced with the overwhelming decision of how and where to manage their money as a safe and secure safety net.

To exacerbate matters, the demise of the cheque as many high street chains such as Boots and PC World refuse to accept cheques now imposes the question of was this initiative too premature at the time.

Prepaid could be the answer.

Companies seeking prepaid payment solutions may well be stepping onto a successful platform by offering their customers a safe, risk free and alternative way to control their money whilst offering them a suite of privileges of added value. In turn, brand loyalty and sustained customer service can be achieved in this new creative environment of prepaid for corporate users.

Prepaid payment solutions for companies business needs are not isolated to providing payment solutions for the un-banked. In fact, businesses are realising the return of investment in implementing prepaid card programmes early on within their budget, as the prospect of lucrative volume in transactional usage from





cardholders yields a healthy profit in their pocket. New technological and efficient methods of adding value are now integrated onto prepaid schemes, replacing the antiquated 'loyalty card' of little value other than offering points.

The advantages in creating a prepaid card programme for a business today, cultivates a new breed of payment trend for their customers. It is far more effective and prevalent to implement such an initiative in a recession, since the competition to capture the market share within a limited environment and generate sales are strive. Retailers are struggling to capture the full attention of the market place unless they offer 'added value' and 'give back' a form of incentive to entice customers to regularly shop exclusively for all their products. Value, delivery and performance are key.

### **Un-banked and the demise of the cheque**

An example of one of the most popular prepaid business applications falls within the payroll domain as cheque processing is in decline and the un-banked rising. Cheques are expensive for employees to cash and for the employers the cost of creating and mailing cheques laboriously time consuming and expensive. Employees with bank accounts are paid by BACS. Not a problem if you have a bank account, but with the growing number of immigrant labour force rising, this has contributed to the number of un-banked people who cannot be paid by BACS. The diminishing confidence with people closing bank accounts and placing funds elsewhere is becoming a realistic proposition in the current perilous waters of the economy and contributes to the bewildering problems faced in the world of financial services. Prepaid cards, especially those with full BACS capability such as those supplied by specialist prepaid card providers, supply ingenious ways of providing a solution with advantages for company and cardholder. CredEcard is an example of a specialist prepaid card provider. Unique to their brand is their payroll prepaid product with their own sort code. They implement MasterCard® branded prepaid cards that enable employers and agencies to pay un-banked staff in exactly the same way as banked staff. Prepaid cards can be offered to those without bank accounts, but only credEcard's card schemes provide prepaid cards that can be paid directly via BACS allowing payroll and expense payments to be loaded directly onto them. Typically, all prepaid cards have a 16 digit account number, but BACS does not recognise this number. Usually, a problem. CredEcard has its own BACS sort code and each card has its own account number. A perfect solution - enabling credEcard's prepaid cards to be loaded directly by BACS enabling employers and agencies to pay un-banked staff in exactly the same way as paying those with regular bank accounts.

### **Versatility of prepaid card solutions for Corporate needs**

Obviously, prepaid card schemes for business purposes, doesn't just stop here. Specialist prepaid card providers such as companies like credEcard provide MasterCard® branded prepaid card programmes that set up and manage prepaid card applications for a diverse range of industry needs. Prepaid card schemes are new revenue earners for corporate companies providing a string of constant and on-going profit from card use activity, a constant brand reminder to their customers and a string of benefits for their cardholders.

For the cardholder, its a new recession free form of financial tool, controlling spend with no overdraft facility, a risk free method of purchasing on line, the versatility of use and with the new technological driven prepaid products available, the option of cash back, discounts and offers loaded back onto the card - every reason to have one especially if you don't have a bank account. What's more, no credit history is required and since the card doesn't interfere with any current bank account, any transactions onto a prepaid card remain invisible, so cardholder can be anonymous. The world of prepaid prosperity is just around the corner.

Prepaid card schemes for business needs provide sophisticated payment solutions of bespoke tailor made applications reflecting the company's priorities and requirements. In fact, prepaid facilitates an efficient and cost effective mean of delivering payment solution for business needs. It can accommodate as a method of resource in a controlled environment (travel purposes, online preferred method of payment, etc.), is a perfect substitute for any cheque issuing practices (paying un-banked employees, disbursement of claims, etc.), and a better form of loyalty card for companies administering discounts and cash back facilities incorporated within the prepaid scheme structure.

Prepaid card schemes provide the security and flexibility of a MasterCard® branded network of prepaid solutions delivering an insulation against market and economic volatility both for the corporate world as well as the smaller financial institutions deeply involved in the payments industry.

Prepaid card schemes may just provide the holistic answer for businesses to offer their customers the capability of spending in a restricted environment – spend what's on the card without the need to go overdrawn and benefit rather than the banks!





# NHS database faces stiff competition from Health eCard

By Tom Tainton, Smartcard & Identity News



*Tom Tainton*

It seems as though patience is wearing thin with the proposed national NHS database. The project, which plans to store electronic medical records for 50 million people in the UK, has been hit with lengthy delays amidst fears over the system's confidentiality and bust-ups with providers. To make matters worse, there's a new kid on the block for the Government to contend with. The innovative £40 'Health eCard' provides an alternative to the less-than-reliable database scheme, and enables patients to carry their medical records with them at all times. The London-based company behind the card, Health e-Systems, says that once the credit-card sized smart card is adopted by a GP, a securely encrypted copy of the patient's records can be accessed, downloaded, updated, and checked. Not to mention storing test results and digital X-rays.

In almost sheepish comparison, the NHS database languishes four years behind schedule, and the National Audit Office now predicts a completion date 'around 2014-15.' The project is part of a £12.4bn government programme to upgrade NHS computer systems. That equates to £200 for every man, woman and child in the UK, a staggering amount of cash. Ministers claim the database, which will store information on mental illness, HIV status, pregnancy and alcoholism, will 'drag the NHS kicking and screaming into the 21st century. Sure, there's a risk of losing data (see recent data losses by various Whitehall departments), but paper records are also going astray. Doctors and nurses will carry chip and PIN cards to access more confidential information, although ominously, the danger with the system is that with no clear individual responsibility for the records, who's going to protect the information that's been collected?

The government's decision that only the minimum information on each patient will be uploaded perhaps signals the lack of confidence in their own staff actually retaining this data, rather than misplacing it, as we've come to expect.

In fact, the Department for Health was forced to admit another blunder, announcing negotiations with Japanese giant Fujitsu had collapsed after the two failed to reach an agreement ahead of the first scheduled roll-out in Southern England. (As yet, only two NHS primary care trusts have piloted the scheme, describing the results as 'clunky'). Fujitsu was one of the three main suppliers, holding a contract worth £895m, and overseeing activities from Kent all the way to Cornwall. Contractors involved in the deal are rumoured to have complained the DoH has been 'inflexible in specifications in order to keep costs within budget'. In a statement, a Fujitsu spokesman said the company had withdrawn as it did not feel there was any prospect of an acceptable conclusion. It seems the government's attempt to push a centralised, one-size-fits-all NHS system is starting to crack under the considerable pressure.

But nevertheless, ministers have brushed aside concerns over the project. Labour MP Kevin Baron accused the British Medical Association (BMA) of scaremongering with suggestions that the government will profit by selling health records to pharmaceutical and insurance companies. It's clear that a central database would be very helpful when managing and monitoring patients – the benefits are obvious to all. Then again, so are the risks. The recent debacles in data management make it very difficult for patients to have any confidence in a system which cannot wholly guarantee the security of its data.

But what about the GPs? A survey conducted by BMA News revealed nine out of ten doctors had no confidence in the government's ability to safeguard data either. More than 90% of respondents said they weren't confident patient data on the centralised database would be secure. However, there could be more of a motive for doctors to turn their backs on the government's plans. The company behind the Health eCard pays GPs £10 to download a patient's records onto the card, a handy bonus to add to the coffers. If the card takes off, it could mean an extra £500m for doctors across England. Are GPs protesting against the threat of data loss and the potential effect on patients, or are they motivated by making a quick buck?





One reason for an affiliation to the eCard over the proposed database for doctors is the reduced risk and culpability involved from their perspective, with sensitive details carried in the wallet rather than smeared across the web. Of course, I can think of 500 million other reasons as well. Already, twenty-one surgeries and three-hundred patients, mainly based in London, are using the card. Trust is so minimal in the database that even some NHS hospitals have bought alternative software, at extra expense might I add.

With the government's previous farcical handling of medical services contracts, it's no surprise that the public is looking elsewhere for secure ways to protect sensitive information. Whether the Health eCard is the answer is uncertain, but the DoH will need to get its act together if it wants to regain the trust of doctors and patients across the country.

## World News In Brief

### Zetes Wins Morrison Voice Picking Contract

Zetes, has just signed a significant contract in excess of 6 million pounds with Morrisons, the UK's 4th largest supermarket chain, to provide one of the country's biggest voice directed picking installations.

Prior to securing the final contract, Zetes successfully completed a 3 month pilot project to prove the business case of their voice system at Morrisons' Corby Freezer Distribution Centre.

During the pilot phase Zetes implemented a voice picking solution in conjunction with 20 Vocollect Talkman T5 wearable voice computers and headsets, which delivered immediate improvements according to Morrisons' project evaluation criteria. These benefits included improved picking accuracy, greater operational efficiency including ease of task allocation and the flexibility to meet Morrison's operational requirements, user-friendliness, the ability to support multi-lingual pickers of all levels of ability and the suitability of the system for freezer environments.

Once live, it will voice enable thousands of Morrisons' warehouse operators based at all the retailer's distribution centres, who are currently working from a paper based picking system. Implementation has just started and is scheduled for completion by 2010.

### Great Ormond Street Hospital Laptop Stolen

A laptop from the secure area of the audiology department has been stolen. The laptop contained limited information on 458 patients. While the information included names it did not include any contact details.

The Trust accepts this is a serious breach of information security and has written to all families concerned to explain the situation and to apologise. A helpline number has been set up. "We reported

the theft to the police and we have also reported the breach to the Information Commissioner."

Trust Chief Executive Dr Jane Collins said, "We must apologise to the families for any anxiety this will cause. Patient confidentiality is very important to us and we have acted quickly to minimise the damage done. The Trust has provided the facility for all departments to encrypt patient data through encrypted USB sticks, and is rolling out encryption for laptops. This laptop had not yet been encrypted as part of the rolling programme."

### Researchers Hack Laptop Biometric Facial Recognition

At this month's Black Hat security convention Researcher Nguyen Minh Duc, head of the application security department at the Bach Khoa Internetwork Security Center at Hanoi University of Technology, demonstrated how to beat the facial recognition systems built into some Lenovo, Toshiba and Asus laptops.

The systems use the laptop's built-in webcam to take a picture of the user's face, so that it can be used instead of a fingerprint or password to access the device. But according to Duc this system can be beaten in a variety of ways.

"The mechanisms used by those three vendors haven't met the security requirements needed by an authentication system, and they cannot wholly protect their users from being tampered," he said.

The researchers used the obvious method of showing the camera a picture of the registered user and this was reasonably successful. However the system could also be bypassed by showing the camera pictures of other people's faces after playing around with light and shade settings.

Black Hat founder Jeff Moss interviewed him about the discovery and the future of that technology and his firm's research. <http://tinyurl.com/cg2rcn>

