

Unit-5 Circuit switching and Packet Switching

Switching is a term in network that provides a transfer path between two devices. It means "The process of transferring data blocks from one node to another is called data switching."

There are three switching techniques applicable in network:-

- (a) Circuit switching
- (b) Message switching
- (c) Packet switching

a) Circuit switching → In this switching, there is a dedicated communication path between the sending and receiving devices. The dedicated path is a connected sequence of links between switching nodes.

Telephone calls always an example of circuit switching where a dedicated path is set between the caller and the called party.

In circuit switching, a complete end to end path must exist before the communication takes place. Fixed data can be transferred at a time in circuit switching technology.

a) Circuit Switching →

Communication through circuit switching has 3 phases: ⇒ i) Circuit (Connection) Establishment
⇒ ii) Data transfer
⇒ iii) Circuit termination/Disconnect.

A circuit switching network is excellent for data that needs a constant link from end to end. So, based on that, it guarantees to transfer all the data.

It may occur very less or no interference.
It has fixed bandwidth.

The main drawback is that, it takes a long time to set up a circuit and if no data is being sent, the dedicated line still remains open.

a) Circuit Switching →

