Transaction. Interaction. Convergence.

Enabling mPOS by the convergence of technologies

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EXECUTIVE SUMMARY

This white paper takes the reader through the fascinating journey of mPOS adoption to date, from the initial concept of exploiting the long tail phenomenon, the technology enabler, chip and PIN mPOS devices, vertical segmentation and implementation challenges.

Once the scene has been set, this paper will explain how the promised utopia of mPOS has not materialised and highlight the reasons offered by the industry. Of particular note is the second half of the paper where Nigel explains many of these reasons are simply distractions to the real problem. Delving deeper into why propositions have not been successful, the paper explains mPOS still requires another technical enabler to unlock its full potential and stimulate wide-scale acceptance. One such example of this is beacon technology.

In combination with an mPOS solution the retail experience can be enriched for the customer, and provide unparalleled dynamic marketing potential for the retailer. In addition mPOS combined with beacon technology can offer the information-rich online experience with the physical bricks and mortar alternative.

INTRODUCTION

mPOS is a payment technology yet to find a commercially sustainable business model. It still promises to deliver a mobile card acceptance utopia for many, but its adoption continues to labour. In contrast, industry reports, conference messaging, investment announcements, would all lead the world to believe its full steam ahead. This is perfectly summarised by the following statement which was circulated by Finextra in May this year:

'The installed base of mPOS devices is set to make up to 46% of all point-of-sale terminals in circulation by 2019, according to forecasts by ABI research'

This equates to 51 million mPOS devices in circulation within a five year period, that's in excess of 1,000 mPOS devices deployed every minute until mid 2019. Is such a prediction achievable? The simple answer is probably 'no' unless there is a step-change in the mPOS proposition. At present, identifying such a stimulant is proving illusive so the alternative approach taken by many mPOS players within the ecosystem is to search for why the current proposition is failing.

As ever, it is always easier to identify a negative rather than a positive, and this mPOS dilemma has proven to be no exception: Dependence on ever changing smart phone operating systems, no tried, tested and market adopted solution for the receipt, high device cost due to certification and security requirements, inadequate customer and merchant awareness, high transaction fees, data security scares, poor implementation, and the list goes on and on.

Potentially any one or even all of these factors have a hand in the ultimate success or failure of mPOS, but in reality they are simply distractions. As with any proposition, the key to wide-spread adoption is the measure of the value it delivers to the end-user. If this measure proves to be desirable, all that's needed is a pro-active marketing plan and the proposition will fly.

PERCEIVED VALUE

Perceived value is a complex beast to measure, and varies from person to person and from solution to solution. Having said this, there are core ingredients which have been proven to deliver a winning proposition. Take for example the iPhone. It's clearly one of the most expensive smart phones money can buy, but still continues to attract massive adoption and a loyal following. Other competitor offerings are extremely impressive and in certain aspects eclipse the iPhone's functionality, but it still remains one of, if not the, most successful smart phone of all time.

Is it because of the superb user interface, powerful application platform, ability to offer multiple value-added applications, or is it the modernistic monolithic design? The answer is probably influenced by all these factors, but above all the solution simply and consistently delivers a rewarding end-user experience. The net result is an extremely high perceived value for the Apple device which is reflected in its continued success even though facing increasing competition. So I hear you ask, how should an mPOS proposition be positioned to maximise perceived value and stimulate wide-spread adoption?

THE LONG TAIL PHENOMENON

Before I offer the potential game changer, it is worth understanding what initially drove this new payment solution and how the market has reacted to its arrival.

In many commercial environments there are revenue opportunities that are not easily accessed and are economically difficult to serve. These revenue opportunities belong to what is commonly referred to as the "long tail" which is an economic principle based on the idea that products that are in low demand or deliver low sales volumes can collectively equal or out-perform the revenues generated by those deemed as best-sellers if they can be accessed digitally.

Taking the typical bricks and mortar retail proposition it is clear that limited shelf space will dictate only the best sellers can be offered to the customer base. As such, significant opportunity in the 'long tail' cannot be tapped by traditional high street retailing. A step-change was required and this came in the form of an enabling technology: Internet connected PCs in almost every home. This, in turn, initiated the concept of on-line shopping.

By removing the need to have expensive real-estate and costly human intervention during the sales process, on-line retailers could suddenly stock every product imaginable and reach any customer who had access to this new technology. This opportunity was first exploited by forward thinking businesses such as Amazon who developed a "just in time" book publishing model and the rest is history.

THE BIRTH OF mPOS

Moving onto payments the exact same "long tail" principle has stimulated the emergence of mPOS. Winding the clock back several years, the acceptance criteria for a merchant to own a card acceptance device was extremely demanding and expensive. The net result was many smaller merchants who could not meet the risk criteria, or turnover required by main-stream banks, could not process card payments. This resulted in only circa 20% of merchants with a business account having a POS device. Clearly not all the remaining 80% would want to have this capability, but even if just a quarter were viable with less-demanding acceptance criteria, then global demand for such devices could instantly double.

However, as with the online shopping explosion, a technological enabler was required to realise this potential and it came in the form of the smart phone. These mobile PCs not only have powerful processing capability but can connect remotely to networks via 3/4G, UMTS, GPRS, WiFi or any number of other options. As with online shopping, the "long tail" phenomenon had a new device through which it could be exploited thanks to this mobile PC that fits in everyones' pocket. In environments where magnetic stripe card payments were acceptable, the solution was simple.

Step 1: Develop a simple payment application to sit on the smart phone.

Step 2: Provide an inexpensive card reading device to plug into the audio jack.

Step 3: Relax merchant acceptance criteria.

Step 4: Offer an interface between these devices and the main card processing acquirers (payment gateway)

The business model was clear. Use this low-cost approach to tap into the so-called micro-merchant market which occupied the 'long tail' portion of the payments demand model, deploy hundreds of thousands of devices and "voila" - millions of transactions would result. The model was based on charging a fee of a few percentage points per transaction and everyone would win; merchants who previously could not afford a terminal were now empowered to take cards and cardholders found a new and convenient way to pay for small services. Improved merchant cash flow since payment was immediate.

Reduction in cash processing for the banks. Increased brand awareness for the card schemes due to increased card usage. Acquirer turnover would increase due to transaction volumes increasing. mPOS service providers would financially benefit from processing transactions. It was a win-win for all concerned. Companies such as Square in the US exploited this opportunity to the full and attracted significant investment and flooded the market with card acceptance capability.

mPOS CHIP AND PIN

The global mPOS hype was clear and other markets outside of the US, such as Europe, were keen to follow suit. However, there was a problem in the form of chip and PIN cardholder verification. The realisation that smart phones could not meet the demanding security requirements of such a solution stalled the migration. Suddenly the technological piece of the jigsaw had been removed and a workable proposition was not available. The race was on with POS terminal vendors and new entrants to the market trying to develop an inexpensive, mobile chip and PIN device to work in tandem with smart phone payment apps.

Thyron systems (now part of Spire Payments), were the first past the post in early 2012 with their PosMate Smart chip and PIN mPOS device. This was closely followed by others such as Miura. Again the technological piece was back in play and once again it was possible to exploit the untapped micro-merchant proposition in virgin markets. Initially solutions were linked to smart phones, but this soon migrated to tablets which offered a more versatile and rich user interface. This development was partly focused on a slightly different market vertical: Corporate clients who offered goods and services in the home (insurance sales man, double glazing etc.).

THE SUCCESS OF mPOS

If we now move the clock forward to today, mPOS players should be basking in the success of exploiting the long tail phenomenon. However, the reality is somewhat different. On one hand multiple mPOS deployments are live and processing transactions daily. Spire Payments, one of the mPOS pioneers and market leaders has multiple PosMate Smart estates across Europe which will be mirrored in Asia-Pac imminently. On the other, such estates are relatively small and processing a modest number of transactions compared to traditional POS deployments, which, for Spire Payments, exceeds 1,000,000 devices.

Competent players such as Spire Payments have a strong market share, albeit relatively modest in size compared to mainstream POS, but such businesses have fared well compared to many new entrants who have fallen by the way side. So it is clear some ecosystem players have gained traction but it is safe to say the micro-merchant business model with which most deployments are based, still refuses to give up a profitable business model.

As suggested at the start of this paper, fault is being attributed to many factors. A favourite candidate, the cost of the chip and PIN entry device is a constant thorn in the side of hardware vendors. The market is calling for a sub $50 device to apparently stimulate mass deployment, but when you consider the technical demands of such a solution: Accreditations, approvals, new technologies (NFC, BLE etc.), a dose of reality is clearly required throughout the mPOS ecosystem.

MOVING UP THE VALUE CHAIN

In response to this situation mPOS players, gateway providers, hardware vendors etc. are looking further up the value chain. SME Tier 1 and 2 merchants are definitely less sensitive to hardware costs and human intervention is acceptable (even encouraged) compared to the micro-merchant environment. This development plays into the hands of traditional POS vendors compared to newcomers to the scene. They are comfortable working with large clients, potentially have existing relationships and most importantly the mPOS proposition can be offered as part of an entire payment solution. This broader approach helps dilute the full cost of an mPOS implementation since it can be encompassed in a full payment solution.

The more interesting point, however, is suddenly our "long tail" phenomenon is not the core driver for the mPOS revolution. This has been replaced by the need to enrich the customer purchasing experience. This pushes the mPOS solution towards a tablet/chip and PIN device combo since it offers an extremely powerful and versatile platform for a more advanced and feature rich payment experience.

mPOS THE DISRUPTOR

While mPOS has been stumbling around trying to find a home, it has left a trail of disruption in its wake. The promise of great riches has seen many new players enter this previously insular market with a handful of incumbent vendors. Some new entrants have gained traction, others have fallen by the way side, but the predicted race for market share has been built on the assumption uptake would be strong. Large acquirers and banks have joined the mPOS race even though their traditional POS business model seems perfectly stable.

However, the risk of not being part of this new technology is greater than the investment required to deploy a pilot solution. Being part of the game is imperative, a view shared by most. To add further to the mix, many players have decided to seek riches in parts of the ecosystem where they have previously not played: Terminal vendors becoming payment processors, being a typical example. This has significant ramifications since suddenly a vendor's customer has become their competitor and vice-versa. All in all this previously stable and somewhat lumbering industry has been shaken to the core.

A POTENTIAL GAME CHANGER

What is required to light the mPOS touch-paper? The answer must be based on customer experience and perceived value.

In the case of on-line shopping, the PC with internet access was the game changer. This platform was the perfect portal for retailers and customers alike to be fulfilled. It was not just about buying a widget, but the accessibility to information regarding the widget, customer reviews on the widget, price comparisons with similar widgets, suggestions of other widgets people also bought at the same time, widget vouchers and above all an effortless and empowering experience.

If the market has tried to transpose this to mPOS it has not quite hit the nail on the head. Paying a micro-merchant with your card is convenient for the card holder, but that's where the benefit ends. As for the merchant, instant payment, viewing of records and printing invoices etc., is all well and good but in reality it is convenience and little more.

Higher up the value chain, for example in a SME, Tier 2 and Tier 1 environment, the mPOS queue busting ability for a card holder to pay without going to a check-out is again convenient but no more. For the retailer the assistant can try and up-sell additional products but with the digital age well and truly upon us, this does feel a little archaic. What's required is another technological enabler and one such candidate is the beacon. Still in its infancy, the promise this technology offers to the retail experience is significant. Of more importance to payment it encapsulates mPOS perfectly. Probably the best way to illustrate this is in an example.

mPOS AND BEACON TECHNOLOGY

Nigel is your typical customer. He likes technology and has loaded onto his iPhone the latest mobile app from his favourite audio and visual entertainment shop. Nigel is interested in purchasing a sound-system, and has done the usual on-line research including the web-site of his favourite shop. Even though looking on-line is simple, Nigel also wants to see the sound system, listen to the output and inspect/feel the build quality.

Visiting the store Nigel approaches the front doors and his beacon enabled app displays the message 'Welcome Nigel'. Since the app is linked to Nigel's on-line account, it knows he has been looking at sound systems and as such the phone displays the message, 'Why not view our sound system range?' By answering 'yes' on the app, Nigel is guided to the sound system isle and he walks up to the model of interest. The app is aware Nigel is interested in this specific product since the app on his phone can detect proximity to the beacon located beneath the sound system. This allows display product information, reviews etc. to be displayed on his phone. In addition there is the option of comparing the specification and reviews with other systems he was looking at on his PC at home. Since the app knows how long Nigel has stood in front of any particular sound system, it may present a money-off voucher. Deciding to purchase the sound system by pressing 'buy' on the app Nigel receives suggestions of complementary items, such as a stand, speakers etc. Once all of Nigel's selections are complete he presses 'Finish and pay' on his app. This notifies a shop assistant Nigel is ready to pay and also his location in the shop. Armed with an mPOS device paired with a tablet the assistant can see Nigel's shopping cart, and the total amount payable. The assistant performs a chip and PIN card transaction with the mPOS device, updates Nigel's loyalty points and takes him to the counter to pick up his goods.

As can be appreciated the mobile capability of mPOS, a real-time link to the retailers back-end system and the beacon enabled app on the cardholder's phone provides a full 360 retail solution that begins to mirror the e-commerce experience. The net result is the customer's brick & mortar retail experience is enriched from start to finish. The retailer can dynamically influence purchasing decisions by pushing vouchers, while collating invaluable data for future direct marketing. However, above all the retailer encourages customers back to the high street. A beacon enabled mPOS proposition combines the power and freedom of on-line shopping, with the bricks and mortar personal shopping experience. This type of solution will be revolutionary.

CONVERGENCE

Clearly, technology is enabling these new and exciting opportunities. This is not isolated to the payments industry and has been used to transform otherwise single dimensional products to feature rich offerings. A typical example is the smart phone itself. Surely a phone is designed to make phone calls not play music, watch films, take pictures, surf the internet, offer sat nav capability, …. you get the drift. This effect is best described as convergence. Many technologies, some new, some not so new a coming together to provide a final solution which can offer more than the sum of the parts. History has shown the payments industry as a slow adapter of new technologies. EMV, and NFC are probably the two biggest payments-related game changes in the last two decades. Compare this to how the smart phone has developed in a far shorter time frame.

Moving forward convergence will set the scene for payments. Beacons are just one example, but what's to say the distinction between mPOS and traditional POS will remain? Surely the bigger question is, when will they converge and what will the final solution offer?

Even though mPOS still struggles to deliver the promised utopia, one thing is for sure, it has given our payments industry a true wake-up call.

ABOUT SPIRE PAYMENTS

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In a world of converging technologies in which e-commerce, mobile commerce, and social networks cross over into traditional electronic payment, Spire Payments applies its thirty years of expertise to bring to market innovative, highly secure and future proof devices and solutions that promote seamless payment transactions to all end-points around a user experience that is both interactive and rewarding. Spire Payments, the fastest growing European POS solutions provider, is one of the original pioneers to develop world-class secure electronic payment solutions - from fixed, portable and mobile payment solutions to PIN pads and unattended terminals for integration with cash register systems and self-service kiosks. Serving markets that range from the financial, retail, hospitality and transportation segments to healthcare and government and with offices in Spain, the UK, the Czech Republic, Dubai and Hong Kong, Spire Payments is a forward-looking alternative to traditional payment terminal suppliers. With some of Europe's top financial and retail organisations among its customers, the Spire Payments team will always be at the forefront of progress in electronic payments.

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