

Directions of data flow

1) Simplex

Fixed one-way transfer of data.

Ex - Transfer of data from keyboard or mouse.

2) Half-duplex

Transfer of data is possible both ways but not simultaneously.

Ex - Commⁿ via walkie-talkie.

3) Full-duplex

Transfer of data both ways simultaneously.

Ex - Commⁿ via telephone. Also, TCP.

Performance of a network

1) Transit time

The time during which message is in transit.

The lower is transit time, better the performance.

2) Response time

The time interval b/w ^{message} sending the ~~response~~ & receiving the response. (From A to B & B to A)

3) Throughput

The amount of data transferred via a reference point (router, gateway) of a network per unit time.

Another meaning
not in same category

Fault tolerance -

- Measured by the frequency of ~~fault~~ occurrence of fault within a network.

- Measured by ~~the~~ how quickly the network can be revived if a fault has occurred.

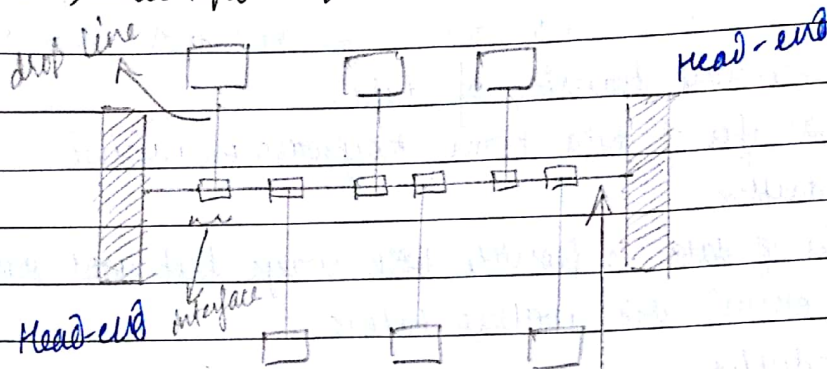
Types of connections -

1) Point to point (A dedicated connection)

If a connection starts at one point and ends at another point with no third point in b/w. No third ~~point~~ ^{party} can use the connection.



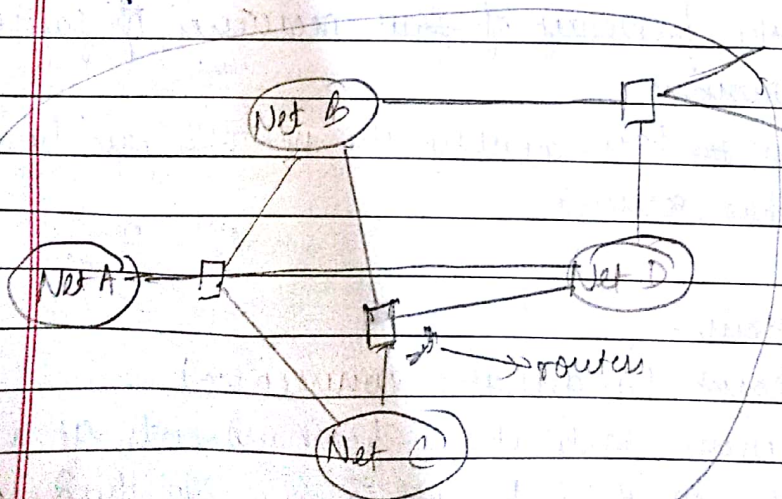
2) Multipoint / multidrop.



BUS (Bit unification system)

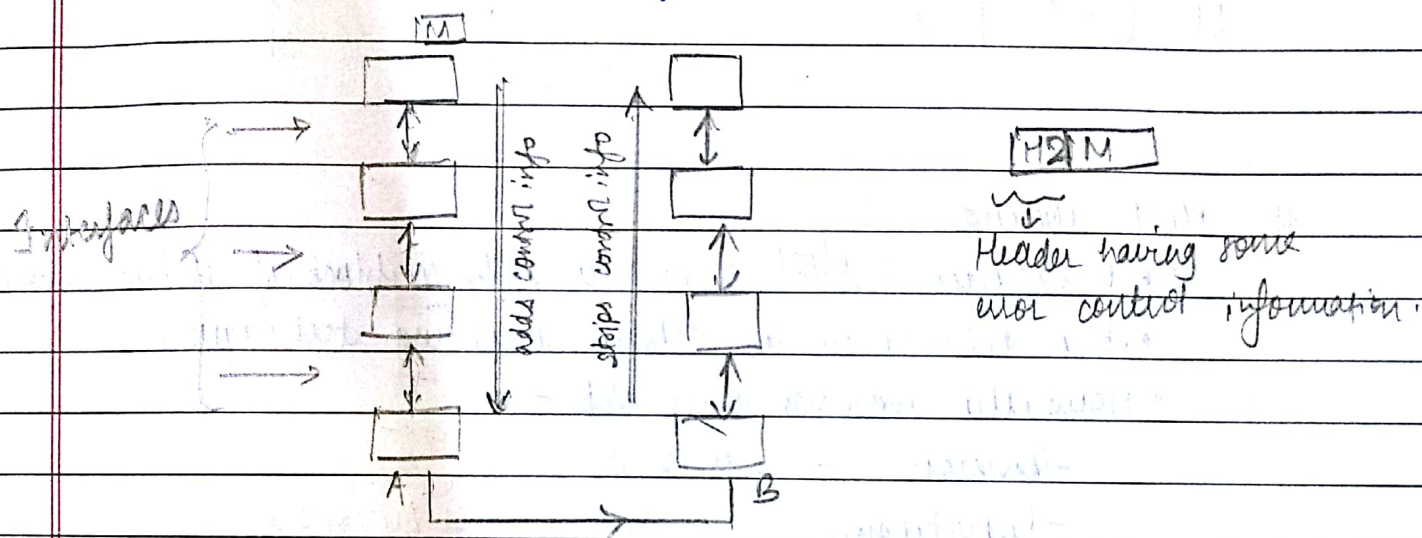
- Store and forward type of commⁿ.
- BUS tells about a serial commⁿ or bit-by-bit commⁿ.
- Head end - Acts as the initiator of commⁿ at one end and terminates at other end.
- The interface figures out which device is the recipient of the message.
- If the message is meant for a node, the interface consumes it, else forwards it.

* Point to point is the fastest and most cost-effective way of connection. • That is why, it is usually for the internet.



Network software

- All the background tasks need to be performed for a successful commⁿ.
- If the message is discarded by the receiver, the the commⁿ is entirely unsuccessful.
- Different entities must be present to perform background tasks. These different entities are the different layers with some interface b/w them. This is called layered architecture of networks.



- The layers have the job of forwarding message to the next immediate layer as well as ~~add~~ doing some background duties. They add ^(or strip) some control information to the message (like error control information as headers).
- In the source, m/c headers are added layer wise and in the destination, m/c headers are removed layer wise. This is called actual way of commⁿ.