2009 mCommerce Market Map

Tim Ellis tellis@firstpartner.net Justin Davidson idavidson@firstpartner.net Tom Heritage theritage@firstpartner.net

FirstPartner

Introduction

Welcome to the FirstPartner mCommerce Market Map which provides an overview of the mCommerce solution market, its value chain and the ecosystem The mCommerce market is currently demonstrating a number of dynamics which are expected to significantly accelerate the current rate of development

mBanking

Philippines have shown that mBanking can demonstrate accelerated adoption adoption is growing quickly in these markets by providing simple economic access to money management services to the existing unbanked population mBanking will take longer to achieve adoption in mature markets with high levels of banked population, as the current deployed services have not delivered significant advantages over existing traditional methods.

The main inhibitors of mPayments to date have been both the end-user experience and the ability to deploy the necessary technology to a large base This has limited mPayments methods to SMS or specific applications. NFC is expected to provide high levels of end user experience, but will require large scale deployment of equipped mobile handsets and merchant EPOS acceptance terminals. Large scale NFC deployments will require collaboration between various different stakeholders to gain critical mass.

Regulation and Security

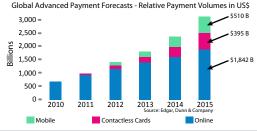
Regulatory requirements are fragmented both within and between potential adopting markets. Regulatory complexity may require services to be approved by multiple regulators, including both financial and telecoms representation. Resultant costs and time to market penalties reduce attractiveness of offering mCommerce services. Consumers' biggest concern is security of their personal information both within the service and also if their handset is lost. These concerns require difficult service design decisions to ensure balance between security, usability and transaction value

Geographic Trends

mCommerce has some very specific geographic characteristics. In mature markets, MNOs generally require collaboration with established banking etworks to penetrate existing banked customer bases.

- NTT DoCoMo have demonstrated in Japan that a capability lead business mode can succeed if careful attention is paid to end-user experience.
- mCommerce has achieved dramatic adoption rates when launched by market dominant MNO's in developing countries where the mobile handset is the
- mPayments success has been more varied and is forecast to achieve high adoption rates as end users experience its convenience.

Edgar, Dunn & Company forecasts the global advanced payments for mobile to be worth \$510 billion by 2012, rising from a small base in 2009. The growth in mPayments over existing online methods will be contributed by the convenience of NFC based payment methods integrated directly in the handset.



mCommerce Requires

Current volume success has come from services deployed by market dominant MNOs.

- Role of MNOs in collaboration mode is unclear.
- · MNO's ability to promote brand and potentially gain customer retention
- around universal service acceptance messaging.
- · Lack of NFC handsets currently generating retro fit solutions to generate

attempts to establish mCommerce to date.

- Critical mass needed with attractive fees to stimulate Merchant



methods like structured interviews and surveys, conference material and nformation available in the public domain. As data and information sources are outside our control, FirstPartner make no representation as to its accuracy of

Customer Experience

High Value **Retail Goods** CINEMA^{21:9}

card level security.
Payment could either
be made through

Low Value **Retail Goods**

and newsagents Security is not a priority



to purchase and act as the physical ticket for mers. This can be

Online Mobile Purchases



payments can be made on amobile device or by fixed line internet

MNO/MVNO Dependent

OSHAN

Bill Payments can use their mobile handset to pay bills from their mobile P2P Transfer National

family or colleagues through a transfer made using the mobile phone. A bank account

P2P Transfer International

3rd Party Intermediary

Banked individuals are those with an account at a bank or other financial institution, and are consid

can send money hom using their mobile

Business Models

Operator Dominated

they need to invest in acquiring and distribute terminal readers to merchants for proximity payments.



Operators and Financial Services companies collaborate to offer a joint proposition and together set the fees for merchants. As there are two stakeholders looking for a revenue stream this can make the

Financial services companies operate independently of MNO's offer services, either through mBanking or mPayments. With mPayments they may need to partner with an MNO or device manufacturer so NFC is made possible

mobile·lime

Retail Banks

O

cîtîbank"

mBanking individuals can transfer money between two users who are registered with the services. These services are not necessarily dependent on a carrier. mPayments can be used if a retailer is set up to receive payments from a 3rd party.

mPayments

Mobile Payments is any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated

Transport Fares

Virtual Goods

networking sites allow users to be virtual items online by entering

their mobile phone number and

charging the amount to their mobile service provider.

Online gaming and social

apan already uses NFC for all bublic transport including Trair Taxis, Buses and underground



nWallet is a data repository tha houses consumer data to facilitate

mWallet

Retail Goods

and Carrefour to allow customers

rcard are trialling their 'Tap



Online Goods

Operator / Financial Services Collaberation

such as Amazon and eBay have



Wallpapers and Applications car be purchased directly from a



Mobile Banking is the provision of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, giving access customised information as well as administering accounts.

UnBanked

Financial Services Dominated

without an account at a bank or other financial institution, and are considered to be outside the



Deutsche Bank



HSBC 🖎 SYBASE 365 Aquiring

Proximity Transactions

Security

Acquirers /

Issuers

Industry Bodies

Stand-Alone NFC

This form of NFC is the literal combination of NFC device

and a mobile device to provide a single device. There is no

Felica

Data encryption

communication between the device and the NEC unit. This

Near Field Communication (NFC), is a short-range high frequency wireless communication technology which enables the exchange of data between devices over a distance of around 10 centimetres. NFC is primarily aimed at use in mobile phones. • ISO18092 / ECMA-340

Near Field Communication (NFC)

Handset contains embedded NFC chip which is connected

to the handset components via Single Wire Protocol (SWP) for communication, Handset connected NFC allows

docomo Nicales inside



A mobile device can generate a 1D or 2D barcode to provide a POS terminal with product info. The barcode on the handset screen is read by the POS to complete the transaction.

Proximity Barcode

Retro-Fit NFC





NFC Reade

VIVOpay WNCR

VeriFone.

Desposit

via an SMS to a short code and a premium charge is applied to their phone bill. The merchant is informed of the payment

<u>symbol</u>

EPSON (I)



During a checkout procedure, the consumer enters their mobile phone number as choice of payment. A text

SMS Verified Payment



Handsets

BlackBerry.

The consumer uses web pages displayed make a payment, WAP (Wireless



NEC

Financial Service

Regulators

fonelab/

The rate at which the mCommerce market will develop will be determined by:

- Transfer of success models to drive new market adoption are not reliable vet.
- Potential tipping point identified for mCommerce around NFC deployment. • Competition from existing payment card issuers also adopting NFC.
- Merchants and end-users in mature markets have been quick to reject
- User experience in excess of current payment methods needed to stimulate End User adoption

Prepared by

find us at www.firstpartner.net email us at hello@firstpartner.net

completeness. All responsibility for any interpretation or actions based on thi map lies solely with the reader.

Copyright 200



Operator Billing on charging by the MNO to the

parties offer a single interface to vendors to bill to a variety of MNOs.

Security on the mobile can be integrated in

naly of low value, and often used to purchas

verizon payform boku

· UICC/SIM • PIN · 2 Factor

The Clearing House





combined with operator and credit card payments through a unified

amazonpayments* PayPal* Google checkout >



Payment Network

Connect and switch transactions either own network or existing payment networks.

These transactions may conform to ISO-8583.

ers to register with a personal PIN before making





· Device Anti-Virus · Signalling & Firewa

to make purchases. Vendors can automatically and securely identify

Sample of the second of the

paym#

Network Security

Mobile operators are now in a similar role to ISP's as they open up mobile data access This has resulted in mobile users and

• F-Secure

MasterCard

POS Terminal

Firewalls can help operators control fraudulent activities and mitigate threads from hackers. Symantec, Macafee and Kaspersky all aim to minimise mobile fraud

Fraud Management

• DES Data encryption allows information to be assed over networks without risk of • 3DES interception in transit. Standards exist for encryption which allow free movement of data, whilst securing the contents. • AES

In an unbanked society, cash can be used to fund a mobile transaction

or can be withdrawn from a mobile 'account' through an agent. Agents are common place in Africa where M-Pesa and cash are often the only

€

Nokia 1100 • Samsung C3310 • Samsung L770 • Motorolla U9 • Nokia N900 • Apple iPhone

LG SAMSUNG







Merchant payment request is authorised by issuer who manages debit of customer's account.

Telecoms

Regulators

SocialCord

• Fortumo



Payment Authorisation











