$\boxed{\text{TCP/IP protocol}}$

Application	(software)	
		OS
Transport	(TCP)	
Internet	(IP)	
		↑ software
Network	(″)	↓ hardware (physical)

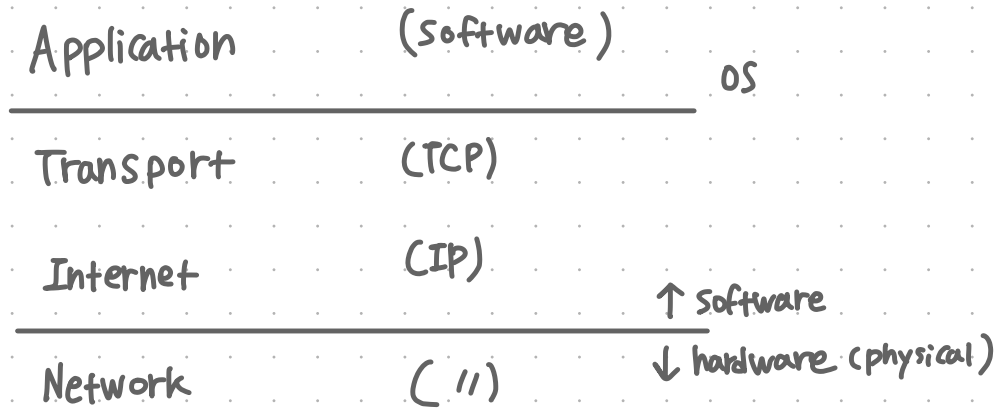## OSI 7-layer Model

1 Application
  representation
  session
  transport
  IP
  Network Interface
7 Data Link

Internet

A collection of ==packet switching== networks conneted by ==routers==
using ==TCP/IP Protocols==

Network
- Circuit Switching (telephone)
- Packet switching (digital, computer)

A ⟷ B

switch

A — B

Size
LAN (Local area network)
WAN (wide area network)
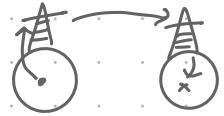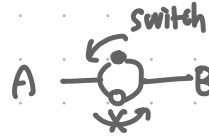
distance
Satellite communication
wifi
bluetooth
Mobile
NFC
:

Frequency
AM
(to)FM   (tv).
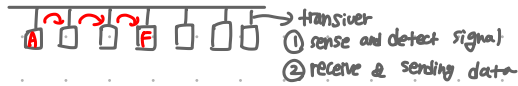
4
2
1
3

Sorting!

100
4 4 4 4
1 2 3 4 destination..

작은 유닛으로 잘려..

Most popular LAN

① Ethernet

protocol ; common bus

→ transiver
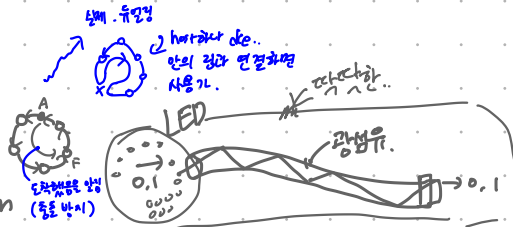① sense and detect signal
② receive & sending data

- broadcasting data (여러개 맞았어서
충돌 발생..)
- CSMA/CD ←——
2ⁿ back off Policy

사고, 구현이 쉬움.

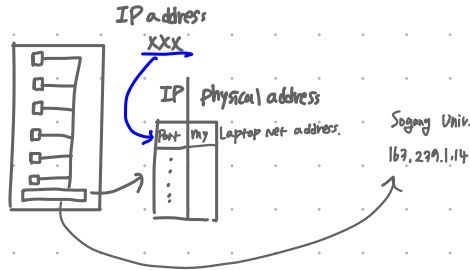## ② FDDI

- topology , ring
- Fiber optic communication
광.섬유..

Network Address

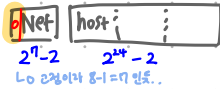two unique address

physical address
- = LAN address
- = MAC address

IP address
XXX

IP | physical address

Port | my Laptop net address.

Sogang Univ.
163.239.1.14

IP address (IPV.4) 32 bit

(all 0, all 1 은 test용이라 제외) : -2

type A
[0|Net][host | :]
2^7-2 $2^{24}-2$
└ 2진수이라 8-1=7 인듯.

type B
[1|0| :][ ]
$2^{14}-2$ $2^{16}-2$

type C
[1|1|0| :][ ]