Mobile Commerce, also known as **M-Commerce** or **mCommerce**, is the ability to conduct commerce using a mobile device, such as a mobile phone, a Personal Digital Assistant (PDA), a smartphone, or other emerging mobile equipment such as <u>mobile</u> devices. Mobile Commerce has been defined as follows:

"Mobile Commerce is any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated networks with the help of an electronic device."

History

First thought up by Matt Wilson.

Mobile commerce was born in <u>1997</u> when the first two mobile-phone enabled <u>Coca Cola</u> vending machines were installed in the <u>Helsinki</u> area in <u>Finland</u>. The machines accepted payment via <u>SMS</u> text messages. The first mobile phone-based banking service was launched in 1997 by Merita Bank of Finland, also using SMS.

The phrase mobile commerce was coined by Kevin Duffey of Logica in February 2007, <u>see report on Mobile Commerce</u> and (<u>see section 5.2 of this Ericsson competitor report of May 1998</u>).

The Global Mobile Commerce Forum, which came to include over 100 organisations, had its <u>fully minuted launch in London on 10 November 1997</u>. It was <u>founded by Logica and Cellnet</u>. The meeting was opened by <u>Dr Mike Short, former chairman of the GSM Association</u>, with forecasts from Kevin Duffey (Group Telecoms Director of Logica) and <u>Tom Alexander (later CEO of Virgin Mobile and then of Orange)</u>.

On 23 November 1998, at a gala dinner in New York, <u>the Financial Times awarded it's Mobile Innovation award to a mobile commerce solution</u> with 3 components: (i) the world's first dual slot GSM Cellular Phone from Motorola, (ii) De La Rue's SIMphonIC Java powered SIM toolkit smart card and (iii) Logica's m-Commerce(TM) server.

In <u>1998</u>, the first sales of digital content as downloads to mobile phones were made possible when the first commercial downloadable <u>ringtones</u> were launched in Finland by <u>Radiolinja</u> (now part of <u>Elisa Oyj</u>).

Two major national commercial platforms for mobile commerce were launched in 1999: Smart Money (http://smart.com.ph/money/) in the <u>Philippines</u>, and <u>NTT DoCoMo</u>'s <u>i-Mode</u> Internet service in <u>Japan</u>. i-Mode offered a revolutionary revenue-sharing plan where NTT DoCoMo kept 9 percent of the fee users paid for content, and returned 91 percent to the content owner.

Mobile-commerce-related services spread rapidly in early <u>2000</u>. <u>Norway</u> launched mobile parking payments. <u>Austria</u> offered train ticketing via mobile device. <u>Japan</u> offered mobile purchases of airline tickets.

The first conference dedicated to mobile commerce was held in London in July 2001.

The first book to cover mobile commerce was Tomi Ahonen's *M-profits* in 2002.

The first university short course to discuss mobile commerce was held at the University of Oxford in 2003, with Tomi Ahonen and Steve Jones lecturing. As of 2008, UCL Computer Science and Peter J. Bentley demonstrated the potential for medical applications on mobile devices.[2]

PDAs and cellular phones have become so popular that many businesses[specify] are beginning to use mobile commerce as a more efficient way to communicate with their customers.

In order to exploit the potential mobile commerce market, mobile phone manufacturers such as Nokia, Ericsson, Motorola, and Qualcomm are working with carriers such as AT&T Wireless and Sprint to develop WAP-enabled smartphones. Smartphones offer fax, e-mail, and phone capabilities.

"Profitability for device vendors and carriers hinges on high-end mobile devices and the accompanying killer applications," said Burchett.[who?] Perennial early adopters, such as the youth market, which are the least price sensitive, as well as more open to premium mobile content and applications, must also be a key target for device vendors.

Since the launch of the iPhone, mobile commerce has moved away from SMS systems and into actual applications. SMS has significant security vulnerabilities and congestion problems, even though it is widely available and accessible. In addition, improvements in the capabilities of modern mobile devices make it prudent to place more of the resource burden on the mobile device.

More recently, brick and mortar business owners, and big-box retailers in particular, have made an effort to take advantage of mobile commerce by utilizing a number of mobile capabilities such as location based services, barcode scanning, and push notifications to improve the customer experience of shopping in physical stores. By creating what is referred to as a 'bricks & clicks' environment, physical retailers can allow customers to access the common benefits of shopping online (such as product reviews, information, and coupons) while still shopping in the physical store. This is seen as a bridge between the gap created by e-commerce and in-store shopping, and is being utilized by physical retailers as a way to compete with the lower prices typically seen through online retailers.

Products and services available

Mobile ticketing

Template:Main: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 phones at the venue.

Tickets can be booked and cancelled on the mobile device with the help of simple application downloads, or by accessing the WAP portals of various travel agents or direct service providers.

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 consists 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 transactions. Knowing the location of the user allows for location-based services such

- Local discount offers
- Local weather
- Tracking and monitoring of people

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

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 StoreFront

The reinvention of the mobile phone as a touch sensitive handheld computer has for the first time made mobile commerce practically feasible. 'According to ABI Research, mobile is going to get a lot bigger in the ecommerce market. The research firm is predicting that in 2015, $119bn worth of goods and services will be purchased via a mobile phone.'

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[*when?*] mobile reverse auction solutions have grown in popularity.[*by whom?*] 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—a World Wide Web browser on a mobile device—customers can shop online without having to be at their personal computer.

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. Some merchants provide mobile websites that are customized for the smaller screen and limited user interface of a mobile device.

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. Mobile campaigns must be based on the global Content Generationor what is called Generation C and four other 'C's: Creativity, Casual

Collapse, Control, and Celebrity. A brief introduction... Creativity: let's face it, we're all creatives, if not artists! (Notice we didn't mean talented artists ;-). And as creativity normally leads to content, the link with GENERATION C is obvious. Which then brings us to Casual Collapse: the ongoing demise of many beliefs, rituals, formal requirements and laws modern societies have held dear, which continue to 'collapse' without causing the apocalyptic aftermath often predicted by conservative minds. From women's rights to gay marriage to not wearing a tie to work if you don't feel like it!ref>"Increasing Trend of Mobile Marketing". *Youpark*. Youpark ApS. http://youpark.com/blog/index.php?p=21. Retrieved August 23, 2010.</ref>[*unreliable source?*]

Influence on youth markets

Mobile media is a rapidly changing field. New technologies, such as WiMax, act to accelerate innovation in mobile commerce. Early pioneers in mobile advertising include Vodafone, Orange, and SK Telecom.

Mobile devices are heavily used in South Korea to conduct mobile commerce. Mobile companies in South Korea believed that mobile technology would become synonymous with youth life style, based on their experience with previous generations of South Koreans. "Profitability for device vendors and carriers hinges on high-end mobile devices and the accompanying killer applications," said Gibran Burchett.[*citation needed*]

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Payment methods

Consumers can use many forms of payment in mobile commerce, including:

- Premium-rate telephone numbers', which apply charges to the consumer's long-distance bill
- Charges added to the consumer's mobile telephone bill, including deductions to pre-paid calling plans
- Credit cards
  - Some providers allow credit cards to be linked to a phone's SIM card
- Micropayment services
- Stored-value cards, often used with mobile-device application stores or music stores