



Mobile Banking for Outreach



Next Big Story



- **Over-the-Air Issuance & Transaction**
- **Proximity – NFC , Infrared**
- **Network & Device Agnostic**
- **Retain Existing Infrastructure**
- **PKI based 1024 & AES 128 Bit Encryption**

- **Simple & Intuitive User Interface**
- **Multiple Cards & Applications**
- **Preserves Logo / Brand & Images**
- **Enable Real & Virtual-World Transactions**
- **Generate & Store Electronic Receipts**



Mobile Payment Characteristics

- Simplicity and usability
- Universality
- Interoperability
- Security, Privacy and Trust
- Cost
- Speed
- Cross-border payments





Operative Guidelines

- RBI's latest operative guidelines on mobile banking (December, 2009):
 - Cap on fund transfer & m-commerce: Rs.50,000 per customer/day
 - Transactions upto Rs.1000/- permitted without end-to-end encryption with adequate addressing of risk aspects
 - Mobile based fund transfer for disbursement in cash thro' ATM/BCs at the other end after suitable identification of the beneficiary: Cap – Rs.5000/- per transaction and max Rs.25000/- per customer/month



Operative Guidelines...

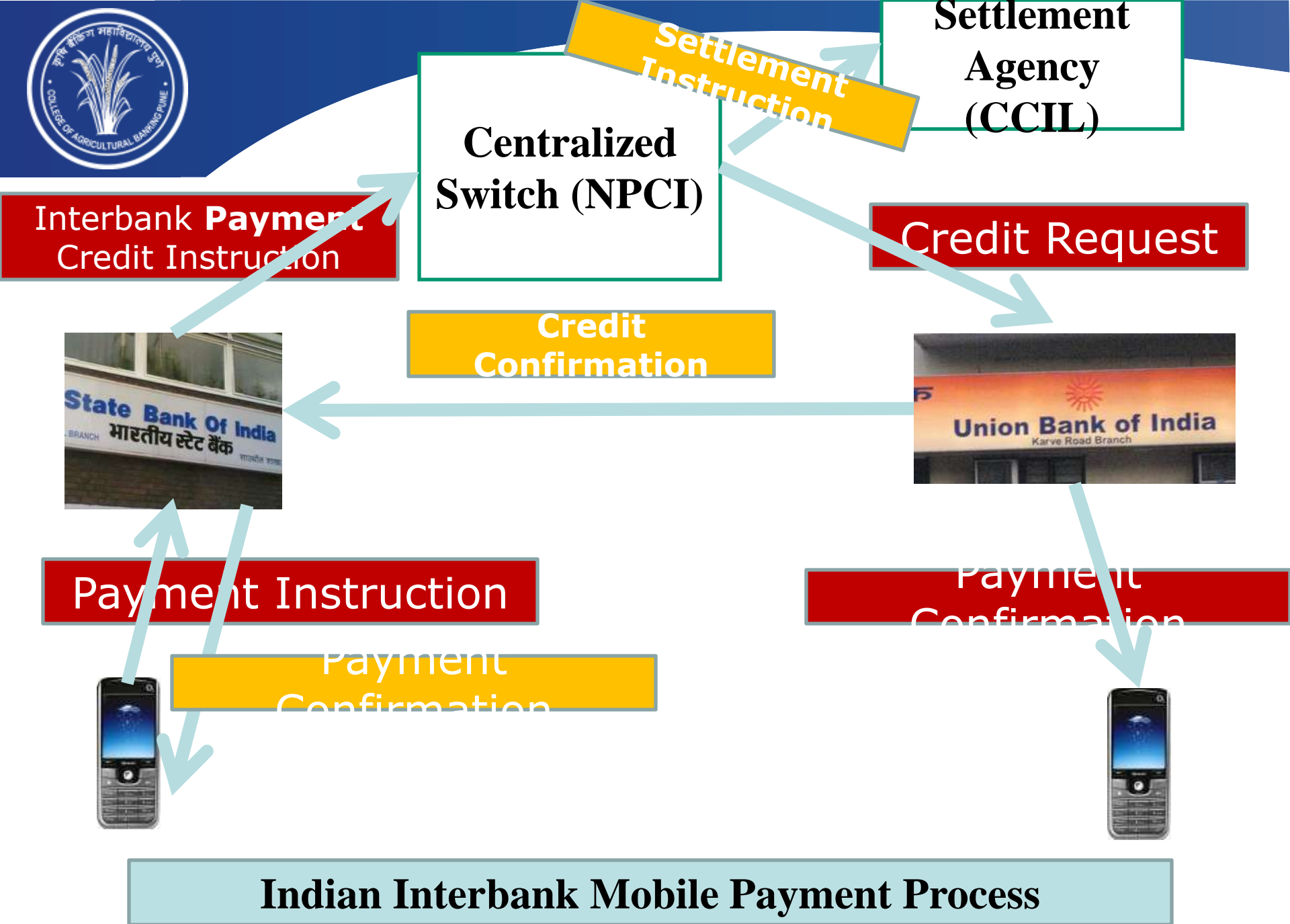
- RBI's operative guidelines on mobile banking (October, 2008):
 - Cross border inward & outward transactions prohibited
 - KYC/AML/CFT provisions will apply
 - Only CBS banks can apply to RBI for permission for mobile banking
 - To be Secure (two-factor authentication, encryption, IDS, physical security, risk audit, etc.) & Interoperable amongst mobile service operators within 6 months
 - Approval by BoDs
 - Only for registered customers



Interoperability - MPFI Standard

The **Mobile Payment Forum of India** under the aegis of IDRBT & IIT, Madras prescribed standards for mobile transactions in **September 2009** covering the following:

- **Entities Involved**
- **Payment Process Overview**
- **Responsibilities of Different Entities**
- **Registration Process**
- **Confidentiality Practices**
- **Payment Process Details**
- **Transaction Reversal**
- **Error Scenarios**
- **Message Formats**
- **Transport Layer**
- **Security**



Indian Interbank Mobile Payment Process



India: Overview of NFC System

- New generation NFC mobile phones
- NFC Mobile + Fingerprint unit + Receipt printers.
- Portable. Battery operated. Can last 5 days without electricity.
- Receipt Printer and Fingerprint Scanner – locally designed and manufactured
- Commercially available NFC phones from Nokia, Motorola, etc.
- Entire transaction payload fits in a single encrypted SMS
- Extensive ID profile, multiple accounts; last known balance and a history of recent transactions.
- RFID smartcards with high end security (similar to new US passports)





NFC – How it operates?





Mobile Banking Models

- Bank Account based M-Banking (Bank-led Model)
- Credit Card based M-Payment
- Telecommunication Company Billing of M-Payments (Mobile Company-led model)
- At present, we have bank-led model with sms based mobile banking



International Business & Technology Models: Samples

- **GCash (SMS)**
- **mPay (USSD)**
- **Pay Buy Mobile (NFC)**
- **NTTDoCoMo (GPRS)**





- Launched in 2004 in Philippines
- Cashless, card-less methods of money remittances, disbursement of salaries, payment of bills, etc with just a text message.
- Primarily uses SMS



GCash Transaction



AMOUNT <Space> 4-digit PIN

2882 + 10 digit phone number



- Poland's first and unique-in-the-world mobile payment systems in September 2007
- Uses USSD
- Authorize, process and arrange settlement of transactions initiated with any kind of mobile.
- With two-factor authentication and the consumer's full control over transaction execution
- Multilingual interfaces for transaction execution and account management, roaming transparency, and multi-currency support



- Japanese company launched in 1999, today there are 30 million subscribers in a country of 126 million people.
- There are over 1,000 official content providers and tens of thousands of unofficial 'volunteer sites'.
- Uses GPRS (General Packet Radio Service)



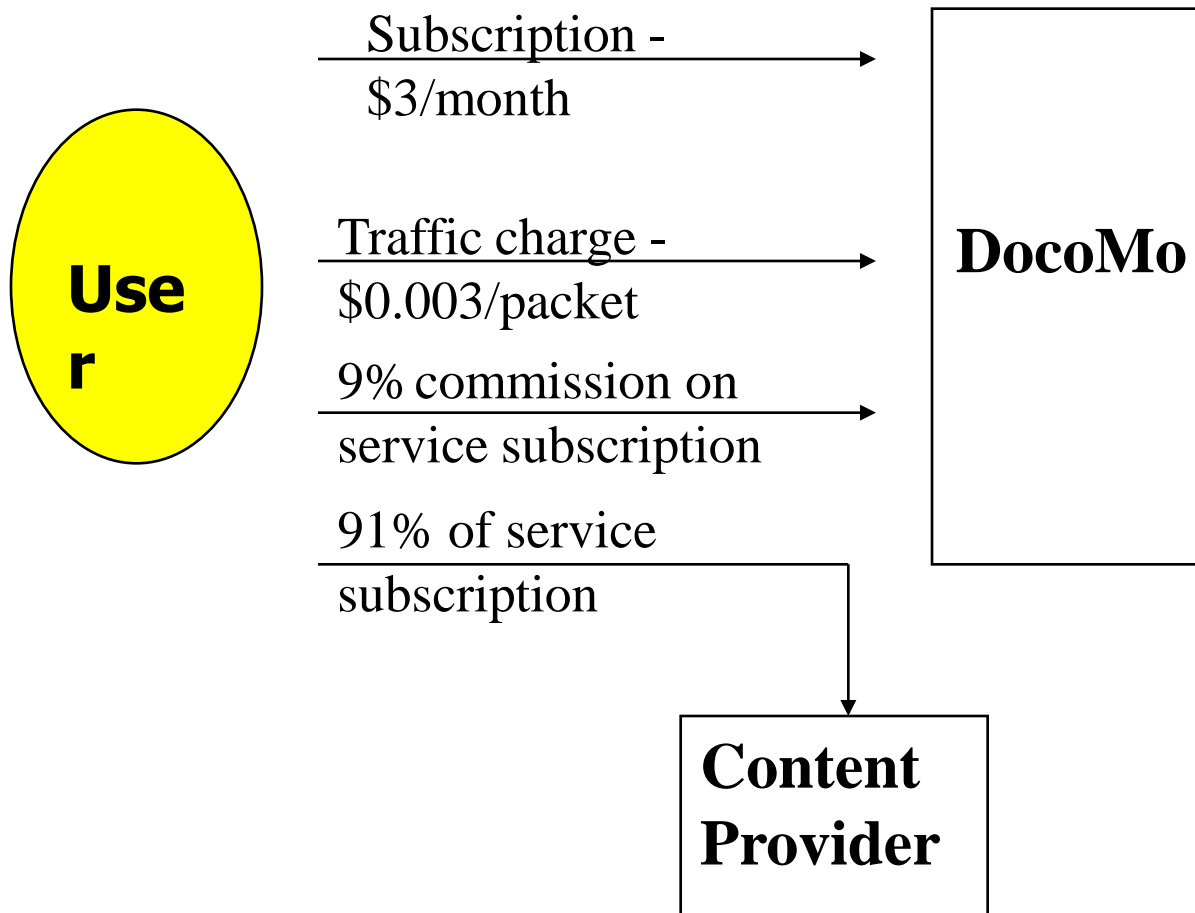
DoCoMo Business Model

- DoCoMo collaborates with equipment manufacturers, content providers to provide content quality and enjoyable user experience.
- Customers, partners and shareholders share interests with end users enabling all parties to maximize value.





Revenue Model





Pay-Buy-Mobile



- GSM (Global System for Mobile Communications) Association's initiative
- 34 world's largest Mobile Network Operators (MNOs)
- Credit and Debit card applications hosted on the Universal Integrated Circuit Chip
- Targets 1.3 billion customers worldwide
- Uses Near-Field-Communication Technology (NFC)



Pay Buy Mobile



Insert IC-chip



Swipe



Input PIN



Mobile Payment Systems

- Card-holder information held in the Subscriber Identity Module (SIM)
- Card-holder information held in the server of the third-party service provider





Open House

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Thank you!!

