

Mobile Commerce The Next Big Leap In India

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Abstract

Mobile commerce is a new trend where any transaction with a monetary value is conducted in a wireless environment by using mobile devices. While shopping if you are short of money or while travelling you feel that you don't have money to pay to the driver or at the filling station you need to pay the money and you find your wallet empty then what will you do? But now a days the help is on the way and that is mobile commerce.

It has grown to large extent in the world but in India it is still confined to basic banking transactions, purchase of travel tickets and payment of some utility bills. But now banks, cellular operators and payment service providers are finding solutions that can comply with regulatory guidelines. This paper mainly describes the sectors where mobile commerce can be used and the future challenges that we need to face in India.

1. Introduction: Mobile Commerce commonly known as m-commerce is the next generation of commerce where transaction can be conducted in wireless environment using mobile devices. It is a result of combining two strongly emerging trends: electronic commerce and omnipresent computing. It is online anywhere, anytime and on any device and is providing new business opportunities.

Internet + **Wireless** + **E-Commerce** = **M-Commerce**

Mobile Commerce is still in its development phase in India, here it is primarily used for basic banking, purchase of tickets, payment of utility bill etc. Its presence is being felt in the business world. Some companies have started assimilating this technology. Companies like Airtel, ICICI, Reliance, Tata etc. are using this technology to facilitate their customers to make payments for the things they have purchased from their phones.

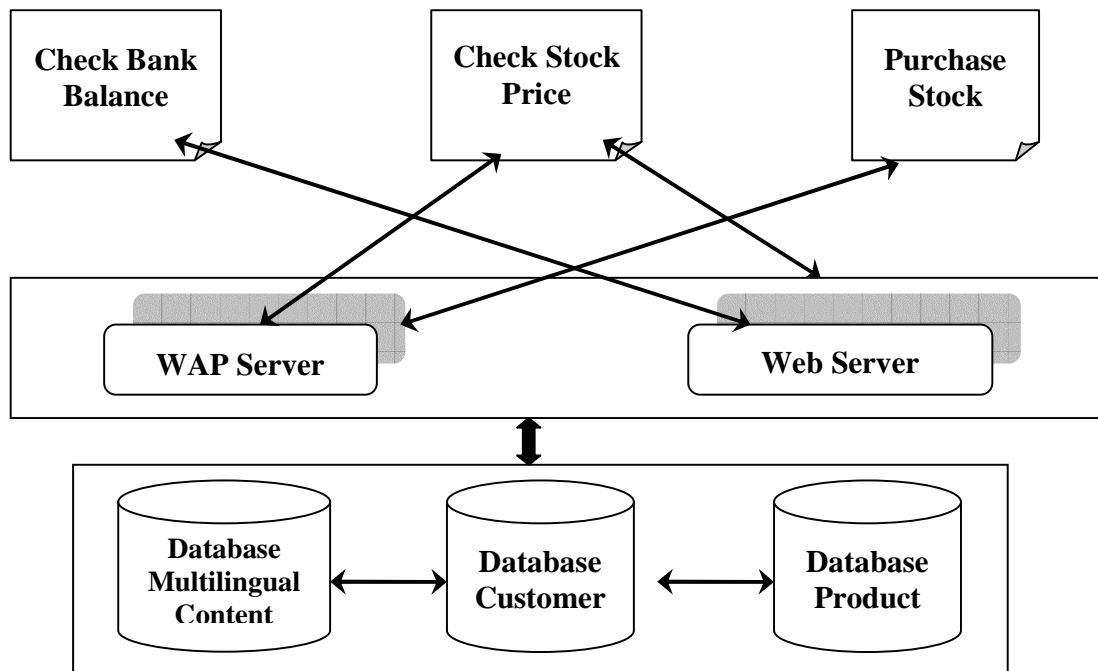
Considering the market growth of m-commerce mobile manufacturing companies are making WAP enabled phones and are also providing maximum wireless internet and web facilities that covers the personal, official and business needs of people and are also optimizing their business. The m-commerce service providers like Paymate, mcheck, Itzcash, HDFC, ICICI iMobile, are offering such innovative services that will change the size and style of your wallet.

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3. Characteristics of M-Commerce

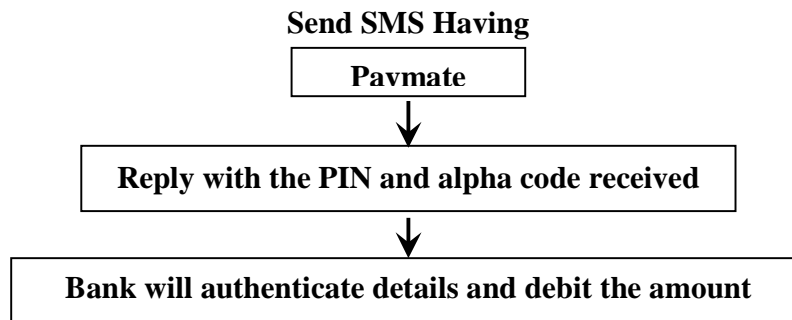
- **Mobility** — as users can carry their cell phones or other mobile devices easily.
- **Broad reach ability/ Ubiquitous computing** — people can be contacted anywhere and at any time. It is also convenient and provides instant connectivity.
- **Ubiquity**—information can be accessed easily and in a real-time environment.
- **Convenience**—as the devices facilitates storage of data and has Internet, intranet, extranet connections so it is convenient.
- **Localization of products and services**—knowing where the user is located at any given time.
- **Very personal**—Device owner has an exclusive access to the contents/services and the service providers keeps the identity of the owner.
- **Varied users**—Elementary school students, grandpas, grandmas are the varied users that uses m-commerce and from varied location.
- **Ambidextrous** – Work & Play: Business purpose + Personal fun.
- **Willingness** - People seem willing to pay for mobile services

4. Limitations of M-Commerce

- **Usability Problem** - small size of mobile devices (screens, keyboards, etc), limited storage capacity of devices, hard to browse sites
- **Technical Limitations** - lack of a standardized security protocol, insufficient bandwidth, 3G licenses, transmission and power consumption limitations, poor reception in tunnels and certain buildings, multipath interference, weather, and terrain problems and distance-limited connections

- **WAP Limitations** - Speed, Cost, Accessibility
- **Security** - Less processing power on devices, Less memory (keys, certs, etc. require storage), Few devices have crypto accelerators, or support for biometric authentication, No tamper resistance (memory can be tampered with, no secure storage), Primitive operating systems w/ no support for access control (Palm OS)

5. Paymate: An Example: You must be thinking how it will work it is as simple the only thing you need is a valid credit or debit card. And then your mobile will securely linked to the existing bank account and from this account all your payments will be made. Like for example if you choose to pay via Paymate you need to share your mobile number on which you will receive a SMS with the name vendor and the amount you need to pay and asking for your consent to pay the vendor via a PIN and re-entering the alpha code that you have received through the SMS. Once you reply, within few seconds your bank will authenticate the details and debit the amount from your account.



6. Sectors Where It Is Being Used: PDA's and mobile phones are so popularly used that businesses have started using m-commerce as an effective method of reaching their customers. Banks and financial institutions are exploring m-commerce to expand their business and allowing their customers to access their account information from anywhere, anytime. This service is normally known as mobile banking. News subscriptions of daily headlines from anywhere in the world can be transmitted to your mobile devices. Sports, Entertainment, Shopping and Reservation are the services that can be accessed using mobile devices. Corporate houses are using m-commerce to expand their business and also using it for marketing and advertisement.

7. Sectors Where It Can Used: Financial institutions are offering more service channels to their customers and providing them new and innovative products. They are also working on design and implementation of new applications that offers mobile payment for groceries etc. Travel industry is working on to provide travel arrangements, flight updates to customers, also notify them if the information changes and will make the necessary arrangements if there is any change. In this way an entire trip of a customer can be planned, scheduled and maintained using this technology.

In the retail sector can also use m-commerce and make purchase easier. Customers can browse and order products from the list and catalogue provided directly on their mobile device.

3G Services, includes video calls, video mails, video messages, video streaming, etc. these services can be provided with the help of high speed Internet and Java enabled phones. Also they can track their customers and notify them with the latest discounts that are available at their local stores.

Soon the shopping will become easier as the mobile phones will be equipped with the “*Bar Code Scanners*” and the customer can scan the item and find its pricing and availability.

8. Future Challenges in India: The major challenges in implementing M-commerce in India is that the players in the m-commerce field like mcheck, obopay, paymate etc. need users to link one of their banking instruments like the credit card, debit card, bank account to their mobile phone with the help of software installed on phone and the common man is not willing to share such information on the phone as he still think that his information can be hacked. No doubt it is a big leap in India but from the security point, it is still at its development stage. Service providers use WAP and SMS as the medium for providing services like facilitating people to pay through their mobile phones. But these services has not reached its peak as the service providers are unable to link with the banks also the common people do not agree in sharing their credit/debit card information. Also GSM services can provide a secure connection using personal identification number (PIN)

TRAI(Telephone Regulatory Authority of India) guidelines had made mandatory for every service provider to identify customers and this policy is similar to that of opening an account and getting a debit card inturn making telecom companies bank rather than the other way round. If a person starts using his phone as debit card for buying vegetables and other stuffs the daily banking transaction will significantly reduced.

According to the TRAI guidelines the telecom companies have to pay 6% of annual gross revenue as license fees to register as Value Added Service providers, Bank is charging 2-4% from the them and the merchants are not ready to pay them 7-8% for the services they provide. In compliance to TRAI norms RBI norms are much simpler in handling fraud transactions and banking.The solution of this problem is that to build a MVAS(mobile value added services) application that can be charged to from the user account for providing the service. The 2.1.3(iv) TRAI riles clearly sates that the RBI guidelines need to be followed by the telecom companies.

9. Conclusion: In few years from now the mobile commerce will become more secured as the cell phone companies are spending more to protect their customers and also their information from intrusions and hacking. Mobile commerce has gain a huge popularity but still it is in its initial phase and can be further expand to different fields and also can play a huge role in effecting human life. Its future seems to be extremely safe and bright and its upgraded version will emerge as the leader in the 4G technological version. So we can conclude with this that “The future is here” and we need to accept it with both hands.

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