

## Comments Received

## IEEE P802.3cs D2.1 SuperPON Task Force 2nd Working Group recirculation ballot comments

**Cl 1 SC 1.4.245c P22 L34 # 235**  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
**Comment Type E Comment Status X**  
 Use of abbreviations - I believe this is the first use of the abbreviation EQ in IEEE Std 802.3. While the previous definition (inserted by .3ca) defined Equalization Time, and inserted an abbreviation in 1.5 for EQ, it forgot to expand the first use, which is in the definition of EQT on line 34. To the reader outside this particular amendment set, EQ has a lot of general meanings (e.g., equalization), so spelling it out will improve clarity, in my opinion. While technically, EQT is actually an abbreviation (in 1.5) and the defined term should be envelope quantum time, it is never used in its spelled out form that I can find, so I suggest just inserting the expansion of EQ and letting EQT - the unit, be just as it is.

**SuggestedRemedy**

Suggest change "transmit one EQ" to "transmit one envelope quantum (EQ)".

**Proposed Response Response Status O**

**Cl 1 SC 1.4.275a P22 L40 # 236**  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
**Comment Type E Comment Status X**  
 FSR is defined as though it is a property of "an optical filter" - this doesn't appear to make sense with the usages of FSR in many places. FSR is a 'channel set' (either one or 2), and FSR seems to be the frequency range of a mux "so they may be designed to have a free spectral range (FSR) significantly wider than the defined frequencies of operation" in other places. In the second case, it appears the previous draft's definition (range of frequencies, rather than spacing) seemed more appropriate. Which is it?

**SuggestedRemedy**

Suggest revert the text, or split the terminology. Editor to review usage.

**Proposed Response Response Status O**

**Cl 45 SC 45.2.1.23a.1 P25 L36 # 237**  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
**Comment Type T Comment Status X**  
 This change for the ONU, while appropriate, necessitates another change in the description of the bit in Table 45-26a which is not in this draft (but is in .3ca). This currently says "1 = Downstream differential encoding enabled  
 0 = Downstream differential encoding disabled". It needs to be aligned.

**SuggestedRemedy**

Add table 45-26a to the draft, and, in the description of bit 1.29.15, change "enabled" to "enabled/active", and change "disabled" to "disabled/inactive"

**Proposed Response Response Status O**

**Cl 56 SC 56.1.2 P36 L25 # 238**  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,  
**Comment Type E Comment Status X**  
 There is no editing instruction "Add". Given the marking, Change was appropriate. Also, there are a whole bunch of missing lines between the header (EFM supports the following systems:) and item d.

**SuggestedRemedy**

Suggest editing instruction be replaced with "Change lettered list in 56.1.2, as modified by IEEE Std 802.3ca-2020, to add new item d as shown (unchanged list items not shown)"

**Proposed Response Response Status O**

**Cl 164 SC 164.2.4.2 P46 L3 # 239**  
 Dawe, Piers Nvidia  
**Comment Type TR Comment Status X**  
 As 1.4.160a says, the DWDM channel (black link) extends from MDI to MDI.

**SuggestedRemedy**

Make the box with rounded corners wider so its sides are just inside the dashed MDI lines. It's OK to show things over/under the black link (the PMD test points aren't actually in the black link, but are alternative connections to the PMDs when they are out of service).

**Proposed Response Response Status O**

## Comments Received

## IEEE P802.3cs D2.1 SuperPON Task Force 2nd Working Group recirculation ballot comments

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Cl 164 SC 164.2.7.2 P51 L 12 # 240

Dawe, Piers

Nvidia

Comment Type T Comment Status X

Apply the changes of D2.1 comment 221 (Table 164-6) to Table 164-8

*SuggestedRemedy*

Put Minimum mean input power and Receiver OSNR tolerance next to each other. Use a single note for both: "Receiver OSNR tolerance is defined at the minimum mean input power with OLT transmitter extinction ratio of 8.2 dB (see 164.2.9.5)"

Proposed Response Response Status O

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Cl 164 SC 164.2.9.7 P53 L 22 # 243

Dawe, Piers

Nvidia

Comment Type T Comment Status X

Need to spell out what "according to 158.8.7 divided by 4" means

*SuggestedRemedy*

Bandwidth of scope filter response and jitter corner frequency of CRU are 1/4 those for 10G.

Proposed Response Response Status O

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Cl 164 SC 164.2.9.9 P53 L 48 # 245

Dawe, Piers

Nvidia

Comment Type TR Comment Status X

This says "See 75.7.12" and "See ITU-T G.698.2, section 7.4.3". These two references give very different ways of defining receiver performance which need to be combined or reconciled. 75.7.12 is stressed sensitivity per 52.9.9 for 10 Gb/s PHYs, with chromatic dispersion that might not apply here.

*SuggestedRemedy*

Refer directly to 52.9.9, with the appropriate residual chromatic dispersion (as 164.2.9.14? or a table like 52.9.10.2 Channel requirements), OSNR level as "Receiver OSNR tolerance" in Table 164-6 or 8, any qualifications for 2.5G.

52.9.9 refers to the applied sinusoidal jitter in 52.8.1, which is convenient but it may need qualification for 2.5G. You'll need a definition of OSNR: you could start with G.698.2, 7.4.2, but that's rather loose.

You should consider if you want to put residual CD, SJ and OSNR all together in a single stressed receiver definition, or create two stressed receiver criteria.

Also you should consider what the receiver is supposed to do with the entry "Minimum OSNR" in Table 164-6 or 8.

Proposed Response Response Status O

## Comments Received

## IEEE P802.3cs D2.1 SuperPON Task Force 2nd Working Group recirculation ballot comments

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Cl **164A** SC **164A** P**96** L **32** # **241**

Dawe, Piers Nvidia

Comment Type **TR** Comment Status **X**

This Annex 164A is informative and following D2.1 comment 208, some normative language was changed, but there is more to do. Avoid "specification" and required". Editorial: position of "only".

*SuggestedRemedy*

Change "The recommended specifications" to "The recommended characteristics" or "The recommendations".

Change the title of Table 164A-2 from "Specifications for the flat-top AWG based MUX/DEMUX" to "Recommendations for the flat-top AWG based MUX/DEMUX". Similarly (text and table) in 164A.2.2, 164A.2.3, 164A.2.4 and 164A.3.

Change "... CAWGs are required only at the ..." to "... CAWGs are used/employed/appropriate/beneficial only at the ...".

Change "Gain clamping is therefore required to avoid" to "Gain clamping is therefore used to avoid".

"(DCF) is required... a DCM is only required for the (US) upstream direction" to "(DCF) is used... a DCM is used/present for the (US) upstream direction only"

and so on, except e.g. "high extinction ratio required for the downstream OLT transmitter" to "high extinction ratio of the downstream OLT transmitter" (although as this and a couple more are referring to normative requirements in normative sections, they could be left as is). In "the required upstream powers", "the required power levels", "minimum required downstream power", can "required" just be deleted?

*Proposed Response* Response Status **O**

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Cl **164A** SC **164A.2.1** P**97** L **13** # **244**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **X**

Unwanted new-line

*SuggestedRemedy*

Remove

*Proposed Response* Response Status **O**

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Cl **164A** SC **164A.2.5** P**99** L **20** # **242**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **X**

Repetition of "FBG DCMs are likely to be channelized"

*SuggestedRemedy*

Could change "FBG DCMs are likely to be channelized. Therefore, it is important" to "As FBG DCMs are likely to be channelized, it is important"

*Proposed Response* Response Status **O**