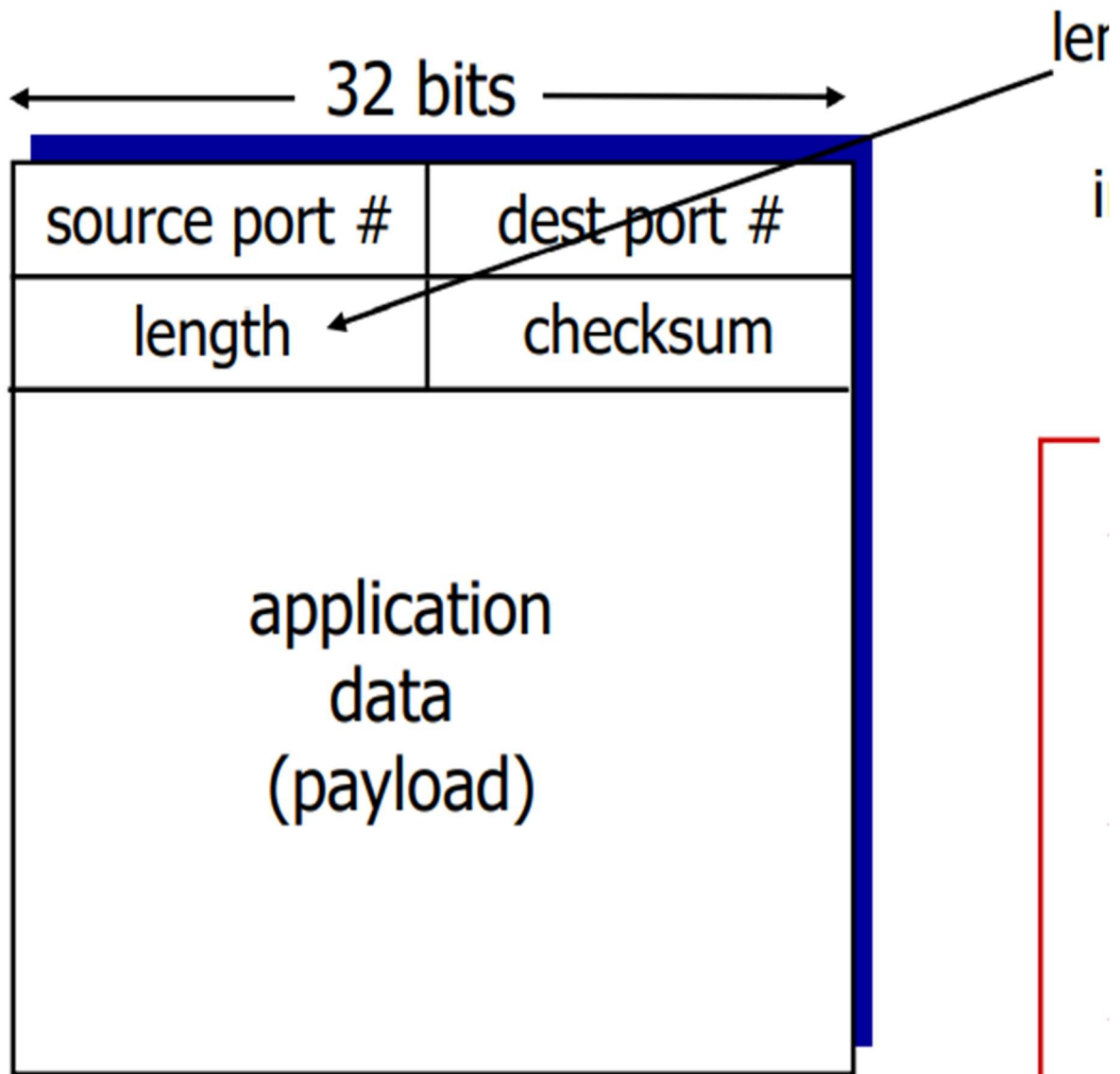
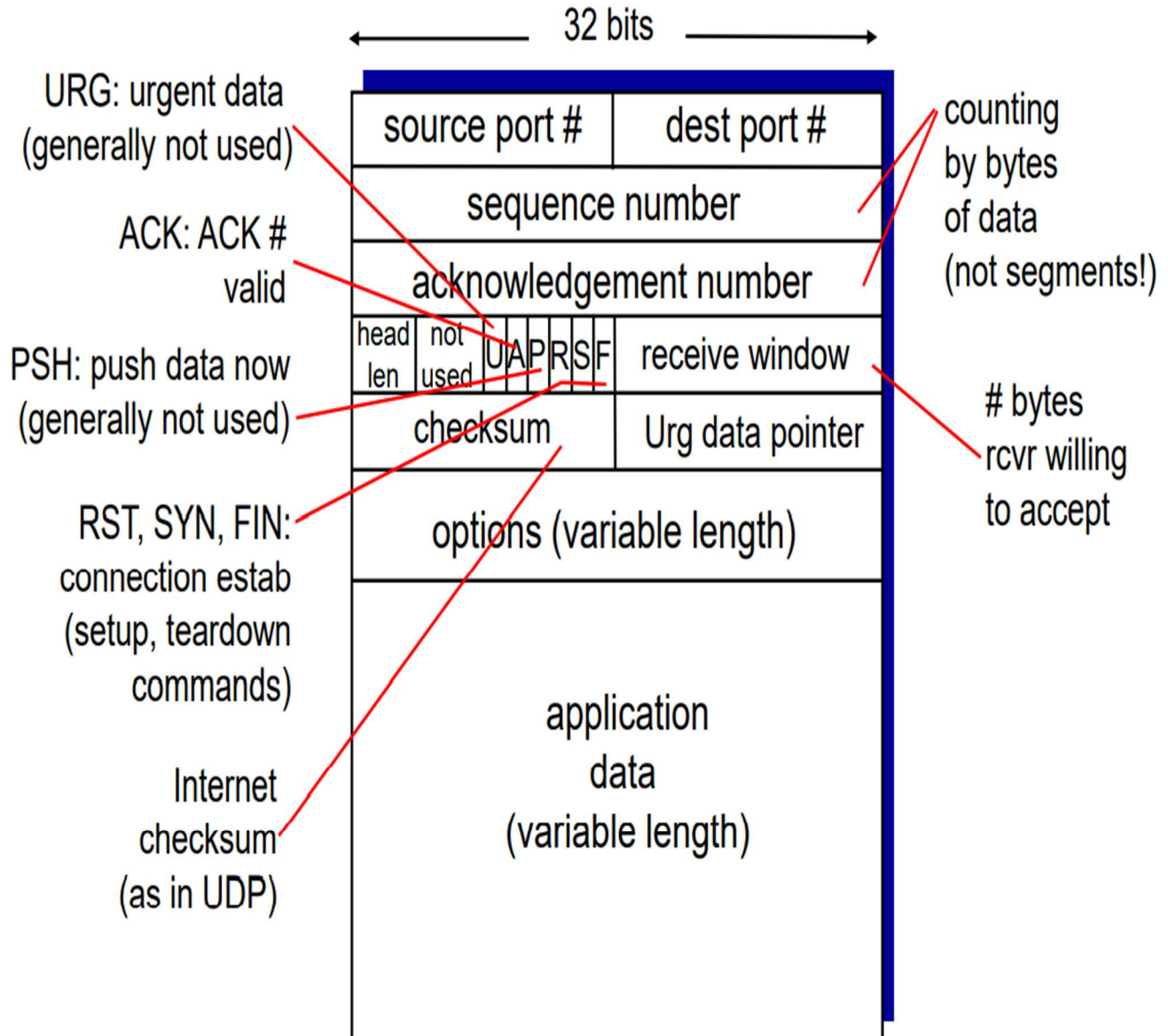


# UDP: segment header

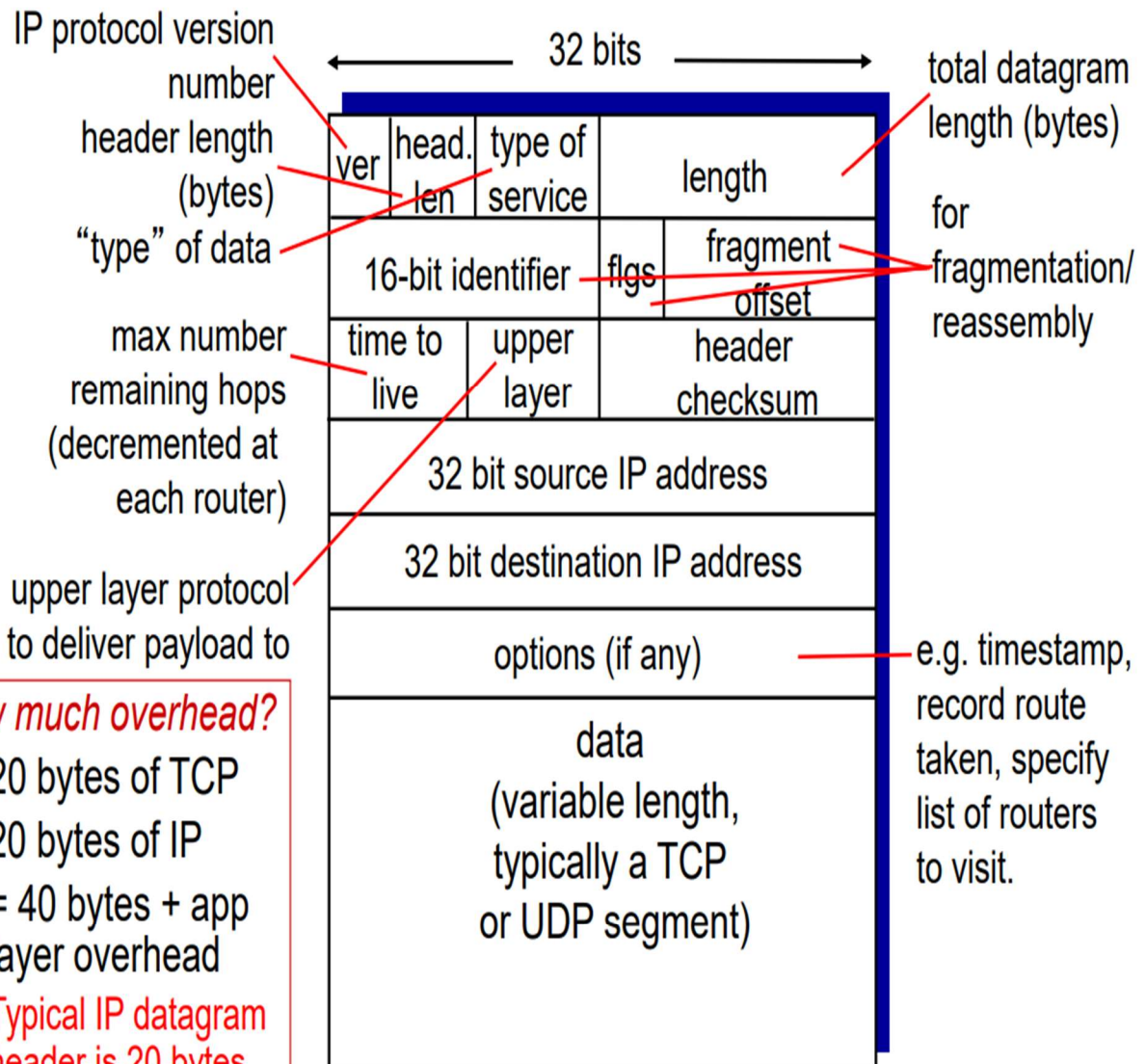


UDP segment format

# TCP segment structure



# IPv4 datagram format



## how much overhead?

- ❖ 20 bytes of TCP
- ❖ 20 bytes of IP
- ❖ = 40 bytes + app layer overhead
- ❖ **Typical IP datagram header is 20 bytes (if options not used)**

# IPv6 datagram format

*Priority/traffic class:* identify priority among datagrams in flow

*flow Label:* identify datagrams in same “flow.”

(concept of “flow” not well defined).

*next header:* identify upper layer protocol for data

ver	pri	flow label	
payload len		next hdr	hop limit
source address (128 bits)			
destination address (128 bits)			
data			

# Ethernet frame structure

sending adapter encapsulates IP datagram (or other network layer protocol packet) in **Ethernet frame**

