Cl **45** *SC* **45.2.1.89.6** *P* **36** *L* **15** # 7

Ran, Adee Intel

Comment Type **TR** *Comment Status* **A**

"The PMD signal detect function is optional see 70.6.4" is not stanards language.

Also, looking at 70.6.4, this function is described as mandatory if EEE is implemented, which is what's writing in the original text. The amendment breaks this text.

I suspect that the required text is included in the response to comment #11 against draft 2.1 but was not implemented correctly.

SuggestedRemedy

Replace the current text with the text in the resolution of comment #11 against D2.1:

"The PMD signal detect function for both 1000BASE-X PCS (see 70.6.4) and 2.5GBASE-X PCS (see 128.6.4) is mandatory if EEE is implemented, and optional otherwise."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Revert to D2.2 wording with correct editing instructions relative to base text.

Cl **128A** *SC* **128A** *P* **167** *L* **14** # 9

Ran, Adee Intel

Comment Type **ER** *Comment Status* **A**

The text effectively reads
"The compliance point definitions provide a unique partitioning of the channel defined in Annex 128A, such that the test points TP0D-H and TP0HD defined in this Annex are equivalent to TP1 defined in Annex 128A, and TP5D-H and TP5HD defined in this Annex are equivalent to TP4 defined in Annex 128A"

After the change from 128C to 128A the text refers to "this annex" and to "Annex 128A" (which are one and the same) twice in the same sentence. Also, TP1 and TP4 (unqualified) are not defined in this annex - they are defined in 128B.

SuggestedRemedy

Change "128A" to "128B" (three times).

Response *Response Status* **U**

ACCEPT.

Cl **128A** *SC* **128A.3.4.2** *P* **181** *L* **14** # 10

Ran, Adee Intel

Comment Type **TR** *Comment Status* **A**

SNDR of 5.6 dB resulting from noise generated from a Gaussian noise source, if the transmitter and test channel do not create such low SNDR due to equalizable ISI, would make it impossible for a receiver to achieve BER<1e-12. It is well known that for an AWGN channel the required SNR for that performance is >17 dB.

I assume the intent is to allow ISI from the transmitter (as specified in 128A.3.1.7), since linear fitting is done with NP=3; but this is a bad way to allow that. It would be better not to require SNDR measurement from the test equipment and instead specify the additive Gaussian noise directly, as done in Annex 69B. Or use SNDR is it should be used, without equalizable ISI, to calculate how much noise should be added.

The transmitter SNDR should also be limited to prevent very noisy transmitters from being compliant.

SuggestedRemedy

In the SNDR measurement in 128A.3.1.7 and 128A.3.3.3, change NP=3 to NP=100, or instead define a reference equalizer and apply it in the measurement.

In both places, set required SNDR to a reasonable value for BER<1e-12, such as >25 dB, as defined for the host test, Table 128A–3.

Alternatively, delete the SNDR subclause and specify the additive noise RMS directly; a suggested value is 8.1 mV as used in 10GBASE-KX4 (same Baud rate and similar channel budget).

Implement similarly in annex 130A.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Change the specification methodology to use eye diagram(s) with a reference receiver and adjust the SNDR requirement accordingly.

Cl **128A** *SC* **128A.3.4.2** *P* **180** *L* **34** # 11

Ran, Adee Intel

Comment Type **ER** *Comment Status* **A**

Wrong cross reference to Table 128C–1 - it does not define f1.

Also in P175 L37.

SuggestedRemedy

Change to Table 128B–1 in both places.

Response *Response Status* **U**

ACCEPT.

Cl **130A** *SC* **130A.1** *P* **205** *L* **14** # 12

Ran, Adee Intel

Comment Type **ER** *Comment Status* **A**

The text refers to Annex 128C for channel partition and definitions of TP1 and TP4, but 128C is the text fixture annex. TP1 and TP4 are not defined in 128C - they are defined in 128B.

SuggestedRemedy

Change "128C" to "128B" (three times)

Response *Response Status* **U**

ACCEPT.

Cl **130A** *SC* **130A.6.2** *P* **220** *L* **14** # 13

Ran, Adee Intel

Comment Type **TR** *Comment Status* **A**

As stated in another comment on 128A, SNDR of 16 dB is still too low to enable BER<1e-12. The value should be aligned with the host input and drive output values, 28 dB in this annex.

SuggestedRemedy

In measurement, change Np from 8 to 100 or define a reference equalizer.

Set required SNDR to >28 dB.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

See resolution in comment #10.