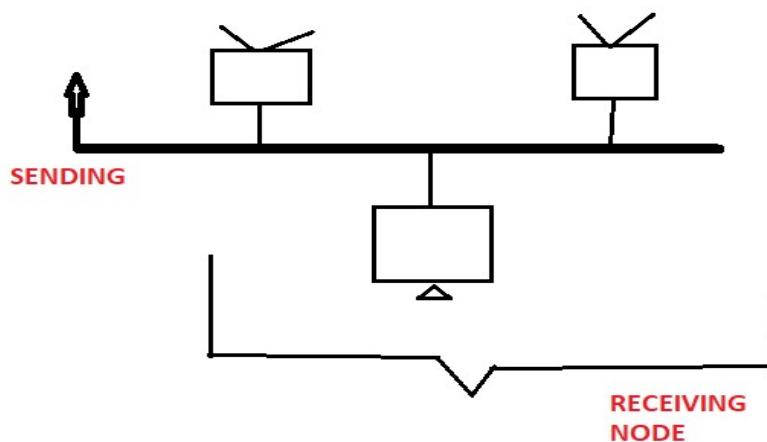


TRANSMISSION OF DATA

(1).SIMPLEX -> ONE WAY TRANSMISSION

EX:- TV-Channel, radio, etc.

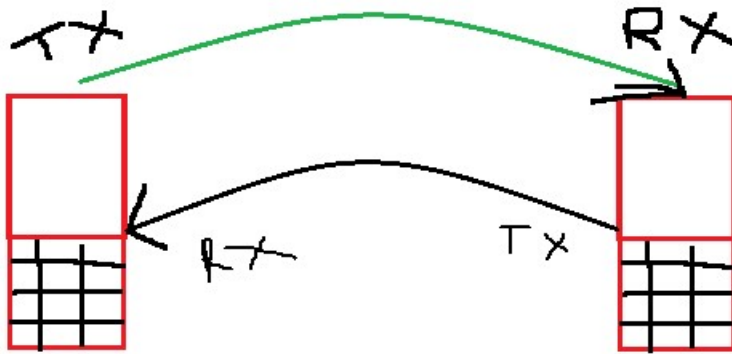


(2) Half Duplex

-> Tow way Transmission but

-> One Transmission at a time

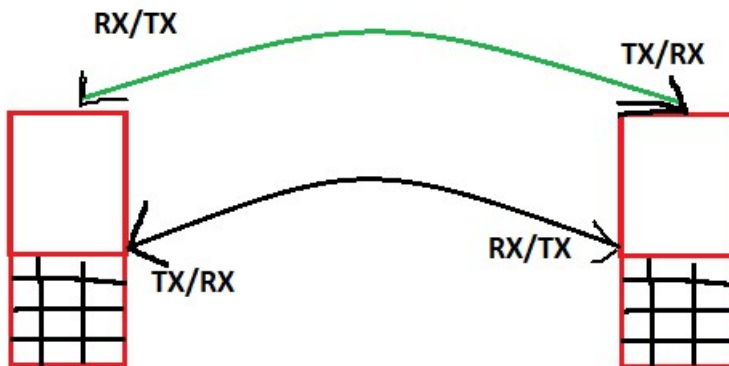
Ex:- Walki-Talki, Hub, etc.



(3). Full Duplex:->

-> Two Way Transmission Both Transmission At a time

-> Ex:- Router, Phone, Switch , etc.



(4). Unicasting <-----> One-To-One Transmission

(5). Multicasting <-----> One-To-Many Transmission

(6). Broadcasting <-----> One-To-All Transmission

(7). Serial Transmission <-----> Bit-By-Bit Transmission

(8). Parallel <-----> Set-Of-Bit Transmission

(9). Synchronous Transmission

(Ans):->

→ In this transmission of data both sending and receiving node synchronization Themselves.

→ Then all data packets are transfer it provides reliable transmission of data

→ Ex-> VOICE COMMUNICATION

(10). Asynchronous Transmission.

(Ans):->

- ➔ In this mode of transmission there are no need of synchronization between sending or receiving node. Data is divided into small packets and packets are free to go through any available link
- ➔ There cannot be assume of successful transmission
- ➔ Ex: -> Email

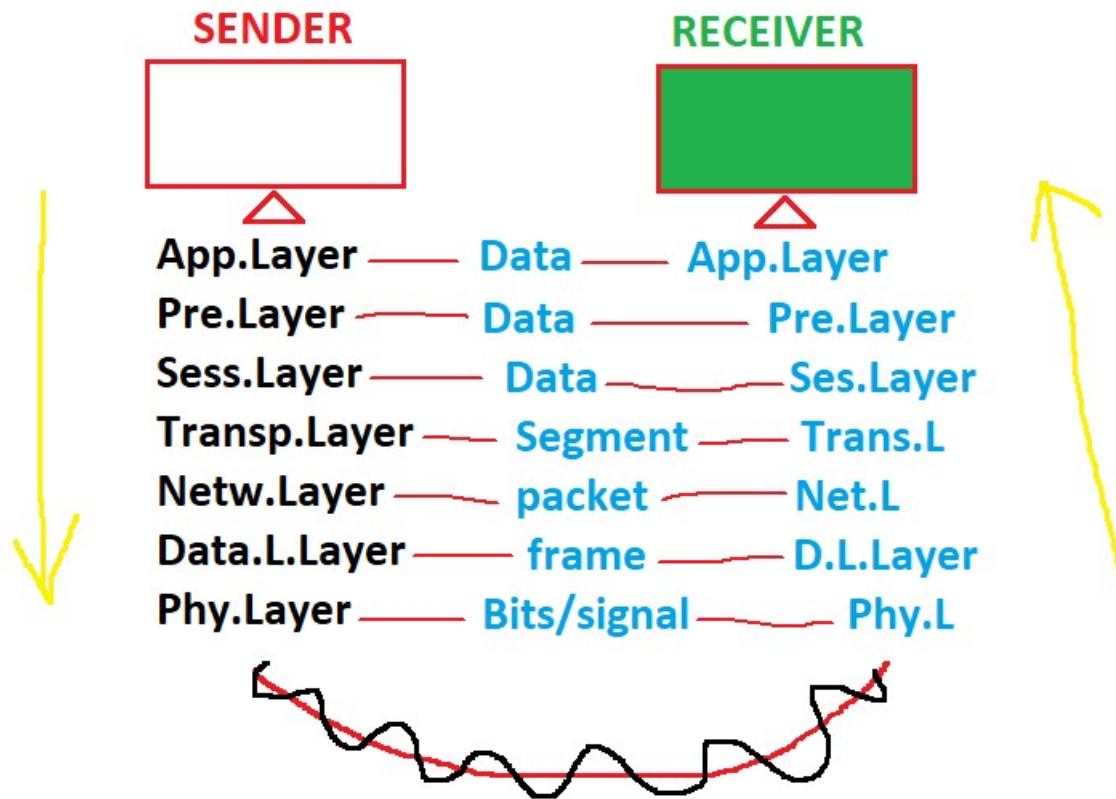
06/02/2025

OSI-REFERENCE MODEL (network Protocols)

- ➔ 1984
- ➔ Used to define different protocols and services used In IP Infrastructure
- ➔ Given by ISO
- ➔ OSI -> Open Systems Interconnection
- ➔ ISO-> International Organization for Standardization
- ➔ IT HAS 7 LAYER

OSI HAS SEVEN LAYER:->

- (1) **Physical Layer**
- (2) **Data Link Layer**
- (3) **Network Layer**
- (4) **Transport Layer**
- (5) **Session Layer**
- (6) **Presentation Layer**
- (7) **Application Layer**



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(7). Application Layer

- > File Handling
- > Web Accessing
- > Email Accessing.
- > Remote Accessing
- > Protocols
- > SMB, FTP, NFS, SMTP, IMAP, POP3, DHCP, DNS, TELNET, SSH

(6). Presentation Layer.

-> Compression & Decompression

-> Encryption & Decryption

(5). Session Layer.

-> Provides Session to Different execution process

(4). Transport Layer

-> Segmentation

-> Port Addressing

-> Sequence No

-> Protocols

-> TCP,UDP,SSTP

(3). Network Layers.

-> Logical Addressing

-> IP ADDRESS

-> Packet Formation

-> IP Routing

-> packet Filtration

->Source To Destination Delivery of data

->Protocol

-> IP,ICMP,ARP,RARP

(2). Data Link Layer

-> Frame Formating

-> Physical Address

-> Error Detection & Correction

-> Flow control

->WAN Connection

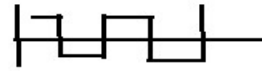
-> X.25M , Leased Line, ISDN

Line, MPLS ,FRAME Relay, VOIP

(1). Physical Layer.

→ Signaling

-> Digital



-> Analog



→ Bit Synchronization

→ MEDIA Accessin

PROTOCOLS

SMB



(Server Message Block)

-> Used for sharing of data of Windows machines

NFS



(Network File Sharing)

-> Used For Sharing Data Of Linux Machines

FTP



(File Transfer Protocol)

-> Used For Sharing Of Data Among Multiple Users With Security

