

MAC interface

1 Control Messages

1.1 PhyLayer -> MAC

- RX_START
 - Start of message indicator
- RX_HDR
 - “Headers complete” indicator. Should also provide a packet containing all of the data up to the end of the MAC headers
- RX_FAIL
 - Message receive failure. Occurs after a RX_START, if the message either fails CRC checks or collides with something else.
- TX_END
 - Message being transmitted has completed.
- TX_FAIL
 - End of transmit (like TX_END) but the message has failed to be transmitted. For most radios, this should never happen (but there are valid cases for packet-based radios e.g. CC2420)
- SET_RSSI
 - RSSI data about current packet. Should probably be folded into a MacPkt field.

1.2 MAC -> PhyLayer

- SET_TRANSMIT
- SET_LISTEN
- SET_SLEEP
 - Transition the PhyLayer into the given mode.

2 Data packets

The MAC layer transfers messages to the Phy layer for transmission (TX packets) and expects to receive message from the Phy layer when messages arrive from other nodes (RX packets). The diagrams below indicate the interaction between the packet types and the control messages listed above.

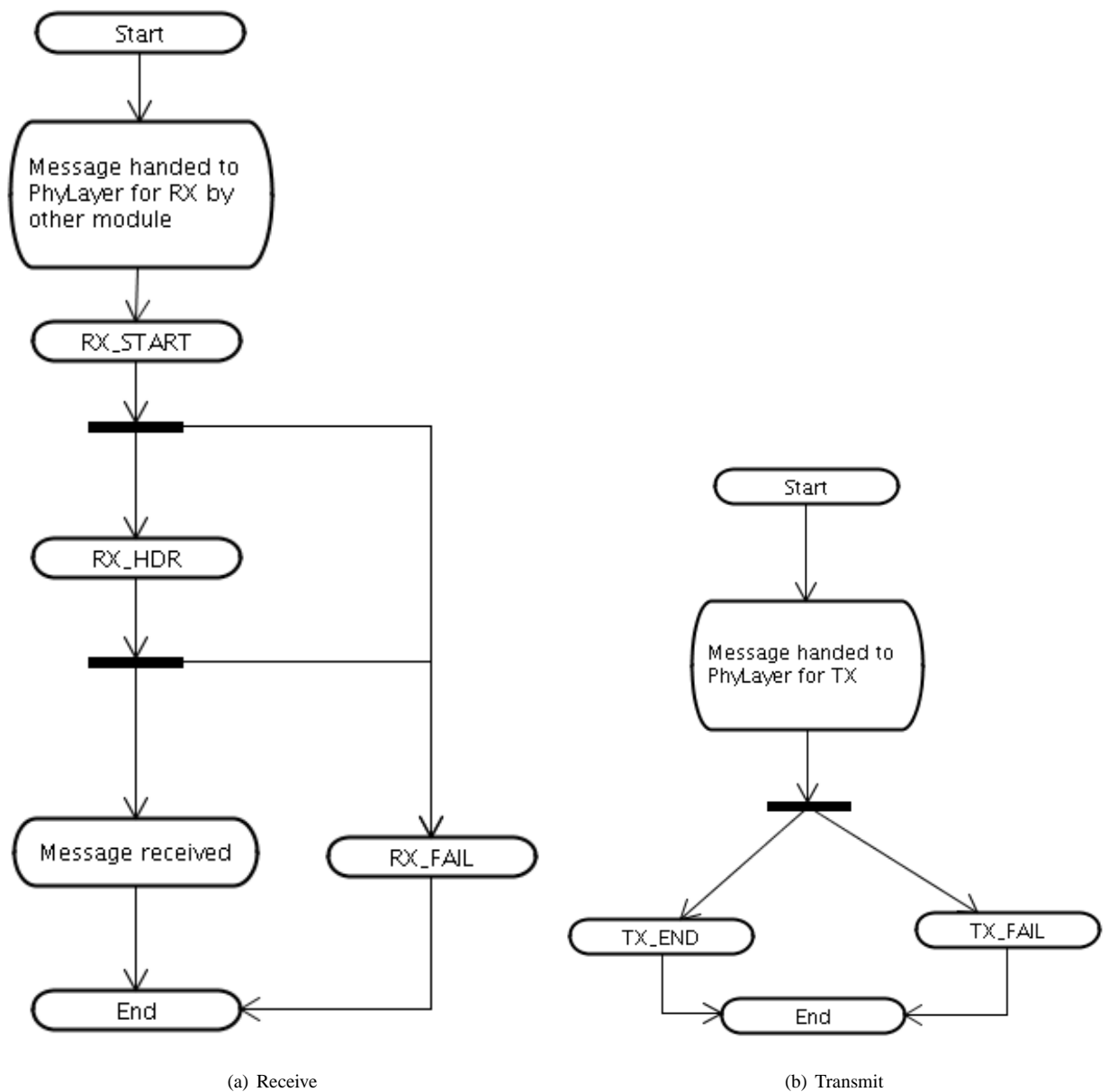


Figure 1: Message sequences