CS144
An Introduction to Computer Networks

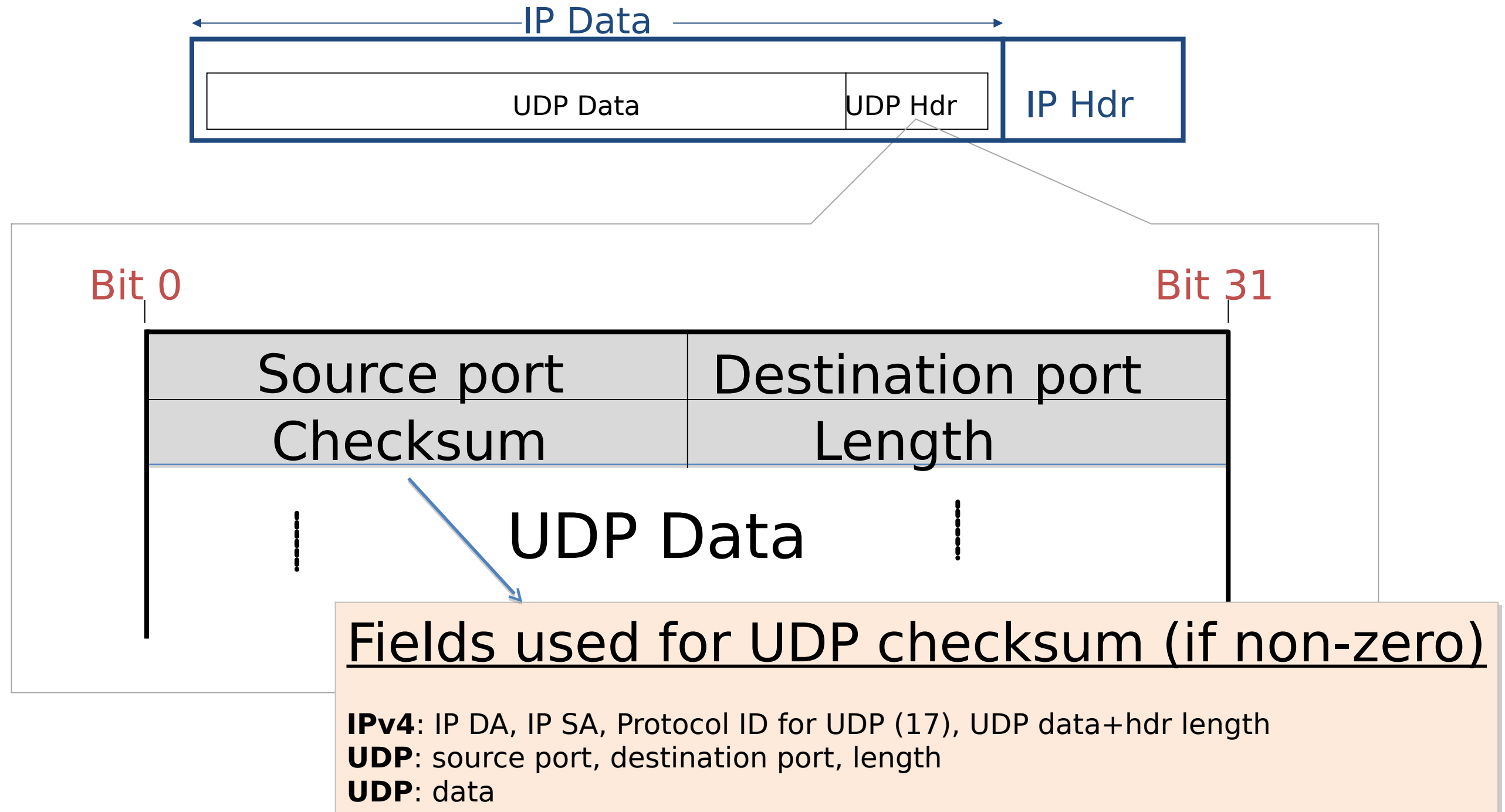## What the Internet is
The UDP Service Model

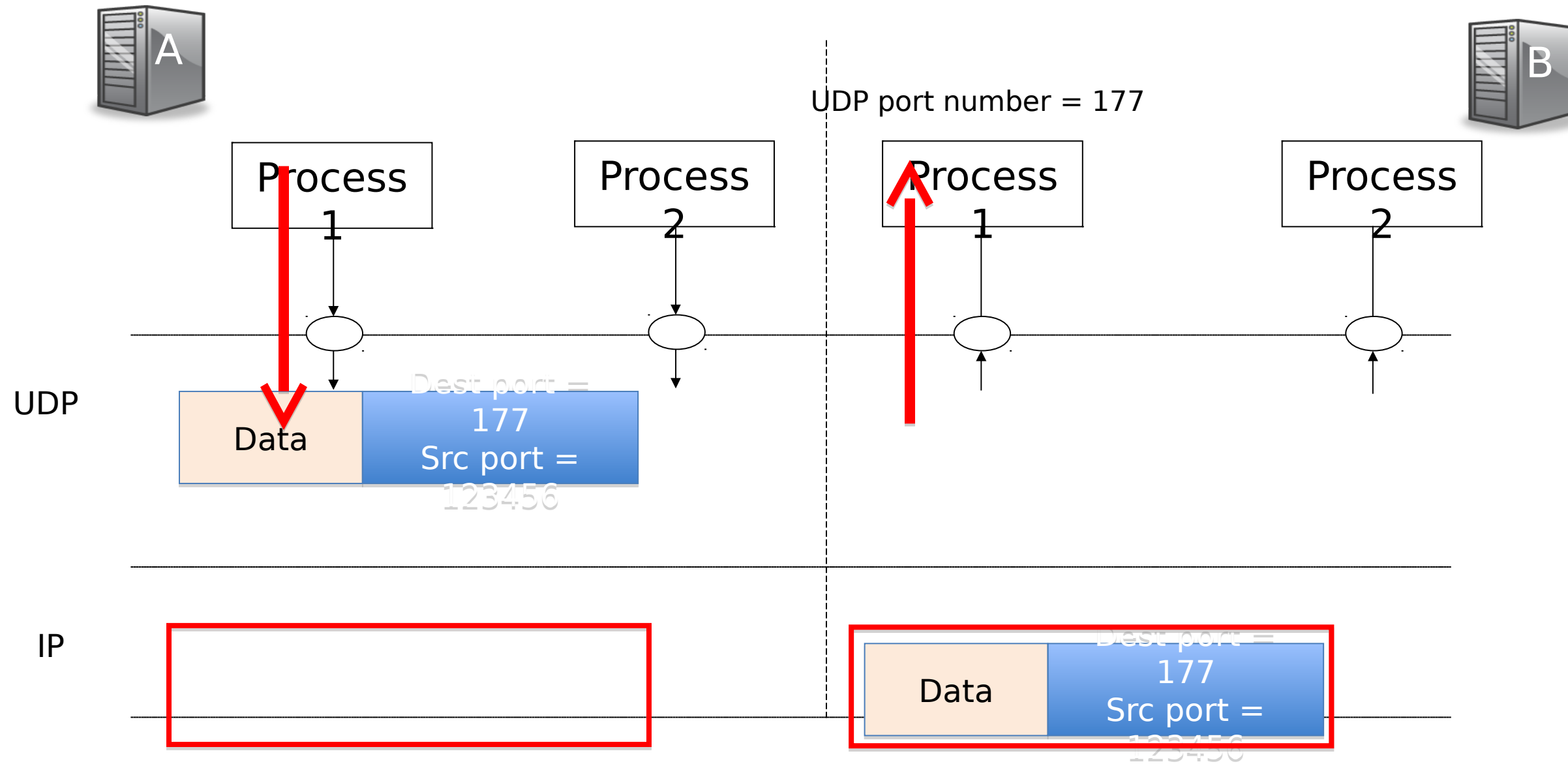**Nick McKeown**

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The UDP Datagram Format

IP Data

| UDP Data | UDP Hdr | IP Hdr |

Bit 0   Bit 31

| Source port | Destination port |
| Checksum | Length |

UDP Data

Fields used for UDP checksum (if non-zero)

IPv4: IP DA, IP SA, Protocol ID for UDP (17), UDP data+hdr length
UDP: source port, destination port, length
UDP: data

UDP: Port Demultiplexing

A

B

UDP port number = 177

| Process 1 | Process 2 | Process 1 | Process 2 |

UDP

Data

Dest port = 177
Src port = 123456

IP

Data

Dest port = 177
Src port = 123456

User Datagram Protocol (UDP)

Property	Behavior
Connectionless Datagram Service	No connection established. Packets may show up in any order.
Self contained datagrams	
Unreliable delivery	1. No acknowledgments. 2. No mechanism to detect missing or mis-sequenced datagrams. 3. No flow control.

Summary

UDP provides a simpler, datagram delivery service between application processes.

<The End>