

Intervals, reducing the probability of a collision when the first retry is attempted.

Topic: Ethernet.

⇒ Ethernet is the most popular network architecture for LAN. Ethernet was originally developed by Xerox in the 1970s and was proposed as a standard by Xerox, Digital Equipment Corporation and Intel in 1980. A separate standardization council for Ethernet technology was established in 1985 by the IEEE (Institute of Electrical and Electronics Engineers). A system for connecting a number of computer systems to form a LAN, with protocols to control the passing of information and to avoid simultaneous transmission by two or more systems. Ethernet is a link layer protocol in the TCP/IP describing how network devices can format data for transmission to other network devices on the same network segment and how to put that data out on the network connection. It is available in 3 different speeds —

- 1) 10 Mbps which is simply called Ethernet.

- ii) 100Mbps which is called fast ethernet.
- iii) 100Mbps or 1Gb which is an emerging standard called gigabyte ethernet.

Ethernet can be classified into the following category they are —

1) 10 Base 5 (Thick Ethernet):

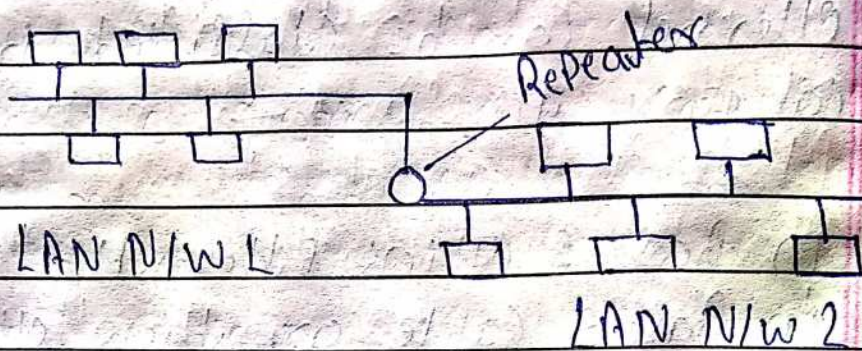
=> 10 Base 5 cable or, thick ethernet cable which is the oldest in this category. It is called thicknet because of the use of thick co-axial cable. The cable is marked after each 2 meters. This cable is used in bus topology. This mark are provided for tap point the connection of the cable are made by vampire taping.

Note:

A vampire taping is a device for physically connecting a station, typically a computer network to a network that uses 10 Base 5 cabling.

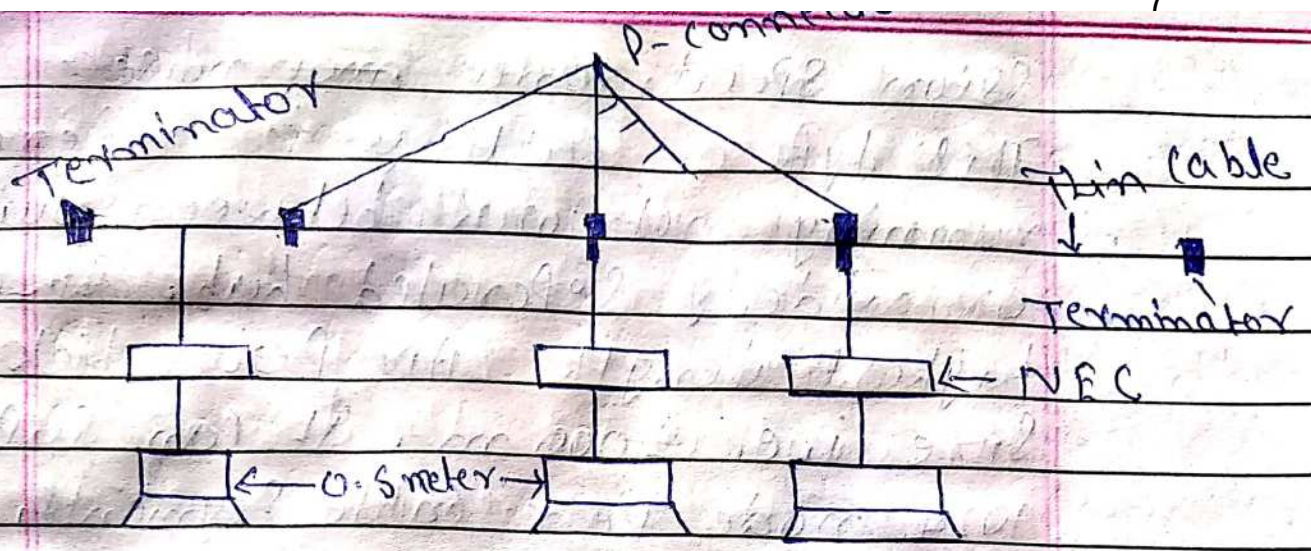
The cable operates 10Mbps. It can support to a maximum of 500m. These segment are connected by the help of the repeater. Each station connection is to the ethernet

Cable through the frame meter receiver pair which can extract or, intended signal on a cable in one direction.



2) 10 Base 2 (Thin Ethernet):-

10 Base 2 cable also called thin ethernet. This type of cable usually thin, flexible and bend easily. It also make use of Bus topology. It is also called a co-axial cable that is having a smaller diameter than the 10 Base 5 cable. 10 Base 2 ethernet that used thin co-axial cable terminated with BNC connector (Bayonet - Neill - Connelman). The ethernet based on this type of cable is cheaper and easy to install but it can run for the 20 meters and it support 30 to 50 node for sequence in both of this network cable detecting cable break or, loss connection can be measure problem.



3) 10 Base T :-

⇒ 10 Base T twisted wire pair cable is most popular among LAN. It make use star topology. In this type of network every station having a link to a central device called hub this is an older technology of connection. It can support 107 mode per cable segment. The maximum length of a segment from hub to station can 150 m.

4.) 10 Base F :-

⇒ 10 Base F cable is also known as fibre optical cable. The most efficient and fastest cable in this category of cable for LAN. The fibre optical cable is very expensive compare to above cable but it offer a very high data transmi-

Session Speed and ~~not~~ noise

This type of cabling is referred to running network between buildings or, widely separated hub. It can be highest length LAN per which segment size i.e. 2000 m. It can support 1024 node per cable segments.

Topic :- Token.

⇒ In networking token is a special sense of bits that travel around a token ring network. The token circulate computer attached to the network can capture it. The token act like a ticket enabling its holder to send a message across the network. There is only one token for each network so, there is no possibility that two computers attempt transmitting at the same time.

Topic :- Token Bus (802.4)

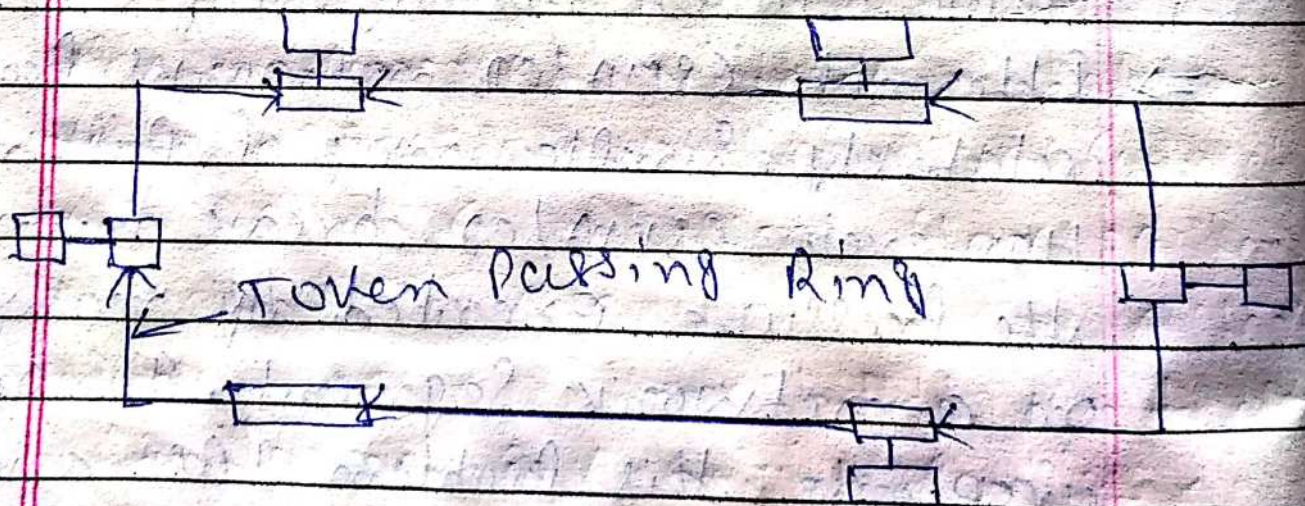
2 A token bus computer network must have processing of a token before it can transmit on the computer network. The IEEE 802.4 committee has defined token bus standard as

Broadband Computer network as opposed to ethernet transmission topology. The token bus is a linear or free shape cable to which the stations are attached that token bus topology is well suited to group of users that are separated by some distance. The token transmits a frame of data are based from one station to another following the numeric sequence of station addresses. In token bus each station receives each frame. The station whose address is specialized in the frame processes it and the other station this is called the frame.

Topic :- Token Passing Ring (802.5).

⇒ Ethernet CSMA/CD networks provide a relatively simple way of passing data. However CSMA/CD breaks down under the pressure exerted by many computers on a network segment. In order to overcome this problem IBM and IEEE created another networking standard called 802.5. Token ring works very differently from ethernet. In ethernet any computer can transmit data until it senses a collision with

Another Computer. In token ring network by contrast a single special packet called a token is passed around the network. When a computer has data to transmit it wait until the token is available and then transmits a data packet while simultaneously releasing the token to the next computer in the line. Then the next computer grabs the token if it has data to transmit. Token ring is an IEEE 802.5 Standard whose topology is physically a star but logically a ring.



Topic: Network Device.

⇒ In the small function of network many devices play important roles.