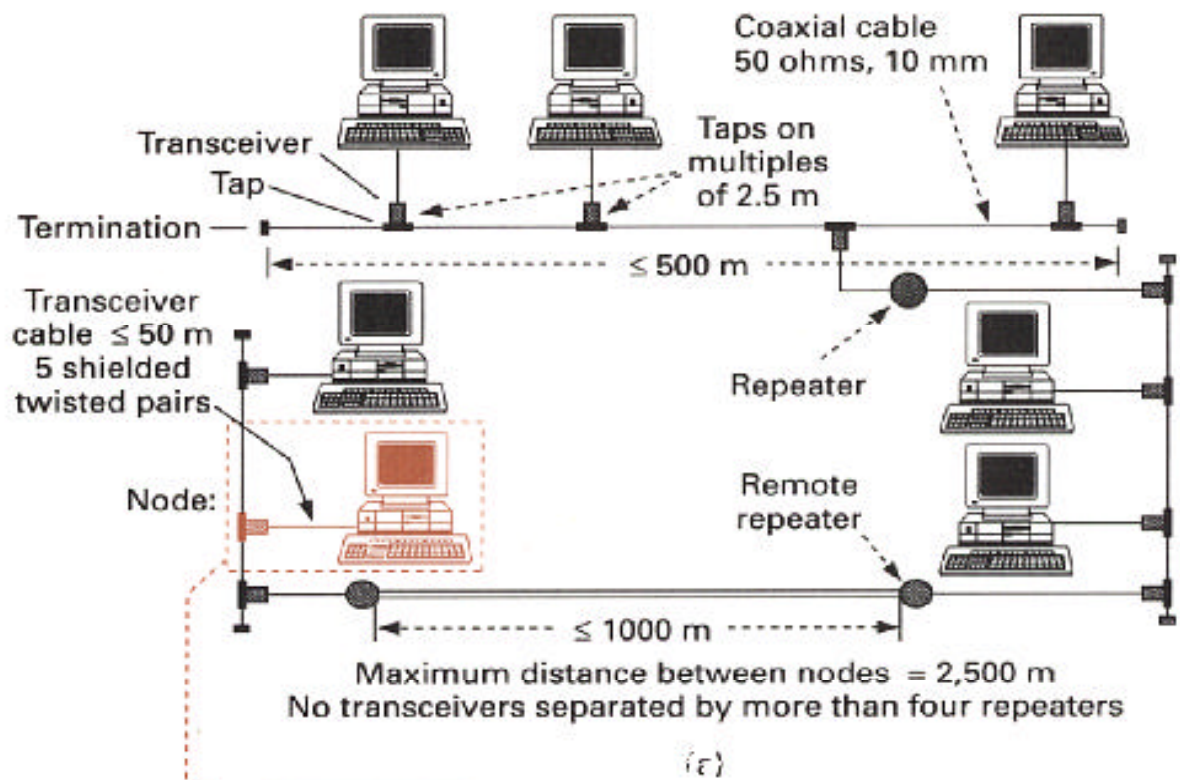


| | 10BASE5 Ethernet | 10BASE2 CheaperNet | StarLAN1BASE5 StarLAN | 10BROAD36 Broadband | 10 BASE - T |
|------------------------|---|-------------------------------|----------------------------|-----------------------------|--|
| Medium | Coaxial cable 50 ohms-10 mm | Coaxial cable 50 ohms-5 mm | Twisted pair unshielded | Coaxial cable 75 ohms | 2 simplex twisted pair unshielded |
| Signals | 10 Mbps-Manch | 10 Mbps-Manch | 1 Mbps-Manch | 10 Mbps-DPSK | 10 Mbps-Manch |
| Maximum segment | 500 m | 185 m | 500 m | 1,800 m | 100 m |
| Maximum distance | 2.5 km | 0.925 km | 2.5 km | 3.6 km | 1 km |
| Nodes per segment | 100 | 30 | | | 2 |
| Collision detection | Excess current | | 2 active hub inputs | Transmission ≠ reception | Activity on receiver and transmitter |
| Notes | Slot time = 512 bits; gap time = 96 bits; jam = 32 to 48 bits | | | | |

IEEE 802.3 networks. (from Walrand 1991)

The IEEE 802.3 networks use twisted pairs or coaxial cables. Some use optical fibers. The baseband networks use Manchester encoding. The broadband network uses differential phase shift keying (DPSK). The figure shows the maximum segment length, the maximum distance between nodes, and the maximum number of nodes per segment. The figure also indicates the methods used for collision detection. The slot time is used to schedule retransmissions, and the gap time is the minimum time between two successive packets.



Ethernet Layout (from Walrand, 1991).

