Comments received on 802.3cm draft 0.1

802.3cm 400Gb/s over Multimode Fiber ad hoc,

30th August 2018

Jonathan King, Finisar, Jonathan Ingham, FOIT

(Editors of 802.3cm)

Summary of comments against Draft 0.1

- 19 comments received via email and marked up copies
  - 17 editorial and non-controversial (editors propose to accept all these comments)
  - 1 nomenclature, 400GBASE-SR4.2
    - Proposal to add λ_1 and λ_2 names for the wavelength ranges in the transmitter and receiver characteristics tables to match the names used in the proposed MDI definitions for 400GBASE-SR4.2.
    - Proposed change needs review and approval
  - 1 technical, 400GBASE-SR4.2
    - Proposal to change the reach capability advertised in 200.1 from "up to at least 150 m" to "up to at least 100 m"
    - Proposed change needs review and approval

Comments received - 1

#	Technical /Editorial	clause	Page	Line	Comment	Response
1	E	200			Tables 200-7 transmit characteristics and 200-8 receive characteristics. Since the MDI proposal differentiates the two wavelength windows by calling the first λ1 and the second λ2, it would be necessary to define that association. I think the natural place for it is in the row for "Lane wavelengths (range)". Could you add λ1 to the top line and λ2 to the bottom line in that row? Something to the effect of: λ1: 844 to 863, λ2: 900 to 918	Agree in principle, for discussion in Aug 30th ad hoc
2	T	200			Summarized from e-mail to reflector - In 200.1 the third sentence should be "The PMD sublayers provide point-to-point 400 Gigabit Ethernet links over four pairs of multimode fiber, with a reach of up to at least 100 m"	For discussion in August 30th ad hoc. The text in draft 0.1 of 200.1 is correct, 400GBASE-SR4.2 has a reach of up to at least 150m (on OM5), whereas 400GBASE-SR8 has a reach of at least up to 100m on OM5

Comments received - 2

3	E	138			a	In figure 138-1, near line 23 should it say 400GBASE-SR8 in the figure (so it is 50-SR,100-SR2,200-SR4, 400-SR8)	fixed !
4	E	138			b	In Table 138-6, it should be 200GBASE-SR4 not 200GBASE-SR [maybe accidently deleted]	fixed !
5	E	138			c	In section 138.8.10, is the text "Change the seventh exception in 138.8.10 as follows:" something temporary to be deleted. Should the exceptions be numbered for clarity	The temporary text is an editors instruction to the 802.3 editorial team on how to amend clause 138 as amended by 8023cd. The exceptions in Clause 138 (and other clauses) are not usually numbered.
6	E	138			d	In section 138.11.1 is text "Change the first sentence of 138.11.1 as follows" something temporary to be deleted.	The temporary text is an editors instruction to the 802.3 editorial team on how to amend clause 138.
7	E	138			e	In section 138.11.1 it looks like 400GBASE-SR8 is listed twice (once underlined, once not underlined)	fixed !
8	E	138			f	Above table in 138.11.2.2 (p.287 line 1) there is temporary text – maybe color magenta or delete	The temporary text is an editors instruction to the 802.3 editorial team on how to amend clause 138.
9	E	138			g	In table in 138.11.2.2 (p.287 line 7) it looks like 400GBASE-SR8 is listed twice	fixed !

Comment received - 3

10	E	138			h	On p.288 there is temporary text line 1 and 400GBASE-SR8 is listed twice line 5	fixed !
11	E	138			i	On p.291 "Characteristics of the fiber optic cabling and MDI" should there be **TBDs** related to SR8 MDI (see editor note p.46 200.11.4.6	Added editors note : "Editors note: PICS for 400GBASE-SR8 MDI layout, mating, requirements, and dimensions are TBD"
12	E	138			j	On p.291 should "Characteristics of the fiber optic cabling and MDI" be "**138.11.4.6** Characteristics of the fiber optic cabling and MDI" (as in 200.11.4.6)	fixed !
13	E	138			k	Table 138-12 p.275 title is "Table 138-12 Test-pattern definitions and related subclauses" (see comment l and m)	fixed !
14	E	138			l	138.8.8 line 33 (c) should be "The test pattern is according to Table 138-12 (see comment k)	fixed !
15	E	138			m	k. 138.8.10 3rd exception line 45 "specified in Table 138-12 (see comment k)	fixed !
16	E	138.2	268	40		400GBASE-SR4 should be 400GBASE-SR8	fixed !
17	E	138				Table 138-7: missing underline where 400GBASE-SR8 added	fixed !
18	E	138.9.2	279	34		missing underline where 400GBASE-SR8 added	fixed !
19	E	138.11				title has 400GBASE-SR8 appearing twice	fixed !

Notes on 802.3cm Clause 138

- 802.3cm will be amending Clause 138 after 802.3cd has completed.
- Therefore Clause 138 in 802.3cm will be written as a set of editors instructions to the 802.3 editorial team.
  - Editorial instructions are written in ***bold italics*** and in Framemaker are marked as paragraph type 'Editing instructions'
- Prior to issuing draft 1.0, the whole of Clause 138 will be been shown, so that the effect of our changes on 138 can be seen more clearly
- For draft 1.0 and later, the parts of Clause 138 that are not changed will be removed from the draft, so that just the editing instructions remain. Parts of 138 to be deleted are shown with ~~strike through~~, addditions to 138 are shown <u>underlined</u>

Notes on on 802.3cm Clause 200

- Clause 200 is a working clause number until we are assigned a final clause number by the 802.3 Vice Chair (Mr Adam Healey).

Proposal to satisfy comment 1

Table 200–7—Transmit characteristics

Description	Value	Unit
Signaling rate, each lane (range)	26.5625 ± 100 ppm	GBd
Modulation format	PAM4	
Wavelength (range), λ_1 Wavelength (range), λ_2	844 to 863 900 to 918	nm
RMS spectral width[a] (max)	0.6	nm
Average launch power, each lane (max)	4	dBm

Table 200–8—Receive characteristics

Description	Value	Unit
Signaling rate, each lane (range)	26.5625 ± 100 ppm	GBd
Modulation format	PAM4	
Wavelength (range), λ_1 Wavelength (range), λ_2	844 to 863 900 to 918	nm
Damage threshold[a] (min)	5	dBm
Average receive power, each lane (max)	4	dBm

Things to do:

- Editorial stuff:
  - PICS for 138 and 200 need completion
  - Editing instructions for Clause 1, 30, 78, 45, 116 need to be written
  - Most cross-references are broken at present, this needs addressing
- Items needing contributions and/or review by the Task Force
  - TBDs in 138:
    - MDI figure for 400GBASE-SR8
    - Optical Lane Assignments for 400GBASE-SR8
    - MDI requirements for 400GBASE-SR8
    - PICS for 400GBASE-SR8 MDI layout, mating, requirements, and dimensions are TBD
  - TBDs in 200:
    - TDECQ bandwidth for 400GBASE-SR4.2
    - MDI figure for 400GBASE-SR4.2
    - Optical Lane Assignments for 400GBASE-SR4.2
    - MDI requirements for 400GBASE-SR4.2

Draft 0.1 reviewers….

- Paul Kolesar, Commscope

- Dominic LaPierre, Exfo

- John Abbott, Corning

- Steve Swanson, Corning

Thank you !