

## IT Analysis – Mobile commerce – near field or far, far away?

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Cash or plastic? From starting with seashells, gold coins and rewarding soldiers with salt, payment systems have evolved to keep lowering the cost of making each transaction, and separating the real item of value from the point of the transaction.

Bank notes came to represent the value of gold held somewhere else and were far easier to carry, and credit or debit cards helped to identify an individual and link them to their remotely stored pot of gold, bank balance or debt.

The anonymity, flexibility and lack of an attached age limit makes cash still a compelling payment instrument, but in the networked age it limits payment to direct contact, and is getting increasingly expensive to process and handle. The dangers of fraud or counterfeiting on the one hand, and the costs and risks of theft or 'shrinkage' on the other make cash an increasingly dangerous commodity.

The answer, at least from the smartcard industry, was to move cash to stored value on plastic – e-cash, or some form of prepay system. There have been any number of e-cash deployments, but success is often constrained to a closed group of users or narrow set of transaction types for a limited range of goods or services – transport tickets, or mobile phone calls for example.

However, as more discrete solutions appear, we will all rapidly end up with a wallet full of e-cash cards, to add to a range of credit or debit cards and a plethora of loyalty cards. At one time, smart card vendors offered the promise of universal multi-function cards.

However, although the technology is willing, widespread deployment is hindered by the need to bring together diverse commercial agendas such as branding and customer ownership onto a limited piece of plastic real estate - and then there are the infrastructure costs.

There is another problem. If the card itself stores value, how much is on the card at any moment in time? The user might like to know,

as although the smart card might have integral security, the anonymous and stored value nature means that once stolen or mislaid, the cash value is lost.

Some solutions have pocketable readers with numeric displays, others rely on web portals and user access to the Internet. Neither is appealing in a multiple service scenario.

The mobile phone probably is more appealing and is capable of serving such multiple requirements. Alongside their security and payment instruments – a set of keys and wallet or purse – the mobile phone is one of the three items most people are likely to take out with them.

Adding payment to the phone would seem a logical step, after all there is the payment system in place with the operator, either billed monthly or pre-paid.

However, much as mobile operators would like to expand the scope of that payment system, they are not banks, and are limited in scope by transaction value, the cost of processing, and their universal acceptance by merchants as a payment system.

A number of attempts have been made to provide a more uniform, network independent payment system, along the lines perhaps of the online model for paypal, but online levels of ease of use rarely translate well enough to a simple mobile experience. There are also software solutions that place an application on the phone, but the varied nature of the software platforms on mobile phones makes this a challenge.

A solution is required that is independent of individual network providers, and broad enough to accommodate multiple payment and receipt instruments in a single phone. While not reliant upon a particular technology, there is an idea to extend the phone hardware that makes this simple enough to be a hit with consumers – providing it can become widely deployed sufficiently quickly.

The current buzz around the edge of the mobile industry is Near Field Communications (NFC), which is essentially the same idea as contact-less smart cards where the user taps or waves their card next to a reader.

Companies already use contact-less cards for security access passes and some for employee catering payment systems. Travellers in London or Singapore/HongKong use the Oyster and Octopus cards this way and some users of Mastercard's PayPass in the US will also recognise the concept.

Putting NFC in a device with SIM (Subscriber Identity Module) and the computing, communications and user interface capabilities of a mobile phone does several things. It provides a wallet for multiple payment systems, a screen to display balances and the brand identity of the system currently in use, and a way to enter a PIN code to secure use. It also provides the cellular communications link to acquire, update, monitor and securely manage the payment systems.

To put such a solution in place requires skills from the payment services and telecoms industries. It also requires complete interoperability and acceptance by a wide range of companies of standards and common principles.

There are already moves afoot to build this consensus, an NFC forum which brings together one group of diverse interests, and a consortium led by Motorola involving a European Commission co-funded initiative. Still early stages, and as yet the mobile operator community is not as involved as it should be.

However, unlike many of the proposed 'killer' applications for mobile phone users – TV, Music, Internet – which appeal to specific segments of the mobile phone wielding community, the potential appeal of a simple to use "Mobile eCash" is far, far more universal.

As the mobile industry approaches its annual festival of hype at 3GSM in Barcelona, NFC may not be one of the short-lived concepts getting all the (hot) airtime, but as an enabler for financial transactions that everyone could easily use, its impact in the mobile industry and beyond is likely to be far more significant.

The utopian dream of one, personally carried item that safely fulfils our needs for secured access – keys - securely supports our commercial interactions – credit cards, cash, tickets – and our need to communicate with friends and the world in general – the mobile phone – is taking a step closer.

## About Quocirca

Quocirca is a primary research and analysis company specialising in the business impact of information technology and communications (ITC). With world-wide, native language reach, Quocirca provides in-depth insights into the views of buyers and influencers in large, mid-sized and small organisations. Its analyst team is made up of real-world practitioners with first hand experience of ITC delivery who continuously research and track the industry and its real usage in the markets.

Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

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