m-Business: Mobile Business

Mobile commerce (m-commerce, m-business): e-commerce done in a wireless environment using some type of mobile device.

Cell phone portability meets the Internet, become ubiquitous.

Interesting Attributes of M-Commerce
Mobile Commerce Drivers

Drivers of M-Commerce

- Widespread availability of more powerful devices
- The service economy
- The mobile workforce
- Improved price/performance

m-Business Challenges

Primary challenges:

- Much money, research being invested here
- Many consumers expect "free" devices and are unwilling to pay non-subsidized fees.
- As technology becomes truly ubiquitous, becomes embedded in other devices (Amazon Kindle).
Generations of Portable Devices

1st Generation wireless:

2nd Generation wireless:

3rd Generation wireless (3G):

(14.4Mbit/sec)

4th Generation wireless (4G):

(up to 1GB/sec)

Some current companies (Sprint) are marketing a 4G product. It's not "true" 4G.

Consumer desire: blend email, blogging, Instant Messages, SMS, and social networking in device which makes Web browsing easy.

What makes this interesting? (e-Business context)

Potential for secure transactions/communication

Federal legislation is pressing cell companies to embed GPS in all devices. (e-911)

Example: automatic crash notification (ACN) (OnStar).

Telematics:

Targeted advertising—
What makes this interesting? (e-Business context)

Localized content, cont.
Focal points:

- (GIS)—system capable of integrating, storing, editing, analyzing, sharing, and displaying geographically-referenced (spatial) information.

What makes this interesting? (e-Business context)

Wireless electronic payment

- Secure tools capable of instantly authorizing payments over cellular network.

**Micropayments:**

- Success depends on the costs of the transactions

Voice portal

- A Web site with an audio interface that can be accessed through a telephone call ([VoiceXML](https://www.w3.org/TR/voicexml/))
What makes this interesting? (e-Business context)

Work force mobilization and assistance
- Complete tasks aided/monitored by wireless data devices.
- Wearable devices IBM Linux Watch Xybernaut Mobile Assistant iButtons

Implementation Issues in M-Commerce
- Many Web sites not designed for viewing by mobile devices.
  - wireless Web browser designed for small screens, limited bandwidth, limited storage and memory.
- Current devices have limited usability (screen size and data input).
- Quick and easy navigation of sites is necessary but not always available in the mobile environment.
Mechanics of Mobile Web Browsing

Most microbrowsers operate using

- **WAP scripting language**: based on XML, minus unnecessary content to increase speed
- **Compact Hypertext Markup Language (cHTML)**: Competing technology. Scripting language used to create content for "i-mode"
- **Traditional XHTML, CSS**: Contemporary devices such as iPhone and competitors render traditional pages on smaller device. Many believe WAP, etc. is dead.
Interesting m-Commerce questions