

- l3) Internet layer: deliver from address to address  
 l4) TCP: which person (process) will receive the packet.  
 l2) Data link: neighbor send/receive. SF-Seattle-Chicago...

Depending on phys (L1), L2 will be different.

↑ ↑  
 ethernet wifi

Most ethernet device does not have LLC control.

x each. protocol:

- header size: <sup>IP</sup> v4 (20 bytes), TCP (20), <sup>IP</sup> v6 (40), UDP (8)

IPv6: x "flow label" is new

- \* Next header: similar to "protocol" in v4.
- \* no 2nd level (fragmentation): frag is done by the source, not by the router (post office).

IP - connectionless: the packets do not go in order or in the same route.

- does not spend time to setup the conn.  
 (less reliable, faster)

IPv4 only does independent routing by default. Source routing or route. are optional.

,, <sup>recording</sup> does not do flow control.

Network Info Source: the map. (routing info) that the router maintain.

- Distance-vector routing: based on the info from neighbor to find out the best way to go.
- Link state routing: got a map (instead of asking the neighbor)

ARP: convert L3 (MAC addr) to L4 (IP addr)

TCP flag: <sup>used for</sup> Setup conn or tearing down conn.

QoS:

- Resource reservation: reserve res b4 use, very expensive

MPLS: another class

Quiz <sup>on</sup> every class, open book.  
Midterm / final: same as quiz but different no, closed

slides: ~ sandy / class / CS540.