

PHYSICAL LAYER PHY

Data in this layer are in form of Bits, This Layer are consist of the physical devices that interconnect computers like Cables.
in this layer Sequence of ones & zeros from one end of the link to next device.
it refers also to means of transmitting bits across computer networks

CABLES

Coaxial Cables: Used usually in the Receiver device of the TV there different type of it :

Thin 10 base 2

=base refer to baseband signal and 2 refer to maximum segment length approaching and 10 refers to the speed 10MB/S

Thick 10 base 5

Twisted Pair cables: This twist is to prevent the electromagnetic field interference

Unshielded Twisted Pair UTP:

CAT3, CAT5, CAT5e, CAT6

these different categories have different bandwidth

Shielded Twisted Pair STP:

It is like the other type but shielded with aluminum

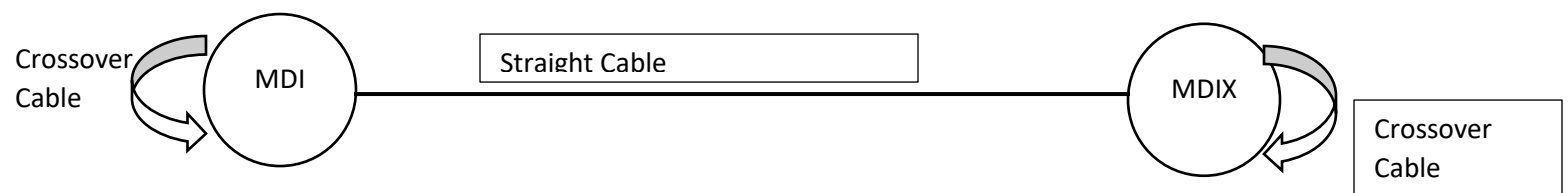
Fiber Optics Cables

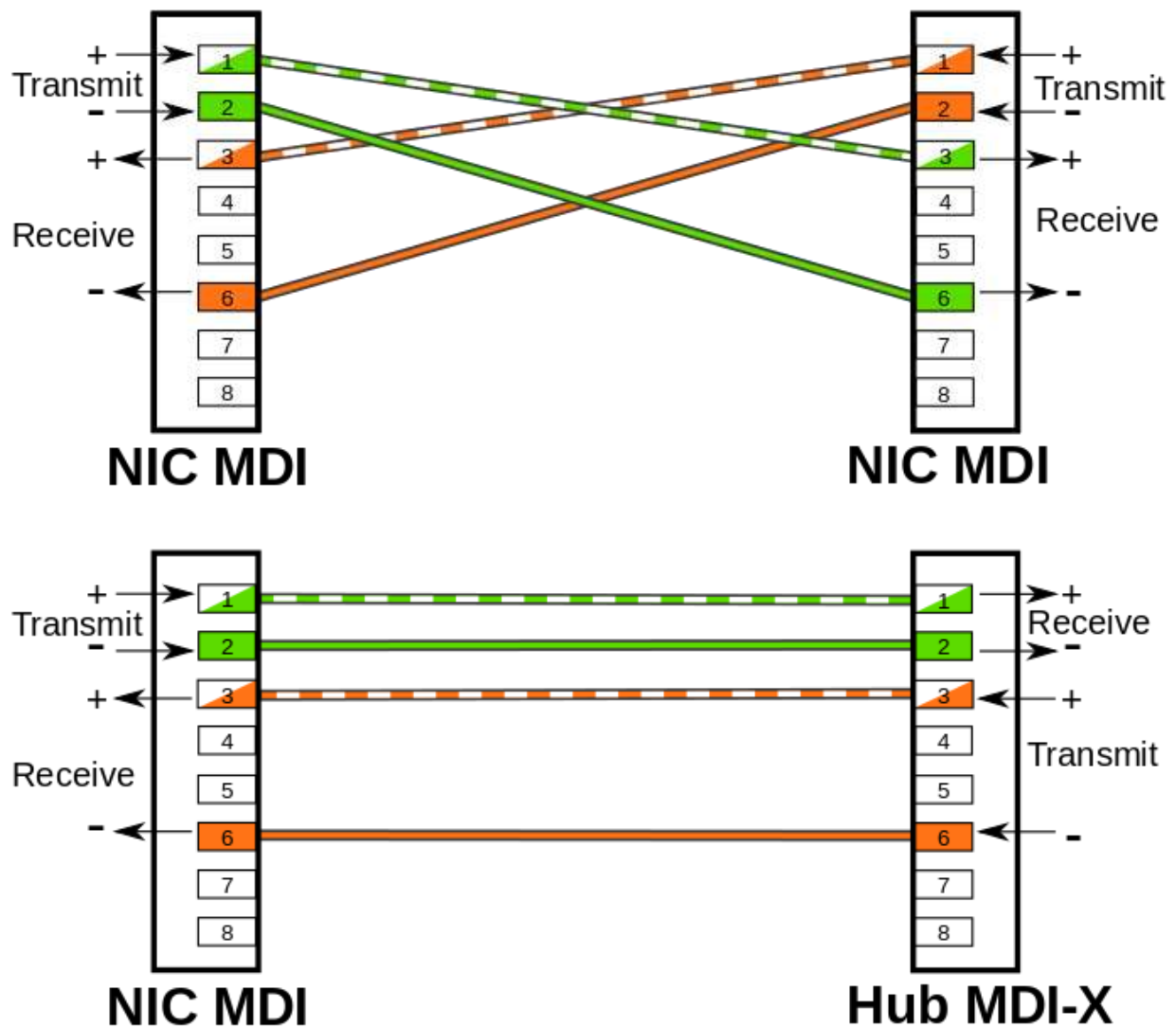
We have two different definitions

Bandwidth: the maximum Data rate

Throughput: the actual Data rate

medium dependent interface (MDI) & medium dependent interface Crossover (MDIX) :





Devices in this layer :

Hub

The hub only takes the data and forwards it to all the attached devices and when a device rejects it and reruns it, the hub thinks that the device wants to send the data so it re forwards it again and that makes a flood.