

Micro-Payment Systems in Mobile Networks

A Report by infoDev, IFC, and GSMA

By anonymous MIT student

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Why m-Commerce?

- Gap in banking system access between developed and developing nations
- Cash-dependent society is not ideal
- Pre-paid mobile services
- Demonstrated ability to perform simple financial transactions and SMS usage

The Philippines Experience

- Reliance on cash for day-to-day subsistence
- 'Sachet' purchasing
- Prepaid segment → low margin, high volume
- Reduced minimum from \$6 to \$0.6
- Can we go even lower?

SMART Money and G-Cash

- Cash deposits/withdrawals
- Transfer of cash to airtime
- P2P transfer of airtime or cash
- International remittances
- Cashless retail purchasing
- Bill payment
- Payroll
- ...

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SMART Money and G-Cash

- Interface
 - SMS or menu-based SIM (GSM only)
- Service Charges
 - SMS text for transactions (\$0.02)
 - 1% fee on cash transfers (with minimum)
 - SMART Money-specific
 - Annual Charge of \$4 for debit card
 - ATM charges for debit card use

SMART Money vs. G-Cash

- 2000 vs 2004 (2.5 vs 1 million users)
- SMART Money offers MasterCard debit card
- G-Cash launched 4 years after SMART Money, but offers more:
 - Payment of taxes and annual fees
 - Online payments for movies, games, etc.
 - Micro-finance (with 'rural banks')
- Different implementations



The Two Models

- ‘Access Model’

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The Two Models

- ‘Hybrid model’

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Benefits – Providers

- For service provider
 - Higher profits (ARPU, cards)
 - Higher penetration (low-income markets)
 - Less ‘churn’, more loyalty (from 3% to 0.5)
- For bank (provider in ‘hybrid model’)
 - Higher profits (more transactions)
 - Increased outreach

Benefits – Clients

- For the end user
 - Convenience
 - Safety at low cost
 - Time saving
- For third parties
 - Easy micro-loan issuance and repayment
 - Retailers earn 15% commission
 - Time-value of cash
 - No need for remote locations



Other Considerations

- Bad debt provision
- Regulation → Imposes limits
- Network Traffic and security
- Regardless of model, need transaction processing engine
 - Really?
- Revenue and cost
 - Increased ARPU (by time-limiting airtime)

Further discussion

- Debit Cards – good or bad?
- High relative fee
- Use of ATMs
- Purchases aren't limited to selected retailers

Further discussion

- 'Access model' vs. 'Hybrid model'
- Regulation
- Profit (e.g. \$10 million)
- Investment in banking system
- Flexibility

Further discussion

- What other services can be enabled?
- Incorporate with retailer's POS so they don't *need* an account as well
- Micro-finance

Further discussion

- Why hasn't this happened here?
- Familiarity with SMS
- Big segment of population 'unbanked'
- Regulatory concerns

Further discussion

- How about in other developing countries?
- Airtime transfers already exist
- Lack of infrastructure?
- Happening in many places → Ideal to have a common interface

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