TEAM POTATO
Milestone 2

In this milestone, we were asked to model acknowledgements from the receiver after a packet has been sent. If the transfer was successful, an ACK acknowledgement is sent. If the transfer was not successful, a NAK acknowledgement is sent, and the previous packet is resent.

Below is the trace for successfully transferring 6 packets in 8 states (i.e. there is one NAK), and another trace where the data is not successfully transferred because it runs out of states.

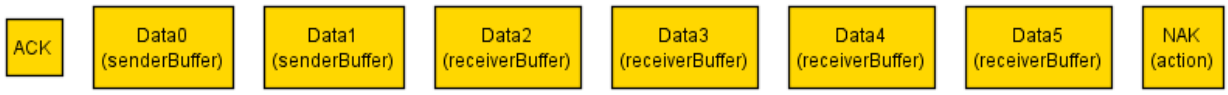
State 0

State 1

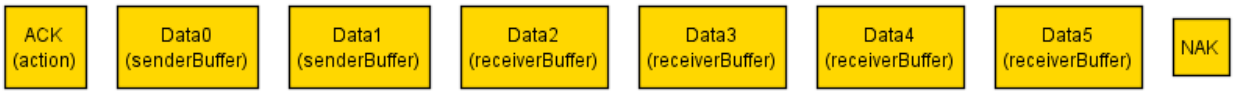
State 2

State 3

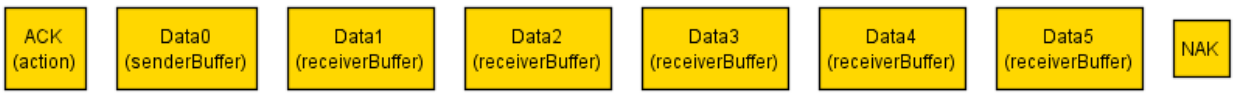
State 4



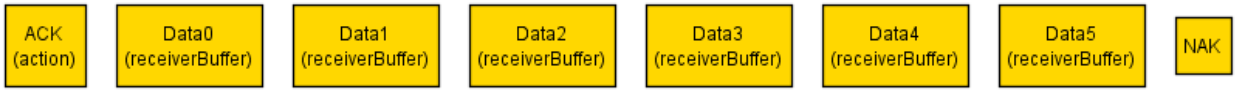
State 5



State 6



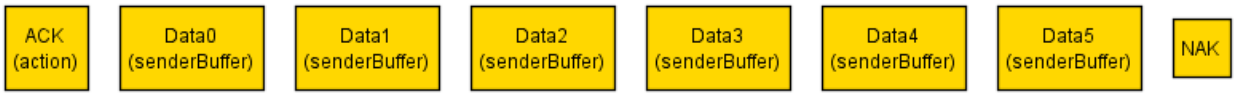
State 7



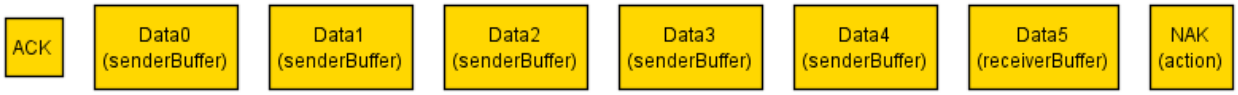
State	Send Buffer	Receiver Buffer	Acknowledgement
0	0,1,2,3,4,5	-	ACK
1	0,1,2,3,4	5	ACK
2	0,1,2,3	4,5	ACK
3	0,1,2	3,4,5	ACK
4	0,1	2,3,4,5	NAK
5	0,1	2,3,4,5	ACK
6	0	1,2,3,4,5	ACK
7	-	0,1,2,3,4,5	ACK

Now we move on to the trace where the data is not successfully transferred.

State 0

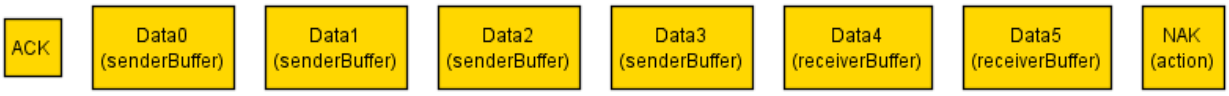


State 1

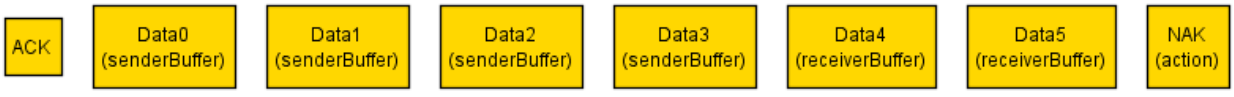


State 2

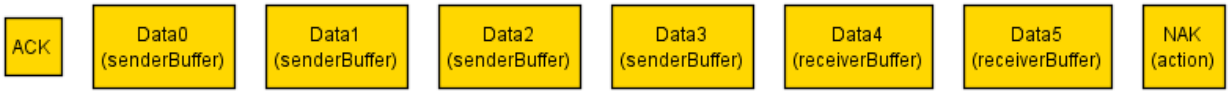
State 3



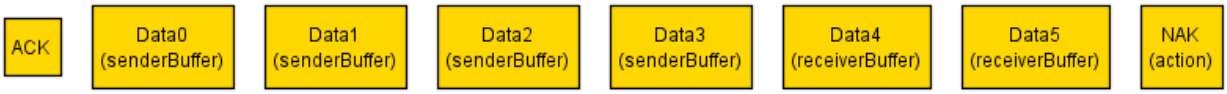
State 4



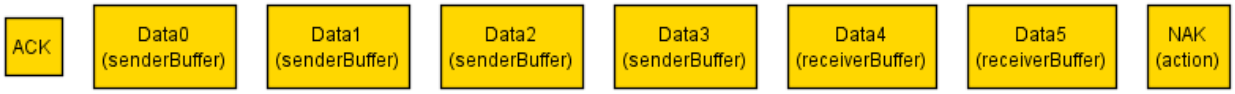
State 5



State 6



State 7



State	Send Buffer	Receiver Buffer	Acknowledgement
0	0,1,2,3,4,5	-	ACK
1	0,1,2,3,4	5	NAK
2	0,1,2,3,4	5	ACK
3	0,1,2,3	4,5	NAK
4	0,1,2,3	4,5	NAK
5	0,1,2,3	4,5	NAK
6	0,1,2,3	4,5	NAK
7	0,1,2,3	4,5	NAK

With this model of data transfer, all data will be successfully transferred if it is given enough time to do so. However, if there is some timeout mechanism (i.e. after 4 NAK's the sender stops attempting to send data), then data transfer may fail.