A · · · · · · · · · · B

Aseq

SYN, Seq# = Aseq

Bseq

SYN, Seq# = Bseq, Ack# = Aseq+1

Seq# = Aseq+1, Ack# = Bseq# +1

← here B knows the connection is for real

e.g. 1000 bytes of data

data
⋮
data

} 500 bytes of data

FIN Seq# = Aseq +1000

FIN Seq# = Bseq+500
Ack# = Aseq +1001

Ack = Bseq+500

timed wait in case Ack gets lost

B here forgets about the connection

Preventing Message Replay
Connection

B

$Seq\# = Bseq\# + 2000$

(no connection right now)

SYN $Seq\# = Aseq$

B does not know if this is a new connection or not.

SYN $Seq\# = Bseq + 2000$
$Ack\# = Aseq + 1$

X lost

if this arrives to A, A will return a RESET msg

$Seq\# = Aseq + 1$
$Ack\# = Bseq + 1$

wrong seq #, msg is thrown away.

after a timeout B throws away this connection.