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## REVIEW PAPER ON NETWORK TOPOLOGIES

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Abstract - This review paper based on to sort out the Topic of Topology. We have to study about the different Topologies in this paper. We have to study the limit of these Topologies in brief. By briefing previous and analyzing existed problems, we also point out the possible review of direction for future works. In this review paper we also have to study about the Hybrid Topology in detail.

### I. Introduction

A Topology is generalized geometric configurations of some class of object that join together with each other. These are different Topologies. These Topologies are the architecture drawings that show the overall physical configurations for the communication system. The term Topology is about the layout to register on the network. It can be shown or considered as the logical "Shape" of the network wiring.

Logical shape is not the necessary to considered the actual physical layout on the device on the network.

### II. BASIC ARCHITECTURE:

Basic architecture has the different links to complicate the Network Topology. They are:

- Point to Point
- Multi Point

### POINT TO POINT:

Direct communication between the links, nodes, devices point to point links.

- PC connected to Printer.
- Mainframes terminal connected to Mainframes front end processor.

### **MULTI POINT:**

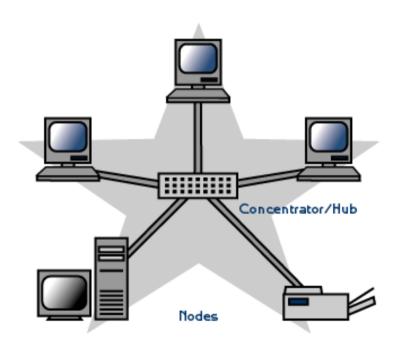
It is the multi type linking. It links the connection between onor more than one two devices, nodes or links. Sanjay Kumar Department of Computer Science G.V.I.E.T Banur, Punjab-India

### III. TYPES OF TOPOLOGIES

- ➤ Star Topology
- ➤ Ring Topology
- ➤ Mesh Topology
- ➤ Bus Topology
- ➤ Tree Topology
- ➤ Hybrid Topology

### Star topology:

In a star topology network all the nodes are connected to the center server. It is the simplest form. This network is an implementation of the spoke and Distribution Paradigm in the computer network. The hub, switch manages and control all the function of the network. It also acts as the repeater for the data. These configurations are common with the twisted cables and optical cables. In the Star Topology easy to add a new station as each station has own direct cable connection to the Hub.



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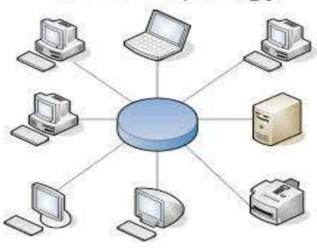
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### Ring topology

In a ring network every device has exactly two neighbors for communication purpose. All messages travel through a ring in same direction. Ring can be unidirectional there are no terminated ends to the cable. Ring are normally implemented using twisted pair or fiber optic cable. In Ring topology all stations have equal access.

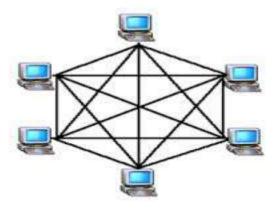
## RING Topology



### Mesh Topology

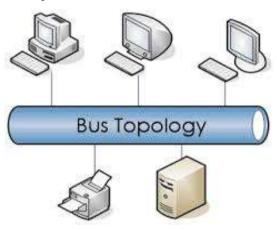
In Mesh topology every device has dedicate point to point link to other devices. A mesh topology is often used or MAN and WAN networks. Mesh topology is a high square and reliability each node must have an interface for every other device.

### Mesh Topology



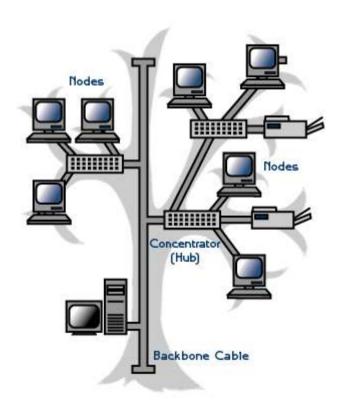
### **Bus Topology**

In Bus Topology all stations are attached to the same cable. In Bus topology message are send in both directions from single point and read by the node identified by the code with message. The cable is terminated at each end. There is no center point of failure on bus because there is no hub.



### Tree Topology

Tree Topology is called hierarchical topology. It consisting of group of star configured works stations connected to the linear bus backbone cable. It is a combination of star and bus.



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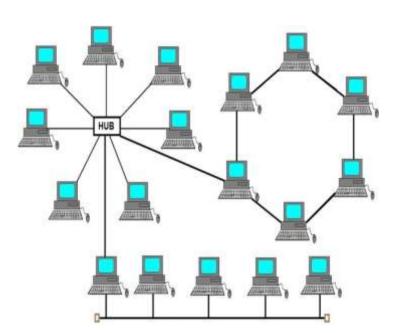
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#### **Hybrid Topology**

Hybrid Networks are simple networks that use multiple technology. WANs usually used point to point links to connect remote rings or star. There are many different way the basic topologies can be combined. The WWW itself is a giant hybrid topology.

- Hybrid star bus topology is a bus topology where at least one of the stations is replaced with the hub.
- Hybrid star ring topology looks like a star network except the hub is wired as a logical way. Such a hub is much easier to implement than physical ring topology.
- A hybrid mesh topology is any hybrid topology where some the key computers are connected in a mesh fashion. The WWW has its domain name servers as a part a hybrid mesh networks.



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