Cl **156** *SC* **156.8** *P* **101** *L* **31** # 1

Maniloff, Eric Ciena

Comment Type **T** *Comment Status* **D**

The comment "interpolation
between the defined frequencies is not possible as the curve is not linear" doesn't provide sufficient detail. The derivation of the values in Table 156-10 should be provided.

SuggestedRemedy

Add an equation to 156.8 that provides the values at arbitrary frequencies. A contribution with the equation will be provided.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Pending comment resolution group review of the supporting presentation.

Cl **156** *SC* **156.8** *P* **102** *L* **13** # 2

Maniloff, Eric Ciena

Comment Type **E** *Comment Status* **D**

Fig 156-8 should be replaced with a figure based on the actual values. Current figgure is illustrative but not sufficiently accurate.

SuggestedRemedy

Update Fig 156-6 with a more accurate figure.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Update figure 156-6 as suggested using the values from the formula to be provided in 156.8. See response to comment #1.

Cl **156** *SC* **156.9.4** *P* **104** *L* **52** # 3

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **D**

where lists are single spaced

SuggestedRemedy

Change the line spacing to single spaced. Also for Eq. 156A-1

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **156** *SC* **156.10.1.2.4** *P* **112** *L* **21** # 4

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

The measurement already has significant filtering: "The coherent receiver has a bandwidth of at least 30 GHz". Filtering it again without taking this into account would be too much.
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

Say that the signal is further filtered so that the combined effect of the observation filter in 156.10.1.1 Calibrated coherent receiver and this filter is the RRC response.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

For CRG discussion.

Cl **156** *SC* **156.9.27** *P* **109** *L* **40** # 5

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

The optical path OSNR penalty defined in Recommendation ITU-T G.698 uses a reference receiver based on the G.698 EVM, which is different to the EVM here. So the Rx and channel specs are not consistent.
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

Define optical path OSNR penalty with a reference receiver based on the EVM of this clause.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

For CRG discussion.

Cl **156** *SC* **156.9.22** *P* **108** *L* **1** # 6

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

This spec item "Transmit output power control absolute accuracy" duplicates 156.9.19 Transmit output power absolute accuracy (in spite of the slightly different names, they specify the same thing).
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

The definition in 156.9.19 is more complete, so delete 156.9.22. Consolidate the two entries in Table 156-7. The +/- way is preferable.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

The consolidation of Transmit output power absolute accuracy and Transmit output power control absolute accuracy for CRG discussion.

In Table 156-7 consolidate Transmit output power absolute accuracy max and min to +/- 1db and consolidate Transmit output power absolute accuracy max and min to +/- 1db.

Cl **156** *SC* **156.9.17** *P* **108** *L* **20** # 7

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

I did not find the term "limits of the C-band" in this document or in G.689.2.
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

Rather than use this unsourced terminology, say what the limits are. According to Table 156-5, 191.3 THz to 196.175 THz might be appropriate.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Replace "limits of the C-band" with specific frequency limits. For CRG discussion.

Cl **156** *SC* **156.9.12** *P* **108** *L* **33** # 8

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

This doesn't make sense: "the center value between the proportional amplitude difference of..."
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

Say what is meant, for example, the unsigned ratio of the amplitudes of I and Q. Clarify whether the amplitudes found with or without their offsets.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

For CRG discussion

Cl **156** *SC* **156.9.5** *P* **105** *L* **46** # 9

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

This says "Laser frequency noise is measured using an unmodulated laser as specified in Table 156-11" but frequency noise is not measured directly, it is derived from a measurement of something else. This doesn't say what is measured, or how, or how what is measured (power spectrum or phase noise) is converted into frequency noise.
D2.1 comments 285, optical parameters are inadequately defined, and other comments specifically on frequency noise.

SuggestedRemedy

Change this spec to power spectrum or phase noise, or add the missing information so that "frequency noise" is defined.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

For CRG discussion.

Cl **156** *SC* **156.9.5** *P* **106** *L* **4** # 10

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

The units of frequency noise are Hz^2/Hz. No watts or dB involved. Frequency noise is not a power spectral density.
D2.1 comments 285, optical parameters are inadequately defined, and other comments specifically on frequency noise.

SuggestedRemedy

Change this spec to power spectrum or phase noise, or change Table 156-13--Frequency vs spectral power density to 156-13--Frequency noise mask
Change "One-sided frequency noise power spectral density (Hz^2/Hz)" in the table and "One-sided frequency noise power spectral density [Hz^2/Hz]" in the figure, to "One-sided frequency noise (Hz2/Hz)
Change Figure 156-8--Frequency vs spectral power density to Figure 156-8--Frequency noise mask .

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

For CRG discussion.

Cl **156** *SC* **156.9.5** *P* **106** *L* **6** # 11

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

"One-sided" is ambiguous and does not appear in the text. It might mean that only one side is shown, and the other is the same, or it might mean that both sides are to be summed (presumably in an RMS way).
D2.1 comments 285, optical parameters are inadequately defined, and other comments specifically on frequency noise.

SuggestedRemedy

In the text, say which is meant.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

For CRG discussion.

Cl **156** *SC* **156.9.9** *P* **107** *L* **11** # 12

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

This says that EVMmax is the RMS addition of the normalised EVM values. I believe it is the RMS average (standard deviation), not the sum.
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

Change RMS addition to standard deviation

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Replace the second paragraph in 156.9.9 with

"EVMMAX, is defined as a ratio of the root mean square (RMS) value of all the error vectors (averaged over N symbols) to the maximum magnitude of all the reference constellation points.

EVMRMS, is defined as a ratio of the root mean square (RMS) value of all the reference constellation point magnitudes used for normalization."

Cl **156** *SC* **156.9.1** *P* **104** *L* **5** # 13

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D**

As well as the pattern for frequency noise, some other patterns should be corrected. Ripple, polarization dependent loss, polarization rotation speed, adjacent channel isolation and interferometric crosstalk at TP3 do not involve patterns at all.
D2.1 comments 285, optical parameters are inadequately defined.

SuggestedRemedy

For these, change 5 to Not applicable

Proposed Response *Response Status* **W**

PROPOSED REJECT.

In 802.3-2022 Table 154-11 ripple, polarization dependent loss and polar rotation speed require pattern 5. Requiring the use of pattern 5 for the same parameters in Table 156-12 keeps alignment between the clauses.

Cl **156** *SC* **156.9.1** *P* **103** *L* **47** # 14

Dawe, Piers
Nvidia

Comment Type **T** *Comment Status* **D**

If it's OK to use a valid 400GBASE-ZR signal for average channel output power, transmit output power stability, and transmit output power absolute accuracy it should be OK for minimum average channel power at maximum adjustable power setting, and transmit output power control absolute accuracy.

SuggestedRemedy

For these, change 5 to 5 or valid 400GBASE-R signal

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

In Table 156-12, for Adjustable range of transmit output power, Minimum average channel power at maximum adjustable power setting and Transmit output power control absolute accuracy change the patteren from "5" to "5 or valid 400GBASE-R signal".