



Mobile Payments

– *it takes more than two to tango*

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With a worldwide market penetration of more than 50% and tens of countries exceeding 100%, the mobile phone is literally everywhere. And as mobile devices are getting smarter and prices of mobile connectivity continue to fall, consumers increasingly rely on mobile phones to surf the internet, keep in touch via social media, share information and stay organized...on-the-go. Moreover, according to a recent study, 59% of consumers are interested in using their phone to pay at the cash registers just as they would do with their debit or credit card. (Source: StrategyOne, 2009). The story has been told maybe too many times: technology is ready to offer consumers a fast and rich payment experience with added value applications such as e-Vouchers, Loyalty, e-Money Transfers, and more. However, despite technology being ready and after several successful pilots around the world, the expected mass roll-out has yet to happen.

Looking at the mobile service markets today, it is a very fragmented market with a multitude of players and not fully compatible technology standards. Whilst it is widely accepted that some form of a collaborative model makes the most sense for the industry, the convergence of the mobile and payment space proves extremely complex, requiring the co-operation of many players, in particular financial institutions such as banks and mobile network operators. It is this complexity that is one of the main hindrances for an extensive roll-out of secure mobile services.

Welcome to the new connected world

New technologies have the potential to create new trends and transform user habits. For example, the spread of affordable mobile phones has connected people via speech and SMS technology, and now the advent of smarter phones and high-speed connectivity leads to richer forms of communication. Similar to the internet that grew from a “static” database to a dynamic application-loaded platform that connects the world, the mobile phone is going through a similar evolution. It is morphing to an essential, personal device for purchasing goods, sharing files, browsing the web, e-mailing, with even the capability of replacing a PC. And with Near Field Communication (NFC), it seems we have the ability to convert the phone into a wave & pay device.

The connection of the mobile ecosystem with the existing micro payment ecosystems like cards, ticketing, loyalty, couponing and the internet (social media) is inevitable. Obviously, the mobile phone has the power to replace our physical wallets and thus enable us to go without cash, visit ATM machines or perform wire transfers: financial and retail transactions at the touch of the fingertip. But then why have mobile payments and commerce failed to materialize?

The fragmented mobile omniverse

Offering mobile services necessitates the cooperation of multiple parties from different market sectors, each with very different motivations and challenges: SIM manufacturers, handset vendors, mobile operators, financial institutions, processors, payment schemes, merchants, transport operators and there's more. The market is fragmented across many stakeholders. Let's break down the mobile end-to-end omniverse into the major parts to fully understand the complexity:

- End-user credentials: phones, cards, paper vouchers, USB tokens
- Channels: payment terminals, cash registers, phones
- Channel and credential management services: control mechanisms for devices, channels and users
- Application services: a wide array of commercial services



- Payment methods: bank accounts, credit cards, phones, e-money, vouchers
- Processor gateways: facilitates the moving of money via banking/payment systems
- Security services: authentication, transaction non-repudiation
- Fraud management: activity monitoring, dispute handling (chargebacks)
- Trusted third parties
- Regulators

Connecting all these components is a complex exercise and one can often not see the wood from the trees. Understandably, many mobile projects only solve part of the equation and confusion between mobile banking and mobile payments is rife.

The successful pilot ambiguity

The complex and diversified market and the wide array of players have contributed to the slow uptake of mobile payment services. Today the industry is using many different technologies for front end systems, communication protocols, payment processing and so on, which has restricted any natural cooperation between the several partners and resulted in an opportunistic approach covering only parts of the end-to-end process.

Today, there are mobile commerce pilot schemes in abundance, of which some have been quite successful. But when exactly is a test project a success? Let's have a closer look. Such pilots are limited in scope and capabilities, and focus primarily on the more visible end-user device as a driver of the service. Given the small scale of these trial schemes, they are limited to small numbers of users with proprietary handsets operating over a single network connecting to a single bank. Evidently, customers will only replace cash with a mobile equivalent if they can use it with any NFC-enabled phone at any mobile payment accepting Point-Of-Sale, regardless the bank or mobile operator. Furthermore, a bank would want to offer its service to all its account holders, independent of their operator and vice versa. As explained above, connecting the different building blocks and players of the payment value chain is a complex yet essential task.

Moreover, most pilots are technology centric with limited use cases. Instead of leveraging on the existing payment infrastructure they customarily make use of proprietary equipment requiring substitution of existing components such as for example payment terminals. Operators and banks are also often in conflict over access to the customer and see each other as a threat to their desire of becoming more entangled with the customer. Both fear that the other might intervene in the relation of "their" customer. And how is the revenue split across all parties? Anyone owning financial liability, assessing the risks, taking care of security aspects or safeguarding privacy? The business case in many instances is simply not there. Last but not least, pilots mainly test payment solutions, while there's so much more to be explored: coupons, smart posters, vouchers, loyalty points, e-money transfers from person to person and more.

Collaboration is the key to success

It is not very likely that a single bank or operator business model is to break out from the pilot phase and propose a viable e-Wallet solution. We are convinced that a business model with the most potential for commercial success involves collaboration between banks, operators and the many different stakeholders. A first step in putting the pieces of the puzzle together is establishing partnership or collaborations with companies that have complementary specialized knowledge so to create a value added solution and linking the necessary bits and pieces.

The vision of the e-Wallet is to combine everything we ever need on a single smart phone, simply because this is a logical evolution. However, it is the customer that will decide if it really takes off one day. Besides that it is way cooler to pay for a newspaper or sandwich with the newest iPhone, there should be more in it for the end-user to make the switch from the comfort of cash and the convenience of cards.

Let us look at the following example. Clear2Pay recently signed a partnership with Alcatel-Lucent to create a mobile micro payment framework that combines the respective companies' long time payment knowledge with mobile network experience. It's exactly this complementariness that allows synchronizing the involved parties with the underlying payment mechanisms. The framework is an open, end-to-end solution that

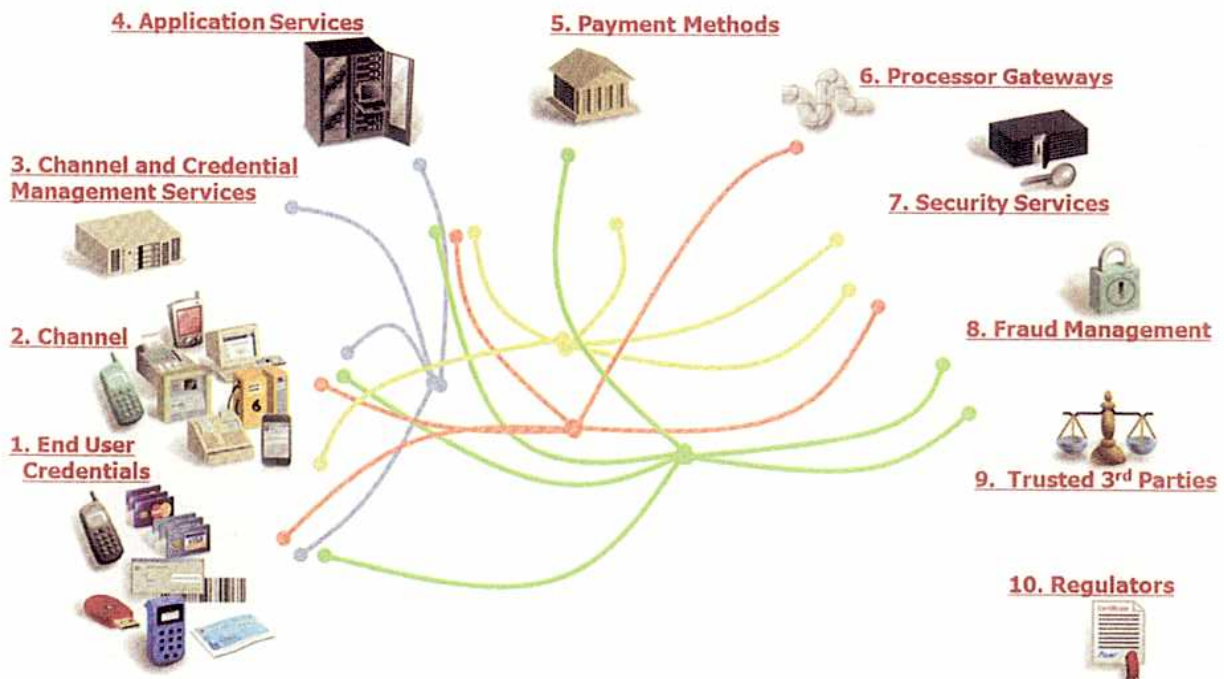




integrates seamlessly with existing payment infrastructures, e-shops and applications. It features the essential payment gateway enabling to settle and redirect payments.

The framework is in fact a stored value account solution which steps away from the traditional account that simply adds and subtracts numbers but allows creation of value by its ability to store coupons, vouchers and loyalty points. Through this co-operative effort, Clear2Pay and touchatag have created an e-Wallet solution that allows consumers and merchants to enjoy mobile point-of-sale transactions on top of added-value services such as the collection and redemption of loyalty points, issuance of gift cards, delivery of electronic store receipts, interactive advertising and promotions as well as person to person e-money transfers. Users also gain the benefit of checking transactions and balances in real time on their mobile phone and manage many relationships with merchants, banks, and day-to-day applications without adding single use cards to their physical wallet.

In these challenging times, the market is looking for profitable and secure mobile solutions which have true business potential. With the likely commercial deployment of NFC from 2011/2012 onwards, ubiquitous smart phones and a wealth of value-added applications, the front-end application of the mobile ecosystem is ready to go. It's the industry's task to choose the right partnership and succeed in connecting the different components of the value chain to make the e-Wallet the natural next step for a convergence of industries. But anyway, regardless of technology and how all stakeholders work together, the success of the m-commerce will largely be influenced by whether the e-Wallet fits within the consumer's lifestyle.



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