

## **Unit 14.2 Mobile Hardware and Communication Technologies**

Mobile hardware is shrinking. The hardware used to make and display multimedia has become more capable, more compact, yet more powerful. The transformation from Plain Old Telephone Sets (POTS) into palm size smartphones have revolutionized how we communicate.

From turning a phone rotary dialer in 1990's, now you just need to use touch screens on your mobile devices to call your friends and family.

Moreover, you may just use voice command and the smartphone will dial a number for you. Top 5 world mobile phones manufacturers are Samsung, Nokia, Apple, LG Electronics and ZTE.

Besides that, the advancement in mobile interaction technology has enable you to use multi-touch gestures like pinches and swipes and taps.

But, if you are too lazy to touch the screen, you may just speak to your phone. In addition, the phone will detect your eyes and will help you to scroll down your mobile book.

In terms of communication protocols, now in Malaysia we have 3G and 4G. 3G (Third Generation) and 4G (Fourth Generation) are protocols that govern this movement of information on the radio connection between handset and tower. In 3G the data transmission rate is up to 3.1 Mbps. But in 4G, the rate is up to 12 Mbps.

Other mobile communication technologies include LTE (Long-Term Evolution) and WiMAX (Worldwide Interoperability for Microwave Access). You may also gain access to your Facebook account using Wi-Fi 802.11 a/b/g/n technology. It provides faster, cheaper, easier connection.

But, make sure that you are in the range of around 30 meters indoors and 100 meters outdoors from your wireless access points (WAP). And make sure, it is really free. And please, do not hack your neighbor's Wifi connection.

In terms of smartphone operating system, the main player in this industry is of course none other than Google's Android. The other mobile operating systems are such as Apple's iOS, Windows Phone and Blackberry.

In summary, mobile device is the combination of hardware, operating system, and system programming. Mobile devices work on 3G and 4G are communication protocols or Wi-Fi technology.

