Internet Protocol (IP)

5강

IP characteristics

- Connectionless

- "Best-effort" service

IP headers

- IPv4

- IPv6
  - Remove useless fields from IPv4
  - Add new fields
  - Rename some fields
  - No "options"

IPv4 header fields

- Version
- IHL
- DS
- ECN
- Length
- Id
- Flags
- Fragment offset

- TTL
- Protocol
- (Header) checksum
- SIP
- DIP
- Options

DS & ECN

- QoS

- Congestion control

Fragmentation

- Id
- Flags
- Fragment offset

Internet checksum

- 1's complement of 1's complement sum

- Almost all Internet protocols use it

IPv4 options

- Most cannot be used today

IPv6 extension headers

- TLV

IP forwarding

- Routing table → forwarding table

- Matching rule

Misc.

- Mobile IP

- Host processing