142. Physical Coding Sublayer and Physical Media Attachment for Nx25G-EPON

...

142.3.5.2 Variables

To the Editor: add the following new variables to 142.3.5.2 Variables:

BadCwCount
: Counts the number of invalid LDPC codewords within the current BER monitoring interval period.

BerMonitorInterval
: Indicates the length of the interval window period associated with the LDPC BER monitor in units of LDPC codewords (see 45.2.3.43). This value is reflected in MDIO register 3.80.

BerThreshold
: Indicates the threshold value of invalid LDPC codeword errors within the LDPC BER monitor function. At the end each monitor interval period, *HiBer* is updated. The value of *BerThreshold* is reflected in MDIO register 3.82

CwAvailable
: Boolean variable that is set true when a new LDPC codeword is available for testing and set to false when WAIT_FOR_CODEWORD state is entered. A new LDPC codeword is available for testing when the ONU Synchronizer Process has accumulated enough blocks from the PMA to evaluate the next LDPC codeword (see Figure 142-16).

CwLeft
: Counts the remaining number of LDPC codewords within the current BER monitoring interval.

CwValid
: Boolean indication that is set true if a received LDPC codeword is valid. As an example, an LDPC codeword is valid if and only if all parity checks of the LDPC code are satisfied thereby terminating iterations before reaching the maximum count (e.g., < 15). The specific method for evaluating codeword validity is implementation dependent within the LDPC decoder and outside the scope of this standard.

HiBer
: Boolean variable that is asserted true if *BadCwCount* reaches or exceeds *BerThreshold* LDPC codeword errors within one BER monitor interval period, otherwise set to false. The value of *HiBer* is reflected in MDIO register 3.81.

To the Editor: new text and SD figure for 142.3.5.6 PCS BER monitor process. Includes one "shall" for the PICS. Suggest moving this subclause immediately after 142.3.5.7 PCS Output Process for better description flow.

142.3.5.6 PCS ONU BER monitor Process

When the ONU Synchronizer Process has obtained block synchronization, the LDPC BER Monitor Process monitors the signal quality asserting *HiBer* if a count of LDPC parity errors reaches *BerThreshold* within the timer interval. The ONU PCS shall perform the operation of the LDPC BER monitor shown in Figure 142-X.

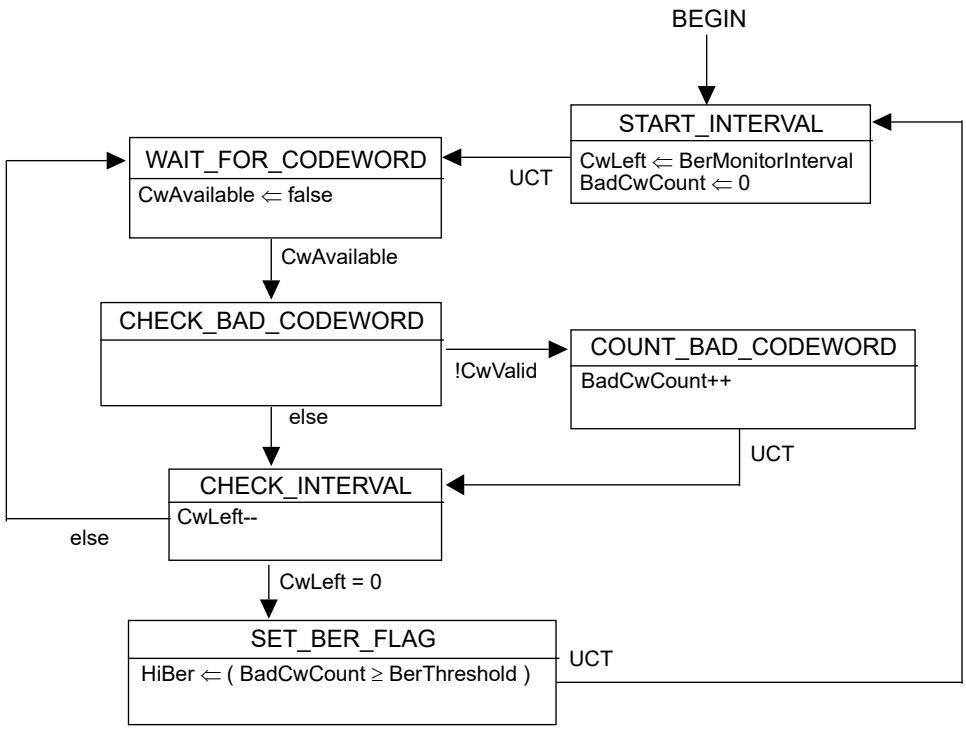

Figure 142–X—LDPC BER monitor state diagram (ONU only)