# Original Multiplexer State Diagram

The left hand portion of the diagram is really performing functions that one would expect the Control Block to handle.

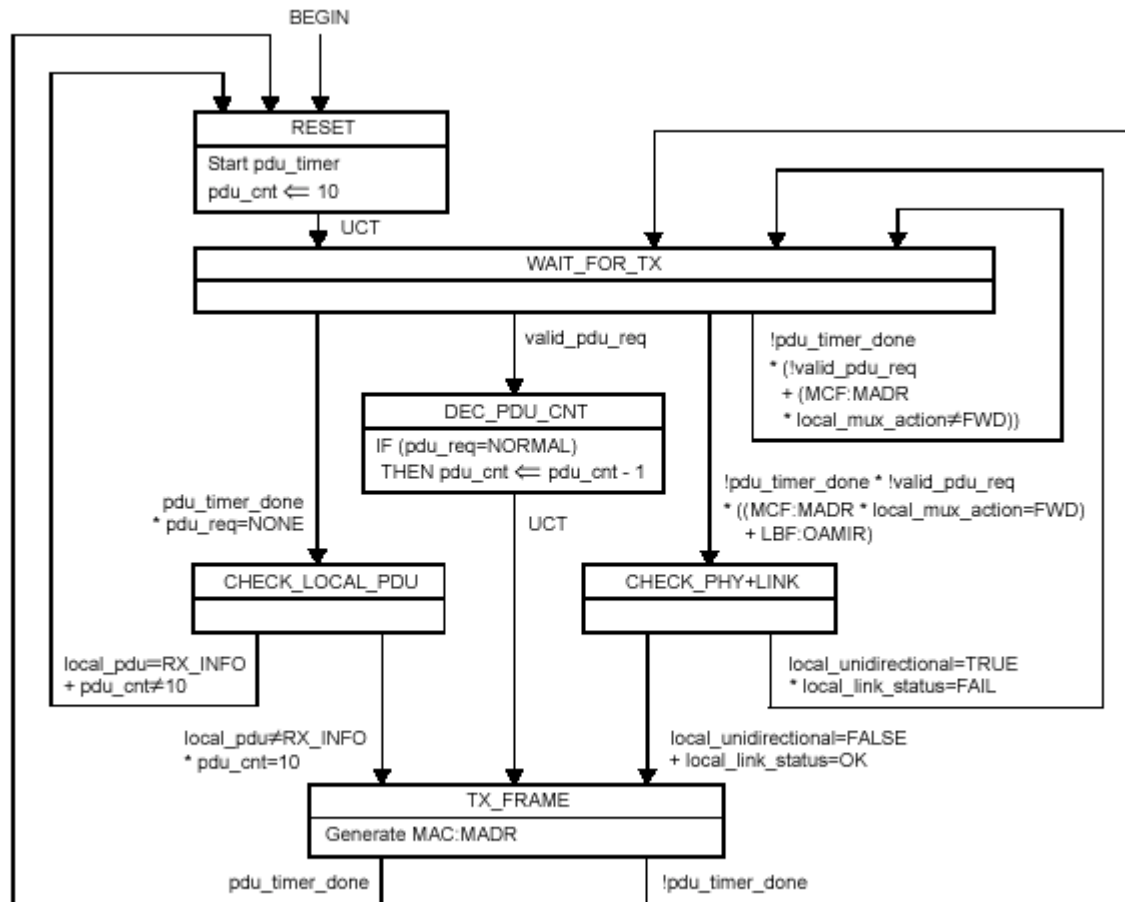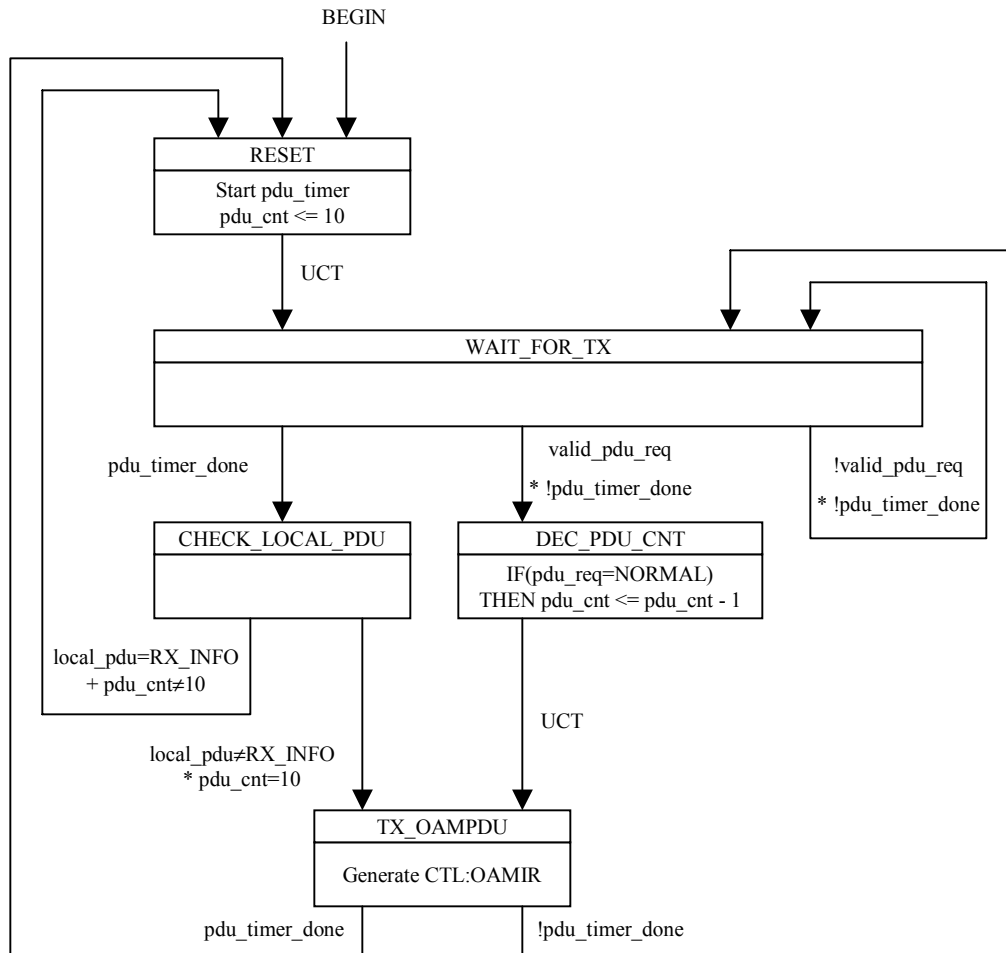The right hand portion of the diagram is doing the multiplexing



**Figure 57–6—Multiplexer state diagram**

BEGIN

RESET
Start pdu_timer
pdu_cnt <= 10

UCT

WAIT_FOR_TX

pdu_timer_done

valid_pdu_req
* !pdu_timer_done

!valid_pdu_req
* !pdu_timer_done

CHECK_LOCAL_PDU

DEC_PDU_CNT
IF(pdu_req=NORMAL)
THEN pdu_cnt <= pdu_cnt - 1

local_pdu=RX_INFO
+ pdu_cnt≠10

UCT

local_pdu≠RX_INFO
* pdu_cnt=10

TX_OAMPDU
Generate CTL:OAMIR

pdu_timer_done

!pdu_timer_done

# Control Block state diagram

Note: The following changes:

pdu_req

This represents a request to send an OAMPDU and is used within the Control block state diagram

Values: NONE: No OAMPDU.request(source_address,flags,code,data).

CRITICAL: OAMPDU.request(source_address,flags,code,data) while one or more critical link event OAM_CTL.request parameters set (local_dying_gasp, local_link_status, local_critical_event).
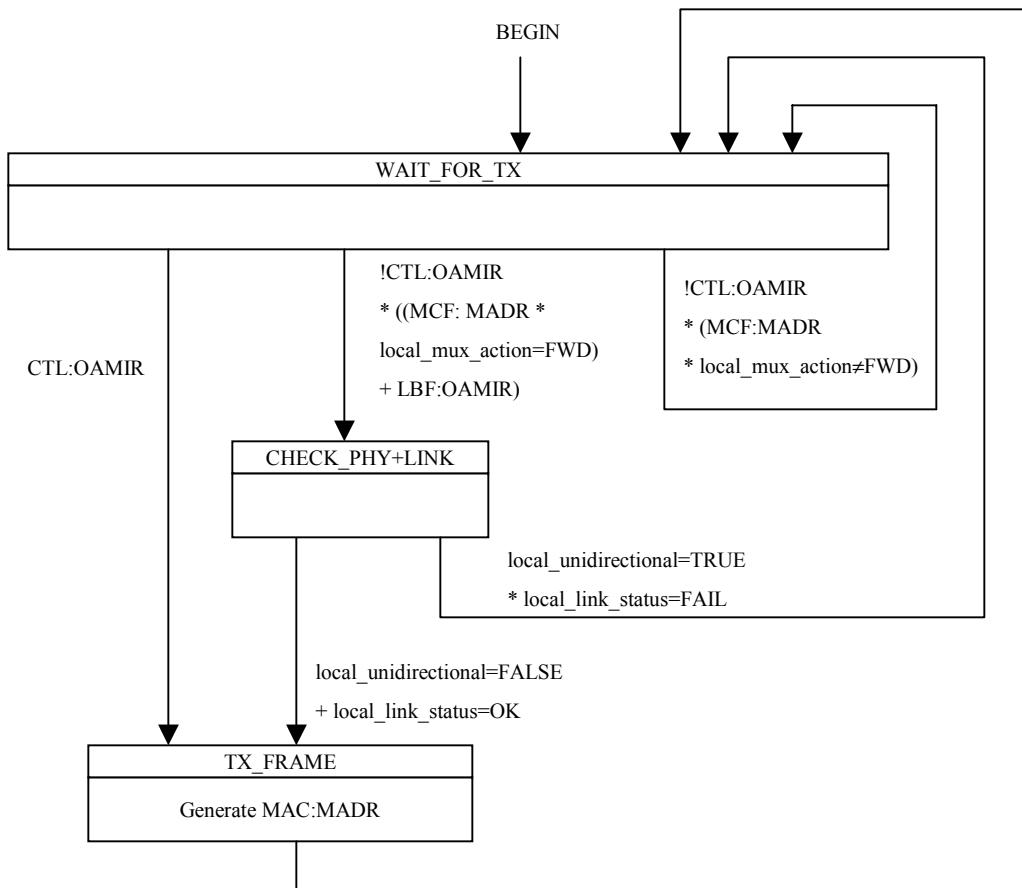
NORMAL: OAMPDU.request(source_address,flags,code,data) with no critical link event(s) set

valid_pdu_req: Alias for the following term:

(local_pdu≠RX_INFO * pdu_req=NORMAL * pdu_cnt≠0)

+ (local_pdu=ANY * pdu_req=CRITICAL)

By adding the !valid_pdu_req * !pdu_timer_done transition and removing the pdu_req=NORMAL from the pdu_timer_done transition all attempts to transmit an invalid while !pdu_timer_done will have a transition and not get stuck in the WAIT_FOR_TX state

BEGIN

WAIT_FOR_TX

!CTL:OAMIR
* ((MCF: MADR *
local_mux_action=FWD)
+ LBF:OAMIR)

!CTL:OAMIR
* (MCF:MADR
* local_mux_action≠FWD)

CTL:OAMIR

CHECK_PHY+LINK

local_unidirectional=TRUE
* local_link_status=FAIL

local_unidirectional=FALSE
+ local_link_status=OK

TX_FRAME

Generate MAC:MADR

# Multiplexer state diagram

All references to pdu_timer_done are removed as this is a control block function

All references to valid_pdu_req are removed as all OAM control block frames are valid

Multiplexer now just multiplexes

# Further Required Changes

- Control Block Related
- Add the control block diagram. It would go somewhere around 57.3.2.2 (possibly 57.3.2.2.1?)
- For consistency each transition would need a text description of what is happening. (basically what would need to be removed from MUX)
    - Text from 57.3.3 would be placed below the diagram
    - Add 57.3.3.1.1 to explain pdu_timer (changing all refs to Mutliplexer with Control Block)
    - Add 57.3.3.1.2 to explain valid OAMPDUs
    - Add 57.3.3.1.4 to explain what happens to invalid requests

- Multiplexer Related
- Replace the Multiplexer diagram.
- Clause 57.3.3: all text removed.  Short blurb mentioning that the WAIT_FOR_TX state is entered when BEGIN is true.
- Clause 57.3.3.1: Condition A) should be removed
- Clause 57.3.3.1.1: Removed but used as the basis for Control Block Text (replace all ref to Multiplexer with Control Block)
- Clause 57.3.3.1.2: Remove all text but the first sentence. Maybe explain that OAMPDU have priority over all other frames.
- Clause 57.3.3.1.3: Remove the last two sentences in the first paragraph
- Clause 57.3.3.1.4: Change title (remove send an OAMPDU or ) and remove first paragraph and two conditions
- Clause 57.3.3.2: Remove the last 3 sentences.

- Variables
- Change the def of pdu_req to send OAMPDU.requests rather than OAM_CTL.requests