

Wireless communications and networksright

[Sociology](#), [Communication](#)



Assignment 1

Wireless Communications and Networksright

6156960 Name : Sikandar ALI.

Roll no. : FA14-BCS-095.

Section: A.

Submitted to : Sir aMMAR YASIR.

Date : 2nd March , 2018. 1000000

Name : Sikandar ALI.

Roll no. : FA14-BCS-095.

Section: A.

Submitted to : Sir aMMAR YASIR.

Date : 2nd March , 2018.

Communication is a Latin word which means " sharing". It means sharing some data or information from one place to another or with someone. The main source of communication is language. There are some other ways for communicating like: The use of Symbols. Road signs for the movement of vehicles. In military defense, we use secret codes for confidential communication.

Types of Communication: There are three types of communication: Verbal Communication. Non-Verbal Communication. Visual Communication. Verbal

Communication: The communication which is in formal way to exchange or communicate from one person to another. It has further two types: Written

Communication: The communication which is in written form like documents , emails , chats , SMS.

This kind of communication is also used in business proposal, issuing legal instructions contracts, memes. To make effective written communication, it depends on vocabulary, styles, clarity and also grammar. Oral

Communication: The communication which is face to face of spoken words. It could also be on phone call, audio/video call and also video conference through internet. People give interviews to international companies for job on Skype.

It could be formal or informal communication. Formal Communication: The communication in which conferences, lectures takes place. Informal

Communication: The communication in which gossips with friends, crack jokes takes place. Non-Verbal communication: The communication which is in formal way to exchange or communicate from one person to another.

This communication can be done by body language which includes facial expressions, eye contact, body posture, gestures and others. But the most common of all is facial expressions. Visual Communication: A communication in which an idea or information that can be read or viewed by using visual aids like drawing, signs, typography, graphic design and other electronic devices.

The profit and loss of business can be view by graphs or charts through which employees can present the profit and loss of business very easily.

Wireless Communication: A communication in which data or information can be send or receive without any cables or wires to another device. The information is transmitted through air by electromagnetic waves like radio frequency, infrared, satellite and much more. Now there are variety of devices and technologies ranging from smartphones to laptops, tablets, printers, bluetooth, Wi-Fi, 3G and 4G etc.

Types of Wireless Communication: There are three types of Wireless Communication: Wireless Personal Area Network (WPAN). Wireless Local Area Network (WLAN). Wireless Metropolitan Area Network (WMAN). Wireless Personal Area Network (WPAN): The system which connect two devices at very short range. They must be very close to each other usually in the same room. Bluetooth: It is two way communication between two devices which could be place very close to each other for sharing data or any information.

It is very efficient reducing the wires like connect a mouse with computer, headphones, MP3 and cellphones etc. Infrared (IR) Wireless Communication: In this system, data or information is carried over infrared waves between two points. The frequency range is in between the microwave and visible light.

These are very small range of distance like TV remote and AC remote.

Wireless Local Area Network (WLAN): It is local area network which connects two or more transceivers by using a wireless device. It covered the house or small offices under the WLAN. **Wi-Fi:** A system that is related to computer

networking. In this, we need wired connection of internet with guided router which connects to other devices like mobile, laptops, tablets and LED TV. Its range is generally one home or small offices.

If we use in large campus or hospitals then we use range extender to make the range much more and cover the whole area under the network. Wireless Metropolitan Area Network (WMAN): It is the communication network which have to covered the large areas , states or countries to communicate with each other. For this purpose, we use satellite communication or transmission tower to communicate with other very long range places and take care by service provider.

Satellite Communication: An artificial satellite that provide us facilities for communication as radio, television, telephones transmission and communicate with other countries by video or audio calling, texting and so on. The heart of a satellite communication system is a satellite based antenna in a stable orbit above the Earth.

There are many satellites that relays on the space to communicate with each other as serve as relay station in space. The antenna station on near the Earth are referred to as " Earth Stations". A transmission from an Earth station to the satellite is referred as " Uplink". A transmission from satellite to an Earth station is referred as " Downlink".

The component in satellite which takes an uplink and convert into downlink signals is known as " Transponder". There are number of ways of categorizing satellite communication:-Coverage Area: It covers the global,

regional and national. The larger the area of coverage, the more satellites must be involved in a single networked system. Service Type: Fixed service satellite, broadcast service satellite and mobile service satellite.

General Usage: Commercial, Military, Amateur and Experimental. Protocols for Satellite Communication: The protocols for Satellite Communication are these: MPEG : It stands for Motion Picture Expert Group. It is the dominant standard used for TV encoding and transmission. IP : It stands for Internet Protocol. It is the entire family of data communication protocols which is popular for emails and web-browsing.

Why use of Satellite Communication?

We use satellite communication for television, telephones, navigations, business and finance, weather, safety, development and a lot of more. Let us take some scenario to show why we use satellite communication? Scenario: If we talk about television, you watch TV and there are hundred of channels on TV which are broadcast from many countries and there are some news channels, movies channels, drama channels, sports channels and also animated channels for children.

People get to know about the situation of other countries through news if there will be no satellite then there will be no broadcast and no channel will appear on TV. If we talk about Telephones, we can call on airplanes through flight phone communication which is provided by satellites to communicate with rural areas.

Also through satellite, we can make our audio and video calls and talk from one country to another. If we talk about navigators, when you like to visit a place with friends and family but you lost the way that which is the right one. So, you use navigator which is in your cellphone and connect it with GPS through satellite to know about your location which is very helpful to get the right path and you can easily reach to your destination without any problem.

Advantages of Satellite Communication: It is use for wireless communication. It is use for navigation. It covers the wide area of region or country with one satellite It is also use for audio/video calls and for transmission of data. It is use for connecting small areas, broadcasting TV/radio and also tell us about weather situations.