Experiment 2

Date: 23-7-24

## AIM

Study of different type of Network Cables

## Theory

Different Cables

1) Unshielded twisted pair (UTP) cable
2) Shielded Twisted pair (STP) cable
3) Coaxial Cable
4) fibre optic cable

## Cables

### 1. UTP

Category 3:

* Maximum data transmission - 10bps

Category 5

* maximum data transmission - upto 100 bps

Category 5e

* maximum data transmission - 10Gbps

### Advantages

* Cheaper
* easy to install

### Application

* 10 Base - T Ethernet
* Fast Ethernet, Gigabit Ethernet

## 2. STP, SSTP

Category 6, 6a

maximum data transmission - 10gbps

Category 7

maximum data transmission - 10gbps

### Advantages

* Shielded
* faster than UTP
* Less susceptible to noise

### Disadvantages

* Expensive
* greater installation effort

### Application

* gigabit Ethernet
* 10g Ethernet (STP) 55m
* 10G Ethernet (100m) SSTP

## 3. Coaxial Cable

Category RG-6, RG-59, RG-11

maximum data transmission - 10-100Mbps

### Application

* television network
* high speed internet connection

### Advantages

* High bandwidth
* immune to interference

Disadvantages

* limited distance

4. Fibre Optics cable

maximum data transaction

100gbps

Advantages

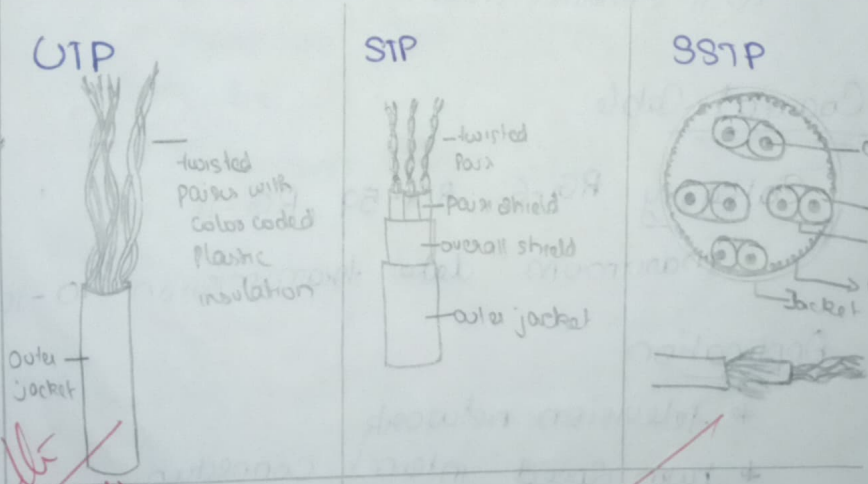
* High speed
* high bandwidth
* high security

Disadvantage

* expensive
* requires skilled installer

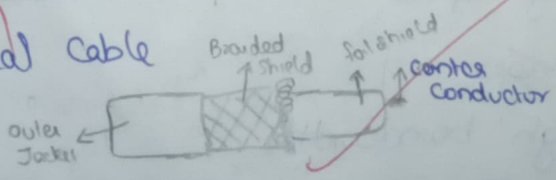
Application

* maximom distance of fibre optical cable is around 100m.




23/9/24

Coaxial Cable




RESULT

Thus the different type of network cable has been studied