[ECSE208L: Computer Networks](http://lms.bennett.edu.in/course/view.php?id=1095" \o "ECSE208L: Computer Networks )

LAB 2

We made the straight and twisted pair cables.It was hard to insert the wires in the rj-45 socket but at last we were able to successfully do it .we checked on the machine and the wire worked perfectly.

The steps we did were:

-To cut the wire

-making the wire straight

- aligning all the wires

-putting them in rj-45 socket

1 Transmission Media

**Guided Media: It transmit data through cabling from one device to other and guide the signal along specific path.**

1. Twisted Pair Cable: It consists of 2 separately insulated conductor wires wound about each other.

These are of two types:

* Unshielded Twisted pair (UTP): This type of cable has the ability to block interference and does not

depends on a physical shield for this purpose.

* Shielded Twisted Pair: This type of cable consists of a special jacket to block external interference. It is used in fast-data-rate Ethernet and in voice transmission

1. Coaxial Cable: It has an outer plastic covering containing 2 parallel conductors each having a separate insulated protection cover. Coaxial cable transmits information in two modes: Baseband mode which deals with bandwidth and Broadband mode split bandwidth into separate ranges.

**Unguided Media:** It is also referred to as Wireless or unbounded transmission media. no physical medium is required for the transmission of electromagnetic signals.

1. Radio waves: These are easy to generate and can penetrate through buildings. The sending and receiving antennas need not be aligned. Frequency Range: 3 KHz – 1GHz.
2. **Microwaves –**It is a line of sight transmission i.e. the sending and receiving antennas need to be properly aligned with each other. The distance covered by the signal is directly proportional to the height of the antenna. Frequency Range:1GHz – 300GHz
3. **Infrared –**Infrared waves are used for very short distance communication. They cannot penetrate through obstacles. This prevents interference between systems. Frequency Range: 300GHz – 400THz. It is used in TV remotes, wireless mouse, keyboard, printer, etc.

**Straight Through cable:** These cables that have the pin assignments on each end of the cable and are most commonly used to connect a host to client.

Arrangement of Color:

Right side: { o O g B b G br Br }

Left side: { o O g B b G br Br }

CrossOver Wired Cable: An Ethernet crossover cable is a crossover cable for Ethernet used to connect computing devices together directly. It is most often used to connect two devices of the same type.

Arrangement of Color:

Right side: { o O g B b G br Br }

Left side: { g G o B b O br Br }