

MOBILE COMMERCE

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Abstract: The importance of mobile commerce (m-commerce) in the e-commerce business has been tremendous so far and the future predictions seems to be on a growth track as well. Mobile commerce has definitely revolutionized the e-commerce space. Mobile Commerce, or m-Commerce, is about the explosion of applications and services that are becoming accessible from Internet-enabled mobile devices. It involves new technologies, services and business models. It is quite different from traditional e-Commerce. Mobile phones impose very different constraints than desktop computers. But they also open the door to a slew of new applications and services. They follow you wherever you go, making it possible to look for a nearby restaurant, stay in touch with colleagues, or pay for items at a store.

Definition

M-commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as cellular telephone and personal digital assistants (PDAs). Known as next-generation e-commerce, m-commerce enables users to access the Internet without needing to find a place to plug in. The emerging technology behind m-commerce, which is based on the Wireless Application Protocol (WAP), has made far greater strides in Europe, where mobile devices equipped with Web-ready micro-browsers are much more common than in the United States.

It is not simply just buying and selling stuff with mobile devices.

Depending on the approach we can include:

- Purchases on mobile web and apps;
- Mobile payments;
- Mobile money transfers and m-banking;
- Mobile financial services.

The industries affected by m-commerce include:

- **Financial services**, which includes mobile banking (when customers use their handheld devices to access their accounts and pay their bills) as well as brokerage services, in which stock quotes can be displayed and trading conducted from the same handheld device
- **Telecommunications**, in which service changes, bill payment and account reviews can all be conducted from the same handheld device
- **Service/retail**, as consumers are given the ability to place and pay for orders on-the-fly
- **Information services**, which include the delivery of financial news, sports figures and traffic updates to a single mobile device

IBM and other companies are experimenting with speech recognition software as a way to ensure security for m-commerce transactions.

Importance or uses of mobile commerce

Mobile payment

Mobile payment (also referred to as mobile money, mobile money transfer, and mobile wallet) generally refer to payment services operated under financial regulation and performed from or via a mobile device. Instead of paying with cash, cheque, or credit cards, a consumer can use a mobile to pay for a wide range of services and digital or hard goods. Although the concept of using non-coin-based currency systems has a long history, it is only recently that the technology to support such systems has become widely available.

In developing countries mobile payment solutions have been deployed as a means of extending financial services to the community known as the "unbanked" or "underbanked," which is estimated to be as much as 50% of the world's adult population, according to Financial Access' 2009 Report "Half the World is Unbanked". These payment networks are often used for micropayments. The use of mobile payments in developing countries has attracted public and private funding by organizations such as the Bill & Melinda Gates Foundation, United States Agency for International Development and Mercy Corps.

Mobile payments are becoming a key instrument for PSPs and other market participants, in order to achieve new growth opportunities, according to the European Payments Council (EPC). The EPC states that "new technology solutions provide a direct improvement to the operations efficiency, ultimately resulting in cost savings and in an increase in business volume".

Mobile ticketing

Tickets can be sent to mobile phones using a variety of technologies. Users are then able to use their tickets immediately, by presenting their mobile phone at the ticket check as a digital boarding pass. Most numbers of users are now moving towards this technology. Best example would be IRCTC where ticket comes as SMS to users. New technology such as RFID can now be used to directly provide a single association digital ticket via the mobile device hardware associated with relevant software.

Mobile vouchers, coupons and loyalty cards

Mobile ticketing technology can also be used for the distribution of vouchers, coupons, and loyalty cards. These items are represented by a virtual token that is sent to the mobile phone. A customer presenting a mobile phone with one of these tokens at the point of sale receives the same benefits as if they had the traditional token. Stores may send coupons to customers using location-based services to determine when the customer is nearby.

Content purchase and delivery

Currently, mobile content purchase and delivery mainly consist of the sale of ring-tones, wallpapers, and games for mobile phones. The convergence of mobile phones, portable audio players, and video players into a single device is increasing the purchase and delivery of full-length music tracks and video. The download speeds available with 4G networks make it possible to buy a movie on a mobile device in a couple of seconds.

Location-based services

The location of the mobile phone user is an important piece of information used during mobile commerce or m-commerce transactions. Knowing the location of the user allows for location-based services such as:

- Local discount offers
- Local weather
- Tracking and monitoring of people
- Data driven mashups targeting at a hyper-local level

Information services

A wide variety of information services can be delivered to mobile phone users in much the same way as it is delivered to PCs. These services include:

- News
- Stock quotes
- Sports scores
- Financial records
- Traffic reporting
- Emergency Alerts
- Location Based Notifications

Customized traffic information, based on a user's actual travel patterns, can be sent to a mobile device. This customized data is more useful than a generic traffic-report broadcast, but was impractical before the invention of modern mobile devices due to the bandwidth requirements.

Mobile banking

Banks and other financial institutions use mobile commerce to allow their customers to access account information and make transactions, such as purchasing stocks, remitting money. This service is often referred to as mobile banking, or m-banking.

Mobile brokerage

Stock market services offered via mobile devices have also become more popular and are known as Mobile Brokerage. They allow the subscriber to react to market developments in a timely fashion and irrespective of their physical location.

Auctions

Over the past three years mobile reverse auction solutions have grown in popularity. Unlike traditional auctions, the reverse auction (or low-bid auction) bills the consumer's phone each time they place a bid. Many mobile SMS commerce solutions rely on a one-time purchase or one-time subscription; however, reverse auctions offer a high return for the mobile vendor as they require the consumer to make multiple transactions over a long period of time.

Mobile browsing

Using a mobile browser customers can shop online without having to be at their personal computer. Many mobile marketing apps with geo-location capability are now delivering user-specific marketing messages to the right person at the right time.

Mobile purchase

Catalog merchants can accept orders from customers electronically, via the customer's mobile device. In some cases, the merchant may even deliver the catalog electronically, rather than mailing a paper catalog to the customer. Consumers making mobile purchases can also receive value-add upselling services and offers. Some merchants provide mobile web sites that are customized for the smaller screen and limited user interface of a mobile device.

In-application mobile phone payments

Payments can be made directly inside of an application running on a popular smartphone operating system, such as Google Android. Analyst firm Gartner expects in-application purchases to drive 41 percent of app store (also referred to as mobile software distribution platforms) revenue in 2016. In-app purchases can be used to buy virtual goods, new and other mobile content and is ultimately billed by mobile carriers rather than the app stores themselves. Ericsson's IPX mobile commerce system is used by 120 mobile carriers to offer payment options such as try-before-you-buy, rentals and subscriptions.

Mobile marketing and advertising

In the context of mobile commerce, mobile marketing refers to marketing sent to mobile devices. Companies have reported that they see better response from mobile marketing campaigns than from traditional campaigns. The primary reason for this is the instant nature of customer decision-making that mobile apps and websites enable. The consumer can receive a marketing message or discount coupon and, within a few seconds, make a decision to buy and go on to complete the sale - without disrupting their current real-world activity.

For example, a busy mom tending to her household chores with a baby in her arm could receive a marketing message on her mobile about baby products from a local store. She can and within a few clicks, place an order for her supplies without having to plan ahead for it. No more need to reach for her purse and hunt for credit cards, no need to log into her laptop and try to recall the web address of the store she visited last week, and surely no need to find a babysitter to cover for her while she runs to the local store.

Research demonstrates that consumers of mobile and wireline markets represent two distinct groups who are driven by different values and behaviors, and who exhibit dissimilar psychographic and demographic profiles. What aspects truly distinguish between a traditional online shopper from home and a mobile on-the-go shopper? Research shows that how individuals relate to four situational dimensions- place, time, social context and control determine to what extent they are ubiquitous or situated as consumers. These factors are important in triggering m-commerce from e-commerce. As a result, successful mobile commerce requires the development of marketing campaigns targeted to these particular dimensions and according to user segments.

CHALLENGES FACED BY MC

With many eCommerce websites already adapting to accommodate mobile commerce, here are the challenges faced by them:

- **Mobile App or Responsive Website:** To address the need of their customers businesses are often faced with the dilemma of choosing between a mobile app and a responsive site (a separate mobile site is no longer an option being considered). Both have their own merits and demerits. While app might be a good way to start, building a mobile app is far more expensive than building a responsive website. In addition, studies have shown that 67% of mobile users are more likely to visit a responsive website and make purchases than on a mobile app. Many organizations choose either of the two; we recommend, if you can, building a responsive website first and then a mobile app.
- **Security:** Users are paranoid about their data when it comes to the virtual world. They are ever so worried when it comes to wireless connections. The main reason why mobile commerce is still not as prevalent as conventional eCommerce is the lack of security, especially when it comes to mobile payments. With options like virtual wallets, this risk is mitigated to some extent.
- **Screen Size:** Although it might sound absurd, many users find the small screen of a mobile device hindering. This can be a challenge when it comes to providing a user-friendly service. In addition, maintaining consistency across various channels like mobile responsive website, mobile app and official website can be a challenge. In addition to this, the content that is on the website also needs to be crisp. With smaller screens, the images and content should effectively convey the message across and must draw the customer to buy any item.

- **Future-Proof:** While you plan to build a responsive website for mobile devices, make sure you build it in line with your future expansions plans. In addition, make it easy for the website to be modified in newer platforms like smart TV's, smart watches, game consoles, etc.
- **Connectivity and Hosting:** Another major challenge in mobile commerce is speed and reliability. According to a survey and study, an average person spends only a few seconds on a new website before making a judgment. If your website is not properly hosted, your site will not only be slow but also the chances of a transaction going wrong are high, resulting in irritated and unhappy customers and unpleasant customer support calls.
- **Marketing:** Mobile commerce needs a different set of marketing strategies. This can be a challenge as many companies follow a strict marketing calendar and most of them do not consider mobile phones. Marketing in mobile commerce can mean everything. Whatever your campaign, it reaches your consumers no matter where they are. This can be either a challenge or a great success strategy when done right.

Conclusion

As m-commerce applications and wireless devices are evolving rapidly, one will take forward the other one towards empowering innovation, versatility and power in them. There are a number of business opportunities and grand challenges of bringing forth viable and robust wireless technologies ahead for fully realizing the enormous strength of m-commerce in this Internet era and thereby meeting both the basic requirements and advanced expectations of mobile users and providers.

There are news articles and pictures displaying people, who are ordering things over the Internet while waiting for a bus, downloading merchant coupons on their PDAs as they enter a store or bidding for the last table at a hot restaurant by digital phone in a spur-of-the-moment auction. Actually this process represents a tip of a very big iceberg. The advent of m-commerce, as widely referred to among the users, has far-reaching implications. But there are many limitations in the technologies that Once its relevant technologies get matured, widely available and competent, the host of portable devices will be ready to handle the bigger transactional activities not envisioned so far successfully apart from these minor activities.

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