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18P9713

Group 2 , Section 1

Project Networks

INTRODUCTION

Project is divided into 2 parts, Alternating-Bit-Protocol version and the second part for the Go-Back-N version. For further info, please check out the README.md file which includes everything about the project including an overview, introduction, guidelines, and usage.

DESCRIPTION OF FUNCTIONS

A output(message)

where message is a structure of type msg, containing data to be sent to the B-side. This routine will be called whenever the upper layer at the sending side (A) has a message to send. It is the job of your protocol to ensure that the data in such a message is delivered in-order, and correctly, to the receiving side upper layer.

A input(packet)

where packet is a structure of type pkt. This routine will be called whenever a packet sent from the B-side (i.e., as a result of a tolayer3() being done by a B-side procedure) arrives at the A-side. packet is the (possibly corrupted) packet sent from the B-side.

A timerinterrupt()

This routine will be called when A's timer expires (thus generating a timer interrupt). You'll probably want to use this routine to control the retransmission of packets. See starttimer() and stoptimer() below for how the timer is started and stopped.

A init()

This routine will be called once, before any of your other A-side routines are called. It can be used to do any required initialization.

B_input(packet)

where packet is a structure of type pkt. This routine will be called whenever a packet sent from the A-side (i.e., as a result of a tolayer3() being done by a A-side procedure) arrives at the B-side. packet is the (possibly corrupted) packet sent from the A-side.

B_init()

This routine will be called once, before any of your other B-side routines are called. It can be used to do any required initialization

ALTERNATING BIT PROTOCOL

a. Output1

the number of messages to simulate: 10

packet loss probability: 0.000000

packet corruption probability: 0.000000

average time between messages from sender's layer5: 5.000000

TRACE: 0

A_output: send packet: aaaaaaaaaaaaaaaaaa

B_input: receive message: aaaaaaaaaaaaaaaaaa

B_input: send ACK.

A_output: the message has not ack, so it will drop the message: bbbbbbbbbbbbbbbbbbbb

A_input: ack ok .

A_output: send packet: ccccccccccccccccc

B_input: receive message: ccccccccccccccccc

B_input: send ACK.

A_output: the message has not ack, so it will drop the message: ddddddddddddddddddd

A_output: the message has not ack, so it will drop the message: eeeeeeeeeeeeeeeee

A_input: ack ok .

A_output: send packet: ffffffffffffffffff

B_input: receive message: ffffffffffffffffff

B_input: send ACK.

A_output: the message has not ack, so it will drop the message: gggggggggggggggggggg

A_output: the message has not ack, so it will drop the message: hhhhhhhhhhhhhhhhhhhh

A_input: ack ok .

A_output: send packet: iiiiiiiiiiiiiiiiii

B_input: recieve message: iiiiiiiiiiiiiiiiii

B_input: send ACK.

A_output: the message has not ack, so it will drop the message: jjjjjjjjjjjjjjjjjj

A_input: ack ok .

Simulator terminated at time 47.591816

after sending 10 msgs from layer5

b. Output2

the number of messages to simulate: 50

packet loss probability: 0.300000

packet corruption probability: 0.000000

average time between messages from sender's layer5: 10.000000

TRACE: 0

A_output: send packet: aaaaaaaaaaaaaaaaaa

B_input: recieve message: aaaaaaaaaaaaaaaaaa

B_input: send ACK.

A_input: ack ok .

A_output: send packet: bbbbbbbbbbbbbbbbbbbb

B_input: recieve message: bbbbbbbbbbbbbbbbbbbb

B_input: send ACK.

A_input: ack ok .

A_output: send packet: cccccccccccccccccc

B_input: recieve message: cccccccccccccccccc

B_input: send ACK.

A_input: ack ok .

A_output: send packet: dddddddddddddddddd

B_input: recieve message: dddddddddddddddddd

B_input: send ACK.

A_input: ack ok .

A_output: send packet: eeeeeeeeeeeeeeeeeeee

B_input: recieve message: eeeeeeeeeeeeeeeeeeee

B_input: send ACK.
A_output: the message has not ack, so it will drop the message: ffffffffffffffffff
A_timerinterrupt: resend last packet: eeeeeeeeeeeeeeeeeee.
A_output: the message has not ack, so it will drop the message: gggggggggggggggggggg
A_output: the message has not ack, so it will drop the message: hhhhhhhhhhhhhhhhhhhh
B_input: this is not the expected sequence so NACK will be sent.
A_timerinterrupt: resend last packet: eeeeeeeeeeeeeeeeeee.
A_output: the message has not ack, so it will drop the message: iiiiiiiiiiiiiiiiii
B_input: this is not the expected sequence so NACK will be sent.
A_output: the message has not ack, so it will drop the message: jjjjjjjjjjjjjjjjjj
A_input: ack ok .
A_output: send packet: kkkkkkkkkkkkkkkkkk
A_timerinterrupt: resend last packet: kkkkkkkkkkkkkkkkkk.
A_output: the message has not ack, so it will drop the message: llllllllllllllll
A_output: the message has not ack, so it will drop the message:
mmmmmmmmmmmmmmmmmmmmmmmm
B_input: receive message: kkkkkkkkkkkkkkkkkk
B_input: send ACK.
A_input: ack ok .
A_output: send packet: nnnnnnnnnnnnnnnnnnn
B_input: receive message: nnnnnnnnnnnnnnnnnnn
B_input: send ACK.
A_output: the message has not ack, so it will drop the message: oooooooooooooooooooooo
A_input: ack ok .
A_output: send packet: ppppppppppppppppppp
B_input: receive message: ppppppppppppppppppp
B_input: send ACK.
A_input: ack ok .
A_output: send packet: qqqqqqqqqqqqqqqqqq
A_output: the message has not ack, so it will drop the message: rrrrrrrrrrrrrrrrrr
A_output: the message has not ack, so it will drop the message: ssssssssssssssssss
A_output: the message has not ack, so it will drop the message: tttttttttttttttt
B_input: receive message: qqqqqqqqqqqqqqqqqq
B_input: send ACK.
A_output: the message has not ack, so it will drop the message: uuuuuuuuuuuuuuuuuuu
A_input: ack ok .
A_output: send packet: vvvvvvvvvvvvvvvvv
A_output: the message has not ack, so it will drop the message:
wwwwwwwwwwwwwwwwwwwwww
A_output: the message has not ack, so it will drop the message: xxxxxxxxxxxxxxxxxxxx
A_output: the message has not ack, so it will drop the message: yyyyyyyyyyyyyyyyyyy
A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvvv
A_output: the message has not ack, so it will drop the message: zzzzzzzzzzzzzzzzzz
A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvvv.

A_output: the message has not ack, so it will drop the message: aaaaaaaaaaaaaaaaaa
A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvvv.
A_output: the message has not ack, so it will drop the message: bbbbbbbbbbbbbbbbbbbb
B_input: recieve message: vvvvvvvvvvvvvvvvv
B_input: send ACK.
A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvvv.
A_output: the message has not ack, so it will drop the message: cccccccccccccccccc
B_input: this is not the expected sequenceso NACK will be sent.
A_input: ack ok .
A_output: send packet: dddddddddddddddddd
B_input: recieve message: dddddddddddddddddd
B_input: send ACK.
A_timerinterrupt: resend last packet: dddddddddddddddddd.
B_input: this is not the expected sequenceso NACK will be sent.
A_output: the message has not ack, so it will drop the message: eeeeeeeeeeeeeeeeeeee
A_input: ack ok .
A_output: send packet: ffffffffffffffffffff
A_output: the message has not ack, so it will drop the message: gggggggggggggggggggg
A_timerinterrupt: resend last packet: ffffffffffffffffffff.
A_output: the message has not ack, so it will drop the message: hhhhhhhhhhhhhhhhhhhh
A_output: the message has not ack, so it will drop the message: iiiiiiiiiiiiiiiiii
A_output: the message has not ack, so it will drop the message: jjjjjjjjjjjjjjjjjj
B_input: recieve message: ffffffffffffffffffff
B_input: send ACK.
A_output: the message has not ack, so it will drop the message: kkkkkkkkkkkkkkkkkkk
A_input: ack ok .
A_output: send packet: llllllllllllllll
A_timerinterrupt: resend last packet: llllllllllllll.
A_output: the message has not ack, so it will drop the message:
mmmmmmmmmmmmmmmmmmmmmmmm
B_input: recieve message: llllllllllllll
B_input: send ACK.
A_timerinterrupt: resend last packet: llllllllllllll.
A_output: the message has not ack, so it will drop the message: nnnnnnnnnnnnnnnnnnn
B_input: this is not the expected sequenceso NACK will be sent.
A_timerinterrupt: resend last packet: llllllllllllll.
B_input: this is not the expected sequenceso NACK will be sent.
A_output: the message has not ack, so it will drop the message: ooooooooooooooooooooo
A_input: ack ok .
A_output: send packet: ppppppppppppppppppp
B_input: recieve message: ppppppppppppppppppp
B_input: send ACK.
A_timerinterrupt: resend last packet: ppppppppppppppppppp.
A_output: the message has not ack, so it will drop the message: qqqqqqqqqqqqqqqqqqq

A_output: the message has not ack, so it will drop the message: rrrrrrrrrrrrrrrrr
 B_input: this is not the expected sequence so NACK will be sent.
 A_input: ack ok .
 A_output: send packet: sssssssssssssssss
 B_input: receive message: sssssssssssssssss
 B_input: send ACK.
 A_input: ack ok .
 A_output: send packet: tttttttttttttttt
 A_output: the message has not ack, so it will drop the message: uuuuuuuuuuuuuuuuuuu
 B_input: receive message: tttttttttttttttt
 B_input: send ACK.
 A_input: ack ok .
 A_output: send packet: vvvvvvvvvvvvvvvv
 A_output: the message has not ack, so it will drop the message:
 wwwwwwwwwwwwwwwwwwwww
 A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvv.
 A_output: the message has not ack, so it will drop the message: xxxxxxxxxxxxxxxxxxxxx
 A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvv.
 A_timerinterrupt: resend last packet: vvvvvvvvvvvvvvvv.
 B_input: receive message: vvvvvvvvvvvvvvvv
 B_input: send ACK.
 A_input: ack ok .
 Simulator terminated at time 507.020447
 after sending 50 msgs from layer5

c. Output3

the number of messages to simulate: 10
 packet loss probability: 0.000000
 packet corruption probability: 0.300000
 average time between messages from sender's layer5: 10.000000
 TRACE: 0
 A_output: send packet: aaaaaaaaaaaaaaaaaa
 B_input: receive message: aaaaaaaaaaaaaaaaaa
 B_input: send ACK.
 A_input: ack ok .
 A_output: send packet: bbbbbbbbbbbbbbbbbbb
 B_input: receive message: bbbbbbbbbbbbbbbbbbb
 B_input: send ACK.
 A_input: ack ok .
 A_output: send packet: cccccccccccccccccc
 B_input: receive message: cccccccccccccccccc
 B_input: send ACK.

A_input: ack ok .
 A_output: send packet: ddddddddddddddddddd
 B_input: the packet is corrupted, so NACK will be sent.
 A_input: this is not the expected Acknowledgment . drop the message .
 A_timerinterrupt: resend last packet: ddddddddddddddddddd.
 A_output: the message has not ack, so it will drop the message: eeeeeeeeeeeeeeeeeee
 A_output: the message has not ack, so it will drop the message: ffffffffffffffffffff
 B_input: receive message: ddddddddddddddddddd
 B_input: send ACK.
 A_output: the message has not ack, so it will drop the message: gggggggggggggggggggg
 A_input: ack ok .
 A_output: send packet: hhhhhhhhhhhhhhhhhhh
 B_input: receive message: hhhhhhhhhhhhhhhhhhh
 B_input: send ACK.
 A_output: the message has not ack, so it will drop the message: iiiiiiiiiiiiiiiiii
 A_input: ack ok .
 A_output: send packet: jjjjjjjjjjjjjjjjjj
 B_input: receive message: jjjjjjjjjjjjjjjjjj
 B_input: send ACK.
 A_timerinterrupt: resend last packet: jjjjjjjjjjjjjjjjjj.
 A_input: ack ok .
 B_input: this is not the expected sequence so NACK will be sent.
 A_input: A to B only. drop the message.
 Simulator terminated at time 117.520515
 after sending 10 msgs from layer5

GO-AND-BACK

a. Output1

the number of messages to simulate: 10

packet loss probability: 0.000000

packet corruption probability: 0.000000

average time between messages from sender's layer5: 5.000000

TRACE: 0

A_output: buffered packet (seq=1): aaaaaaaaaaaaaaaaaa

send_window:the packet will be sent (seq=1): aaaaaaaaaaaaaaaaaa

B_input: the packet is received (seq=1): aaaaaaaaaaaaaaaaaa

B_input: send ACK (ack=1)

A_output: buffered packet (seq=2): bbbbbbbbbbbbbbbbbbb

send_window: the packet will be sent (seq=2): bbbbbbbbbbbbbbbbbbb

A_input: got ACK (ack=1)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=2): bbbbbbbbbbbbbbbbbbb

B_input: send ACK (ack=2)

A_output: buffered packet (seq=3): ccccccccccccccccc

send_window: the packet will be sent (seq=3): ccccccccccccccccc

A_input: got ACK (ack=2)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=3): ccccccccccccccccc

B_input: send ACK (ack=3)

A_timerinterrupt: resend packet (seq=3): ccccccccccccccccc

A_timerinterrupt: timer + 15.000000

A_output: buffered packet (seq=4): ddddddddddddddddd

send_window: the packet will be sent (seq=4): ddddddddddddddddd

A_input: got ACK (ack=3)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=5): eeeeeeeeeeeeeeeee

send_window: the packet will be sent (seq=5): eeeeeeeeeeeeeeeee

B_input: this is not the expected sequence so NACK will be sent (ack=3)

A_output: buffered packet (seq=6): fffffffffffffffff

send_window: the packet will be sent (seq=6): fffffffffffffffff

A_input: got NAK (ack=3). drop.

B_input: the packet is received (seq=4): ddddddddddddddddddd

B_input: send ACK (ack=4)

A_timerinterrupt: resend packet (seq=4): ddddddddddddddddddd

A_timerinterrupt: resend packet (seq=5): eeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=6): ffffffffffffffffffff

A_timerinterrupt: timer + 15.000000

A_output: buffered packet (seq=7): gggggggggggggggggggg

send_window:the packet will be sent (seq=7): gggggggggggggggggggg

B_input: the packet is received (seq=5): eeeeeeeeeeeeeeeeeee

B_input: send ACK (ack=5)

A_output: buffered packet (seq=8): hhhhhhhhhhhhhhhhhhhh

send_window:the packet will be sent (seq=8): hhhhhhhhhhhhhhhhhhhh

B_input: the packet is received (seq=6): ffffffffffffffffffff

B_input: send ACK (ack=6)

A_input: got ACK (ack=4)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=6)

A_output: buffered packet (seq=9): iiiiiiiiiiiiiiiiii

send_window:the packet will be sent (seq=9): iiiiiiiiiiiiiiiiii

B_input: this is not the expected sequence so NACK will be sent (ack=6)

B_input: this is not the expected sequence so NACK will be sent (ack=6)

A_timerinterrupt: resend packet (seq=5): eeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=6): ffffffffffffffffffff

A_timerinterrupt: resend packet (seq=7): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiiii

A_timerinterrupt: timer + 15.000000

B_input: the packet is received (seq=7): gggggggggggggggggggg

B_input: send ACK (ack=7)

A_input: got ACK (ack=5)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=8): hhhhhhhhhhhhhhhhhhh

B_input: send ACK (ack=8)

A_output: buffered packet (seq=10): jjjjjjjjjjjjjjjjjj

send_window: the packet will be sent (seq=10): jjjjjjjjjjjjjjjjjj

A_input: got ACK (ack=6)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=9): iiiiiiiiiiiiiiiii

B_input: send ACK (ack=9)

A_timerinterrupt: resend packet (seq=7): ggggggggggggggggggg

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=9)

A_input: got NAK (ack=6). drop.

A_input: got NAK (ack=6). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=9)

A_input: got NAK (ack=6). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=9)

A_timerinterrupt: resend packet (seq=7): ggggggggggggggggggg

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

A_input: got ACK (ack=7)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got ACK (ack=8)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=9)

B_input: this is not the expected sequence so NACK will be sent (ack=9)

A_input: got ACK (ack=9)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got NAK (ack=9). drop.

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=9). drop.

B_input: the packet is received (seq=10): jjjjjjjjjjjjjjjjjj

B_input: send ACK (ack=10)

A_input: got NAK (ack=9). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=10)

B_input: this is not the expected sequence so NACK will be sent (ack=10)

A_input: got NAK (ack=9). drop.

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=10)

A_input: got NAK (ack=9). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=10)

A_input: got ACK (ack=10)

A_input: stop timer

B_input: this is not the expected sequence so NACK will be sent (ack=10)


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A_timerinterrupt: timer + 15.000000
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B_input: the packet is received (seq=6): ffffffffffffffffff

B_input: send ACK (ack=6)

B_input: this is not the expected sequence so NACK will be sent (ack=6)

A_output: buffered packet (seq=7): gggggggggggggggggg

send_window: the packet will be sent (seq=7): gggggggggggggggggg

A_input: got ACK (ack=6)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=7): gggggggggggggggggg

B_input: send ACK (ack=7)

A_input: got NAK (ack=6). drop.

A_timerinterrupt: resend packet (seq=7): gggggggggggggggggg

A_timerinterrupt: timer + 15.000000

A_output: buffered packet (seq=8): hhhhhhhhhhhhhhhhhh

send_window: the packet will be sent (seq=8): hhhhhhhhhhhhhhhhhh

B_input: this is not the expected sequence so NACK will be sent (ack=7)

A_input: got ACK (ack=7)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=8): hhhhhhhhhhhhhhhhhh

B_input: send ACK (ack=8)

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhh

A_timerinterrupt: timer + 15.000000

A_output: buffered packet (seq=9): iiiiiiiiiiiiiiiii

send_window: the packet will be sent (seq=9): iiiiiiiiiiiiiiiii

A_input: got ACK (ack=8)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=8)

A_input: got NAK (ack=8). drop.

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii

A_timerinterrupt: timer + 15.000000

B_input: the packet is received (seq=9): iiiiiiiiiiiiiiiii

B_input: send ACK (ack=9)

A_output: buffered packet (seq=10): jjjjjjjjjjjjjjjjjj

send_window:the packet will be sent (seq=10): jjjjjjjjjjjjjjjjjj

B_input: this is not the expected sequence so NACK will be sent (ack=9)

B_input: the packet is received (seq=10): jjjjjjjjjjjjjjjjjj

B_input: send ACK (ack=10)

A_output: buffered packet (seq=11): kkkkkkkkkkkkkkkkkk

send_window:the packet will be sent (seq=11): kkkkkkkkkkkkkkkkkk

B_input: the packet is received (seq=11): kkkkkkkkkkkkkkkkkk

B_input: send ACK (ack=11)

A_output: buffered packet (seq=12): llllllllllllllll

send_window:the packet will be sent (seq=12): llllllllllllllll

A_input: got ACK (ack=9)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=13): mmmmmmmmmmmmmmmmmmm

send_window:the packet will be sent (seq=13): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=11): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=12): llllllllllllllll

A_timerinterrupt: resend packet (seq=13): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: timer + 15.000000

B_input: the packet is received (seq=12): llllllllllllllll

B_input: send ACK (ack=12)

B_input: this is not the expected sequence so NACK will be sent (ack=12)

A_input: got ACK (ack=12)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=12)

A_output: buffered packet (seq=14): nnnnnnnnnnnnnnnnnnn

send_window:the packet will be sent (seq=14): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=13): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=14): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

B_input: the packet is recieved (seq=13): mmmmmmmmmmmmmmmmmmm

B_input: send ACK (ack=13)

A_input: got NAK (ack=12). drop.

B_input: the packet is recieved (seq=14): nnnnnnnnnnnnnnnnnnn

B_input: send ACK (ack=14)

B_input: this is not the expected sequence so NACK will be sent (ack=14)

A_output: buffered packet (seq=15): ooooooooooooooooooooo

send_window:the packet will be sent (seq=15): ooooooooooooooooooooo

A_output: buffered packet (seq=16): pppppppppppppppppppp

send_window:the packet will be sent (seq=16): pppppppppppppppppppp

A_input: got ACK (ack=14)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_timerinterrupt: resend packet (seq=15): ooooooooooooooooooooo

A_timerinterrupt: resend packet (seq=16): pppppppppppppppppppp

A_timerinterrupt: timer + 15.000000

B_input: the packet is recieved (seq=15): ooooooooooooooooooooo

B_input: send ACK (ack=15)

A_input: got ACK (ack=15)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000
B_input: the packet is recieved (seq=16): ppppppppppppppppppp
B_input: send ACK (ack=16)
A_input: got ACK (ack=16)
A_input: stop timer
B_input: this is not the expected sequence so NACK will be sent (ack=16)
A_output: buffered packet (seq=17): qqqqqqqqqqqqqqqqqq
send_window:the packet will be sent (seq=17): qqqqqqqqqqqqqqqqqq
A_input: got NAK (ack=16). drop.
B_input: the packet is recieved (seq=17): qqqqqqqqqqqqqqqqqq
B_input: send ACK (ack=17)
A_timerinterrupt: resend packet (seq=17): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: timer + 15.000000
A_output: buffered packet (seq=18): rrrrrrrrrrrrrrrrr
send_window:the packet will be sent (seq=18): rrrrrrrrrrrrrrrrr
A_output: buffered packet (seq=19): sssssssssssssssss
send_window:the packet will be sent (seq=19): sssssssssssssssss
B_input: this is not the expected sequence so NACK will be sent (ack=17)
A_output: buffered packet (seq=20): tttttttttttttttt
send_window:the packet will be sent (seq=20): tttttttttttttttt
B_input: the packet is recieved (seq=18): rrrrrrrrrrrrrrrrr
B_input: send ACK (ack=18)
A_timerinterrupt: resend packet (seq=17): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=18): rrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=19): sssssssssssssssss
A_timerinterrupt: resend packet (seq=20): tttttttttttttttt
A_timerinterrupt: timer + 15.000000
A_output: buffered packet (seq=21): uuuuuuuuuuuuuuuuuu
send_window:the packet will be sent (seq=21): uuuuuuuuuuuuuuuuuu

B_input: the packet is received (seq=19): sssssssssssssssssss

B_input: send ACK (ack=19)

A_input: got ACK (ack=17)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=19)

A_input: got ACK (ack=18)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=22): vvvvvvvvvvvvvvvvvv

send_window: the packet will be sent (seq=22): vvvvvvvvvvvvvvvvvv

B_input: this is not the expected sequence so NACK will be sent (ack=19)

A_timerinterrupt: resend packet (seq=19): sssssssssssssssssss

A_timerinterrupt: resend packet (seq=20): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=21): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=22): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=19)

A_input: got ACK (ack=19)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=20): tttttttttttttttttt

B_input: send ACK (ack=20)

A_output: buffered packet (seq=23): wwwwwwwwwwwwwwwwwwww

send_window: the packet will be sent (seq=23): wwwwwwwwwwwwwwwwwwww

B_input: the packet is received (seq=21): uuuuuuuuuuuuuuuuuuu

B_input: send ACK (ack=21)

A_input: got ACK (ack=20)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=24): xxxxxxxxxxxxxxxxxxxx

send_window:the packet will be sent (seq=24): xxxxxxxxxxxxxxxxxxxx

B_input: the packet is received (seq=22): vvvvvvvvvvvvvvvvv

B_input: send ACK (ack=22)

A_output: buffered packet (seq=25): yyyyyyyyyyyyyyyyyy

send_window:the packet will be sent (seq=25): yyyyyyyyyyyyyyyyyy

A_timerinterrupt: resend packet (seq=21): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=22): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=23): wwwwwwwwwwwwwwwwww

A_timerinterrupt: resend packet (seq=24): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: resend packet (seq=25): yyyyyyyyyyyyyyyyyy

A_timerinterrupt: timer + 15.000000

A_input: got ACK (ack=21)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got ACK (ack=22)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=22)

A_input: got NAK (ack=22). drop.

A_output: buffered packet (seq=26): zzzzzzzzzzzzzzzzzz

send_window:the packet will be sent (seq=26): zzzzzzzzzzzzzzzzzz

A_timerinterrupt: resend packet (seq=23): wwwwwwwwwwwwwwwwww

A_timerinterrupt: resend packet (seq=24): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: resend packet (seq=25): yyyyyyyyyyyyyyyyyy

A_timerinterrupt: resend packet (seq=26): zzzzzzzzzzzzzzzzzz

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=22)

B_input: this is not the expected sequence so NACK will be sent (ack=22)

A_output: buffered packet (seq=27): aaaaaaaaaaaaaaaaaaaa

send_window:the packet will be sent (seq=27): aaaaaaaaaaaaaaaaaaaa

A_input: got NAK (ack=22). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=22)

B_input: the packet is recieved (seq=23): wwwwwwwwwwwwwww

B_input: send ACK (ack=23)

B_input: this is not the expected sequence so NACK will be sent (ack=23)

A_timerinterrupt: resend packet (seq=23): wwwwwwwwwwwwwww

A_timerinterrupt: resend packet (seq=24): xxxxxxxxxxxxxxxxx

A_timerinterrupt: resend packet (seq=25): yyyyyyyyyyyyyyy

A_timerinterrupt: resend packet (seq=26): zzzzzzzzzzzzzzz

A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaaaa

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=23)

A_input: got ACK (ack=23)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=28): bbbbbbbbbbbbbbb

send_window:the packet will be sent (seq=28): bbbbbbbbbbbbbbb

B_input: this is not the expected sequence so NACK will be sent (ack=23)

B_input: this is not the expected sequence so NACK will be sent (ack=23)

A_output: buffered packet (seq=29): ccccccccccccccc

send_window:the packet will be sent (seq=29): ccccccccccccccc

A_input: got NAK (ack=23). drop.

A_timerinterrupt: resend packet (seq=24): xxxxxxxxxxxxxxxxx

A_timerinterrupt: resend packet (seq=25): yyyyyyyyyyyyyyy

A_timerinterrupt: resend packet (seq=26): zzzzzzzzzzzzzzz

A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaaaa

A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb
A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=23)
B_input: the packet is recieved (seq=24): xxxxxxxxxxxxxxxxxxxx
B_input: send ACK (ack=24)
A_input: got NAK (ack=23). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=24)
A_output: buffered packet (seq=30): dddddddddddddddddd
send_window:the packet will be sent (seq=30): dddddddddddddddddd
A_timerinterrupt: resend packet (seq=24): xxxxxxxxxxxxxxxxxxxx
A_timerinterrupt: resend packet (seq=25): yyyyyyyyyyyyyyyyyyyy
A_timerinterrupt: resend packet (seq=26): zzzzzzzzzzzzzzzzzz
A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaa
A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb
A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc
A_timerinterrupt: resend packet (seq=30): dddddddddddddddddd
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=24)
A_input: got ACK (ack=24)
Warning: attempt to start a timer that is already started
A_input: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=24)
A_input: got NAK (ack=24). drop.
A_input: got NAK (ack=24). drop.
B_input: the packet is recieved (seq=25): yyyyyyyyyyyyyyyyyyyy
B_input: send ACK (ack=25)
A_output: buffered packet (seq=31): eeeeeeeeeeeeeeeeeeee
send_window:the packet will be sent (seq=31): eeeeeeeeeeeeeeeeeeee

A_input: got NAK (ack=24). drop.

A_timerinterrupt: resend packet (seq=25): yyyyyyyyyyyyyyyyyyy

A_timerinterrupt: resend packet (seq=26): zzzzzzzzzzzzzzzzzzz

A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaaaa

A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb

A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc

A_timerinterrupt: resend packet (seq=30): dddddddddddddddddddd

A_timerinterrupt: resend packet (seq=31): eeeeeeeeeeeeeeeeeeee

A_timerinterrupt: timer + 15.000000

B_input: the packet is recieved (seq=26): zzzzzzzzzzzzzzzzzzz

B_input: send ACK (ack=26)

A_input: got ACK (ack=25)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=26)

A_output: buffered packet (seq=32): ffffffffffffffffff

send_window:the packet will be sent (seq=32): ffffffffffffffffff

A_timerinterrupt: resend packet (seq=26): zzzzzzzzzzzzzzzzzzz

A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaaaa

A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb

A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc

A_timerinterrupt: resend packet (seq=30): dddddddddddddddddddd

A_timerinterrupt: resend packet (seq=31): eeeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=32): ffffffffffffffffff

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=26)

A_input: got ACK (ack=26)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got NAK (ack=26). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=26)

B_input: this is not the expected sequence so NACK will be sent (ack=26)

A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaa

A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb

A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc

A_timerinterrupt: resend packet (seq=30): dddddddddddddddddd

A_timerinterrupt: resend packet (seq=31): eeeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=32): ffffffffffffffffffff

A_timerinterrupt: timer + 15.000000

A_output: buffered packet (seq=33): gggggggggggggggggggg

send_window:the packet will be sent (seq=33): gggggggggggggggggggg

B_input: this is not the expected sequence so NACK will be sent (ack=26)

A_input: got NAK (ack=26). drop.

B_input: the packet is recieved (seq=27): aaaaaaaaaaaaaaaaaa

B_input: send ACK (ack=27)

A_input: got NAK (ack=26). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=27)

A_output: buffered packet (seq=34): hhhhhhhhhhhhhhhhhh

send_window:the packet will be sent (seq=34): hhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=27): aaaaaaaaaaaaaaaaaa

A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb

A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc

A_timerinterrupt: resend packet (seq=30): dddddddddddddddddd

A_timerinterrupt: resend packet (seq=31): eeeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=32): ffffffffffffffffffff

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhh

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=27)

B_input: this is not the expected sequence so NACK will be sent (ack=27)

A_output: buffered packet (seq=35): iiiiiiiiiiiiiiiii

A_output: buffered packet (seq=36): jjjjjjjjjjjjjjjjjj

B_input: this is not the expected sequence so NACK will be sent (ack=27)

A_output: buffered packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_input: got ACK (ack=27)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_timerinterrupt: resend packet (seq=28): bbbbbbbbbbbbbbbbbbbb

A_timerinterrupt: resend packet (seq=29): cccccccccccccccccc

A_timerinterrupt: resend packet (seq=30): dddddddddddddddddd

A_timerinterrupt: resend packet (seq=31): eeeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=32): ffffffffffffffffffff

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: timer + 15.000000

B_input: the packet is recieved (seq=28): bbbbbbbbbbbbbbbbbbbb

B_input: send ACK (ack=28)

A_output: buffered packet (seq=38): llllllllllllllllll

send_window:the packet will be sent (seq=35): iiiiiiiiiiiiiiiii

B_input: the packet is recieved (seq=29): cccccccccccccccccc

B_input: send ACK (ack=29)

A_input: got ACK (ack=28)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=39): mmmmmmmmmmmmmmmmmm

send_window:the packet will be sent (seq=36): jjjjjjjjjjjjjjjjjj

B_input: the packet is recieved (seq=30): dddddddddddddddddd

B_input: send ACK (ack=30)

A_input: got ACK (ack=29)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_timerinterrupt: resend packet (seq=30): ddddddddddddddddddd

A_timerinterrupt: resend packet (seq=31): eeeeeeeeeeeeeeeeeee

A_timerinterrupt: resend packet (seq=32): ffffffffffffffffffff

A_timerinterrupt: resend packet (seq=33): ggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

A_input: got ACK (ack=30)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=31): eeeeeeeeeeeeeeeeeee

B_input: send ACK (ack=31)

A_input: got ACK (ack=31)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=40): nnnnnnnnnnnnnnnnnnn

send_window:the packet will be sent (seq=37): kkkkkkkkkkkkkkkkkkk

send_window:the packet will be sent (seq=38): llllllllllllllllll

send_window:the packet will be sent (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=32): ffffffffffffffffffff

A_timerinterrupt: resend packet (seq=33): ggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk
A_timerinterrupt: resend packet (seq=38): llllllllllllllllll
A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=31)
B_input: this is not the expected sequence so NACK will be sent (ack=31)
A_input: got NAK (ack=31). drop.
A_input: got NAK (ack=31). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=31)
A_output: buffered packet (seq=41): oooooooooooooooooooooo
B_input: this is not the expected sequence so NACK will be sent (ack=31)
B_input: the packet is received (seq=32): ffffffffffffffffffff
B_input: send ACK (ack=32)
A_timerinterrupt: resend packet (seq=32): ffffffffffffffffffff
A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg
A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh
A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii
A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjjjj
A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk
A_timerinterrupt: resend packet (seq=38): llllllllllllllllll
A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=31). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=32)
B_input: this is not the expected sequence so NACK will be sent (ack=32)
A_input: got ACK (ack=32)
Warning: attempt to start a timer that is already started
A_input: timer + 15.000000
A_output: buffered packet (seq=42): pppppppppppppppppppp

send_window:the packet will be sent (seq=40): nnnnnnnnnnnnnnnnnnn

A_input: got NAK (ack=32). drop.

A_input: got NAK (ack=32). drop.

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_output: buffered packet (seq=43): qqqqqqqqqqqqqqqqqq

A_input: got NAK (ack=32). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_input: got NAK (ack=32). drop.

A_output: buffered packet (seq=44): rrrrrrrrrrrrrrrrrr

A_output: buffered packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=32)

B_input: this is not the expected sequence so NACK will be sent (ack=32)

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_input: got NAK (ack=32). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_output: buffered packet (seq=46): tttttttttttttttt

A_input: got NAK (ack=32). drop.

A_input: got NAK (ack=32). drop.

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=32)

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_input: got NAK (ack=32). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_output: buffered packet (seq=47): uuuuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=32). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=32)

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_input: got NAK (ack=32). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=32)

A_input: got NAK (ack=32). drop.

A_timerinterrupt: resend packet (seq=33): gggggggggggggggggggg

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: timer + 15.000000

B_input: the packet is received (seq=33): gggggggggggggggggggg

B_input: send ACK (ack=33)

A_output: buffered packet (seq=48): vvvvvvvvvvvvvvvvvv

A_input: got ACK (ack=33)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=33)

A_output: buffered packet (seq=49): wwwwwwwwwwwwwww

send_window:the packet will be sent (seq=41): oooooooooooooooooo

B_input: this is not the expected sequence so NACK will be sent (ack=33)

A_input: got NAK (ack=33). drop.

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=33). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=33)

A_output: buffered packet (seq=50): xxxxxxxxxxxxxxxxxxxx

B_input: the packet is recieved (seq=34): hhhhhhhhhhhhhhhhh

B_input: send ACK (ack=34)

A_timerinterrupt: resend packet (seq=34): hhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got ACK (ack=34)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

B_input: this is not the expected sequence so NACK will be sent (ack=34)

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=34). drop.

A_input: got NAK (ack=34). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=34)

A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiii
A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjjj
A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk
A_timerinterrupt: resend packet (seq=38): lllllllllllllllll
A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm
A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn
A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=34)
A_input: got NAK (ack=34). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=34)
B_input: this is not the expected sequence so NACK will be sent (ack=34)
A_timerinterrupt: resend packet (seq=35): iiiiiiiiiiiiiiiii
A_timerinterrupt: resend packet (seq=36): jjjjjjjjjjjjjjjjjjj
A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk
A_timerinterrupt: resend packet (seq=38): lllllllllllllllll
A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm
A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn
A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=34). drop.
B_input: the packet is recieved (seq=35): iiiiiiiiiiiiiiiii
B_input: send ACK (ack=35)
A_input: got ACK (ack=35)
Warning: attempt to start a timer that is already started
A_input: timer + 15.000000
B_input: the packet is recieved (seq=36): jjjjjjjjjjjjjjjjjjj
B_input: send ACK (ack=36)
B_input: the packet is recieved (seq=37): kkkkkkkkkkkkkkkkkkk

B_input: send ACK (ack=37)

A_timerinterrupt: resend packet (seq=36): jzzzzzzzzzzzzzzzzzz

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got ACK (ack=36)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is recvied (seq=38): llllllllllllllllll

B_input: send ACK (ack=38)

B_input: the packet is recvied (seq=39): mmmmmmmmmmmmmmmmmmm

B_input: send ACK (ack=39)

A_timerinterrupt: resend packet (seq=37): kkkkkkkkkkkkkkkkkkk

A_timerinterrupt: resend packet (seq=38): llllllllllllllllll

A_timerinterrupt: resend packet (seq=39): mmmmmmmmmmmmmmmmmmm

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got ACK (ack=37)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got ACK (ack=38)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is recvied (seq=40): nnnnnnnnnnnnnnnnnnn

B_input: send ACK (ack=40)

A_input: got ACK (ack=39)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_timerinterrupt: resend packet (seq=40): nnnnnnnnnnnnnnnnnnn

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got ACK (ack=40)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=40)

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_input: got NAK (ack=40). drop.

A_input: got NAK (ack=40). drop.

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_input: got NAK (ack=40). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_input: got NAK (ack=40). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_timerinterrupt: resend packet (seq=41): ooooooooooooooooooooo

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=40). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=40)

B_input: this is not the expected sequence so NACK will be sent (ack=40)

A_input: got NAK (ack=40). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=40)
A_input: got NAK (ack=40). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=40)
A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=40)
B_input: this is not the expected sequence so NACK will be sent (ack=40)
A_input: got NAK (ack=40). drop.
A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=40). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=40)
A_input: got NAK (ack=40). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=40)
A_input: got NAK (ack=40). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=40)
A_input: got NAK (ack=40). drop.
B_input: the packet is received (seq=41): oooooooooooooooooooooo
B_input: send ACK (ack=41)
A_input: got NAK (ack=40). drop.
A_timerinterrupt: resend packet (seq=41): oooooooooooooooooooooo
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_input: got ACK (ack=41)
A_input: stop timer
send_window:the packet will be sent (seq=42): pppppppppppppppppppp
send_window:the packet will be sent (seq=43): qqqqqqqqqqqqqqqqqqq
send_window:the packet will be sent (seq=44): rrrrrrrrrrrrrrrrrrr

send_window:the packet will be sent (seq=45): sssssssssssssssss

send_window:the packet will be sent (seq=46): tttttttttttttttt

send_window:the packet will be sent (seq=47): uuuuuuuuuuuuuuuuuu

send_window:the packet will be sent (seq=48): vvvvvvvvvvvvvvvvv

send_window:the packet will be sent (seq=49): wwwwwwwwwwwwwwwwwww

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
B_input: this is not the expected sequence so NACK will be sent (ack=41)
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp
A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_input: got NAK (ack=41). drop.
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp
A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_input: got NAK (ack=41). drop.
A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp
A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp
A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

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B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=45): sssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
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A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): sssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
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A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
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A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
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A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
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A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
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A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
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A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv
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A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

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A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): ssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=41)

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A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=41). drop.

A_input: got NAK (ack=41). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=41)

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A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=41). drop.

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B_input: this is not the expected sequence so NACK will be sent (ack=41)

A_timerinterrupt: resend packet (seq=42): ppppppppppppppppppp

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A_timerinterrupt: resend packet (seq=45): sssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_input: got NAK (ack=41). drop.
B_input: this is not the expected sequence so NACK will be sent (ack=41)
B_input: this is not the expected sequence so NACK will be sent (ack=41)
A_timerinterrupt: resend packet (seq=42): pppppppppppppppppp
A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): sssssssssssssssss
A_timerinterrupt: resend packet (seq=46): tttttttttttttttt
A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuu
A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv
A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwww
A_timerinterrupt: timer + 15.000000
A_input: got NAK (ack=41). drop.
B_input: the packet is recieved (seq=42): pppppppppppppppppp
B_input: send ACK (ack=42)
A_timerinterrupt: resend packet (seq=42): pppppppppppppppppp
A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqqq
A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr
A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=42)

A_input: got ACK (ack=42)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=42)

B_input: this is not the expected sequence so NACK will be sent (ack=42)

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=42)

A_input: got NAK (ack=42). drop.

A_input: got NAK (ack=42). drop.

B_input: the packet is received (seq=43): qqqqqqqqqqqqqqqqq

B_input: send ACK (ack=43)

B_input: the packet is received (seq=44): rrrrrrrrrrrrrrrrr

B_input: send ACK (ack=44)

A_timerinterrupt: resend packet (seq=43): qqqqqqqqqqqqqqqqq

A_timerinterrupt: resend packet (seq=44): rrrrrrrrrrrrrrrrr

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=44)

A_input: got ACK (ack=43)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got ACK (ack=44)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=44)

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=44)

A_input: got NAK (ack=44). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=44)

B_input: this is not the expected sequence so NACK will be sent (ack=44)

A_timerinterrupt: resend packet (seq=45): sssssssssssssssss

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=44). drop.

B_input: the packet is received (seq=45): sssssssssssssssss

B_input: send ACK (ack=45)

A_input: got NAK (ack=44). drop.

A_input: got ACK (ack=45)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=46): tttttttttttttttt

B_input: send ACK (ack=46)

B_input: the packet is received (seq=47): uuuuuuuuuuuuuuuuuuu

B_input: send ACK (ack=47)

A_timerinterrupt: resend packet (seq=46): tttttttttttttttt

A_timerinterrupt: resend packet (seq=47): uuuuuuuuuuuuuuuuuuu

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: the packet is received (seq=48): vvvvvvvvvvvvvvvvv

B_input: send ACK (ack=48)

A_input: got ACK (ack=46)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_input: got ACK (ack=47)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: the packet is received (seq=49): wwwwwwwwwwwwwwwwwww

B_input: send ACK (ack=49)

A_timerinterrupt: resend packet (seq=48): vvvvvvvvvvvvvvvvv

A_timerinterrupt: resend packet (seq=49): wwwwwwwwwwwwwwwwwww

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got ACK (ack=48)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got ACK (ack=49)

A_input: stop timer

send_window:the packet will be sent (seq=50): xxxxxxxxxxxxxxxxxxxx

B_input: this is not the expected sequence so NACK will be sent (ack=49)

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got NAK (ack=49). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got NAK (ack=49). drop.

A_timerinterrupt: resend packet (seq=50): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=49). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=49)

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got NAK (ack=49). drop.

A_timerinterrupt: resend packet (seq=50): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=49)

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_timerinterrupt: resend packet (seq=50): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got NAK (ack=49). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_input: got NAK (ack=49). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=49)

A_timerinterrupt: resend packet (seq=50): xxxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=49)

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A_timerinterrupt: resend packet (seq=50): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=49). drop.

B_input: the packet is recieved (seq=50): xxxxxxxxxxxxxxxxxxxx

B_input: send ACK (ack=50)

B_input: this is not the expected sequence so NACK will be sent (ack=50)

A_timerinterrupt: resend packet (seq=50): xxxxxxxxxxxxxxxxxxxx

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=50)

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A_input: got ACK (ack=50)

A_input: stop timer

B_input: this is not the expected sequence so NACK will be sent (ack=50)

A_input: got NAK (ack=50). drop.

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A_input: got NAK (ack=50). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=50)

A_input: got NAK (ack=50). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=50)

B_input: this is not the expected sequence so NACK will be sent (ack=50)

A_input: got NAK (ack=50). drop.

A_input: got NAK (ack=50). drop.

Simulator terminated at time 2516.320313

after sending 50 msgs from layer5

c. Output3

the number of messages to simulate: 10

packet loss probability: 0.000000

packet corruption probability: 0.300000

average time between messages from sender's layer5: 10.000000

TRACE: 0

A_output: buffered packet (seq=1): aaaaaaaaaaaaaaaaaa

send_window:the packet will be sent (seq=1): aaaaaaaaaaaaaaaaaa

B_input: the packet is received (seq=1): aaaaaaaaaaaaaaaaaa

B_input: send ACK (ack=1)

A_input: got ACK (ack=1)

A_input: stop timer

A_output: buffered packet (seq=2): bbbbbbbbbbbbbbbbbbb

send_window:the packet will be sent (seq=2): bbbbbbbbbbbbbbbbbbb

B_input: the packet is received (seq=2): bbbbbbbbbbbbbbbbbbb

B_input: send ACK (ack=2)

A_input: got ACK (ack=2)

A_input: stop timer

A_output: buffered packet (seq=3): cccccccccccccccccc

send_window:the packet will be sent (seq=3): cccccccccccccccccc

B_input: the packet is received (seq=3): cccccccccccccccccc

B_input: send ACK (ack=3)

A_input: got ACK (ack=3)

A_input: stop timer

A_output: buffered packet (seq=4): dddddddddddddddddd

send_window:the packet will be sent (seq=4): dddddddddddddddddd

B_input: the packet is corrupted so NACK will be sent (ack=3)

A_input: got NAK (ack=3). drop.

A_timerinterrupt: resend packet (seq=4): dddddddddddddddddd

A_timerinterrupt: timer + 15.000000

A_output: buffered packet (seq=5): eeeeeeeeeeeeeeeeeee

send_window:the packet will be sent (seq=5): eeeeeeeeeeeeeeeeeee
 A_output: buffered packet (seq=6): ffffffffffffffffff
 send_window:the packet will be sent (seq=6): ffffffffffffffffff
 B_input: the packet is recieved (seq=4): ddddddddddddddd
 B_input: send ACK (ack=4)
 A_input:the packet iss corrupted. drop.
 A_output: buffered packet (seq=7): gggggggggggggggggg
 send_window:the packet will be sent (seq=7): gggggggggggggggggg
 B_input: the packet is recieved (seq=5): eeeeeeeeeeeeeeeeeee
 B_input: send ACK (ack=5)
 A_timerinterrupt: resend packet (seq=4): ddddddddddddddd
 A_timerinterrupt: resend packet (seq=5): eeeeeeeeeeeeeeeeeee
 A_timerinterrupt: resend packet (seq=6): ffffffffffffffffff
 A_timerinterrupt: resend packet (seq=7): gggggggggggggggggg
 A_timerinterrupt: timer + 15.000000
 B_input: the packet is corrupted so NACK will be sent (ack=5)
 A_input: got ACK (ack=5)
 Warning: attempt to start a timer that is already started
 A_input: timer + 15.000000
 B_input: this is not the expected sequence so NACK will be sent (ack=5)
 A_input: got NAK (ack=5). drop.
 B_input: this is not the expected sequence so NACK will be sent (ack=5)
 A_output: buffered packet (seq=8): hhhhhhhhhhhhhhhhh
 send_window:the packet will be sent (seq=8): hhhhhhhhhhhhhhhhh
 A_timerinterrupt: resend packet (seq=6): ffffffffffffffffff
 A_timerinterrupt: resend packet (seq=7): gggggggggggggggggg
 A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhh
 A_timerinterrupt: timer + 15.000000
 A_output: buffered packet (seq=9): iiiiiiiiiiiiiii
 send_window:the packet will be sent (seq=9): iiiiiiiiiiiiiii
 B_input: this is not the expected sequence so NACK will be sent (ack=5)
 A_input: got NAK (ack=5). drop.
 B_input: the packet is recieved (seq=6): ffffffffffffffffff
 B_input: send ACK (ack=6)
 A_input: got NAK (ack=5). drop.
 B_input: the packet is recieved (seq=7): gggggggggggggggggg
 B_input: send ACK (ack=7)
 A_timerinterrupt: resend packet (seq=6): ffffffffffffffffff
 A_timerinterrupt: resend packet (seq=7): gggggggggggggggggg
 A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhh
 A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiii
 A_timerinterrupt: timer + 15.000000
 A_input: got NAK (ack=5). drop.
 A_input: got ACK (ack=6)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_output: buffered packet (seq=10): jjjjjjjjjjjjjjjjjj

send_window: the packet will be sent (seq=10): jjjjjjjjjjjjjjjjjj

B_input: the packet is corrupted so NACK will be sent (ack=7)

B_input: this is not the expected sequence so NACK will be sent (ack=7)

A_input: got ACK (ack=7)

Warning: attempt to start a timer that is already started

A_input: timer + 15.000000

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

B_input: this is not the expected sequence so NACK will be sent (ack=7)

B_input: the packet is corrupted so NACK will be sent (ack=7)

A_input: the packet is corrupted. drop.

A_input: got NAK (ack=7). drop.

B_input: the packet is corrupted so NACK will be sent (ack=7)

B_input: the packet is corrupted so NACK will be sent (ack=7)

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

A_input: got NAK (ack=7). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=7)

A_input: the packet is corrupted. drop.

B_input: the packet is corrupted so NACK will be sent (ack=7)

A_input: got NAK (ack=7). drop.

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhh

A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii

A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj

A_timerinterrupt: timer + 15.000000

A_input: the packet is corrupted. drop.

A_input: got NAK (ack=7). drop.

B_input: this is not the expected sequence so NACK will be sent (ack=7)

B_input: the packet is corrupted so NACK will be sent (ack=7)

B_input: the packet is received (seq=8): hhhhhhhhhhhhhhhhhhh

B_input: send ACK (ack=8)

A_input: the packet is corrupted. drop.

B_input: the packet is received (seq=9): iiiiiiiiiiiiiiiii

B_input: send ACK (ack=9)

B_input: the packet is received (seq=10): jjjjjjjjjjjjjjjjjj

B_input: send ACK (ack=10)

A_input: got NAK (ack=7). drop.

A_timerinterrupt: resend packet (seq=8): hhhhhhhhhhhhhhhhhhh
 A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii
 A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj
 A_timerinterrupt: timer + 15.000000
 A_input: got NAK (ack=7). drop.
 A_input: got ACK (ack=8)
 Warning: attempt to start a timer that is already started
 A_input: timer + 15.000000
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 A_input: the packet is corrupted. drop.
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 A_timerinterrupt: resend packet (seq=9): iiiiiiiiiiiiiiiii
 A_timerinterrupt: resend packet (seq=10): jjjjjjjjjjjjjjjjjj
 A_timerinterrupt: timer + 15.000000
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 A_input: got ACK (ack=10)
 A_input: stop timer
 A_input: got NAK (ack=10). drop.
 B_input: the packet is corrupted so NACK will be sent (ack=10)
 A_input: got NAK (ack=10). drop.
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 B_input: the packet is corrupted so NACK will be sent (ack=10)
 A_input: got NAK (ack=10). drop.
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 A_input: the packet is corrupted. drop.
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 A_input: got NAK (ack=10). drop.
 B_input: this is not the expected sequence so NACK will be sent (ack=10)
 B_input: the packet is corrupted so NACK will be sent (ack=10)
 B_input: the packet is corrupted so NACK will be sent (ack=10)
 A_input: the packet is corrupted. drop.
 A_input: the packet is corrupted. drop.
 A_input: the packet is corrupted. drop.
 A_input: got NAK (ack=10). drop.
 A_input: got NAK (ack=10). drop.
 A_input: got NAK (ack=10). drop.
 Simulator terminated at time 227.009552
 after sending 10 msgs from layer5