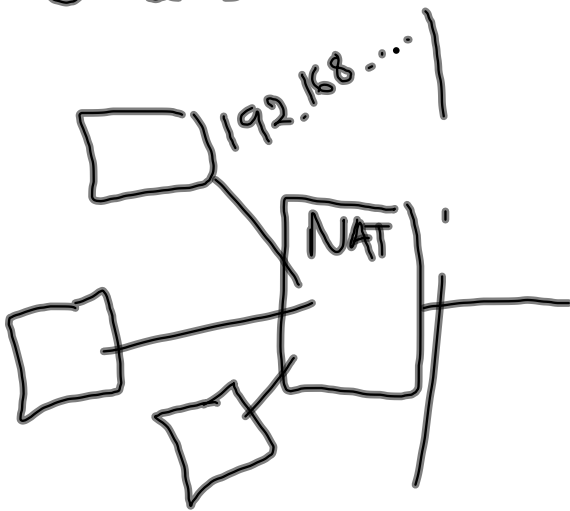




0-255



192.168...

$2^{32}$

IPv4

IPv6

128 bit addr

$2^{128}$

## Transport Layer

TCP  
UDP

UDP  
best effort

## TCP

- reliable
- connections
- congestion control
- flow control

security  
bandwidth  
timing

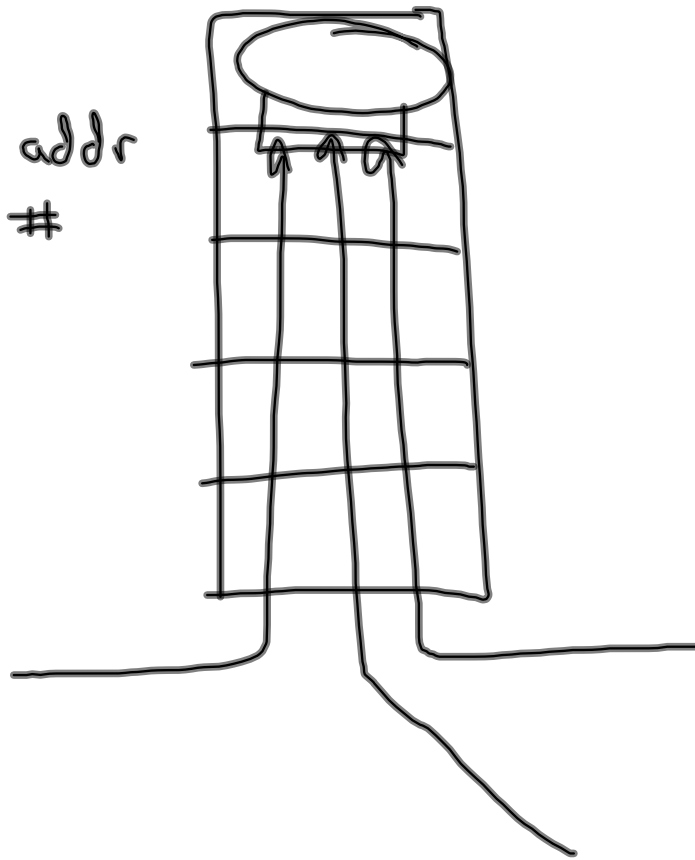
# Multiplexing / Demultiplexing

↓  
packaging w/  
header  
split

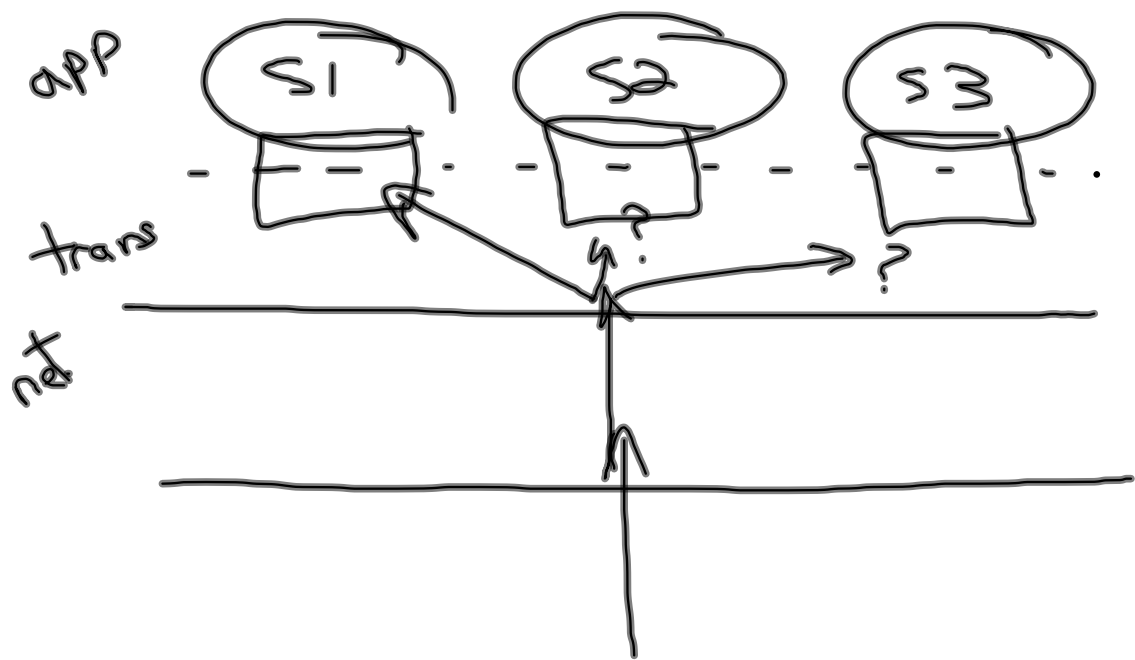


UDP

uses IP addr  
and port #



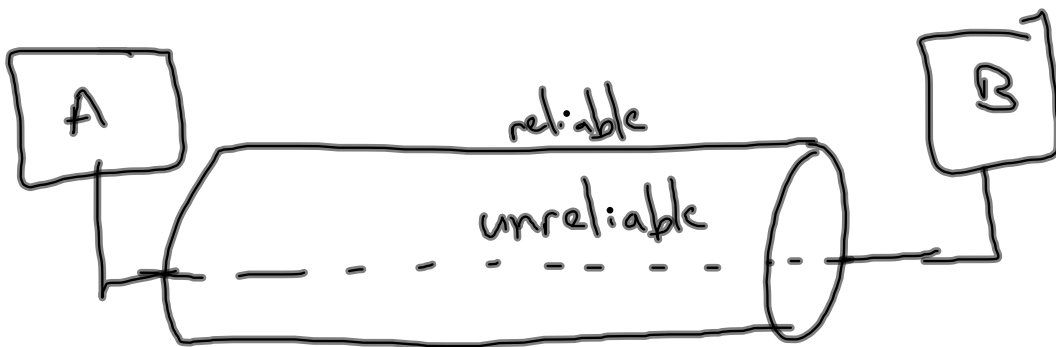
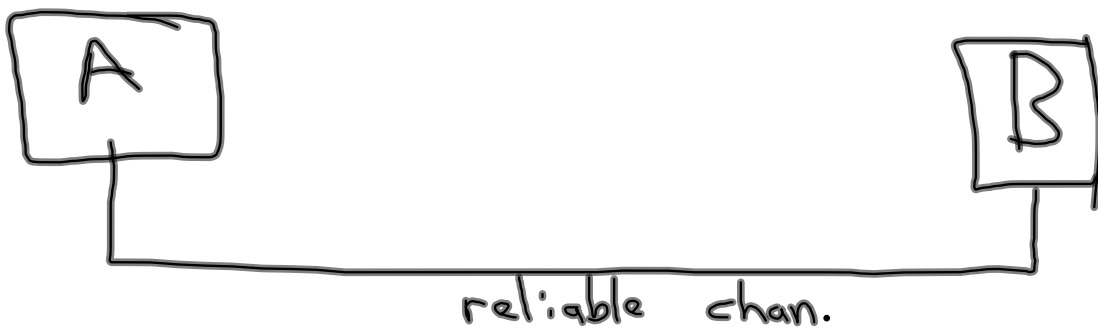
all go to  
same  
socket

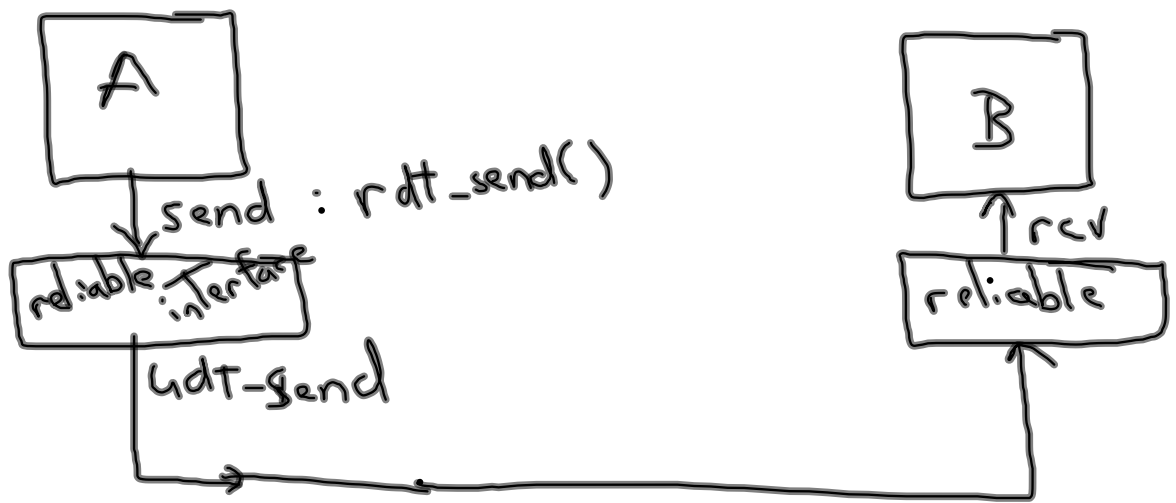


ICP

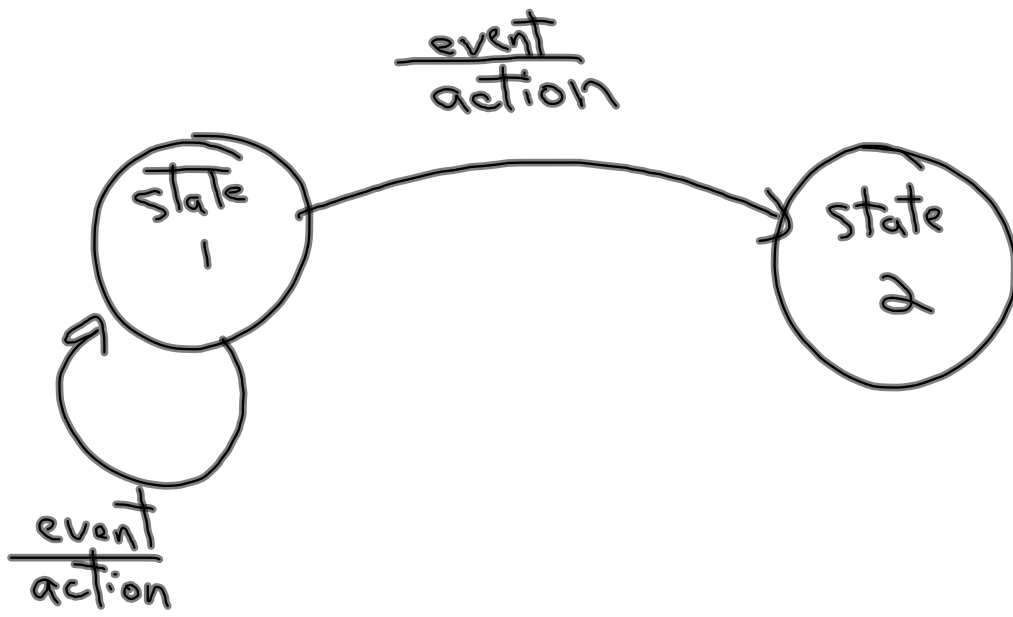
dest	IP
dest	Port
src	IP
src	port





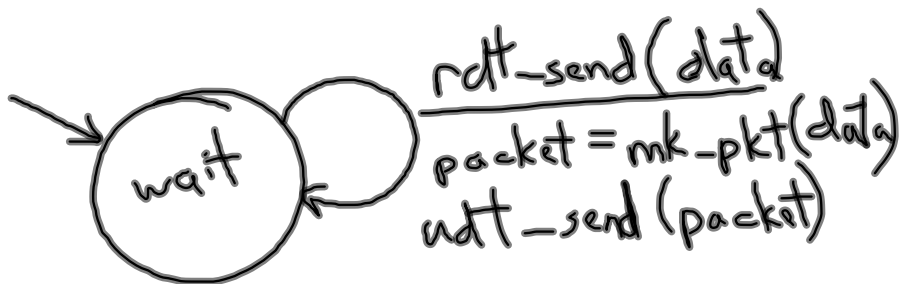




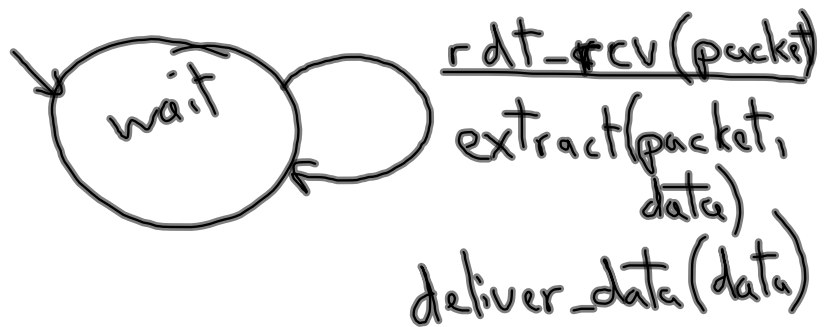


rdt 1.0 reliable transfer  
over reliable channel

sender



receiver



rdt 2.0 : bit errors

ACK : acknowledgement

NAK : neg. "