



SNS College of Engineering Coimbatore - 641107



UNIT 2

DATA LINK LAYER

Services, ARP, DLC Protocols, HDLC, PPP, Media Access control, Wired LANs: Ethernet, wireless LANs: IEEE 802.11, Bluetooth, Connecting devices: Hubs, Routers, Switches

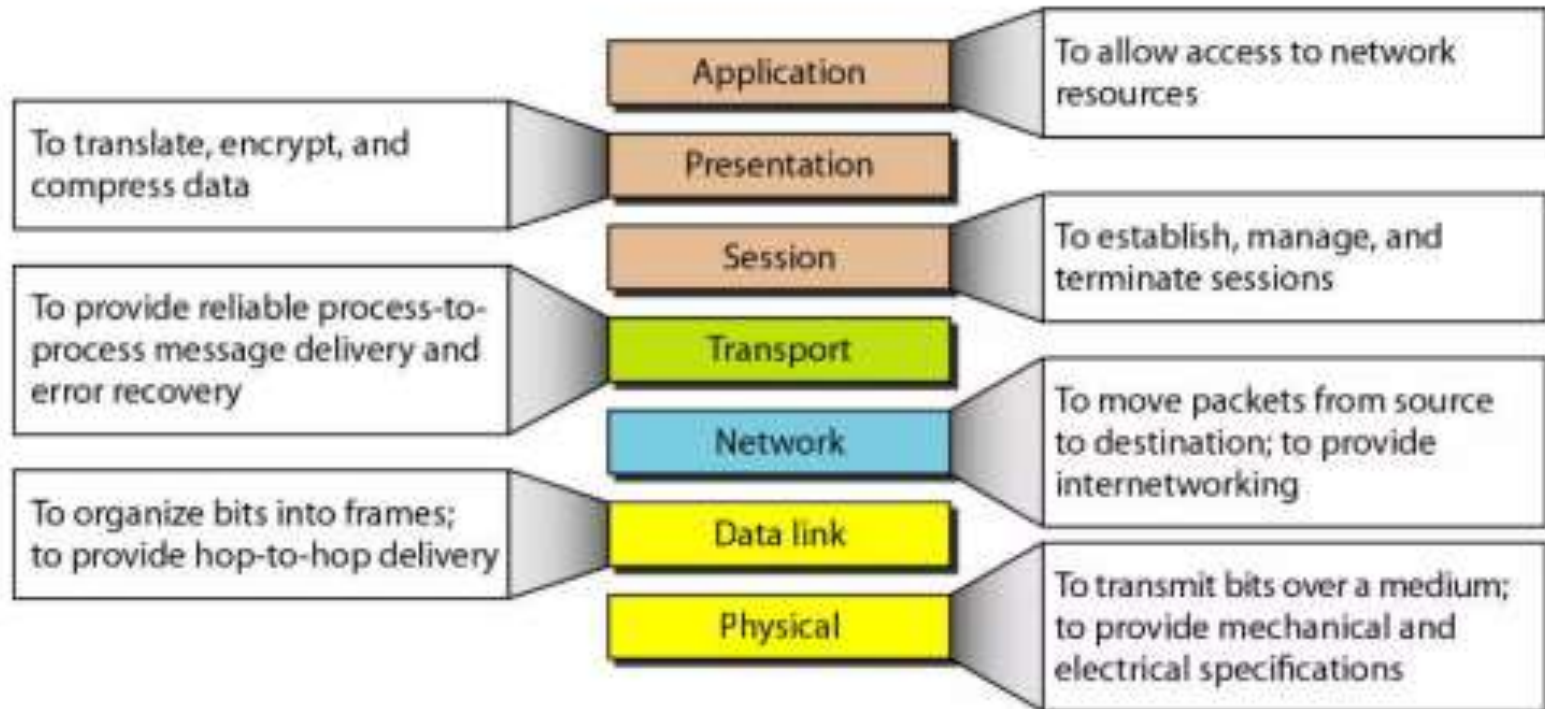
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Summery of Layers



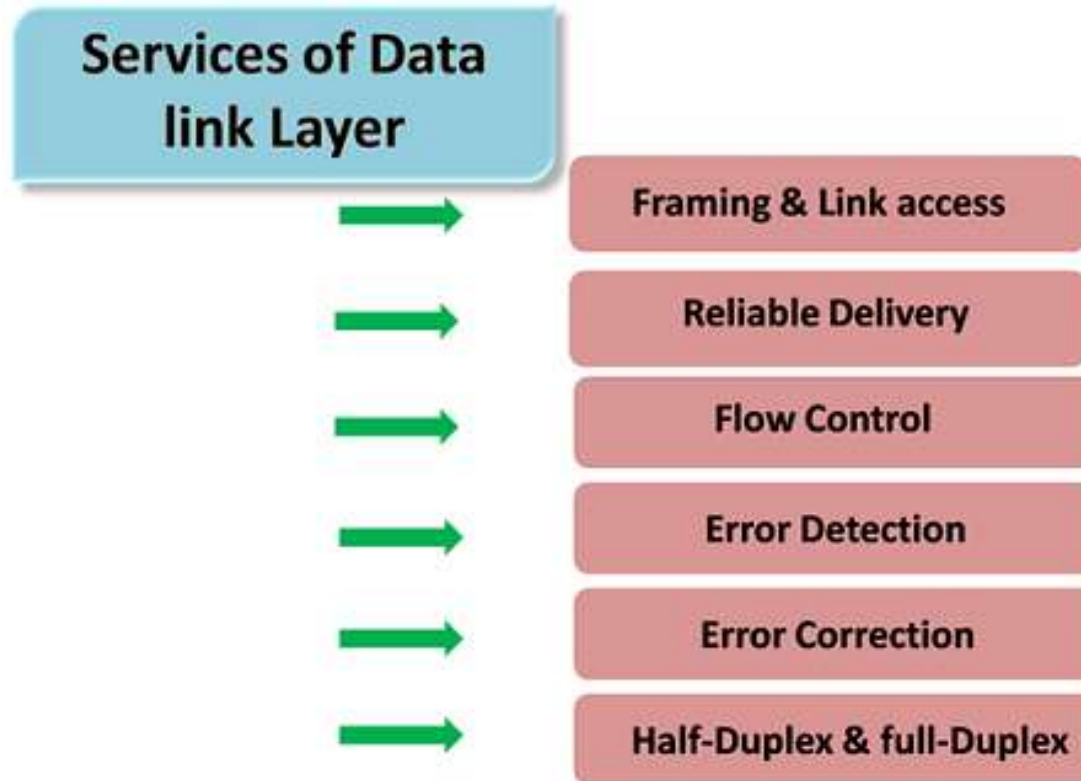


Introduction- DLL

- In the OSI model, the data link layer is a 4th layer from the top and 2nd layer from the bottom.
- The main responsibility of the Data Link Layer is to transfer the datagram
- The Data Link Layer protocols are Ethernet, token ring, FDDI and PPP.



Services

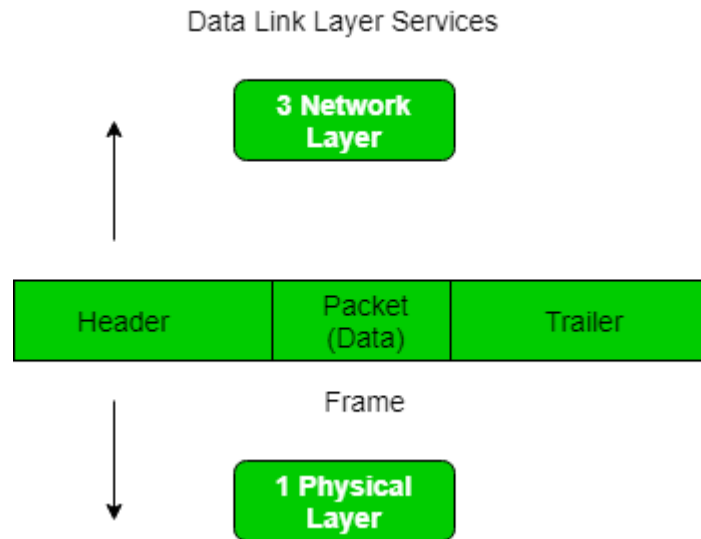




Framing & Link access:



- Simply from all other messages to all other destinations just by adding sender address and destination



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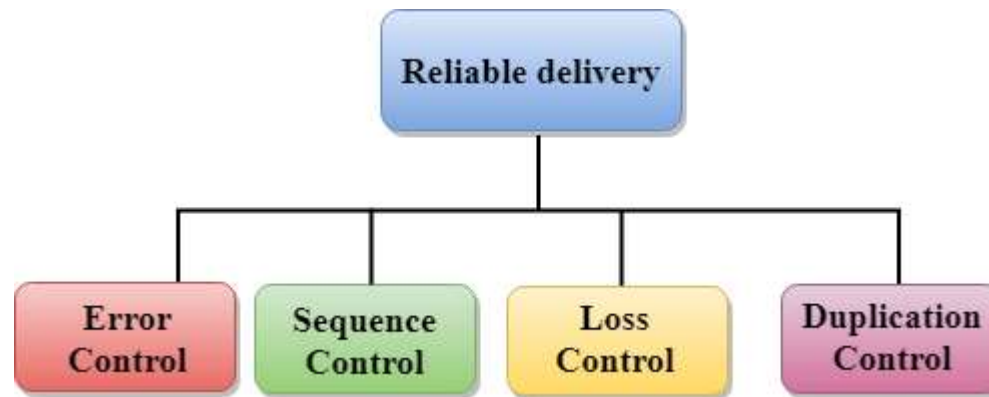
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Reliable delivery

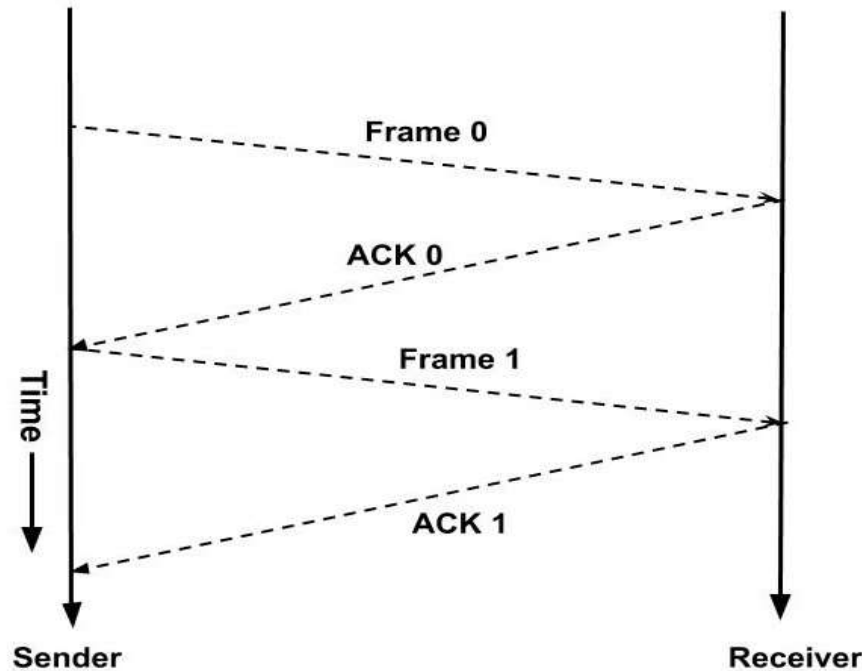
The primary role of reliability is Error Control. In reality, no transmission will be 100 percent error-free delivery.





Flow control

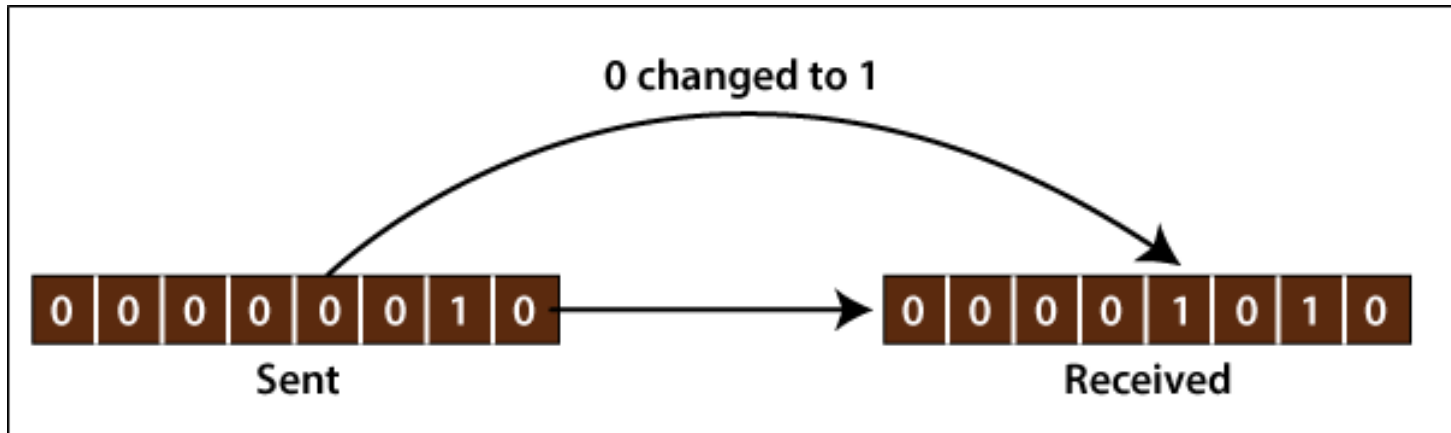
A receiving node can receive the frames at a faster rate than it can process the frame





Error detection

Error detection is the detection of errors caused by noise or other impairments during transmission from the transmitter to the receiver.

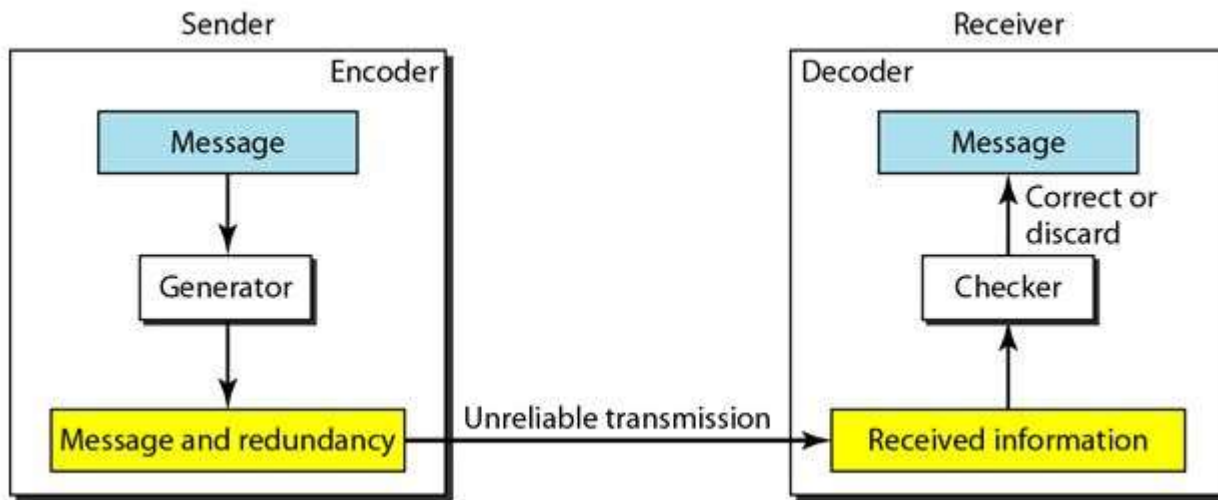




Error Correction



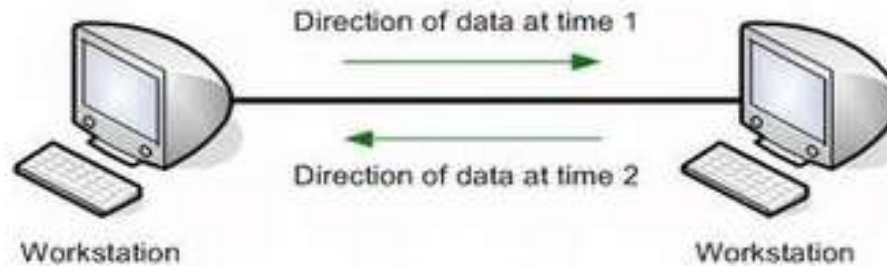
- Adding enough redundant bits to deduce what the correct bits are





Half duplex and Full Duplex

Half Duplex



Full Duplex

