

Mobile Commerce - A Mode of Modern Business in India

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Abstract

Mobile commerce (M-Commerce) is a buzz today in India. With half a billion mobile subscribers, emerging competition, innovative ways to attracts customer's way of doing business has undergone sea change by the use of mobile. Mobile commerce or M-Commerce is conducting business using mobile device. It is used to buy tickets, paying insurance premium, buying gifts and recharging mobile accounts. Many companies in India started using mobile for doing business, Finance sector, Telecom sector; Banking and Real Estate are some using this. M-Commerce with features like ubiquity, convenience, personalization and timely service, it is going to be next generation mode of business

Key words *Mobile commerce- innovative- customer- convenience-personalization-generation*

Introduction

Commerce deals with exchanges of goods and services of economic value between producer and consumer. With invention of new technologies and methods, commerce has taken many forms. The way of dealing, exchanging of goods and services has undergone massive changes with days passed on. With competition emerging, consumers becoming more aware and having more choice, marketers searching for innovative ways to deals with customers to be in forefront to break the competition. Many companies to stand out of clutter and top of mind to do the business with the customer, a new strategy / way choosen is M- commerce or Mobile Commerce. Mobile is the latest happening thing not only in India but in the world. By the advent of latest technologies in mobile handsets and sophisticated services by service providers in Indian Mobile telecom market is a buzz. Mobile entered in India in 1995 but penetrated so fast with in a decade that it has become a necessity for every individual.

Not only in Indian urban market but rural market penetration is also great. Mobile subscribers have grown from 7.94 lakhs to 52.41 crores (COAI and TRAI) in 13 years i.e. from December 1997 to December 2009) making India the fastest growing mobile phone market. At present there are 581.81 million subscribers as on January 2010.

Meaning of Mobile Commerce (M Commerce)

M-commerce or Mobile commerce refers to conducting business or commerce through Mobile phone or Personal Digital Assistant (PDAs). It is buying and selling of goods, ordering for services or products, transferring money through mobile by accessing internet. According to Wikipedia "M-Commerce is ability to conduct commerce, using a mobile device viz, a mobile phone, a PDA, a smart phone and other emerging mobile equipment such as dash top mobile devices". When defining mobile commerce in

terms of an extension of electronic commerce, it is called wireless e-commerce (Frolick and Chen, 2004), It has also been defined as “electronic commerce transactions carried out via mobile, wireless terminals” (Dholakia and Dholakia, 2004), “the delivery of products and services via wireless technologies to enable e-commerce activities at any time or location” (Mennecke and Strader, 2001), and “the new type of e-commerce transactions, conducted through mobile devices using wireless telecommunications networks and other wired e-commerce technologies” (Siau et al., 2001). In simple M-Commerce refers to any business with monetary value conducted through mobile phone. Various technologies used in Mobile commerce are GSM (Global System for Mobile Communication) and HSCD (High Speed Circuit Switched Data) protocol based on GSM uses four channels to provide four times radio transmission rates or 57.6 kbs. GPRS (General Packet Radio Service) wireless service based on GSM, EDGE (Enhanced Data rate for Global Evolution), UMTS (Universal Mobile Television System), microbrowsing, WAP (Wide Application Protocol), Bluetooth.

Features of M-Commerce

The following are the features of Mobile commerce, making it one of the effective ways of doing commerce:

- i. Ubiquity: consumers can avail or buy products / services from any where independent of his/her current geographic location. Customer can buy respective of the regions they reside or companies can do business.
- ii. Convenience: Services like GPRS gives convenience and keeps always in touch and connected. This helps the companies to well connect with the customers.

iii. Personalization: M-Commerce services has been personalized, it can be used as per requirement of the consumer.

iv. Location based services: a service such as GPS allows companies to offer goods and services as per the location based.

v. Timely services: consumers are directly connected; it provides real time availability of service.

History of Mobile Commerce

Mobile Commerce in the beginning started with wireless Point of Sale (POS) Swipe terminals and then entered into cellular phones and PDAs (Personal Digital Assistants). The first enabling M-Commerce technologies were presented through wireless Application Protocol (WAP) and i-mode mobile internet service. The first mobile commerce was started by Coca-cola in 1997 in Helsinki area in Finland by enabling vending machine to accepting payment sent by mobile phones. First mobile Banking service was launched by Merita bank of Finland in 1997. In 1999 Smart money, a national payment system by Smart was launched in Philippines. In Japan NTT DoCoMo launched first mobile internet platform which was revolutionary.

Tools for Mobile Commerce

In present market number of mobile tools available for the companies to engage customer in business, the following are some of the technologies that are help in reaching the customers:

1. SMS (Short Message Service)

SMS is short messaging service which consists of 160 characters of black and white. It is the widely used and cheapest form of mobile marketing. Companies can send bulk messages

and customers can also respond in the same form to order a product or service.

2. MMS (Multi-media Message Service)

MMS is Multimedia Message Service. This consists of time slide show of images, text audio and video. Mobile set with color screen are capable of sending and receiving standard MMS message. Product demonstration, use and other things can be done with help of MMS to convince customers to buy products or services.

3. Mobile Web Applications

Accessing web page on mobile device is an option. Yahoo, Google and other mobile content providers have been selling advertising placement on their properties. Customer can access the products or services through the web pages of the companies through mobile phones or contents of other web pages, and they can trade.

4. Bluetooth or Blue casting

A Bluetooth message can be circulated with in a 10meter range, retailers, mall owners and small business holders use this tool to sell their product to the customers who come to in the proximity of that area.

5. Location-based marketing

Location based marketing helps to locate the customer location via GPS (Global Positioning System) technology and company delivers the contents, offers relating to that particular location.

6. Voice

Voice based marketing over the mobile is emerging form of marketing. Interactive voice Response (IVR) is very popular and companies use to offer various services to their customers.

A customer has to follow the instructions recorded on the system at the other end.

M-Commerce Vs E-Commerce

M-Commerce is a subset of E-Commerce. It is transaction made through mobile or wireless. Some of the advantages of M-Commerce over E-commerce:

- i. Consumers can access the service in M-commerce at any place which is not possible in E-Commerce
- ii. M-Commerce is more secure than E-Commerce as users have authentication number
- iii. M-Commerce is more convenient than E-Commerce in terms of using, carrying and handling the mobile devices.

Applications / Uses of M-Commerce

M-Commerce has been used applied in the following sectors:

Service / Retail Sector

Service / retail sector is the important sector in using mobile commerce. Some of the services which can be availed are booking the orders, purchasing online, paying directly.

Finance Sector

Finance sector which includes financial institutes, banks, stock market and share brokers. Consumers can pay bills from their bank accounts using M-Commerce, transfer money deal with the stock brokers and shares. Banks can provide 24x7 services with the help of mobile commerce to the customers.

Mobile banking is the area which has rapidly emerged with mobile commerce with reserve bank of India issued guidelines for mobile banking transactions in October 2008, to provide mobile

banking facilities and mandates that all transactions have to originate from one bank and terminate in another

Mobile commerce can be used by the consumers for buying many things. Here are some the list of goods and services purchased with the help of mobile:

- i. Buying bus / train / movie tickets
- ii. Paying insurance premium
- iii. Buying gifts for friends / family
- iv. Shopping
- v. Recharging prepaid account / fixed account / digital TV account
- vi. Purchasing Holiday packages
- vii. SMS based notifications or alerts
- viii. Mobile Vouchers or coupons

Types of Mobile transactions / payments

1. Mobile web payments

Through web pages payment is made under this system, to make payment customer has to enter mobile phone number and password on micro browser of web page, then a text message from the partner bank is received after verification of password. Customer has to confirm the bank by sending an SMS; finally payment is directly debited from the bank account of the customer.

2. Mobile phone based payments

a) SMS based transactional payments

In this method, customer can make payment through mobile phone by sending an SMS to the retailer. Both the customer and the retailer must have a regular credit or debit card account in one of the partner banks of the payment service

provider like paymate, mcheck, gpay. After selecting an item for purchase the customer sends an SMS to the retailer requesting the purchase. The retailer responds by sending a payment request through SMS to the customer. The customer keys in the banks PIN number to approve the payment. After verification of PIN bank debits the customer account.

b) Direct mobile billing

In this method, purchase amount is added to the monthly mobile bill of the customer or payment is debited from prepaid account. This is used to purchase ring tones, videogames, music, wallpapers etc.

3. Card based mobile payments

a) credit card based payments

Users enter the PIN provided by the bank of credit card for mobile transactions from mobile along with the amount to be paid.

b) smart card based payments

smart card are plastic cards with embedded integrated circuits containing micro processors and the memory to store personal data such as credit card number, driving license number, bank account number, insurance information, personal identification number (PIN)

i) Contact smart card contact smart cards need a card reader to retrieve stored data and transmit it to external devices such as computers, point of sales (POS) terminals or mobile telephones for further processing.

ii) Contact less smart card the microprocessor chip communicates with the card reader through RFID technology that employs radio waves to transmit/receive information to and from the card reader without any physical contact.

At the time of payment, customer wave their mobile phone near a reader module installed inside the store. A PIN is required for authentication purposes which are supplied by the smart card in order to make it more secure.

4. Mobile wallets

In this system, mobile phone users open a mobile wallet account in an issuing bank and deposit cash to get mobile account number. After purchase, through mobile phone users type in account number and send it to the issuing bank via SMS. Mobile wallet's automated system check's for sufficient balance and payment amount is debited from the users account.

Recent Trends in M-Commerce applications / Uses

Airtel launched m-commerce service mcheck which will help customers to pay Airtel mobile and fixed land line bills, recharge Airtel prepaid and digital TV accounts, buying gifts, paying insurance premiums, tickets and shop using their mobile phones. Reliance communication with Atom technologies an m-commerce solution provider allowed subscribers to purchase insurance services, DTH recharges, movie tickets, books and periodicals, consumer goods, holiday packages and train and bus tickets using Reliance mobile connections.

Tata Indicom has launched mobile money transfer service in association with corporation bank and paymate. Nokia recently announced to launch of its Nokia money partnering with Yes bank and mobile payment technology developer obopay. It is used to pay bills, friends, merchants, banks, reload prepaid mobile accounts and remit money to other countries.

According to recent survey conducted by ACNielsen and Paymate, India has currently

around 5 million M-commerce users. In India paymate, oxycash, mcheck and ITZcash are some players in M-commerce.

In Bangalore consumer are paying water bills with their mobile phones, consumers in Chennai paying property taxes using mobile phones, services provided by ngpay technology. Consumers tie their debit or credit cards to the mobile platform. ICICI Lombard is selling through mobile phone first of kind in India. Customers can choose various products, pay premium while on the move or out of the country, mobile commerce can be used for renewal of policies and claim processes. ICICI Lombard has pioneered the concept of mobile commerce in Insurance to give efficient and quick services to the customers.

ITC launched e-choupal on 2000, version 1, the it helped farming communities to get best prices for their produce. It also procured supplies for its supplies for its agribusiness division directly from the farmers. In version 2.0 it used the network to market the products in the rural areas through hypermarkets. In version 3.0 it is empowering farmers in villages by integrating the mobile phones to the digital and physical network of the e-choupal. Mobile phones play an key role in reaching 34000 villages within the 10states, ITC shifts focus from engaging them through kiosk to reaching them directly through mobile phones. The two anchor businesses – jobs and personalized agricultural services have the potential to connect with a 4 million farmers. Nokia offering agriculture, education and entertainment services to the farmers – as part of its Life tools application. The agri-information service sends farmers regular SMS updates in 11 languages on the wheather, procurement prices of various crops at nearest mandi, prices of seeds, fertilizers.

Bombay Stock Exchange launched mobile trading after Securities and Exchange Board of India had cleared way for trading in securities using wireless technology. This helps investors who are cannot access internet through PC while at work. The features of mobile trading are simple, easy and attractive user interface, customizable market watch, secure connection, ability to provide details for stocks, easy access to market news and research tips through interactive message, ease in placing instant buy/sell orders and immediate cancellation of orders. Smaller broking firms offer customers mobile access to BSE's 'FASTRADE (an on-line facility), to offer mobile trading. ICICIdirect.com which is largest online trading portal provides 'on-the-move' a facility accessible through wireless devices to their investors.

The launch of 3G services will revolutionize the Mobile Commerce, as the content, data speed and other services provided will improve drastically in India. Handset manufacturer are producing high end features with reasonable prices which can be reachable for all Indian consumers. New alliances being happening between vendors, operators and application develops to develop better content for the customers. Web browsing is expected to be the most used service among mobile broadband subscribers in India. More products and service firms are going to offer their products and services on mobile to the customers. Banks are taking steps issue credit and debit cards with magnetic strips as smart card. This will solve the problem of security in terms of payments through credit and debit cards in mobile commerce. HDFC is planning to issue 5.5 million cards by 2011. It is an opportunity to the banks as Smart cards can be multifunctional as ID card, e-purse and loyalty programmes.

Mobile Commerce outside India

According to ABI research overall Mobile commerce revenue would touch to \$ 119 billion by 2015. The Mobile Commerce is heating up in US as revenues jumping from \$396 millions in 2008 to \$ 1.2 billion in 2009. In Europe Mobile Commerce is more than US i.e \$ 1.2 billion in 2009 and when come to Asian country like Japan it is growing putting \$ 20 billion in 2009. In China with 800 million mobile subscribers, Mobile commerce is emerging fast and in 2009 sales were put at approx. around US \$ 4.4 billion. According to e-Marketer more than 70 million US mobile phone users access the internet from their devices. In 2008 pizza chain Papa John's international facilitated the customers to order food and drinks through cell phones, by December it fetched around \$1 million sales. M-Commerce helped e-bay to earn \$380 million in September 2009, customers search and bid an auction item. Receive alerts when they are outbid, to pay for goods use eBay's i-phone application. Starbucks started an application that helps customers replenish and check their star bucks card balances and pay by phone at 16 stores in Seattle and Silicon Valley. Another application which allows customers to find nearest open star bucks and browse its menu.

The above survey by Billing Revolution conducted by Harris interactive, shows the consumers willingness to purchase different product through mobile in US between April–May 2009. Products purchased are Pizza, Movie tickets and fast foods, music, travel tickets and Games. March 2009 Pricegrabber.com survey depicted that consumers are not only interested to buy small amount items but also higher priced items like consumer electronics, apparels and jewelry.

Problems / Constraints

1. Many consumers are not technology savvy

Many consumers will not be using mobile for transaction especially in tier III and IV cities as they are not aware and fear to use the technology in purchase the things. Still people believe in using conventional methods in purchasing things.

2. Most of the retailers do not have technology

Most of the retailers do not have advanced technology which can transact with mobile. As it require different platform in mobile and connection with your online bank for the transfer of funds from your customer account to retailer accounts.

3. Many products cannot be purchased

Many products cannot be purchased through mobile. So it plays a limited role that to in high end products.

4. New Phenomenon for many Consumers

In urban areas also this is new phenomenon which takes time to catch with consumers

5. Delay in Reverse transaction

In mobile commerce if we return the purchases, consumers are confused how to reverse the order and to get the money. It is also a time consuming process.

6. Concerns of Security, privacy and reliability

Mobile phone users feel that they can be tracked easily on the lines where they are buying,

what they are buying intruding into privacy. In mobile commerce, risk of knowing credit card details are very much high makes it less secure and less reliable.

7. Limited speed and storage capacity

Mobile commerce solutions have limited speed compared to computer systems and storage capacity to store important information regarding mobile transaction.

Conclusion

Mobile commerce is going to play a major role in conducting business in future. With heated competition in the markets, emerging players, different marketing strategies, and more customer awareness gives a boost to the mobile commerce growth. One in two Indians have mobile connection i.e.; mobile subscribers touching nearly 600 millions, more than 12 players waging war for the market and mobile technology players creating platforms for transactions in mobile commerce. Mobile commerce is changing the ways and rules to do the transactions and business. Mobile commerce is not only providing timely services, convenience, personalization and ubiquity but on the whole it is offering value for money to the consumers. Recent applications show the huge acceptance and success of mobile commerce. Mobile payments are developed much to the user advantage and security and lot more change is expected in future. Mobile commerce is the next generation mode of business.

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