Mobile Recharge – The Dynamism of Recharge

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moGile
win the wireless race

The emergence of e-commerce has digitized the payment process, whereby payment details are sent over open networks with no physical contact between the buyer and the seller. The recent development of high-speed mobile data networks has created a new channel for commerce, while sophisticated mobile devices are enabling the virtual exchange of payment information known as proximity payments.

Operators are facing cutthroat competition and with the call rates dropping everyday, the margins are reduced to nadir. Therefore the operators are looking at Value Added Services (VAS) as the next wave for growth. It has become the flywheel of telecom growth and a large chunk of revenue for operators is likely to come from VAS services in the years to come.

High-speed data networks, such as 2.5 and 3G, with more sophisticated data-enabled wireless devices, have the potential to transform payment. Color screens, greater bandwidth, and compelling content are converging to create an environment where consumers feel more comfortable transacting on the move.

The success of mobile payments is contingent on the same factors that have fuelled the growth of physical world non-cash payments, namely: security, interoperability, privacy, global acceptance, and ease –of use.

This white paper provides a detailed analysis of the opportunities and challenges in mobile recharge market.

White Paper Overview

Abstract

This paper describes the basic concepts, services offered, market survey and technology which enables Mobile Recharge. Over the last few years, the mobile and wireless market has outgrown the internet market.

There is an increasing demand from the customers for the value added services on their cell phones. As average revenue per user decrease from voice drops, and voice becomes commoditized, Telcos are increasingly looking at data as an additional revenue stream. The end users have also embraced VAS and it contributes between 5-10% of the revenues of different Telcos. Thus Mobile VAS has become an important element in the growth of mobile telephony in India.

One such potential market is the mobile recharge market. With almost 200 million cell phone users in India alone, it opens up new channels for customer service and revenue generation.

Document Audience
This document is primarily intended for Marketing, Sales, Product Support, Internet Services Group, Project Engineering and anyone who is interested in Mobile Gaming.

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Introduction to Mobile Market Size

The user demand for convenient and intelligent ways in which to make payments for goods and services using a mobile phone is creating exciting opportunities for those organizations that are part of the mobile payment ecosystem.

The ecosystem includes mobile operators, banks, retail merchants & transport operators, handset manufacturers and a whole range of new entrants eager to put their innovative mobile payment solutions into the hands of mobile phone users.

Mobile telecommunications continue to be phenomenally successful, with an estimated one billion mobile subscribers by the end of 2002 (Source: The Universal Mobile Telecommunications Service (UMTS) Forum). The success of NTT DoCoMo's i-mode service in Japan, which currently has 34 million data subscribers, illustrates the appetite for compelling mobile data services. In Europe, the viral uptake of short messaging (SMS) has demonstrated the huge demand for non-voice services in that market. According to the GSM Association, there were over 30 billion SMS messages sent in 2001.

By the end of 2007, the total transaction value for mobile payments will have reached just above $2bn. The demand for mobile payments will grow in the 5 years from 2007 to enable the processing of nearly $22bn worth of payment transactions by 2011. This is a large figure on the surface but still means that in terms of payment schemes; mobile payments will be a niche player in the overall payment market.
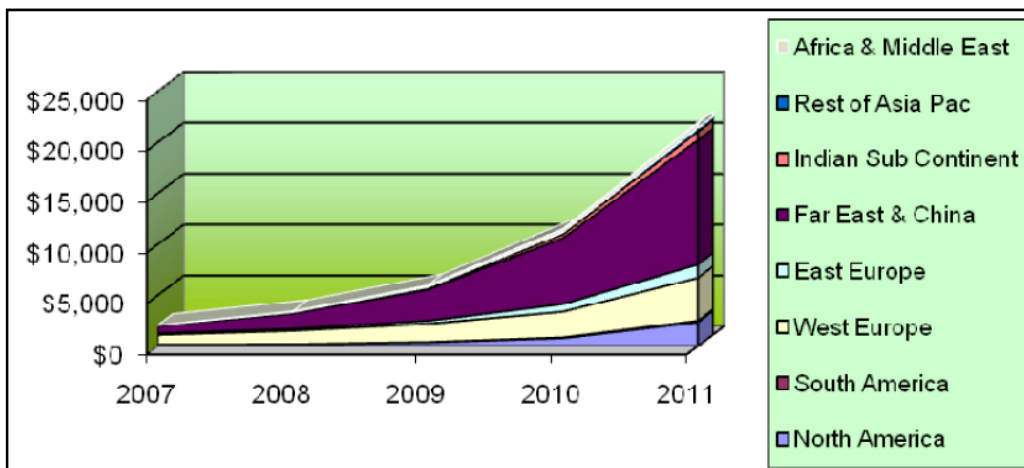
Total M-payment Transaction Value ($m) Regional Forecast 2007-2011 (Source: Juniper Research)

India is going through a telecom revolution, especially in the wireless telephony segment. The adoption of mobile telephony remains unparallel in scope, as users from diverse segments increasingly choose to exercise the option of personal mobility. The user base has been adding 3- 4 million subscribers per month (on an average) and recently the mobile subscriber base is touching magical figure of 200 million.

Mobile value-added services (VAS) are those services that are not part of the basic voice offer and are availed off separately by the end user. They are used as a tool for differentiation and allow the mobile operators to develop another stream of revenue.

➢ By the end of 2007, the total transaction value for mobile payments will have reached just above $2bn.

➢ The demand for mobile payments will grow in the 5 years from $2bn to $22bn 2011.

The success of the market can be gauged from the fact that mobile user base has surpassed the PC user base in India and very soon the Indian market will have more mobile users than TV viewers.

India is rapidly moving towards being an evolved mobility market with no distinction between market incumbents and challengers. There is now a critical mass of users in the Indian mobile telephony market who are experienced mobility users. These users are very comfortable in using their phones and want to exercise the option of doing more on them beyond basic voice applications.

Mobile Payment

Mobile payments can be classified into two distinct categories

Remote Mobile Payment – when the storefront or retailer is remote to the mobile phone user, e.g.: paying for digital goods or physical goods via a mobile enabled retailer.

Physical Mobile Payment – when the storefront or retailer is physical, e.g. the payment is made in a physical storefront in the same way we would use cash or a plastic debit/credit card.

Remote Mobile Payment

This is currently the most popular mobile payment method and SMS is the dominant technology. There are many categories under the remote mobile payment header, and there is a high degree of overlap between each category.

Premium Rate SMS (PSMS): Premium Rate SMS (PSMS) has been the dominant mobile payment method and is geared up towards purchase of digital goods, such as ringtones, wallpaper, games and physical goods from mobile web enabled m-commerce sites. The payment is usually managed by the operator. It is simple to use with no payment application to download. It has proved popular and dominates the current mobile payment world in the number of transaction volumes and total number of users.

Mobile Phone Bill – D2B: One of the simplest methods of paying for goods and services using a mobile phone is payment via a mobile phone bill. Operated by mobile phone operators, this is usually aimed at low-value micro-payments and is offered to account customers as an alternative to a credit card.

Online – WAP Billing: Online payment for the mobile web is a payment method that enables retailers to bill goods or services from a mobile web or website. This is very similar to payment to e-commerce sites and usually allows consumers to pay via a variety of payment mechanisms that may not be unique to m-commerce.

SMS Payment – Mobile Wallet and Account Based Payment

SMS payments are when the mobile payment is initiated using SMS and the funds are transferred from a registered account or mobile wallet. The registered account could be debit or credit based.

Remote Mobile Payment:

Features

➢ Convenient, Secure, Reliable

➢ Can be used to purchase goods and services

➢ Physical presence of merchant or consumer not required

Physical Mobile Payment:

Features

➢ Quick, Secured & Reliable payment method

➢ Saves time in long queues

➢ Easy to transact

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Source: www.maporia.com

Person-to-Person (P2P) Payments

This category has generated a lot of interest from the mobile payment ecosystem recently. P2P payments are when funds are transferred between mobile phone users and then the funds are redeemed for either goods or cash at selected merchants. P2P is seen as a social money payment mechanism in the developed world, for instance to allow a group of friends to share payment for dinner at a restaurant or for parents to send funds to a child at college to pay for school books etc. In developing world it has considerable potential to act as a major payment method as often there is a lack of traditional payment and banking infrastructure in these economies.

Physical Mobile Payments – PMP

Physical Mobile Payments (PMP) happens when the mobile phone is used at a physical location to make payment; this could be with a cashier in a physical store or at an unattended vending or ticketing machine or kiosk.

Near Field Communication

With these schemes a contactless chip, similar to the chips that are embedded in smartcards, is embedded into the mobile phone and interacts with a payment application that is either preloaded onto the phone or downloaded over the air (OTA). These mobile payment schemes have generally been more successful than other physical mobile payment methods as they are simpler to use. Both retailers and customers alike want a speedy transaction at the point of sale (POS) and 'wave & buy' schemes using contactless chips provide them with that requirement.

Mobile Recharge Service

Using the state of the art mobile recharge service telcos and banks can electronically, wirelessly and securely top-up or replenish mobile subscribers' airtime accounts in real-time, without the use of expensive prepaid vouchers or scratch-off cards.

Customers can top-up their prepaid accounts (prepaid cards and even calling cards) themselves and avail a host of loyalty services offered by the telco on mobile phones.

Person-to-Person payments have generated lot of interest of players. It can be used to send prepaid gifts, vouchers and articles to friends and family.

Near Field Communication can be used as a substitute to credit card payments at the stores, malls and petrol pumps etc.

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Mobile recharge services enable the settlement partner (essentially a bank) to issue various bank and credit cards on the customers' mobile phone such that the customer does not need to carry the physical card.
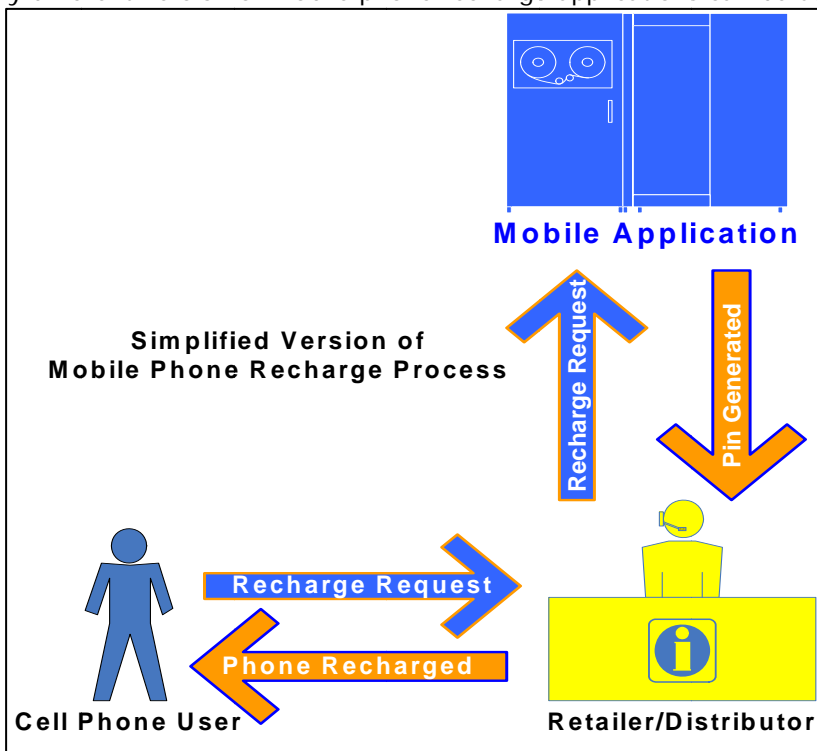
It enables the telco to conduct paperless top-up and perform financial settlements in real time. In addition to this, it helps the telco leverage its customer base and obtain increased customer loyalty.
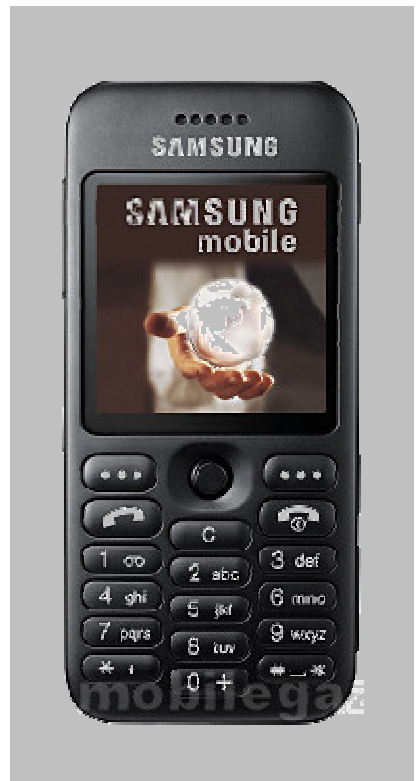
How it Works

Recharging your cell phone is fairly simple process. In general an operator (or any other product/service provider) provides the PINs (gift/recharge coupons) to the franchisee. Franchisee resells these PINs to distributors which in turn sells these PINs to retailers. The credit limits for distributors and retailers are set after receiving payments from them. The PINs are available in predefined denomination depending upon the business policy of operator/service provider.

The customer goes to retailer or distributor and requests for the recharge. The retailer/distributor will access the mobile application either through SMS, GSM, GPRS, WAP or internet. He will request for the recharge along with the relevant details such as recharge plan, user cell phone number etc. The application will generate a PIN and will forward it to retailer/distributor while charging user's phone. The retailer collects money from the customer and all the concurrent transaction details get saved in a database. The inventory of PINs allocated to the retailer/distributer is reduced. If the credit limit goes below a certain threshold a message is generated for retailer/distributer to replenish his credit limit.

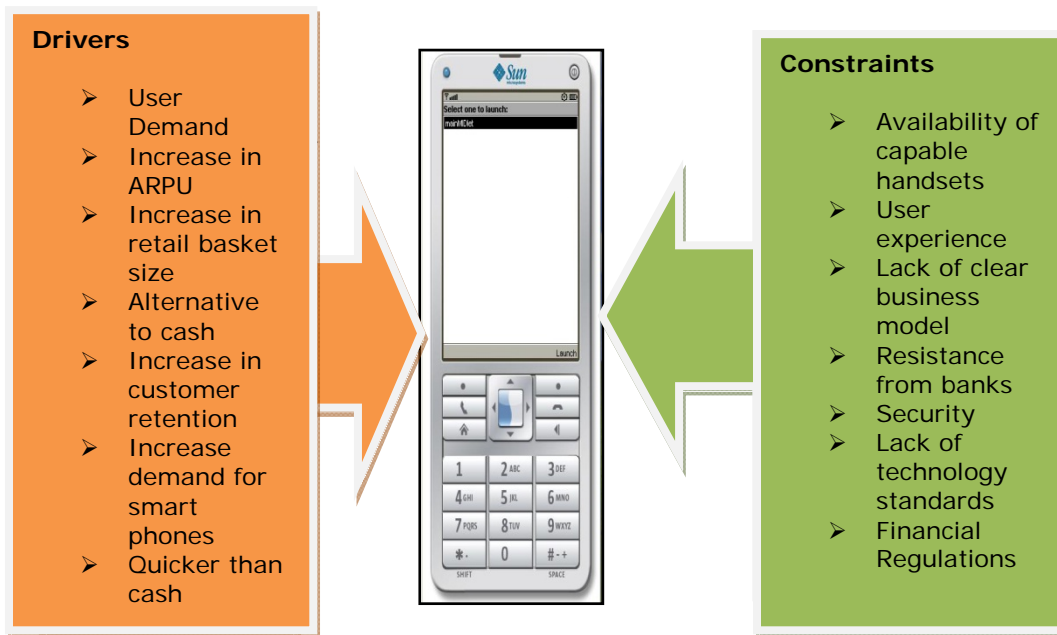A slightly different version of mobile phone recharge applications can be used to buy

Efforts are on to make mobile devices pay for goods and services with the same ease and peace of mind that has been a cornerstone of the payment card industry since its inception.

Mobile Application

Simplified Version of Mobile Phone Recharge Process

Recharge Request

Pin Generated

Recharge Request

Phone Recharged

Cell Phone User

Retailer/Distributor

prepaid gifts for friends and family whereby the customer purchases the gift coupon (example coupons for coffee, pizza, greeting cards, toys etc) and the coupon number is delivered to his or her friend. These applications not only recharge the

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phones but they are complete m-commerce applications within themselves because they handle all the financial details as well.

Drivers & Constraints

There are some real and compelling market drivers for mobile payments in both remote and physical guises, but we also need to discuss the constraints that could restrict its growth. The main drivers and constraints are summarized in Figure below.

Drivers

- User Demand
- Increase in ARPU
- Increase in retail basket size
- Alternative to cash
- Increase in customer retention
- Increase demand for smart phones
- Quicker than cash

Constraints

- Availability of capable handsets
- User experience
- Lack of clear business model
- Resistance from banks
- Security
- Lack of technology standards
- Financial Regulations

The rapidly increasing number of cell phone users augurs well for mobile based applications. The industry is increasing at a rapid pace and the last hurdle will be crossed after standardization in security and payment process happens worldwide.

Conclusion

Going forward, standardization in protocols, process and payment methods will enhance the confidence of consumers to opt for mobile payment methods rather than carrying wallet heavily loaded with credit and debit cards.

Research groups and industry bodies all agree that there is enormous potential for mobile payments. However, most also agree that there are considerable hurdles to be overcome before ubiquitous and easy-to-use payment on a mobile device becomes a reality. A fragmentation of mobile standards and wireless protocols has slowed the growth of high speed data services. However, secure mobile payment, linchpin of remote and proximity-based payments, is the resolution to this problem.

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