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Julian@JMP Submission % ./project2 gbn
      Network Simulator Version 1.1 ---
Enter the number of messages to simulate: 45
Enter packet loss probability [enter 0.0 for no loss]:0.2
Enter packet corruption probability [0.0 for no corruption]:0.2
Enter average time between messages from sender's layer5 [ > 0.0]:10
Enter TRACE:2
EVENT time: 6.965711, type: 1, fromlayer5 entity: 1
Sent from B: seq = 10, ack = 0, isACK = 0, checksum = 3228,
aaaaaaaaaaaaaaaaa
Buffer at B: filled buffer slots = 0, filled window slots = 0, base A
segnum = 0
EVENT time: 11.168114, type: 1, fromlayer5 entity: 0
Sent from A: seq = 20, ack = 0, isACK = 0, checksum = 2814,
Buffer at A: filled buffer slots = 0, filled window slots = 0, base A
segnum = 0
EVENT time: 13.216425, type: 2, fromlayer3 entity: 0
Received at A: seg = 10, ack = 0, isACK = 0, checksum = 3228,
aaaaaaaaaaaaaaaaa
Accepted at A: seq = 10, ack = 0, isACK = 0, checksum = 3228,
aaaaaaaaaaaaaaaaa
         TOLAYER3: packet being lost
EVENT time: 13.858004, type: 1, fromlayer5 entity: 0
Sent from A: seq = 21, ack = 0, isACK = 0, checksum = 1e09,
cccccccccccccc
Buffer at A: filled buffer slots = 1, filled window slots = 1, base A
segnum = 20
EVENT time: 20.696243, type: 2, fromlayer3 entity: 1
Received at B: seq = 20, ack = 0, isACK = 0, checksum = 2814,
Accepted at B: seq = 20, ack = 0, isACK = 0, checksum = 2814,
EVENT time: 21.850939, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 20, isACK = 1, checksum = 56bb, ?0
Base A segnum is 20
Total successful ACKs: 1
EVENT time: 25.316151, type: 2, fromlayer3 entity: 1
Received at B: seq = 21, ack = 0, isACK = 0, checksum = 1e09,
ccccccccccccccc
Accepted at B: seq = 21, ack = 0, isACK = 0, checksum = 1e09,
ccccccccccccccc
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EVENT time: 30.965710, type: 0, timerinterrupt entity: 1
Go back to 10
Retransmitted packet segnum 10
          TOLAYER3: packet being lost
EVENT time: 31.485765, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 21, isACK = 1, checksum = 567a, ?0@
Base A segnum is 21
Total successful ACKs: 2
EVENT time: 33.198532, type: 1, fromlayer5 entity: 1
Sent from B: seq = 11, ack = 0, isACK = 0, checksum = 1409,
Buffer at B: filled buffer slots = 1, filled window slots = 1, base A
segnum = 10
EVENT time: 42.649467, type: 2, fromlayer3 entity: 0
Received at A: seq = 11, ack = 0, isACK = 0, checksum = 1409,
Accepted at A: seq = 11, ack = 0, isACK = 0, checksum = 1409,
dddddddddddddddd
EVENT time: 43.866299, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 11, isACK = 1, checksum = 5704, ?0?
B just received ACK from A for a packet previously retransmitted at
time 30.965710
Base B segnum is 10
Total successful ACKs: 3
Total successful ACKs: 4
EVENT time: 45.046837, type: 1, fromlayer5 entity: 1
Sent from B: seq = 12, ack = 0, isACK = 0, checksum = 9fe,
eeeeeeeeeeeee
Buffer at B: filled buffer slots = 0, filled window slots = 0, base A
segnum = 0
EVENT time: 46.070732, type: 2, fromlayer3 entity: 0
Received at A: seq = 12, ack = 0, isACK = 0, checksum = 9fe,
eeeeeeeeeeeee
Accepted at A: seq = 12, ack = 0, isACK = 0, checksum = 9fe,
eeeeeeeeeeeee
EVENT time: 54.537804, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 12, isACK = 1, checksum = 5703, ?0?
Base B segnum is 12
Total successful ACKs: 5
EVENT time: 56.050827, type: 1, fromlayer5 entity: 0
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Sent from A: seg = 22, ack = 0, isACK = 0, checksum = ffe9,
ffffffffffffffffffffffffff
Buffer at A: filled buffer slots = 0, filled window slots = 0, base A
segnum = 0
         TOLAYER3: packet being corrupted
EVENT time: 63.538921, type: 2, fromlayer3 entity: 1
Received at B: seq = 22, ack = 0, isACK = 0, checksum = ffe9,
Zfffffffffffffffffff
Checksum error at B: seg = 22, ack = 0, isACK = 0, checksum = 0,
Zffffffffffffffffffffff
Sent NAK from B
         TOLAYER3: packet being corrupted
EVENT time: 67.921181, type: 1, fromlayer5 entity: 0
Sent from A: seq = 23, ack = 0, isACK = 0, checksum = f5de,
Buffer at A: filled buffer slots = 1, filled window slots = 1, base A
segnum = 22
EVENT time: 69.572853, type: 2, fromlayer3 entity: 1
Received at B: seq = 23, ack = 0, isACK = 0, checksum = f5de,
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 70.553047, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
Z0??????
Checksum error at A: seq = -209419879, ack = -1, isACK = 1, checksum = -1
0, Z0??????
Sent NAK from A
EVENT time: 74.255905, type: 2, fromlayer3 entity: 1
Received at B: seg = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Empty window. Resending last sent ACK with acknum 21
         TOLAYER3: packet being lost
EVENT time: 75.919876, type: 1, fromlayer5 entity: 1
Sent from B: seq = 13, ack = 0, isACK = 0, checksum = ebde,
hhhhhhhhhhhhhhhhhhh
Buffer at B: filled buffer slots = 0, filled window slots = 0, base A
segnum = 0
         TOLAYER3: packet being lost
EVENT time: 76.846428, type: 2, fromlayer3 entity: 0
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Received at A: seg = 0, ack = 21, isACK = 1, checksum = 3f3f, Z\dot{c}h?
Checksum error at A: seq = 0, ack = 21, isACK = 1, checksum = 0, Z\dot{c}h?
Sent NAK from A
EVENT time: 80.050827, type: 0, timerinterrupt entity: 0
Go back to 22
Retransmitted packet segnum 22
Retransmitted packet segnum 23
         TOLAYER3: packet being lost
EVENT time: 80.347893, type: 1, fromlayer5 entity: 0
Sent from A: seq = 24, ack = 0, isACK = 0, checksum = e1c9,
Buffer at A: filled buffer slots = 2, filled window slots = 2, base A
segnum = 22
EVENT time: 83.794868, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 13
Retransmitted packet segnum 13
         TOLAYER3: packet being lost
EVENT time: 90.981689, type: 2, fromlayer3 entity: 1
Received at B: seq = 22, ack = 0, isACK = 0, checksum = ffe9,
fffffffffffffffffffff
Accepted at B: seq = 22, ack = 0, isACK = 0, checksum = ffe9,
ffffffffffffffffffffff
EVENT time: 92.924133, type: 2, fromlayer3 entity: 1
Received at B: seq = 24, ack = 0, isACK = 0, checksum = e1c9,
1111111111111111111111
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 95.754951, type: 1, fromlayer5 entity: 0
Sent from A: seq = 25, ack = 0, isACK = 0, checksum = d7be,
1111111111111111111111
Buffer at A: filled buffer slots = 3, filled window slots = 3, base A
segnum = 22
EVENT time: 96.651497, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 22, isACK = 1, checksum = 56b9, ?0
A just received ACK from B for a packet previously retransmitted at
time 80.050827
Base A segnum is 22
Total successful ACKs: 6
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EVENT time: 100.226334, type: 2, fromlayer3 entity: 1
Received at B: seq = 25, ack = 0, isACK = 0, checksum = d7be,
111111111111111111111
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 104.893120, type: 2, fromlayer3 entity: 0
Received at A: seg = 0, ack = 22, isACK = 1, checksum = 3e3e, \dot{c}h?
Received ACK 22 when base A segnum is 23. Ignore
EVENT time: 107.794868, type: 0, timerinterrupt entity: 1
Go back to 13
Retransmitted packet segnum 13
          TOLAYER3: packet being corrupted
EVENT time: 112.587746, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 22, isACK = 1, checksum = 3d3e, \dot{c}h?
Received ACK 22 when base A segnum is 23. Ignore
EVENT time: 115.242203, type: 1, fromlayer5 entity: 0
Sent from A: seg = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkkkk
Buffer at A: filled buffer slots = 3, filled window slots = 3, base A
seanum = 23
EVENT time: 115.540169, type: 2, fromlayer3 entity: 0
Received at A: seq = 13, ack = 0, isACK = 0, checksum = ebde,
Zhhhhhhhhhhhhhhhhhhhh
Checksum error at A: seq = 13, ack = 0, isACK = 0, checksum = 0,
Zhhhhhhhhhhhhhhhhhhh
Sent NAK from A
EVENT time: 116.535027, type: 2, fromlayer3 entity: 1
Received at B: seq = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkkk
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 120.651497, type: 0, timerinterrupt entity: 0
Go back to 23
Retransmitted packet segnum 23
Retransmitted packet segnum 24
Retransmitted packet segnum 25
Retransmitted packet segnum 26
          TOLAYER3: packet being corrupted
EVENT time: 120.710190, type: 2, fromlayer3 entity: 1
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Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 13
Retransmitted packet segnum 13
EVENT time: 122.480133, type: 2, fromlayer3 entity: 1
Received at B: seq = 23, ack = 0, isACK = 0, checksum = f5de,
gggggggggggggggg
Accepted at B: seg = 23, ack = 0, isACK = 0, checksum = f5de,
gggggggggggggggg
EVENT time: 124.410927, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 22, isACK = 1, checksum = 3c3e, \dot{c}h?
Received ACK 22 when base A segnum is 23. Ignore
EVENT time: 125.741760, type: 2, fromlayer3 entity: 1
Received at B: seq = 24, ack = 0, isACK = 0, checksum = e1c9,
Accepted at B: seq = 24, ack = 0, isACK = 0, checksum = e1c9,
EVENT time: 133.396469, type: 2, fromlayer3 entity: 1
Received at B: seq = 25, ack = 0, isACK = 0, checksum = d7be,
Accepted at B: seq = 25, ack = 0, isACK = 0, checksum = d7be,
EVENT time: 133.905624, type: 2, fromlayer3 entity: 0
Received at A: seq = 13, ack = 0, isACK = 0, checksum = ebde,
hhhhhhhhhhhhhhhhhhh
Accepted at A: seq = 13, ack = 0, isACK = 0, checksum = ebde,
hhhhhhhhhhhhhhhhhhh
EVENT time: 134.580200, type: 1, fromlayer5 entity: 1
Sent from B: seq = 14, ack = 0, isACK = 0, checksum = c3b5,
Buffer at B: filled buffer slots = 1, filled window slots = 1, base A
segnum = 13
         TOLAYER3: packet being lost
EVENT time: 135.130722, type: 2, fromlayer3 entity: 0
Received at A: seg = 0, ack = 23, isACK = 1, checksum = 5738, ?0?
A just received ACK from B for a packet previously retransmitted at
time 120.651497
Base A segnum is 23
Total successful ACKs: 7
EVENT time: 136.259750, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 24, isACK = 1, checksum = 56b7, ?0
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Base A segnum is 24
Total successful ACKs: 8
EVENT time: 139.810822, type: 2, fromlayer3 entity: 1
Received at B: seq = 26, ack = 0, isACK = 0, checksum = cdb3,
Zkkkkkkkkkkkkkkkkk
Checksum error at B: seq = 26, ack = 0, isACK = 0, checksum = 0,
Zkkkkkkkkkkkkkkkkk
Sent NAK from B
EVENT time: 142.390717, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 25, isACK = 1, checksum = 56d6, ?0?
Base A segnum is 25
Total successful ACKs: 9
EVENT time: 144.455780, type: 1, fromlayer5 entity: 1
Sent from B: seq = 15, ack = 0, isACK = 0, checksum = b9aa,
Buffer at B: filled buffer slots = 2, filled window slots = 2, base A
segnum = 13
EVENT time: 144.710190, type: 0, timerinterrupt entity: 1
Go back to 13
Retransmitted packet segnum 13
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 14
         TOLAYER3: packet being lost
Retransmitted packet segnum 15
EVENT time: 146.334381, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 13, isACK = 1, checksum = 56e2, ?0?
B just received ACK from A for a packet previously retransmitted at
time 107.794868
Base B segnum is 13
Total successful ACKs: 10
EVENT time: 149.089172, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 26
Retransmitted packet segnum 26
EVENT time: 152.364731, type: 2, fromlayer3 entity: 1
Received at B: seq = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkkk
Accepted at B: seq = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkkkk
         TOLAYER3: packet being corrupted
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EVENT time: 157.589142, type: 2, fromlayer3 entity: 0
Received at A: seq = 15, ack = 0, isACK = 0, checksum = b9aa,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 159.404648, type: 1, fromlayer5 entity: 0
Sent from A: seq = 27, ack = 0, isACK = 0, checksum = af94,
nnnnnnnnnnnnnnnnn
Buffer at A: filled buffer slots = 1, filled window slots = 1, base A
seanum = 26
         TOLAYER3: packet being lost
EVENT time: 159.632874, type: 2, fromlayer3 entity: 0
Received at A: seq = 13, ack = 0, isACK = 0, checksum = ebde,
Zhhhhhhhhhhhhhhhhhhhh
Checksum error at A: seq = 13, ack = 0, isACK = 0, checksum = 0,
Zhhhhhhhhhhhhhhhhhhh
Sent NAK from A
         TOLAYER3: packet being corrupted
EVENT time: 164.891510, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 13, isACK = 1, checksum = 2fb0, ch?0??
Received ACK 13 when base B segnum is 14. Ignore
EVENT time: 168.781845, type: 2, fromlayer3 entity: 0
Received at A: seq = 15, ack = 0, isACK = 0, checksum = b9aa,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 170.334381, type: 0, timerinterrupt entity: 1
Go back to 14
Retransmitted packet segnum 14
         TOLAYER3: packet being lost
Retransmitted packet segnum 15
         TOLAYER3: packet being corrupted
EVENT time: 171.202057, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 26, isACK = 1, checksum = 56d5, Z0?
Checksum error at A: seq = 0, ack = 26, isACK = 1, checksum = 0, Z0?
Sent NAK from A
         TOLAYER3: packet being corrupted
EVENT time: 173.089172, type: 0, timerinterrupt entity: 0
Go back to 26
Retransmitted packet segnum 26
Retransmitted packet segnum 27
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EVENT time: 173.978531, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
Z0??????
Checksum error at B: seq = -209419879, ack = -1, isACK = 1, checksum =
0, Z0??????
Sent NAK from B
EVENT time: 175.250687, type: 1, fromlayer5 entity: 0
Sent from A: seq = 28, ack = 0, isACK = 0, checksum = a589,
Buffer at A: filled buffer slots = 2, filled window slots = 2, base A
seanum = 26
                    TOLAYER3: packet being corrupted
EVENT time: 177.684357, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 13, isACK = 1, checksum = 3c47, checksum = 3c47,
Received ACK 13 when base B segnum is 14. Ignore
EVENT time: 179.726837, type: 2, fromlayer3 entity: 0
Received at A: seq = 15, ack = 0, isACK = 0, checksum = b9aa,
Checksum error at A: seq = 15, ack = 0, isACK = 0, checksum = 0,
Sent NAK from A
EVENT time: 181.968628, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = 999999, isACK = 1, checksum =
5a6b, 0??????
Checksum error at B: seq = -209419879, ack = 999999, isACK = 1,
checksum = 0, 0??????
Sent NAK from B
EVENT time: 182.378571, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 26
Retransmitted packet segnum 26
Retransmitted packet segnum 27
Retransmitted packet segnum 28
EVENT time: 184.726074, type: 1, fromlayer5 entity: 1
Sent from B: seq = 16, ack = 0, isACK = 0, checksum = 9b8b,
qqqqqqqqqqqqqqqqqq
Buffer at B: filled buffer slots = 2, filled window slots = 2, base A
segnum = 14
EVENT time: 186.842194, type: 2, fromlayer3 entity: 1
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Received at B: seq = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkkkk
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being lost
EVENT time: 187.218903, type: 1, fromlayer5 entity: 1
Sent from B: seq = 17, ack = 0, isACK = 0, checksum = 9180,
Buffer at B: filled buffer slots = 3, filled window slots = 3, base A
segnum = 14
         TOLAYER3: packet being corrupted
EVENT time: 190.096497, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 26
Retransmitted packet segnum 26
Retransmitted packet segnum 27
Retransmitted packet segnum 28
EVENT time: 192.559326, type: 2, fromlayer3 entity: 1
Received at B: seq = 27, ack = 0, isACK = 0, checksum = af94,
nnnnnnnnnnnnnnnnn
Accepted at B: seq = 27, ack = 0, isACK = 0, checksum = af94,
nnnnnnnnnnnnnnnnn
EVENT time: 194.334381, type: 0, timerinterrupt entity: 1
Go back to 14
Retransmitted packet segnum 14
Retransmitted packet segnum 15
Retransmitted packet segnum 16
         TOLAYER3: packet being lost
Retransmitted packet segnum 17
EVENT time: 195.130768, type: 1, fromlayer5 entity: 1
Sent from B: seq = 18, ack = 0, isACK = 0, checksum = 8775,
rrrrrrrrrrrrrrrrrrr
Buffer at B: filled buffer slots = 4, filled window slots = 4, base A
segnum = 14
EVENT time: 197.132278, type: 2, fromlayer3 entity: 0
Received at A: seq = 16, ack = 0, isACK = 0, checksum = 9b8b,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
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EVENT time: 197.343979, type: 1, fromlayer5 entity: 1
Sent from B: seq = 19, ack = 0, isACK = 0, checksum = 7d6a,
SSSSSSSSSSSSSSSS
Buffer at B: filled buffer slots = 5, filled window slots = 5, base A
seqnum = 14
EVENT time: 197.714050, type: 1, fromlayer5 entity: 1
Sent from B: seq = 20, ack = 0, isACK = 0, checksum = 735f,
ttttttttttttttttttt
Buffer at B: filled buffer slots = 6, filled window slots = 6, base A
segnum = 14
         TOLAYER3: packet being corrupted
EVENT time: 200.362122, type: 2, fromlayer3 entity: 0
Received at A: seq = 17, ack = 0, isACK = 0, checksum = 9180,
Zaqaqaqaqaqaqaqa
Checksum error at A: seq = 17, ack = 0, isACK = 0, checksum = 0,
Zqqqqqqqqqqqqqq
Sent NAK from A
          TOLAYER3: packet being corrupted
EVENT time: 202.398224, type: 2, fromlayer3 entity: 1
Received at B: seq = 28, ack = 0, isACK = 0, checksum = a589,
Z0000000000000000000
Checksum error at B: seg = 28, ack = 0, isACK = 0, checksum = 0,
Z0000000000000000000
Sent NAK from B
EVENT time: 203.910950, type: 1, fromlayer5 entity: 1
Sent from B: seq = 21, ack = 0, isACK = 0, checksum = 6954,
uuuuuuuuuuuuuuuuu
Buffer at B: filled buffer slots = 7, filled window slots = 7, base A
segnum = 14
EVENT time: 209.268219, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 14
Retransmitted packet segnum 14
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 15
          TOLAYER3: packet being lost
Retransmitted packet segnum 16
Retransmitted packet segnum 17
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 18
          TOLAYER3: packet being lost
Retransmitted packet segnum 19
Retransmitted packet segnum 20
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Retransmitted packet segnum 21
         TOLAYER3: packet being corrupted
EVENT time: 210.155121, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 27, isACK = 1, checksum = 56b4, ?0
A just received ACK from B for a packet previously retransmitted at
time 173.089172
Base A segnum is 26
Total successful ACKs: 11
Total successful ACKs: 12
EVENT time: 212.196869, type: 2, fromlayer3 entity: 1
Received at B: seq = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkk
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 216.635986, type: 2, fromlayer3 entity: 1
Received at B: seq = 27, ack = 0, isACK = 0, checksum = af94,
nnnnnnnnnnnnnnnnn
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 216.645874, type: 2, fromlayer3 entity: 0
Received at A: seq = 14, ack = 0, isACK = 0, checksum = c3b5,
Accepted at A: seq = 14, ack = 0, isACK = 0, checksum = c3b5,
EVENT time: 219.974915, type: 1, fromlayer5 entity: 0
Sent from A: seg = 29, ack = 0, isACK = 0, checksum = 5f42,
VVVVVVVVVVVVVVVVVVVVV
Buffer at A: filled buffer slots = 1, filled window slots = 1, base A
segnum = 28
         TOLAYER3: packet being corrupted
EVENT time: 223.897125, type: 2, fromlayer3 entity: 1
Received at B: seg = 28, ack = 0, isACK = 0, checksum = a589,
Accepted at B: seq = 28, ack = 0, isACK = 0, checksum = a589,
EVENT time: 224.725403, type: 2, fromlayer3 entity: 0
Received at A: seq = 15, ack = 0, isACK = 0, checksum = b9aa,
Accepted at A: seg = 15, ack = 0, isACK = 0, checksum = b9aa,
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TOLAYER3: packet being lost

TOLAYER3: packet being corrupted

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EVENT time: 229.870926, type: 2, fromlayer3 entity: 0
Received at A: seq = 17, ack = 0, isACK = 0, checksum = 9180,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 230.637192, type: 2, fromlayer3 entity: 1
Received at B: seg = 26, ack = 0, isACK = 0, checksum = cdb3,
kkkkkkkkkkkkkkkkk
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 232.288727, type: 2, fromlayer3 entity: 1
Received at B: seq = 27, ack = 0, isACK = 0, checksum = af94,
nnnnnnnnnnnnnnnnn
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 233.268219, type: 0, timerinterrupt entity: 1
Go back to 14
Retransmitted packet segnum 14
Retransmitted packet segnum 15
Retransmitted packet segnum 16
Retransmitted packet segnum 17
Retransmitted packet segnum 18
Retransmitted packet segnum 19
Retransmitted packet segnum 20
Retransmitted packet segnum 21
         TOLAYER3: packet being corrupted
EVENT time: 233.978577, type: 2, fromlayer3 entity: 1
Received at B: seg = 28, ack = 0, isACK = 0, checksum = a589,
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 234.155121, type: 0, timerinterrupt entity: 0
Go back to 28
Retransmitted packet segnum 28
Retransmitted packet segnum 29
EVENT time: 235.959305, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 13, isACK = 1, checksum = 4547, \dot{c}h?
```

```
Received ACK 13 when base B segnum is 14. Ignore
EVENT time: 239.786224, type: 2, fromlayer3 entity: 0
Received at A: seq = 18, ack = 0, isACK = 0, checksum = 8775,
rrrrrrrrrrrrrrrrrrr
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 239.964111, type: 1, fromlayer5 entity: 1
Sent from B: seq = 22, ack = 0, isACK = 0, checksum = 553f,
WWWWWWWWWWWWWWW
Buffer at B: filled buffer slots = 8, filled window slots = 8, base A
segnum = 14
EVENT time: 241.853867, type: 2, fromlayer3 entity: 0
Received at A: seq = 19, ack = 0, isACK = 0, checksum = 7d6a,
SSSSSSSSSSSSSSSS
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 242.547195, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
Checksum error at B: seq = -209419879, ack = -1, isACK = 1, checksum =
0. Z0??????
Sent NAK from B
EVENT time: 247.017090, type: 1, fromlayer5 entity: 1
Sent from B: seq = 23, ack = 0, isACK = 0, checksum = 4b34,
XXXXXXXXXXXXXXXXXX
Buffer at B: filled buffer slots = 9, filled window slots = 9, base A
segnum = 14
EVENT time: 248.476593, type: 2, fromlayer3 entity: 0
Received at A: seg = 20, ack = 0, isACK = 0, checksum = 735f,
Ztttttttttttttttttt
Checksum error at A: seq = 20, ack = 0, isACK = 0, checksum = 0.
Ztttttttttttttttttt
Sent NAK from A
EVENT time: 249.456467, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 14, isACK = 1, checksum = 56c1, ?0
B just received ACK from A for a packet previously retransmitted at
time 170.334381
Base B segnum is 14
Total successful ACKs: 13
```

```
EVENT time: 254.744705, type: 2, fromlayer3 entity: 1
Received at B: seq = 999999, ack = 0, isACK = 0, checksum = 5f42,
Checksum error at B: seq = 999999, ack = 0, isACK = 0, checksum = 0,
Sent NAK from B
         TOLAYER3: packet being lost
EVENT time: 256.441986, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 28
Retransmitted packet segnum 28
Retransmitted packet segnum 29
EVENT time: 260.392761, type: 1, fromlayer5 entity: 0
Sent from A: seq = 30, ack = 0, isACK = 0, checksum = 4123,
ууууууууууууууууу
Buffer at A: filled buffer slots = 2, filled window slots = 2, base A
segnum = 28
EVENT time: 261.730469, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 15, isACK = 1, checksum = 5740, Z0?
Checksum error at B: seg = 0, ack = 15, isACK = 1, checksum = 0, Z0?
Sent NAK from B
         TOLAYER3: packet being corrupted
EVENT time: 265.303192, type: 2, fromlayer3 entity: 0
Received at A: seq = 21, ack = 0, isACK = 0, checksum = 6954,
uuuuuuuuuuuuuuuuu
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 265.989838, type: 2, fromlayer3 entity: 1
Received at B: seg = 0, ack = 15, isACK = 1, checksum = 3a45, \dot{c}h?
Base B segnum is 15
Total successful ACKs: 14
EVENT time: 270.978027, type: 2, fromlayer3 entity: 0
Received at A: seq = 14, ack = 0, isACK = 0, checksum = c3b5,
Checksum error at A: seq = 14, ack = 0, isACK = 0, checksum = 0,
Sent NAK from A
EVENT time: 272.115143, type: 2, fromlayer3 entity: 1
Received at B: seq = 28, ack = 0, isACK = 0, checksum = a589,
```

```
Received unexpected seanum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being lost
EVENT time: 275.803833, type: 2, fromlayer3 entity: 1
Received at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42,
Accepted at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42,
EVENT time: 279.701660, type: 1, fromlayer5 entity: 0
Sent from A: seq = 31, ack = 0, isACK = 0, checksum = 3718,
Buffer at A: filled buffer slots = 3, filled window slots = 3, base A
segnum = 28
EVENT time: 280.005493, type: 2, fromlayer3 entity: 0
Received at A: seq = 16, ack = 0, isACK = 0, checksum = 9b8b,
qqqqqqqqqqqqqqqqqqq
Accepted at A: seq = 16, ack = 0, isACK = 0, checksum = 9b8b,
qqqqqqqqqqqqqqqqqqq
         TOLAYER3: packet being corrupted
EVENT time: 280.441986, type: 0, timerinterrupt entity: 0
Go back to 28
Retransmitted packet segnum 28
Retransmitted packet segnum 29
Retransmitted packet segnum 30
Retransmitted packet segnum 31
EVENT time: 282.867401, type: 2, fromlayer3 entity: 0
Received at A: seq = 999999, ack = 0, isACK = 0, checksum = 9180,
Checksum error at A: seq = 999999, ack = 0, isACK = 0, checksum = 0,
Sent NAK from A
EVENT time: 284.325378, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 15, isACK = 1, checksum = 2fae, Zch?0??
Checksum error at B: seq = 0, ack = 15, isACK = 1, checksum = 0,
Zċh?0??
Sent NAK from B
EVENT time: 286.745117, type: 2, fromlayer3 entity: 0
Received at A: seq = 19, ack = 0, isACK = 0, checksum = 7d6a,
SSSSSSSSSSSSSSSS
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
```

```
EVENT time: 287.524841, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 15, isACK = 1, checksum = 4145, checksum = 4145,
Received ACK 15 when base B segnum is 16. Ignore
EVENT time: 289.989838, type: 0, timerinterrupt entity: 1
Go back to 16
Retransmitted packet segnum 16
Retransmitted packet segnum 17
Retransmitted packet segnum 18
Retransmitted packet segnum 19
                     TOLAYER3: packet being lost
Retransmitted packet segnum 20
                     TOLAYER3: packet being lost
Retransmitted packet segnum 21
Retransmitted packet segnum 22
                     TOLAYER3: packet being corrupted
Retransmitted packet segnum 23
EVENT time: 292.022552, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 16
Retransmitted packet segnum 16
Retransmitted packet segnum 17
Retransmitted packet segnum 18
                     TOLAYER3: packet being corrupted
Retransmitted packet segnum 19
Retransmitted packet segnum 20
Retransmitted packet segnum 21
Retransmitted packet segnum 22
                     TOLAYER3: packet being lost
Retransmitted packet segnum 23
                     TOLAYER3: packet being corrupted
EVENT time: 293.752899, type: 2, fromlayer3 entity: 0
Received at A: seq = 21, ack = 0, isACK = 0, checksum = 6954,
Zuuuuuuuuuuuuuuuu
Checksum error at A: seq = 21, ack = 0, isACK = 0, checksum = 0.
Zuuuuuuuuuuuuuuuu
Sent NAK from A
                     TOLAYER3: packet being corrupted
EVENT time: 294.329407, type: 1, fromlayer5 entity: 0
Sent from A: seq = 32, ack = 0, isACK = 0, checksum = 3212,
aaaaaaaaaaaaaaaaa
Buffer at A: filled buffer slots = 4, filled window slots = 4, base A
segnum = 28
```

```
EVENT time: 294.979797, type: 2, fromlayer3 entity: 0
Received at A: seq = \emptyset, ack = 27, isACK = 1, checksum = 4139, checksum = 4139
Received ACK 27 when base A segnum is 28. Ignore
EVENT time: 297.669495, type: 1, fromlayer5 entity: 1
Sent from B: seq = 24, ack = 0, isACK = 0, checksum = 2810,
Buffer at B: filled buffer slots = 8, filled window slots = 8, base A
segnum = 16
EVENT time: 298.602814, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 27, isACK = 1, checksum = 4139, checksum = 4139
Received ACK 27 when base A segnum is 28. Ignore
EVENT time: 299.382751, type: 2, fromlayer3 entity: 1
Received at B: seq = 28, ack = 0, isACK = 0, checksum = a589,
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being lost
EVENT time: 300.777222, type: 2, fromlayer3 entity: 1
Received at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42,
VVVVVVVVVVVVVVVVVVVVVV
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 304.441986, type: 0, timerinterrupt entity: 0
Go back to 28
Retransmitted packet segnum 28
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 29
Retransmitted packet segnum 30
Retransmitted packet segnum 31
Retransmitted packet segnum 32
EVENT time: 304.536072, type: 2, fromlayer3 entity: 1
Received at B: seq = 30, ack = 0, isACK = 0, checksum = 4123,
уууууууууууууууууу
Accepted at B: seq = 30, ack = 0, isACK = 0, checksum = 4123,
уууууууууууууууууу
EVENT time: 305.924103, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 28, isACK = 1, checksum = 5673, ?0@
A just received ACK from B for a packet previously retransmitted at
time 234.155121
Base A segnum is 28
Total successful ACKs: 15
```

```
EVENT time: 306.503845, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 15, isACK = 1, checksum = 3945, checksum = 3945,
Received ACK 15 when base B seqnum is 16. Ignore
EVENT time: 306.670929, type: 1, fromlayer5 entity: 0
Sent from A: seq = 33, ack = 0, isACK = 0, checksum = 1dfd,
CCCCCCCCCCCCCCCC
Buffer at A: filled buffer slots = 4, filled window slots = 4, base A
seanum = 29
                    TOLAYER3: packet being lost
EVENT time: 311.389221, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 16
Retransmitted packet segnum 16
Retransmitted packet segnum 17
Retransmitted packet segnum 18
Retransmitted packet segnum 19
                    TOLAYER3: packet being lost
Retransmitted packet segnum 20
                    TOLAYER3: packet being corrupted
Retransmitted packet segnum 21
Retransmitted packet segnum 22
Retransmitted packet segnum 23
Retransmitted packet segnum 24
EVENT time: 312.034302, type: 2, fromlayer3 entity: 0
Received at A: seq = \emptyset, ack = 28, isACK = 1, checksum = 3938, checksum = 3938
Received ACK 28 when base A segnum is 29. Ignore
EVENT time: 314.013306, type: 2, fromlayer3 entity: 1
Received at B: seq = 31, ack = 0, isACK = 0, checksum = 3718,
ZZZZZZZZZZZZZZZZZZZ
Accepted at B: seq = 31, ack = 0, isACK = 0, checksum = 3718,
ZZZZZZZZZZZZZZZZZZZZ
EVENT time: 317.955322, type: 2, fromlayer3 entity: 1
Received at B: seg = 999999, ack = 16, isACK = 1, checksum = 573f, ?0?
Checksum error at B: seg = 999999, ack = 16, isACK = 1, checksum = 0,
?0?
Sent NAK from B
                    TOLAYER3: packet being lost
EVENT time: 319.857910, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 28, isACK = 1, checksum = 3938, ch?
Received ACK 28 when base A segnum is 29. Ignore
```

```
EVENT time: 322.830383, type: 1, fromlayer5 entity: 1
Sent from B: seq = 25, ack = 0, isACK = 0, checksum = 13fb,
ddddddddddddddd
Buffer at B: filled buffer slots = 9, filled window slots = 9, base A
segnum = 16
         TOLAYER3: packet being corrupted
EVENT time: 324.598114, type: 2, fromlayer3 entity: 0
Received at A: seq = 14, ack = 0, isACK = 0, checksum = c3b5,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 325.490021, type: 2, fromlayer3 entity: 1
Received at B: seq = 28, ack = 0, isACK = 0, checksum = a589,
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 329.584351, type: 2, fromlayer3 entity: 1
Received at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42,
VVVVVVVVVVVVVVVVVVVVVV
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 329.924103, type: 0, timerinterrupt entity: 0
Go back to 29
Retransmitted packet segnum 29
Retransmitted packet segnum 30
         TOLAYER3: packet being lost
Retransmitted packet segnum 31
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 32
Retransmitted packet segnum 33
EVENT time: 332.273773, type: 2, fromlayer3 entity: 0
Received at A: seg = 15, ack = 0, isACK = 0, checksum = b9aa,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 333.291565, type: 2, fromlayer3 entity: 0
Received at A: seq = 16, ack = 0, isACK = 0, checksum = 9b8b,
qqqqqqqqqqqqqqqqqqq
Received unexpected segnum.
```

```
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 335.389221, type: 0, timerinterrupt entity: 1
Go back to 16
Retransmitted packet segnum 16
         TOLAYER3: packet being lost
Retransmitted packet segnum 17
Retransmitted packet segnum 18
Retransmitted packet segnum 19
         TOLAYER3: packet being lost
Retransmitted packet segnum 20
         TOLAYER3: packet being lost
Retransmitted packet segnum 21
Retransmitted packet segnum 22
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 23
Retransmitted packet segnum 24
         TOLAYER3: packet being lost
Retransmitted packet segnum 25
EVENT time: 335.991638, type: 2, fromlayer3 entity: 1
Received at B: seq = 30, ack = 0, isACK = 0, checksum = 4123,
УУУУУУУУУУУУУУУУУ
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 339.225281, type: 1, fromlayer5 entity: 0
Sent from A: seq = 34, ack = 0, isACK = 0, checksum = 9e8,
eeeeeeeeeeeeee
Buffer at A: filled buffer slots = 5, filled window slots = 5, base A
segnum = 29
         TOLAYER3: packet being corrupted
EVENT time: 340.492004, type: 2, fromlayer3 entity: 0
Received at A: seq = 17, ack = 0, isACK = 0, checksum = 9180,
ppppppppppppppppppppp
Accepted at A: seq = 17, ack = 0, isACK = 0, checksum = 9180,
TOLAYER3: packet being corrupted
EVENT time: 340.570221, type: 1, fromlayer5 entity: 0
Sent from A: seq = 35, ack = 0, isACK = 0, checksum = ffdc,
ffffffffffffffffffffff
Buffer at A: filled buffer slots = 6, filled window slots = 6, base A
segnum = 29
         TOLAYER3: packet being corrupted
```

```
EVENT time: 342.574463, type: 2, fromlayer3 entity: 1
Received at B: seq = 31, ack = 0, isACK = 0, checksum = 3718,
ZZZZZZZZZZZZZZZZZZZ
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 343.462250, type: 1, fromlayer5 entity: 0
Sent from A: seq = 36, ack = 0, isACK = 0, checksum = f5d1,
Buffer at A: filled buffer slots = 7, filled window slots = 7, base A
segnum = 29
EVENT time: 345.086426, type: 2, fromlayer3 entity: 0
Received at A: seq = 18, ack = 0, isACK = 0, checksum = 8775,
Accepted at A: seg = 18, ack = 0, isACK = 0, checksum = 8775,
EVENT time: 346.239471, type: 2, fromlayer3 entity: 1
Received at B: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 16
Retransmitted packet segnum 16
Retransmitted packet segnum 17
Retransmitted packet segnum 18
Retransmitted packet segnum 19
Retransmitted packet segnum 20
Retransmitted packet segnum 21
Retransmitted packet segnum 22
         TOLAYER3: packet being lost
Retransmitted packet segnum 23
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 24
         TOLAYER3: packet being lost
Retransmitted packet segnum 25
EVENT time: 346.856476, type: 1, fromlayer5 entity: 0
Sent from A: seq = 37, ack = 0, isACK = 0, checksum = ebc6,
hhhhhhhhhhhhhhhhhhhh
Buffer at A: filled buffer slots = 8, filled window slots = 8, base A
segnum = 29
Can't send right now, window is full. Placing in buffer.
EVENT time: 351.093231, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 16, isACK = 1, checksum = 2fad, ch?0??
B just received ACK from A for a packet previously retransmitted at
time 289.989838
Base B segnum is 16
```

```
Total successful ACKs: 16
EVENT time: 351.305634, type: 2, fromlayer3 entity: 0
Received at A: seq = 19, ack = 0, isACK = 0, checksum = 7d6a,
SSSSSSSSSSSSSSSS
Accepted at A: seq = 19, ack = 0, isACK = 0, checksum = 7d6a,
SSSSSSSSSSSSSSSS
          TOLAYER3: packet being corrupted
EVENT time: 353.924103, type: 0, timerinterrupt entity: 0
Go back to 29
Retransmitted packet segnum 29
          TOLAYER3: packet being corrupted
Retransmitted packet segnum 30
          TOLAYER3: packet being lost
Retransmitted packet segnum 31
         TOLAYER3: packet being lost
Retransmitted packet segnum 32
Retransmitted packet segnum 33
Retransmitted packet segnum 34
Retransmitted packet segnum 35
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 36
EVENT time: 354.527649, type: 2, fromlayer3 entity: 1
Received at B: seg = 999999, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Checksum error at B: seq = 999999, ack = -1, isACK = 1, checksum = 0,
0??????
Sent NAK from B
         TOLAYER3: packet being lost
EVENT time: 355.959961, type: 2, fromlayer3 entity: 1
Received at B: seg = 32, ack = 0, isACK = 0, checksum = 3212,
aaaaaaaaaaaaaaaaa
Accepted at B: seq = 32, ack = 0, isACK = 0, checksum = 3212,
aaaaaaaaaaaaaaaaa
         TOLAYER3: packet being lost
EVENT time: 357.248566, type: 2, fromlayer3 entity: 0
Received at A: seg = 20, ack = 0, isACK = 0, checksum = 735f,
tttttttttttttttttt
Accepted at A: seq = 20, ack = 0, isACK = 0, checksum = 735f,
tttttttttttttttttt
         TOLAYER3: packet being corrupted
EVENT time: 363.225250, type: 2, fromlayer3 entity: 1
Received at B: seg = 28, ack = 0, isACK = 0, checksum = a589,
Z000000000000000000
```

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Checksum error at B: seq = 28, ack = 0, isACK = 0, checksum = 0,
Z000000000000000000
Sent NAK from B
EVENT time: 363.834839, type: 2, fromlayer3 entity: 0
Received at A: seq = 9999999, ack = 0, isACK = 0, checksum = 6954,
uuuuuuuuuuuuuuuuuuu
Checksum error at A: seq = 999999, ack = 0, isACK = 0, checksum = 0,
uuuuuuuuuuuuuuuuu
Sent NAK from A
EVENT time: 366.616302, type: 1, fromlayer5 entity: 0
Sent from A: seq = 38, ack = 0, isACK = 0, checksum = e1bb,
Buffer at A: filled buffer slots = 9, filled window slots = 8, base A
seanum = 29
Can't send right now, window is full. Placing in buffer.
EVENT time: 368.046753, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 28, isACK = 1, checksum = 2ea1, Zch?0??
Checksum error at A: seq = 0, ack = 28, isACK = 1, checksum = 0,
Zċh?0??
Sent NAK from A
         TOLAYER3: packet being lost
EVENT time: 368.050232, type: 2, fromlayer3 entity: 1
Received at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42.
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 373.383148, type: 2, fromlayer3 entity: 1
Received at B: seq = 30, ack = 0, isACK = 0, checksum = 4123,
ууууууууууууууууу
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 375.093231, type: 0, timerinterrupt entity: 1
Go back to 17
Retransmitted packet segnum 17
Retransmitted packet segnum 18
Retransmitted packet segnum 19
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 20
Retransmitted packet segnum 21
Retransmitted packet segnum 22
Retransmitted packet segnum 23
```

```
Retransmitted packet segnum 24
Retransmitted packet segnum 25
EVENT time: 376.211426, type: 2, fromlayer3 entity: 0
Received at A: seq = 22, ack = 0, isACK = 0, checksum = 553f,
Received unexpected seanum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 377.924103, type: 0, timerinterrupt entity: 0
Go back to 29
Retransmitted packet segnum 29
         TOLAYER3: packet being lost
Retransmitted packet segnum 30
Retransmitted packet segnum 31
         TOLAYER3: packet being lost
Retransmitted packet segnum 32
Retransmitted packet segnum 33
          TOLAYER3: packet being corrupted
Retransmitted packet segnum 34
Retransmitted packet segnum 35
          TOLAYER3: packet being lost
Retransmitted packet segnum 36
         TOLAYER3: packet being lost
EVENT time: 382.860229, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 29
Retransmitted packet segnum 29
          TOLAYER3: packet being corrupted
Retransmitted packet segnum 30
         TOLAYER3: packet being lost
Retransmitted packet segnum 31
Retransmitted packet segnum 32
Retransmitted packet segnum 33
Retransmitted packet segnum 34
Retransmitted packet segnum 35
Retransmitted packet segnum 36
EVENT time: 383.264587, type: 2, fromlayer3 entity: 1
Received at B: seq = 31, ack = 0, isACK = 0, checksum = 3718,
ZZZZZZZZZZZZZZZZZZZZ
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 384.719116, type: 1, fromlayer5 entity: 1
```

```
Sent from B: seg = 26, ack = 0, isACK = 0, checksum = d7bd,
Buffer at B: filled buffer slots = 9, filled window slots = 9, base A
seanum = 17
Can't send right now, window is full. Placing in buffer.
EVENT time: 385.500824, type: 1, fromlayer5 entity: 1
Sent from B: seq = 27, ack = 0, isACK = 0, checksum = cdb2,
kkkkkkkkkkkkkkkkk
Buffer at B: filled buffer slots = 10, filled window slots = 9, base A
seanum = 17
Can't send right now, window is full. Placing in buffer.
EVENT time: 386.061340, type: 2, fromlayer3 entity: 1
Received at B: seq = 32, ack = 0, isACK = 0, checksum = 3212,
aaaaaaaaaaaaaaaaa
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 387.457092, type: 2, fromlayer3 entity: 1
Received at B: seg = 0, ack = 999999, isACK = 1, checksum = 3e44, \dot{ch}?
Checksum error at B: seq = 0, ack = 999999, isACK = 1, checksum = 0,
ċh?
Sent NAK from B
EVENT time: 388.126343, type: 2, fromlayer3 entity: 0
Received at A: seq = 23, ack = 0, isACK = 0, checksum = 4b34,
XXXXXXXXXXXXXXXXXXX
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 389.396790, type: 2, fromlayer3 entity: 0
Received at A: seg = 999999, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Checksum error at A: seg = 999999, ack = -1, isACK = 1, checksum = 0,
0??????
Sent NAK from A
EVENT time: 392.812164, type: 2, fromlayer3 entity: 1
Received at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42,
VVVVVVVVVVVVVVVVVVVVV
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 395.341858, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 29, isACK = 1, checksum = 5732, ?0?
```

```
A just received ACK from B for a packet previously retransmitted at
time 329.924103
Base A segnum is 29
Total successful ACKs: 17
EVENT time: 399.093231, type: 0, timerinterrupt entity: 1
Go back to 17
Retransmitted packet segnum 17
Retransmitted packet segnum 18
         TOLAYER3: packet being lost
Retransmitted packet segnum 19
         TOLAYER3: packet being lost
Retransmitted packet segnum 20
Retransmitted packet segnum 21
Retransmitted packet segnum 22
Retransmitted packet segnum 23
Retransmitted packet segnum 24
         TOLAYER3: packet being lost
Retransmitted packet segnum 25
         TOLAYER3: packet being lost
EVENT time: 399.604065, type: 2, fromlayer3 entity: 1
Received at B: seq = 31, ack = 0, isACK = 0, checksum = 3718,
Zzzzzzzzzzzzzzzzzz
Checksum error at B: seq = 31, ack = 0, isACK = 0, checksum = 0,
Sent NAK from B
EVENT time: 400.861542, type: 1, fromlayer5 entity: 0
Sent from A: seq = 39, ack = 0, isACK = 0, checksum = c39c,
Buffer at A: filled buffer slots = 9, filled window slots = 7, base A
segnum = 30
EVENT time: 402.847321, type: 2, fromlayer3 entity: 0
Received at A: seq = -209419879, ack = -1, isACK = 1, checksum = 5a6b,
0??????
Received NAK
Go back to 30
Retransmitted packet segnum 30
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 31
Retransmitted packet segnum 32
Retransmitted packet segnum 33
Retransmitted packet segnum 34
Retransmitted packet segnum 35
Retransmitted packet segnum 36
         TOLAYER3: packet being lost
Retransmitted packet segnum 37
```

```
EVENT time: 403.351013, type: 2, fromlayer3 entity: 1
Received at B: seq = 32, ack = 0, isACK = 0, checksum = 3212,
aaaaaaaaaaaaaaaaa
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 406.511017, type: 1, fromlayer5 entity: 1
Sent from B: seg = 28, ack = 0, isACK = 0, checksum = b99d,
Buffer at B: filled buffer slots = 11, filled window slots = 9, base A
seanum = 17
Can't send right now, window is full. Placing in buffer.
EVENT time: 407.197784, type: 2, fromlayer3 entity: 0
Received at A: seq = 16, ack = 0, isACK = 0, checksum = 9b8b,
qqqqqqqqqqqqqqqqqq
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 409.902405, type: 2, fromlayer3 entity: 1
Received at B: seq = 33, ack = 0, isACK = 0, checksum = 1dfd,
CCCCCCCCCCCCCCCC
Accepted at B: seq = 33, ack = 0, isACK = 0, checksum = 1dfd,
CCCCCCCCCCCCCCCC
EVENT time: 411.093964, type: 2, fromlayer3 entity: 0
Received at A: seq = 17, ack = 0, isACK = 0, checksum = 9180,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 415.308746, type: 2, fromlayer3 entity: 1
Received at B: seg = 0, ack = 16, isACK = 1, checksum = 2fad, ch?0??
Received ACK 16 when base B segnum is 17. Ignore
EVENT time: 419.764709, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 16, isACK = 1, checksum = 2fad, ch?0??
Received ACK 16 when base B segnum is 17. Ignore
EVENT time: 421.023468, type: 2, fromlayer3 entity: 0
Received at A: seq = 18, ack = 0, isACK = 0, checksum = 8775,
rrrrrrrrrrrrrrrrrrrr
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
```

```
EVENT time: 421.587769, type: 2, fromlayer3 entity: 1
Received at B: seq = 34, ack = 0, isACK = 0, checksum = 9e8,
Zeeeeeeeeeeeee
Checksum error at B: seq = 34, ack = 0, isACK = 0, checksum = 0,
Zeeeeeeeeeeeee
Sent NAK from B
         TOLAYER3: packet being lost
EVENT time: 422.551270, type: 2, fromlayer3 entity: 0
Received at A: seg = 21, ack = 0, isACK = 0, checksum = 6954,
uuuuuuuuuuuuuuuuu
Accepted at A: seq = 21, ack = 0, isACK = 0, checksum = 6954,
uuuuuuuuuuuuuuuuu
          TOLAYER3: packet being corrupted
EVENT time: 423.093231, type: 0, timerinterrupt entity: 1
Go back to 17
Retransmitted packet segnum 17
          TOLAYER3: packet being corrupted
Retransmitted packet segnum 18
         TOLAYER3: packet being lost
Retransmitted packet segnum 19
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 20
         TOLAYER3: packet being lost
Retransmitted packet segnum 21
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 22
Retransmitted packet segnum 23
         TOLAYER3: packet being lost
Retransmitted packet segnum 24
          TOLAYER3: packet being lost
Retransmitted packet segnum 25
EVENT time: 423.595062, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 17, isACK = 1, checksum = 567e, Z0@
Checksum error at B: seg = 0, ack = 17, isACK = 1, checksum = 0, Z0@
Sent NAK from B
EVENT time: 425.922180, type: 1, fromlayer5 entity: 0
Sent from A: seq = 40, ack = 0, isACK = 0, checksum = af87,
nnnnnnnnnnnnnnnnn
Buffer at A: filled buffer slots = 10, filled window slots = 8, base A
segnum = 30
Can't send right now, window is full. Placing in buffer.
EVENT time: 426.847321, type: 0, timerinterrupt entity: 0
Go back to 30
Retransmitted packet segnum 30
Retransmitted packet segnum 31
```

```
TOLAYER3: packet being corrupted
Retransmitted packet segnum 32
         TOLAYER3: packet being lost
Retransmitted packet segnum 33
Retransmitted packet segnum 34
Retransmitted packet segnum 35
Retransmitted packet segnum 36
Retransmitted packet segnum 37
EVENT time: 427.279968, type: 2, fromlayer3 entity: 0
Received at A: seg = 22, ack = 0, isACK = 999999, checksum = 553f,
WWWWWWWWWWWWWWW
Checksum error at A: seg = 22, ack = 0, isACK = 999999, checksum = 0,
WWWWWWWWWWWWWWW
Sent NAK from A
EVENT time: 431.981171, type: 2, fromlayer3 entity: 0
Received at A: seq = 23, ack = 0, isACK = 0, checksum = 4b34,
XXXXXXXXXXXXXXXXXXX
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being lost
EVENT time: 433.246490, type: 2, fromlayer3 entity: 1
Received at B: seq = 35, ack = 0, isACK = 0, checksum = ffdc,
Zfffffffffffffffffff
Checksum error at B: seq = 35, ack = 0, isACK = 0, checksum = 0,
Zfffffffffffffffffffff
Sent NAK from B
         TOLAYER3: packet being lost
EVENT time: 434.828430, type: 2, fromlayer3 entity: 0
Received at A: seg = 16, ack = 0, isACK = 0, checksum = 9b8b,
qqqqqqqqqqqqqqqqqqq
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being lost
EVENT time: 438.618530, type: 2, fromlayer3 entity: 0
Received at A: seq = 17, ack = 0, isACK = 0, checksum = 9180,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
         TOLAYER3: packet being corrupted
EVENT time: 440.769379, type: 1, fromlayer5 entity: 1
```

```
Sent from B: seg = 29, ack = 0, isACK = 0, checksum = a588,
000000000000000000000000
Buffer at B: filled buffer slots = 12, filled window slots = 9, base A
seanum = 17
Can't send right now, window is full. Placing in buffer.
EVENT time: 441.205963, type: 1, fromlayer5 entity: 1
Sent from B: seq = 30, ack = 0, isACK = 0, checksum = 9b7d,
addadadadadadadadadadada
Buffer at B: filled buffer slots = 13, filled window slots = 9, base A
seanum = 17
Can't send right now, window is full. Placing in buffer.
EVENT time: 441.218842, type: 2, fromlayer3 entity: 1
Received at B: seq = 36, ack = 0, isACK = 0, checksum = f5d1,
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 441.317688, type: 2, fromlayer3 entity: 0
Received at A: seq = 18, ack = 0, isACK = 0, checksum = 8775,
Zrrrrrrrrrrrrrrrrrr
Checksum error at A: seq = 18, ack = 0, isACK = 0, checksum = 0,
Zrrrrrrrrrrrrrrrrrr
Sent NAK from A
          TOLAYER3: packet being lost
EVENT time: 443.012360, type: 2, fromlayer3 entity: 0
Received at A: seq = 19, ack = 0, isACK = 0, checksum = 7d6a,
SSSSSSSSSSSSSSSS
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 443.669800, type: 2, fromlayer3 entity: 1
Received at B: seg = 0, ack = 18, isACK = 1, checksum = 56bd, ?0
B just received ACK from A for a packet previously retransmitted at
time 375.093231
Base B segnum is 17
Total successful ACKs: 18
Total successful ACKs: 19
EVENT time: 445.159241, type: 2, fromlayer3 entity: 1
Received at B: seq = 0, ack = 19, isACK = 1, checksum = 56dc, Z0?
Checksum error at B: seg = 0, ack = 19, isACK = 1, checksum = 0, Z0?
Sent NAK from B
          TOLAYER3: packet being corrupted
EVENT time: 448.704681, type: 2, fromlayer3 entity: 0
```

```
Received at A: seg = 20, ack = 0, isACK = 0, checksum = 735f,
ttttttttttttttttttt
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
          TOLAYER3: packet being lost
EVENT time: 450.847321, type: 0, timerinterrupt entity: 0
Go back to 30
Retransmitted packet segnum 30
          TOLAYER3: packet being lost
Retransmitted packet segnum 31
Retransmitted packet segnum 32
          TOLAYER3: packet being lost
Retransmitted packet segnum 33
          TOLAYER3: packet being lost
Retransmitted packet segnum 34
          TOLAYER3: packet being lost
Retransmitted packet segnum 35
Retransmitted packet segnum 36
         TOLAYER3: packet being lost
Retransmitted packet segnum 37
         TOLAYER3: packet being corrupted
EVENT time: 454.157013, type: 2, fromlayer3 entity: 0
Received at A: seq = 21, ack = 0, isACK = 0, checksum = 6954,
uuuuuuuuuuuuuuuuu
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
EVENT time: 454.348541, type: 2, fromlayer3 entity: 1
Received at B: seq = 29, ack = 0, isACK = 0, checksum = 5f42,
Zvvvvvvvvvvvvvvvv
Checksum error at B: seq = 29, ack = 0, isACK = 0, checksum = 0,
Zvvvvvvvvvvvvvvvv
Sent NAK from B
EVENT time: 455.952942, type: 1, fromlayer5 entity: 1
Sent from B: seq = 31, ack = 0, isACK = 0, checksum = 9172,
adadadadadadadadada
Buffer at B: filled buffer slots = 12, filled window slots = 7, base A
segnum = 19
Can't send right now, window is full. Placing in buffer.
EVENT time: 461.648529, type: 2, fromlayer3 entity: 1
Received at B: seq = 32, ack = 0, isACK = 0, checksum = 3212,
aaaaaaaaaaaaaaaaa
Received unexpected segnum.
Previous ACk probably didn't arrive.
```

```
Resent ACK to A.
EVENT time: 462.406036, type: 2, fromlayer3 entity: 0
Received at A: seq = 23, ack = 0, isACK = 0, checksum = 4b34,
Zxxxxxxxxxxxxxxxxx
Checksum error at A: seq = 23, ack = 0, isACK = 0, checksum = 0,
Zxxxxxxxxxxxxxxxxx
Sent NAK from A
         TOLAYER3: packet being corrupted
EVENT time: 467.669800, type: 0, timerinterrupt entity: 1
Go back to 19
Retransmitted packet segnum 19
Retransmitted packet segnum 20
          TOLAYER3: packet being lost
Retransmitted packet segnum 21
Retransmitted packet segnum 22
Retransmitted packet segnum 23
Retransmitted packet segnum 24
          TOLAYER3: packet being lost
Retransmitted packet segnum 25
EVENT time: 467.725220, type: 1, fromlayer5 entity: 1
Sent from B: seq = 32, ack = 0, isACK = 0, checksum = 8767,
rrrrrrrrrrrrrrrrrr
Buffer at B: filled buffer slots = 13, filled window slots = 7, base A
seanum = 19
Can't send right now, window is full. Placing in buffer.
EVENT time: 468.608704, type: 2, fromlayer3 entity: 1
Received at B: seq = 33, ack = 0, isACK = 0, checksum = 1dfd,
ccccccccccccccc
Received unexpected segnum.
Previous ACk probably didn't arrive.
Resent ACK to A.
EVENT time: 471.588074, type: 2, fromlayer3 entity: 0
Received at A: seq = 24, ack = 0, isACK = 0, checksum = 2810,
Received unexpected segnum.
Previous ACK probably didn't arrive.
Resent ACK to A.
          TOLAYER3: packet being corrupted
EVENT time: 473.633636, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 29, isACK = 1, checksum = 3537, checksum = 3537
Received ACK 29 when base A segnum is 30. Ignore
EVENT time: 474.847321, type: 0, timerinterrupt entity: 0
Go back to 30
```

```
Retransmitted packet segnum 30
         TOLAYER3: packet being lost
Retransmitted packet segnum 31
Retransmitted packet segnum 32
Retransmitted packet segnum 33
Retransmitted packet segnum 34
         TOLAYER3: packet being corrupted
Retransmitted packet segnum 35
Retransmitted packet segnum 36
          TOLAYER3: packet being corrupted
Retransmitted packet segnum 37
         TOLAYER3: packet being lost
EVENT time: 477.275146, type: 2, fromlayer3 entity: 1
Received at B: seq = 34, ack = 0, isACK = 0, checksum = 9e8,
eeeeeeeeeeeee
Accepted at B: seq = 34, ack = 0, isACK = 0, checksum = 9e8,
eeeeeeeeeeeeee
          TOLAYER3: packet being lost
EVENT time: 481.965271, type: 2, fromlayer3 entity: 1
Received at B: seq = 999999, ack = 0, isACK = 0, checksum = ffdc,
ffffffffffffffffffffff
Checksum error at B: seq = 999999, ack = 0, isACK = 0, checksum = 0,
fffffffffffffffffffffff
Sent NAK from B
          TOLAYER3: packet being corrupted
EVENT time: 482.789337, type: 2, fromlayer3 entity: 0
Received at A: seq = 0, ack = 30, isACK = 1, checksum = 56f1, ?0?
A just received ACK from B for a packet previously retransmitted at
time 426.847321
Base A segnum is 30
Total successful ACKs: 20
```