Open system Interconnection (OSI)

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August 10, 2020

OSI reference model

- It was introduced by International Organization for Standardization (ISO) in 1984.
- Its goal is the interoperability of diverse communication systems with standard communication protocols.
- The concept of a seven-layer model was provided by the work of Charles Bachman at **Honeywell Information Systems.**
- In this model, a networking system was divided into layers.

TCP/IP Model   OSI Model
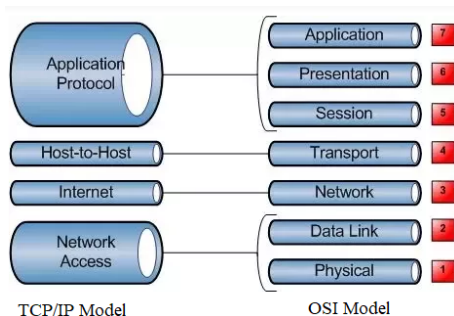
Application Layer

Application Layer: **Network Applications**

HTTP,HTTPS, FTP, NFS,
DHCP, SMTP, TELNET,POP3

File Transfer   Web Surfing   Email   Virtual Server
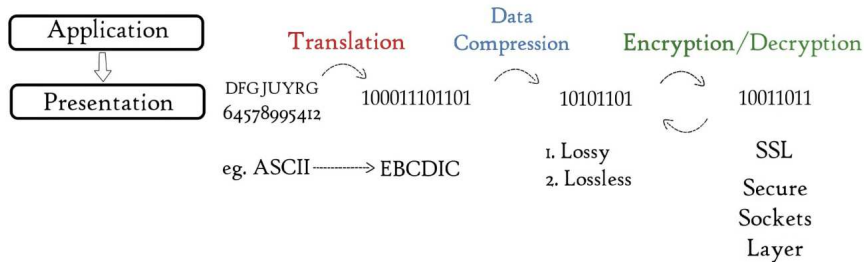
FTP   **HTTP/S**   **SMTP**   **Telnet**

Presentation Layer

Session Layer
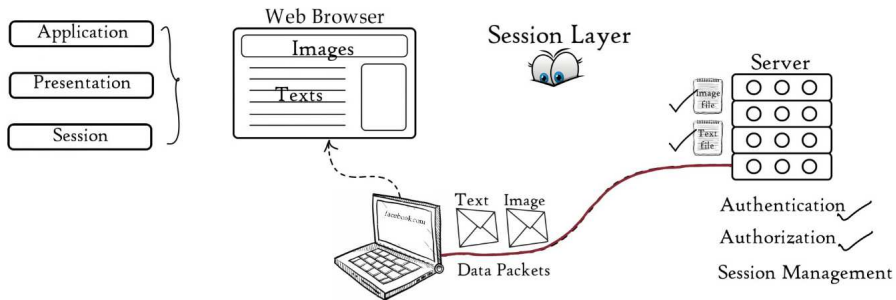
Transport Layer

UDP

TCP

WWW
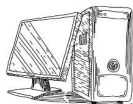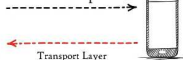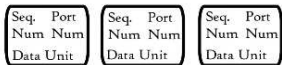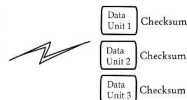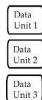
No feedback

Feedback

Example:

VIDEO GAMES

TFTP DNS

FTP

Network Layer

Network Layer Cont...

Logical Addressing

IPv4 & IPv6
+
Mask

Path determination

Routing

192.168.3.1
Facebook Server

225.225.225.0
192.168.3.1
192.168.2.1

Packet

Network 1

Network 2

A   192.168.1.1
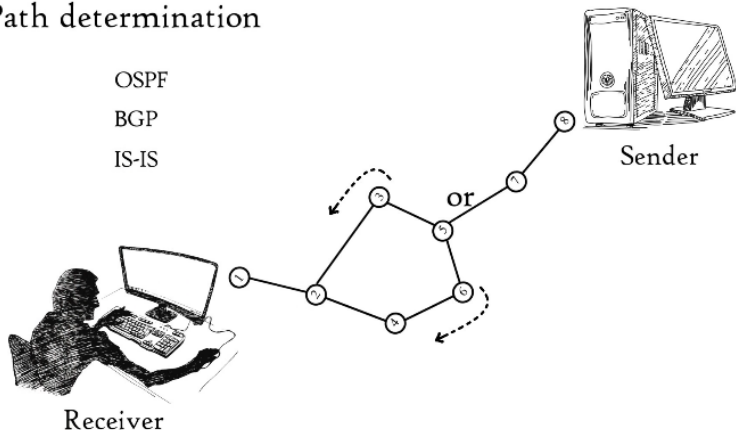
192.168.2.1   B
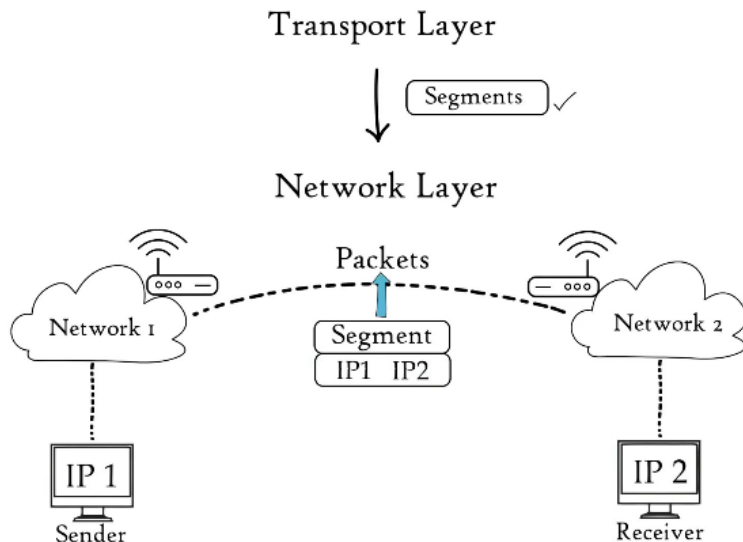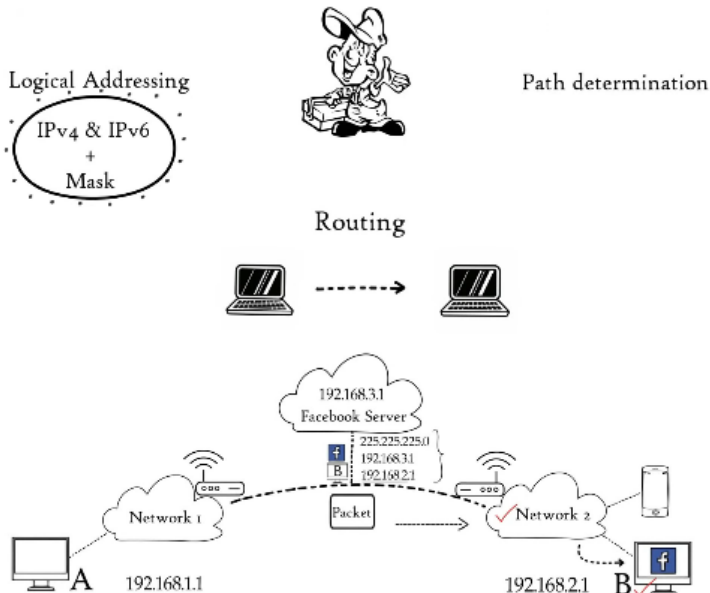
Network Layer Cont...

Path determination

OSPF

BGP
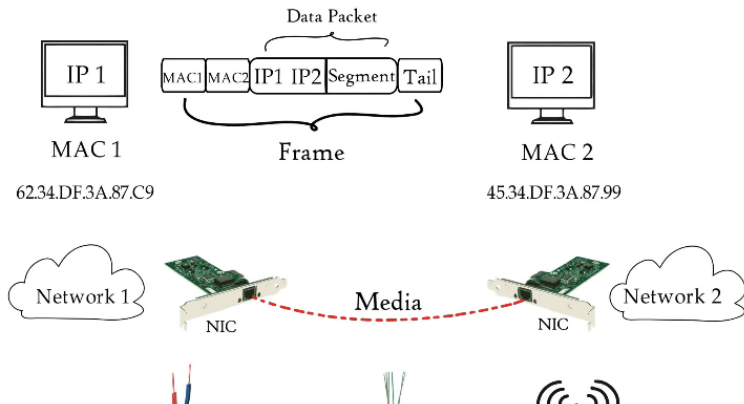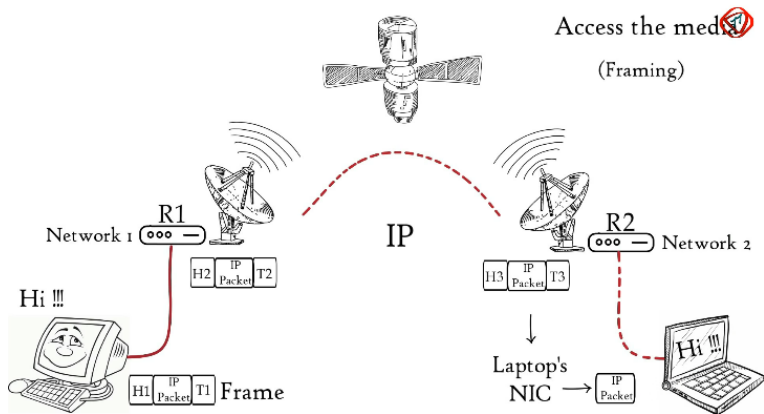
IS-IS

Data Link Layer

Data Link Layer

- Logical addressing : Network layer

- Physical addressing : Data Link layer

Data Link Layer Cont...

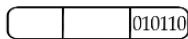# Data Link Layer Cont...

Controls how data is placed
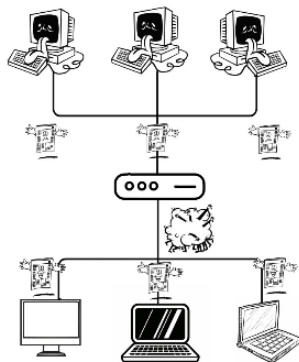and received from the media
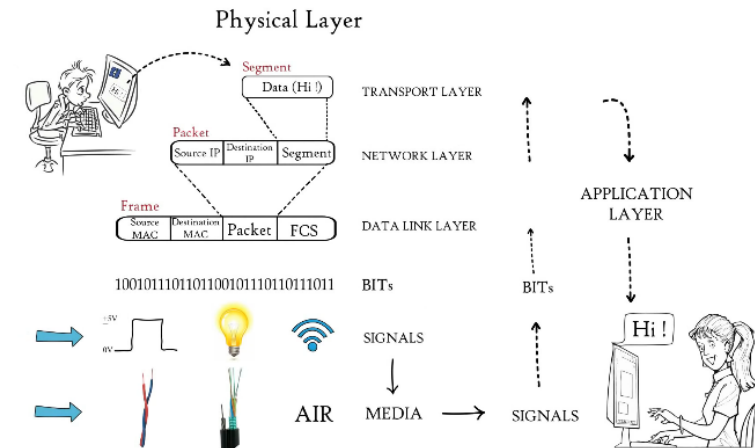
☞ (Media Access Control)
(Error Detection) ⟵

010110

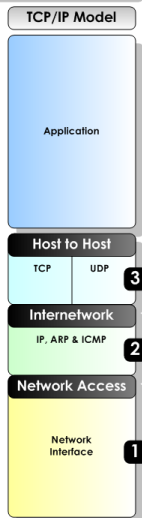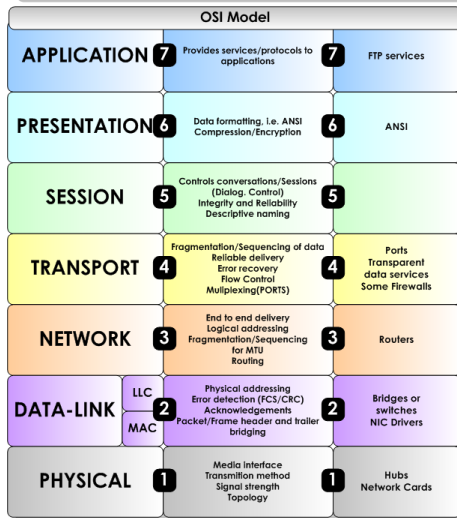DATA LINK LAYER

CSMA

LAN Cable, Optical Fiber, Air

Physical Layer

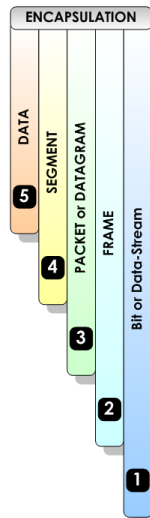Physical Layer

OSI Reference Model

Thank You