

EXP No: 2

Date: 24/07/24

Practical - 2Different types of Network CablesAim:-

Study of different types of Network cables

Types:-

- 1) Unshielded Twisted pair
- 2) Shielded Twisted pair
- 3) Coaxial cable
- 4) Fiber Optic cable

Cable Type	Category	Maximum Data Transmission	Advantages/Disadvantages	Application/Use
UTP	Category 3 Category 5 Category 5e	10 bps upto 100 Mbps 1 Gbps	Adv: Cheaper, easy to install Disadv: prone to EMI	10 Base-T Ethernet Fast ethernet, Gigabit ethernet
STP	6, 6a	10 Gbps	Adv: Shielded, faster, noise Disadv: Expensive, complex installation	Gigabit, 10G Ethernet; used in data centres
SSTP	7	10 Gbps		10Gbit, 10G ethernet
Coaxial Cable	RG-6 RG-59 RG-11	10-100 Mbps	Adv: TBW, immune to interference Disadv: lost, size, distance	Speed is slow Television network, increased speed Internet conn.
Fibre Optics Cable	Single mode Multi mode	100 Gbps	Adv: Increased speed, increased BW, security Disadv: Expensive, skilled installers	Maximum distance is 100m.

b) Make your own Ethernet Cross-Over Cable / straight cable

Tools and parts needed:
 Ethernet cabling. CAT5e is certified for gigabit support, but CAT6 cabling works as well, just over

shorter distances

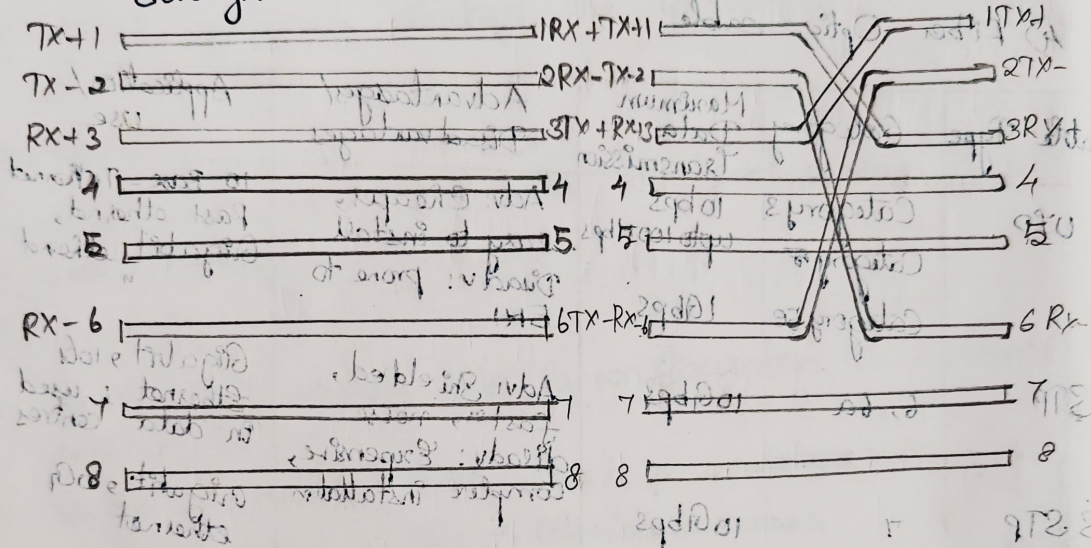
→ A crimping tool. This is an all-in-one networking tool shaped to push down the pins in the plug and strip and cut the strip and cut the shielding off the cables.

→ Two RJ45 plugs.

→ Optional two plug shields.

Straight thru cable

X-over cable



Question Answer:-

① Goss Cable - Connected for same devices
Straight cable - connected for different devices

② Cross Cable

③ Straight Cable

④ Understanding - Induces arranging wires
Challenge - correct wire arrangement
O/P - Successful connection of wire -

Result:-

Thus the different type of network cable is studied.

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