

# Smart Card & Identity News

Smart Cards, SIM, Payment, Biometrics, NFC and RFID

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Founder of miiCard



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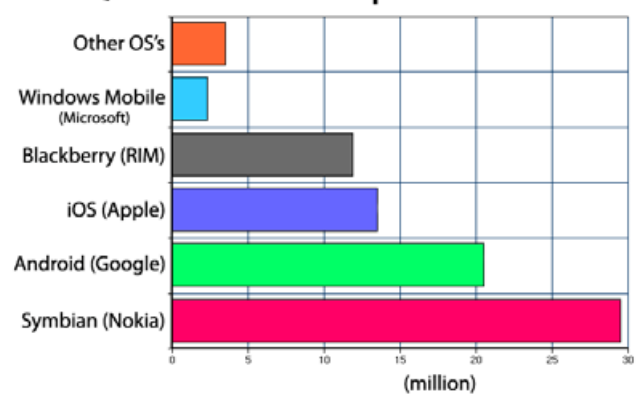
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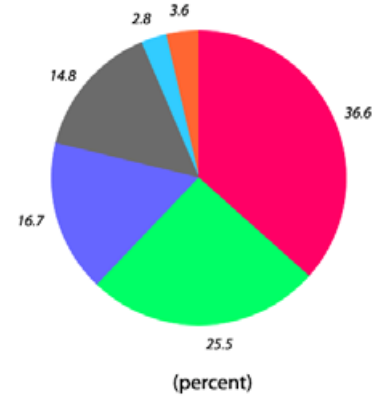
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UK: slow, slow, quick quick

## Mobile Wars – Apple versus the World

Q3 Global Smartphone Sales



Market Share



Source: Gartner Q3 2010

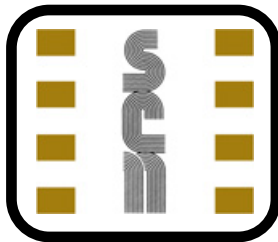
You may not have noticed it but there is a war breaking out in the mobile phone world and more particularly in the smart phone segment. Three issues really, the smart phone operating system, the security of the mobile phone software and the future of the SIM as we know it.

Let's take the easy bit first because it's been coming for some time but at the beginning of November Nokia decided to take full control of the Symbian smart phone operating system after rival handset makers finally abandoned the platform in favour of Google's Android platform. Nokia didn't really have a choice they were left on their own which means we now have a battle with clearly defined boundaries, there are 6 main players,

You might be forgiven for thinking that Nokia's Symbian is in the clear lead but when I tell you that a year ago Android only had 1.8% of the market then you can see the problem facing Nokia. Realistically Android is going to be bouncing alongside Symbian by the end of this year.

Perhaps more interesting still to the industry observers is that Android has already overtaken Apple's iPhone (iOS) as well as RIM and the Blackberry. Behind the scenes RIM has been faced with a series of security problems with various governments (where the government can't break the encryption and RIM hasn't got the keys) around the world. I'm sure these issues will be resolved but one suspects that the Blackberry will remain the corporate darling at about 15% of the market which is still big business for RIM.

**Continued on page 4...**



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## Our Comments

Dear Subscribers



*Patsy Everett*

Cartes 2010 is now upon us and you can't help thinking about the years gone by. Several people have told me that this year they are not sure if they are going. It's a mature market and most companies are trying to keep the expenses down, if you're coming from the USA then it's not an insignificant cost.

In the early days of Cartes it was exciting because there would always be something new and often inspirational but in more recent years you knew before you got there what you were going to see. Now is this because we are so much better informed through the internet or is it that there really isn't anything that new. This is going to be my mission for 2010 to find something new and exciting, it's a bit like the projects they give on 'The Apprentice' a UK BBC program designed to find a new recruit for Lord Alan Sugar's business empire. The potentials on the TV usually screw up and it's fun to watch so I'll try and do a little better, at least I'll listen to what people have to say.

But of course that's not the main reason for going, it's really all about meeting friends new and old to chat about what's happening in the industry. I guess from our stable we're still quite intrigued by NFC, will it end up in every phone, will Apple adopt NFC? We hear so much talk about stickers (i.e. contactless labels) that you attach to the back of your phone to do payments. Everybody seems to see it as an intermediate step on the way to full NFC, call me dumb but I can't see it, I'd just as soon have a contactless card in my purse. Anyway we shall be there as always to wrestle with these issues in the bar, please feel free to join us.

Oh and I forgot to mention it but at the moment there are no strikes with the RER in Paris forecast for the duration of the show, that will be a change, a normal Metro service to the exhibition.

Our lead article this month is all about the competition in smart mobile phones between the main operating systems including the latest rumours about Apple and Gemalto working on a super SIM. This is to allow users to make their choice of network operator when they buy their phone (or iPad). The suggestion is that the SIM might not be removable it could even be a virtual SIM buried in the memory of the iPhone although the security experts have told me that is unlikely because somewhere you need to securely manage the cryptographic keys that authenticate your phone for billing purposes.

So here's the thought, how much do you value the removable SIM that can be changed from phone to phone? Of course in the early days everything was stored in the SIM card including your SMS messages and contact lists. Today most of it goes into the phone memory so the SIM plays a small role in the applications. I know we have SIM Toolkit but does anybody use it?

The next problem of course is that the phone is usually locked to the network operator that has subsidised the purchase of the phone so although you can change phones, changing operator is more bother.



Technically I'm assured that you could have a chip built into the phone and it could be configured over the air waves. Now what would that do for the business profile of the likes of Gemalto and Oberthur Card Systems? I wouldn't dismiss it Apple seem to be hovering in an area that could lead to just that....

See you at Cartes.

Patsy.

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## Events Diary

### December 2010

7 - 9      Cartes 2010, Paris, France - <http://www.cartes.com/>

### January 2011

18 - 20      Omnicard 2011, Grand Hotel Esplanade Berlin, Berlin, Germany -  
<http://www.omnicard.de/index.php>

19 - 20      Nordic Card Markets Conference, Sheraton Stockholm Hotel and Towers, Sweden  
<http://www.smi-online.co.uk/events/overview.asp>

25 – 27      Transport Ticketing 2011, Waldorf Hilton Hotel, London, UK -  
<http://www.transport-ticketing.com/64/index.php>

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





## Mobile Wars – Apple versus the World .... Continued from page 1

Apple also has a problem, the iPhone is single sourced (from Apple), Android by comparison is freely available to all manufacturers (already adopted by Samsung, LG, HTC and to the rescue of Sony Ericsson and Motorola who have been struggling). However one suspects that with so many different manufacturers and their different kit that there will be interoperability problems. We have enough of that already with existing phones even within different versions of the software from the same manufacturer.

So what will happen to iPhone? I'm certainly not an Apple geek but I would be the first to say that the iPhone experience is superb and rave even more about the iPad and with all those applications and the click and use experience – that's going to take some catching up but my money would be on Android doing exactly that but over a longer space of time. However the iPhone will remain on not less than 15% of the market.

Well that leaves Nokia and Symbian, who would want to be in the shoes of Microsoft's Stephen Elop who replaced the sacked Olli-Pekka Kalasvuo in September and who first joined Nokia in 1980, and then rose to be Chief Executive Officer in 2007? He has had the unpleasant experience of sitting on a crash in operating profits this last year of 40%. Apparently it's the software and the change management skills of Stephen Elop that persuaded Nokia's Chairman on the way to go.

But it's even worse than this, don't forget about MeeGo the joint effort between Intel and Nokia for the Linux based platform that was due to appear on Nokia's N9 phone but seems to have run into long delays. I wonder if this has anything to do with the sudden departure of Ari Jaaksi who was Nokia's VP of MeeGo devices, the inside story goes that he was after the CEO's job but obviously didn't get it.

It was not only Jaaksi after the top job and apparently Anssi Vanjoki the head of Nokia's smart phone unit has also handed in his notice. However before announcing his departure Mr Vanjoki has been very supportive of Symbian and has rejected a move towards adopting Android. He is reported to have said that, handset manufacturers using Android could have low operating margins but claimed they were only likely to have temporary relief with Google's operating system. He compared this to Finnish boys who 'pee in their pants' for warmth during the cold winter.

Many analysts think that Symbian has little future, regardless of how hot or cold it might be outside. Of course this is not likely to be the end of Nokia yet; the company has a very strong position in the bog standard phones that are used in countries like India and China. However if I was Stephen Elop I wouldn't want my future to depend on the decreasing margins in a low cost commodity product that can and is manufactured in these same countries.

Apparently MeeGo is going to be for the high end devices and Symbian for the midrange, you're going to need to be an expert to sort all this out! I personally believe the line between smart and basic is becoming very fuzzy and one suspects that smart will become the norm over the next few years. If Nokia could hold on to its top spot I would be amazed, it's more a matter of how far can they sink?

Now you know that smart devices are susceptible to bugs and vulnerable to hacking attacks so you won't be surprised to hear that Google's Android is facing a critical security study. After the release of the Android software kernel used on the HTC Droid Incredible phones a code analysis group called Coverity discovered examples of improper memory access and memory corruption that could cause data loss or system crashes. There are concerns that could allow malicious applications to access user's email or other sensitive data. In all fairness it should also be noted that the number of defects discovered in the Android kernel by Coverity is lower than average for open source projects.

And then we heard about the apps running on these smart phones and in particular the PayPal app running on the iPhone. According to ViaForensics the application has serious flaws that could allow a phishing site to steal the user's credentials. Apparently the mobile application fails to check the site's digital signature which would allow a hacker to use a bogus PayPal web site and fool the users into handing over their credentials.

Let's be honest this is but the tip of the iceberg we know that all applications will have flaws and it would not be surprising if in many cases they formed some form of a security vulnerability.

Saved to last because it's only a rumour but sources inside some of the European carriers have reported that Apple has been working with Gemalto on a special SIM card that would allow users to buy their phone over the web or at an Apple shop with a SIM application but not yet configured to any network operator. This can be done at the POS or later on-line. It's like Apple acting as a multi-carrier MVNO (Mobile Virtual Network Operator).





Now of course this is just the start, do we need a real SIM, could it be a virtual SIM? I personally would be a little worried as to where the authentication keys are being stored. However we could put some form of secure chip in the wireless device, it doesn't have to be removable.

So who gains by this proposition, the user, but I'm not sure by how much. Somehow it doesn't sound to be any cheaper albeit it could be more flexible but I rather suspect that Apple would make a turn. The carriers are partially dis-intermediated but that may not be a huge problem.

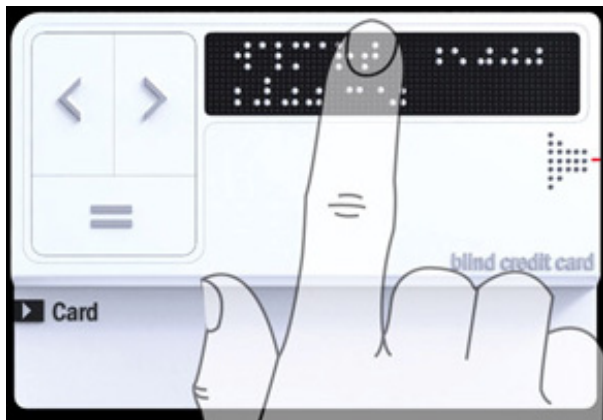
If I were a betting man I would expect Apple to lose on this one because the removable SIM already provides consumers with lots of flexibility and I for one don't like the micro-SIM used by Apple which is non interoperable with other phones. The next 12 months promises to be interesting and my money is on Android to win.

David Everett, Smartcard & Identity News.

## World News In Brief

### A Unique Credit Card for the Blind

A new concept from Kwon Ki Nam offers a unique credit card for the blind. It looks complicated but is quite simple to use.



Instead of a signature, it uses the cardholder's fingerprint (using fingerprint recognition software) for a secure authentication. Braille on the display provides the transaction details, and an inbuilt speaker rattles-off the kind of products being paid for, thus giving the blind a complete account of the transaction autonomously.

### Donate with Chip & Pin

Consumers can now spare electronic coppers to a good cause. 'Pennies' is the UK's first electronic charity box, an innovation which could transform mainstream giving.

Consumers can now donate a few pennies by Chip & Pin. At the terminal you will be prompted if you want to "round up" the price to the nearest pound and donate the extra to the retailer's nominated charity.

CEO of The Pennies Foundation said: "The way that we shop is changing. We are paying for things

more often with cards not cash and using the internet more frequently too. That's exactly where Pennies, the electronic charity box comes in, a way of giving those pennies when you pay by card in a shop or online – a new channel for an old habit."

The first retail partner is Domino's Pizza with another retailer to follow shortly and more in the New Year, both online and in-store.

The Pennies Foundation has also joined forces with Smart Technology Solutions (STS) and YESpay International (YESpay) to extend the Pennies proposition to retailers served by YESpay.

### Were US banks Targeted by cyber Terrorists?

On the 7th November Sunday morning, Twitter was flooded of messages from US citizens reporting that their local ATM's had crashed and online banking facilities were out of order. Bloggers were also spooked by the closeness this event occurred to 9/11.

Banks affected were: U.S. Bank, USAA, Compass, American Express, Bank of America, Chase, PNC, BB&T, Suntrust, Fairwinds Credit Union and Wells Fargo. Most banks put down the problem to the daylight savings change.

Banking and payments fraud expert Julie McNelley who recently joined Aite Group LLC has commented to news sources that the outage is likely to be the result of a Malware. She continued "It has all the hallmarks of that, based on the geographic spread of it, the targeted systems and the banks in question".





# Interview with James Varga, Founder of miiCard

By Tom Tainton, *Smartcard & Identity News*



Tom Tainton

## What is miiCard?

miiCard is pioneering way to prove a customer's identity online, instantly. It is a digital passport – a safe, secure and trusted online identity – established and managed by the user. It's a user-centric federated identity that enables pure online validation that confirms 'you are who you say you are'. For the first time, miiCard executes financial transactions online and in real time. We're hoping that it will become a standard that supports consumers travelling the internet. Above all, miiCard establishes a new level of trust between vendors and consumers in a digital marketplace.

## How does it work?

Each miiCard has an associated Level Of Assurance determined by the amount and quality of information the user provides. Built and managed by the user via the miiCard website, the Level Of Assurance is the key to gaining maximum usability and benefit from the product. When you attempt to purchase a product or service online, the Level Of Assurance that you need is pre-determined by the vendor or service provider and its regulator. The higher the user's Level Of Assurance, the wider variety of transactions it can be used to validate.

The vendor or service provider is responsible for ensuring their own compliance with the regulations that govern their industries. The regulations, in turn, determine how much and what kind of information is required in order to complete a transaction. This is typical of financial transactions, such as applying for a new credit card, a bank account or loan but it can also happen in other situations, such as acquiring a new mobile phone contract.

## Why is miiCard such a unique product?

miiCard is a global first. It's a pure online and real time solution that replaces the need for the primary ID check (the drivers' license, passport, etc.) Furthermore, unlike a number of consumer focused identity solutions, miiCard has a clear business model that will give it the momentum to establish itself as a standard. miiCard is currently supporting North America, Western Europe, India and Australasia.

## What areas of the industry does miiCard target?

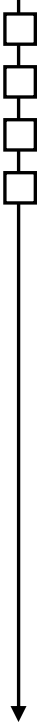
miiCard targets three areas of the retail financial services industry. Firstly it reduces the drop out (currently 70-90% in the UK) in the selling of online financial products experienced as soon as an offline process is introduced. Even where a document signature or a regulated product is being sold, miiCard can provide a purely online and real time user experience. Secondly it reduces the operational execution cost of selling products due to the offline processes involved. Finally, it reduces identity theft and fraud as it validates 'you are who you say you are' and doesn't rely on validating secondary identity (information about you such as your address, DOB, etc) as currently provided by CRAs.

## How do you anticipate consumer take-up?

Initially miiCard will be sold directly with a focus on establishing a UK market. Once established with the first couple customers we will look to engage with distributors through a channel management strategy. When the UK market is developed we will target the US market and then look to grow from there. Direct selling initially will allow us to build value in the proposition and prove the market. Also, developing distributor channels will enable us to expand rapidly and establish miiCard as the standard for identity.

## Why will 'online trust' help to fight internet fraud?

By providing such a strong level of assurance of the consumer we are making a step change in the available validation to the market. This is based on validating an individual against information that isn't publically available or subject to the same risks of identity theft as commonly experienced in other areas.





## What are the benefits of the product to the consumer, and to the vendor?

The benefits to the consumer are:

- Security and control of personal data through being in control of who sees what and having centralised management of this information.
- Convenience, consistency & simplicity by not having to send physical documents, not having to go to a local branch and being able to complete the transaction purely online and in real time.

The benefits to the vendor are:

- Regulatory compliance by complying fully to the KYC and AML guidelines even for regulated financial products.
- Improved fraud detection by linking to previous primary ID checks.
- Reduced costs through a per transaction model at a fraction of the traditional offline processing costs.
- Increased customer satisfaction/retention through providing a purely online experience.
- Reduced drop out rates due to immediate execution of the financial product.
- Single customer view (across group portfolio) where required by linking each consumer to a unique reference (token).

## How secure is the miiCard and what information will it store about the individual?

miiCard follows the same ISO guidelines followed by the financial services industry and is based on proven technology stack and methodologies. External security consultants have been involved in the development from the beginning and actively manage and test the environment. miiCard will store a consumers name, mobile and their Level of Assurance (LoA) as a core requirement with the option of storing address, phone numbers and other information potentially required by the vendor. Each piece of information is validated and offered to the vendor as a Claim. Before sending the information to the vendor the consumers confirms consent and validates the information is correct so that they are always in control of the information shared.

## World News In Brief

### Coverity Scan 2010 Report Reveals High Risk Software Flaws in Android

The Coverity Scan 2010 Open Source Integrity Report has found some serious defects in Android phones. The report has been made after analysing more than 61 million lines of open source code from 291 popular and widely-used open source projects such as Android, Linux, Apache, Samba and PHP, among others.

Highlights from the Coverity Scan 2010 Open Source Integrity Report include:

- The Android kernel tested by Coverity revealed 359 software defects, which is a sample of what might be shipping in popular mobile and other Android-based devices.
- 25% of the Android defects found are high risk with the potential to cause security breaches and crashes.
- Nearly half of the defects discovered in open source projects by Coverity Scan are classified as high risk.

Common defects found in open source code continue to be flaws such as memory corruptions, NULL pointer dereferences, and resource leaks, which can cause system crashes and security vulnerabilities in products.

### Virgin Money to replace 2 Million Credit Cards with Contactless Cards

UK-based Virgin Money has announced its plan to roll out contactless across its card base, joining Barclaycard. Virgin Money, the financial services arm of UK-based Virgin Group, has announced that it has begun replacing its base of 2 million credit cards with cards supporting contactless.

The process would enable cardholders to tap their cards to pay for purchases of up to GBP15 (USD23.68) without having to insert the cards into readers and enter PIN codes. The cards would carry dual-interface chips, letting consumers to do conventional chip-and-PIN contact transactions for higher-value purchases. Virgin is expected to add the contactless functionality over the normal replacement cycle of the cards.





## **Emulex Introduces Host-Based Encryption Solution**

California-based Emulex Corporation has announced the introduction of a comprehensive host-based encryption solution. The solution consists of 'OneCommand' Guardian, Emulex's new software security product and OneCommand Key Manager, an enterprise-class, Key management Interoperability Protocol (KMIP) compliant key manager based on IBM Tivoli Key Lifecycle Manager technology, which can be deployed on servers using Emulex's OneSecure adapters, or Emulex's family of LightPulse' 8Gb/s Fibre Channel Host Bus Adapters (HBAs).

Emulex's security solution improves the data centre's security stance and minimises the window of data vulnerability by securing data where it originates, at the host, as described in SNIA's Best Current Practices. The Emulex solution allows companies to meet their compliance requirements for data protection rules and regulations, such as HiTECH Act, PCI-DSS, European Union Data Protection Directive, Security Breach Disclosure, HIPAA, GLBA, Germany's Federal Data Protection Act, BASEL II, the UK Data Protection Act and various DoD and NSA mandates.

## **Oberthur Technologies to Launch First Dual Prepaid Smart Card in South Africa**

Oberthur Technologies, a global leader in secure technologies, has been chosen by South Africa's ABSA Bank as the supplier of its first, new prepaid MasterCard contactless payment cards with PayPass.

The dual-interface payment technology will enable both contact and contactless payment transactions, and can be used in retail outlets throughout South Africa to offer consumers increased convenience and speed at the point of sale (POS) terminals, while giving retailers the benefit of faster till points and providing a secure alternative to cash. The card can also be used as a transport token in South Africa's new integrated transport system, implemented by the National Department of Transport.

## **Gemalto Enhances Multi-Platform eBanking Security for CI Banco's Mexican Customers**

Gemalto and Consultoria Internacional Banco (CI Banco) announced the rollout of Gemalto's Ezio strong authentication server and One-time Password (OTP) tokens to enhance eBanking security for CI Banco's customers, with options to expand to other types of authentication devices, including EMV payment cards, connected readers or mobile phones. Gemalto's strong authentication solution combines OTP tokens customised for CI Banco with the software platform to create a time-based challenge-response mechanism in multiple authentication devices. This added layer of security ensures the authenticity of the internet banking session and provides an enhanced level of protection for users when accessing their accounts or performing online transactions.

## **HID Global Receives CCC for e-Government Manufacturing Site in Ireland**

HID Global, trusted worldwide leader in solutions for the delivery of secure identity, announced that it has obtained a site certificate for its Galway, Ireland e-government solutions manufacturing facility from the German Federal Office for Information Security (BSI), which supports product certifications conformance up to the Common Criteria assurance level EAL5+. The site certificate covers the initialisation and production environments and processes for personal electronic identification (e-ID) products, including RFID inlays for e-passports and contactless National ID cards.

Common Criteria is an internationally approved set of security standards that ensures a clear and reliable evaluation of the security capabilities of information technology products for government customers.

## **Identive Group to Acquire Smartag**

Identive Group, Inc., a provider of products and solutions for security, identification and RFID industries, announced that it has entered into an agreement with the France-based Group FCI SA to acquire FCI's Smartag subsidiary, a Singapore-based manufacturer of RFID inlays and inlay applications, as well as an associated portfolio of RFID and related patents and other intellectual property. The transaction is expected to close during November 2010, subject to customary closing terms and conditions.







# Night of the living computers...

*By Noa Bar Yosef, Senior Security Analyst, Imperva*



**Noa Bar Yosef**

At Halloween, zombies worm their way into our consciousness once more. But these days your traditional zombie has a rival – not exactly a clone, but a modern version with equally nasty habits.

Where the original zombie was said to be typically a reanimated corpse or a human being controlled by someone else by use of magic, today's computer version is controlled by cyber criminals who are usually after your bank, social network or webmail credentials.

Traditional zombies originated in the West African spiritual belief system of voodoo, and became a popular device in modern horror fiction, largely because of the successful 1968 film *Night of the Living Dead*.

Four decades later, we are still fighting zombies. The computer variety connects to the internet after an innocent user's PC has been compromised by a hacker, computer virus or malicious software called a Trojan. Usually, a compromised machine is one of many in a botnet, which will be used to perform malicious tasks of one sort or another under remote direction.

Most zombie-infected computer owners are unaware that their system is being used in this way. This lack of awareness is why such computers are compared to traditional zombies.

The modern zombies have been growing in strength and power over recent times. The bad news for their victims is that today's industrialised hackers are demystifying two zombie myths: (1) zombies are uncoordinated, and (2) zombies are slow.

With just a few clicks, a hacker can issue command and controls (C&Cs) to waken a group of zombies. This group then becomes part of the attacker's 'botnet' – a cyber-army under his/her control. The attacker then issues different C&Cs to the botnet to perform the required cyber-attack.

A major goal of these botnets is to probe Web application vulnerabilities and extract valuable data, such as:

- Banking credentials to gain access to a victim's online banking system.
- Social network credentials to hijack a victim's profile and scrape their friend list and send out spam.
- Webmail account credentials to gain personal information on the individual for spear-phishing.

The bottom line is, beware of zombies because today's sophisticated hackers can conduct fully muscular attack campaigns, using a corporate 'dashboard' detailing attack movements and advancements, within an hour!

How do you fight a computer zombie? Avoid being the next victim, use common sense. If a link seems too good, don't click. Update your computer with the latest patches; and ensure your anti-virus software is always enabled and up-to-date.

So, safe computing for the rest of the year. And watch out for those 'real' zombies!





## World News In Brief

### **China Telecom, Bank of China and China UnionPay Launch New E Surfing Great Wall Card**

China Telecom, the largest telecom operator in China has joined hands with China UnionPay (CUP) and Bank of China in launching a new mobile payment service in Ningbo city, located in Zhejiang province. The so-called "E Surfing Great Wall Card" includes 13.56MHz Watchdata SIMpass technology and integrates the full functionality of a mobile phone SIM card and on site payment function of a standard bankcard. This is the first joint venture project after the unifying of mobile phone payment standards in China.

### **ICO Found Data Breach in Google Street View Investigation**

Google UK will be subject to an audit and must sign an undertaking to ensure data protection breaches do not occur again or they will face enforcement action, Information Commissioner Christopher Graham said.

The Commissioner has concluded that there was a significant breach of the Data Protection Act when Google Street View cars collected payload data as part of their wi-fi mapping exercise in Great Britain. He has instructed Google UK to sign an undertaking in which the company commits to take action to ensure that breaches of this kind cannot happen again. An audit of Google UK's Data Protection practices will also be undertaken. The Commissioner has rejected calls for a monetary penalty to be imposed but it can take further regulatory action if the undertaking is not fully complied with.

### **BofA and Citi Testing iPhone and Android for Corporate E-Mails**

Bank of America and Citi are the latest financial services giants to consider letting their staff use iPhones and Google Android-based handsets as an alternative to BlackBerry for corporate e-mailing.

According to Bloomberg, the banks are currently using around 1000 people to test security software with iPhones. Bank of America and Citi, which both employ over 250,000 people, are also testing Android-based smartphones, as they look to widen choice for staff, and not replace BlackBerrys.

### **First 'ActivID' Credential Management System Launched**

ActivIdentity Corporation has introduced the 'ActivID' Credential Management System (CMS) Appliance. The industry's first-ever credential management appliance will enable medium-sized companies to quickly deploy smart cards and smart USB tokens for simple, secure authentication into desktops, VPNs, applications and building access systems. As the cornerstone of the ActivIdentity Universal Enterprise Access solution, the ActivID Credential Management System Appliance will reduce the risk of network breaches, compliance problems and financial liabilities for organisations in a variety of markets including finance, technology, health care, energy and manufacturing.

### **Figures Reveal the Bleak and Complex Reality of Fraud in the UK Today**

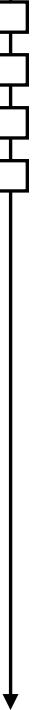
At the end of the third quarter of 2010, data provided by the 265 Member organisations of CIFAS - the UK's Fraud Prevention Service demonstrates that fraud remains rife.

In the first nine months of 2010, nearly 168,000 confirmed cases of fraud were recorded by CIFAS Members. While this represents a decrease of 4.52% from the same period in 2009, this apparent good news must be placed in context, as it represents an increase of 6.31% since the end of September 2008.

### **Telefonica and Jasper Wireless Signs Deal for Connected Devices & M2M**

Jasper Wireless, a global provider of M2M services, and Telefonica announced a strategic partnership to wirelessly connect machine-to-machine (M2M) and consumer electronics devices. The Telefonica Control Centre, powered by Jasper Wireless, enables M2M enterprise customers and device manufacturers to connect and manage embedded mobile devices, advancing their design and market introduction. Financial terms of the agreement have not been disclosed.

Telefonica's M2M service with Jasper Wireless will be commercially available on from 1 January 2011.





## BBM Services to Continue in India

Since August's article entitled "India BlackBerry Ban Imminent". This month the Indian government in an official press statement from Press Information Bureau, RIM stated that an interim arrangement of lawful interception of BlackBerry Messenger services has been made so far. Indian security agencies can henceforth lawfully intercept the encrypted BlackBerry services. RIM, in a statement, told Hindustan Times, "No changes to the related stories security architecture for BlackBerry Enterprise Server customers".

For security concerns, the government of India had asked the Canadian BlackBerry handset maker to offer complete lawful access to its encrypted BlackBerry services for monitoring. The Indian government had threatened to shut down all BlackBerry Services if RIM does not comply with its rules.

After discussions that spread over months, RIM has now provided an interim solution for lawful access to BBM services as per the press statement. The final solution for lawful interception of BBM services will be provided by January 31, 2011 and till then, BBM services will continue to be available in the country.

## DoCoMo to Roll out NFC in 2013

Japan's leading mobile operator, NTT DoCoMo has shown signs of adopting NFC technology to its mobile phones starting in 2013. The company has, however, declined to comment on its NFC move. A close DoCoMo source stated that the telecommunications company is "actively looking" at migrating from the proprietary Sony FeliCa technology it now uses to NFC phones that can store payment and other secure applications on SIM cards supporting the single-wire protocol standard.

However, it is still not clear when the move would happen or whether DoCoMo has made a final decision. Last week, report by economic news publisher Nikkei said DoCoMo would begin moving the FeliCa applications to SIM cards in about 3 years time.

## MegaMatcher Accelerator to Match Up to 100 Million Fingerprints per Second

Neurotechnology, a provider of high-precision biometric identification technologies, announced the release of MegaMatcher Accelerator 3.0, a packaged multi-biometric software and hardware solution for

high-volume, high-speed fingerprint and iris identification.

The latest version of MegaMatcher Accelerator 3.0 includes very fast iris matching capabilities of up to 200 million irises per second, with increased fingerprint matching speeds of up to 100 million fingerprints per second. Either iris or fingerprint modes can be used as primary, fast-identification biometrics, or both can be used together for even more accurate multi-biometric identification.

## FAC Certified and Verified for Visa, MasterCard SecureCode

Bermuda-based First Atlantic Commerce (FAC), a leading online payment gateway and fraud management services provider, is now certified to Allied Irish Bank Merchant Services (AIBMS), Elavon and Barclaycard for 3-D Secure Verified by Visa and MasterCard SecureCode. By certifying for 3-D Secure with European banks and processors, FAC enables merchants to use FAC's "3-D Secure only" payer authentication solutions to obtain liability shift for chargebacks on certain reason codes.

3-D Secure can be used to determine the enrolment status of the Issuing Bank and the cardholder so merchants can pre-determine the risk profile of new consumers before the first transaction.

## RF-SIM Neglected in China Mobile's Planning Document

A recent mobile-payment document from China's largest mobile operator, China Mobile, makes no mention of the proprietary RF-SIM technology that the company was promoting for mobile payment earlier this year, NFC Times reported.

The document mentioned standard contactless technology several times, as well as NFC in general. The document, which appears to be an internal planning presentation discussing mobile payment and mobile money or cash, is yet another piece of evidence that China Mobile is abandoning the RF-SIM technology it began rolling out last year.

For more on RF-SIM within China view April's Newsletter.



## Report shows payments thriving in ever-changing industry

By Tom Tainton, *Smartcard & Identity News*



*Tom Tainton*

The World Payments Report 2010 observes the ever-changing global payments landscape, analysing the latest trends in payment-related regulatory initiatives, payments volumes, instruments usage and challenges facing the banking industry. Drawn from executive interviews with major banks, as well as clearing houses, the report gauges global, regional and local perspectives, covering 33 countries from Singapore to South Korea.

The 2010 report, compiled by RBS, Capgemini and Efma, exhibited positive signs for the industry, finding that payment volumes continued to thrive despite the impact of the financial crisis and an increasingly complex payments landscape as a result of regulatory measures and greater competition. Andy Brown, payments expert at ACI Worldwide said: “With global payments volumes growing throughout 2009 and an increase in non-cash payments of nine percent in 2008, we can see that even during some very difficult economic times, electronic payments are growing at significant rates - increasing pressure on the banks to ensure their payments infrastructure can keep pace.”

But, according to the report’s key findings, regulatory pressures continue to hamper the payments industry. In response to the global financial meltdown, regulators have taken decisions that could have serious consequences for key elements of the payments environment. For instance, Anti-Money Laundering (AML) and Anti-Terrorist Financing (ATF) requirements are likely to increase the costs of processing orders, thus reducing efficiency and slowing the rate of Straight-Through processing (STP). Also, implementing a Basel III framework will demand management attention and investment which could require strategic repositioning for banking firms.

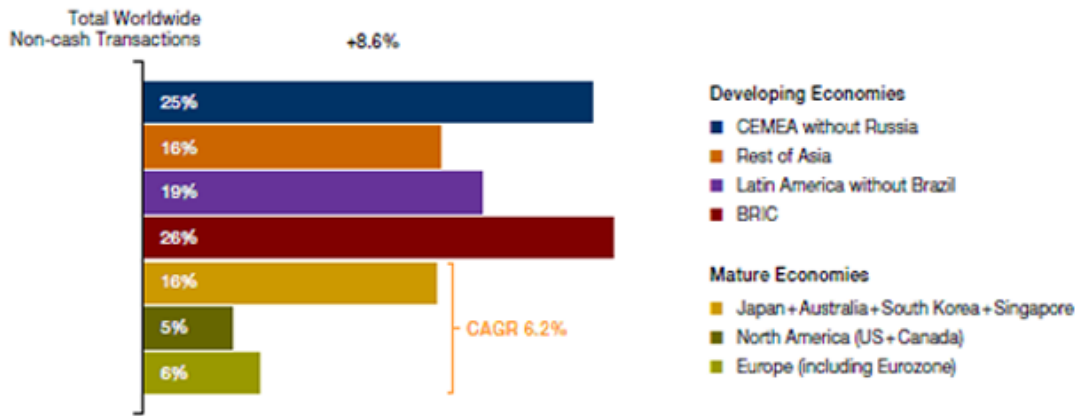
Brown contends that these pressures emphasise the need for ‘payment hubs’, a centralized model which integrates operations, enabling banks to better understand performance and profitability: “The need for banks to adopt payment hubs is further underlined by the many new regulatory pressures the industry faces. Without an agile system that gives a complete overview of all payments across all channels, they cannot achieve the visibility required to meet the requirements of the Basel III framework, for example. These hubs can also reduce the increasing complexity of payments for banks, ensuring their mission-critical systems stay robust and able to manage the challenges of the future.”

Financial business leaders interviewed for the report commented that new technologies and added competition has meant traditional players need to adapt to a landscape which now incorporates new market entrants, such as e-payment providers. Banks will need to decide how important payments are to their core business strategies, and may have to put in place a series of cost-focused initiatives. As a result, partnerships with third parties and revenue-focused sourcing strategies are likely to play an increasing role, enabling banks to improve scale and efficiency. The challenges associated with an evolving payments landscape also present significant opportunity to the banks that are able to adjust their strategies and take advantage of new ways of operating. Brown says: “With cards remaining popular, there are huge opportunities for banks to illustrate innovation in new products – such as suites of family cards that are tailored to the specific needs of different ages. But to achieve this and gain overall cost savings, and support true ‘markets of one’ with their payment systems, financial institutions need to move toward ‘payments hubs’ – a point recognised by the World Payments Report.”

Many concrete developments have taken place surrounding the Single Euro Payments Area (SEPA) and Payment Services Directive (PSD), revealing that nearly all European Economic Area (EEA) Member States have now included PSD in national law. The report suggested that SEPA Direct Debit usage remains very low, while SEPA credit transfers are also languishing behind initial expectations. Industry and government stakeholders agree that SEPA migration will continue to lag unless supported by regulation. Progress has been made, but the process is slow. Global economic challenges have caused some banks to be more hesitant in making the investments to speed SEPA migration. However, in June this year the European Commission (EC) announced its intention to draft binding legislation of migration end-dates.



Figure 1.2 Total Worldwide Non-cash Transactions CAGR, 2001–2007



Source: ECB DWH—2007 figures, released Nov. 2008; Bank for International Settlements—Red Book—2007 figures, released March 2009; IMF database; Central Bank Source; Capgemini research and analysis, 2009.

Finally, as displayed in the graph above, the report noted the accelerating transformation of the payments value chain, revealing that card payments account for 58% of global payments – the market’s preferred non-cash payment instrument. Overall growth in non-cash payments rose dramatically in developing.

## World News In Brief

### EMV Makes Fraudsters Work More for Less

The recent stats from EAST (European ATM Security Team) show that Europe’s banks reported a record number of skimming attacks in the first six months of this year. The number of attacks, when criminals capture payment card details as bank customers try to withdraw cash from ATMs, was 3% higher than the second half of 2009 and up 24% over the first half of 2009. The crooks are targeting the magnetic stripe on the back of cards which contains the card’s account details. By attaching an external recording device near where a bank card is inserted into an ATM, a fraudster can “skim” those details and encode them onto a dummy or clone card.

But despite the higher number of skimming attacks, losses have fallen, according to EAST. Skimming losses were Euro 143.5 million for the first half of this year, down 7% from the Euro 154.1 million reported in the last half of 2009. EAST’s coordinator, Lachlan Gunn, believes EMV has had an important role to play in the drop.

Nearly 95% of cash machines in 31 countries in the Single Euro Payments Area (SEPA) now accept Chip & PIN or EMV cards. So, even if a fraudster manages to clone an EMV card, the clone card lacks the microchip and won’t work in EMV-compliant machines.

While EMV countries are protected, these clone cards will obviously work in those countries that still

don’t use the EMV system, such as the U.S. As a result, international losses increased by 7% in total.

### Practical EMV Interception

Omar Choudary, a PhD computer science student at Cambridge University, England, has recently released ‘The Smart Card Detective: a hand-held EMV interceptor’. The report with accompanying source code, describes how he developed a portable (to be worn under the sleeve) device to modify any part of an EMV transaction.

With the device, one is able to easily implement a recently discovered man-in-the-middle vulnerability. The vulnerability allows a transaction to complete without the correct PIN. Omar describes the vulnerability as follows; “On one side the middle-man tells the terminal that the PIN entered is correct, while on the card side the middle-man removes the PIN verification (i.e. the VERIFY command is never sent while the rest of the transaction remains unchanged). This works because the card will believe that signature authentication has been used since no PIN verification was requested. Both card and terminal keep some status bits that could be used to detect this attack but because of the complexity of the EMV implementation this mismatch is not checked.” – in the UK.

Omar has tested his ‘Smart Card Detective’ device at “several shops in town”. He has also given thanks to Frank Stajano and Ross Anderson for suggesting the project.





# Payment Trends

*By Adam Holt, Head of Retail, Ingenico*

We are currently in an era of new and ever-improving technologies, and the way we are paying for products or services is rapidly evolving.

The biggest trend recently has been around the development of contactless and mobile phone payment technology. We are seeing more and more coffee shops, food outlets and even supermarkets adopting contactless technology for purchases under £15, and there are predictions that payment via mobile phones could be a reality at the London 2012 Olympics.

There are still those who see cash as king, but with 12 million Visa issued contactless cards in circulation by the end of the year, could we be heading for a society where cash will be de-throned by contactless payment? Barclays and Barclaycard announced a 217% increase in contactless payments this year with 150,000 of them processed in September alone. Virgin Money and MBNA have also announced their commitment to contactless with millions of their cards being rolled out over the next couple of years.

'Cash champions' have stated that cash shows no sign of dying out - in fact, according to Ovum, citing European Bank figures, the amount of cash in circulation is continually on the rise. There are over 40% more dollar bills in circulation in the US than at the beginning of the millennium - a startling figure. But cash is expensive. You have the manufacturing of the coins and notes to consider all the way to transportation and security; not to mention the staff hours spent counting the money. In comparison, electronic payments are far more cost effective.

Despite some people's deep emotional attachment to cash, contactless advocates have proposed that the era of contactless is finally here— Visa has increased its contactless card issuance this year to 12 million from 8 million, and a recent survey from MyVoucherCodes found that 72% of Britons are in favour of contactless technology in all supermarket stores. This new payment trend has even made its way into schools, with Nottinghamshire County Council providing payment cards for children to buy school meals using sQuid.

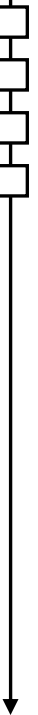
While it is unlikely that cash will become obsolete, contactless and mobile payment is poised to corner the market in low-value transactions. Despite Datamonitor's recent report that retailers have been slow to adopt contactless technology, a number of forward-thinking brands such as Co-op and Pret a Manger, have already adopted contactless technology and are benefiting from substantially faster customer transactions, higher footfall and an increased average spend of up to 33%. Recent research from Barclaycard has found, that despite our collective reputation for a love of queuing, British consumers are only willing to queue for two minutes; a decrease from five minutes six years ago. Addressing this demise in tolerance for queuing is crucial for retailers. Transforming queues into transactions is something these new technologies can aid.

Even with high profile TV advertising from brands, such as Barclays, there are still many consumers who are not yet aware of these new technologies. Whether it is habit or lack of education, there are still barriers to adoption, but they are not insurmountable. After all, consumers and retailers were initially reticent about electronic and online payments, but these are among the most popular today.

The key on both sides of the transaction is education. Retailers need to be further educated about the benefits, and what new payment technology can do for their business. With research by US firm CVS showing that a contactless payment can be completed in only 12.5 seconds, compared to cash and chip-and-pin transactions taking an average of 34 and 27 seconds respectively, the opportunity for queue-busting is huge. In parallel to this, if both retailers and card issuers collaborate to help customers understand the benefits and how to use these new methods of payment, contactless payment will spike.

A good example of a behavioural change is the Oyster card. It was introduced in 2003 in London and although it took a while to change customers' behavioural patterns, it is now the most popular UK contactless card with 34 million issued by June 2010. More than 80% of all tube journeys and more than 90% of all bus journeys are now paid for by the Oyster card. Why does everyone use it? Primarily for speed and convenience.

With big brands such as Virgin announcing that they are going contactless, and Apple who is believed to be developing an iPhone with mobile payment technology, other companies are bound to follow suit.





Payment for purchases using a mobile phone, containing an electronic chip or special SIM card carrying your bank details - acting just like a credit card, could mean bypassing queues, and purchasing what you want in a matter of a moment or two. The tipping point for these new ways of payment will be the implementation by a major tier one retailer, such as those like Virgin or Apple, or an event such as the Olympics – providing the ideal platform for these new payment trends to take off. Using mobiles to pay for everything from train tickets to groceries could be a reality at the London 2012 Olympics claims European telecoms giant Telefonica.

To encourage general acceptance of new technologies requires simultaneous co-operation of all parties involved; it doesn't solely depend on the retailers, card issuers, terminal providers or banks. Integrating the service is a jigsaw puzzle—only when we put all of the pieces together can new payment technologies become a widely accepted method of payment.

As cheques have become increasingly uncommon in favour of online banking (a mere 0.8 % of retail payments are now made by cheque) consumers and retailers alike will continue to look for more convenient and efficient ways of payment. Mobile and Contactless payment systems seem to be the next logical step, it may simply be a case of giving UK consumers, retailers and all other parties a little more education and time to adapt.

## World News In Brief

### Cash Still Top for P2P Transactions

A new report from Aite Group confirms that cash is still the preferred method used in person-to-person (P2P) transactions.

The survey of 3,190 consumers in the United States, United Kingdom, and Australia, provides insight into consumers' person-to-person (P2P) transaction behaviour. What was once a relatively simple transaction, usually involving handing over cash or writing a check, has evolved into a wide range of potential transaction types, with at least 16 different payment methods and nine different payment channels.

50% Cash, 17% Cheque, 11% Gift Card, 7% Domestic Bank Transfer, 4% Online Banking / Bill Pay, 4% Debit Card, 3% Credit Card, 5% Other Methods.

### Clipper Card's Dirty Little Secret

Matthew Roth of Streetsblog San Francisco investigates after learning that there are a number of ways you can use your Clipper smart card for payment on transit agencies throughout the Bay Area, but what you probably didn't realise is you could use it like a credit card, spending up to \$10 more than the value on the card.

Here's how the scam works. At any retailer or vending machine that sells Clipper, load the minimum \$2 dollars in cash on a new Clipper card, and then ride BART where ever you desire and you will never have to pay more than \$2.

"Because the card registers a negative balance, which would have to be cleared before a positive balance can be added to the card upon re-loading, the smart

thing to do would be to throw away the card.

Like any scam someone has to foot the bill and this is the Metropolitan Transport Commission, the planning body that administers Clipper.

MTC spokesperson John Goodwin acknowledged that Clipper cards can "go negative," which he said the MTC programmed into the card to help customers get out of a transit system where there aren't fare machines or customer service personnel to help them add value to their cards. "It's a built-in convenience to the system, based on the goodwill that people will re-load their card," said Goodwin.

Continue reading this article on Streetsblog San Francisco

### Gemalto Launches Payment Card with Online Banking Security Functionality

Gemalto has launched the industry's first credit card to combine one-time password security capabilities with standard payment. This innovation allows banks to provide a single card that delivers both payment and increased security for online transactions. The new Gemalto Ezio product is immediately available in the United States.

The card's online secure password feature is activated by pressing a button on the face of the card. A one-time code is digitally generated and displayed. The card becomes a second factor of authentication, allowing the user to enter this unique and non-reusable numeric code on a Web page, in addition to their user name and password.

As part of the solution, Gemalto provides a turnkey





platform that is plug and play with existing banking systems, for the online verification. The server verifies user authentication for online transactions and account access.

"With the rapid growth of attempted online fraud, financial institutions are looking for effective and affordable ways to provide increased and more user-friendly online security, especially for commercial and high net worth accounts," commented Ove Wedsjo, Head of eBanking at Gemalto. "Our brand new Ezio product equips end-users with a security token embedded in a form-factor they are very familiar with, guaranteeing high user acceptance".

### **Denmark Renews Multi-Year ePassport Contract with Gemalto**

Gemalto announced that the Danish State Police ("Den Danske Stat ved Rigspolitiet") has renewed its multi-year agreement with Gemalto for a complete Sealys ePassport production and issuance service. The new outsourcing contract is for 5 years with an option of extending the contract to an additional 5 years.

Gemalto has been providing its Allynis Issuance operated services, which include ePassport personalisation from its Denmark-based secure service centre, and delivery to the citizens. The comprehensive set of services enables the Danish Police to benefit from a smooth and trouble-free process, with a regular flow of delivery, thus ensuring citizens do receive their passport within a very short delivery time.

Gemalto also manages the production of all Sealys ePassport components as well as booklet assembly. The travel document incorporates Gemalto's secure laser-engraved polycarbonate data-page, fitted with innovative security features. The Sealys eData-page includes a contactless microprocessor running Gemalto's highly secure operating system and carrying the holder's digitised photograph, in addition to their demographic data already laser-engraved and human-readable. Gemalto has been deploying more than 4 million ePassports in Denmark to date, as part of the previous contract

### **ID Card Data to be Shredded**

A document released through Parliament's publications and records reveals that the IPS (Identity and Passport Service) plans to order Thales and 3M SPSL to shred hard disks and back up tapes holding personal information on the NIR (National Identity Register).

The document, CWIC-NIR Destruction and

Equipment Decommissioning will be circulated within the IPS to agree the requirements and processes that will be followed to destroy the NIR and to decommission the associated IT equipment, which is now surplus to requirements.

This follows the Home Secretary's announcement on the 27th May 2010 that Identity Cards for UK citizens and EEA/Swiss Nationals are to be cancelled and that the NIR containing biographic and biometric data will be physically destroyed.

### **Western Union Launched Mobile Money Transfer Services in Philippines**

Global payment services provider, Western Union, has announced that its mobile money transfer offering will be made available to mobile subscribers in the Philippines via a partnership with Globe Telecom and Smart Communications (country's telecommunications company). The Western Union mobile money transfer service to the Philippines will be available from 70,000 Western Union agent locations in 27 countries.

Additionally, consumers in 6 countries are allowed to access Western Union's website to send funds online to recipients located in the Philippines. This service is available using a credit or debit card directly to Smart Communications or Globe Telecom subscribers' "mobile wallets," or accounts tied to their mobile phones.

### **UK Contactless Card Payments Surpassed 1 Million Milestone**

The total number of "touch-and-go" contactless transactions has passed the one million mark in the UK, according to Barclays and Barclaycard. According to Barclaycard, since January there has been a 217% rise in monthly contactless transactions, with over 150,000 processed in September 2010 alone. The statistics reveal there are currently 42,500 payment terminals in shops across the UK and 10 million Barclays and Barclaycard customers have been provided with contactless cards.

The financial service providers have pioneered the use of the technology, which allows customers to hold cards equipped with touch-and-go technology up to a reader to buy goods up to the value of GBP15 without the need to enter a Pin code.

Several retailers have rolled out contactless terminals, including the Co-operative food stores, coffee shop chains Eat and Pret A Manger. A trial is also underway at Boots the Chemist.







## Public transport ticketing in the UK: slow, slow, quick quick

*By Peter Tomlinson - Smartcard & Identity News*



**Peter Tomlinson**

It is some 12 years since a visionary UK civil servant encouraged a group of interested individuals to propose the possibility of a UK national method for smart card ticketing on public transport. Not one single scheme, because London's Oyster, already under development, would clearly not, for several overlapping reasons, be scalable to cover the entire country. Thus was born a concept and architecture that eventually became the bedrock of the international standard Integrated Fare Management: IFM, ISO 24014 Part 1. Enabled are many schemes, interoperable in the sense that a smart card issued in one area can be used all over the country (with possibilities, if we work hard, for through ticketing and a national travel token purse). Delivered is: the duality of travelling using smart media to hold tickets and passes, and reporting of every journey. Yet, 12 years on, most passengers on buses or rail services don't see the national spec technology, now using the name ITSO, operating for them. Fear not: it is spreading very fast.

All the 7,000 buses in Scotland are equipped and accept at least the Scottish concessionary travel passes as part of their Entitlement Card project. Elderly passengers travel free of charge for most of the day; registered disabled persons travel free at all times.

On 3rd November the West Midlands (Birmingham and nearby areas) launched their scheme, with the local Passenger Transport Executive CENTRO having equipped almost all of the local bus fleets.

The counties of Lancashire and Cumbria, together with the seaside resort of Blackpool and the small area of Blackburn with Darwen, started early with a proprietary technology but quickly adopted the national method, have now equipped all of the buses, and are operating an ITSO scheme, initially for concessionary travel. Two other areas (Cheshire and Nottingham) also started with proprietary technology, added commercial Products, and are now converting to ITSO.

London's proprietary Oyster scheme has been very successful for quite a while. It is now preparing to move to a second incarnation, less expensive to operate - and it is also preparing to accept cards and ticket Products that conform to the national specification. The first ITSO spec Products accepted in London might be concessionary travel passes, or perhaps through tickets from commuter rail services. On-bus equipment is already starting to be upgraded.

At the developing stage are major schemes in the North East, Yorkshire, Greater Manchester, the Liverpool area, and all of Wales - they will include paid for tickets as well as the travel concessions. Across England, Scotland, and now Wales, all who qualify for concessionary travel and applied for the passes have ITSO specification cards - that is near 15M smart cards. Beyond that, a detailed equipment rollout strategy for all buses in England was last December unveiled by the Department for Transport, so that within 2 years every bus operator will have available to them the essential core back office services, and behind that ITSO Ltd's networks connecting back offices and ITSO's security key management service. There is now only one major bus operating group that has not made the needed commitment.

What about rail services? Just bits and pieces so far, not real coordinated commitment despite government words in the franchise agreements. We still have some way to go in that area.

What next? That has got to be the use of smart phones.

Just one other niggle: administering the concessionary travel scheme in England is causing major headaches - that was discussed with remarkable frankness at the November 4th Concessionary Fares 2010 Conference. In typical British public administration fashion, it's a muddle. If we don't quickly overcome the muddle, we could see significant damage to bus services at the margin: curtailing of rural and late evening services.

It is that typical British public administration methodology that has caused this to take so long, but the prediction of the now retired, visionary civil servant is at last coming true: when the big public transport operating groups start to go ahead, they will all go together. There is just one laggard at the moment.

*The author is a Member of ITSO Ltd, and was a Director of the Company in its early stages. However, the opinions expressed here are solely those of the author.*





# Front Money

## *An Introduction into Online Payment Processing within Gambling Industry*

*By Suparna Sen, Smartcard & Identity News*



*Suparna Sen*

Gambling has been a leisure activity for over two hundred years. During the 16th century, King Henry VIII of England outlawed games which encouraged drinking and gambling when he realised his troops were spending more time gambling than bettering their battle skills. When his wife, Anne Boleyn, and her brother were convicted for treason and incest, apparently the betting odds were 10-to-1 on acquittal.

In 2009, the global gambling market brought in revenue of \$335 billion<sup>1</sup>, while the online gambling market's contribution was just over 8% of the total at \$26 billion. Online gambling revenues have risen rapidly from around \$10 billion in 2004 to a prediction of over \$35 billion in 2012

According to Rachael Church-Sanders, the author of 'The Global Business of Online Casinos', the growth of online casinos will be attributed to more number of people getting internet/wireless connections and getting hooked to social networking, mobile applications and micro transactions.

According to Juniper Research, of the world online gaming industry, only the North American mobile revenues will reach \$10Billion in 2015. The firm has also estimated that gambling operations will be the most popular phone service.

Online gambling is also capturing a wide audience because of its ease and convenience to gamble uninterrupted and undetected for hours at a time. Of late, women and teenagers are trying gambling by going online. This year the website Cashcade, which runs getmintedbingo.com, reported 80% of its audience is female. Britain has seen a 40% increase in online gambling over the past 12 months, making it the UK's fastest-growing hobby<sup>2</sup>.

Online gambling has spawned a vast array of payment processing companies. Often online casinos introduce you to over half a dozen payment processors. Here are the names of just a few: Add-funds, EcoCard, eWalletXpress, Youteller, Western Union, Firepay, Instadebit, myCitadel, epassporte, etc. These provide currency exchange and fund transfers into your gambling pot, but the reason why there are so many of these processing companies can be attributed down to the murky area of legality.

The first problematic area is that different countries each have different ideas of what gambling is.

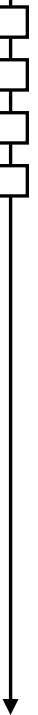
The UK based charity Gamcare defines gambling as two or more people agreeing to take part in an activity involving a stake which is paid by the loser to the winner. The outcome is uncertain and determined at least partly by chance.

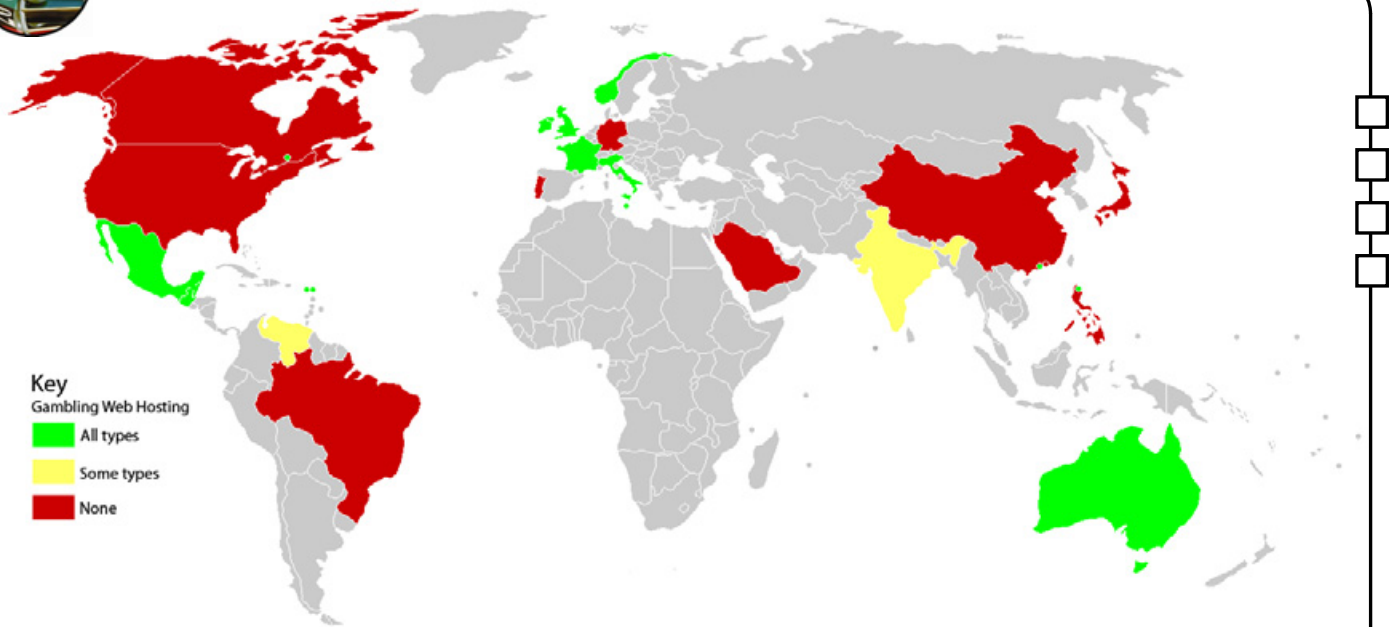
The UK's gambling licensor (Gambling Commission) breaks down gambling into different categories. Online gambling is covered by their remote gambling category. The commission offers remote operating licences for each type of gambling activity a company may want to run. Below are the types of licence which relate to Internet (Online) gambling:

- Casino Games: Games like Roulette, Blackjack, Keno, Pachinko, Poker, Slots (Fruit Machine).
- Betting: Usually betting is made on the outcome of sports. Bookmakers, William Hill say they will endeavour where possible to put odds to any reasonable proposition with which they are approached.
- Bingo: Loquax Bingo, Foxy Bingo, Prize Bingo, Red Bus Bingo, Bingo on the Box, Wink Bingo, etc are popular UK bingo sites.
- Lotteries: This includes tombolas, sweepstakes and raffles, etc.

Using what the UK Gambling commission regards as gambling, I have tried to map were it is possible for a private company to obtain a licence to host a gambling website. (*See figure 1*)

As we can see on the map it is illegal to host a gambling website in the USA. The Federal Wire Wager Act of 1961 says "the transmission of a wire communication which entitles the recipient to receive money or credit as a result of bets or wagers, or for information assisting in the placing of bets or wagers, shall be fined under this title or imprisoned not more than two years, or both".





Above: Figure 1 – Licensed Gambling Web Hosting

On 13 October 2006, the U.S. Congress passed the Unlawful Internet Gambling Enforcement Act (UIGEA), making it illegal for US banks to transfer money to offshore gambling websites or to the gambling website's online payment providers.

Many gambling payments processor operators have been arrested as soon as they set foot in the US. On August 5th 2009, Douglas Rennick a Canadian national and director of the companies: My ATM Online, Alenis Limited, KJB Financial Corporation and Check Payment Financial was arrested and could face 30 years of imprisonment for processing over \$350 million in payments for internet gambling companies.

A 27-year old Australian man 'Daniel Tzvetkoff' was arrested earlier this year for processing online gambling transactions worth more than \$543 million for American gamblers. He faces up to 75 years in prison.

The 2006 legislation includes a specific allowance for online competitions in games of skill. Skill gaming is legal in the majority of US States. Gin rummy is apparently a game of skill.

China strictly prohibits hosting online casinos, and the government does not grant licence to start up a casino.

The Macau government allows setting up of online casinos in the country. Gambling is the biggest revenue generator in Macau, adding to about 50% of the country's economy.

Within the Philippines online gambling sites are run by PAGCOR, and they can only be used by Filipino players. In the north a region called Cagayan can license and host gambling websites which are open to foreign players only.

Australia: Although the Australian government provides licenses to online casinos for operating within the territory, it doesn't allow the participation of its citizens in online gambling.

In Europe, each country has its own set of laws to restrict or prohibit different types of gambling. In 2010, France has implemented a new gambling law that needs online poker players to pay a 2% tax on all pots and tournament fees. The new law allows only French citizens to gamble online. UK and Ireland have legalised online gambling, and hence hosting as well as playing at online casinos is fully licensed.

Spain's government jump-started its talks with regional authorities this year, as it moved to accelerate online gambling reforms and lodge a bill with parliament by the end of the year.

Germany has banned online and other private gambling companies from operating within the country, restricting sports betting, casino games, etc. Under the 2008 German Interstate Gambling Treaty, the German government only allows state lotteries to function.

The European Court of Justice (the highest court in the European Union in matters of European Union law), has disapproved Germany's gambling monopoly stating that it fails to pursue the objective of combating the dangers of gambling in a "consistent and systematic manner".





India has a restricted online gambling market. Goa and Sikkim have online casinos. Sikkim operates its online lottery run by Playwin, and there are a few legal websites in India where players can place bets. Kerala State Lotteries can also be played online.

On July 1st 2010, Russia banned all forms of gambling from bingo to Russian Roulette. Moscow had to shut down about 550 gambling places, including 30 casinos. However gambling will be permitted in the regions: Altai, Primorye, Kaliningrad and the Krasnodar Territory. These are regions which attract a lot of international tourism.

To conclude, online gambling is inherently problematic as the internet has no boundaries. What constitutes gambling can vary between countries. There are different types of gambling activity. Laws apply differently to whether the activity is held on or offline. So, how does PayPal, the largest online payment provider handle this?

From the "PayPal Acceptable Use Policy" that the company does not allow financial transactions coming from online gambling, gaming or any such activity that includes an entry fee and a prize, including, casino games, sports betting, horse or greyhound racing, lottery tickets, games of skill and sweepstakes unless the operator has obtained prior approval from PayPal authorities or the game is allowed by the country's law. In USA, no player can use PayPal to deposit or withdraw money at online casinos. It is only the European players who can use PayPal to carry on gambling transactions.

Currently, PayPal is offering its transaction services to only a handful of gambling websites such as Betfair and Ladbrokes, both UK-based online gambling sites, Bwin, an Austrian based online betting company, along with 888 Poker, William Hill Poker, Party Poker and Paddy Poker.

Non-Europeans, excluding USA are also free to play at the sites such as Betfair, Ladbrokes, 888 Poker, Bwin, etc, but they cannot use their PayPal account to deposit money earned from gambling.

Governments are slowly coming to terms with the difficulty of policing the internet, it is likely that we will see more countries follow the UK's model of licensing and taxation. Countries like Argentina, Mexico, Singapore, Taiwan and South Korea have moved forward in support of legalising online gambling.

Although India does not have any gambling laws (except the Bombay Wager Act, which prohibits online gaming in Mumbai city), the recent financial and ownership controversies over IPL (Indian Premier League) teams, and increased cricket betting has made India think of whether legalising gambling or not!

The U.S. UIGEA Act that was passed in 2006 for a 4-years period is already serving its final year - 2010. This means time has come for USA to either revise the existing Act or bring in new laws supporting online gambling within the country.

The November US mid-term state election is over, and both Barney Frank and Harry Reid have won their respective seats from Florida and Nevada. For a long time, they have been pushing Congress to pass HR2267 bill (Internet Gambling Regulation, Consumer Protection, and Enforcement Act) that will give online gamblers the right to frequent online gaming sites without fearing of breaking any US laws. It is only time that will tell how far they succeed in making online gambling legal in USA.

#### References:

<sup>1</sup> H2 Gambling Capital Report

<sup>2</sup> ACNielsen Report

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