

“COMMUNICATION AND DATA TRANSMISSION NETWORKS”

Ing. Manuel Benites

7 Multiplexing

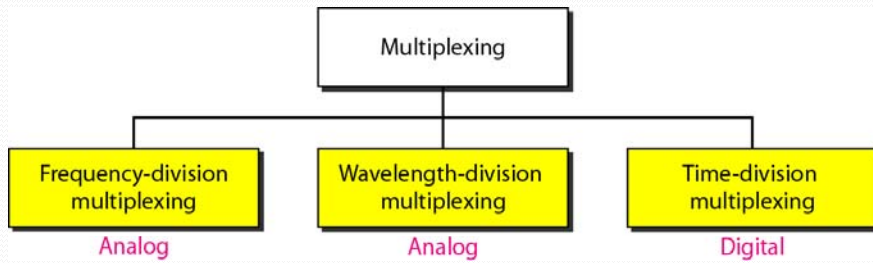
- a. Frequency division (FDM)
- b. Time division (TDM)
- c. Applications and hierarchies

8 El Modelo OSI

- a. Architecture and layers of the model
- b. Functions and interconnection of layers

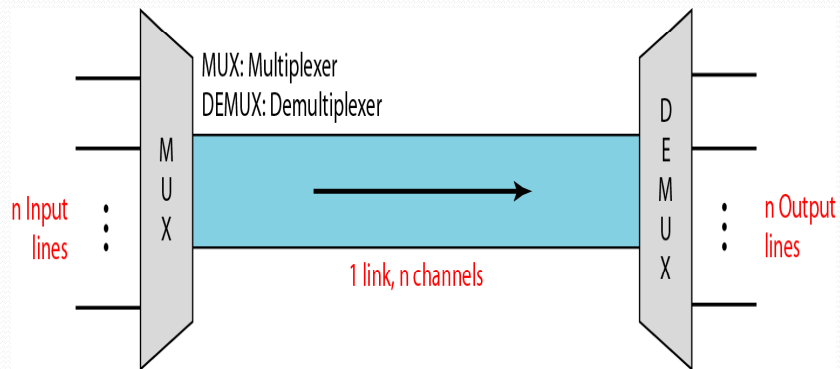
7 Multiplexing

Multiplexing categories



7 Multiplexing

a. Frequency division (FDM)

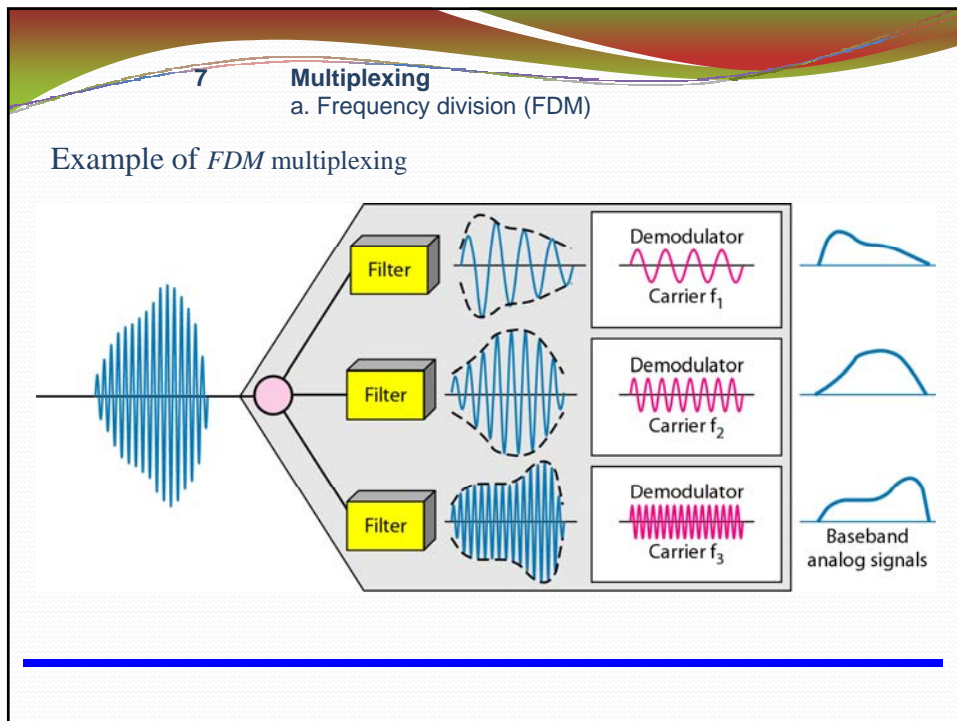
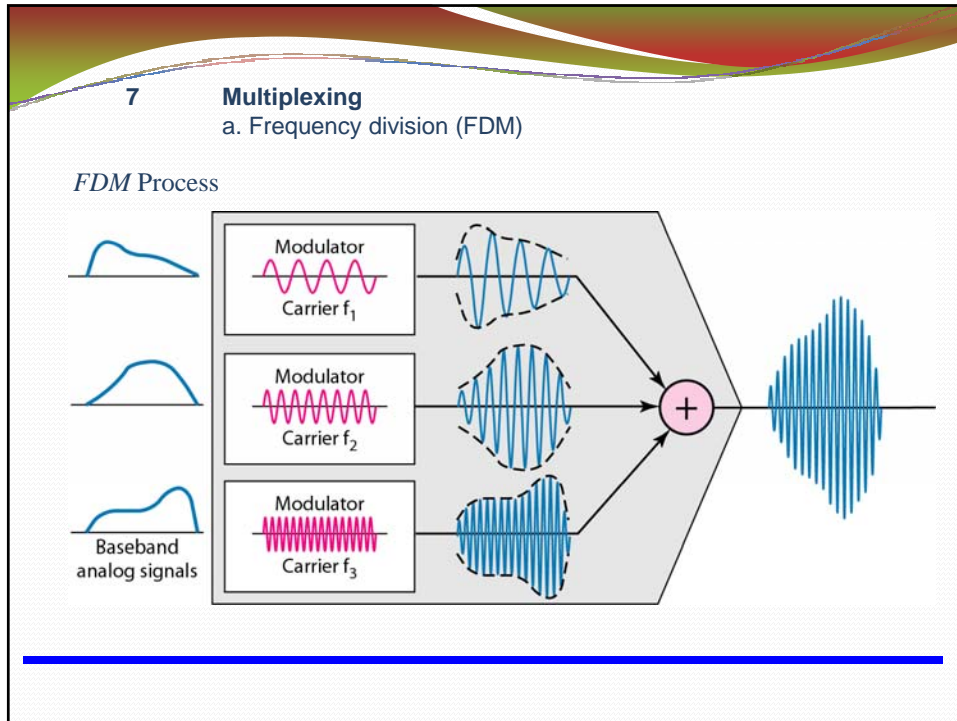


7 Multiplexing
a. Frequency division (FDM)

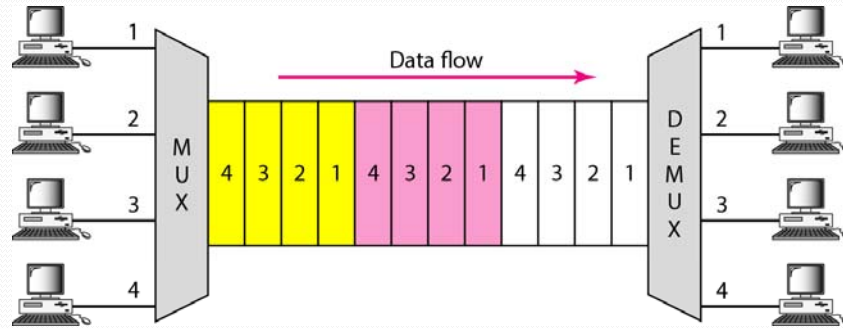


7 Multiplexing
a. Frequency division (FDM)

FDM is a multiplexing technique that combines analog signals.

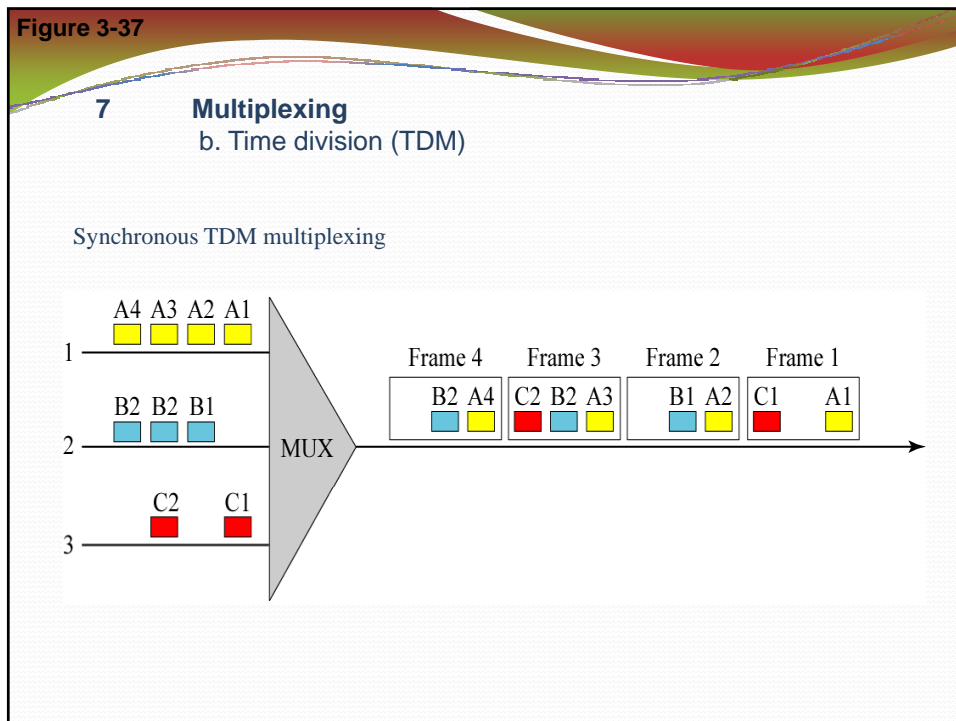
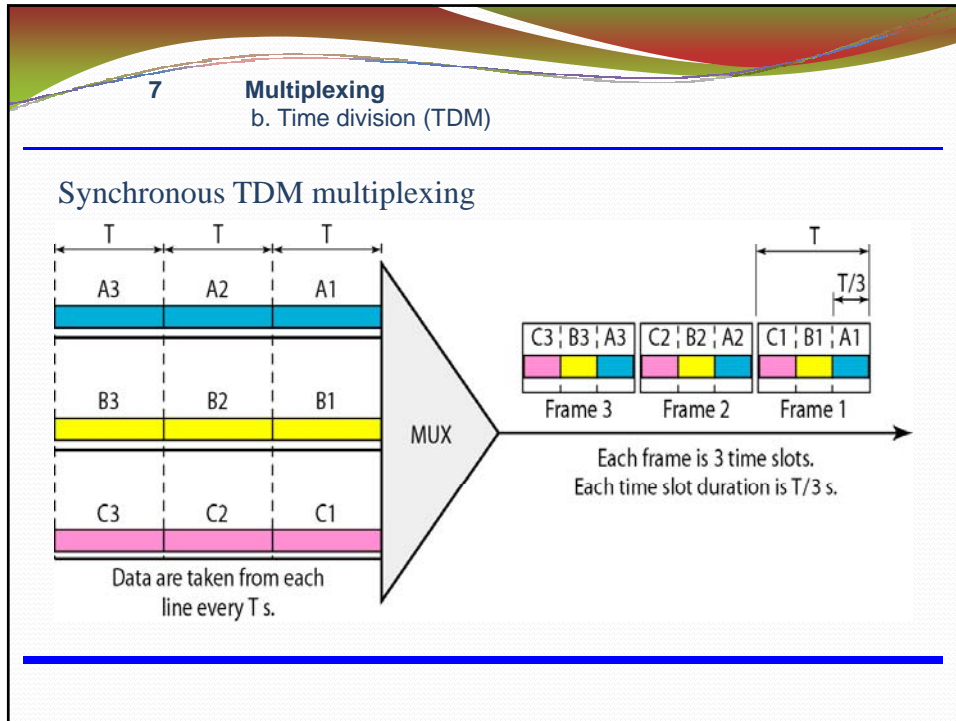


7 **Multiplexing**
b. Time division (TDM)



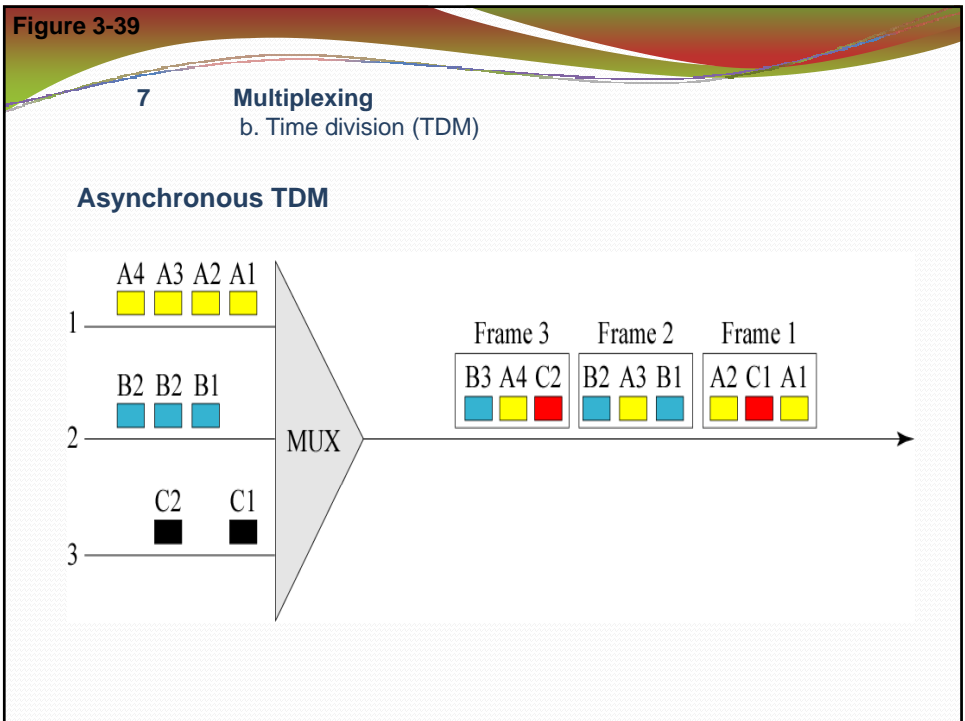
7 **Multiplexing**
b. Time division (TDM)

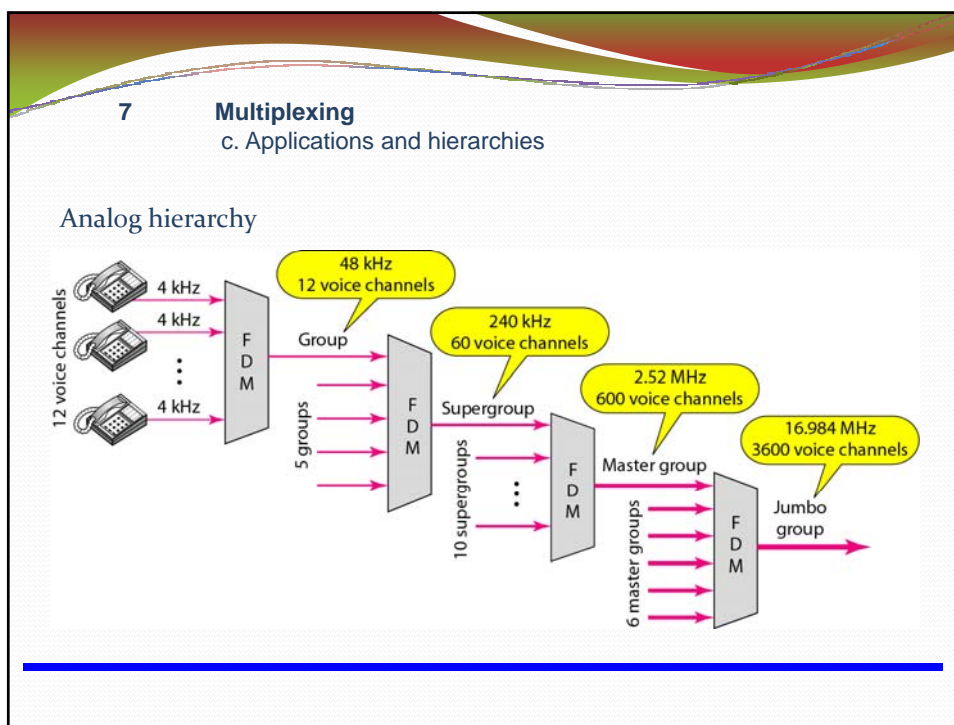
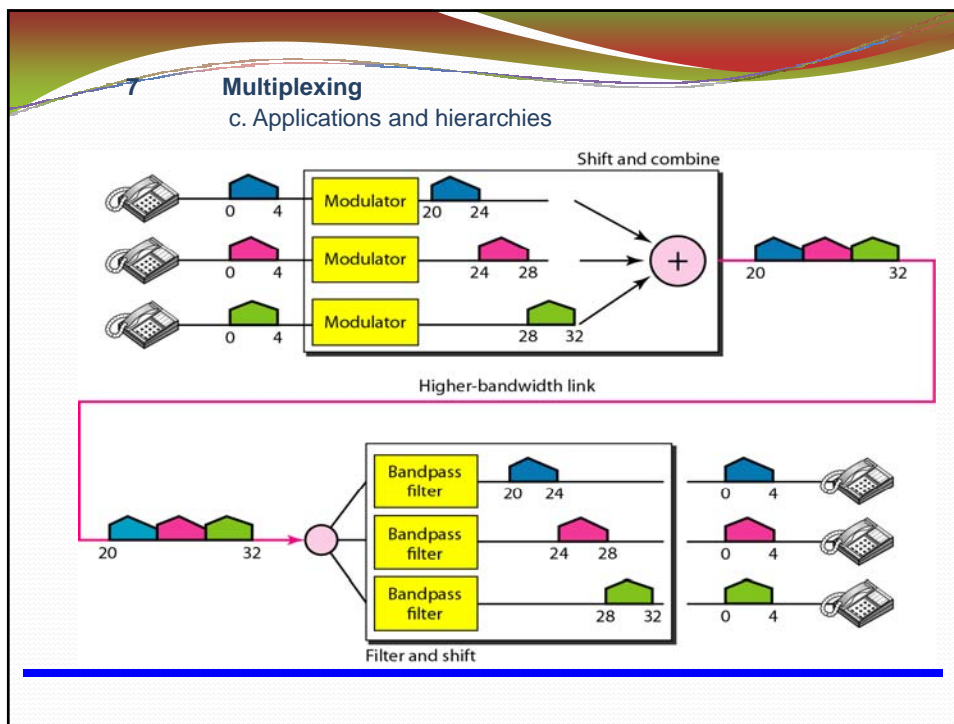
TDM is a digital multiplexing technique for combining several low-speed channels into one high-capacity channel.



7 **Multiplexing**
b. Time division (TDM)

In the synchronous TDM, the data rate of the link is n times faster, and the unit of duration is n times shorter.





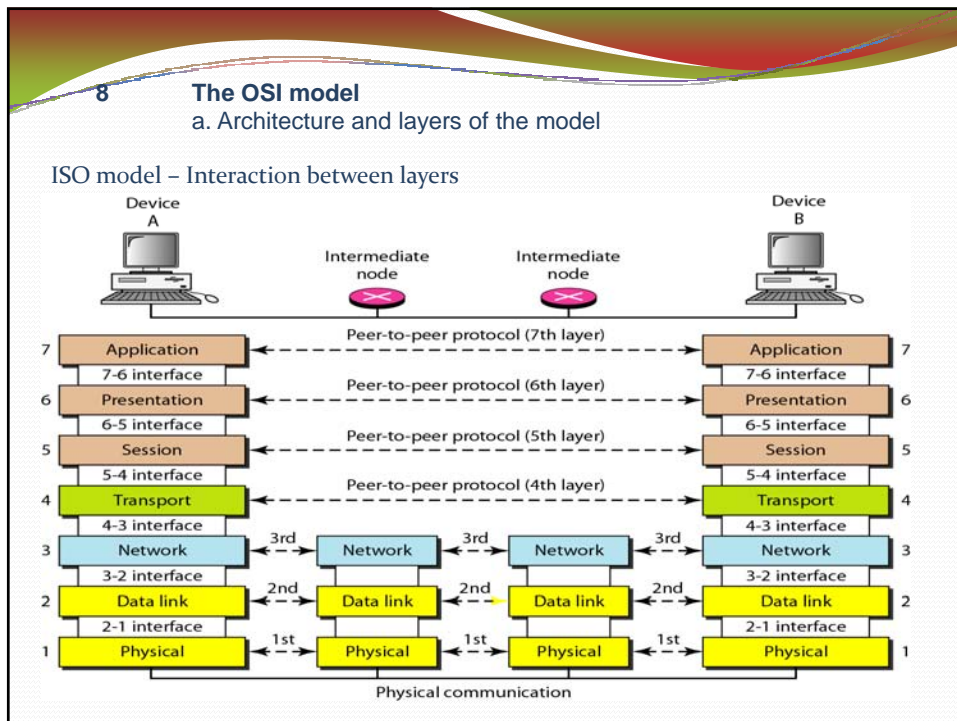
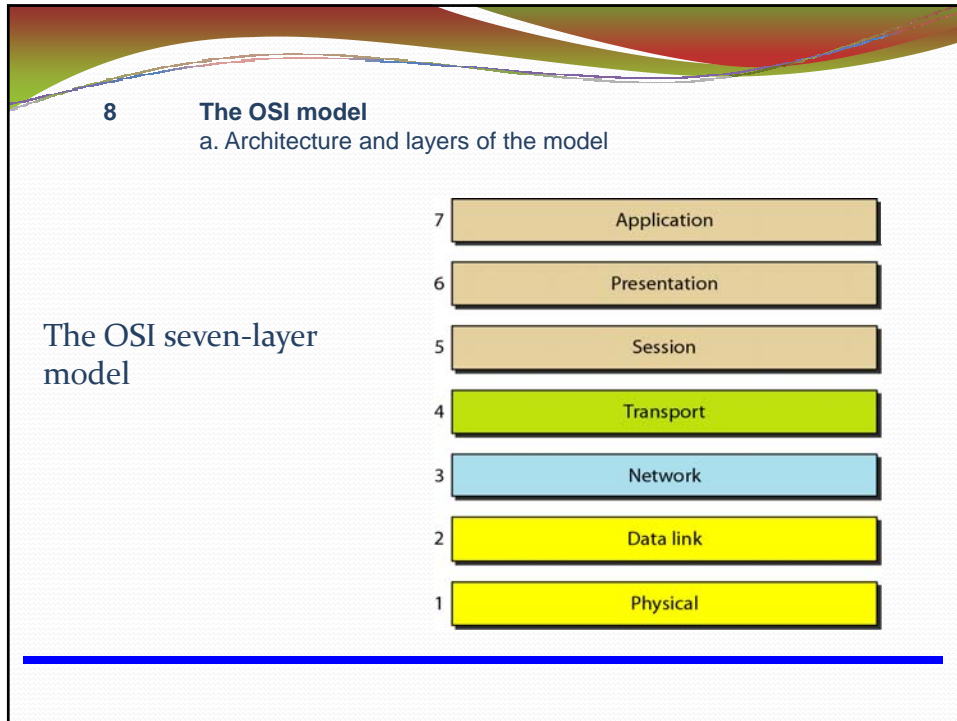
8 The OSI Model

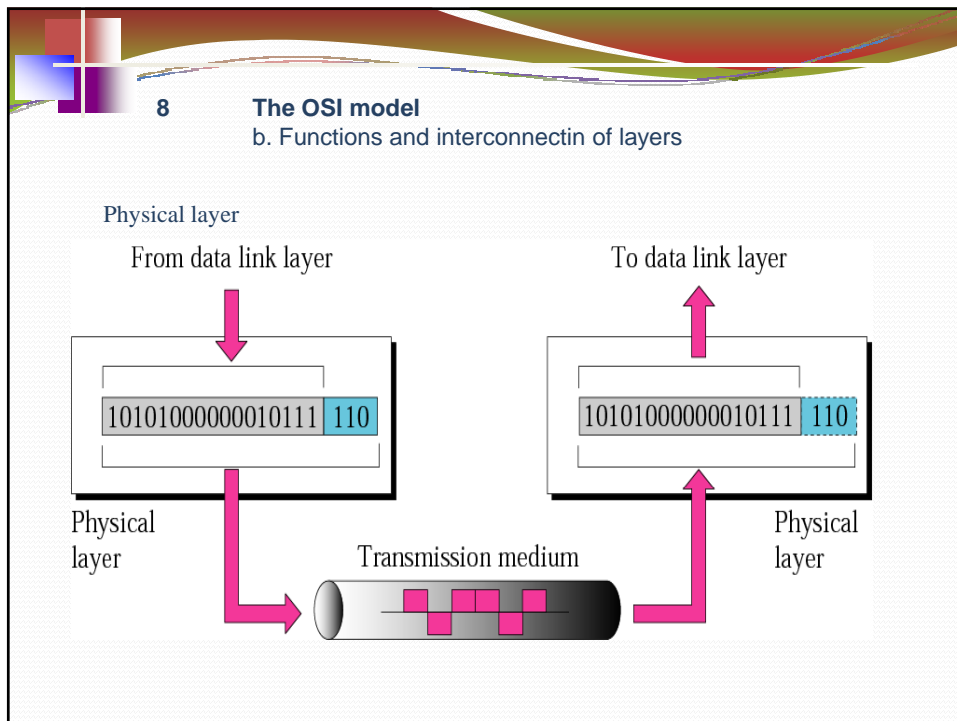
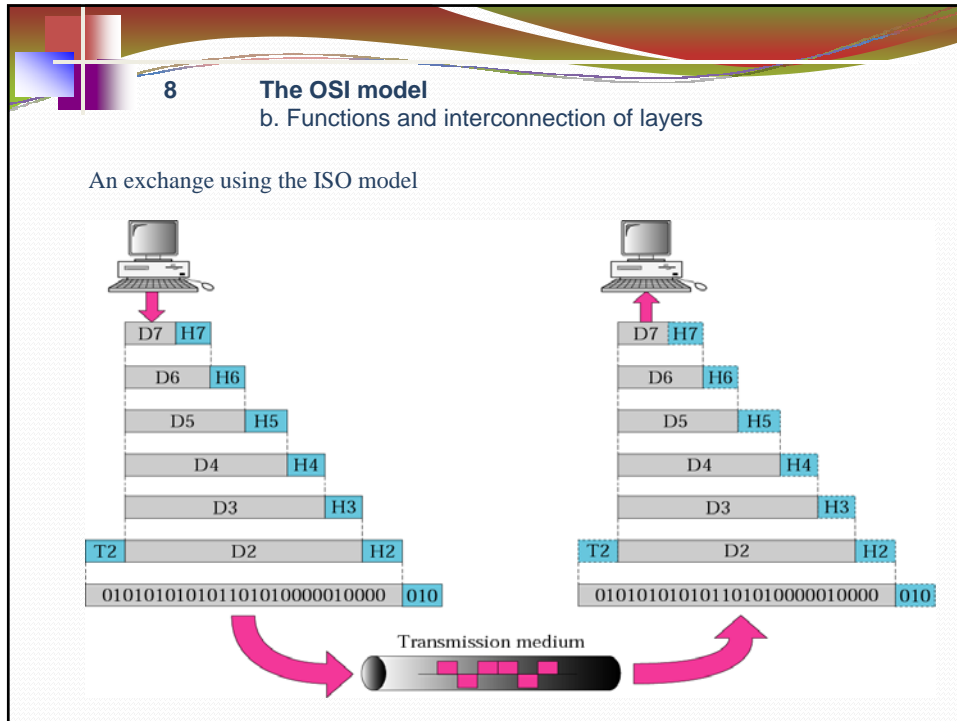
- a. Architecture and layers of the model
- b. Functions and interconnection of layers

- 8 The OSI Model
a. Architecture and layers of the model

Established in 1947, the International Standards Organization (ISO) is a multinational organization concerned with attaining agreement on international standards.

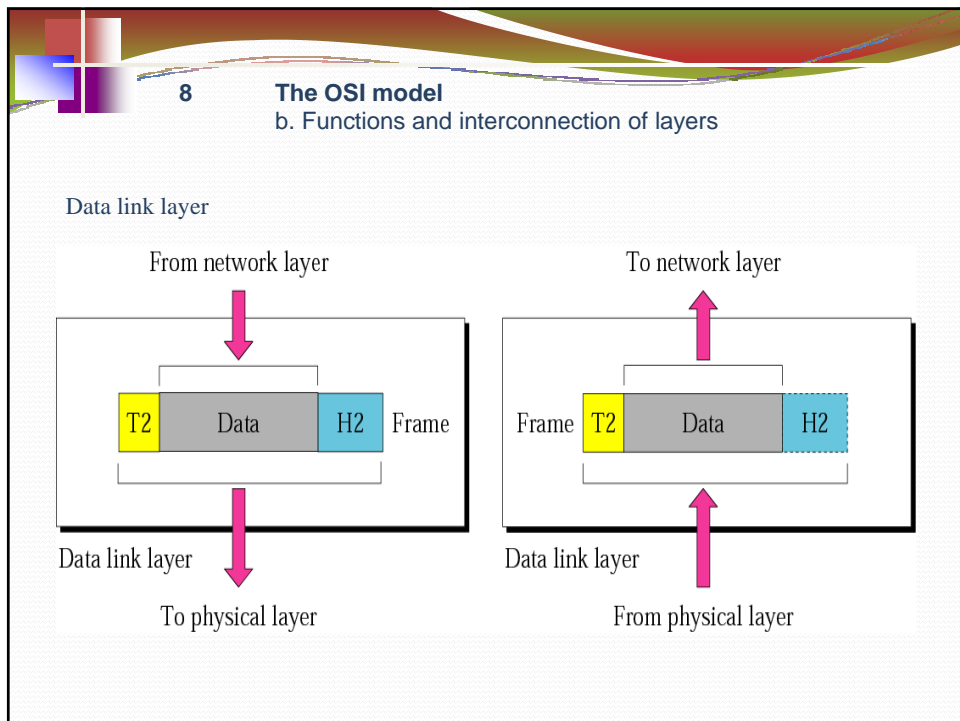
An OSI standard that covers all aspects of network communications is the Open Systems Interconnection model. It was the first model introduced in the 1970s.





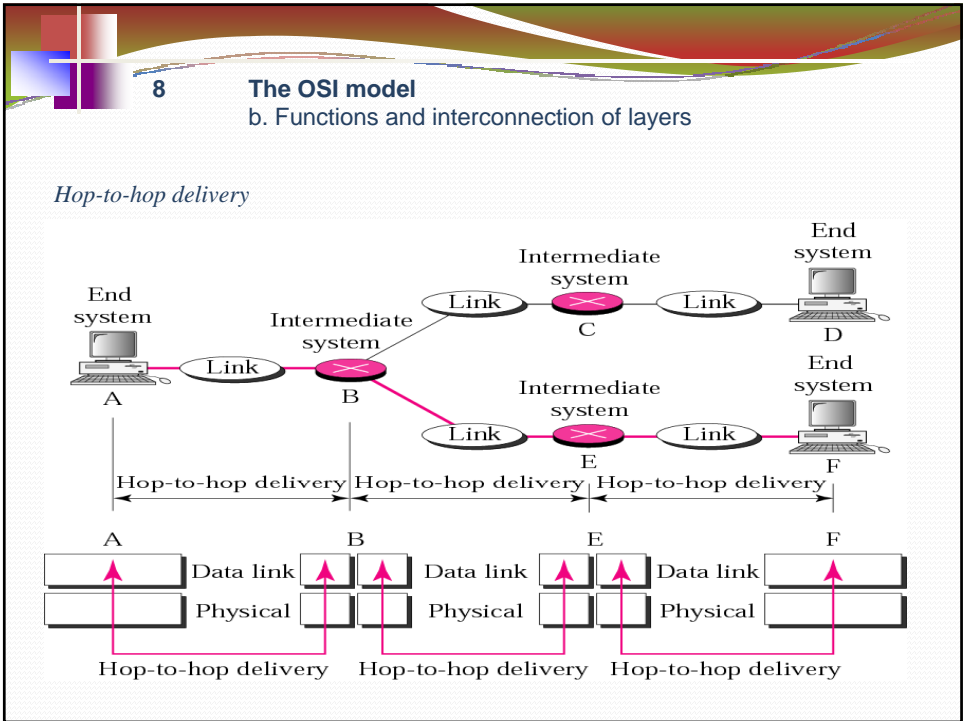
8 The OSI model
 b. Functions and interconnection of layers

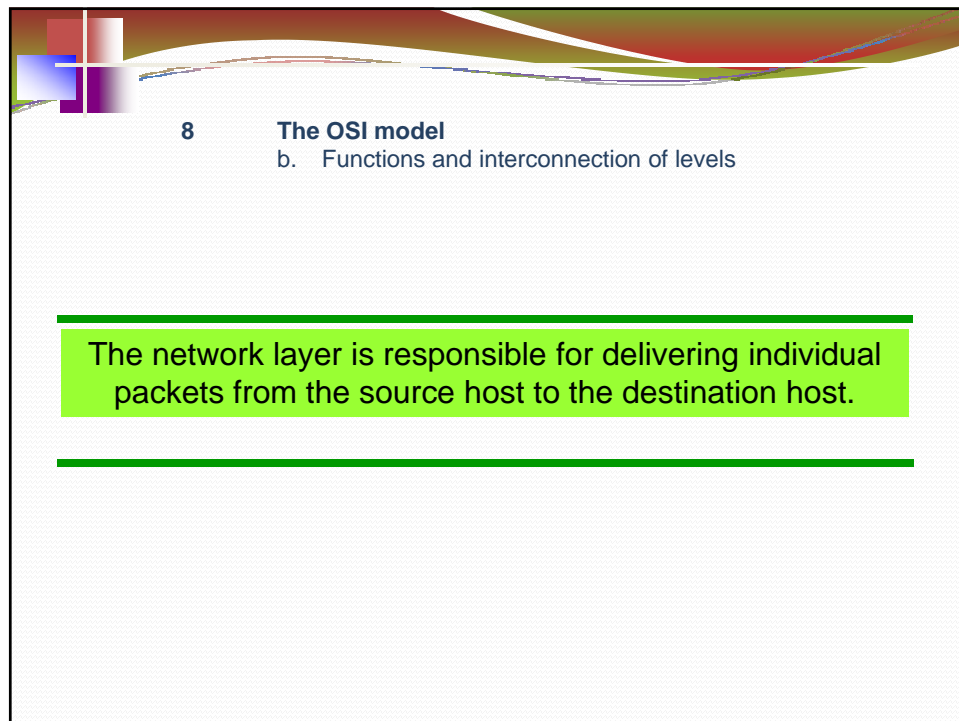
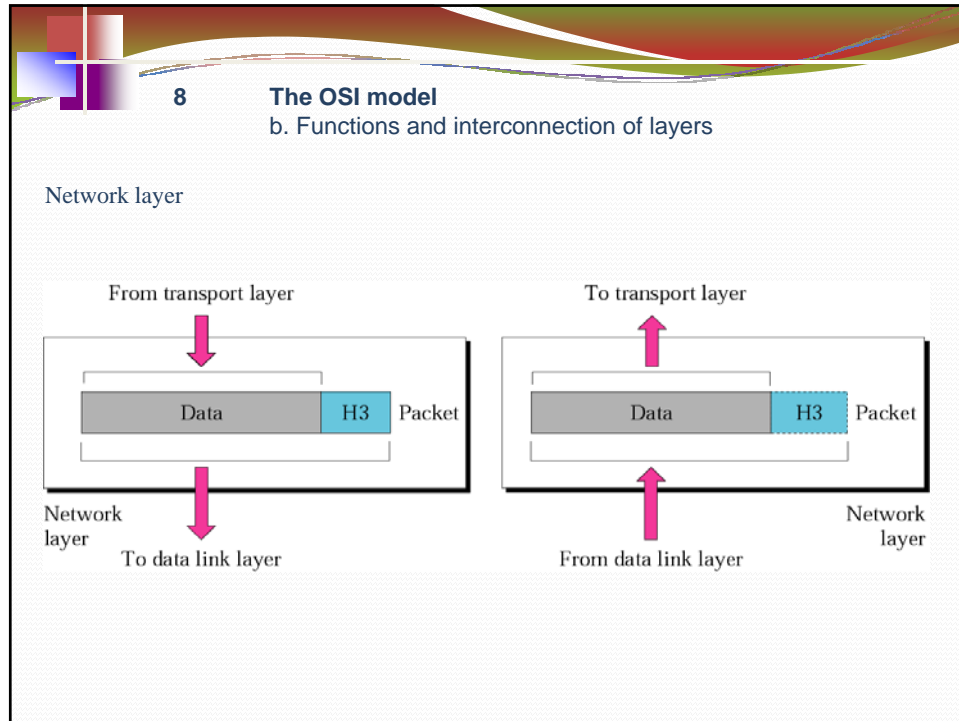
The physical layer is responsible for the movement of individual bits from one node (hop) to the next

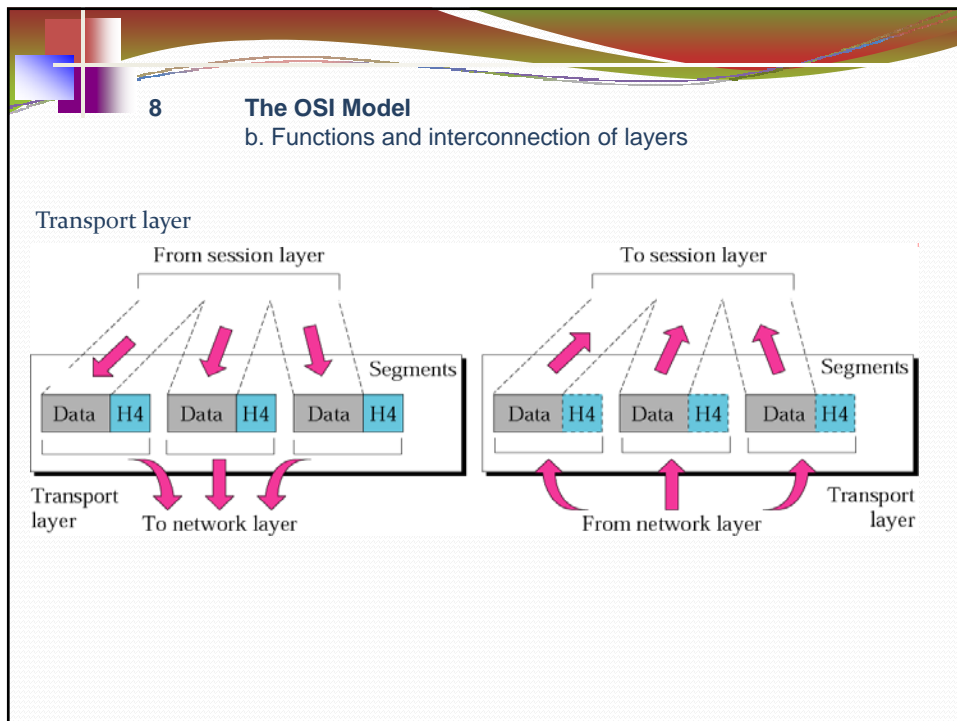
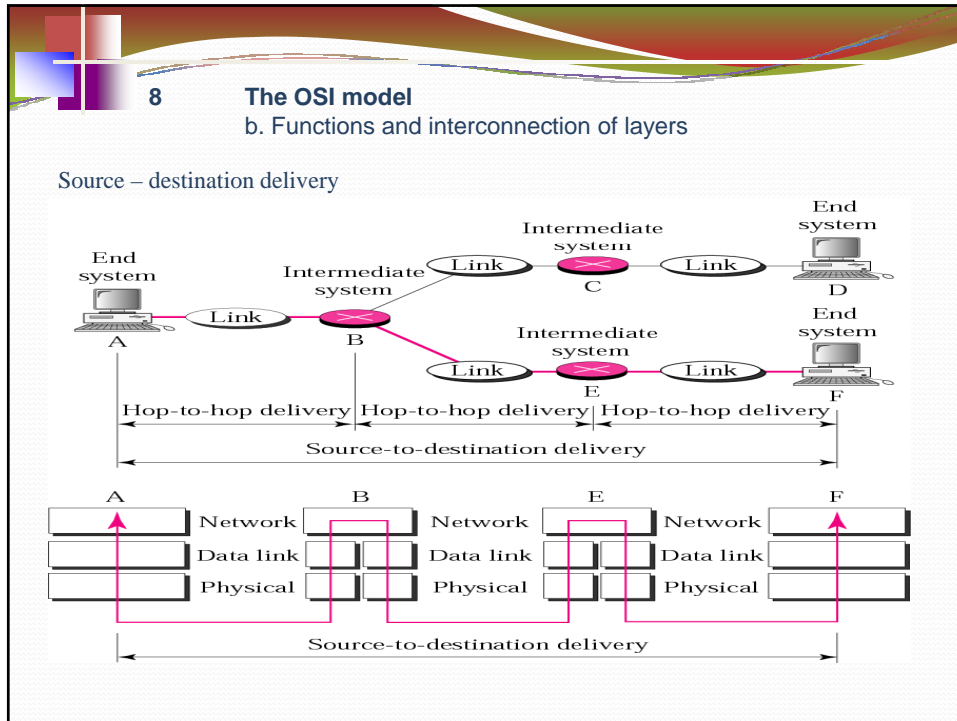


8 **The OSI model**
 b. Functions and interconnection of layers

The data link layer is responsible for moving frames from one hop to the next.







8 **The OSI model**
b. Functions and interconnection of layers

The transport layer is responsible for delivering a message from one process to another.

8 **The OSI model**
b. Functions and interconnection of layers

Reliability in message delivery
Process - process

