Cl **00** *SC* **0** *P* *L* # 163

Grow, Robert — Intel

Comment Type **TR** *Comment Status* **A** *URL*

Inconsistent URLs for downloads. We shouldn't have three download sites, staff has promised a site with sufficient structure, but I've yet to see it meet requirements. The site must support revisions (e.g., the current file needs to be distinguished from a superseded file). The first URL given to us is now a broken link, that makes one question the durability of the current downloads link.

We have a Style Manual detailing all sorts of stuff, but there is no guidance on important topics that should have equal rigor and consistency across IEEE standards. For example, does one name the file for the parent standard or the amendment? Is the year included to cover superseded files? If an amendment is superseded does one keep the same file name? Should the references be to file lists or to specific files?

SuggestedRemedy

Fix with consistent file naming conventions, the following URLs.

40.1.3.5, NOTE on p. 185, l. 51 is broken, footnote on next page is to http://standards.ieee.org/reading/ieee/std/downloads/index.html. Unfortunately this redirects to Xplore.

76A.1, footnote on p. 803, l. 54 is to a list at http://www.ieee802.org/3/av/online_resources/.

40.6.1.3, NOTE on p. 236, l. 1 has same problems as above.

40.6.1.2.4, NOTE on p. 241, l. 11 is broken

55A.2, footnote 29 on p. 593, l. 54 does link to a zip file, its parent http://standards.ieee.org/downloads/802/ takes one to a flat list for all 802 (not very forward looking if IEEE-SA ever enters the electronic age with gusto).

68.6.6.2, footnote 24, p. 367, l. 54 takes one to the file, but unlike the clause 55 matrices, the file name includes project identification.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Issue currently being worked on with IEEE staff

Cl **01** *SC* **1.3** *P* **9** *L* **37** # 7

Dawe, Piers — IPtronics

Comment Type **TR** *Comment Status* **R** *Standards reference change*

This reference:
ANSI/EIA/TIA-455-127-1991, FOTP-127-Spectral Characterization of Multimode Laser Diodes
is very old. There is now TIA-455-127-A FOTP-127-A Basic Spectral Characterization of Laser Diodes Publication Date: Nov 1, 2006 (note no ANSI - and is this the same content or not?). But there is an even newer, and international,
IEC 61280-1-3 ed2.0 Fibre optic communication subsystem test procedures - Part 1-3: General communication subsystems - Central wavelength and spectral width measurement, Publication date 2010-03-18
http://webstore.iec.ch/Webstore/webstore.nsf/Artnum_PK/43879
1.3 Normative references also lists IEC 61280-1-3:1998.

SuggestedRemedy

Consider if the references to ANSI/EIA/TIA-455-127-1991, FOTP-127 and the references to IEC 61280-1-3:1998 should be updated to IEC 61280-1-3 ed2.0. If so, remove ANSI/EIA/TIA-455-127-1991, FOTP-127 from the list of normative references but consider adding TIA-455-127-A FOTP-127-A to the bibliography. Update 1.4.350 RMS spectral width.
Consider doing the same for other old or non-international references, unless used by the non-maintained clauses or where we refer to an old version for a reason.

Response *Response Status* **U**

REJECT.

The historical references are appropriate in this case, and there is no consensus to make this change.

Cl **01** *SC* **1.4** *P* **17** *L* **39** # 1

Dawe, Piers — IPtronics

Comment Type **ER** *Comment Status* **R**

The Definitions section is 27 pages long. Although it is finely subdivided, the subheadings do not appear in the bookmarks, so it is hard to navigate quickly to a particular definition.

SuggestedRemedy

Please introduce bookmarked subheadings e.g. 1 to 9, A to E, F to O, P to Z. The current subheadings can become fourth-level non-bookmarked subheadings.

Response *Response Status* **U**

REJECT.

There was no agreement that this change improves the document.

Cl **01** *SC* **1.5** *P* **45** *L* **13** # 2

Dawe, Piers IPtronics

Comment Type **ER** *Comment Status* **R**

The Abbreviations section is 5 pages long with no subdivisions. It is hard to navigate quickly to a particular abbreviation.

SuggestedRemedy

Please consider introducing bookmarked subheadings e.g. 1 to L, M to Z.

Response *Response Status* **U**

REJECT.

There was no agreement that this change improves the document.

Cl **30** *SC* **30.2.5** *P* **325** *L* **41** # 72

Dawe, Piers IPtronics

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

Text says "For LLDP management, the LLDP Basic Package is mandatory." and Table 30-7 says LLDP Basic Package (mandatory). I don't think management is like MDIO or I2C where there are reserved register addresses that are zero whether an implementation knows what they will be used for or even whether they will be used. As far as I know, LLDP is not a requirement of 802.3 so its management package can't be mandatory either.

SuggestedRemedy

Change "For LLDP management, the LLDP Basic Package is mandatory." to "The LLDP Basic Package is optional." and show it as optional in the table.

Response *Response Status* **U**

REJECT.

There are requirements where LLDP is mandatory. The text is correct. There are other instances where the term "mandatory" is used for other management packages that are mandated when an option is supported.

Cl **30A** *SC* **30A** *P* **701** *L* **8** # 15

Dawe, Piers IPtronics

Comment Type **ER** *Comment Status* **A**

This says "NOTE—The GDMO specification was moved to IEEE Std 802.3.1-2011."

SuggestedRemedy

So, add IEEE Std 802.3.1-2011 to the list of references, and explain in 1.1 and 30.1 how it fits in.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Will add a reference to Clause 1. If the commenter would like to see intro text, he is invited to propose some for the BRC to consider.

Cl **30A** *SC* **30A** *P* **703** *L* **8** # 16

Dawe, Piers IPtronics

Comment Type **ER** *Comment Status* **A**

This says "NOTE—The SNMP for Link Aggregation specification was moved to IEEE Std 802.1AX-2008."

SuggestedRemedy

So, add IEEE Std 802.1AX-2008 to the list of references, and explain in 1.1 and 30.1 how it fits in.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Will add a reference to the Annex A (references to 802.1AX are non-normative). If the commenter would like to see intro text, he is invited to propose some for the BRC to consider.

Cl **33** *SC* **2.7.5** *P* **605** *L* **47** # 145

Michael, McCormack — Texas Instruments

Comment Type **TR** *Comment Status* **R** *PoE: PSE Startup*

In IEEE Std 802.3-2008, section 33.2.8.5 which was the equivalent section, there was allowance for 1ms of settling time (item b.) This settling time has been removed which will make some previously compliant systems no longer compliant.

SuggestedRemedy

1) Restore the 1ms allowance.
2) Add note that preferred behavior is to meet output requirements during 1ms settling time.
3) Add note in section 33.3.5.2 that some PSEs may oscillate during the first millisecond and therefore filtering of 1ms variations may be prudent.

Response *Response Status* **U**

REJECT.

The suggested remedy does not fully resolve the problem identified in the comment.

Cl **38** *SC* **38.11.1** *P* **131** *L* **26** # 28

Dawe, Piers — IPtronics

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

Updating reference to IEC 60793-2, which is too broad anyway.
The dispersion limits have changed slightly for 50 um MMF and I think for SMF. Both old and new limits are allowable, and this must be made clear.
I don't think SMF is called "10/125" any more.
The "type A1a" naming is not memorable. It might help to give the "OM2" style names as well.

SuggestedRemedy

List old and new dispersion limits.
Use dated old and new references to IEC 60793-2-10 and IEC 60793-2-50.
Update the name of SMF.
Add rows to Table 38-12 with A1a and OM2 style fibre names.
Do similar in Clause 52.

Response *Response Status* **U**

REJECT.

The key fiber parameters are called in the table and not from the references.

Cl **52** *SC* **52.14.1** *P* **456** *L* **26** # 45

Dawe, Piers — IPtronics

Comment Type **TR** *Comment Status* **A**

Now that IEC 60793-2-10 ed.4 is published, we should not include TIA-492AAAD in the normative spec. That's the policy: international standards only unless there isn't a suitable one available, "NOTE--Local and national standards such as those supported by ANSI, EIA, MIL, NFPA, and UL are not a formal part of this standard except where no international standard equivalent exists."

In general, we refer to IEC 60793-2-10 without a date or edition number, except in the table of references and two cases which I think are in error.

Also, as IEC 60793-2-10 contains many things, and doesn't mention OM4 by that name (at least in the table of contents), we need to mention type A1a.3 so the reader can find the right spec.

Also, there have been minor changes in chromatic dispersion limits, for 50 um MMF and I believe for SMF. The newer limits provide slightly better performance but one case is formally outside the previous limits. We do not want to make existing serviceable fibre non-compliant, so we need to keep the old limits (as 802.3 does for twisted pair copper) as well as introduce the new ones.

SuggestedRemedy

So, please change
Effective modal bandwidth for fiber meeting TIA/EIA-492AAAC-2002 when used with sources meeting the wavelength (range) and encircled flux specifications of Table 52-7.
to
Effective modal bandwidth for OM4 fibers are specified for type A1a.3 in IEC 60793-2-10.
Add IEC 60793-2-10 (2011) to 1.3 Normative references, or replace IEC 60793-2-10 (2004).
Give the old and new chromatic dispersion parameters for 50 um MMF and SMF, and say that either old or new is compliant.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
This note is for OM3 fibre.
Change:
"Effective modal bandwidth for fiber meeting TIA/EIA-492AAAC-2002 when used with sources meeting the wavelength (range) and encircled flux specifications of Table 52-7."
to:
"Effective modal bandwidth for fiber meeting IEC 60793-2-10 Type A1a.2 when used with sources meeting the wavelength (range) and encircled flux specifications of Table 52-7."

Replace IEC 60793-2-10 (2004) with IEC 60793-2-10 (2011) in 1.3 Normative references.

See also comments #12, #106, #109, #108

A vote of the BRC was taken on whether to accept this proposed response:
Yes 15

No 1
Abstain 3

Cl **54** *SC* **54.6** *P* **509** *L* **42** # 427

Maguire, Valerie Siemon

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

Balanced twisted-pair and optical fiber MDI interfaces are interoperable between vendors. In addition, industry comparative evaluation events (e.g. Ethernet Alliance Plugfests) go to great lengths to ensure interoperability between equipment manufactured by different vendors. In may cases, however, EEPROM circuitry is built into the 10GBASE-CX4 MDI for the specific purpose of ensuring that products between vendors DO NOT work together. This is outside the spirit of an applications Standard that specifies requirements "to allow for maximum interoperability between various 10 Gb/s components" (e.g. see clause 54.6.4.3) and should not be allowed.

SuggestedRemedy

Insert new clause:
"54.6.1 Interoperability

The 10GBASE-CX4 MDI shall not contain circuitry or use other means to prohibit interoperability between compliant interfaces and cable assemblies.

Response *Response Status* **U**

REJECT.

An interface that does not operate according to the requirements for 10GBASE-CX4 when connected to equipment from a different vendor (that does meet the requirements for 10GBASE-CX4) is already non-compliant with the 10GBASE-CX4 specification, so no new subclauses are needed.

A vote of the BRC on whether to reject the comment with the above text was:
Yes 8
No 3
Abstain 6

The 10GBASE-CX4 MDI shall be interoperable with compliant interfaces and cable assemblies

A vote of the BRC on whether to AIP the comment with the above text was:
Yes 8
No 7
Abstain 2

Move to re-consider the first vote
Yes 12
No 3

Motion to overrule the chair
Yes 3
No 11
Abstain 3

The first vote of the BRC on whether to reject the comment with the proposed text was re-taken:
Yes 11
No 3
Abstain 2

Cl **55** *SC* **55.4.2.5.14** *P* **598** *L* **28** # 461

Daniel Dove Hewlett Packard

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

The recommended values in this table can lead to potential interoperability problems with existing devices that are known to use different timing values for PMA_Coeff_Exch state timing_lock_OK=0/1. While this is only a recommended value table, it can potentially lead to implementations that assume the maximum values are required, and thus suggest that anything that exceeds these maximum values are not compliant.

SuggestedRemedy

Change Recommended maximum time (ms) from 100ms to 200ms and from 420ms to 320ms respectively.

Response *Response Status* **U**

REJECT.

Feedback from those making and testing PHYs was that 100 ms is sufficient for this and that raising the maximum to 200 ms would leave too little time in the 1 state

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Cl **83A** *SC* **83A.3.3.1** *P* **302** *L* # 110

Dawe, Piers IPtronics

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

According to the PCI Express Base Specification Revision 3.0,
De-emphasis = 20log10 Vb/Va, where in our terminology Vb is VMA and Va is differential peak-to-peak amplitude.
Or, from the same document,
VTX-DE-RATIO = -20log10 (VTX-DIFF-PP/VTX-DE-EMPH-PP), where in our terminology VTX-DIFF-PP is differential peak-to-peak amplitude and VTX-DE-EMPH-PP is VMA.
Example: -3.5 dB De-emphasis
So, it is clear that more negative de-emphasis is more emphasis, in line with what de- means in English.
But 83A and 83B have got this upside down.

SuggestedRemedy

Either change the sign of all entries for de-emphasis, paying attention to maxima and minima, and equation 83B-6 (about 12 changes in all of Section 6 including consequential changes such as PICS);
or change "de-emphasis" to "emphasis and keep the positive sign. 24 changes, easy to do.

Response *Response Status* **U**

REJECT.
De-emphasis is an industry standard term where implementations are de-emphasizing low frequency content.
This was repeatedly debated during the development of the 802.3ba amendment with no consensus to change from the current usage.
See Comment #84 against D2.2
http://ieee802.org/3/ba/public/sep09/P8023ba-D22-Final_Responses_byID.pdf
See Comment #55 against D2.3
http://ieee802.org/3/ba/public/nov09/P8023ba-D23-Final_Responses_byID.pdf
See Comment #318 against D3.0
http://ieee802.org/3/ba/public/jan10/P8023ba-D30-Final_Responses_byID.pdf

Cl **85** *SC* **10.9.5** *P* **206** *L* **35** # 151

Palkert, Thomas — Luxtera

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

The mated test fixture ICN values were generated based on a 4 lane interface. The values are used for both 4 and 10 lane implementations and need to be modified to include the performance of 10 lane compliance boards.

SuggestedRemedy

Modify the values in Table 85-12 per the following:
Change SDNEXT from 0.7 to 3.0
Change SDFEXT from 2.5 to 4.0
Change MDNEXT from 1.0 to 3.5
Change MDNEXT from 3.5 to 5.0

Response *Response Status* **U**

REJECT.

This modification would modify the specifcation for the 4 lane interfaces as well as the 10 lane interfaces.
The commenter has not provided information on the impact of this change on the SR10 specifications such as the jitter budget.
The chair has appointed an Adhoc to gather more information on the impact of this proposed change.

Cl **85** *SC* **85.8** *P* **181** *L* **48** # 428

Maguire, Valerie — Siemon

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

Balanced twisted-pair and optical fiber MDI interfaces are interoperable between vendors. In addition, industry comparative evaluation events (e.g. Ethernet Alliance Plugfests) go to great lengths to ensure interoperability between equipment manufactured by different vendors. In may cases, however, EEPROM circuitry is built into 40GBASE-CR4 and 100GBASE-CR10 MDIs for the specific purpose of ensuring that products between vendors DO NOT work together. This is outside the spirit of an applications Standard that specifies generic performance requirements and should not be allowed.

SuggestedRemedy

Insert new clause:
"85.8.1 Interoperability

The 40GBASE-CR4 and 100GBASE-CR10 MDI shall not contain circuitry or use other means to prohibit interoperability between compliant interfaces and cable assemblies.

Response *Response Status* **U**

REJECT.
An interface that does not operate according to the requirements for 40GBASE-CR4 when connected to equipment from a different vendor (that does meet the requirements for 40GBASE-CR4) is already non-compliant with the 40GBASE-CR4 specification (likewise for 100GBASE-CR10), so no new subclauses are needed.