

Proposed subclause 999.2 for 100G BiDi

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Clauses 140 and 160

- 140.2 defines PMD service interface of 100GBASE-DR/FR1/LR1
- 160.2 from 802.3cp is another reference of this specification, which is for 50G BiDi
- It is proposed to reuse these subclauses for 100G BiDi
- Following slides show content reuse and suggested minor changes
 - Black text: reused content from 140/160
 - Blue text: difference between 140 and 160
 - Red text: notes and discussion point

Proposed subclause 999.2 (references: subclause 140.2 and 160.2)

999.2 Bit error ratio Physical Medium Dependent (PMD) service interface (Exact copy of subclauses 140.2 and 160.2)

This subclause specifies the services provided by the 100GBASE-BRx PMDs. The service interface for these PMDs is described in an abstract manner and does not imply any particular implementation. The PMD service interface supports the exchange of encoded data between the PMA entity that resides just above the PMD, and the PMD entity. The PMD translates the encoded data to and from signals suitable for the specified medium.

The 100GBASE-BRx PMD service interface is an instance of the inter-sublayer service interface defined in 80.3, with a single symbol stream ($n = 1$).

The service interface primitives are summarized as follows:

PMD:IS_UNITDATA_0.request

PMD:IS_UNITDATA_0.indication

PMD:IS_SIGNAL.indication

In the transmit direction, the PMA continuously sends one stream of PAM4 symbols to the PMD using the PMD:IS_UNITDATA_0.request primitive, at a nominal signaling rate of 53.125 GBd. The PMD converts these streams of symbols into appropriate signals on the MDI.

In the receive direction, the PMD continuously sends one stream of PAM4 symbols to the PMA, corresponding to the signals received from the MDI, using the PMD:IS_UNITDATA_0.indication primitive, at a nominal signaling rate of 53.125 GBd.

The SIGNAL_OK parameter of the PMD:IS_SIGNAL.indication primitive corresponds to the variable SIGNAL_DETECT parameter as defined in 999.5.4. The SIGNAL_DETECT parameter can take on one of two values: OK or FAIL. When SIGNAL_DETECT = FAIL, the rx_symbol parameters are undefined.

NOTE—SIGNAL_DETECT = OK does not guarantee that the rx_symbol parameters are known to be good. It is possible for a poor quality link to provide sufficient light for a SIGNAL_DETECT = OK indication and still not meet the BER defined in 999.1.1.

Thank you

Any questions?