

M-commerce essay

[Business](#), [E-Commerce](#)



Mobile Commerce. Introduction The development of telecommunication and computer technology is always attractive for consumers to follow. This is because services providers and gadget manufacturers are always able to find new things that attract consumers to use them. iPod, Wi-Fi enabled handsets, laptop computers, for instances, are some examples of well-known inventions in information technology that are saleable in markets. Moreover, the recent development in mobile devices and wireless technology also leads to mobile computing that leads to a paradigm shift from desktop computers to handheld devices.

Recently, it is common to see consumers to use Personal Digital Assistants (PDAs), smart phones, and notebooks that suggest the business has gone mobile so that the consumers can do all things over wireless gadgets the same with doing by desktop computer. It makes sense since Intel, the world's largest microprocessor manufacturer, continues developing powerful processor; for instances, in mid 2005, Intel delivered the next generation processors that enable cell phones and PDAs to meet multimedia, low power, and security requirements (Intel, 2004). All above information are data about the development of telecommunication technologies. Thanks to the continual development and maturity in networking technologies that help consumers to communicate one to another across the cities, lands, and even continents. While the description of future mobile technologies is valuable to wait, consumers can see the description over the Internet of a company's vision. For example, NTT DoCoMo (www.

nttdocomo.com) best describes a visualization of what wireless community will be through its video presentation called Vision 2010. Moreover, the

advancement of telecommunications and internet technologies has created new model of commerce, the borderless commerce or e-commerce. The terminology refers to cross-nations or even cross-continent trade and commerce. This development goes further as Internet is accessible not only via desktop computers but also via mobile devices like PDAs and mobile phones. Concerning the development of commerce and telecommunications, this paper will focus on M-Commerce (Mobile Commerce) that refers to the development of any type of commerce conducted via mobile networks.

To add focus of the discussion, this paper will elaborate the development of mobile commerce in the world, especially in the United States. Things to be discussed in this paper including current issues of mobile commerce applications, top-five key success factors for mobile commerce applications, major current mobile commerce providers, and future potential for mobile commerce from a business stand point of view. II. Current

Issues of Mobile Commerce Currently, there are a number of mobile commerce applications that can be used by consumers with suitable handsets. For example, now customers in some countries like Japan and UK shop via their mobile handsets exactly similar to shopping in malls. The applications include mobile banking (financial services), advertising, product location and shopping, auction and reverse auction, and entertainment, to name a few (Varshney and Vetter, 2001).

Table 1 shows summary of mobile e-commerce that are now available in market. The table also explains the relevant questions for each mobile commerce applications. Among twelve issues in mobile commerce, this

paper only considers three of them; they are security issues of mobile commerce, development of complex application in limited speed of mobile processor, and human-handhelds interface through the development of attractive graphical user interface in mobile devices (Tarasewich, Nickerson, and Warkentin, Merrill, 2002). Table 1 Summary of Mobile E-Commerce Application Issues Source: Tarasewich, Peter., Nickerson, Robert C., and Warkentin, Merrill. (2002). Issues in Mobile E-Commerce.

Communications of the Association for Information Systems, Volume 8, 41-64

II. 1 Security Issues of Mobile Commerce Amidst the increasing number of consumers that shop online via mobile devices, there is a potential threat that could prevent the fast adoption of mobile commerce; the threat is security. It is known that electronic commerce including e-commerce is potential to malware that contains viruses, adwares, or hijackers that collect our credit card information and sending it into a remote host for further criminal actions. In order to eliminate this threat, mobile application developers provide high-level threat into personal and corporation confidential information such as password and personal identification number (PIN).

II. 2 Speed of Mobile Processor Since computer technology has gone mobile, the applications and computer program also follow.

Therefore, it is also common to find many applications that tailored to work on mobile devices such as wireless e-mail and Microsoft Office for mobile handsets. However, mobile devices have some drawbacks such as limited bandwidth allocation that restricts the use of several mobile applications such as video conferencing over the phone, high-speed internet, bus on

demand and may others. In addition, mobile handhelds are also limited in processor speeds in which highest processor speed for typical PDAs is about 400 MHz while desktop computers have achieved more than 2 GHz.

II. 3 Communication between different Messaging Services
The question is what type of interface that between the messaging services. Fortunately, to simplify and enable customers to use mobile devices, currently, there is new module called a hyperbolic tree that allows users to view and present their information on an easy-to-use, interactive, multi-dimensional tree, with additional visual navigation features. By definition, hyperbolic trees are dynamic visualizations, just like tree map, fisheye view, cone trees, cam trees, and perspective wall that based on interactive manipulation of the structure of the information (Ovaska, 2004). The interesting part in the development of visualization in mobile handhelds is that fact that such devices such as smart phone and PDA have small screen than desktop computer. This fact underlies the way information presented in the devices. III.

Top-Five Key Success Factors
As explained above, mobile handsets have limited power and storage capacity. Therefore, the first success factor is convenient and personalization (Arthur D. Little Int., (2001). This means that mobile commerce providers should develop application that runs in low speed and occupies small portions in storage capacity. However, the interface with customers must be attractive enough with the use of graphical user interfaces (GUI). NBA. com, Toshiba.

com, and many other interesting websites are using more GUIs in order to entice watchers and wannabe customers. Second, the success factor is about security. This is important since security issue like carding, stolen of personal information may prevent a user to shop online. Third factor is timeliness and ubiquity (Arthur D. Little Int.

, (2001); it includes the invention of high-speed mobile processor that enables the consumers to use mobile handsets like PCs. This condition makes shopping become more attractive. Fourth factor is customer ownership that includes secured customer database. This means that any user can shop online without the worry that their card information is stolen and changed. Fifth factor is localization; this means that a user know the location of the user that adds value to product (Arthur D. Little Int., (2001). IV.

Two Major Current Mobile Commerce Providers in U. S One of mobile commerce providers in the U. S. is Open Market Exchange that provides a complete on-demand business and financial solution (Open Market Exchange, 2006). This company also develops and sells premium digital content to consumers. The strength of this company is they already have wide range of customers such as Warner Brothers, Disney, and Best Buy etc. However, they have not developed services to run in 3G networks that provide consumers with greater possibility to access mobile commerce in high speed. Another provider is Valista; this is the new company because of merger between two major mobile commerce providers, Network365 and iPIN.

The strength of this company is its worldwide experience with more than 140 million users. The drawback is the company still needs to invest in charging system since it is prone to fail and service failure will lead to customer dissatisfaction and non-usage (Hughes, 2003). V. Potential of Mobile Commerce Mobile commerce is the next step of online commerce. Therefore, the opportunity for mobile commerce lies on the number of mobile service penetration rates. According to ITU (2005), America records 42% of mobile penetration rates. This considerably high penetration rate has put mobile subscribers in the U.

S. to surpass those in fixed phone lines and imply that mobile commerce will be easily adoptable by U. S. consumers.

Table 2 shows U. S. internet penetration rate compared to other countries in the world. Table 2 Countries with the highest Internet rate Penetration

Rate TOP 30 COUNTRIES WITH THE HIGHEST INTERNET PENETRATION

Rate	Rank	Country or Region	Penetration (% Population)	Internet Users	Latest Data	Population (2006 Est.)	Source and Date of Latest Data
76.3 %	1	New Zealand	76.3 %	3,200,000	ITU - Sept/05	4,195,729	
69.4 %	2	Denmark	69.4 %	3,762,500	5,425,373	ITU - Sept/05	6
69.2 %	3	Hong Kong	69.2 %	4,878,713	7,054,867	Nielsen//NR Feb./05	7
68.6 %	4	United States	68.6 %	205,326,680	299,093,237	Nielsen//NR Jan/06	8
68.4 %	5	Australia	68.4 %	14,189,557	20,750,052	Nielsen//NR Jan/06	18
62.9 %	6	United Kingdom	62.9 %	37,800,000	60,139,274	ITU - Oct/05	
15.7 %	7	World Total Users	15.7 %	1,022,863,307	6,499,697,060	IWS - Mar/06	

Source: www.

internetworldstats. com Therefore, since U. S. consumers have used to browsing and shopping online, there are factors that U. S. mobile carriers should pay attention. The factors are to find and partner with suitable mobile commerce providers so that they can boost the M-Commerce traffic and thus, revenue.

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Issues in Mobile E-Commerce. Communications of the Association for Information Systems, Volume 8, 41-64