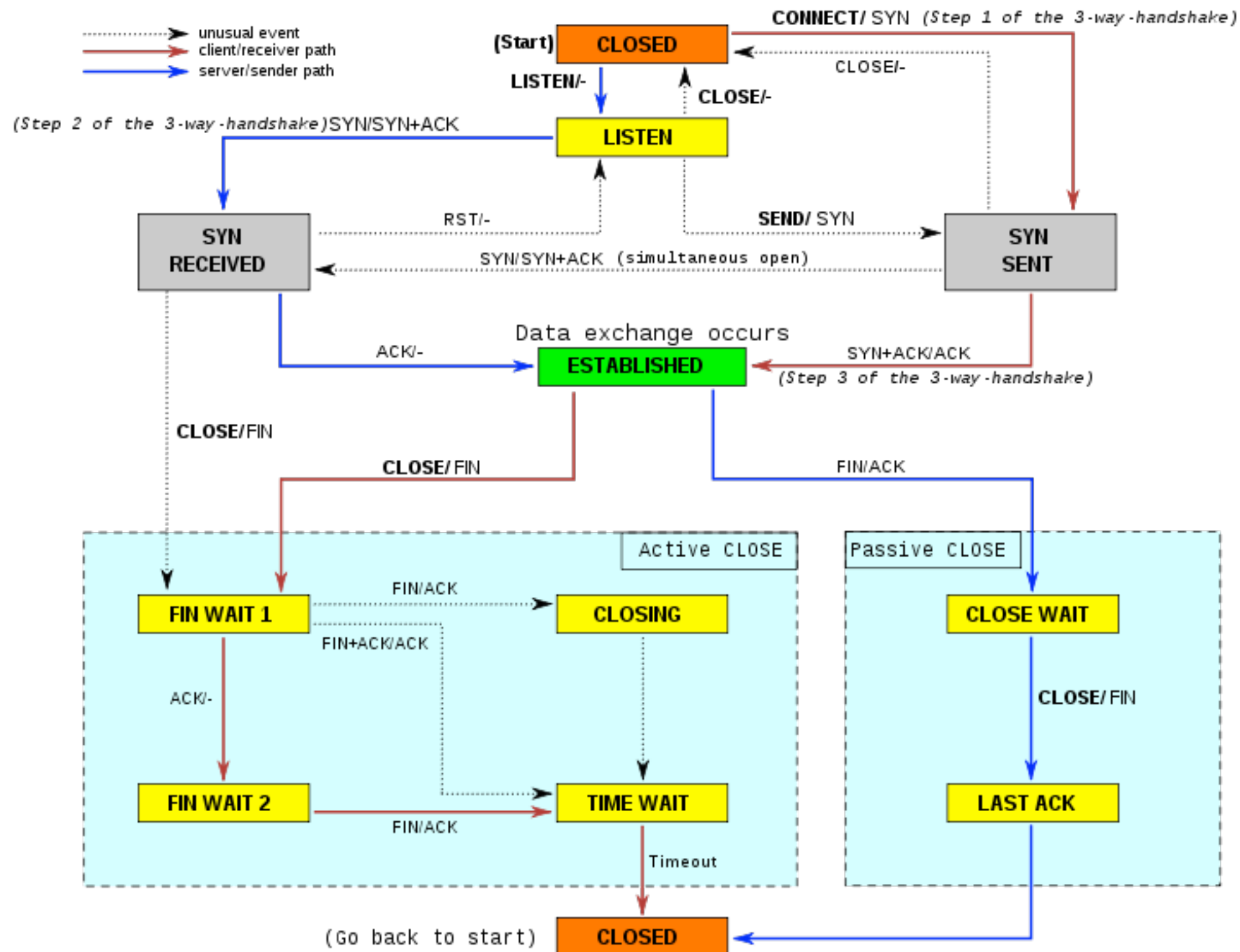
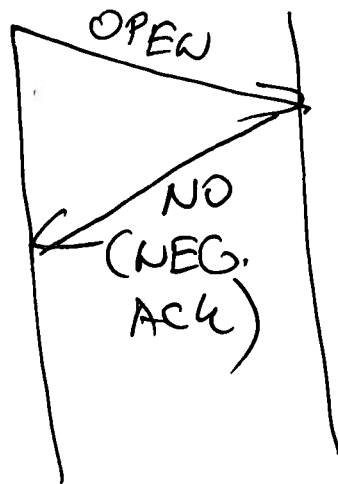
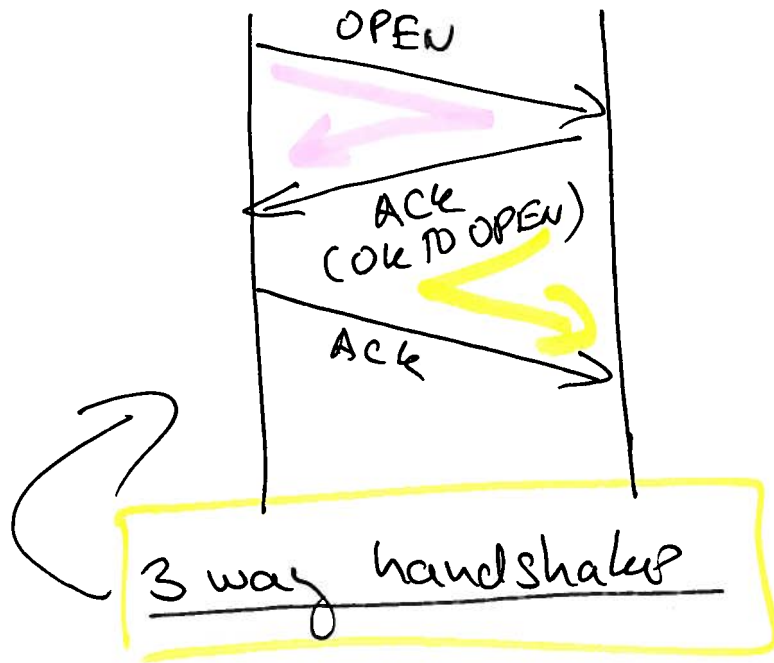


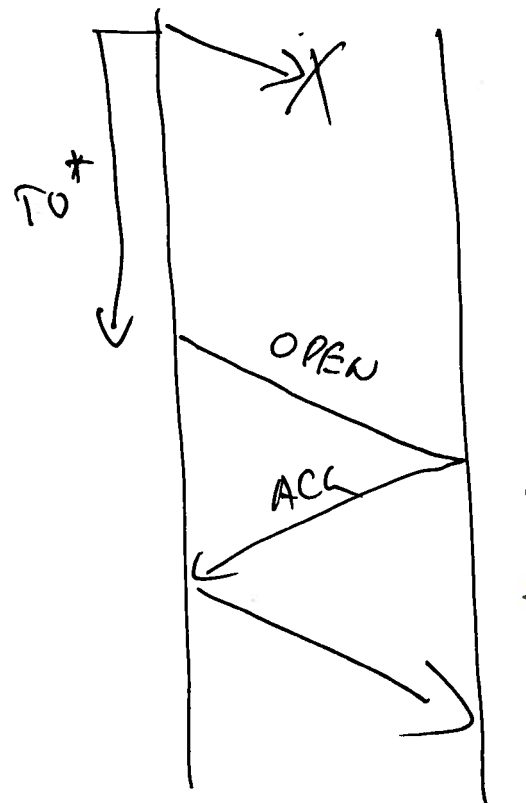
# TCP State Diagram



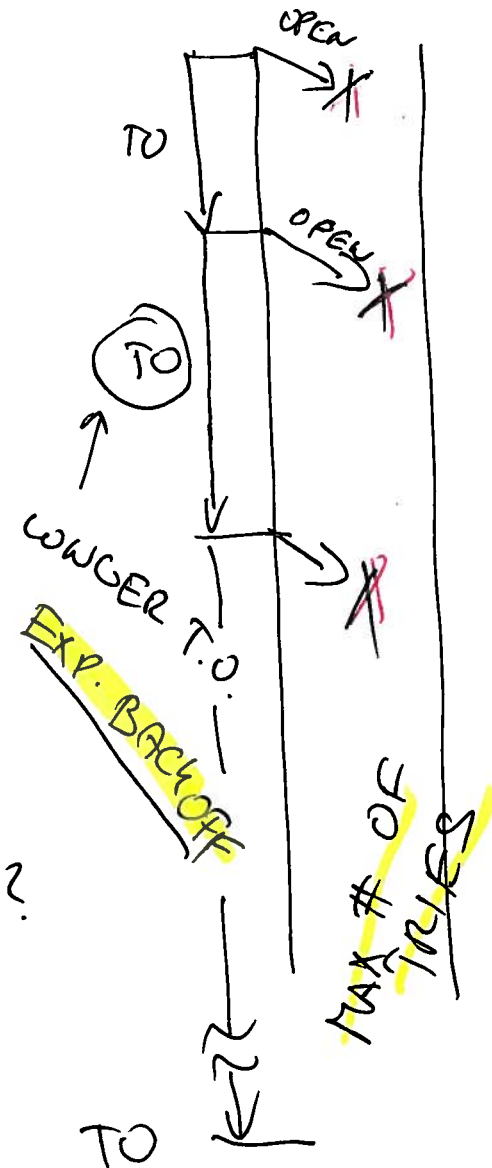
## WN. OPEN - BASICS



## PROBLEMS :

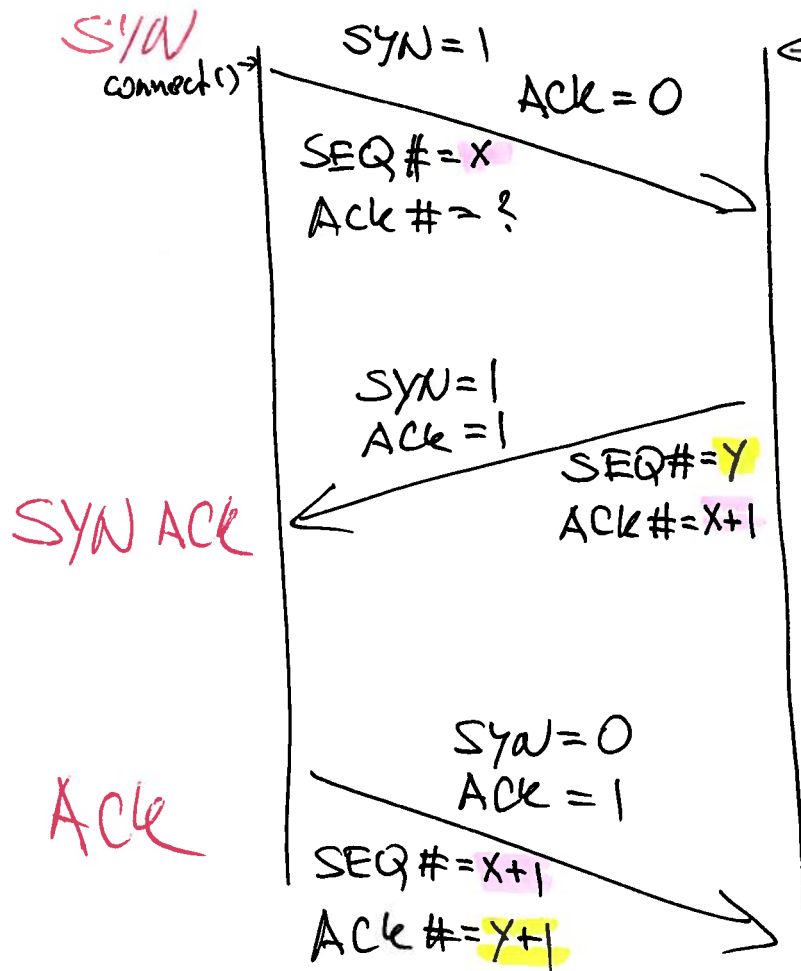


\* HOW LONG ?



# TCP

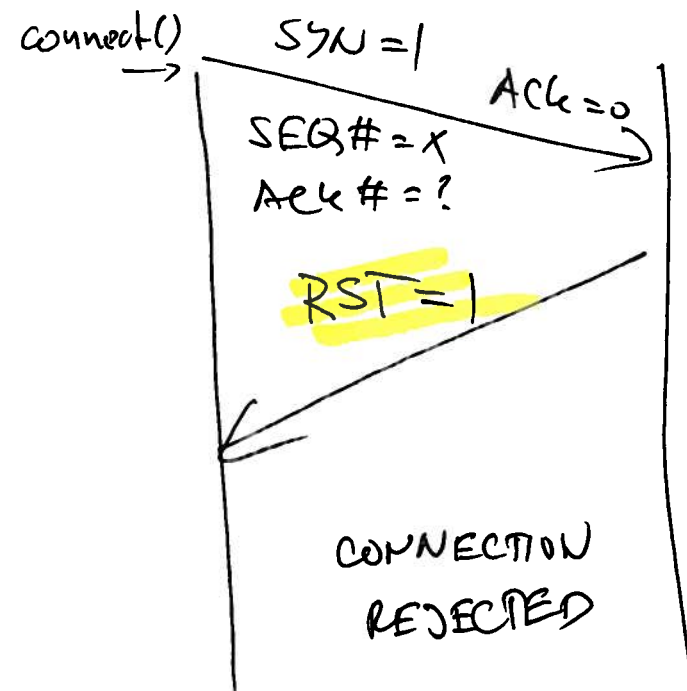
## CONNECTION OPEN



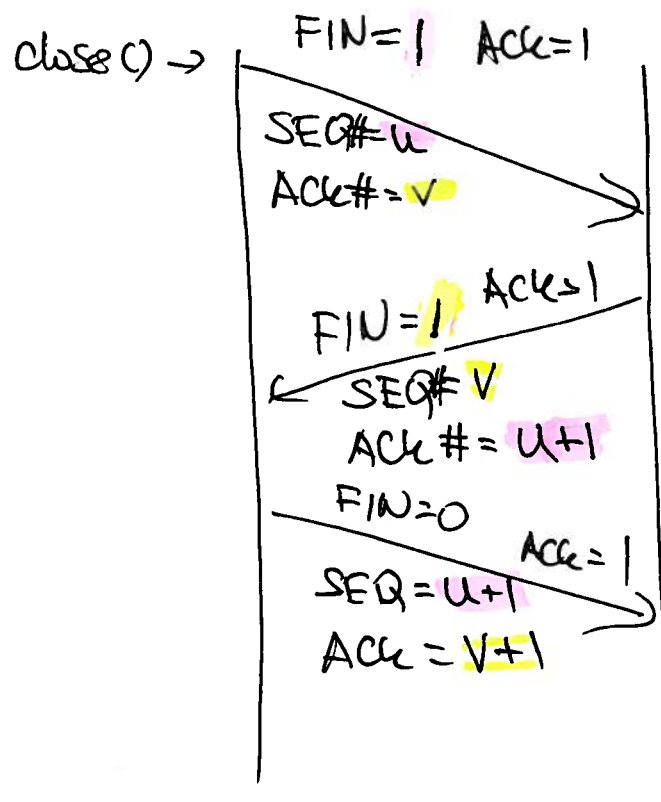
SYN - SYNCHRONIZE  
SEQ #s

ACK - ACK # FIELD  
CONTAINS A VALID  
VALUE

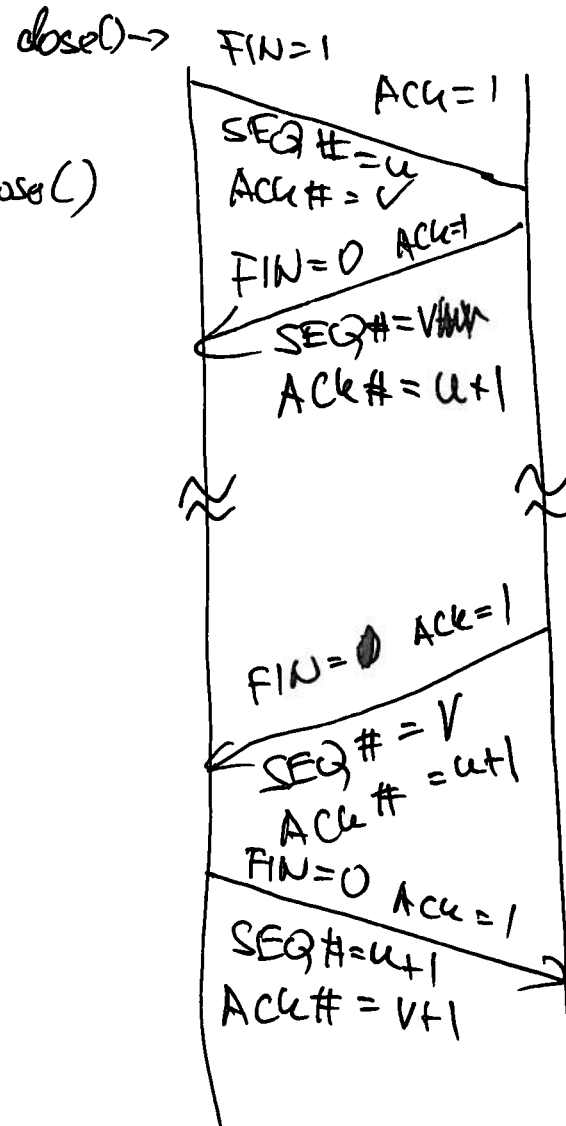
RST - RESET



# TCP - CLOSE CONNECTION



SYN. RELEASE

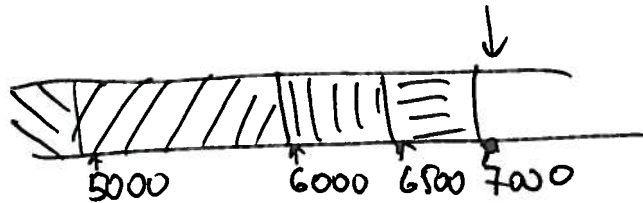
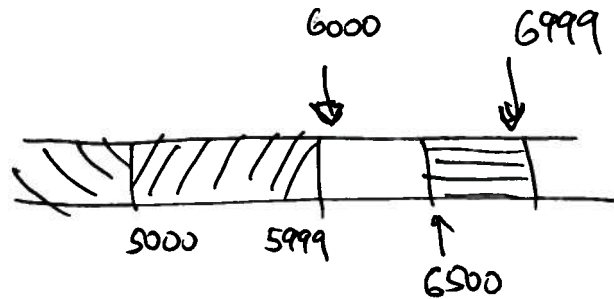
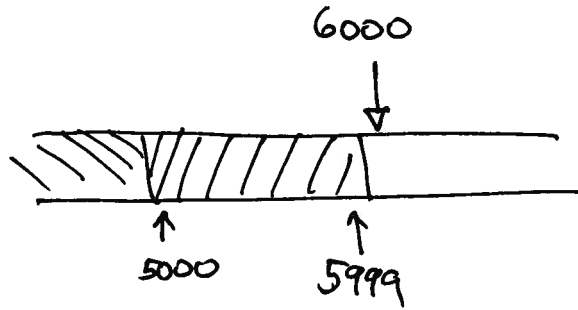
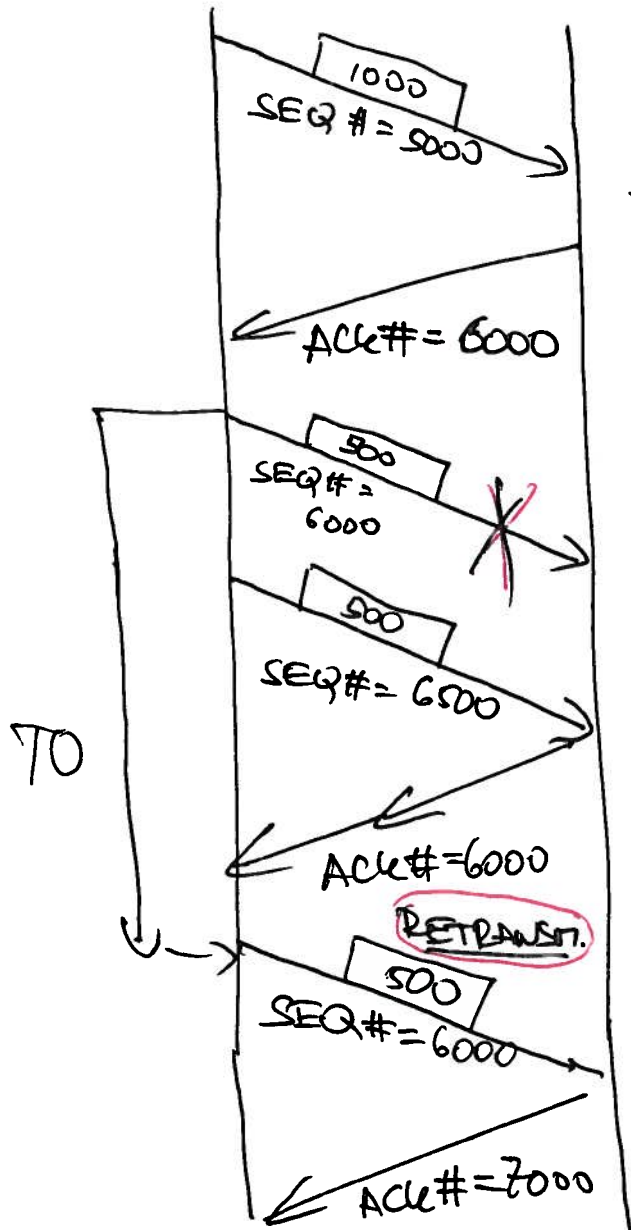


ASYM. RELEASE

FIN = CON. CLOSE REQUEST

# SEQUENCE & ACK NUMBERS IN TCP

SEQ # = 5000



# TCP Flow Control

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- ▶ Receiver congestion:
  - Window Size field - explicitly reported by the receiver
- ▶ Network congestion:
  - Retransmission timeout - based on observed RTT
  - Transmission window - based on detected packet loss