

Mobile Payment in Mobile E-commerce

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Abstract—The main problem of Indian e-commerce is its insufficient modes of payment. Therefore the development in resources of mobile payment is necessary to boost the e-commerce business in India. There are presently three forms of payment prevalent in India in e-commerce One is the payment through credit cards/debit cards, second is the cash on delivery option which is only available in selected cities. Last but not the least is the mobile banking payment which has recently developed. But it is available only through banks which provide mobile banking. The paper brings forward a new form of payment through mobile phone. Referring to the advantages of the existing forms of payments and aiming to cover up their disadvantages at the same time. We propose an idea for an e-commerce website and mobile service provider to eliminate the role of banks from mobile payment. An e-commerce pin will be available for the people buying sim cards and can further purchase via sending sms from their mobile phones.

Keywords—Mobile e-commerce, Mobile payment, Special mobile payment platform.

I. INTRODUCTION

Mobile e-commerce is derived from the concept of e-commerce, which is a kind of trading of goods and availing of services.

In Mobile E-commerce the payment made for buying the goods/services is through mobile resources. Indian mobile e-commerce has its own unique and non-productive advantages as well as development opportunities, and the main problem at present is its insufficient modes of payment. This paper will give a research on mobile payment, an emerging mode of payment in mobile e-commerce under the existing 3G communication network. Till Few years back ecommerce was 70% related to travel itself in India but will come

down to 1/5th in the coming two years. MurliKrishnan B. from eBay India, said that E-Commerce in India was at \$0.6 Billion in 2010 and will be at \$1 Trillion by 2013. These days entrepreneurs have spread their hands in various fields be it in communication, transportation, socialization or IT Sector.

II. INITIAL RESEARCH ON MOBILE PAYMENT

MOBILE PAYMENT

Mobile payment is a means through which the customers make payment for the services or commodities through mobile phones. In India people register for mobile payment facilities in their respective banks. On registration they are provided with a seven-digit number known as MMID. Please refer Fig 1 for the basic flow of mobile payment.

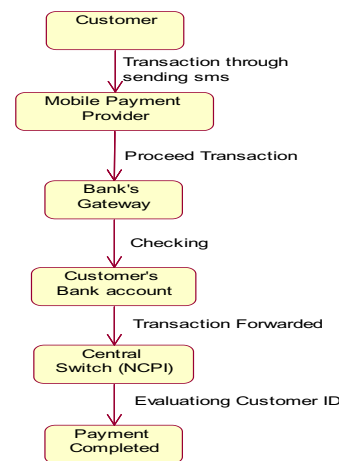


Fig 1

ONLINE PAYMENT

Online shopping is a means of e-commerce where customers shop online without an intermediary. The online website directs the link to a secure payment gateway of a bank where the customer selects the payment options : credit card/debit card/net banking and then proceeds by entering his account details which results in secure payment, only after the confirmation of payment from the bank the order is dispatched. Please refer Fig 2 for basic flow of online payment.

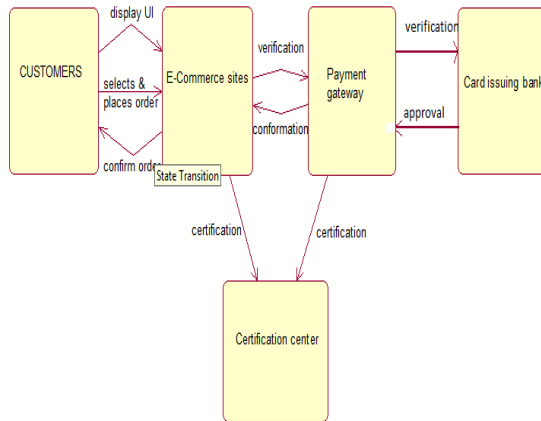


Fig 2

Both online payment and mobile payment deal with a common problem of payment in association with banks. We also realize that online payment is convenient as compared to mobile payments as a long procedure is involved in mobile banking which is tedious. Online payment is presently more secure form of payment. But if we look at Mobile payment the biggest advantage is that it can be made available anytime and anywhere. But when it comes to security, mobile payment is not that mature and lacks proper techniques.

III Analysis on existing mode of mobile payment

In India a customer can pay for the opted services by sending an sms from mobile phone but this service is bank oriented. Customers wishing to avail mobile payment services have to register with banks which provide the corresponding facilities. Currently mobile payment services is being offered by several banks and is expected to develop further but the barrier which comes across is the various charges taken by either the mobile communication service provider or the respective bank.

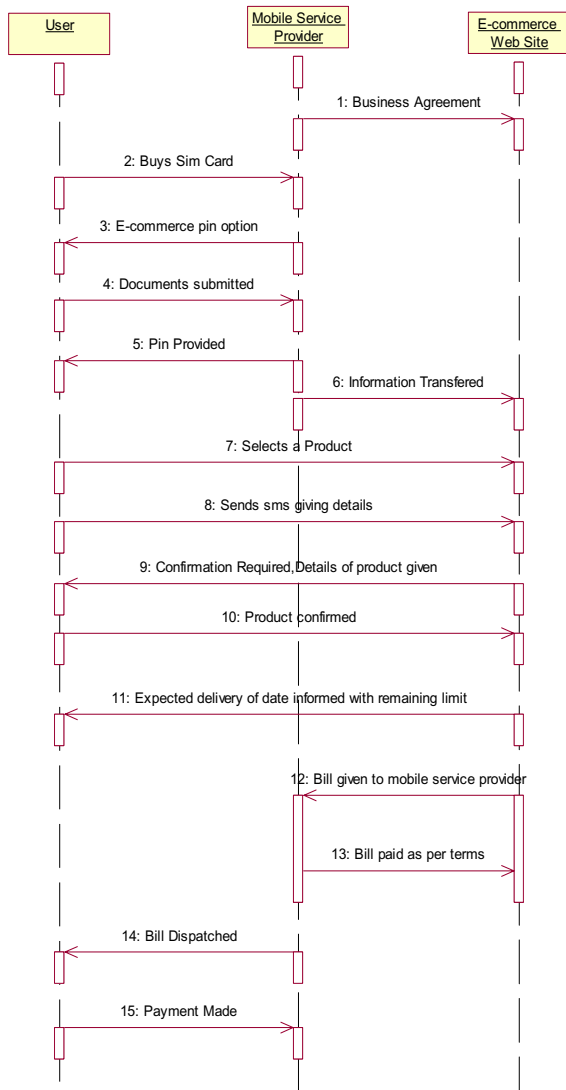
IV Establishment of a new mode of Mobile Payment

In today's world mobile phones have reached various areas including villages. A recent study even tells that the ratio of mobile phones in villages is more than the ratio of televisions.

As account opening form of a bank credit card/ATM card option is provided likewise we plan to facilitate an e-commerce option included in sim card registration form while buying of a sim card. After the registration process of the sim card the buyer will be provided with an e-commerce pin, for obtaining the pin the buyer has to submit extra documents. For a normal registration ID proof is needed, now for applying an e-commerce pin the customer will have to submit a proof of his/her passbook along with the copy of his/her income tax return and in the case of non-income tax assesses his/her proof of income. Based on the customer's income the limit for the shopping will be set (e.g. 12% of his/her total income). As soon as the limit is crossed the customer will have to do the payment only then he can continue his further shopping. The company providing the mobile connection services will enter into trade agreement with e-commerce sites wherein in addition to other terms the agreed commission on the business procured and credit facilities can be decided or can even own an e-commerce website. When a customer selects a particular product he will have to send an sms to the provided number stating his ecommerce pin provided to him at the time of sim card registration along with the website's name and the product number from the same mobile number.

e.g. <A23b19(pin) www.ebay.com P90654(Product Number) >

Thereafter the customer will receive an sms stating the product details selected by the customer. If the customer wishes to finalize his order he should reply with <1> to the same number. Again an sms will be sent to him regarding his remaining limit and the expected delivery date of the placed order. The shopping/e-commerce bill generated will be attached along with his sim card bill and will be delivered at the customer's registered address. The customer will be given fifteen days after receiving the bill for making the due payment. In case of delay in payment interest will be charged as per the policy to be decided by the service provider.



Sequence Diagram for the new mode of e-commerce

Advantages

1. This is a very secure form of payment as the customer has to make an order with the help of the e-commerce pin with the same mobile number with which it has been provided (If a customer places his order using his e-commerce pin and sends a message from any other mobile number his order will not be placed vice-versa if a customer uses his mobile number and gives someone else's pin his order again will not be placed.)
2. Service is availed even on low end mobile handsets.
3. The customer need not depend on the customer care executives for any kind of booking.

4. The services are not extra charged by the service provider or bank as there is no involvement of the bank.

5. India is a country of villages. People living in villages are comfortable with the services which are simple to operate than technically driven. This being the simple operational facility will be more popular among masses.

6. The mobile phone company will get added profit in terms of commission from e-commerce sites.

V CONCLUSIONS

Mobile payment is directly linked to mobile e-commerce. This paper brings forward a new form of mobile payment by referring to the advantages of the existing form of mobile payment and covering their disadvantages at the same time. But practically it is impossible to confront with some problems. The development of the forms of mobile payment mainly depends on the influence of policies of the government. Mobile payment is a problem relevant to financial field, and financial industry hopes to occupy the leading position in the mobile e-commerce. Mobile e-commerce needs the supports and participation of mobile communication industry and Government at the same time. Till now, the development of mobile payment in mobile e-commerce was just a game between mobile communication industry and banking industry. But we try to drive it away from their hands. Keeping away from these factors, the research has practical significance at present, and brand-new and high-efficiency form of mobile payment is very important for the development of Indian mobile e-commerce. We wish to consider mobile phone as an economically viable instrument to cater financial services.

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