

CS8601 –MOBILE COMPUTING

UNIT 5

MOBILE PLATFORMS AND APPLICATIONS

5.7. Mobile Payment System and Security Issues.

The development of smartphones has gone and replaced a few things we grew up with: the watch, the alarm clock, the tape recorder, music players, and it seems that very soon, we can add cash and wallets to that list. It's hardly a surprise. Payment methods have been morphing through various channels: from cash to cheques, to credit cards and debit cards, and now to online banking and mobile commerce.

Close to 10 million mobile subscribers in Japan are already paying for purchases with their smartphones by the end of 2010, and reports are saying that the more than \$200 billion dollar mobile payment industry will be worth a trillion by 2015.

There are 6 billion mobile phone subscriptions in the world, and more than a billion smartphones already in the market. Perhaps it's just a matter of time before we embrace the idea of losing that wallet and opting for a digital one to buy flight tickets, lunch, coffee or even to pay the rent.

Digital Wallets

The verdict is still out on what to call these cashless wallets: digital wallet, electronic wallet, e-wallet, virtual wallet etc but they all work the same way. By downloading an app onto your phone, you can link the service or app account to your bank account or payment card. With that done, you can start paying for your wares with your digital wallet.

Paying is a Breeze

If your digital wallet is an NFC enabled Android phone, you can tap your smartphone at the card terminal at the checkout counter, like you would your debit card. But let's face it, not all Android phones carry NFC technology and it's hardly a strong reason for you to consider when it comes to picking your next smartphone. But fret not, other e-wallets, like Square Wallet, let you pay just by saying your name to the cashier. Systems like ERPLY allow you to check in at a store, and let the cashier identify you by facial recognition; your purchases are then auto-deducted from your PayPal account.

Restaurants and pubs would love platforms like Tabbedout, which lets their diners check in when they arrive, and pay for their meal anytime without needing to wait for the bill or to bring their wallets along. All of this is made possible with smartphones and the right apps.

Digital Wallets not only carry payment details to allow their owners to make purchases, they also help them to better manage their loyalty cards. If you really want to go full digital (wallet) then it only makes sense that you need not carry around your loyalty cards either.

To cater for this, there are also apps that let users scan the information on the barcodes of their loyalty cards, then store them up in the phone. At the checkout counter, they can let the cashier scan the barcode displayed on their mobile screen to ensure that they don't miss out on any rewards.

Loyalty Apps and Programs

But then other apps take it up a notch and become the reward platform itself. Loyalty platforms like LevelUp, Perka and rewardjunki! give business owners the flexibility to customize reward programs for their loyal, paying customers, and to engage new customers for their booming business.

For the rest of us, this means that we don't have to carry around stacks of brand-specific loyalty cards that are used probably once every couple of months. Everything is in our smartphone, including new offers, discounts and deals offered by participating merchants. Alternative Payment Methods

If however you are cautious with your spending and prefer to not put all your chicken eggs in the same basket (i.e. what if you lose your smartphone?), then there are other online payment methods to use.

Carrier or Mobile Billing

The idea is to charge all your online purchases to your phone bill and clear that at the end of the month. The good thing with this method is that you need not even own a smartphone to start making online purchases. Having a mobile phone is enough as you can pay via sms. There are confirmation codes or authorization pins or text to punch in they are intended for security purposes.

Security Issues

Ultimately, the security of these mobile payment systems is always at the back of our heads. What happens if I transfer all my payment card details into the smartphone and the unthinkable happens: someone else gets hold of my lost or stolen smartphone?. Well, it's a good thing that most of these accounts, as well as your smartphone, can be remotely deactivated or wiped out. It is a good idea to have a passcode lock, at least to give your phone an extra layer of protection. Also, before you start linking your sensitive data to any mobile payment platform, do take a look at customer reviews or coverage of the platform from reliable sources first.

Resources for accepting mobile payment

To wrap up, here is a small list of resources developers can adapt to their online business to start accepting mobile payments from their online customers.

Card io

Tired of having to punch in line after line of credit card details? You can skip through all that with Card.io by taking a photo of your credit card, then punching in the CVV code manually. This help reduce fraud and developers can easily join the program by grabbing the SDK for card.io at the site.

Jumio

Here is another app that lets you take photos of your credit card as a payment method via Netswipe. It also has a similar online ID verification tool called Netverify, which lets your customer's computer work in your favor as an ID scanning tool.

BancBox

BancBox is an all-in, one-stop solution for businesses that cater to the online marketplace. With the payment portal in place, the business owner can receive credit card payments, wire transfers and checks, among others. It also has a relatively low fee of 0.5% +30 cents per transaction for its services.

Stripe

Stripe helps developers take care of credit card payments online with a simple JS script. It lets you build your own payment forms, and avoid PCI requirements. Embedding the codes in the site lets Stripe to handle all your online payment needs at 2.9% + 30 cents per successful charge.

Zooz

ZooZ gives developers 3 lines of code, which they can integrate into their mobile applications. There is also a sandbox environment to let developers test out transactions at no charge. Prices are locked in at 2.8% + 19 cents per transaction.