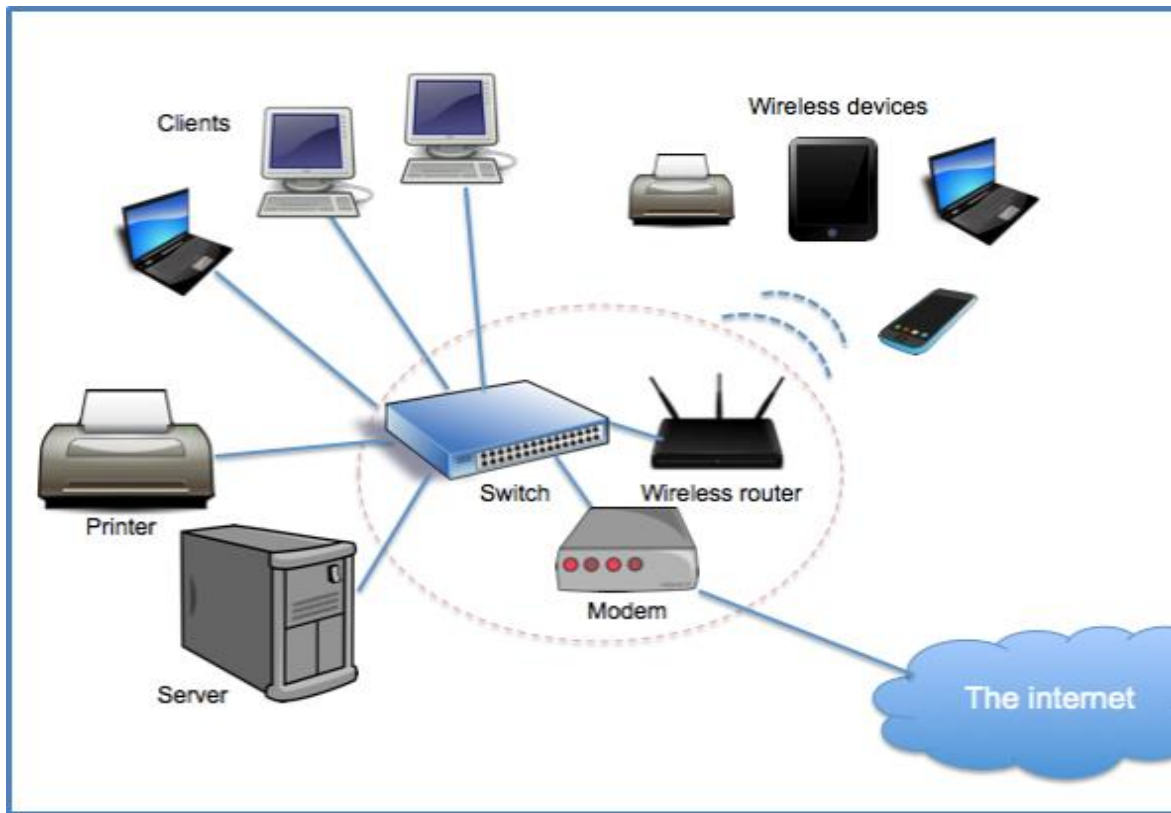


Basics of Networking



Network

- Computer Network is a group of devices connected physically/logically for communication.
- Each device in the network is known as host/node.

Line Configuration

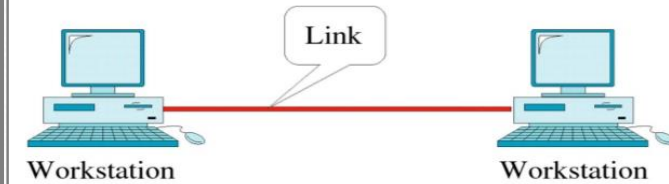
It defines how the communication link is configured between the network devices

Types

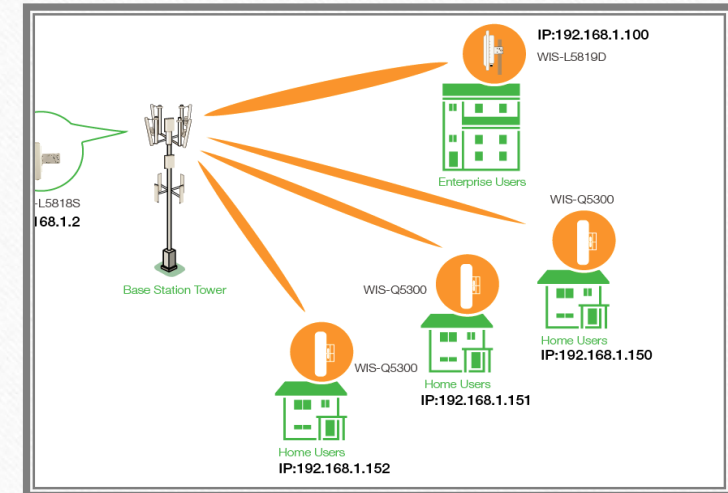
Point To Point

Point To Multi-Point

Point-to-Point Line Configuration

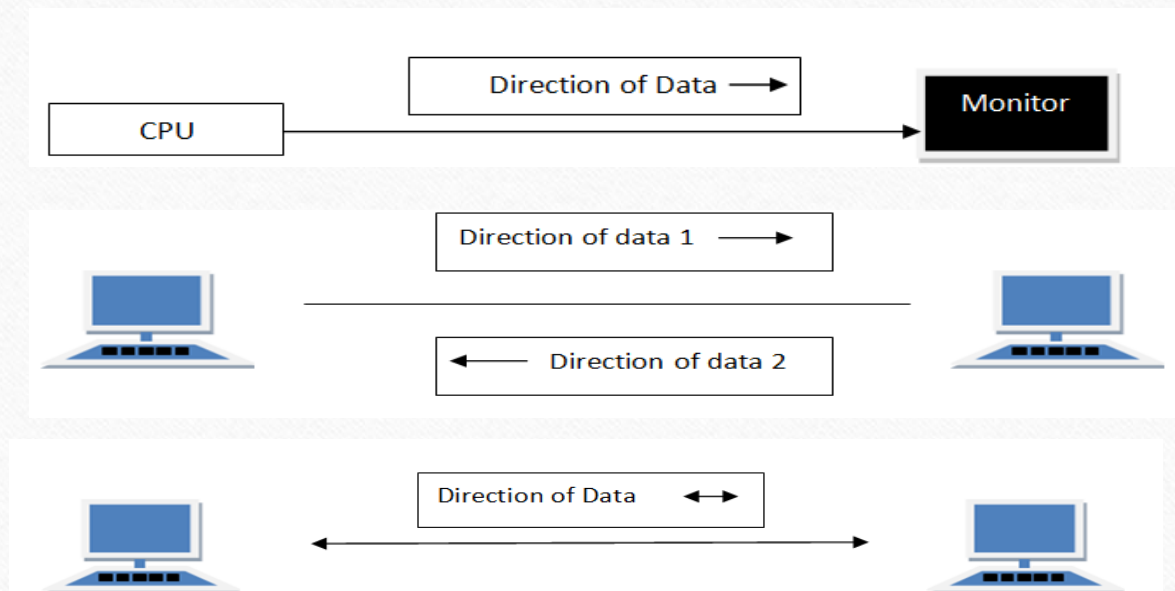
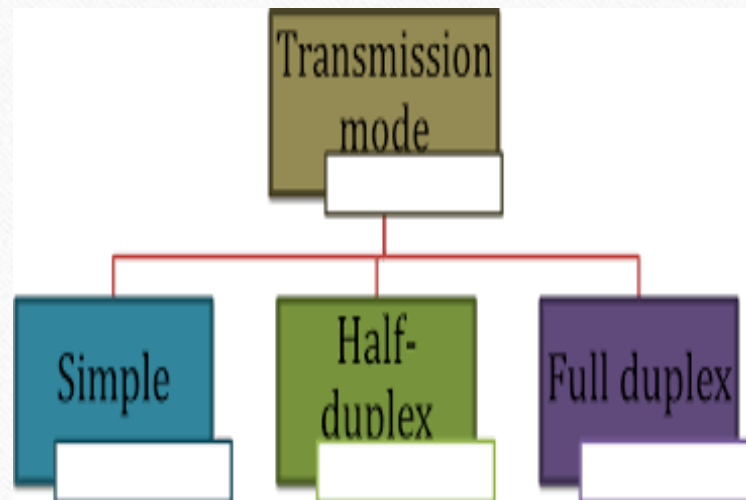


Entire capacity of the link is reserved for transmission between these two connected devices only.

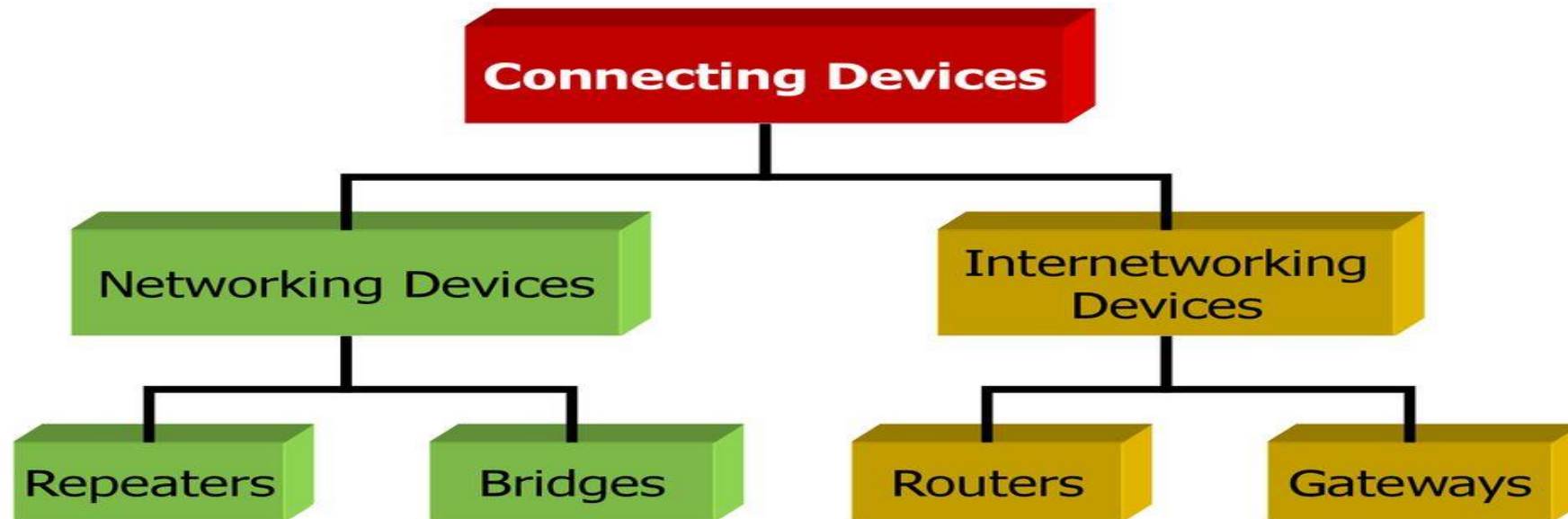


Transmission Modes

It defines the direction of flow of data between the devices in the network



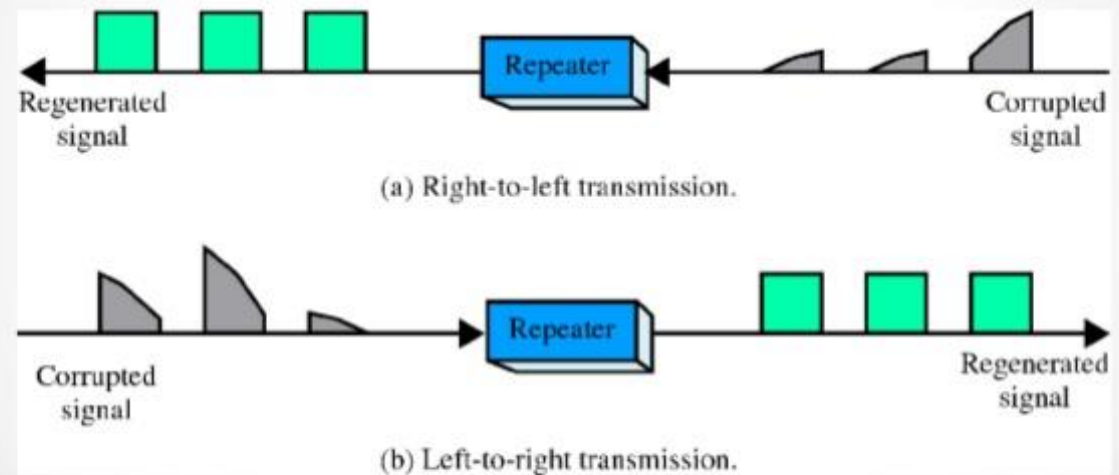
Connecting Devices



Repeater

- Repeater is used to regenerate the signal in the network before it gets weak or corrupted
- It is a two port device
- They do not amplify the signals

Function of repeater

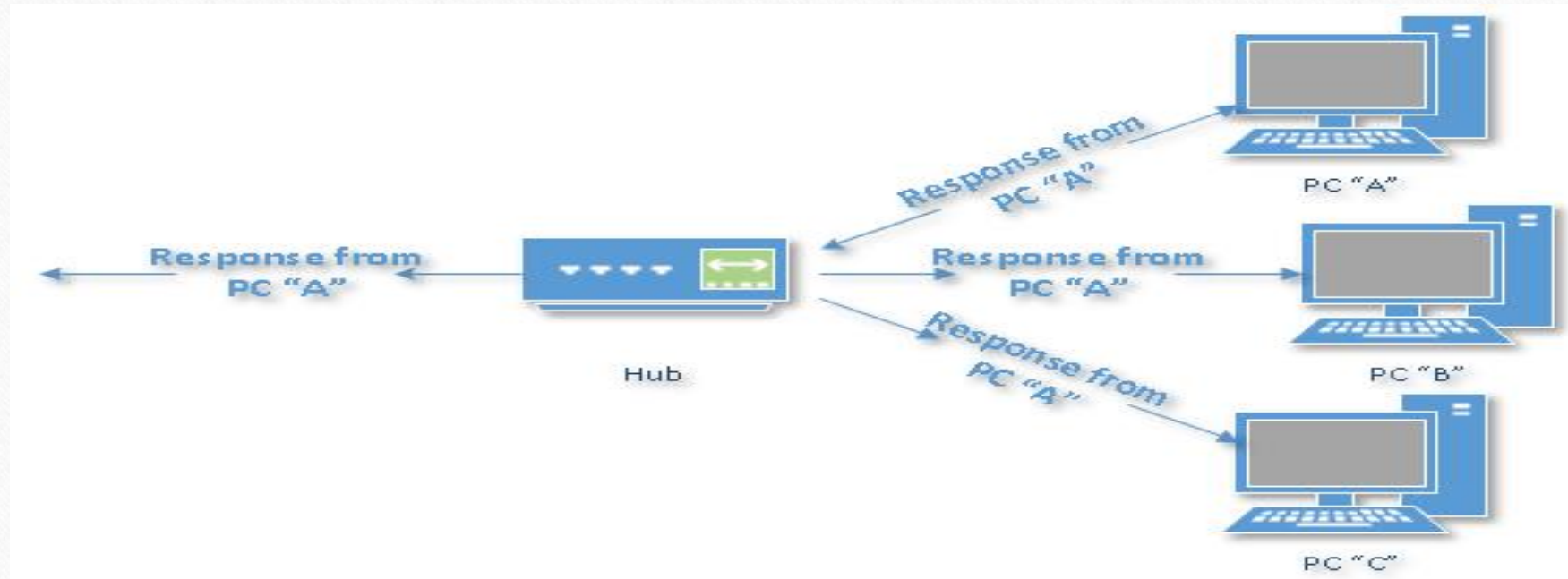


Repeater is not exactly as same as Amplifier

HUB

A hub is basically a multiport repeater. A hub connects multiple wires coming from different branches.

Hub is non-intelligent device, broadcast the data and same collision domain

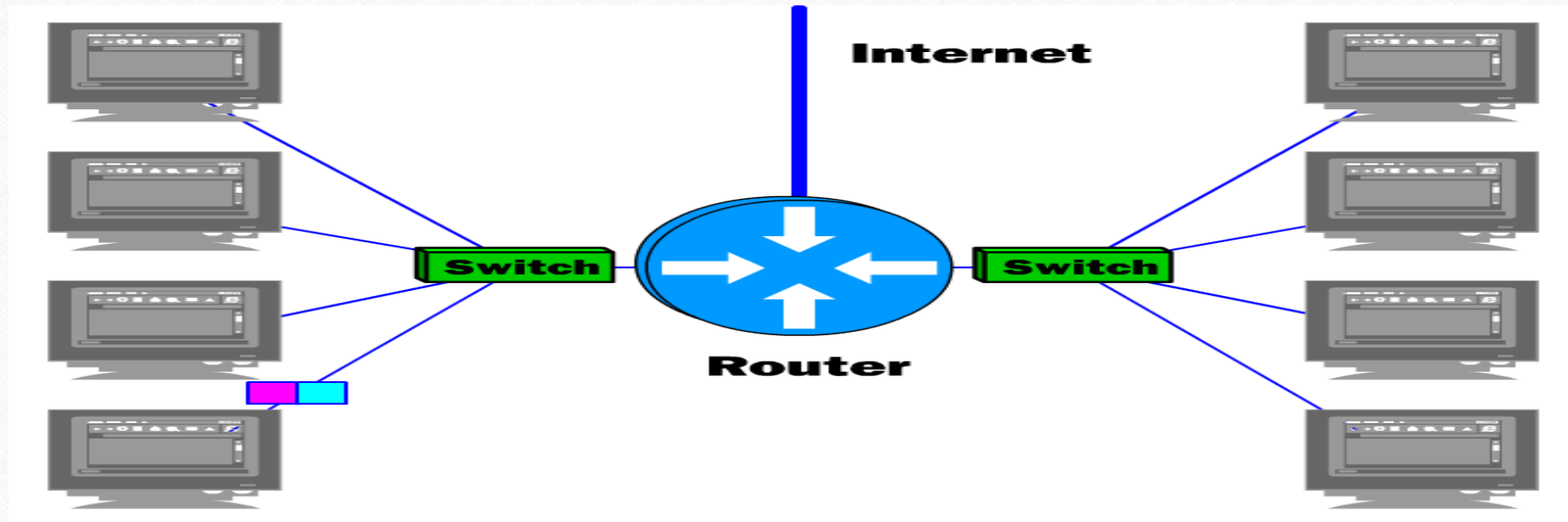


Switch

Works at Data Link Layer , intelligent and separate collision domain

Forwards the data based on MAC (media access control) Layer – no broadcasting

Error checking Mechanism



Router

Routes the data packets from one network to other network based on IP address and specify the path

Works at Network layer and Connects LANS,WANS etc

Bridge

Works at data link layer and forwards the packets based on MAC address

Two port device, forms bridge between two networks

Gateway

They basically works as the messenger agents that take data from one system, interpret it, and transfer it to another system.

Gateways are entrance and exit of the network