

AN ANALYSIS OF MOBILE E-COMMERCE USING THREE CASE STUDIES: INTEGRATED STRATEGIES AND MARKETING CHALLENGES

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Abstract

Why should we go M-Commerce? Is M-Commerce just a simple combination of Mobile technology and E-Commerce? In this paper we focus on how to acquire the synergy of these two technologies and analysis the benefits and the downsides that we should try to avoid while getting involved to M-Commerce.

Mobile Commerce: Definitions

Simply saying, Mobile E- Commerce (M-Commerce) is defined as any type of transaction of an economic value conducted through a mobile terminal that uses telecommunications network for communication with the E-Commerce infrastructure. [13] In principle, any transaction with a monetary value conducted via mobile communication networks can be considered “M-Commerce”. As such, M-Commerce is an extension of PC-based E-Commerce to mobile devices - E-Commerce for users on the move. However, due to its specific characteristics – ubiquity, user friendliness, localization capabilities, M-Commerce has the potential to expand to entirely new E-Commerce areas, creating new consumer habits and lifestyles. In technology terms, M-Commerce is the result of the convergence between the Internet and wireless personal devices. It brings together a wide range of hitherto distinct technologies in areas such as security and encryption, mobile location, Internet navigation, electronic mail, voice recognition, data and image compression. [14]

Characteristics of M-Commerce

The essentials required to execute an M-Commerce transaction include the following:

- A transaction must take place: The good or services must be provided and the payment should be made for the goods or services. Simply checking the price of a stock or put the products in the shopping cart does not make a transaction. For example, purchase an airline ticket via a mobile device and the fare is charged to the client’s credit card; execute a stock trade from a cell phone and the transaction (buy or sell) is successfully performed. [1]
- Mobility must be involved during the transaction: At least one party in an M-Commerce transaction must be mobile during part or all of the transaction. For example, using a cell phone on the street to order a movie ticket on the theater’s website; conducting an E-Commerce transaction in your car via a palm computer. On the contrary, an E-Commerce transaction conducted via a wireless local area network (LAN) connection in your office is not considered as M-Commerce. [1]
- A mobile wireless device must be used: The transaction must take place using, in part or whole, a mobile wireless device, such as a cellular handset, palm computer or other wireless devices. Dialing into the Internet through a wired connection at an airport or in a hotel room is not considered as an M-Commerce. [4]

Market Drivers

There are three market conditions which will have a significant impact on whether M-Commerce will be an entirely “new-new thing” or develop more as an extension of today’s E-Commerce. Namely, 1. Power of the brand, 2. Degree of Internet penetration, 3. Method of payment

Power of the Brand

Reality lies within the mind of the consumer. The M-Commerce user is at the heart of who is accorded the greatest power in the value chain. As M-Commerce value chains develop and deploy past the current pilot stage, branding and positioning will play a major part in how an M-Commerce offering is perceived by the user. The challenge will be how best to extend that brand quickly into the new M-Commerce space. To the degree they are successful, the more power in the value chain they will possess.

Degree of Internet penetration

How M-Commerce develops depends upon the degree of Internet penetration a country or region enjoys prior to the deployment of M-Commerce. Here the US and Europe differ significantly. Internet penetration in the US will continue to outpace mobile penetration for at least the next 5 years. This results in a user population that has developed its expectations and experience with on-line E-Commerce. This includes rich media, merchandise choice and a plethora of E-Commerce sites to satisfy the most discriminating shopper. [21] Europe (and to a greater degree, Japan) has lagged in Internet penetration. The result is a user population that can readily adopt M-Commerce without comparing on-line experience with the US market. As more bricks and mortar companies in the US adopt E-Commerce strategies, the more mobile E-Commerce becomes. It is a part of a multi-channel strategy to reach traditional customers in new ways and to reach new customers altogether. For an enterprise, M-Commerce is the next wave of technology that will help fulfill the potential of E-Commerce by extending its reach to anywhere and anytime.

Method of Payment

The type of purchases and payment processes utilized in M-Commerce offerings may drive much of how M-Commerce develops over the next year. M-Commerce, like E-Commerce, has categorized transactions into two levels: (1) Major purchases (\$10 or more) - using credit cards or debit cards, and (2) Micro purchases (under \$10) - using micro-payment processes (e-cash, prepayment accounts). Over the last 3 years, E-Commerce has been employing credit card as the payment method of choice. This makes sense, given consumers have long ago embraced their use (especially in the US) at a physical point of sale as well as over the phone. Several pilot M-Commerce projects now underway employ the use of credit cards that have been pre-registered on the M-Commerce web site. Once loaded, the credit card is “signed” by the user keying in his PIN number. This method avoids the issue of an actual credit card number being transmitted over the airwaves, but currently limits transactions to one pre-registered card.

Future Trends

Here are the key trends for companies to keep in mind as their wireless strategies unfold in the near future. [12]

- Enterprise Applications Will Become the White Hot Center of Mobile E-Business -- Wireless customer relationship management (CRM), sales force management and other enterprise applications will offer firms the chance to reap tangible benefits in terms of both revenue and efficiency.
- Consumer Use of Mobile Will Revolve Around Information, Not Transactions -- On the consumer side, information services such as email, stock quotes, weather, travel delays and itineraries, and point-to-point directions will lead the pack.
- Smart Handheld Displays Will Show Some Improvement, but Form Factors and Raw Data Entry Will Remain Problematic -- Better resolution and barcode-reading functionality will make mobile devices a bit more user friendly, but don't expect miracles. Small display size and cumbersome data entry methods will remain major handicaps.
- Mobile Security Will Become a Hot Issue -- As the acceptance of Internet-enabled mobile devices grows, these devices will become just as susceptible to security concerns as their PC brethren. Security concerns will only be amplified as device capability and data sharing increase. Even though millions of data-capable mobile devices are currently in use around the world, mobile device security mechanisms remain minimal. Voice Navigation Will Remain a Work in Progress -- While voice seems a natural interface for mobile devices, the user experience still is not up to snuff, and won't be any time soon.
- Convergence Will Continue, but It Will Still Be a Multiple-Device World -- PDA makers will keep adding phone features to their devices, and phone makers will try to make their devices more like PDAs, but this will make devices bigger, heavier and pricier. Most people won't accept that tradeoff.
- Advertising Will Continue to Expand to Wireless Devices -- This year will herald the launch of wireless advertising, beyond the testing phase. It won't be a major revenue source for anyone, but it will open a new medium to advertisers.
- Carriers Must Shift Their Distribution Strategies -- Carriers have largely talked to consumers up to now, but that is about to change. With a great number of business applications having debuted in 2000, we expect to see major carriers' distribution strategies shift from targeting end users to effectively targeting enterprises as well. Carriers that best implement this strategy will be able to increase their penetration and will also be likely to increase their average revenue per user.

Remaining questions

However, there are numerous questions remained. Massive investments will be needed to build the necessary wireless infrastructure and services. In this context, it is still an open question whether the enormous licenses fees for spectrum will slow down the deployment of third-generation wireless infrastructure - or spur the speed of innovation and the search for new innovative business models. [7] At this stage, venture capital investments seem to be more targeted at companies that produce the building blocs for the wireless world rather than on services on top of that.

References will be furnished upon request