CHYPpings

Autumn 2008

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Customer Focus
Singapore IDA

The Infocomm Development Authority of Singapore (IDA) is the national information and communications industry champion, the national strategic planner and developer, and the Government CIO. It has a straightforward goal to cultivate a vibrant and competitive information and communications industry in Singapore—one that attracts foreign investment and sustains long-term GDP growth through innovative infocomm technology development, deployment and usage—in order to enhance the global economic competitiveness of Singapore.

In its master-planner role, the IDA ensures that a robust national infrastructure is in place to meet the needs of the government, businesses and people. The "in 2015" vision for Singapore, assembled by the IDA, covers national wired and wireless networks as well as a wide variety of network-enabled e-government and e-business applications.

The IDA works with both public and private organisations to spearhead the strategic use of information and communications technologies, encouraging innovation as well as research and development in emerging areas like digital media. IDA has an excellent track record for master-planning projects for the government and also works with industry to harness technology to enable development in education, healthcare, manufacturing, logistics, tourism, entertainment and finance.

One specific area where the IDA is active is in helping industry to develop interoperable infrastructure, thus maximising the net welfare. This is why the IDA determined that near-field communication (NFC) technology might be of strategic interest. With handsets due to enter the market in 2009, the IDA decided that 2008 was the right time to explore the commercial deployment possibilities. They decided to do this by looking at the global market to see what lessons could be learned and by running a series of stakeholder workshops in Singapore.

Singapore had already begun both transit-based and payments-based trials using NFC handsets with existing infrastructure, so the opportunities that NFC affords were already visible to stakeholders, as were some of the costs. Some particular issues, such as the nature of the "trusted third parties" (TTPs) who can load NFC applications over-the-air into customers' mobile handsets, had been identified as complex because of the interaction between design choices made at a low level in implementing NFC applications and the business models that these technological choices might constrain. Hence further study was needed before government and business could make investment decisions.

The IDA chose Consult Hyperion to support it in this project. Suat Hong Koh of IDA explains: "We needed consulting support from an organisation with practical experience in developing NFC strategies for all of the stakeholders: not only government, but mobile operators, transit companies and banks." As a result of this work, the IDA were able to assess the magnitude of the benefits of an interoperable approach and help the stakeholders to begin informed discussions about appropriate architectures.

For further information about our capabilities and experience supporting governments in Europe, the Middle East and Asia, please contact: Mike Burden <mike.burden@chyp.com>

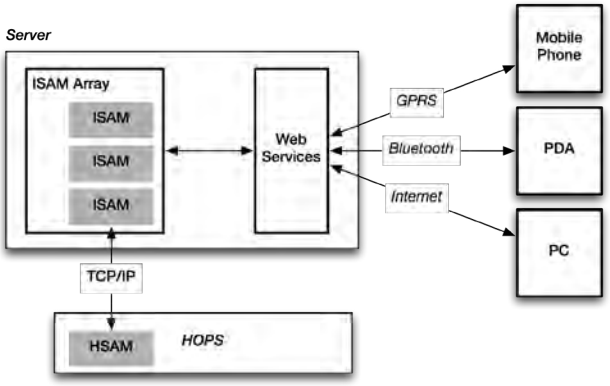


ITSO

Mike Burden
Commercial Manager
Public Sector

At a recent Transport Card Forum (TCF) conference in London, Consult Hyperion's Commercial Manager for the Public Sector, Mike Burden, described how Consult Hyperion, transport consultancy MVA, smart card technologists ESP Systex and mobile operator O2, together with the NowCard scheme in the North West, have joined forces on the first-ever live ITSO Near Field Communications (NFC) trials for public transport ticketing. The Department for Transport (DfT) has funded this research project, with 36 'trialists' currently using mobile phones to pay for bus tickets. ITSO is the specification supported by the Department for Transport (DfT) for interoperable contactless smartcards and is the national standard for transport smart cards in the U.K.

"Increasingly, the data transfer made possible by NFC will take the form of secure payment and ticketing transactions, since NFC phones can be set up to deduct funds from the user's bank account, or stocked up with credit in advance," said Burden. "Since most people carry their mobiles every day, whether they have cash on them or not, the type of transactions made possible by NFC represent a wide variety of possibilities in terms of mobile payments and ticketing."



The ability to use mobile phones as a means for downloading and holding public transport tickets will deliver greater convenience for customers by eliminating the need to queue at the ticket office, and will deliver reduced ticket issuance cost for operators. In addition, the user interface capabilities of the phone will give users the ability to view their journey history and remaining credit at any time.

Live trials of this technology – part of a DfT-funded technology research project launched to investigate and demonstrate the viability of using an NFC phone as an ITSO ticket carrier – are already underway in the North West of England under the NoWcard scheme with two different bus operators. By using NFC technology in place of cards, bus drivers can validate pre-paid bus tickets that have been stored on users' mobile phones. The user benefits from the convenience of the phone as well as being able to use the phone display to check on the remaining balance on stored value tickets. In the future (as shown in the diagram) bus drivers may even be able to use mobile phones to validate customer cards.

The project's first milestone was the certification of the Nokia 6131 phone by ITSO to enable it to be used in live schemes. As such, the Nokia device is able to interact with all existing ITSO card readers, which means that no new investment in infrastructure will be required by ITSO members (which include bus operators, train companies, suppliers to the industry, and local authorities) to accept NFC phones as well as cards.

The on-going research project represents a further continuation of the DfT's ambition to investigate new technologies in order to provide greater convenience across its public transport network. The objective is to evaluate NFC-enabled devices – as well as new functionality within ITSO – in order to gauge whether:

The carrier device is able to hold ITSO-compliant public transport tickets

Remote retail devices will be able to sell ITSO-compliant public transport tickets over a mobile network

A 'validator' device is able to validate ITSO-compliant tickets stored on other media via the NFC interface

Participants were instructed to use the phone for travel, and to engage in a number of activities including the use of Stored Travel Rights, Top-Up Vouchers, and special Youth Concessions.

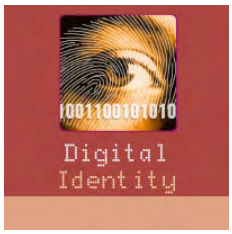
For more information about Consult Hyperion's ITSO experience and expertise, please contact Mike Burden at mike.burden@chyp.com or call +44 (0)1483 468694.

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Aussie Rules

David Birch, Director

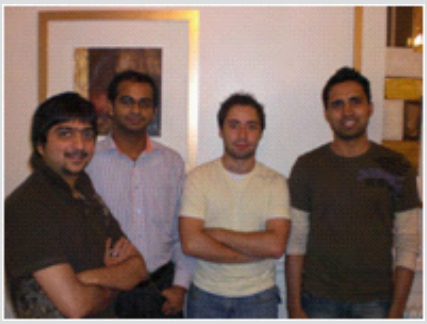
Card schemes point to Australia as a place where attempts to regulate interchange fees have resulted in no beneficial change for the consumer. In essence, as the Australian Consumer Competition Commission (ACCC) implies when it says that "nothing real has happened", the card issuers were forced to halve interchange but the merchants did not pass the saving on to consumers. So was the regulatory intervention a good idea?

Mandated reductions in interchange fees in Australia were supposed to cause retail prices to drop, directly benefiting consumers. The whole idea is that interchange is a "hidden fee" that retailers bundle into their prices, and that a reduction in fees charged to merchants would benefit customers. Yet the regulatory experiment may well have gone horribly wrong.

If we're going to discuss the best way to improve the lot of European consumers, then there are two fundamental options: competition or regulation. This brings us back to the general point: if we want to improve the payments system (by which I mean reduce the social cost of payments, thereby increasing the net welfare) should we expect regulation to be the best way to achieve this?: Professor Steve Worthington published a very detailed review of the Australian situation in the Journal of Payment Systems and Strategy. I won't attempt to paraphrase his detailed work, except to note that he says that "by an ironic twist", the reforms that were meant to help credit card holders have in fact largely disadvantaged them. First, the reduction in interchange and MSCs has not produced any discernible reduction in the prices charged while some have actually increased because of surcharging. Second, the cost/benefit ratio of rewards cards has titled against consumers, because they now have to pay more to get rewards.

I'm no expert on public policy, and my position is generally that regulators should focus on increasing competition rather than price-fixing. This is partly because price-fixing is a little too soviet for me -- and suffers from the same "information problem", in that the regulators cannot know all of the information that might impact the price of something -- but partly because the price-fixing doesn't change consumer behaviour in the right ways, because it doesn't have the clear goal of minimising the social cost of the payments system. If it did, then the industry might be able to agree on that central purpose and set about rebalancing the costs and revenues accordingly (which would have the immediate impact of making cash more expensive and therefore making cards and other electronic payments more attractive). Does it make sense to price-fix in one area only, simply effecting the transfer of resources from one set of business to another set of businesses depending on who is best at lobbying?

Consult Hyperion has a dedicated research, prototyping and specialist development team called Hyperlab, which can take new business ideas off of the whiteboard and into production. **Here are the new additions to the team...**



L-R: Hasnain, Manickam, Scott and Paras.

Manickam Meyyappan - Web Developer
"I am currently working on both the public and private website."

Paras Mehta - Senior Software Engineer
"I am working with Java ME and I am also working on a NFC Demonstration project."



Scott Demichele - Junior Software Engineer
"I am studying BSC Hons in Computer Science. I am currently working on a NFC Project and reader certification.

Hasnain Abbas - Systems Administrator
"At the moment I am working on the server log analysis, server management scripts and building toolkits."



Consult Hyperion newsletter readers are entitled to a 20% discount off of the standard delegate rate of £795 plus VAT at Economist Conferences' *The Digital Money Summit* on 25th November 2008 at The Dorchester in London.

Join Dave Birch from Consult Hyperion and other leading industry experts by registering online at **www.economistconferences.com**

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We are an IT consultancy that has spent two decades advising leading organisations around the world. We help them to reap real benefits from technological change in the field of secure electronic transactions: transactions ranging from retail payments to passport control and from mobile top-up to TV shopping. We help organisations to:

- ***Evaluate new business concepts*** to give clients firm foundation for new ideas.
- ***Develop new products and services*** from specification to customer roll-out
- ***Test and certify complex systems*** using structured and automated techniques.

We support customers in reaching their goals in a timely and cost-effective way. We work in:

- ***Financial services*** where our clients include the world's largest payment schemes.
- ***Telecommunications and media*** where we advise world leaders such as Sky and Vodafone.
- ***Technology*** where we support some of the largest IT companies including EDS, NTT Data and Thales.
- ***Public sector*** where our work has ranged from ID card specifications to roadmaps for law enforcement.

Recognised as thought leaders in the fields of digital money and digital identity, experienced in the delivery and risk analysis of population-scale transaction systems (from identity cards to "chip and PIN" payments) we have world-class expertise at every step in the transaction value chain, ranging from the authentication of transaction using smart cards and biometrics to the execution of transactions through mobile phones, the web and digital television.

For more information about our expertise and experience or to find out how we can help you to exploit new technologies please contact:

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meet the team

Dave Petch
Senior Consultant

What hobbies/pastimes do you have outside the office?
I play the Trombone for Goldalming Brass Band, an instrument I have played since the age of 11. I am also a keen landscape photographer, which I try to fit in around family holidays. I have a small amount of work in the Imageclick online stock library.

What was the last foreign country you visited and why?
The USA, for a family holiday we went to South West coast of California for a couple of weeks. A crazy local tried to convince us to emigrate, but we couldn't wait to get back to cold, damp England!

What exactly were you working on when you were asked these questions?
Writing up some meeting notes from the interviews we are currently performing to build the Requirements Specification for a financial organisation looking to build a mobile wallet product.

What was your first job?
On the street! I did a paper round for a while, although my first proper job was a salesman in Currys. My first professional job was an engineer working on the development of Autopilot simulation software for Flight Simulators at Rediffusion (now Thales).

What is your favorite gadget?
Definatly my iPod. I delayed getting one for a while (being a keen record & CD collector), until I realised I could put my entire collection of 400 CDs onto one device and carry it everywhere. Now I am never without it.

If you could change something about the industry what would it be?
An institutionalised working culture, regardless of company size, that recognises a good home life/ work life balance as being the key to achieving higher productivity and motivation amongst its employers, rather than working them into the ground.

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