

WHITE
PAPER

Mobile Payments

A customer's perspective



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Introduction

Everyone is talking about mobile payments these days, with news reports, press releases and announcements of new product trials wherever you turn. But what is driving this frenzy of mobile payment activity? What are mobile payments? Why should your customer be interested? What's in it for them?

This paper, the first in a series of Mobile Payments White Papers, looks at mobile payments from the point of view of the customer, beginning with a look at what a mobile payment is - and what it is not - then examining why so many industry players are keen to jump on the bandwagon with their own take on mobile payments products or services. We then focus on the main features that a mobile payment offering should include if it is to have a chance of successful adoption by consumers.

Whether you're a retailer considering which mobile payment solutions you might want to support, or a financial institution looking at your options for deploying a mobile payment solution, or simply a confused consumer who wants to make sense of all the mobile payments hype, then this paper will help you cut through the noise and determine whether your solutions meet your customers' expectations.



What do we mean by mobile payments?

There are many descriptions of a mobile payment, the majority of which relate to enabling eCommerce or mCommerce transactions. However, the real challenge is in managing how mobile payment initiation works in the physical world. The Javelin Strategy and Research retail point of sale (POS) forecasts suggest that the in-store retail POS market accounts for over 90% of total retail purchases in the US¹. Given the size of this potential market, we believe that this will be the main battleground where the mobile payments war will be won – or lost.

We define a mobile payment as one where *the payer makes a payment*, not where the payee takes a payment, and where the payment transaction is initiated and completed using the payer's mobile handset. This view was supported by a short end-user poll, and we will therefore only be considering the following mobile payment methods:

- “Tap and go” solutions
- Payments made using the recipient's mobile phone number.

Based on our definition above, we have excluded the following types of “mobile payment”:

1. Those which are not suitable for face to face or physical world transactions: eCommerce and mCommerce solutions that allow payments to be made from within a web browser or from a portable or handheld device which has a data connection.
2. Those transactions which are not customer-initiated or customer-driven: payments which are taken using a portable POS device or a mobile handset equipped to accept card payments.
3. Those involving a solution which is not easy to use, particularly in a retail environment: for example, those payments made from mobile handsets which rely on the customer having to generate or display a QR code or barcode in a handset app before offering this to a laser scanner for capture.

The diagram opposite illustrates the types of “mobile payment” that can be initiated using different devices in various payment situations. Based on our aforementioned definitions, we have then used a number of filters to discard those which do not meet our criteria, leaving us with those which will be the focus of our analysis throughout this paper.

Does our definition of “mobile” extend to tablets and can a tablet substitute for a mobile handset when it comes to making a mobile payment? Provided the payment itself complies with our definition then yes, this would be considered a mobile payment. However, if the payment involves the customer having to input payment card details, CVC and billing/delivery information in a browser page, irrespective of whether this is a phone or a tablet, then this is simply an eCommerce transaction made using a portable device, otherwise known as an mCommerce transaction.

For everyday retail purchases, we can therefore create a fairly robust boundary around mobile payments, namely those which:

- Occur in a “face to face” or unattended environment
- Are initiated by a consumer directly with or from the mobile handset.

¹ Javelin's 2012-2017 Retail Point of Sale Forecast, June 2012

In the future, it is anticipated that enhancements to our shopping experience will blur the boundaries between mCommerce and mobile payments even further as retailers extend their in-store offerings, and include the design of the payment mechanism from the start, rather than as an add on. This change in approach will ensure we focus on what we want, not how we pay, and making a payment will become all but invisible.

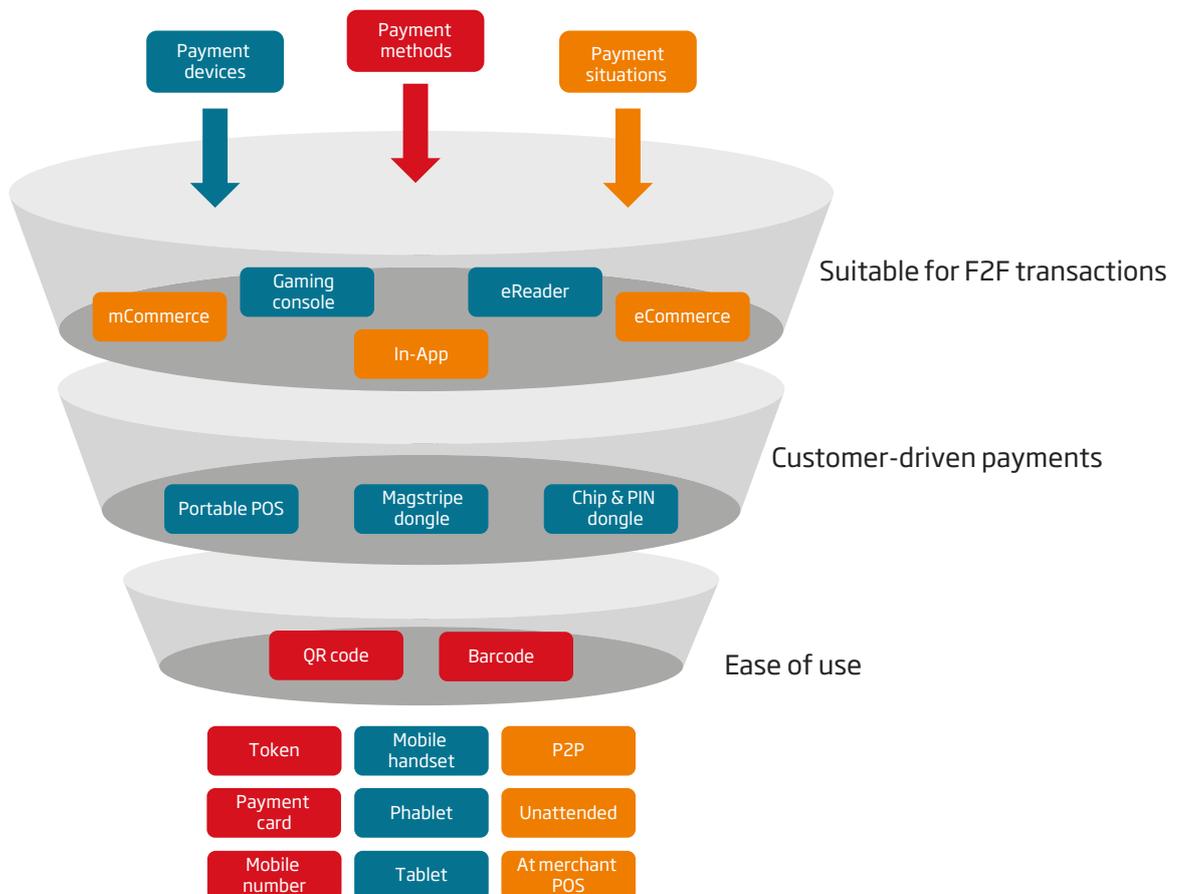
There are already initiatives under way to mobilise the entire shopping experience so that a customer can enter a retail store with mobile phone in hand, and with no interaction with retail assistants or cashiers:

- Select an item in the store
- Take part in an augmented reality fashion parade around the selected item
- Check colours, sizes and inventory from the retailer's warehouse
- Select, order, pay for and arrange delivery or collection of the chosen goods.

This could be facilitated through a mobile app, or via retail "kiosks" or terminals which provide all of the aforementioned features, with the customer invited to select the chosen method of payment at the end of the process. Payment could be card-based or mobile based (or cash).

On completion of the payment, there would be some form of notification on the handset confirming success or otherwise of the transaction. This electronic receipt would be the only record of the purchase, required for guarantees or returns processing.

This change in approach means that in the future, when considering solutions for mobile payments, it will be imperative to consider the full customer value chain, in order to ensure the payment becomes an integrated part of the total retail experience.



Why are mobile payments needed?

So, why are mobile payments in the news so much and why is there so much focus on building consumer propositions around the ability to pay with or from a mobile device?

Firstly, the use of smartphones is increasing. The GSMA - the industry body which represents mobile operators - suggests that in Europe alone, over 50% of mobile subscribers will connect to their chosen network via smartphone by the end of 2015², a figure that has already been surpassed in the UK. By 2020, smartphones are predicted to account for 74% of all mobile connections in Europe, close to the anticipated saturation level³. In a separate report, Ericsson, the Sweden-based communications technology and services company, suggests that worldwide smartphone subscriptions will grow from 2.7 billion in 2014 to 6.1 billion in 2020⁴, accounting for more than 64% of all mobile subscriptions. With almost two thirds of handsets being "smart", more consumers than ever before will have access to powerful technology and will be "always online", creating a ready market for mobile app developers and service providers.

Secondly, the connected consumer is becoming increasingly at ease with mCommerce purchases, buying train tickets or ordering groceries while on the move, and is looking for that same flexibility in the physical world i.e. the opportunity to use a mobile device to pay for goods or services in a face to face environment. Furthermore, customers are demanding a much more personalised shopping and payments experience which recognises and utilises their shopping habits and payment preferences in a secure environment.

Finally, while some of the most popular mobile apps count customers in the tens if not hundreds of millions (Facebook being an obvious example, with over 703 million "mobile daily active users", as of September 2014⁵), the vast majority of these apps and services are free, so mobile service and app providers are looking at ways to monetise their products. In an effort to tap into what is clearly a growing market some providers have incorporated payment solutions into their mobile offerings, the leaders in this field being Facebook, Pinterest and Twitter.

Forrester⁶ has estimated \$294bn in eCommerce sales by the end of 2014 and suggested that almost 30% of these sales will be purchases on smartphones and tablets, with an additional \$28bn in transactions through mobile sites and apps. The total eCommerce figure is expected to increase to \$414bn by 2018. According to Adobe⁷, Black Friday alone accounted for over \$2.4bn in online sales and Thanksgiving Day revenues totalled \$1.33bn, with sales from mobile devices on those days estimated at 27% and 29% respectively.

² GSMA: The Mobile Economy - Europe (December 2014), page 18

³ GSMA Ibid. page 18

⁴ Ericsson Mobility Report (November 2014), page 6

⁵ Facebook Third Quarter 2014 Results: <http://investor.fb.com/releasedetail.cfm?ReleaseID=878726>

⁶ Forrester: Five Year Online Retail Forecast, May 2014

⁷ Adobe Digital Index article: New Online Sales Records for Thanksgiving, Black Friday, 28 November 2014

Other mobile app providers look to capitalise on the social aspects of their products to launch person to person (P2P) payment services as well as retail payments and it is only a matter of time before these providers make a move into the physical world and support face to face payments.

The Impact of Social Networks: The average order value (AOV) for sales over the Thanksgiving and Black Friday period coming directly from social networks was led by Facebook with \$114.45. Pinterest was next with \$93.20, and Twitter drove online sales of \$90.74 on average⁸.

Many retailers also report an uplift in sales through the introduction of mobile payments while others, like Starbucks, have noticed a significant shift away from cash or cards and towards mobile payments. The key to Starbucks' success in mobile payments has been their astute integration of payment functionality with the Starbucks loyalty card, allowing customers both to pay for their drinks and receive recognition for being a loyal Starbucks customer with one scan of their handset.

This initiative has been so successful in enhancing the in-store digital experience by making payments part of the customer shopping journey, that in their last quarterly earnings report they advised that 16 percent of their US transactions took place via a mobile device, equating to 7 million mobile payments per week⁹. In addition, Starbucks revealed that the number of mobile payments made at its stores was growing by almost 50 percent annually.

With the ubiquity and power of connected smartphones, the demands of consumers wanting mobile access to payment services and the appetite of mobile service providers and app developers to offer payment solutions, the conditions are right for mobile payments to really take off. Consequently, there is a continued and increasing focus on finding the "killer" mobile payment product or proposition that will capture the imagination of the connected consumer and allow one or more retail players to dominate the market.

From a payments perspective, this lays the groundwork for a potential explosion in mobile-based transactions and a shift away from cash payments - particularly for small-ticket items - paving the way for retailers to lower their cash handling costs and to offer more targeted and personalised offers to mobile phone-wielding shoppers.

⁸ Adobe Digital Index article: New Online Sales Records for Thanksgiving, Black Friday, 28 November 2014

⁹ Interview with Starbucks CEO Howard Schultz : <http://money.cnn.com/2014/11/03/technology/starbucks-apple-pay/>

Mobile payments: What does the customer want?

While retailers and mobile service providers may be looking at ways to monetise their offerings or to drive customers into their stores and then spend more using their mobile phones, is there really a demand for mobile payments services from the consumer side? If so, what are consumers looking for from these services? Presumably it should be as convenient and simple as a card or cash payment, secure and delivered by a mechanism they trust. Also, wouldn't it be great if we could do away with all those loyalty cards and discount coupons and have everything integrated into a single mobile payment app?

We will now look in more detail at some of the capabilities which customers might expect from a mobile payment solution.



Convenience

If you walk into a store with your mobile phone already in your hand, what could be more convenient than using it to pay for your purchases with a tap or a click? A well-designed mobile payment solution, whether it's NFC¹⁰-based or mobile number-based, could provide the best of all worlds, avoiding the need to give change, or to fish around in a wallet or purse for the right card. A complete solution would also help you to track your mobile purchases, logging the date and time of every transaction and allowing you to keep on top of your monthly expenditure.

So the challenge for the industry is how convenient can a mobile payment be? It needs to match, if not exceed, the convenience of cash payments and compete with contactless card payments. While some mobile payment solutions are already working to emulate existing card mechanisms, there is still some way to go to implement the 'killer' app or service.

It would also be very convenient if the mobile payment product was accepted everywhere that payment cards (or cash) were accepted. Typically, this is currently not the case and most mobile payment solutions have been developed specifically to support payments in a particular, single, retail chain. With such proprietary acceptance environments, customers would need to subscribe to multiple mobile payment apps to ensure full coverage across the high street. Such "closed loop" solutions create a major logistical challenge for the customer, making it very inconvenient, especially if each solution has to be loaded with funds before payments can be made.

If consumers find that making a payment using a mobile phone is no more convenient than handing over cash or tapping a contactless payment card, then they'll quickly abandon the product once any novelty value has been lost.

¹⁰ Near Field Communications (NFC): contactless technology which (among other functions) allows a mobile handset to emulate a payment card to perform a contactless transaction at a POS device.

Simplicity

In terms of consumer demands for a mobile payment solution, simplicity of operation ranks right up there alongside convenience. Simplicity is the key to ensuring that a mobile payment solution is seamless, slick and user friendly. Therefore, any mobile payment product or service that requires multiple button presses, screen swipes or in-app taps before the mobile payment can be made, will be immediately dismissed.

The ultimate in simplicity would be if the customer could simply “tap and go” without any prerequisite payment setup operation. Cash on Tap - a pre-paid mobile payment solution from EE - is an example of this approach; NFC-based, the payment app is always ready to make a payment, whether that’s at a fast food restaurant or when negotiating a ticket barrier at a Transport for London tube station, with a single tap. What could be simpler? Payments can be made with the minimum of fuss or complexity. It is this model of simplicity that will encourage adoption and repeat usage in the physical world.

Security and trust

Of course, simplicity of operation should not be at the expense of the security of the solution. Customers will want to be sure that making a mobile payment is as secure as making a card payment - whether contactless or Chip and PIN. There should be an implicit assumption on the part of the customer that bank grade security is built-in as standard to any mobile payment solution - and service providers need to ensure that these assumptions are well-founded. Unfortunately, many new entrants to the mobile payments industry are either unregulated or have put time-to-market and a slick user experience - or their own convenience - above the security of the solution: even Starbucks has not been immune to these failings¹¹.

Customers also need to know that their payment credentials are safe and protected from unauthorised access, usage or tampering to guard against theft of funds or counterfeiting wherever they are stored. They also need to be confident that these credentials are protected from attack by fraudsters whenever they are transmitted beyond the mobile handset, whether this is via:

- A contactless interface to a POS device (for NFC mobile payments)
- A QR code and a scanner (for scan and pay solutions)

- A mobile operator’s network (for mobile number-based solutions)
- Or any other means.

Allied to this feeling of security, customers also want the comfort of knowing when they make a mobile payment that they will be charged only once for the transaction and that there will not be duplicate debits from their current account or a second charge to their credit card when they tap, swipe or scan to pay with their handset. One way of supporting this is to provide feedback to the customer that a payment has been made. If this information is displayed to the customer on the mobile handset screen, perhaps accompanied by an audible signal, then the customer may be assured that a payment (and only one payment) has been processed and authorised.

Privacy may also be a concern to customers planning to use a mobile payment service. If the provider requires the customer to supply additional personal data over and above what would normally be requested for a cash or card payment, then it’s likely that the customer will think twice before registering. Of course, some additional identification data may be mandatory, especially if the payment service is integrated with a retailer loyalty solution. There is value in customers’ personal data and there is a trade-off between the amount of information provided versus the level of benefit derived. Customers might, for example, trust a merchant with their name and mobile phone number, but will not disclose their bank account details.

Added value services

We have already mentioned that consumers are demanding a more personalised shopping and payments experience. The power and processing capability of smartphones should support extensive functional integration to allow a mobile payment experience to be highly personalised. This integration could enhance the customer’s shopping and payment experience by:

- Linking to a merchant’s in-store offers and promotions
- Providing loyalty points collection and redemption
- Tailoring offers, based on location, time of day and spend patterns
- Integrating the merchant’s mobile app and the mobile payment capability, making for a seamless transition from the shopping phase to the payment phase.

¹¹ Computerworld article, 15 January, 2014: “Starbucks caught storing mobile passwords in clear text” <http://www.computerworld.com/article/2487743/>



Conclusion

There is greater emphasis than ever before on the part of service providers to build and deploy mobile payment solutions to compete with their rivals, attract more customers and ultimately encourage those customers to spend. At the same time, more and more customers are demanding mobile payment solutions in the physical world that match or exceed their mobile experience in the online world. The successful solutions will ultimately be those which:

- Are designed into the shopping experience from the start
- Have the customer experience at the heart of the solution
- Provide convenience and simplicity in a trustworthy and secure environment
- Offer or support ubiquitous acceptance
- Offer added-value services - such as promotions and loyalty.

Any solution that meets the above criteria, and also supports payments of any value will be the one to move mobile payments into the mainstream. Mass adoption and repeat usage will only come about if the solution is convenient, simple, easy to use and provides value to the customer.



This is the first of a series of White Papers aimed at cutting through the hype surrounding mobile payments, assessing what the market looks like today, where it might be headed and how some of the current solutions measure up against customer expectations.

Sopra Steria offers consulting and expertise in the digital and mobile arenas and can help you evaluate your needs, the options available to you and the fit between your company objectives and the various mobile payment solutions on offer. If you're thinking about moving into the mobile payment space, come and talk to us.

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www.soprasteria.co.uk

SOPRA STERIA
Three Cherry Trees Lane, Hemel Hempstead, HP2 7AH
+44 (0)370 600 4466 - info.uk@soprasteria.com

sopra  steria