Factors affecting the choice of topology used

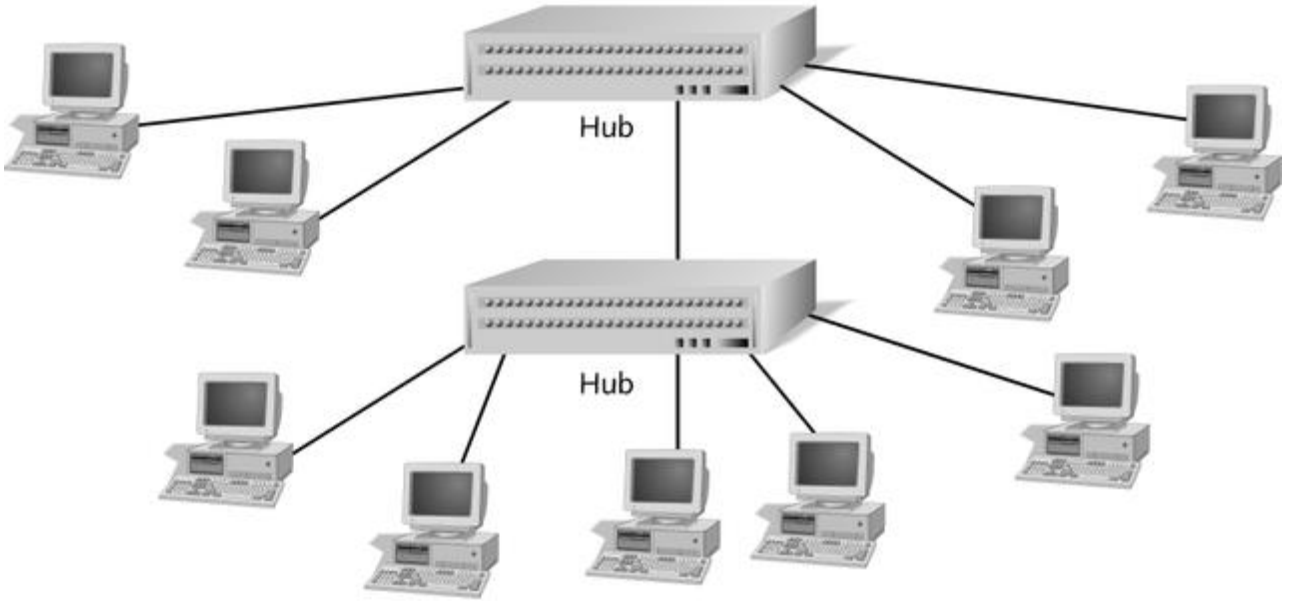
- Impact of cable breaks on a network.
- Impact of adding or removing nodes.
- Flow of messages and which nodes see the messages.
- Ability to use nodes as repeaters.
- Maximum physical size of the network.
- Amount of cable used.
  - The final choice of topology could be either one or more likely a combination of topologies that depend upon, need, cost, speed, and reliability.

Multipoint Topology

- Multipoint topologies link three or more devices together through a single communication medium.
- Each device needs a way to identify itself and the device to which it wants to send information (Addressing).
- Multipoint Physical Topologies
  - Star
  - Bus
  - Ring
  - Hybrid

Hybrid Physical Topologies

- Star-wired bus
  - In a star-wired bus topology, groups of workstations are star-connected to hubs and then networked via a single bus



Comparison of Topologies - Star

Configuration	Strength	Weaknesses
Star	▪ Network control is centralized at one point ▪ Network intelligence is limited to the central workstation ▪ Radiating workstations can use the CPU processing of the central workstation	▪ Congestion at the central workstation can slow transmissions ▪ Failure of the central workstation renders the network useless. ▪ Workstations can only communicate with each other by going through the central workstation. ▪ All workstations have their own communication media, which can become expensive ▪ The central workstation has a physical limitation for the number of workstations that can be connected