

# MOBILE COMPUTING - BRIEF OVERVIEW

[http://www.tutorialspoint.com/mobile\\_computing/mobile\\_computing\\_overview.htm](http://www.tutorialspoint.com/mobile_computing/mobile_computing_overview.htm)

Copyright © tutorialspoint.com

Mobile Computing is a technology that allows transmission of data, voice and video via a computer or any other wireless enabled device without having to be connected to a fixed physical link. The main concept involves:

- Mobile communication
- Mobile hardware
- Mobile software

## Mobile communication

The mobile communication in this case, refers to the infrastructure put in place to ensure that seamless and reliable communication goes on. These would include devices such as Protocols, Services, Bandwidth, and Portals necessary to facilitate and support of the stated services. The data format is also defined at this stage. This ensures that there is no collision with other existing systems which offer the same service.



Since the media is unguided/unbounded, the overlaying infrastructure is more of radio wave oriented. That is, the signals are carried over the air to intended devices that are capable of receiving and sending similar kinds of signals.

## Mobile hardware

Mobile hardware includes mobile devices or device components that receive or access the service of mobility. They would range from Portable laptops, Smartphones, Tablet Pc's, Personal Digital Assistants.





These devices will have receptor medium that are capable of sensing and receiving signals. These devices are configured to operate in full- duplex, whereby they are capable of sending and receiving signals at the same time. They don't have to wait until one device has finished communicating for the other device to initiate communications.

Above mentioned devices use an existing and established network to operate on. In most cases, it would be a wireless network.

## Mobile software

Mobile software is the actual program that run on the mobile hardware. It deals with the characteristics and requirements of mobile applications. This is the engine of that mobile device. In other terms, it is the operating system of that appliance. It's the essential component that makes the mobile device operate.



Since portability is the main factor, this type of computing ensures that users are not *tied or pinned* to a single physical location, but are able to operate from anywhere. It will incorporate all aspects of wireless communications.

This tutorial will look into the concept of mobile computing, current and future trends, advantages, applications, and major security concerns.