

Mobile Commerce

Deepankar Roy, Ph.D.

National Institute of Bank Management,
Pune, India

Outline

- What is mobile commerce?
- What are the different ways through which mobile commerce happens?
- Mobile Commerce examples in India

- **Mobile commerce** is using mobile phone to buy digital or physical goods and services, remotely from a website or in proximity like a shop, metro station or vending machine.
- It can happen through the following 3 ways :
 1. Direct carrier billing, where purchase of e.g. digital content like ringtones is charged to a mobile phone bill and that bill is paid by a traditional payment method like credit transfer or direct debit;
 2. Mobile point of sale, where a card reader is attached to a mobile phone or tablet to swipe a credit card. Whilst it has the potential to significantly increase the number of points of sale, the resulting payment is a traditional credit card transaction;
 3. Mobile product scanning, where a mobile phone is used to scan a product's bar code at an Apple store for example and links it to customer's iTunes account. In that case, iTunes bill is settled by a credit card payment.

NFC Payments: Technology Model

- Two-way contactless communication over short distance (few centimetres), between NFC enabled phone and reader (e.g. POS terminal or smart poster)
- To enable a phone: 1) embed NFC chip, 2) glue NFC sticker at back, 3) insert Micro SD card (for iPhone)
- NFC itself does not make a payment, still need to load virtual credit card(s) on phone.
- NFC-enabled phones to grow from 7 million in 2011 to 203 million in 2015 (Yankee Group),
- More in developed markets as emerging markets generally have basic handsets.

NFC Payments

- Used in Japan: 65 million enabled handsets, 15 million customers initiating 30-50 million transactions/month with 750,000 merchants
- Google Wallet is one example
- Consumer and e-commerce companies are better placed than banks to develop these solutions since they own the product : browse the web to find and compare products, locate a store nearby, select the product from a smart poster, receive a discount, and pay for it –all with a mobile phone
- Several telecom companies have started mobile wallet initiatives
- Handset manufacturers may play a leading role by embedding their NFC chip in the phone

NFC Payments: Issues

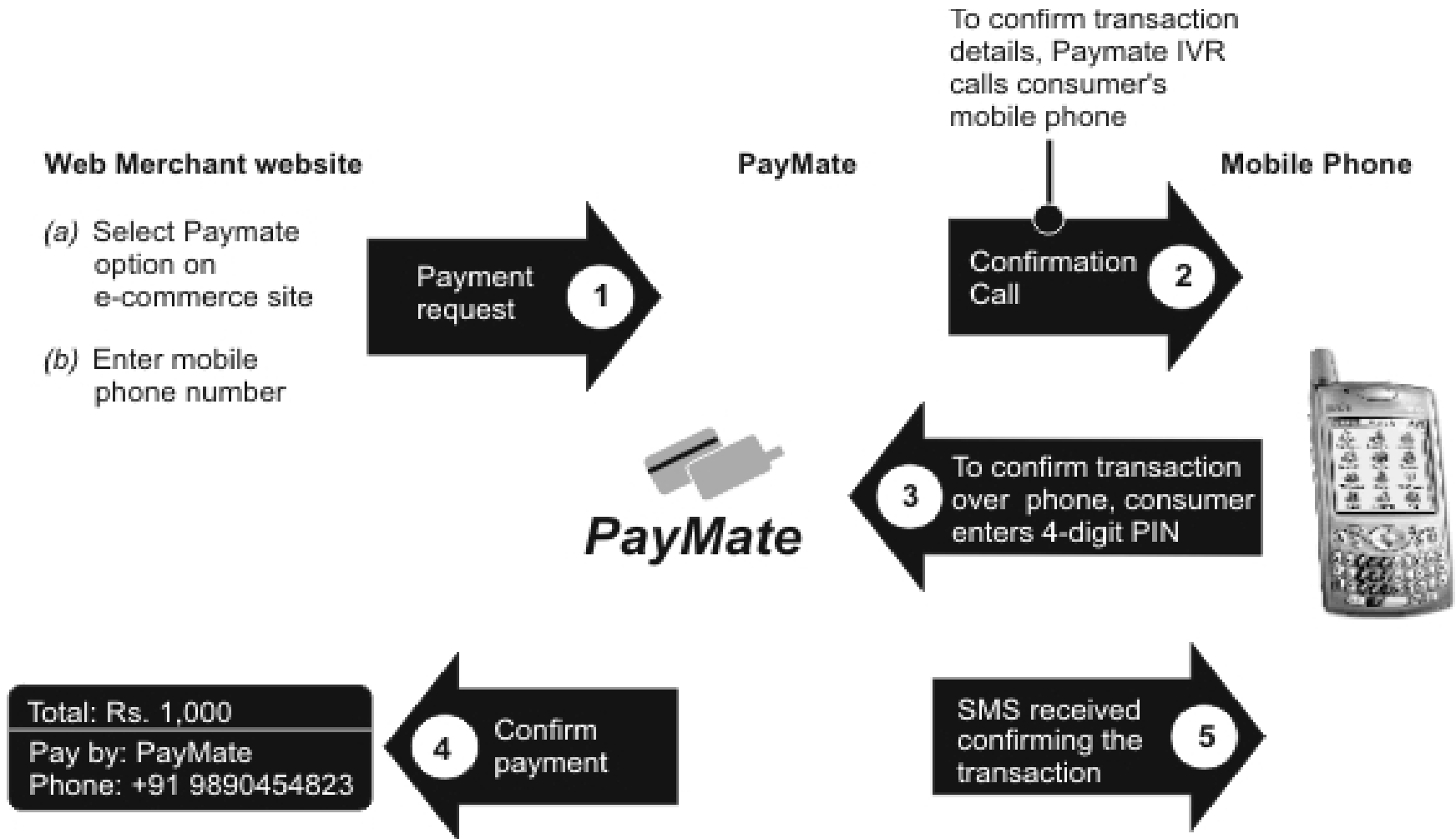
- There are concerns about security: one must make sure that account and credit card details will be safe if the mobile phone is lost or stolen
- There is a high degree of technology evolution: where, for example, does the secure element sit to NFC-enable the handset and store the financial application?
- A whole new business has emerged for banks to distribute their payment and credit card services over the air onto the mobile phone via a Trusted Service Manager

Mobile Commerce examples in India

a) **Mobile Application Service Provider – Paymate**

- Developed a secure online payment system based on Interactive Voice Response (IVR) system.
- It has partnered with some Indian banks (e.g. Standard Chartered Bank of India, State Bank of India) to provide an M-payment service using SMS.
- The transaction platform links the user's phone to a bank account, a credit card or a prepaid account.
- By entering a PIN code, transactions like retail payments, online payments and bill payments can be done very easily.
- For performing the transactions, money can be withdrawn from different bank accounts, which are registered by the user.
- "Paymate" has an ecosystem of over 15,000 merchants offering mobile payments to their customers.
- It also allows workers in cities to send remittances to their homes in the villages

Paymate Transaction Process



Source : (Bellens, Fuldner & Yip, 2009)

Mobile Commerce examples in India

b) IDBI Bank

- Bank launched the mobile payment service in Dec 2008 in association with PayMate, one of the leading m-commerce players in the country.
- Bank has launched complaints through SMS facility wherein a customer just needs to type “IDBI CARE” and the customer receives a call from the customer care to address his / her grievances.
- Customers can use their mobile phones to pay for utility bills, movie and air / railway tickets, restaurant bills, online purchases, mobile recharge, and retail shopping at over 15,000 merchants in India registered with Paymate.

Mobile Commerce examples in India

c) Axis Bank

- Axis Shop on ngpay: Shop on India's largest mobile mall using Axis Bank account
- What is ngpay?
 - It is a secure and convenient GPRS based mobile application.
 - ngpay is India's largest mall - located entirely on the customer's mobile phone.
 - The customers can use ngpay to buy and shop with over 100 merchants who are on board so far

Axis Bank

- **Services Available:**
 - *Entertainment:* Book movie tickets at Fame Cinemas, INOX, PVR, Big Cinema etc.
 - *Travel:* Instant booking options at IRCTC, Make-My-Trip, redBus etc.
 - *Shopping:* Browse and shop at Landmark, Ferns N Petals, Archies, many more.
 - *Bill Payment:* Pay telephone, electricity, insurance premiums etc
 - *Charity:* Contribute to charity(CRY, PETA, etc.)

Axis Bank

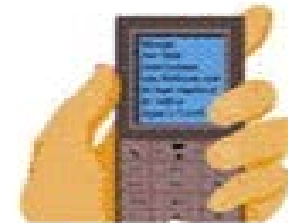
Getting Started...



Download and install
ngpay



Register account
and Mobile number
at an Axis Bank
ATM



Add and activate the
registered account
on the ngpay
application

Axis Bank

How to transact



Step 1

• Shop on ngpay

- Browse through ngpay merchants and select the product or service you wish to buy
- Confirm the transaction details

Step 2

• Pay using your Axis Bank a/c

- Select 'Bank Accounts' > 'Axis Bank Account' option for payment
- Enter / select your registered a/c number and mPIN
- Enter your ngpay pin and your transaction will be completed successfully.

Mobile Commerce examples in India

d) IMPS Merchant Payments

This product is developed by National Payments Corporation of India

IMPS – Merchant Payments Service (P2M)



- A service available to Mobile Banking customers for making payment to a Merchant/Entity for goods or services
- Customer's account gets debited and the Merchant's account gets credited
- Very convenient for making payments for:
 - Premium collection by Customers/agents
 - DTH/Mobile top-ups
 - Any Bill Payments
 - College/Institution Fee Payments
- Two types of transactions:
 - Customer Initiated Transactions - Push Based
 - Merchant Initiated Transactions – Pull Based

IMPS Merchant Payments

Customer Initiated Transaction to Merchant



Using Mobile Application

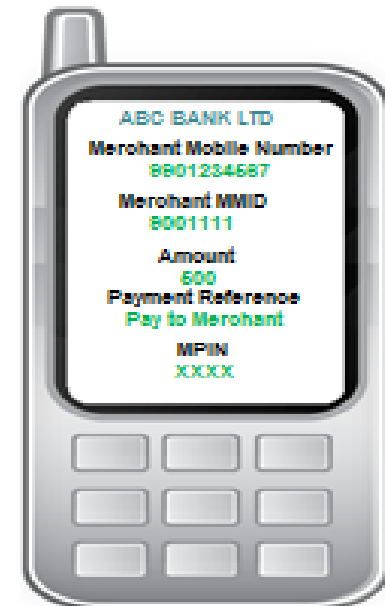
➤ A customer can initiate an IMPS Merchant transaction using Mobile

Banking Application

➤ In the IMPS Menu:

- Go to IMPS Merchant Payments
- Enter the Merchant Mobile No.
- Enter the Merchant MMID
- Enter the Transaction amount
- Enter the Payment Reference

(A Payment Reference field is a field which helps the merchant identify a transaction. For example if the customer wants to make payment towards his insurance Policy then the Payment Reference field could be the Policy Number)



IMPS Merchant Payments

Customer Initiated Transaction to Merchant



Through SMS

➤ A customer can initiate an IMPS Merchant transaction by sending an SMS to the Bank's short code/long code:

➤ The customer needs to send:

MIMPS <Merchant's Mobile No.> <Merchant MMID> <Amount> <MPIN>

<Payment Reference> to the Bank's short-code/long-code

(A Payment Reference field is a field which helps the merchant identify a transaction.

For example if the customer wants to make payment towards his insurance Policy then the Payment Reference field could be the Policy Number)



IMPS Merchant Payments

Flow for Customer Initiated Transactions (PUSH)

