Cl **89**   *SC* **89.10.1**   *P* **50**   *L* **8**   # 1

Kropp, Joerg-R   V-I-Systems GmbH

Comment Type   **T**   *Comment Status* **R**

Table 89-14 "Optical fiber and cable characteristics ..." should state 1550nm as wavelength and not 1310nm. All parameters in the table should refere to the wavelength of 1550nm because this wavelength is defined now for the transmission.

SuggestedRemedy

Response   *Response Status* **C**

REJECT.
This comment is made against unchanged text and therefore out of scope for this ballot.
The task force recognizes that the change suggested below may be an improvement and mandates the editor to resubmit this comment against draft D3.0.

Cl **89**   *SC* **89.6.2**   *P* **41**   *L* **41**   # 2

Chalupsky, David   Intel Corp.

Comment Type   **T**   *Comment Status* **R**

Why is the receiver required to accept a 1290-1330nm input? If this was intentional please add a note explaining the need. If not, delete the 1290-1330nm requirement.

SuggestedRemedy

See comment.

Response   *Response Status* **C**

REJECT.
The cost impact of this extra requirement is expected to be very small and it has the benefit that a possible future 1310 nm serial PMD with a greater distance capability could inter-work with a 40GBASE-FR transceiver over up to 2 km.
This characteristic was the subject of a motion of the task force in the Geneva meeting May 2010:
Motion #2
Move to adopt the receiver characteristics from slide 6 of anslow_03_0510, with the modification that the operating wavelength range will be 1290-1330 nm and 1530-1565 nm.
All in room: Y: 28, N: 0, A: 3
802.3, Y: 21, N: 0, A: 1
The Task Force voted on comment #35 against D 2.0 which also proposed to remove the 1310 nm requirement and contained an identical rebuttal to the above:
Should the Task force accept the proposed response above?
Yes (keep the 1310 nm requirement)
No (remove the 1310 nm requirement)
Yes 19
No 1

See also http://www.ieee802.org/3/bg/public/nov10/anderson_01a_1110.pdf for a discussion of the rationale for requiring the dual window.

The possibility of adding a note to explain this requirement was discussed in connection with comments #35 and #86 against D 2.0 but there was no consensus to add such a note as it would have to speculate about future interfaces.
[Editor's note: Subclause changed from "Table 89-7" to 89.6.2]

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open   W/written   C/closed   U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

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Comment ID # **2**   09/11/2010 16:40:37

Unsatisfied comments from previous ballots

Cl **00**   *SC* **0**   *P* **1**   *L* **30**   # 20060

Dawe, Piers   IPtronics

Comment Type **TR**   *Comment Status* **R**

An objective is "Provide Physical Layer specification which support 40 Gb/s operation over at least 2 km on SMF" and from the PAR, "5.4 Purpose: This project will define a 40 Gb/s serial PMD that supports a link distance of at least 2km over single-mode fiber ... which will enable interconnection ...". This draft allows excessive penalties and I do not believe it provides a robust interoperability spec. The transmitter can pass the draft and be poor, and the receiver can pass the draft and fail to receive that transmitter after the fibre. Some changes are needed to come up to 802.3's traditional standards for an interoperability spec.

SuggestedRemedy

See other comments for remedies

Response   *Response Status* **U**

REJECT.
The level of interoperability provided by the specifications for VSR2000-3R2 in G.693 has not been demonstrated to be inadequate by industry use and Clause 89 follows this methodology.
This comment does not propose any specific changes to the draft, for these see the other comment responses.

Cl **89**   *SC* **89.6.1**   *P* **37**   *L* **14**   # 20061

Dawe, Piers   IPtronics

Comment Type **TR**   *Comment Status* **R**

I do not believe that this draft is "optically compatible with existing carrier 40Gb/s client interfaces" (from the PAR and objectives).
An implementer could make a very slow transmitter with excessive transmitter penalty as long as he got the dispersion penalty OK, and call it compliant. I don't believe that existing VSR2000-3R2 transmitters are that bad, and I don't believe that existing VSR2000-3R2 receivers could receive this worst allowed signal with confidence, and I doubt that folks want to redesign their receivers.
A motion in Geneva doesn't fix this.
Notice that TDP uses the same with/without dispersion measurement that this draft uses already. After the sensitivity to the reference transmitter has been established as a one-off, using a TDP spec will be a cost-effective way to plug the gap and avoid interoperability problems.

SuggestedRemedy

As TDP uses the same tests as DP, after the reference transmitter/sensitivity has been established as a one-off, using a TDP spec will be a cost-effective way to plug the gap and avoid interoperability problems. Suggested TDP limit 3.3 dB (the largest limit in 802.3ae less the polarisation penalty here).

Response   *Response Status* **U**

REJECT.
Including TDP in the transmitter spec would be inconsistent with Motion #1 from the Geneva Task Force meeting in May 2010.
Move to adopt the ITU-T style of optical power budget specification as proposed in slide 4 of anslow_03_0510.
Y: 32, N: 0, A: 0
There is an eye mask requirement to protect against exessively slow transmitter waveforms. The dispersion penalty is measured with the actual transmitter and therefore takes in to account any effect of a slow transmitter waveform and includes the effect of reflections. The PMD penalty has been significantly reduced due to the response to comment #62 which has changed DGD_max to 3ps.
This means that a TDP test is not required to ensure interoperability.

The level of interoperability provided by the specifications for VSR2000-3R2 in G.693 has not been demonstrated to be inadequate by industry use and Clause 89 follows this methodology.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Comment ID

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Comment ID # **20061**   09/11/2010 16:40:38