

IEEE P802.3cw D2.6 400 Gb/s over DWDM systems 6th Working Group recirculation ballot comments

CI **FM** SC **FM** P **8** L **14** # **1**
 Dawe, Piers Nvidia
 Comment Type **E** Comment Status **X**
 Clauses
 SuggestedRemedy
 clauses
 Proposed Response Response Status **O**

CI **00** SC **0** P **14** L **51** # **2**
 Dawe, Piers Nvidia
 Comment Type **E** Comment Status **X**
 EEE
 SuggestedRemedy
 IEEE
 Proposed Response Response Status **O**

CI **116** SC **116.2.4** P **37** L **41** # **3**
 Dawe, Piers Nvidia
 Comment Type **T** Comment Status **X**
 The PMA provides a medium-independent means for the PCS to support the use of a range of physical media - not for this ZR PMA
 SuggestedRemedy
 Change:
 The PMA provides a medium-independent means for the PCS to support the use of a range of physical media.
 For 200GBASE-R and 400GBASE-R, the PMAs...
 to
 For 200GBASE-R and 400GBASE-R, the PMA provides a medium-independent means for the PCS to support the use of a range of physical media. These PMAs...
 Proposed Response Response Status **O**

CI **156** SC **156.7.1** P **98** L **27** # **4**
 Dawe, Piers Nvidia
 Comment Type **T** Comment Status **X**
 Laser frequency noise *mask* - we limit the parameter by the mask (as in transmit spectrum above) - the description entry here should not say "mask".
 SuggestedRemedy
 Here, in Table 156-1 and the title of 156.9.5, change "Laser frequency noise mask" to "Laser frequency noise".
 In 156.9.5, add a new first sentence: The laser frequency noise shall be below the laser frequency noise mask defined in this subclause.
 Proposed Response Response Status **O**

CI **156** SC **156.7.1** P **98** L **38** # **5**
 Dawe, Piers Nvidia
 Comment Type **TR** Comment Status **X**
 This says "I-Q amplitude imbalance (mean)" with a spec of 1 dB and no tolerance. That is impossible to meet.
 SuggestedRemedy
 Change "I-Q amplitude imbalance (mean)" to "Mean I-Q amplitude imbalance (max)" as in 400ZR and similar to "Mean I-Q offset per polarization" just above. In 156.9.13?, change "I-Q amplitude imbalance (mean)" to "Mean I-Q amplitude imbalance", twice.
 Proposed Response Response Status **O**

CI **156** SC **156.8** P **98** L **35** # **6**
 Dawe, Piers Nvidia
 Comment Type **T** Comment Status **X**
 Still one square bracket too many: see D2.5 comment 1 and 18, and maniloff_3cw_01_230925
 SuggestedRemedy
 Change double square brackets to single
 Proposed Response Response Status **O**

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CI 156 SC 156.8 P 102 L 7 # 7
 Dawe, Piers Nvidia
 Comment Type E Comment Status X
 Inconsistent and unusual way of presenting units
 SuggestedRemedy
 Change header row to:
 Frequency offset (GHz) Isolation (dB)
 Delete "GHz from body, delete third row
 Proposed Response Response Status O

CI 156 SC 156.8 P 102 L 34 # 8
 Dawe, Piers Nvidia
 Comment Type ER Comment Status X
 Figure is a bitmap - compare Fig 156-7
 SuggestedRemedy
 Re-insert the figure the proper way, document the method in
https://iee802.org/3/WG_tools/editorial/
 Proposed Response Response Status O

CI 156 SC 156.8 P 102 L 40 # 9
 Dawe, Piers Nvidia
 Comment Type E Comment Status X
 There's a standard way to indicate which side of a line one should be, set up years ago.
 SuggestedRemedy
 In Figure 156-6, add "Meets equation constraints". In Figure 156-7, change "Compliant region" to "Meets equation constraints"
 Proposed Response Response Status O

CI 156 SC 156.9.1 P 104 L 24 # 10
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 The information in this table footnote should be in 156.9.26 and 156.9.30 (and possibly Transmit spectrum 156.9.4), not here under an index table.
 SuggestedRemedy
 Delete this footnote. Ensure the information is given in 156.9.26, 156.9.30.
 Proposed Response Response Status O

CI 156 SC 156.9.4 P 104 L 40 # 11
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 This says "The normalized transmit spectrum shall be within the limits of this subclause if measured per IEC 61280-1-3. As far as I know, IEC 61280-1-3 does not use the word "normalized".
 SuggestedRemedy
 Rewrite the definition to align with the terminology in IEC 61280-1-3 or define what is meant by "normalized".
 Proposed Response Response Status O

CI 156 SC 156.9.4 P 105 L 21 # 12
 Dawe, Piers Nvidia
 Comment Type E Comment Status X
 Upper Mask, Lower Mask, Compliant Region
 SuggestedRemedy
 Upper mask, Lower mask, Meets equation constraints
 Proposed Response Response Status O

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Cl 156 SC 156.9.5 P 105 L 48 # 13
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 "frequency noise" is still undefined - this has been a known issue for a long time.
 According to its units, it cannot be a power spectral density.
 SuggestedRemedy
 See previous comments.
 Proposed Response Response Status O

Cl 156 SC 156.9.9 P 107 L 19 # 17
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (it's a single max)
 Proposed Response Response Status O

Cl 156 SC 156.9.6 P 106 L 54 # 14
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (max, it's unsigned)
 Proposed Response Response Status O

Cl 156 SC 156.9.10 P 107 L 26 # 18
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (it's a single max). Same in 156.9.11.
 Proposed Response Response Status O

Cl 156 SC 156.9.7 P 107 L 4 # 15
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (max, it's unsigned)
 Proposed Response Response Status O

Cl 156 SC 156.9.10 P 107 L 28 # 19
 Dawe, Piers Nvidia
 Comment Type E Comment Status X
 Base of log should be a subscript. Same in 156.9.11.
 SuggestedRemedy
 Proposed Response Response Status O

Cl 156 SC 156.9.8 P 107 L 9 # 16
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (max, it's unsigned)
 Proposed Response Response Status O

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CI 156 SC 156.9.10 P 107 L 28 # 20
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 Imean and Qmean are not defined. Same issue in 156.9.11. Note 156.10.2.5 I-Q offset compensation, so these could be obtained from the EVM method, as 400ZR says.
 SuggestedRemedy
 Define Imean and Qmean and Psignal, e.g. in the EVM section, and cross-reference from here.
 Proposed Response Response Status O

CI 156 SC 156.9.10 P 107 L 28 # 21
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 Measurement interval would be the distance in time between measurement windows. 400ZR says "averaging period"
 SuggestedRemedy
 Change "measurement interval" to "measurement window for averaging".
 Proposed Response Response Status O

CI 156 SC 156.9.12 P 107 L 39 # 22
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (it's a single max)
 Proposed Response Response Status O

CI 156 SC 156.9.13 P 107 L 43 # 25
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 "The I-Q phase error magnitude (max) is the *largest* phase difference of the in-phase component I and quadrature component Q of the signal" [not -90 degrees!]
 SuggestedRemedy
 Define "largest phase difference".
 Proposed Response Response Status O

CI 156 SC 156.9.13 P 107 L 43 # 30
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 "phase difference ... measured relative to "local oscillator"" - seems wrong.
 SuggestedRemedy
 Delete "measured relative to local oscillator"
 Proposed Response Response Status O

CI 156 SC 156.9.13 P 107 L 44 # 23
 Dawe, Piers Nvidia
 Comment Type T Comment Status X
 limits
 SuggestedRemedy
 limit (it's a single max)
 Proposed Response Response Status O

CI 156 SC 156.9.14 P 107 L 49 # 26
 Dawe, Piers Nvidia
 Comment Type TR Comment Status X
 The I-Q quadrature skew is the *maximum* relative skew
 SuggestedRemedy
 Define "maximum skew"
 Proposed Response Response Status O

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Cl 156 SC 156.9.14 P 107 L 49 # 27
Dawe, Piers Nvidia
Comment Type TR Comment Status X
"The I-Q quadrature skew is the maximum *relative* skew": tautology.
SuggestedRemedy
Delete "relative", or change "relative skew" to "timing offset"
Proposed Response Response Status O

Cl 156 SC 156.9.14 P 107 L 50 # 24
Dawe, Piers Nvidia
Comment Type T Comment Status X
limits
SuggestedRemedy
limit (it's a single max)
Proposed Response Response Status O

Cl 156 SC 156.9.14 P 107 L 50 # 28
Dawe, Piers Nvidia
Comment Type T Comment Status X
limits
SuggestedRemedy
limit (it's a single max)
Proposed Response Response Status O

Cl 156 SC 156.10.2.1 P 112 L 3 # 29
Dawe, Piers Nvidia
Comment Type E Comment Status X
4
SuggestedRemedy
four
Proposed Response Response Status O