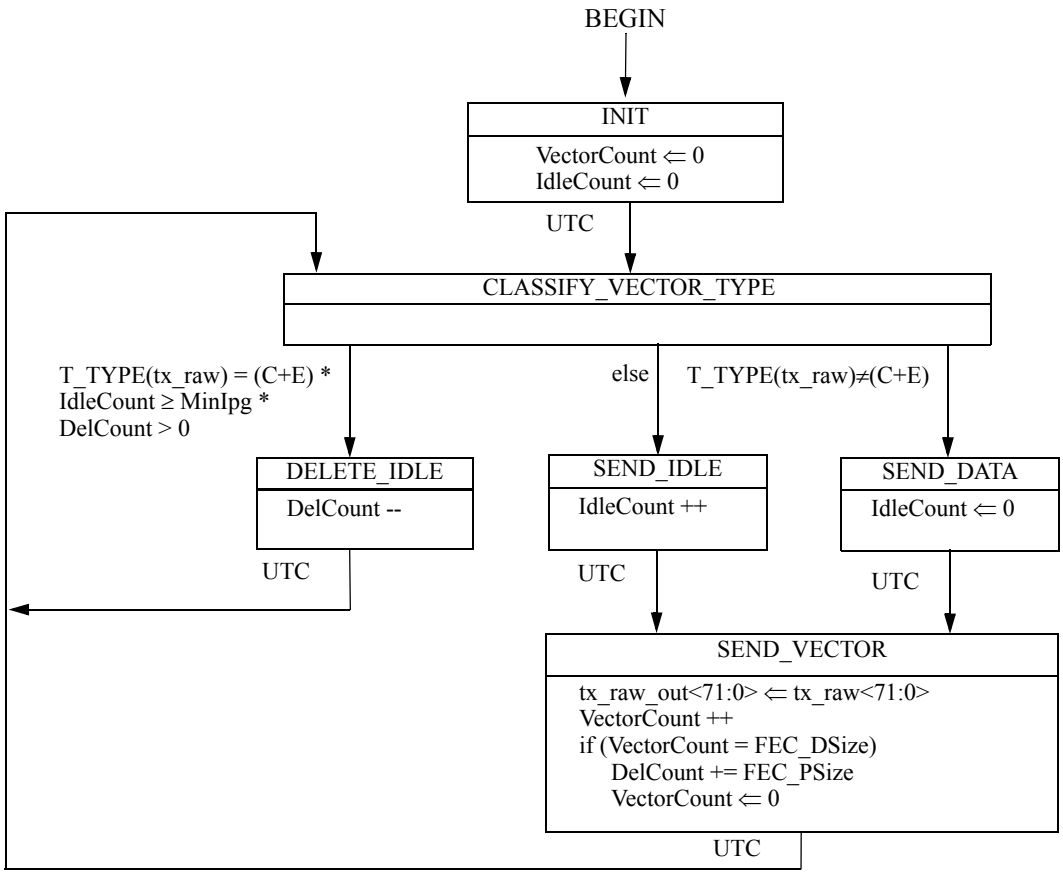

Figure 1–1—OLT Idle Deletion State machine

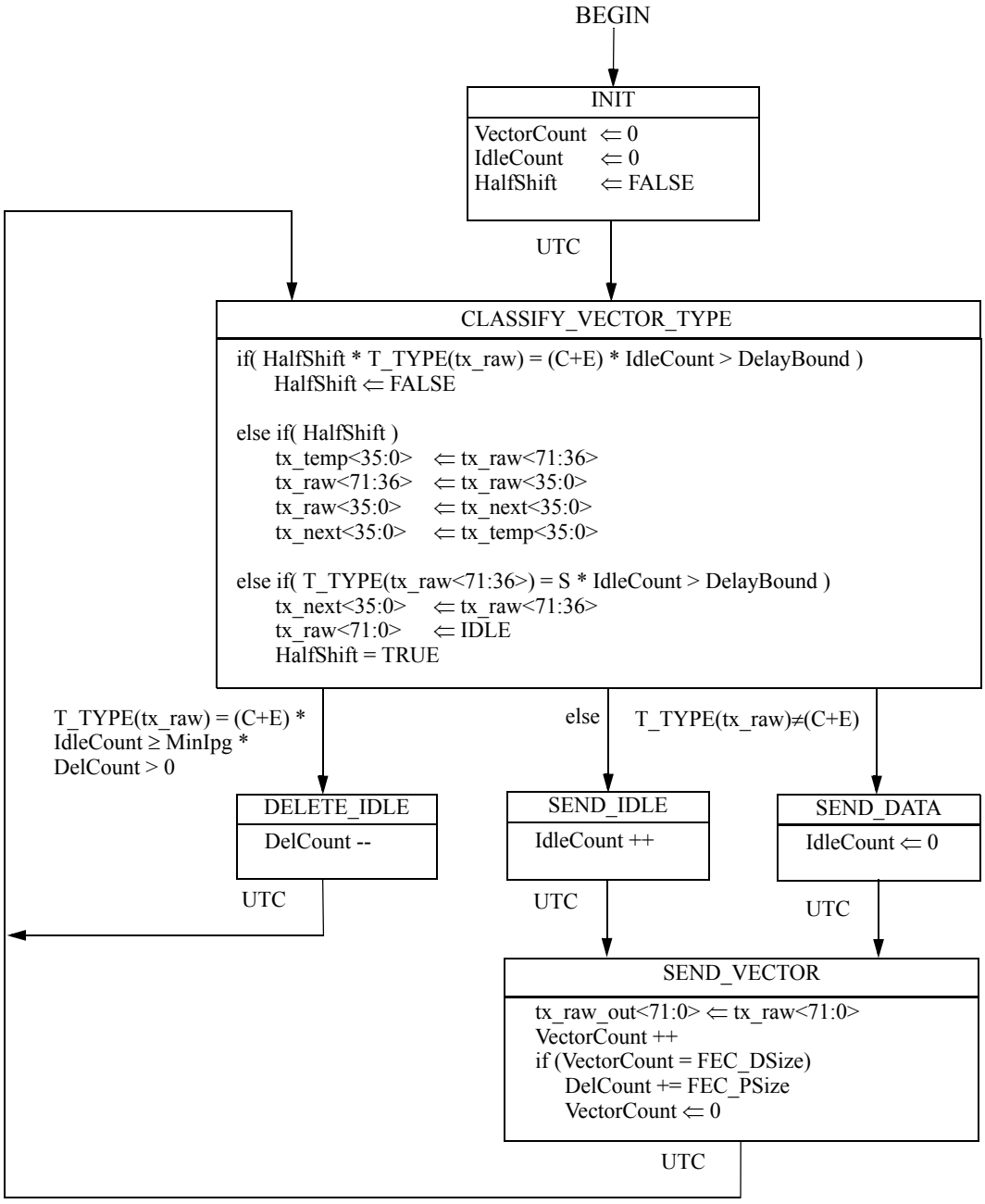

Figure 1–2—ONU Idle Deletion State machine

1.0.0.0.0.1 Constants

MinIpg
: TYPE: 8-bit unsigned
The number of 72-bit vectors consisting of IDLE control characters that constitute minimum IPG.
Value: 1

FEC_DSize
: TYPE: 16-bit unsigned
The number of 72-bit vectors consituting a payload of a FEC codeword. To normalize pre-FEC data rate, the IDLE Deletion function removes FEC_PSize vectors per every FEC_DSize vectors transfered to the 64B/66B encoder.
Value: 27

FEC_PSize
: TYPE: 16-bit unsigned
The number of 72-bit vectors consituting parity portion of a FEC codeword. To normalize pre-FEC data rate, the IDLE Deletion function removes FEC_PSize vectors per every FEC_DSize vectors transfered to the 64B/66B encoder.
Value: 4

1.0.0.0.0.2 Variables

BEGIN
: TYPE: Boolean
This variable is used when initiating operation of the state machine. It is set to true following initialization and every reset.

DelayBound
: TYPE: 16-bit unsigned
This value represents the delay sufficient to initiate the laser and to stabilize the receiver at the OLT (i.e. the maximum FIFO size expressed in 66-bit blocks). The value includes maximum laserOnTime (@@93.3.3.2@@), Treceiver_settling, TCDR, Burst Delimiter, and the two 66-bit blocks containing IDLEs, that preceed the first frame in the burst. This variable is used only by the ONU.
Default: 0x010F

HalfShift
: TYPE: Boolean
True if data is currently shifted by one XGMII column. False if data is not currently shifted.

tx_next<35:0>
: 36-bit vector containing one XGMII transfer. This vector is used to shift the data stream by one XGMII clock in order to align burst start to even XGMII transfer. The XGMII transfer is mapped into the tx_next<35:0> as follows:
RXC<3:0> bits are mapped to bits tx_next<3:0>;
RXD<31:0> bits are mapped to bits tx_next<35:4>.

tx_raw<71:0>
: 72-bit vector containing two XGMII transfers passed to the Idle Deletion function. The XGMII transfers are mapped into the tx_raw<71:0> as follows:
RXC<3:0> of the first transfer are mapped to bits tx_raw<3:0>;

RXD<31:0> of the first transfer are mapped to bits tx_raw<35:4>;
RXC<3:0> of the second transfer are mapped to bits tx_raw<39:36>;
RXD<31:0> of the second transfer are mapped to bits tx_raw<71:40>.

tx_raw_out<71:0>
72-bit vector sent from the output of the Idle Deletion function to the 64B/66B encoder. The vector contains two XGMII transfers mapped as shown for tx_raw<71:0>.

tx_temp<35:0>
36-bit vector used to temporarily hold one XGMII transfer. The XGMII transfer is mapped into the tx_temp<35:0> as shown for tx_next<35:0> above.

1.0.0.0.0.3 Functions

T_TYPE(rx_raw<71:0>)
This function is defined in @@49.2.13.2.3@@.

1.0.0.0.0.4 Counters

VectorCount
TYPE: 16-bit unsigned
Counts the number of 72-bit vectors transmitted.

IdleCount
TYPE: 16-bit unsigned
Counts the number of 72-bit vectors containing IDLE control characters or other control vectors.

DelCount
TYPE: 16-bit unsigned
Counts the number of 72-bit vectors than need to be deleted.

1.0.0.0.0.5 State Diagram

The OLT PCS Idle deletion function shall implement the state mashine as shown in Figure 92-10. The ONU PCS Idle deletion function shall implement the state mashine as shown in Figure 92-11. Should there be a discrepancy between a state machines and descriptive text, the state machines prevail.