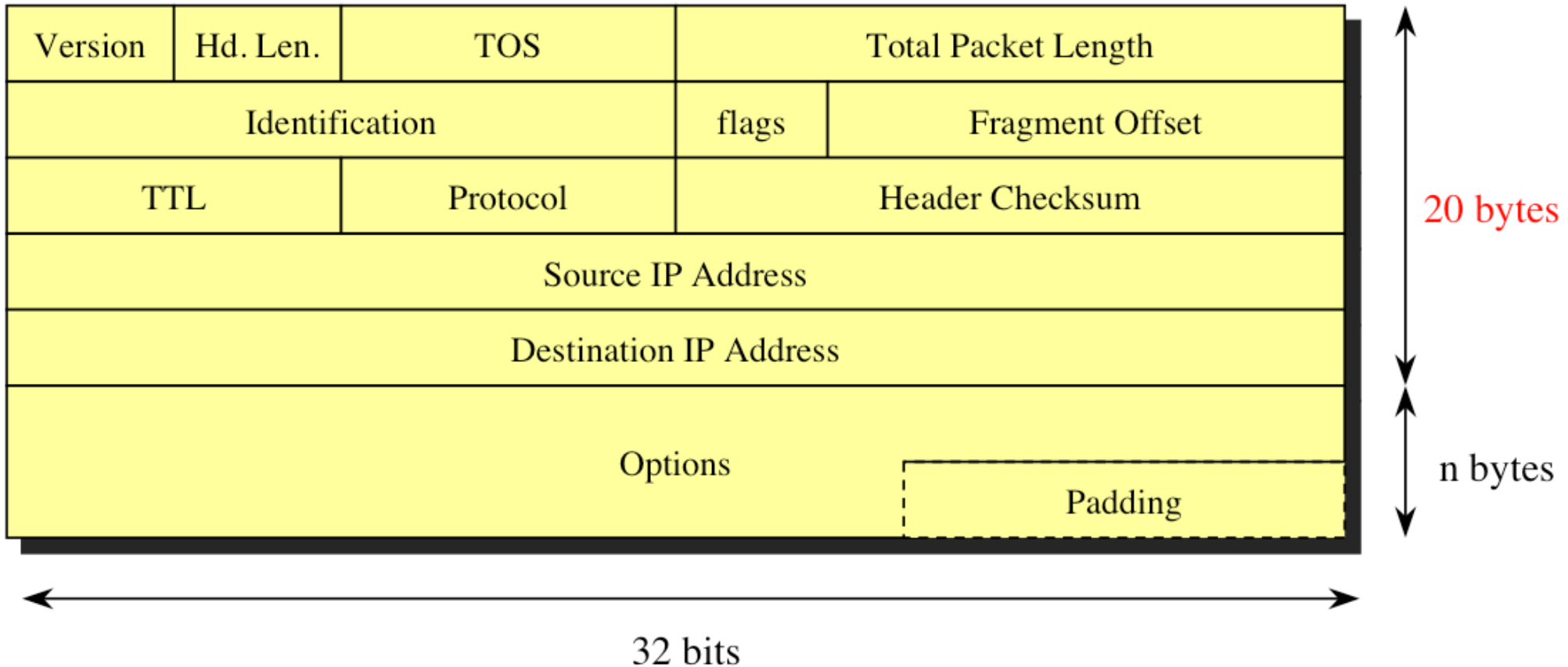


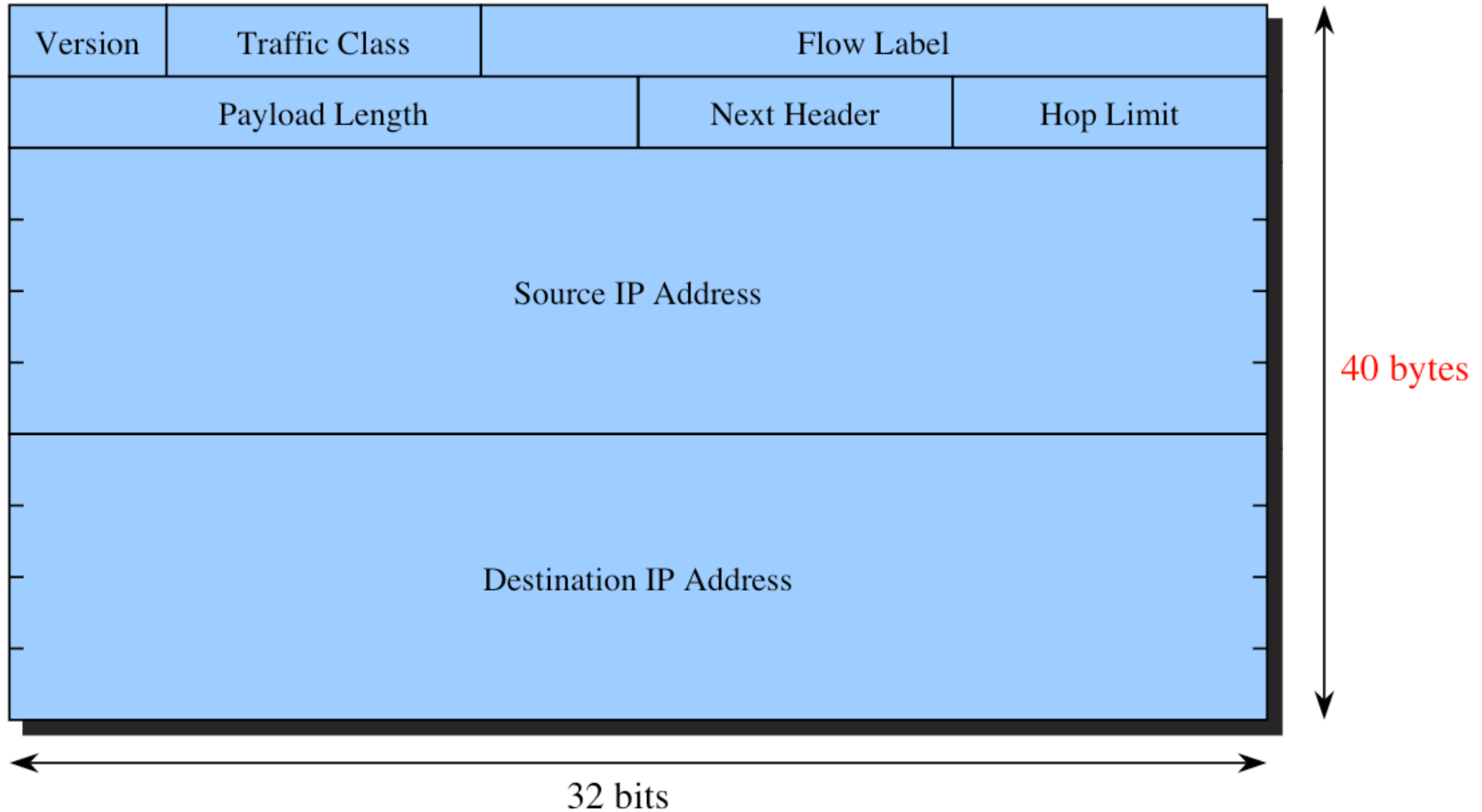
IPv4 Header vs IPv6 Header

Rob Blokzijl
RIPE Chair

IPv4 Header



IPv6 Header



IPv6 Header Fields

- **Version:** IP version 6
- **Traffic Class:** used in congestion control
- **Flow Label:** QoS management
- **Payload length:** payload length in bytes
- **Next header:** specifies the next encapsulated protocol
- **Hop Limit:** replaces the ttl field of IPv4
- **Source and Destination addresses:** 128 bits each

What is not in the header

- Security
- Quality of Service
- Autoconfiguration
- Better Internet Routing

Header Format Simplification

- Fixed length of header
 - Length field eliminated by no options
- No fragmentation on router
 - Fragmentation field and option field moved to extension header
 - Hosts should use the path MTU discovery
- No header checksum
 - Reduce cost of header processing, no checksum updates at each router

Improvement of routing speed