

5) Junctions of Data Link Layer

i) Framing

* Data link layer takes packets from network layer and encapsulates them into frame.

* Then it sends each frame bit-by-bit on the hardware. At received end, it picks up signals from hardware and assembles them into frame.

ii) Addressing

It provides hardware addressing mechanism. Hardware address is assumed to be unique on the link. It is encoded into hardware at the time of manufacturing.

iii) Synchronization

When data frames are sent on the link, both machines must be synchronized in order to transfer to take place.

iv) Error Control

Sometimes signals may have encountered problem in transmission and the bits are flipped. These errors

are detected and attempted to recover actual data bits.
It also provides error reporting mechanism to the sender.

Flow control

Stations on same link may have different speed or capacity. Data link layer ensures flow control that enables both machine to exchange data on same speed.

Multi-access

When host on the shared link tries to transfer the data, it has a high probability of collision. It provides mechanism such as CSMA/CD to equip capability of accessing a shared media among multiple systems.

6) Mobile Network layer

Terminology used in Network layer

- #) HA - Home Agent
- #) FA - Foreign Agent
- *) HN - Home Network