Alternating- Bit Protocol.

Sender:
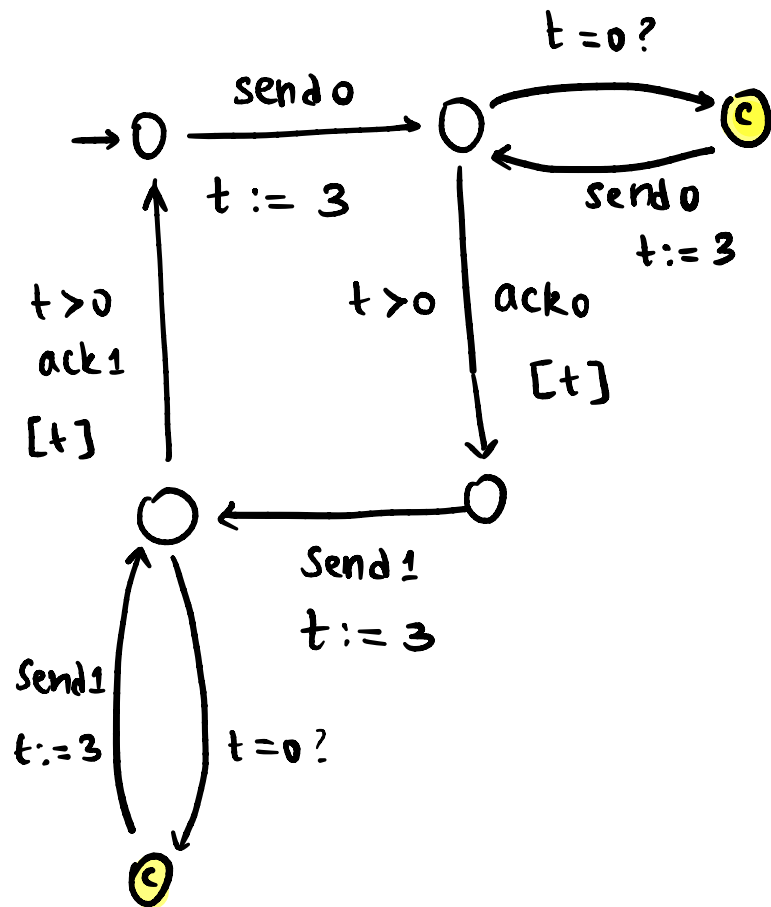
Receiver:

Channel:

x: clock
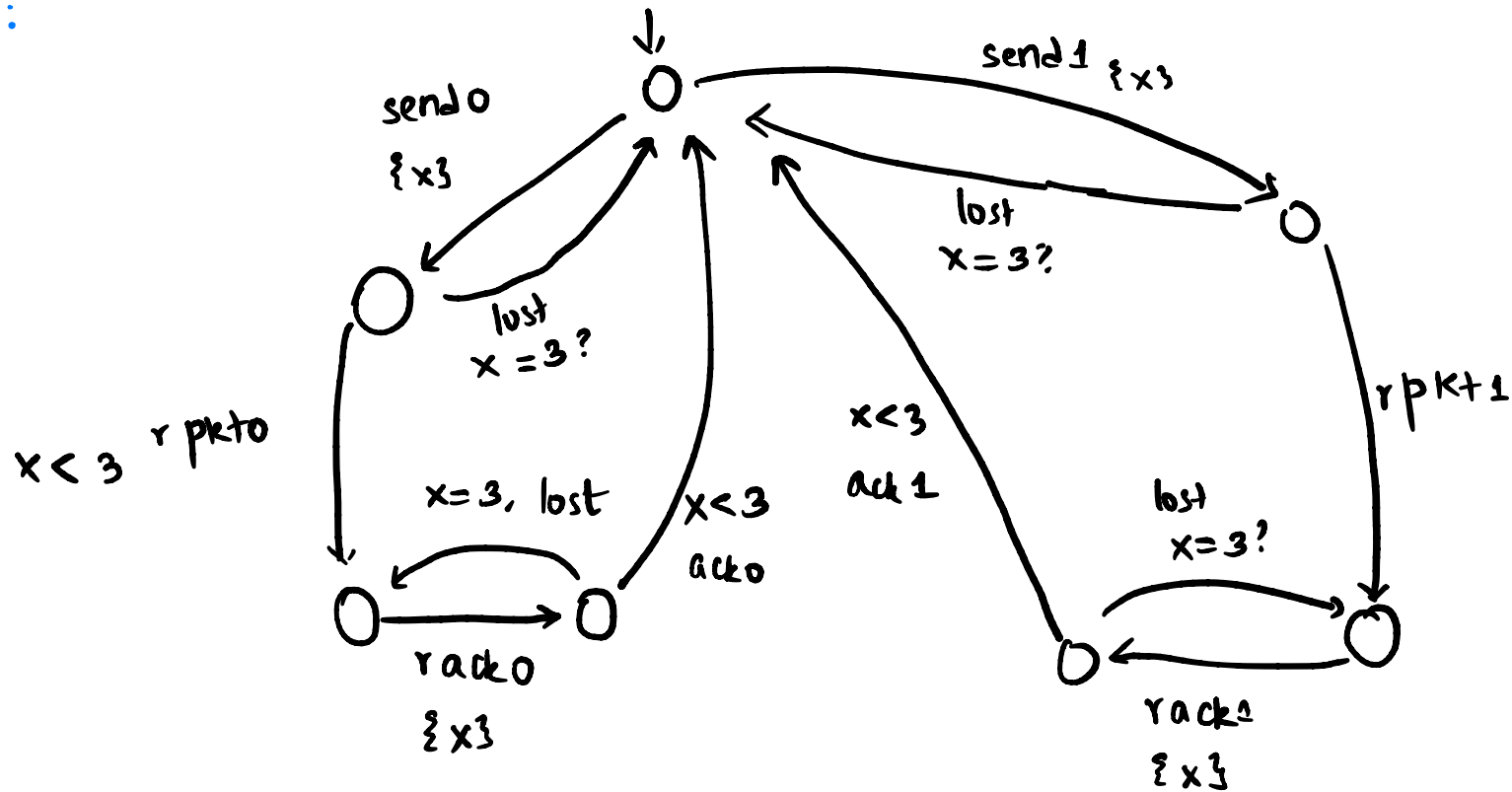

send1 {x}

send0 {x}

lost x=3?

x<3 r pkt0

lost x=3?

x<3 ack0

x=3, lost

rack0 {x}

x<3 ack1

lost x=3?

r pkt1
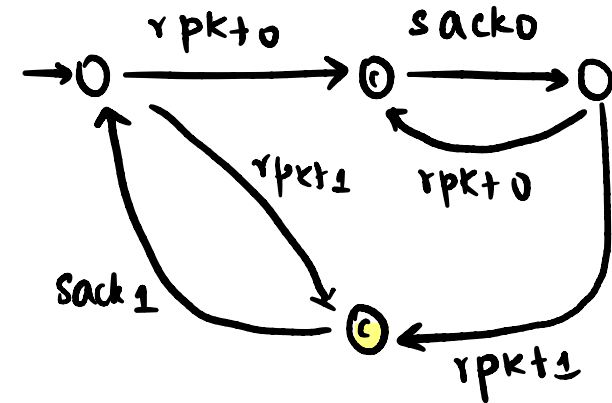
rack1 {x}
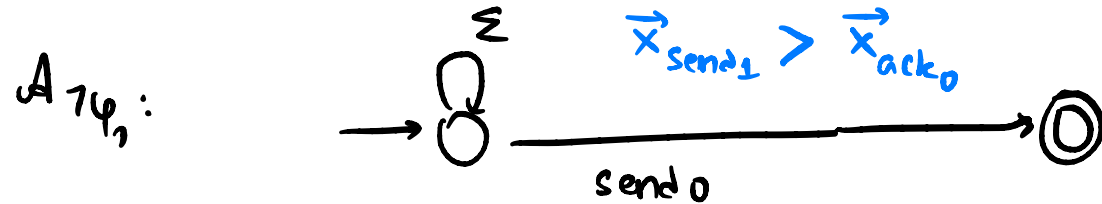
- Messages received: send0, rack0, send1, rack1

  If they are not sent within 3 time units, the channel does a local "lost" transition
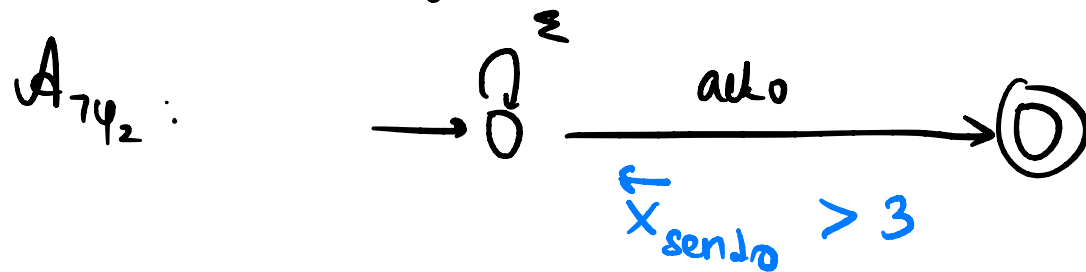
Properties to be checked:

1) φ_1 : between a send0 and send1, there is an ack 0

$A_{\neg\varphi_1}$:

2) φ_2 : An acknowledgement is received within 3 time units of the corresponding send.

$A_{\neg\varphi_2}$:

This property is not satisfied.