

# Chapter 1.4

## Mobile Communications and Mobile Commerce: Conceptual Frames to Grasp the Global Tectonic Shifts

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### ABSTRACT

In this keynote chapter, we provide an overview of the emerging global landscape of mobile communications and mobile commerce, circa 2005. We introduce the four core CLIP functionalities—communications (C), locatability (L), information (I), exchange and payment (P) facilitation—on which mobile commerce systems and services are based. We then explore the various requirements for creating successful mobile commerce portals, or m-portals, using the CLIP functionalities as well as ways for personalization, permission and specification of service formats and content.

### TECTONIC SHIFTS IN GLOBAL MOBILE COMMUNICATIONS

In 2004, the nation of China was adding five million new mobile telephone customers every month. That is the equivalent of adding the whole nation of Denmark, or Finland, *every month* to the mobile user base of the world's most populous country. India, the world's second most populous nation, was far behind China, but its mobile user base was also galloping ahead at a phenomenal pace. By 2005, India had, by some estimates, over 79 million users and various observers expected the number to double in 12-18 months.

While emerging nations such as China, India, Vietnam and South Africa were adding mobile telecom users at a phenomenal rate, in the advanced countries with very high mobile penetration rates, the race was on to promote new patterns of life based on mobile technologies. Take the example of the United States. Although the U.S. was slower than most European nations and the leading Asian nations in terms of mobile technology penetration and mobile data applications, by the mid-2000s a distinct pattern of making mobile communications and applications ubiquitous was becoming evident in many American cities (see Box 1 “The Race to Ubiquitous Mobile Connectivity”).

Mobile commerce, or m-commerce, refers to monetary transactions conducted via a mobile telecommunications network using devices such as mobile phones, personal digital assistants (PDAs), enhanced alphanumeric handheld gadgets and so on. The global wireless mobile networks of various kinds, and the user bases of such

networks, constitute the bedrock infrastructure of mobile commerce. The growing variety of terminal devices and services are the facilitative and revenue-producing tentacles of the mobile telecommunications networks. Together, the network, the devices and the services constitute the growing, globalizing and ever morphing “mobile ecosystem.”

As we survey the mobile ecosystem circa 2005, tectonic shifts are occurring in it. Such shifts will continue into the foreseeable future. Including the explosive growth in Asia’s mobile user base, the following represent the main tectonic shifts expected to shape the mobile commerce landscape for decades:

- Emergence of China as the world’s biggest mobile communications market and the likely impact of this on everything from services to technical standards.

*Box 1. The Race to Ubiquitous Mobile Connectivity*

Towards the end of 2005, many cities in the United States started receiving proposals from a variety of information technology companies to blanket the entire city with Wi-Fi mobile connectivity. For example:

- Google proposed to make the entire city of San Francisco into a large, urban Wi-Fi network. Users would of course be able to take their laptops and be connected to the Internet. With the newly launched “Google Talk” service, using VOIP technology, users would also be able to make
- Earthlink, a major Internet Service Provider, similarly offered to blanket the city of Philadelphia with a ubiquitous Wi-Fi network, and to offer highly discounted services to Earthlink users while on the move anywhere in the city.
- Intel, the maker of the Centrino and other mobile data communications chips, launched programs for Wi-Fi blanketing not only in the United States but also in a dozen cities across the world.

These offers of “Wi-Fi blanketing” were of course made because of the obvious commercial benefits to the firms making these offers. While these developments of creating ubiquitous urban mobile networks were going on, the venture capital firms in the United States were bank rolling a large number of startup companies developing mobile applications.

Of course, looking into the future, many uncertainties and glitches remain. But it is almost certain that certain areas in the United States would become so saturated with free or nearly free mobile networks that people would begin to reorient their lifestyles – carrying a single mobile device of some type that would be phone, a wallet, and a browser all rolled into one.

Source: Authors’ research.

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