Cl **30** *SC* **30.3.3.2** *P* **399** *L* **10** # i-1

Hajduczenia, Marek — ZTE Corporation

Comment Type **T** *Comment Status* **A**

Attribute aMACControlFunctionsSupported does not contain any reference to EXTENSION MAC Control frame mechanism even though Figure 30-3 shows clearly it is part of the oMACControlEntity.
Also it would be welcome to have an on/off switch for the EXTENSION MAC Control frame support, to be able to control whether the given device may use those or not.

SuggestedRemedy

Make the following changes in 30.3.3.2 - Add a new entry under PFC with the following text: "EXTENSION<tab>EXTENSION MAC Control frame supported" Add the following subclause: 30.3.8.3 with the following text 30.3.8.3 aEXTENSIONMACCtrlStatus ATTRIBUTE APPROPRIATE SYNTAX: An ENUMERATED VALUE that has the following entries: enabled disabled BEHAVIOUR DEFINED AS: A read-write value that identifies the current (when read) or target (when set) operational state of the EXTENSION MAC Control function (when read), as specified in Annex 31C.

Response *Response Status* **C**

ACCEPT.

Cl **31C** *SC* **31C.2** *P* **759** *L* **17** # i-2

Hajduczenia, Marek — ZTE Corporation

Comment Type **T** *Comment Status* **A**

In PAUSE annex (31B), the defintion of the transmit function is accompanied by a state diagram which explains how the transmission process takes place. EXTENSION seems to have a dedicated subclause (31C.2) but there is no associated state diagram, even if it is very simple.

SuggestedRemedy

Insert the missing state diagram for transmission of EXTENSION MAC Control frame

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

31B has some specific behaviours needed for the PAUSE control frame. This is just another MAC Control Frame without any specific bahaviour needed.

Add a subclause that says "MAC Control sublayer entities that transmit or receive EXTENSION frames shall pass them through without additional processing"

Cl **00** *SC* **0** *P* *L* # i-3

Wright, Forrest — Lexmark International

Comment Type **G** *Comment Status* **R**

A single PDF version of this draft would have been preferred so that a single table of contents and "front-to-back" page numbering would have been available.

SuggestedRemedy

Issue a single PDF version.

Response *Response Status* **C**

REJECT.

The document has been in sections for a long time. In the 2005 edition, as the book grew from 3 to 5 sections, in a joint decision between volunteers and staff, it was split out into multiple books along the sections to make it easier to deal with the editorial efforts. This year as we added section 6, the document is about 3600 pages thus a single PDF remains an issue.

In the published version of 2008, the table of contents was done by section and was placed in the front. Furthermore, in the publsihed version the books are interlinked so clicking on one PDF will take you to another. We can work with staff to repeat that upon publication.

Cl **03** *SC* **3.2.7** *P* **126** *L* **46** # i-4

Parsons, Glenn — Ericsson AB

Comment Type **E** *Comment Status* **A**

In 3.2.7 as part of NOTE 1, there is a (1.4.x) that should be (1.4.180)

SuggestedRemedy

Change (1.4.x) to (1.4.180)

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.330** *P* **88** *L* **5** # i-5

Parsons, Glenn — Ericsson AB

Comment Type **E** *Comment Status* **A**

In IEEE Std 802.1Q-2011, the Q-tagged Annex showing 802.3 encoding (actually called "MAC method dependent aspects of VLAN support") has moved to Annex G

SuggestedRemedy

Change "Annex C" to "Annex G"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.14.119** *P* **74** *L* **4** # i-6

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Harmonize with other areas of the Standard (e.g. clause 40.1), which support both TIA and ISO cabling references. Delete 120 ohm reference - the impedance of category 4 cables is 100 ohms.
Note - "W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Replace,

"1.4.119 Category 4 balanced cabling: Balanced 100 W and 120 W cables and associated connecting hardware whose transmission characteristics are specified up to 20 MHz as per ISO/IEC 11801:1995. In addition to the requirements outlined in ISO/IEC 11801:1995, IEEE 802.3 Clause 14, Clause 23, and
Clause 32 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T4, and 100BASE-T2, respectively."

with,

"1.4.119 Category 4 balanced cabling: Balanced 100 W cables and associated connecting hardware whose transmission characteristics are specified up to 20 MHz as per ISO/IEC 11801:1995 and ANSI/EIA/TIA-568-A-1995. In addition to the requirements outlined in ISO/IEC 11801:1995 and ANSI/EIA/TIA-568-A-1995, IEEE 802.3 Clause 14, Clause 23, and Clause 32 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T4, and 100BASE-T2, respectively."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.3** *P* **66** *L* **2** # i-7

Maguire, Valerie — The Siemon Company

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

During draft 2.0 comment resolution, it was agreed to delete the TIA OM3 and OM4 references and replace them with IEC 60793-2-10 Type A1a.2 and IEC 60793-2-10 Type A1a.3 references. Since many readers are familiar with the TIA references already, a friendlier solution would be to keep both references. These additional references should also be added as "or" alternatives in Table 52-25 (notes e and f), Table 86-2 (fiber type row and notes a and b), Table 86-9 (Delete superscript a after "Effective modal bandwidth at 850 nm", Insert superscript a after "2000" and add "a IEC 60793-2-10 Type A1a.2 or TIA-492AAAC", Insert superscript b after "4700" and ad "b IEC 60793-2-10 Type A1a.3 or TIA-492AAAD.", Re-letter remaing superscripts.), and Table 86-14 (notes a and b).

SuggestedRemedy

Add the following two Standards into the Normative References clause:

TIA-492AAAC-2009, Detail Specification for 850-nm Laser-Optimized, 50-um core diameter/125-um cladding diameter class Ia graded-index multimode optical fibers.

TIA-492AAAD-2009, Detail Specification for 850-nm Laser-Optimized, 50-um core diameter/125-um cladding diameter class Ia graded-index multimode optical fibers suitable for manufacturing OM4 cabled optical
fiber. Note to Editor: Change "u" in "um" to symbol in 4 locations to indicate micron.

Response *Response Status* **C**

REJECT.

The issue of whether to include TIA references in addition to the IEC ones was discussed during the resolution of comments #12 and #45 against D2.0 and comment #12 against D2.1 with the conclusion that only the international standard would be referenced. The Note at the end of Clause 1.3 says:

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. A number of local and national standards are referenced as resource material; these bibliographical references are located in the bibliography in Annex A

Cl **01** *SC* **1.3** *P* **64** *L* **30** # i-8

Maguire, Valerie The Siemon Company

Comment Type **E** *Comment Status* **A**

Replace forward slash with space.

SuggestedRemedy

Replace,

"ISO/IEC 11801:2002/Amendment 1:2008"
with, "ISO/IEC 11801:2002 Amendment 1:2008"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.121** *P* **64** *L* **32** # i-9

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

Add Normative Reference if Definitions for Category 6A and Category 7A are added as proposed.

SuggestedRemedy

Add,

"ISO/IEC 11801:2002 Amendment 2:2010, Information technology--Generic cabling for customer premises."

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.121** *P* **74** *L* **15** # i-10

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

Definition for category 6 cabling is missing. Note - "W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Add and re-number Definitions accordingly,

"1.4.121 Category 6 balanced cabling: Balanced 100 W cables and associated connecting hardware whose transmission characteristics are specified up to 250 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801:2002 and ANSI/TIA-568-C.2). In addition to the requirements outlined in ISO/IEC 11801:1995 and ANSI/TIA-568-C.2, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, and Clause 55 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, and 10GBASE-T."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.4.122** *P* **74** *L* **15** # i-11

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Definition for category 6A cabling is missing.

A seperate comment to add ISO/IEC 11801:2002 Amendment 2 to the Normative References clause has also been submitted. Note - "W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Add and re-number Definitions accordingly,

"1.4.122 Category 6A balanced cabling: Balanced 100 W cables and associated connecting hardware whose transmission characteristics are specified up to 500 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801:2002 Amendment 2 and ANSI/TIA-568-C.2). In addition to the requirements outlined in ISO/IEC 11801:2002 Amendment 2 and ANSI/TIA-568-C.2, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, and Clause 55 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, and 10GBASE-T."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.4.123** *P* **74** *L* **15** # i-12

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Definition for category 7 cabling is missing. Note - "W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Add and re-number Definitions accordingly,

"1.4.123 Category 7 balanced cabling: Balanced 100 W cables and associated connecting hardware whose transmission characteristics are specified up to 600 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801:2002). In addition to the requirements outlined in ISO/IEC 11801:2002, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, and Clause 55 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, and 10GBASE-T."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.4.124** *P* **74** *L* **14** # i-13

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Definition for category 7A cabling is missing.

Add if comment to add class FA to Table 55-17 is accepted. A seperate comment to add ISO/IEC 11801:2002 Amendment 2 to the Normative References clause has also been submitted. Note - "W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Add and re-number Definitions accordingly,

"1.4.124 Category 7A balanced cabling: Balanced 100 W cables and associated connecting hardware whose transmission characteristics are specified up to 1,00 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801:2002 Amendment 2). In addition to the requirements outlined in ISO/IEC 11801:2002 Amendment 2, IEEE 802.3 Clause 14, Clause 23, Clause 25, Clause 40, and Clause 55 specify additional requirements for this cabling when used with 10BASE-T, 100BASE-T, and 10GBASE-T."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.4.118** *P* **73** *L* **50** # i-14

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Harmonize with other areas of the Standard (e.g. clause 40.1), which support both TIA and ISO cabling references. Delete 120 ohm reference - the impedance of category 3 cables is 100 ohms.
Note - "W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Replace,

"1.4.118 Category 3 balanced cabling: Balanced 100 W and 120 W cables and associated connecting hardware whose transmission characteristics are specified up to 16 MHz (i.e., performance meets the requirements of a Class C link as per ISO/IEC 11801:1995). Commonly used by IEEE 802.3 10BASE-T installations. In addition to the requirements outlined in ISO/IEC 11801:1995, IEEE 802.3 Clause 14, Clause 23, and Clause 32 specify additional requirements for cabling when used with 10BASE-T, 100BASE-TX, and 1000BASE-T."

with,

"1.4.118 Category 3 balanced cabling: Balanced 100 W cables and associated connecting hardware whose transmission characteristics are specified up to 16 MHz (i.e., performance meets the requirements of a Class C link as per ISO/IEC 11801:1995 and category 3 as per ANSI/EIA/TIA-568-A-1995). Commonly used by IEEE 802.3 10BASE-T installations. In addition to the requirements outlined in ISO/IEC 11801:1995 and ANSI/EIA/TIA-568-A-1995, IEEE 802.3 Clause 14, Clause 23, and Clause 32 specify additional requirements for cabling when used with 10BASE-T, 100BASE-TX, and 1000BASE-T."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.4.119** *P* **74** *L* **10** # i-15

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Harmonize with other areas of the Standard (e.g. clause 40.1), which support both TIA and ISO cabling references. Delete 120 ohm reference.

Delete 120 ohm reference. The impedance of category 5 cables is 100 ohms. Note -
"W" should be changed to Symbol font to show ohms symbol.

SuggestedRemedy

Replace,

"1.4.120 Category 5 balanced cabling: Balanced 100 W and 120 W cables and associated connecting hardware whose transmission characteristics are specified up to 100 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801:1995). In addition to the requirements outlined in ISO/IEC
11801:1995, IEEE 802.3 Clause 14, Clause 23, Clause 25, and Clause 40 specify additional requirements for this cabling when used with 10BASE-T and 100BASE-T."

with,

"1.4.120 Category 5 balanced cabling: Balanced 100 W and cables and associated connecting hardware whose transmission characteristics are specified up to 100 MHz (i.e., cabling components meet the performance specified in ISO/IEC 11801:1995 and ANSI/EIA/TIA-568-A-1995). In addition to the requirements outlined in ISO/IEC 11801:1995 and ANSI/EIA/TIA-568-A-1995, IEEE 802.3 Clause 14, Clause 23, Clause 25, and Clause 40 specify additional requirements for this cabling when used with 10BASE-T and 100BASE-T."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Accept the suggested remedy as-is please note that the the ohm symbol appear as W in the comment

Cl **01** *SC* **1.4.18** *P* **67** *L* **24** # i-16

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Unshielded and "UTP" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"over four pairs of Category 3, 4, and 5 unshielded twisted-pair (UTP) wire."

with,

"over four pairs of Category 3, 4, and 5 twisted-pair cabling."

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.19** *P* **67** *L* **27** # i-17

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

UTP and STP are not the only "flavors" of 100 ohm category 5 cabling.

SuggestedRemedy

Replace,

"over two pairs of Category 5 unshielded twisted-pair (UTP) or shielded twisted-pair (STP) wire."

with,

"over two pairs of Category 5 twisted-pair cabling."

Response *Response Status* **C**

ACCEPT.

Cl **14** *SC* **14.4.2** *P* **397** *L* **25** # i-18

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"These characteristics are generally met by 100 m of unshielded twisted-pair cable..."

with,

"These characteristics are generally met by 100 m of twisted-pair cable..."

Response *Response Status* **C**

ACCEPT.

Cl **23** *SC* **23.1.2** *P* **103** *L* **33** # i-19

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"To provide for operating over unshielded twisted pairs of Category 3, 4, or 5 cable,"

with,

"To provide for operating over twisted pairs of Category 3, 4, or 5 cable,"

Response *Response Status* **C**

ACCEPT.

Cl **23** *SC* **23.1.4.1** *P* **104** *L* **45** # i-20

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"This specification permits the use of Category 3, 4, or 5 unshielded twisted pairs,"

with,

"This specification permits the use of Category 3, 4, or 5 twisted pairs,"

Response *Response Status* **C**

ACCEPT.

Cl **24** *SC* **24.1.1** *P* **181** *L* **12** # i-21

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

UTP and STP are not the only "flavors" of 100 ohm category 5 cabling. Footnote 5 is not necessary in consideration of the revised text.

SuggestedRemedy

Replace,

"100BASE-TX specifies operation over two copper media: two pairs of shielded twisted-pair cable (STP) and two pairs of unshielded twisted-pair cable (Category 5 UTP).5"

with,

"100BASE-TX specifies operation over two pairs of twisted-pair category 5 cabling."

Delete footnote 5.

Response *Response Status* **C**

ACCEPT.

Cl **24** *SC* **24.1.2** *P* **181** *L* **42** # i-22

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

"UTP" could be interpreted as excluding shielded 100 ohm category cabling. Footnote 6 is not necessary in consideration of the revised text.

SuggestedRemedy

Replace,

"Support cable plants using Category 5 UTP 6,"

with,

"Support cable plants using Category 5 twisted-pair,"

Delete footnote 6

Response *Response Status* **C**

ACCEPT.

Cl **24** *SC* **24.1.4.3** *P* **183** *L* **27** # i-23

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

UTP and STP are not the only "flavors" of 100 ohm twisted-pair cabling.

SuggestedRemedy

Replace,

"signaling systems that accommodate multimode optical fiber, STP and UTP wiring."

with,

"signaling systems that accommodate multimode optical fiber and twisted-pair cabling."

Response *Response Status* **C**

ACCEPT.

Cl **24** *SC* **24.3.2.1** *P* **208** *L* **6** # i-24

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"such as used by 100BASE-TX over unshielded twisted pair,"

with,

"such as used by 100BASE-TX over twisted pair,"

Response *Response Status* **C**

ACCEPT.

Cl **25** *SC* **25.2** *P* **227** *L* **24** # i-25

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

UTP and STP are not the only "flavors" of 100 ohm category 5 cabling.

SuggestedRemedy

Replace,

"This standard provides support for Category 5 unshielded twisted pair (UTP) and shielded twisted pair (STP)."

with,

"This standard provides support for Category 5 twisted-pair cabling".

Response *Response Status* **C**

ACCEPT.

Cl **25** *SC* **25.3** *P* **227** *L* **40** # i-26

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"The cable plant specifications for unshielded twisted pair (UTP) of TP-PMD 11.1 are replaced by those specified in 25.4.9."

with,

"The twisted-pair cabling specifications of TP-PMD 11.1 are replaced by those specified in 25.4.9."

Response *Response Status* **C**

ACCEPT.

Cl **25** *SC* **25.4.9** *P* **231** *L* **52** # i-27

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" and "UTP" could be mistaken to exclude shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"25.4.9 UTP cable plant
The cable plant specification for unshielded twisted pair (UTP) of TP-PMD 11.1 is replaced by that specified in this subclause."

with,

"25.4.9 Cable plant
The twisted-pair cabling specification of TP-PMD 11.1 is replaced by that specified in this subclause."

Response *Response Status* **C**

ACCEPT.

Cl **25** *SC* **25.6.4.2** *P* **241** *L* **27** # i-28

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

Contact assignments are not specific to unshielded MDI's.

SuggestedRemedy

Replace,

"MDI contact assignments for unshielded twisted pair"

with,

"MDI contact assignments for twisted pair"

Response *Response Status* **C**

ACCEPT.

Cl **40A** *SC* **40A** *P* **339** *L* **10** # i-29

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

"Unshielded" could be interpreted as excluding shielded 100 ohm category cabling.

SuggestedRemedy

Replace,

"1000BASE-T is designed to operate over 4-pair unshielded twisted-pair cabling systems..."

with,

"1000BASE-T is designed to operate over 4-pair twisted-pair cabling systems..."

Response *Response Status* **C**

ACCEPT.

Cl **55** *SC* **55.12.8** *P* **693** *L* **11** # i-30

Maguire, Valerie The Siemon Company

Comment Type **T** *Comment Status* **A**

Category 6 requirements are specified in ANSI/TIA-568-C.2

SuggestedRemedy

Replace,

"Per category 6 requirements specified in ANSI/TIA/EIA568-B.2-1-2002 and ISO/IEC 11801:2002"

with,

"Per category 6 requirements specified in ANSI/TIA-568-C.2 and ISO/IEC 11801:2002"

Response *Response Status* **C**

ACCEPT.

Cl **55** *SC* **55.7** *P* **660** *L* **45** # i-31

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

The term "channel" in ISO/IEC and TIA terminology refers to a cabling configuration that contains cable and connecting hardware that supports transmission over 4 twisted-pairs. To define the link segment as containing 4 channels (is that 16-pairs??) is extremely confusing.

SuggestedRemedy

Replace,

"The term "link segment" used in this clause refers to four duplex channels. Specifications for a link segment apply equally to each of the four duplex channels."

with,

Option 1: "The term "link segment" used in this clause refers to four twisted-pairs transmitting in full duplex. Specifications for a link segment apply equally to each of the four twisted-pairs."

Option 2: The term "link segment" used in this clause refers to a cabling system containing four twisted-pairs. Specifications for a link segment apply equally to each of the four twisted-pairs."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace:
"The term "link segment" used in this clause refers to four duplex channels. Specifications for a link segment apply equally to each of the four duplex channels."
with:
"The term "link segment" used in this clause refers to four twisted-pairs operating in full duplex. Specifications for a link segment apply equally to each of the four twisted-pairs."

Cl **55** *SC* **55.7.2** *P* **661** *L* **38** # i-32

Maguire, Valerie — The Siemon Company

Comment Type **T** *Comment Status* **A**

Class FA also supports 10GBASE-T. Table 55-17: Add Class FA requirements.

SuggestedRemedy

Add the information below in a new row at the bottom of Table 55-17:

Cabling: Class FA

Supported link segment distance: 100m

Cabling references: ISO/IEC 11801:2002 Amendment 1

Note to Editor: The "A" in "FA" is subscript.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **7** *L* **0** # i-33

Turner, Michelle

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

Please update the Patent statement.

SuggestedRemedy

Attention is called to the possibility that implementation of this standard may require use of subject matter covered by patent rights. By publication of this standard, no position is taken by the IEEE with respect to the existence or validity of any patent rights in connection therewith. If a patent holder or patent applicant has filed a statement of assurance via an Accepted Letter of Assurance, then the statement is listed on the IEEE-SA Website <http://standards.ieee.org/about/sasb/patcom/patents.html>. Letters of Assurance may indicate whether the Submitter is willing or unwilling to grant licenses under patent rights without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination to applicants desiring to obtain such licenses.
Essential Patent Claims may exist for which a Letter of Assurance has not been received. The IEEE is not responsible for identifying Essential Patent Claims for which a license may be required, for conducting inquiries into the legal validity or scope of Patents Claims, or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from the IEEE Standards Association.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **0** *L* **0** # i-34

Turner, Michelle

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

Please note, during publication prep the Introduction will be reformatted so it will appear after the Participants list and right before the Special Symbols page.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **0** *L* **0** # i-35

Turner, Michelle

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

*** Comment submitted with the file 75039600003-Normative reference not cited in text.doc attached ***

The following references are cited in the Normative reference clause, however they are not cited in text. If they are not needed for the implementation of the standard please move to the bibliograpy. If they are needed, please cite in text. Attached is a listing.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete all the listed references as they do not appear elsewhere in the document.

Cl **00** *SC* **0** *P* **0** *L* **0** # i-36

Turner, Michelle

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

The following references are cited in both the Normative reference and Bibliography. Please decide if the documents are needed for the implementation of the standar or for informational purposes only. The should only be cited in one place.

SuggestedRemedy

ANSI/TIA/EIA-568-A-1995 and IEC 61754-4:1997

Response *Response Status* **C**

REJECT.

The text is written so that certain parts of the normative specification reference normative text in the other documents. In such cases, the reference is stated as a normative reference. In other cases where it is pointing to information in the document for informational purposes, it is done as a bibliography.

Cl **00** *SC* **0** *P* **0** *L* **0** # i-37

Turner, Michelle

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

*** Comment submitted with the file 75040200003-Normative Reference_descrepancies.doc attached ***

The following references are cited in the Normative reference clause with the date, however when used in text the date is left off. Please note during publication the date will be added

SuggestedRemedy

Response *Response Status* **C**

REJECT.

In the cases where there is no dated reference in the normative text, the group has purposefully done this to make it easier to update the global reference upon publication of updated refrences.

Cl **00** *SC* **0** *P* **0** *L* **0** # i-38

Turner, Michelle

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

The following references are cited in the normative reference clause with a specific date, but cited in text with a different date. Please verify which is the correct version. IEC 60793-1:1995 in Normative reference clause but cited as the 1992 version in text. IEC 60794-1:1996 in Normative reference clause, but as the 1993 version in text.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add the older references to the reference list in addition to the newer ones as some of the older clauses (Clauses 9 and 15).

Cl **00** *SC* **0** *P* **0** *L* **0** # i-39

Turner, Michelle

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

The following references are cited in the Normative reference clause however they are only cited in NOTE or a footnote. This implies that they are needed for informational purposes only. If this is the case, they should be removed from the Normative reference clause and placed in the Bibliography.

SuggestedRemedy

Response *Response Status* **C**

REJECT.

Per discussion with the Editor and the style guide, table footnotes are normative parts of the document. This comment was considered and subsequently withdrawn by the editor.

Cl **00** *SC* **0** *P* **0** *L* **0** # i-40

Turner, Michelle

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

This should be attached to comment 7, I forgot to include the documents. ANSI/TIA/EIA-455-203-2001, ANSI/TIA/EIA-455-204-2000, ITU-T Recommendations G.695, and ITU-T Recommendation O.153

SuggestedRemedy

Response *Response Status* **C**

REJECT.

Per discussion with the Editor and the style guide, table footnotes are normative parts of the document. This comment was considered and subsequently withdrawn by the editor.

Cl **28** *SC* **28.3.4** *P* **320** *L* **2** # i-41

Mclendon, Jonathon Broadcom Corporation

Comment Type **G** *Comment Status* **A**

Figure 28-18 is very hard to read due to split lines contained within the states.

SuggestedRemedy

If possible, stretching the ABILITY DETECT and TRANSMIT DISABLE state boxes horizontally on the page might remedy some of the split lines contained within these states.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will look at making those two states easier to read

Cl **55** *SC* **55.4.2.5.7** *P* **629** *L* **52** # i-42

Grimwood, Michael Broadcom Corporation

Comment Type **T** *Comment Status* **A**

As specified in 55.4.3.4, and corresponding to a 1e-12 BER, the maximum LDPC frame error ratio is 3.2e-9.

This corresponds to a packet error ratio of less than one LDPC frame in 3.125e8 and not one in 3.2e9.

SuggestedRemedy

Change:

3.2 X 10^9

To:

3.125 X 10^8

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the format of the LFER specification to be the same as that used in 55.4.2.4.
Change:
"at an error ratio of less than one LDPC frame in 3.2 x 10^9" to:
"at an LDPC frame error ratio of less than 3.2 x 10^-9"
[Editor's note: 10^ here is 10 with a superscripted number in the document]

See also comment #43

Cl **55** *SC* **55.12.4** *P* **688** *L* **10** # i-43

Grimwood, Michael Broadcom Corporation

Comment Type **T** *Comment Status* **A**

As specified in 55.4.3.4, and corresponding to a 1e-12 BER, the LDPC frame error ratio is 3.2e-9.

This corresponds to a packet error ratio of less than one LDPC frame in 3.125e8 and not one in 3.2e9.

SuggestedRemedy

Change:

3.2 X 10^9

To:

3.125 X 10^8

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the format of the LFER specification to be the same as that used in 55.4.2.4.
Change:
"LDPC frame error ratio of less than one frame in 3.2 x 10^9" to:
"LDPC frame error ratio of less than 3.2 x 10^-9"
[Editor's note: 10^ here is 10 with a superscripted number in the document]

See also comment #42

Cl **19** *SC* **19** *P* **539** *L* **3** # i-44

Thaler, Patricia Broadcom Corporation

Comment Type **E** *Comment Status* **A**

Since this clause is deprecated, shouldn't it also have the usual declaration about maintenance?

SuggestedRemedy

"Since September 2011, maintenance changes are no longer being considered for this clause"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The word deprectaed has a specific meaning within this context as it is being applied to a MIB. For clauses that are HW we have said not recommended. From a maintenance perspective the practical meaning is the same. Hence no change is needed.

Cl **20** *SC* **20** *P* **557** *L* **3** # i-45

Thaler, Patricia — Broadcom Corporation

Comment Type **E** *Comment Status* **A**

The same issue as my comment on Clause 19.

SuggestedRemedy

Add the statement about not considering further maintenance of this Clause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The word deprectaed has a specific meaning within this context as it is being applied to a MIB. For clauses that are HW we have said not recommended. From a maintenance perspective the practical meaning is the same. Hence no change is needed.

Cl **G** *SC* **G** *P* **601** *L* **8** # i-46

Thaler, Patricia — Broadcom Corporation

Comment Type **T** *Comment Status* **A**

Since this Annex applies to Clause 19, and Clause 19 is deprecated, should this clause also have a deprecation note?

SuggestedRemedy

Add the note.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add the following note at the beginning of the clause:

NOTE--This annex relates to a claues that has been deprecated. Since March 2012, maintenance changes are no longer being considered for this annex.

Cl **F** *SC* **F** *P* **599** *L* **1** # i-47

Thaler, Patricia — Broadcom Corporation

Comment Type **G** *Comment Status* **A**

Shouldn't this Annex be deprecated? There are multiple reasons: the management material has been moved to 802.3.1; the Repeater has been deprecated; for modern MIBs there are generic MIB objects defined that cover system up time (time since last boot or reset).

SuggestedRemedy

Deprecate this Annex

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Annex F is deprecated

Cl **E** *SC* **E** *P* **598** *L* **1** # i-48

Thaler, Patricia — Broadcom Corporation

Comment Type **G** *Comment Status* **A**

A strange annex - I don't recall the history at this point, but this annex seems to say, we specified wavelength in 9.9 but we don't really expect it to be followed so you might want to make your receiver tolerate wider ones. In any case, since 9.9 is dperecated, we should deprecate this too.

SuggestedRemedy

Deprecate the annex.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add the following note at the beginning of the clause:

NOTE--This annex relates to a clause that is not recommended for new installations. This annex is not recommended for new installations. Since March 2012, maintenance changes are no longer being considered for this annex.

Cl **13** *SC* **13** *P* **361** *L* **1** # i-49

Thaler, Patricia — Broadcom Corporation

Comment Type **G** *Comment Status* **A**

I hate to say it since we had to struggle so hard in creating this clause, but it now only applies when repeaters are used and we deprecated Clause 9. Shouldn't we also deprecate this Clause?

SuggestedRemedy

Add a note that says since Clause 9 repeaters are not recommended for new installations, this Clause also wouldn't apply and that maintenance changes are no longer being considered for this Clause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add a note:

NOTE--This clause relates to clauses that are not recommended for new installations. This clause is not recommended for new installations. Since March 2012, maintenance changes are no longer being considered for this clause.

Cl **04** *SC* **4** *P* **109** *L* **1** # i-50

Thaler, Patricia — Broadcom Corporation

Comment Type **G** *Comment Status* **R**

At this point, all the shared media and all the repeaters have been deprecated (i.e. not recommended for new installations). Only full duplex capable point-to-point and point-to-multipoint PHYs are left. Shouldn't we therefore also recommend that Clause 4 not be used for new installations?

SuggestedRemedy

Add a note indicating that Annex 4A rather than Clause 4 is recommended for new installations. Perhaps also indicate that maintenance is no longer considered for this Clause. (That depends on whether we think it is worth trying to keep this Clause in sync when/if maintenance is considered for Annex 4A.)

Response *Response Status* **C**

REJECT.

This may have a wide implication. In order for this issue to have full consideration a maintenance request will be entered to be considered for inclusion in the next revision.

Cl **29** *SC* **29** *P* **339** *L* **1** # i-51

Thaler, Patricia — Broadcom Corporation

Comment Type **G** *Comment Status* **A**

Same question and rationale as Clause 13 - is it time to deprecate this Clause.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add a note:

NOTE--This clause relates to clauses that are not recommended for new installations. This clause is not recommended for new installations. Since March 2012, maintenance changes are no longer being considered for this clause.

Cl **30** *SC* **30.1.2** *P* **348** *L* **23** # i-52

Thaler, Patricia — Broadcom Corporation

Comment Type **T** *Comment Status* **A**

802.1F is withdrawn. Should this be deleted as well as other references to oResourceTypeID and oEWMAMetricMonitor? oEWMAMetricMonitor only appears one other place along with oRepeaterMonitor which only appears once. oResourceTypeID is in a bunch of figures.

SuggestedRemedy

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Following the same style as prior comments on withdrawn standards, update the text to say IEEE Std 802.1F-1993 (withdrawn) and add a reference in the reference list if needed

Cl **30** *SC* **30.1** *P* **347** *L* **6** # i-53

Thaler, Patricia — Broadcom Corporation

Comment Type **G** *Comment Status* **R**

Should there be some mention of the relationship between this Clause and 802.3.1?

SuggestedRemedy

Response *Response Status* **C**

REJECT.

There is a reference later on in the draft to text moving to 802.3.1.

A brief paragraph introducing 802.3.1 at a high level is not necessary but had a one been provided in the remedy, the BRC would have considered it and determined whether or not to add it in.

Cl **51** *SC* **51.6.2** *P* **449** *L* **52** # i-54

Anslow, Peter — Ciena Corporation

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

For 10GBASE-R, the allowed clock variation of the transmitter is +/- 100 ppm and the receiver is required to tolerate the same clock variation of +/- 100 ppm.
In contrast to this, for 10GBASE-W the allowed clock variation of the transmitter is +/- 20 ppm but the receiver is still required to tolerate a clock variation of +/- 100 ppm which is five times larger than is allowed for the transmitter. See http://www.ieee802.org/3/maint/public/anslow_1_0112.pdf for a discussion of why this matters.

SuggestedRemedy

In Table 51-12, change the 10GBASE-W tolerance for a valid clock from +/-100 ppm to +/- 20 ppm
In Table 52-9, change the 10GBASE-SW Signaling speed variation from nominal (max) from +/-100 ppm to +/-20 ppm
In Table 52-13, change the 10GBASE-LW Signaling speed variation from nominal (max) from +/-100 ppm to +/-20 ppm
In Table 52-17, change the 10GBASE-EW Signaling speed variation from nominal (max) from +/-100 ppm to +/-20 ppm

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* *L* # i-55

Anslow, Peter — Ciena Corporation

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

Comment #375 against D2.0 changed the references to IEC 60825-1 and IEC 60825-2 to bring them up to date.
See http://www.ieee802.org/3/maint/public/stassar_1_1111.pdf for the justification for the further changes in this comment.

SuggestedRemedy

In the following subclauses related to PMD labeling requirements: 38.9, 52.12, 53.12, 58.8.5, 59.8.5, 60.8.5, 87.9.5, 88.9.7, 89.8.5;
Also in the following subclauses related to laser safety: 75.8.2, 87.9.2, 88.9.2, 89.8.2;
Also in PICS items 38.12.4.2 PMS3, 38.12.4.5 OR31, 53.15.4.5 OM44, 75.10.4.15 ES2 (2 places), 87.12.4.5 XLES2 (2 places), 88.12.4.6 CES2 (2 places), 89.11.4.5 XLES2 (2 places);
Also in 38.3.1 Table 38-3 Note a and 52.5.1 Table 52-7 Note c:
Change "Class 1" to "Hazard Level 1"

In the following subclauses related to Laser Safety: 38.7.2, 52.10.2, 53.10.2, 58.8.2, 59.8.2, 60.8.2:
Change "Class 1" to "Hazard Level 1" and "IEC 60825-1" to "IEC 60825-1 and IEC 60825-2".

In 86.9.2 Laser safety and 86.11.4.5 PICS item SES2:
Change "Class 1M" to "Hazard Level 1M"

In PICS items: 52.15.3.11 ES2, 58.10.3.6 ES2, 59.10.3.6 ES2, 60.10.4.8 ES2, 68.10.3.5 SE2:
Change "Laser safety -IEC Class 1" to "Laser safety -IEC Hazard Level 1" and change: "Conform to Class 1 laser requirements defined in IEC 60825-1" to "Conform to Hazard Level 1 laser requirements defined in IEC 60825-1 and IEC 60825-2".

In PICS item 38.12.4.5 OR32:
Change "IEC 60825-1" to "IEC 60825-1 and IEC 60825-2"

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* *L* # i-56

Anslow, Peter Ciena Corporation

Comment Type **E** *Comment Status* **A**

Many of the internal references within in Sections 1, 2 and 3 are either not links or do not function properly.
In particular, when a user searches for a particular PMD type, the first instance they find is in subclause 1.4 Definitions. These contain a pointer to the clause that PMD is defined in. (See IEEE Std 802.3, Clause x).
Many of these clause references are links, but a significant number are not. Since jumping to the relevant section and clause is a very useful function, please make them all links.
Also scrub the rest of Sections 1, 2 and 3 to make as many of the links active as possible.

SuggestedRemedy

Make all of the references in Subclause 1.4 active hyperlinks.
Scrub the rest of Sections 1, 2 and 3 to make as many of the links active as possible.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

For non functioning links, will restore per comment #59.

For text that can be turned into cross ref, will look at sections 1.4. Will look at clauses 2, 3 and the rest of books as well, time permitting.

For the links noted in anslow_2_0312 make the suggested changes.

Cl **00** *SC* **0** *P* *L* # i-57

Anslow, Peter Ciena Corporation

Comment Type **E** *Comment Status* **A**

Comment #156 against D2.0 changed all instances of "next page" and "base page" to be capitalised as "Next Page" and "Base Page".
This leaves "extended Next Page" and "unformatted Next Page" inconsistently capitalised.

SuggestedRemedy

Change capitalisation to be "Extended Next Page" and "Unformatted Next Page" throughout the draft.
In 28C.13, change:
"followed by an unformatted extended Next Page" to:
"followed by an unformatted Extended Next Page"

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* *L* # i-58

Anslow, Peter Ciena Corporation

Comment Type **E** *Comment Status* **A**

None of the cross-references to "Clause 54" work as links

SuggestedRemedy

Replace the marker in the title of Clause 54 and then re-link the cross-references to it

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* *L* # i-59

Anslow, Peter Ciena Corporation

Comment Type **E** *Comment Status* **A**

Within Sections 2 and 3, most of the internal cross-references to Tables and Figures appear to be links, but clicking on them has no effect

SuggestedRemedy

Fix the links

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The older sections do not always propery converge when the PDF is created if not all the files are open at once despite no cross ref errors in the report. In generating this next book and upon publication, will try again to fix this.

Cl **35** *SC* **35.2.2.6** *P* **30** *L* **19** # i-60

Anslow, Peter Ciena Corporation

Comment Type **E** *Comment Status* **A**

The Figure and Table numbers in Clause 35 are inconsistent.
The Figure numbers go from 35-7 back to 35-1 and there are two (different) Tables numbered 35-1
This is due to an incorrect Autonumber format for the heading of 35.2.2.6

SuggestedRemedy

Fix the Autonumber format of the heading for 35.2.2.6 and hence make the Figure and Table numbering for Clause 35 consistent.

Response *Response Status* **C**

ACCEPT.

Cl **72** *SC* **72.5** *P* **469** *L* **35** # i-61

Anslow, Peter — Ciena Corporation

Comment Type **T** *Comment Status* **A**

Registers 1.150 and 1.151 have been re-named to "BASE-R PMD control" and "BASE-R PMD status" but the previous names of "10GBASE-KR PMD control" and "10GBASE-KR PMD status" still appear in Tables 72-2 and 72-3

SuggestedRemedy

Change "10GBASE-KR PMD control" to "BASE-R PMD control" in Table 72-2 (2 places)
On page 470, change "10GBASE-KR PMD status" to "BASE-R PMD status" in Table 72-3 (4 places)

Response *Response Status* **C**

ACCEPT.

Cl **78** *SC* **78.1.4** *P* **26** *L* **26** # i-62

Anslow, Peter — Ciena Corporation

Comment Type **E** *Comment Status* **A**

Table 78-1 contains references to other clauses within the draft, but these are not links

SuggestedRemedy

Make them links

Response *Response Status* **C**

ACCEPT.

Cl **86A** *SC* **86A.4.1** *P* **380** *L* **40** # i-63

Palkert, Thomas — Luxtera

Comment Type **GR** *Comment Status* **A**

CXP ICN needs to be increased. This will affect the Qsq of SR10 designs.

SuggestedRemedy

Change Qsq from 45 to 40.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the Qsq minimum in Table 86A-1 for CPPI only from 45 to 43 as recommended by the ICN ad hoc.

See also comment #64

Cl **85** *SC* **85.10.9** *P* **206** *L* **37** # i-64

Palkert, Thomas — Luxtera

Comment Type **GR** *Comment Status* **A**

ICN for CR10 and SR10 needs to be increased

SuggestedRemedy

Change Near end integrated crosstalk noise from .7 to 3.0
Change Far end integrated crosstalk noise from 2.5 to 4.0 Change MDNEXT integrated crosstalk noise from 1 to 3.0 Change MDFEXT integrated crosstalk noise from 3.5 to 5.0

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Make the ICN changes recommended by the ICN ad hoc in:
http://www.ieee802.org/3/maint/anslow_3_0312.pdf
See also comment #63

Cl **01** *SC* **1.4181** *P* **78** *L* **21** # i-65

Thaler, Patricia — Broadcom Corporation

Comment Type **E** *Comment Status* **A**

EtherType definition says See: Type and the standard generally uses Type rather than EtherType or Ethertype. However, it also uses type and Type for purposes unrelated to Ethertype. For example Type 1 and Type 2 PDs and PSEs, type in a TLV, and PHY types. IEEE 802.1Q uses Ethertype and the draft of IEEE 802-Rev uses EtherType.

SuggestedRemedy

The field name could stay Length/Type because there is no ambiguity with that combination, but when talking about the 2-byte value in the field when the field has the Ethertype interpretation, Ethertype should be used for consistancy with other standards and disambiguation of Type within 802.3.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Implement the changes suggested in thaler_1_0312.pdf.

Changes will be limited to non-deprecated clauses (i.e. clauses that are not deprecated or noty ones that are not recommended for new implementations)

Cl **55** *SC* **55.4.2.5.14** *P* **633** *L* **46** # i-66

Zimmerman, George CME Consulting

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

Additional constraint on PMA coefficient state timing may cause interoperability issues with earlier equipment

SuggestedRemedy

Delete new line with additional constraint on PMA Coef state with timing_lock_OK = 0.

Response *Response Status* **C**

REJECT.

The new line in Table 55-9 was added in response to Maintenance request 1216 (see http://www.ieee802.org/3/maint/requests/maint_1216.pdf) as modified by the response to comment #183 against D 2.0 (see http://www.ieee802.org/3/bh/comments/P802d3_802d3_bh_D2p0_All_Clause.pdf)
The reason for adding this extra constraint was to improve interoperability by giving the Master a defined minimum time to compute the THP coefficients.

Cl **25** *SC* **25.4.5** *P* **229** *L* **42** # i-67

Zimmerman, George CME Consulting

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

Text is changed from 802.3at-2009, but is not marked as changed. Previous text limited the use of the equivalent test for transmitter droop. while the majority of 100BASE-TX equipment in the field may be designed to handle this, and newer receivers, which would be used with either 802.3at or 10GBASE-T have been shown to handle this equivalent test, further study and unacceptable risk may be had in expanding this text to the wider set of 100BASE-TX transceivers.

SuggestedRemedy

Change "or meet" to read "A
transmitter in a Type 2 Endpoint PSE or Type 2 PD delivering or accepting more than 13.0 W average power
or also implementing Clause 55 10GBASE-T shall meet either the Open Circuit Inductance (OCL) requirement in 9.1.7 of TP-PMD, or meet the
requirements of 25.4.5.1."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Re the commenter's statement about marked changes, this is an initial ballot and open scope document, hence no change marks from 802.3at-2009 are in order (the commenter may be referring to the WG ballot phase). This draft is identical to D2.2 of the WG ballot with the editorial changes to prepare it for initial SA ballot.

Re the OCL change, it will be reverted back to the way it was in IEEE Std 802.3at-2009. Specifically, comment #s 186, 187, 188, 189, 190 and 191, from the P802.3 initial WG Ballot (D2.0), will be rolled back.

Cl **36** *SC* **36.2.5.2.2** *P* **82** *L* **23** # i-68

Barrass, Hugh Cisco Systems, Inc.

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

Exit term from state RX_K to IDLE_D is missing its last element.

SuggestedRemedy

Third line of exit term should be

(xmit=DATA ∗ idle_d)

As it was in 802.3az.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

(xmit=DATA & idle_d)

Cl **36** *SC* **36.2.5.2.2** *P* **82** *L* **27** # i-69

Barrass, Hugh Cisco Systems, Inc.

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

The exit term from state RX_K to labeled polygon E (added by 802.3ax) is missing.

SuggestedRemedy

Add exit term from state RX_K to labeled polygon E with the following condition:

xmit=DATA ∗
(SUDI([/D6.5/] +
[/D26.4/]))

As shown in 802.3az.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

xmit=DATA * (SUDI([/D6.5/] +[/D26.4/]))

Cl **36** *SC* **36.2.4.12** *P* **67** *L* **35** # i-70

Barrass, Hugh Cisco Systems, Inc.

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

The last paragraph is incorrect when EEE is considered.

SuggestedRemedy

Change:

data code-group other than /D21.5/ or /D2.2/,

to

data code-group other than /D21.5/ or /D2.2/ (or /D6.5/ or /D26.4/ to support EEE capability),

Response *Response Status* **C**

ACCEPT.

Cl **82** *SC* **82.6** *P* **124** *L* **5** # i-71

Healey, Adam LSI Corporation

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

This subclause states that "The PCS shall support the primitive AN_LINK.indication(link_status) (see 73.973.9). The parameter link_status shall take the value FAIL when PCS_status=false and the value OK when PCS_status=true." However, the value of PCS_status is not defined.

SuggestedRemedy

Define PCS_status to be align_status = TRUE and hi_ber = FALSE.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add a variable to 82.2.18.2.2:

PCS_status
A Boolean variable that is true when align_status is true and hi_ber is false

Cl **30** *SC* **30.3.1.1.38** *P* **395** *L* **1** # i-72

Barrass, Hugh Cisco Systems, Inc.

Comment Type **T** *Comment Status* **A**

aTransmitLPIMicroseconds should not be in 30.3.1.1 (MAC entity attributes) but should be in 30.3.2.1 (PHY entity attributes)

SuggestedRemedy

Move 30.3.1.1.38 to 30.3.2.1.8 and make corresponding change in Table 30-1b

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.3.1.1.39** *P* **395** *L* **14** # i-73

Barrass, Hugh Cisco Systems, Inc.

Comment Type **T** *Comment Status* **A**

aReceiveLPIMicroseconds should not be in 30.3.1.1 (MAC entity attributes) but should be in 30.3.2.1 (PHY entity attributes)

SuggestedRemedy

Move 30.3.1.1.39 to 30.3.2.1.9 and make corresponding change in Table 30-1b

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.3.1.1.40** *P* **395** *L* **26** # i-74

Barrass, Hugh — Cisco Systems, Inc.

Comment Type **T** *Comment Status* **A**

aTransmitLPITransitions should not be in 30.3.1.1 (MAC entity attributes) but should be in 30.3.2.1 (PHY entity attributes.

SuggestedRemedy

Move 30.3.1.1.40 to 30.3.2.1.10 and make corresponding change in Table 30-1b

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.3.1.1.41** *P* **395** *L* **41** # i-75

Barrass, Hugh — Cisco Systems, Inc.

Comment Type **T** *Comment Status* **A**

aReceiveLPITransitions should not be in 30.3.1.1 (MAC entity attributes) but should be in 30.3.2.1 (PHY entity attributes)

SuggestedRemedy

Move 30.3.1.1.41 to 30.3.2.1.11 and make corresponding change in Table 30-1b

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.3.1.1.42** *P* **396** *L* **1** # i-76

Barrass, Hugh — Cisco Systems, Inc.

Comment Type **T** *Comment Status* **A**

aLDFastRetrainCount should not be in 30.3.1.1 (MAC entity attributes) but should be in 30.5.1.1 (MAU entity attributes)

SuggestedRemedy

Move 30.3.1.1.42 to 30.5.1.1.24 and make corresponding change in Table 30-1b / 30-1e

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.3.1.1.43** *P* **396** *L* **12** # i-77

Barrass, Hugh — Cisco Systems, Inc.

Comment Type **T** *Comment Status* **A**

aLPFastRetrainCount should not be in 30.3.1.1 (MAC entity attributes) but should be in 30.5.1.1 (MAU entity attributes)

SuggestedRemedy

Move 30.3.1.1.42 to 30.5.1.1.24 and make corresponding change in Table 30-1b / 30-1e

Response *Response Status* **C**

ACCEPT.

Cl **33** *SC* **33.2.7.5** *P* **643** *L* **45** # i-78

McCormack, Michael — Texas Instruments Inc

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

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 was removed which makes some previously compliant systems in the installed base no longer compliant. Failing to document this known behavior to PD manufacturers may cause new PDs to not operate with installed base of PSEs compliant with the 2008 edition of the standard.

SuggestedRemedy

1) Restore the 1ms allowance by adding an item "d) Measurement to be taken after 1ms to allow startup transients (not preferred behavior for new implementations.)" at line 50.
2) Add "NOTE 3-33.2.7.5 allows PSEs to oscillate for up to 1ms during power on startup. Though not required, it is advisable to filter the PD input voltage to ignore this potential PSE oscillation." in section 33.3.3.5, page 654, line 5 following Figure 33-16.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Restore the 1ms allowance by adding an item "d) For Type 1 PSE, measurement of minimum IInrush requirement to be taken after 1ms to allow startup transients. A Type 2 PSEs that uses 1-Event physical layer classification, and requires the 1mS settling time, shall power up a class 4 PD as if it used 2-Event physical layer classification. " at line 50.

[Editor's note: IInrush is I subscript Inrush]

Cl **79** *SC* **79.3.2.4** *P* **45** *L* **45** # i-79

McCormack, Michael Texas Instruments Inc

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

"power source" Value 1 0 is reserved. I assume that is because the authors assumed that a PD would at least be powered by a PSE and not only locally. However, a PD is a valid PD when it is only requesting power, not just receiving it. Many PDs on the market also support local power supplies, as alluded to by the bits in this field, so it is entirely possible to have a PD that is requesting power, is not actively powered by the PSE and yet is operating the data link. What power source is a locally powered PD to report?

SuggestedRemedy

Change table to read '1 0 = local' or explain.

Response *Response Status* **C**

REJECT.

PDs that are not powered by a PSE will not receive LLDP messages that require a response; therefore, a locally powered and PSE unpowered PD will not need to reply to a compliant PSE. The standard addresses only interaction between compliant implementations, therefore the requested change is beyond the scope of IEEE 802.3 WG.

Cl **79** *SC* **79.3.2.5** *P* **46** *L* **40** # i-80

McCormack, Michael Texas Instruments Inc

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

0' is specifically excluded as a PD requested power value; however, it may be entirely appropriate for a PD to want to have its input power removed.

SuggestedRemedy

1) Change the text at to read "... decimal 0 through 255."
2) Change the label on the vector in Section 33.2.4.7, Figure 33-9, line 50 to read "tmpdo_timer_done * !short_detected * !ovld_detected * !power_not_available * !option_vport_lim + PD_request_off"
3) In section 33.2.4.6, (pick an appropriate page and line) define a function "PD_request_off" This function returns TRUE if the PSE receives a "PD requested power value" of zero and FALSE for all other values received OR this function returns FALSE if the PSE does not support a PD power off request.

Response *Response Status* **C**

REJECT.

Without other changes not included in the comment, it is likely that an unstable condition could result. Specifically, it is likely that PDs would indefinately cycle between powered and unpowered states.

Cl **28C** *SC* **28C** *P* **730** *L* **23** # i-81

Barrass, Hugh Cisco Systems, Inc.

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

The entry for "Organizationally Unique Identifier Tagged Message (extended Next Page)" needs to use a defined message code. This was left as "XX" in earlier drafts, but should now be definitively assigned.

SuggestedRemedy

Change the entry for "Organizationally Unique Identifier Tagged Message (extended Next Page)" as follows:

Use message code 11, change the columns M10:M0 to 00000001101.

Move the row above the "Reserved..." row.

Change the paragraph heading for 28C.13 to reflect the same change.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Flip message code descriptions between the second to last row and the third to last row

Change 11... to 11. Change equivelent binary to be 00000001011

Change XX to 12...

Cl **51** *SC* **51.8** *P* **453** *L* **6** # i-82

Trowbridge, Stephen ALCATEL-LUCENT

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

10GBASE-W Rx clock tolerance inconsistent with Tx clock tolerance

SuggestedRemedy

Change to 622.08 MHz+/-20ppm

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #54

Cl **52** *SC* **52.5.2** *P* **466** *L* **14** # i-83

Trowbridge, Stephen ALCATEL-LUCENT

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

10GBASE-SW Rx clock tolerance inconsistent with Tx clock tolerance

SuggestedRemedy

As with signaling speed, split specifications for speed variation from nominal to indicate 10GBASE-SR as +/-100ppm and 10GBASE-SW as +/-20ppm

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #54

Cl **52** *SC* **52.6.2** *P* **469** *L* **14** # i-84

Trowbridge, Stephen ALCATEL-LUCENT

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

10GBASE-LW Rx clock tolerance inconsistent with Tx clock tolerance

SuggestedRemedy

As with signaling speed, split specifications for speed variation from nominal to indicate 10GBASE-LR as +/-100ppm and 10GBASE-LW as +/-20ppm

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #54

Cl **52** *SC* **52.7.2** *P* **472** *L* **14** # i-85

Trowbridge, Stephen ALCATEL-LUCENT

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

10GBASE-EW Rx clock tolerance inconsistent with Tx clock tolerance

SuggestedRemedy

As with signaling speed, split specifications for speed variation from nominal to indicate 10GBASE-ER as +/-100ppm and 10GBASE-EW as +/-20ppm

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #54

Cl **82** *SC* **82.1.4.2** *P* **101** *L* **32** # i-86

Trowbridge, Stephen ALCATEL-LUCENT

Comment Type **E** *Comment Status* **A**

The clause title is PMA Service Interface, but the clause content describes a PMA or FEC Service Interface

SuggestedRemedy

Change clause title to "Physical Medium Attachment (PMA) or Forward Error Correction (FEC) service interface"

Response *Response Status* **C**

ACCEPT.

Cl **82** *SC* **82.2.1** *P* **103** *L* **40** # i-87

Trowbridge, Stephen ALCATEL-LUCENT

Comment Type **T** *Comment Status* **A**

The statement "When the receive channel is in test-pattern mode, the BER monitor process is disabled." was copied from clause 49, where test patterns were PRBS that did not have sync headers. But the only test pattern that makes it to the PCS for 40/100GBASE-R is scrambled idle which does have sync headers, and it seems there would be no reason to disable BER monitoring for this.

SuggestedRemedy

Since existing implementations likely disable BER monitor during the test pattern, it is probably not good to remove this altogether and leave the idea that BER monitoring is required. But consider changing to "the BER monitor process may be disabled" so that future implementations don't need to do something unnecessary.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change:
"When the receive channel is in test-pattern mode, the BER monitor process is disabled."
to:
"When the receive channel is in test-pattern mode, the BER monitor process may be disabled."

Cl **83** *SC* **83.4** *P* **143** *L* **2** # i-88

Trowbridge, Stephen ALCATEL-LUCENT

Comment Type **E** *Comment Status* **R**

Inconsistency from "XLAUI/CAUI or nPPI"

SuggestedRemedy

Change to "XLAUI/CAUI or XLPPI/CPPI". Same on lines 13, 39.

Response *Response Status* **C**

REJECT.

The terminology used throughout Section 6 of the draft is (almost) consistent in referring to XLAUI/CAUI (111 instances) and nPPI (50 instances).
Clause 1 contains:
1.4.275 nPPI: The term "nPPI" denotes either XLPPI or CPPI or both. (See IEEE Std 802.3, Annex 86A.)
There are only 3 instances of XLPPI/CPPI in the draft, making the proposed change less consistent.

Cl **28** *SC* **28.2.1.2.3** *P* **290** *L* **12** # i-89

Thompson, Geoffrey GraCaSI S.A.

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

There is a reference to "IEEE 802.5" (should it be IEEE Std 802.5?). There are a couple of problems. (1) IEEE Std. 802.5 it is no longer an active standard. It has been withdrawn. ISO/IEC 8802-5:1998 (and perhaps 8802-5 Amd1:1998) have been left behind as the "Stabilized" versions of 802.5 for reference. (2) The proper reference and mention to go here is actually IEEE Std 802.5v-2001 Gigabit Token Ring Operation. There is no mention of Auto-Negotiation in either of the earlier ISO volumes. I don't believe there was any use of Auto-Negotiation in any other 802.5 work than 802.5v. 802.5v was the last amendment approved for 802.5. There was an attempt to do a revison project to merge everything in 2003 (I have a Sponsor Ballot invite) but I don't believe it ever completed.

SuggestedRemedy

Change the text "IEEE 802.5" to "IEEE Std 802.5v-2001 (withdrawn)". Add a matching reference in the references clause.

Response *Response Status* **C**

ACCEPT.

Cl **28** *SC* **28.2.1.2.3** *P* **290** *L* **12** # i-90

Thompson, Geoffrey GraCaSI S.A.

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

There is a reference to "IEEE 802.9"(should it be IEEE Std 802.9?). There are a couple of problems. (1) IEEE Std. 802.9 it is no longer an active standard in both IEEE and its ISO version has been as well. It is actually a joint edition: ISO/IEC 8802-9: 1996(E) ANSI/IEEE Std 802.9, 1996 Edition. There is no mention of Auto-Negotiation in either of the earlier ISO volumes. I don't believe there was any use of Auto-Negotiation in any other 802.9 work than 802.9a ISLAN16-T (IEEE Std 802.9a-1995). 802.9a was never integrated into the main standard before everything was withdrawn.

SuggestedRemedy

Change the text "IEEE 802.9" to "IEEE Std 802.9a-1995 (withdrawn)". Add a matching reference in the references clause.

Response *Response Status* **C**

ACCEPT.

Cl **86** *SC* **86.7.1** *P* **231** *L* **42** # i-91

Petrilla, John Avago Technologies

Comment Type **T** *Comment Status* **A**

Footnote c only addresses OM3 fiber. Shouldn't OM4 fiber be included?

SuggestedRemedy

Change, "If measured into type A1a.2 50 im fiber in accordance with IEC 61280-1-4." to "If measured into type A1a.2 50 im fiber or into type A1a.3 50 im fiber in accordance with IEC 61280-1-4."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change:
"If measured into type A1a.2 50 um fiber in accordance with IEC 61280-1-4." to:
"If measured into type A1a.2 or type A1a.3 50 um fiber in accordance with IEC 61280-1-4."

Cl **28A** *SC* **28A** *P* **725** *L* **24** # i-92

Thompson, Geoffrey GraCaSI S.A.

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

Table 28A-1, Row 3 There is a reference to "IEEE Std 802.9 ISLAN-16T". The name of the standard is misquoted and the standard has been withdrawn. Also the referred to standard does not show up in the references.

SuggestedRemedy

Change the text "IEEE Std 802.9 ISLAN-16T" to "IEEE Std 802.9a-1995 ISLAN16-T (withdrawn)". Add a matching reference in the references clause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the text "IEEE Std 802.9 ISLAN-16T" to "IEEE Std 802.9a-1995 (withdrawn)". Add a matching reference in the references clause.

Cl **28A** *SC* **28A** *P* **725** *L* **25** # i-93

Thompson, Geoffrey GraCaSI S.A.

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

Table 28A-1, Row 4 There is a reference to "IEEE Std 802.5". The name of the standard is misreferenced and the standard has been withdrawn. Also the referred to standard does not show up in the references.

SuggestedRemedy

Change the text "IEEE Std 802.5" to "IEEE Std 802.5v-2001 (withdrawn)". Add a matching reference in the references clause.

Response *Response Status* **C**

ACCEPT.

Cl **28A** *SC* **28A** *P* **725** *L* **26** # i-94

Thompson, Geoffrey GraCaSI S.A.

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

Table 28A-1, Row 5 There is a reference to "IEEE Std 1394". The referred to standard does not show up in the references.

SuggestedRemedy

Add a matching reference in the references clause.

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.5.1.1.2** *P* **439** *L* **20** # i-95

Thompson, Geoffrey GraCaSI S.A.

Comment Type **E** *Comment Status* **A**

Text description is off just a little.

SuggestedRemedy

Change the text "IEEE Std 802.9 ISLAN-16T" to "IEEE Std 802.9a-1995 ISLAN16-T (withdrawn)". Add a matching reference in the references clause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the text "IEEE Std 802.9 ISLAN-16T" to "IEEE Std 802.9a-1995 (withdrawn)". Add a matching reference in the references clause.

Cl **01** *SC* **1.3** *P* **58** *L* **23** # i-96

Thompson, Geoffrey GraCaSI S.A.

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

References are missing for 802.5v, 802.9a and 1394 (further details in other GOT comments).

SuggestedRemedy

Add proper references for 802.5v (withdrawn), 802.9a (withdrawn) and IEEE Std 1394.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Add IEEE Std 802.5v-2001 (withdrawn), IEEE Std 802.9a-1995 (withdrawn) and IEEE Std 1394-1995 to section 1.3.

Cl **64** *SC* **64** *P* **0** *L* **0** # i-97

Thompson, Geoffrey — GraCaSI S.A.

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

This comment applies to mainly clauses 64, 65, 66, 75, 76 and 77. There is related text in other clauses. The EPON eco-system has developed and expanded to such an extent that I strongly believe it deserves a separate standard within 802.3. I believe that it would serve the LAN community and 802.3 in particular to separate it out and give it a separate (802.3) identity. This should make EPON easier to expand and maintain and make it easier for the market to relate to its "Distinct Identity" This is not breaking new ground as both 802.1 (albeit with a horrible disignation system) and 802.15 have separate standards within the custody of their Working Groups. We have broken the way within 802.3 with the separation of our MIBs into 802.3.1. I also believe that this approach will help 802.3 in the future as other variants on Ethernet present compelling arguments for standardization within 802.3.

SuggestedRemedy

Remove all text clauses related to EPON and move them to a new standard which I propose to be designated 802.3.2. Do such additional editorial work required to support such a change within those clauses and in other clauses. Leave the existing clause headers in place with a reference to the appropriate clause in the new standard.

Response *Response Status* **C**

REJECT.

1) Both PARs for EPON projects (802.3ah and 802.3av) were brought into 802.3 WG as amendments to the base 802.3 standard and not stand-alone documents.
2) If such an extraction process was to proceed, a new project for this end would be needed. EPON is a successful part of the Ethernet family and if it were to be removed from the base standard, it would need a concurent project to do so, preventing a situation in which there would be no approved standard for EPON. Thus, any further action on this would require new action by the WG.

Cl **73A** *SC* **73A.1** *P* **823** *L* **36** # i-98

Ganga, Ilango — Intel Corporation

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

Change the reference to Clause 73 instead of Clause 28 because Clause 73 defines the next page function referenced in this annex.

SuggestedRemedy

Change "See 28.2.3.4" to "See 73.7.7"

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.7.13** *P* **230** *L* **9** # i-99

Ganga, Ilango — Intel Corporation

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

Devices using Clause 73 AN for EEE are required to send a single "Message Next Page" with message code and unformatted code. See 73A.4, "The EEE technology code message shall consist of only a Message Next Page". The message code field indicates EEE as specified in Table 73A-1 and the unformatted code mapping as specified in 45.2.7.13. Whereas text in 45.2.7.13 incorrectly indicates as if unformatted next page is sent after message next page. The unformatted next page only applies to devices using Clasue 28 AN. Correct the text in 45.2.7.13 as proposed.

SuggestedRemedy

Change first sentence in first paragraph of 45.2.7.13 as follows: "This register defines the EEE advertisement that is sent in the unformatted Next Page following a EEE technology message code as defined in 28C.12 or sent in the unformatted code field of Message Next Page with EEE
technology message code as defined in 73A.4 or sent as part of the 10GBASE-T extended Next Page as defined in 55.6.1.
Change second sentence of second paragraph of 45.2.7.13 as follows: "Bits 15:0 of register 7.60 map to bits U15 through U0 respectively of the unformatted coded field of Message Next Page with EEE technology message code as defined in 73A.4."

Response *Response Status* **C**

ACCEPT.

Change first sentence in first paragraph of 45.2.7.13 as follows:
"This register defines the EEE advertisement that is sent in the unformatted Next Page following a EEE technology message code as defined in 28C.12 or sent in the unformatted code field of Message Next Page with EEE technology message code as defined in 73A.4 or sent as part of the 10GBASE-T extended Next Page as defined in 55.6.1."

Change second sentence of second paragraph of 45.2.7.13 as follows:
"Bits 15:0 of register 7.60 map to bits U15 through U0 respectively of the unformatted coded field of Message Next Page with EEE technology message code as defined in 73A.4."

Cl **73A** *SC* **73A** *P* **823** *L* **30** # i-100

Ganga, Ilango — Intel Corporation

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

This comment is related to my comment submitted on Clause 45 regarding the same issue. Devices using Clause 73AN for EEE are required to send a single Message Next Page with EEE message code and unformatted code in the same page (See 73A.4). Whereas, Table 73A-1 incorrectly indicates as if unformatted next page is sent after message next page. Correct text in Table 73A-1.

SuggestedRemedy

Change text in last row of Table 73A-1 as follows:
"EEE Technology Message Code.
EEE capability is advertised using unformatted message code field in the Message Next Page (See 73A.4)."

Response *Response Status* **C**

ACCEPT.

Cl **73A** *SC* **73A.4** *P* **825** *L* **52** # i-101

Ganga, Ilango — Intel Corporation

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

Text in 73A.4 says, "The contents of the unformatted code bits (D47:D16) shall be as defined in 45.2.7.13". However not all unformatted code bits are defined in Clause 45. So clarify that unused message code bits sent with 0 and ignored on receipt (This is similar to last sentence in 73A.3, however make this an informative statement since the 802.3az did not have this as a requirement).

SuggestedRemedy

Change last sentence and add the following to the end of first paragraph: "The contents of the unformatted code bits U31: U0 (D47:D16) shall be as defined in 45.2.7.13.The unformatted code field bits that are not defined in 45.2.7.13 are sent as zero and ignored on receipt.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change last sentence to read as follows:
"The contents of the unformatted code bits U31:U0 (D47:D16) shall be as defined in 45.2.7.13."

Clause 45 already includes a global statements on how undefined bits are set and treated on receipt. No further clarification is needed in 73A.

Cl **01** *SC* **1.1** *P* **51** *L* **6** # i-102

Dawe, Piers J G — IPtronics

Comment Type **T** *Comment Status* **A**

The claim that "This is a comprehensive international standard for Local and Metropolitan Area Networks (LANs and MANs)..." is a bit too wide. Yes, it's large and has many options, but it goes only so far up the stack. As far as I can see it covers the Physical Layer and some of the Data Link Layer.

SuggestedRemedy

Delete "comprehensive". Refer to the most common types of MAC client (LLC? other? In 1.1 or 1.1.1 or 1.1.3.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete "comprehensive". Change "a" to "an".

Cl **01** *SC* **1.1** *P* **51** *L* **6** # i-103

Dawe, Piers J G — IPtronics

Comment Type **E** *Comment Status* **R**

What's our position on being international?

SuggestedRemedy

If this isn't an international standard, delete "international", twice in this paragraph.

Response *Response Status* **C**

REJECT.

This is an international Standard.

Cl **86A** *SC* **86A.4.1** *P* **380** *L* **30** # i-104

Dawe, Piers J G IPtronics

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

We have common-mode generation specs and impedance mismatch specs; therefore we need the compliance boards to support common-mode signals. Abandoning common-mode reflection specs altogether would be a step too far, would leave possible resonances out of control and defeat the specs mentioned. This is true whether or not you believe that common-mode reflection specs are needed to limit EMI."

SuggestedRemedy

Restore all the common-mode specifications of 802.3ba (83B, 85, 86A: inputs, outputs, hosts, modules, cables and compliance boards) but with different (generally more relaxed) limits that take the characteristics of connectors and compliance boards into account better, and with the following additional differences:
Relax the common-mode input or output return loss spec of mated HCB-MCB looking into MCB;
Delete the common-mode input or output return loss spec of mated HCB-MCB looking into HCB;
Add mask for max common-mode insertion loss spec of mated HCB-MCB (looking either way, input or output);
Add spec for max integrated common-mode insertion loss of mated HCB-MCB (looking either way, input or output), using the integration method for integrated crosstalk noise;
Add a differential to common-mode return loss spec for the mated compliance boards.
These improvements to apply to Clause 85 "test fixtures" the same as to Annex 86A compliance boards.

Response *Response Status* **C**

REJECT.

This comment seeks to reverse the removal of the common-mode return loss specs due to comments #146 to #150 against D2.0 without establishing that there is indeed a correlation between common-mode return loss and unacceptable performance or providing a proposal for relaxed limits and evidence that the relaxed limit proposed will ensure adequate performance.

Cl **85** *SC* **85.8.3** *P* **184** *L* **31** # i-105

Dawe, Piers J G IPtronics

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

"Transmitter DC amplitude" is misnamed; it is not a DC amplitude. Fibre Channel and InfiniBand call it "steady-state output voltage".

SuggestedRemedy

Rename to "Steady-state Output Voltage"

Response *Response Status* **C**

REJECT.

The Transmitter DC amplitude has a very precise definition in note b:
"The transmitter DC amplitude is the sum of linear fit pulse response p(k) from step 3) divided by M from step 3)"

Re-naming this to be "Steady-state output voltage" as used by other standards for something different would be likely to cause confusion.

Cl **78** *SC* **78.1.4** *P* **26** *L* **22** # i-106

Dawe, Piers J G IPtronics

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

"interface type": this terminology does not match the sentence before or the table itself (style manual: use the same name for a thing, every time) and is not correct anyway; there can be multiple interfaces for one PHY, such as MDI, PMD service interface, ...

SuggestedRemedy

Change "interface type" to "PHY type". As XGXS is not a PHY, one could change the text to "for the IEEE 802.3 PHYs and the XGXS listed in Table 78-1. The table also lists the clauses associated with each PHY or sublayer. Normative requirements for the EEE capability for each PHY
type, and for XGXS, are in the associated clauses." Or, state that within this clause, XGXS is treated as a PHY.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Changing "interface type" to "PHY type" in the title of Table 78-1 would be incorrect as XGXS is not a PHY.

Change the text of 78.1.4 to:
"EEE defines a low power mode of operation for the IEEE 802.3 PHYs and the XGXS listed in Table 78-1. The table also lists the clauses associated with each PHY or sublayer. Normative requirements for the EEE capability for each PHY type and for XGXS are in the associated clauses.

Cl **85** *SC* **85.13.3** *P* **215** *L* **1** # i-107

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

"85.13.4 Major capabilities/options" should come before "85.13.3 PICS proforma tables for 40GBASE-CR4 and 100GBASE-CR10 PMDs and baseband medium" and "85.13.4.1 PMD functional specifications" should not be a subordinate subclause of 85.13.4. Wording does not match other 40G/100G PICS.

SuggestedRemedy

85.13.3 Major capabilities/options
85.13.4 PICS proforma tables for Physical Medium Dependent (PMD) sublayer and baseband medium, types 40GBASE-CR4 and 100GBASE-CR10"
85.13.4.1 PMD functional specifications

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Move 85.13.4 Major capabilities/options to be above the "PICS proforma tables ." heading.
Change the PICS proforma tables heading to be:
"85.13.4 PICS proforma tables for Physical Medium Dependent (PMD) sublayer and baseband medium, type 40GBASE-CR4 and 100GBASE-CR10"

Cl **78** *SC* **78.2** *P* **51** *L* **26** # i-108

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

"at the xMII interface" - tautology

SuggestedRemedy

Change to "at the xMII", once in 78.1.3, three times in 78.2.

Response *Response Status* **C**

ACCEPT.

[Editor's note: Page should be 26, Line should be 51]

Cl **82** *SC* **82.2.18.1** *P* **117** *L* **5** # i-109

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **R**

"is comprised of" is dubious English: a collective comprises its parts, not the other way round. See a dictionary.

SuggestedRemedy

As in clauses 74 and 76, change "The body of this subclause is comprised of state diagrams..." to "The body of this subclause is comprises state diagrams...". Also in 78.4.2.1. (Alternatives are comprises, contains, or consists of.)

Response *Response Status* **C**

REJECT.

In Draft 3.0 there are 9 instances of "The body of this subclause"
In 6 instances it is followed by "is comprised of"
In 3 instances it is followed by "comprises"

In total there are 20 instances of "is comprised of" and 72 instances of "comprises". "is comprised of", while considered incorrect by purists, is commonly used (125 million results from a well known search engine compared to 152 million for comprises).

Cl **80** *SC* **80.5** *P* **72** *L* **22** # i-110

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Table footnotes are normative, per style manual. Writing "Note that" confuses, adds nothing, and is equally applicable to hundreds of other footnotes.

SuggestedRemedy

For consistency, delete "Note that", four times.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Simply deleting "Note that" would leave the footnote starting with the approximately equal to sign.
Change "Note that" to "The symbol" in four places.

Cl **45** *SC* **45.2.1.7.4** *P* **59** *L* **25** # i-111

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

When this subclause was written, there were only two options, 52.4.8 and 53.4.10. Now there are thirteen and expected to grow further. It's now much too repetitive.

SuggestedRemedy

Please set out the references to the transmit fault function different PMDs as a table. Also for Receive fault in next subclause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace with:
The description of the transmit fault function for the various PMDs is given in Table 45-x.
Add a new table with columns for
"PMD" and "Description location".
Make the equivalent change in 45.2.1.7.5 for receive fault.

Cl **81** *SC* **81.1** *P* **76** *L* **3** # i-112

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

"XLGMII interface": tautology. On the previous page we have just said (twice) that XLGMII is an interface.

SuggestedRemedy

Delete "interface", here and next line.

Response *Response Status* **C**

ACCEPT.

Cl **82** *SC* **82.2.3.3** *P* **107** *L* **17** # i-113

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

"XLGMII/CGMII interface": tautology, not the usual name used in this clause (which is just "XLGMII/CGMII").

SuggestedRemedy

Delete "interface" after "XLGMII/CGMII", four times in this clause.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change:
"XLGMII/CGMII interface" to:
"XLGMII/CGMII"
in four places in Clause 82

Cl **83A** *SC* **83A.5.2** *P* **349** *L* **23** # i-114

Dawe, Piers J G IPtronics

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

"The XLAUI/CAUI jitter tolerance test setup in figure 83A-15 or its functional equivalent". Functional specs are in e.g. 83.5 Functions within the PMA, 85.7 PMD functional specifications, and they are mostly about bits and bytes and topology: just the "digital" function, not the analog detail. Functional is less than electrical. Here in an analog test setup, we need the right analog, electrical behaviour.

SuggestedRemedy

Change "functional" to "electrical".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change:
"The XLAUI/CAUI jitter tolerance test setup in Figure 83A-15 or its functional equivalent shall." to:
"The XLAUI/CAUI jitter tolerance test setup in Figure 83A-15 or its equivalent shall."

Cl **70** *SC* **70.1** *P* **427** *L* **28** # i-115

Dawe, Piers J G IPtronics

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

This PMD clause says "The Clause 36 PCS/PMA when used with 1000BASE-KX PMD shall support full duplex operation only." A PMD clause can't tell the PCS/PMA what to do; that's what the PCS/PMA Clause 36 is for. A similar issue came up in 802.3ba and is now fixed; do similar for this.

SuggestedRemedy

Change this to "The Clause 36 PCS/PMA when used with 1000BASE-KX PMD is required to support full duplex operation only (see 36.1.1)."
At the end of 36.1.1 Scope, add "The 1000BASE-X PCS and PMA when used with the 1000BASE-KX PMD shall support full duplex operation only."
Move the PICS item FD in 70.10.3 to 36.7.3 Major capabilities/options, and adjust the status of FDX to depend on it.

Response *Response Status* **C**

REJECT.

The proposed change is outside of scope for Clause 36. Clause 36 is used with half and full duplex. Clause 70 picks a specific subset of Clause 36 functions for use with that PMD.

Cl **71** *SC* **71.3** *P* **446** *L* **50** # i-116

Dawe, Piers J G IPtronics

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

This PMD clause says "The PCS associated with this PMD shall support the AN service interface primitive AN_LINK.indication defined in 73.9. (See 48.2.7.)" A PMD clause can't tell the PCS/PMA what to do; that's what the PCS/PMA Clause 48 is for, and already "48.2.7 Auto-Negotiation for Backplane Ethernet" says "The following requirements apply to a PCS used with a 10GBASE-KX4 PMD. Support for the Auto-Negotiation process defined in Clause 73 is mandatory. The PCS shall support the primitive AN_LINK.indication(link_status) (see 73.9). ...", with four PICS items in 48.7.4.2. A similar issue came up in 802.3ba and is now fixed; do similar for this.

SuggestedRemedy

Change this to "The PCS associated with this PMD is required to support the AN service interface primitive AN_LINK.indication defined in 73.9. (See 48.2.7.)"
In 48.2.7, change "see 73.9" to "see 71.3 and 73.9".
Delete the redundant "71.10.4.1 PCS requirements for AN service interface" including item PR1.

Response *Response Status* **C**

REJECT.

The PICS in Clause 71 (71.10.4.1 - PR1) describes the service interface primitive. The PICS in Clause 48 (48.7.4.2) describes the PCS function.

Cl **72** *SC* **72.3** *P* **469** *L* **3** # i-117

Dawe, Piers J G IPtronics

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

This PMD clause says "The PCS associated with this PMD shall support the AN service interface primitive AN_LINK.indication defined in 73.9. (See 49.2.16.)" A PMD clause can't tell the PCS what to do; that's what the PCS Clause 49 is for, and already "49.2.16 Auto-Negotiation for Backplane Ethernet" says "The following requirements apply to a PCS used with a 10GBASE-KR PMD. Support for the Auto-Negotiation process defined in Clause 73 is mandatory. The PCS shall support the primitive AN_LINK.indication(link_status) (see 73.9). ...", with four PICS items in 49.3.6.5. A similar issue came up in 802.3ba and is now fixed; do similar for this.

SuggestedRemedy

Change this to "The PCS associated with this PMD is required to support the AN service interface primitive AN_LINK.indication defined in 73.9. (See 49.2.16.)"
In 49.2.16, change "see 73.9" to "see 72.3 and 73.9".
Delete the redundant "72.10.4.1 PCS requirements for AN service interface" including item PR1.

Response *Response Status* **C**

REJECT.

The PICS in Clause 72 (72.10.4.1 - PR1) describes the service interface primitive. The PICS in Clause 49 (49.7.4.2) describes the PCS function.

Cl **36** *SC* **36.1.4.3** *P* **54** *L* **38** # i-118

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

mediums

SuggestedRemedy

media

Response *Response Status* **C**

ACCEPT.

Cl **44** *SC* **44.1.4.4** *P* **40** *L* **23** # i-119

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Although Annex 44A contains useful material it is not referred to from elsewhere.

SuggestedRemedy

At the end of 44.1.4.4, add "Annex 44A contains diagrams of the data flow from the MAC to the MDI and vice versa.".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

At the end of 44.1.4.4, add "Annex 44A contains diagrams of the data flow between the MAC and the MDI, as well as information on the relation between data valid signals and loopback."

Cl **44A** *SC* **44A** *P* **695** *L* **9** # i-120

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Although 44A.4 contains useful material it is not referred to from elsewhere.

SuggestedRemedy

Insert new sentence "... receive direction. 44A.7 illustrates the relation between data valid signals and loopback functions. The diagrams..."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to Comment #119

Cl **36** *SC* **36.7** *P* **100** *L* **34** # i-121

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

It is normal to start the PICS on a new page

SuggestedRemedy

Start the PICS on a new page

Response *Response Status* **C**

ACCEPT.

Cl **58** *SC* **58.7.2** *P* **111** *L* **35** # i-122

Dawe, Piers J G IPtronics

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

IEEE Std 802.3 uses a mixture of ANSI/EIA/TIA-455-127-1991, TIA-455-127-A 2006 and IEC 61280-1-3:1998 for its wavelength and spectral width specs. ANSI/EIA/TIA-455-127-1991 and IEC 61280-1-3:1998 are obsolete. They are very dated and assume one will process the spectral measurement by hand (rather than having an instrument that contains a computer). We should change to current valid references. Also, the EIA has split up, and TIA do not call their document "ANSI".
The niggle is: change to which current reference?
TIA-455-127-A 2006 defines center wavelength as the mean of the spectrum, and rms spectral width as the standard deviation of the spectrum.
IEC 61280-1-3 Ed2 defines centre wavelength as the mean of the half-power wavelengths, found by interpolation between the peaks. It defines RMS spectral width by a formula like a standard deviation, but around lambda_c. Is lambda_c the mean of the spectrum or the mean of the half-power wavelengths?

On the one hand, international references are preferred.
On the other hand, the IEC method is sensitive to changes in the third or lesser mode, so I would think would give less reproducible measurement results than the TIA method. For SLM lasers (DFBs), I doubt that there is a significant difference.

IEC say that their RMS spectral width is not applicable to SLM sources.

So I would propose that we replace all references to ANSI/EIA/TIA-455-127-1991, FOTP-127
with
TIA-455-127-A: 2006 FOTP-127, Spectral Characterization of Laser Diodes
(deleting the obsolete bibliography entry);
And the reference entry in 1.3 for IEC 61280-1-3:1998 with one for IEC 61280-1-3:2010.

SuggestedRemedy

Detailed remedy follows:

1.3
ANSI/EIA/TIA-455-127-1991, FOTP-127--Spectral Characterization of Multimode Laser Diodes.
Delete.
TIA-455-127-A:2006 FOTP-127-A Basic Spectral Characterization of Laser Diodes.
No change needed.
IEC 61280-1-3:1998, Fibre optic communication subsystem basic test procedures--Part 1-3: Test procedures for general communication subsystems--Central wavelength and spectral width measurement.
Replace with: IEC 61280-1-3 ed2.0: 2010 Fibre optic communication subsystem test procedures - Part 1-3: General communication subsystems - Central wavelength and spectral width measurement.
1.4.350 RMS spectral width: A measure of the optical wavelength range as defined by TIA 455-127-A (FOTP-127-A).

No change needed.

Annex A
[B10] ANSI/EIA/TIA 455-127-1991 (FOTP-127), Spectral Characterization of Multimode Lasers.
Delete.

38.6.1 Center wavelength and spectral width measurements
... per ANSI/EIA/TIA-455-127-1991 [B10].
Change to TIA-455-127-A, delete "[B10]".
38.12.4.5 Optical measurement requirements
OR2 Center wavelength and spectral width measurement conditions 38.6.1 Using optical spectrum analyzer per ANSI/EIA/TIA-455-127-1991 [B10] M Yes [ ]
Change to TIA-455-127-A, delete "[B10]".

52.9.2 Center wavelength and spectral width measurements
... per TIA/EIA-455-127 under modulated conditions ...
Change to TIA-455-127-A.
52.15.3.9 Optical measurement requirements
OM2 Center wavelength and spectral width measurement 52.9.2 Measured using an optical spectrum analyzer per TIA/EIA-455-127 under modulated conditions M Yes [ ]
Change to TIA-455-127-A.

58.7.2 Wavelength and spectral width measurements
... according to ANSI/EIA/TIA-455-127, ...
Change to TIA-455-127-A.
58.10.3.5 Optical measurement requirements
OM3 Wavelength and spectral width 58.7.2 Per TIA/EIA-455-127 under modulated conditions M Yes [ ]
And equivalents in 59 and 60.
Change to TIA-455-127-A in all three clauses.

75.7.4 Wavelength and spectral width measurement ... according to TIA-455-127-A ...
No change needed.
75.10.4.13 Definitions of optical parameters and measurement methods
OM2 Wavelength and spectral width 75.7.4 Per TIA-455-127-A under modulated conditions. M Yes [ ]
No change needed.

86.8.4.1 Wavelength and spectral width
... method given in TIA-455-127-A.
No change needed.
86.11.4.4 Definitions of parameters and measurement methods
SOM2 Center wavelength 86.8.4.1 Per TIA-455-127-A M Yes [ ]
No change needed.

87.8.3 Wavelength
per TIA/EIA-455-127-A or IEC 61280-1-3.
No change needed.
87.12.4.4 Optical measurement methods
XLOM2 Center wavelength 87.8.3 Per TIA-455-127-A or IEC 61280-1-3 under modulated conditions M Yes [ ]
No change needed.
And equivalents in 88 and 89.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Apply changes per comment.
Additionally in 1.3 change:
"TIA-455-127-A:2006 FOTP-127-A Basic Spectral Characterization of Laser Diodes" to:
"TIA-455-127-A-2006 FOTP-127-A Basic Spectral Characterization of Laser Diodes"
(change the colon to a dash)

Cl **01** *SC* **1.3** *P* **58** *L* **54** # i-123

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

I don't think we should be promoting a particular reseller above other bookshops. ANSI has its own webstore.

SuggestedRemedy

Change "ANSI publications are available from The IHS Standards Store (http://global.ihs.com)." to "ANSI publications are available from the ANSI Standards Store (http://webstore.ansi.org/).
Or just http://ansi.org/ if you prefer.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will check with staff (publication editors) on whether or not to include anything beyond the URL.

Cl **01** *SC* **1.4** *P* **71** *L* **40** # i-124

Dawe, Piers J G 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 like a single subclause, 27 pages long, when typically we have at least one bookmark per page. This makes it hard to navigate quickly to a particular definition.

SuggestedRemedy

Please set the Frame properties on just a few paragraphs (e.g. the first 1, the first A, the first F and so on) so that they show up in the pdf bookmarks list like any other third level heading.
Alternatively, 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* **C**

REJECT.

The BRC continues to be unanimous that these changes do not improve the document. The find tool continues to be the easiest way to navigate.

Cl **83B** *SC* **83B.2.2** *P* **362** *L* **22** # i-125

Dawe, Piers J G IPtronics

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

While checking the common-mode return loss specs I noticed that while the module had such a spec, the host did not. This spec, together with the output AC common-mode voltage, contains the AC common-mode voltage in service. The inputs can have a high common-mode impedance, so if the output is allowed to have a very bad common-mode return loss, the VSWR of the common mode is unbounded at certain frequencies, and so the common mode voltage can be multiplied up. Even a small common-mode loss will keep this under control. A very relaxed spec would be better than no spec (a relaxed spec is needed to allow higher bandwidth connectors).

SuggestedRemedy

Here is a straw man; I expect to bring a refined proposal. Note the corner frequency is much lower, and the high frequency regime follows twice the HCB insertion loss.
Minimum host common-mode output return loss HCB output TP1a See Equation (86A-2)
dB
Return_loss >= (7-24.5f 0.01<=f<=0.25) dB (86A-2)
(0.52 + 0.6sqrt(f) + 0.22f 0.25<=f<=11.1)

Response *Response Status* **C**

REJECT.

The Suggested remedy here has no supporting evidence for the values proposed.
Equations in Suggested remedy evaluate to:
6.755 dB at 0.01 GHz
0.875 dB at 0.25 GHz
4.961 dB at 11.1 GHz
Which doesn't seem correct.

Cl **38** *SC* **38.11.1** *P* **148** *L* **21** # i-126

Dawe, Piers J G IPtronics

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

Don't we want to allow Gigabit Ethernet on new fibre? We have fixed other clauses, why restrict Gigabit Ethernet to old fibre?
As I pointed out before, IEC 60793-2:1992 is way out of date (the version in force is ed6.0 of 2007). The dispersion limits have changed slightly for 50 um MMF and I believe for SMF. IEC 60793-2 is too broad anyway.
I don't believe SMF is called "10/125" any more.

SuggestedRemedy

Change "... fibers specified in IEC 60793-2:1992. Types A1a (50/125 um multimode), A1b (62.5/125 um multimode), and B1 (10/125 um single-mode) with the exceptions noted in Table 38-12." to "... fiber types A1a (50/125 um multimode) or A1b (62.5/125 um multimode) specified in IEC 60793-2-10 or B1 (single-mode) or as specified in Table 38-12.".
In Table 38-12, delete "10 um".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The requirements in Table 38-12 are normative: 38.11 contains:

"The 1000BASE-SX and 1000BASE-LX fiber optic cabling shall meet the specifications defined in Table 38-12."

The text that is the subject of this comment:

"The fiber optic cable requirements are satisfied by the fibers specified in IEC 60793-2:1992. Types A1a (50/125 um multimode), A1b (62.5/125 um multimode), and B1 (10/125 um single-mode) with the exceptions noted in Table 38-12."

is helpful information concerning fibre types that satisfy the requirements in Table 38-12 and it does not itself restrict the use of more recent fibers.

The changes in SMF dispersion slope specification were a tightening of the requirement from 0.093 to 0.092 ps/nm/nm/km, so the newer SMF fibers still comply with Table 38-12.

The recent changes to the 50um MMF specification (OM3 and OM4) have a different combination of zero dispersion wavelength and dispersion slope limits than Table 38-12 which could make some newer fiber with a dispersion zero greater than 1320 nm non-compliant. The newer combination of specifications always results in the same or lower dispersion in the wavelength range of 770 to 860 nm (for 1000BASE-SX), but for the wavelength range of 1270 to 1355 nm (for 1000BASE-LX), a fiber with a zero dispersion wavelength of 1340 nm and a slope of 0.09375 ps/nm/nm/km (as allowed by the recent specification) could have a significantly higher dispersion than the worst value allowed by Table 38-12. The commenter has not demonstrated that this is not an issue.

In Table 38-2, Table 38-6, Table 38-7, Table 38-9, Table 38-11, Table 38-12, and Table 53-13 change "10 um SMF" to "SMF"

In 38-4 change "and 10 um single-mode fiber" to "and single-mode fiber"

In 38.11.1 change "(10/125 um single-mode)" to "(single-mode)"

Cl **01** *SC* **1.4** *P* **59** *L* **8** # i-127

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **R**

Now that EIA has been reorganised out of existence, referring to documents as "EIA" is not appropriate.

SuggestedRemedy

Replace with current document names, remove the part of footnote 4 about EIA publications "EIA publications are available from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112, USA (http://global.ihs.com/)."

Response *Response Status* **C**

REJECT.

This is an archival document and not subject to current naming conventions. Thus, EIA is correctly part of the Standards title for the editions of documents referenced.

Cl **01** *SC* **1.4** *P* **59** *L* **5** # i-128

Dawe, Piers J G IPtronics

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

According to the TIA web site, TIA-455-175-A (November 1992) has been superseded by "TIA-455-175-B (May 2003) FOTP-175 IEC 60793-1-42 Measurement Methods and Test Procedures - Chromatic Dispersion"

SuggestedRemedy

Replace references to
ANSI/TIA/EIA-455-175A-92; Chromatic Dispersion Measurement of Single-Mode Optical Fibers by the Differential Phase-Shift Method
with references to
IEC 60793-1-42 Measurement Methods and Test Procedures - Chromatic Dispersion

Response *Response Status* **C**

REJECT.

The reference dispersion test method is specified differently in the two Standards.

Cl **86A** *SC* **86A.5.1.1.2** *P* **388** *L* **33** # i-129

Dawe, Piers J G IPtronics

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

If we revisit the MCB-HCB crosstalk specs: this says "The limits on integrated crosstalk noise of the mated HCB and MCB are as specified in 85.10.9.4 with the exception that the frequency range is 0.01 GHz to 12 GHz." but there is another difference: the reference receiver bandwidth in this clause is 12 GHz while in 85.10.7 "In addition, fr is the 3 dB reference receiver bandwidth, which is set to 7.5 GHz."

SuggestedRemedy

If we revisit the MCB-HCB crosstalk specs, change "are as specified in 85.10.9.4 with the exception that the frequency range is 0.01 GHz to 12 GHz." to "are as specified by Table 86A-X according to the method of 85.10.9.4 with the exceptions that the 3 dB reference receiver bandwidth of Equation (85-28) and Equation (85-29) is 12 GHz, and the frequency range is 0.01 GHz to 12 GHz.", and insert a new Table 86A-X in the style of Table 85-12 with limits that are consistent with this.

Response *Response Status* **C**

REJECT.

The ICN Ad Hoc consensus was to leave the 3 dB reference receiver bandwidth (fr) used by Clause 86A in Equation (85-28) and Equation (85-29) unchanged at 7.5 GHz as this is expected to be well correlated with the ICN measured with a 12GHz reference receiver bandwidth.
See also comment #63

Cl **99** *SC* **99** *P* **6** *L* **51** # i-130

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

This draft says "Errata, if any, for this and all other standards can be accessed at" an IEEE URL.
It's not so. IEEE is not the whole world; there are plenty of other standards, including ones we use, with errata elsewhere. In any case the web site denies it: "Not all of the available IEEE standards errata and or corrections are online, this list should not be considered to be comprehensive."

SuggestedRemedy

Change "all other" to "other IEEE".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Comment will be forwarded to staff for consideration upon publication as this is boiler plate text

---

Cl **01** *SC* **1.3** *P* **61** *L* **6** # i-131

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

IEC 61076-3-113 is not available at IEC webstore, although it's available from BSI. Need to say where it is available from.

SuggestedRemedy

Add to footnote 7: "This document is available from the British Standards Institution (http://shop.bsigroup.com/)".
(or http://www.bsigroup.com/)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

http://www.bsigroup.com/

Cl **48A** *SC* **48A.4** *P* **708** *L* **7** # i-132

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Document name here is not the same as in bibliography. Note the plural.

SuggestedRemedy

Change ""Methodology of Jitter Specification"." to "Fibre Channel - Methodologies for Jitter Specification". Also in bibliography, insert dash or hyphen after "Fibre Channel"

Response *Response Status* **C**

ACCEPT.

Cl **85** *SC* **85.8.4.2** *P* **194** *L* **26** # i-133

Dawe, Piers J G IPtronics

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

Table 85-8, 10GBASE-CR4 and 10GBASE-CR10 interference tolerance parameters, contains one "target", one "maximum" and four "min". The "Maximum fitted insertion loss coefficients" seems to contradict 85.8.4.2.3's "minimum fitted insertion loss coefficients". By applying an arbitrarily large amount of jitter, this spec can fail anything.

SuggestedRemedy

Change "Target BER" to "maximum BER" (or delete it).
Change "Maximum fitted insertion loss coefficients" to "Fitted insertion loss coefficients".
Delete "min", five times in this table.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "Target BER" to "Maximum BER"
Change "Maximum fitted insertion loss coefficients" to "Fitted insertion loss coefficients"
Delete "min", five times in this table.

Cl **85** *SC* **85.8.4.2** *P* **194** *L* **31** # i-134

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Why are the two entries Calibrated far-end crosstalk (min RMS)
Calibrated ICN (min, RMS) - sigma_nx in the same table row?

SuggestedRemedy

Put each in its own table row.

Response *Response Status* **C**

ACCEPT.

Cl **85** *SC* **85.8.4.2.3** *P* **195** *L* **43** # i-135

Dawe, Piers J G IPtronics

Comment Type **T** *Comment Status* **A**

The fitted insertion loss coefficients of the lane under test (LUT), derived using the fitting procedure in 85.10.2, are not "minimum". They are experimental findings.

SuggestedRemedy

Delete "minimum".

Response *Response Status* **C**

ACCEPT.

Cl **85** *SC* **85.8.4.2.3** *P* **195** *L* **43** # i-136

Dawe, Piers J G IPtronics

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

The fitted insertion loss coefficients are not really properties of something under test (LUT); they are part of the test.

SuggestedRemedy

Consider changing to "The fitted insertion loss coefficients of the test channel lane under test" (or better wording).

Response *Response Status* **C**

REJECT.

This clause is titled "Test channel calibration" i.e. it is about measuring the test channel, so it is entirely appropriate to discuss "The fitted insertion loss coefficients of the lane under test (LUT)"

Cl **85** *SC* **85.8.4.2.4** *P* **196** *L* **13** # i-137

Dawe, Piers J G IPtronics

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

This isn't a device spec. We specify ports: combination of IC, PCB and connector.

SuggestedRemedy

Change "device" to "receiver".

Response *Response Status* **C**

REJECT.

A receiver is an example of a more generic term "device". The proposed change does not improve the draft.

Cl **85** *SC* **85.8.4.2.3** *P* **195** *L* **37** # i-138

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Font too small.

SuggestedRemedy

Change 7.5 point to 8 point. Change font to be consistent with the rest of the figure.

Response *Response Status* **C**

ACCEPT.

Cl **72** *SC* **72.7.1.8** *P* **489** *L* **37** # i-139

Dawe, Piers J G IPtronics

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

The definition for Duty Cycle Distortion is ambiguous, because it's not clear what the pattern or sequence is. "The data pattern for jitter measurements shall be test patterns 2 or 3 as defined in 52.9.1.1.", "The duty cycle distortion test pattern shall consist of no fewer than eight symbols of alternating polarity.", "The peak-to-peak duty cycle distortion is defined as the absolute value of the difference in the
mean pulse width of a 1 pulse or the mean pulse width of a 0 pulse (as measured at the mean of the high- and low-voltage levels in a clock-like repeating 0101 bit sequence) and the nominal pulse width."
Is there meant to be a difference between pattern and sequence? Is this definition meant to agree with what scopes have built in to them (mean difference between rising and falling edges of an eye)?

SuggestedRemedy

Change wording so that it is clear that Duty Cycle Distortion is equivalent to that built into scopes.

Response *Response Status* **C**

REJECT.

There is no specific remedy provided.

Cl **85** *SC* **85.8.3** *P* **184** *L* **44** # i-140

Dawe, Piers J G IPtronics

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

Surprisingly, random jitter (or Random Jitter) is not defined. 48B.3, Jitter output test methodologies, has some formulae for Dual Dirac method, but it is informative, written for 8B/10B not scrambled signals, and uses RJ_RMS which I think is not what is meant here.

SuggestedRemedy

I don't have a good remedy right now. Maybe Fibre Channel has a definition somewhere.

Response *Response Status* **C**

REJECT.

There is no suggested remedy provided. The commenter is invited to provide a proposed revision of the draft text to address the issue for the BRC to consider.

Cl **85** *SC* **85.8.3** *P* **185** *L* **1** # i-141

Dawe, Piers J G IPtronics

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

Surprisingly, total jitter (or Total Jitter) is not defined. This says "Total jitter at a BER of 10-12 measured per 83A.5.1...". 83A.5.1 says "Transmit jitter is defined with respect to a test procedure resulting in a BER bathtub curve such as that described in Annex 48B.3." 48B.3, Jitter output test methodologies, has some formulae for Dual Dirac method, but it is informative and written for 8B/10B not scrambled signals.

SuggestedRemedy

I don't have a good remedy right now. Maybe Fibre Channel has a definition somewhere. Or it might be better to replace the TJ-DDJ spec with a J9-DDJ spec - easier to measure with reasonable accuracy in a reasonable time.

Response *Response Status* **C**

REJECT.

There is no suggested remedy provided. The commenter is invited to provide a proposed revision of the draft text to address the issue for the BRC to consider.

Cl **85** *SC* **85.8.3** *P* **184** *L* **46** # i-142

Dawe, Piers J G IPtronics

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

If RJ<=0.15, how can TJ-DDJ be as large as 0.25? SJ and PJ should be <<0.1.

SuggestedRemedy

?

Response *Response Status* **C**

REJECT.

There is no suggested remedy provided. The commenter is invited to provide a better definition of the problem and a proposed revision of the draft text to address the issue for the BRC to consider.

Cl **85** *SC* **85.8.3** *P* **185** *L* **1** # i-143

Dawe, Piers J G IPtronics

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

I doubt that where the draft says "random jitter" it means it. I expect Random Jitter is meant.

SuggestedRemedy

Decide what is meant, and use capitals for Random Jitter and Total Jitter as appropriate.

Response *Response Status* **C**

REJECT.

Since random jitter and total jitter are not formally defined terms, the case shown here is appropriate.

Cl **30** *SC* **30.3.1.1.4** *P* **383** *L* **54** # i-144

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

D2.0 comment 68:
nonresetable: presumably something to do with silk (seta)? This was spelled correctly in the earlier editions.
SuggestedRemedy
Revert to correct speling.
ACCEPT.

SuggestedRemedy

Please continue with search-and-replace to fix the remaining occurrences in Clause 30.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will take another look. The commenter is encouraged to provide the locations in his remedy to aid the editors and avoid repeat comments

Cl **44** *SC* **44** *P* **37** *L* **1** # i-145

Dawe, Piers J G IPtronics

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

"Introduction to 1000 Mb/s baseband network" yet only one of the ten port types mentioned (10GBASE-T) is baseband. The BASE in the name does not make it baseband; the optical PMDs are still operating around 2.10^14 Hz, and we had noticed this and stopped making this error by 2003. Compare "80. Introduction to 40 Gb/s and 100 Gb/s networks".

SuggestedRemedy

Please delete "baseband" because it is technically incorrect.

Response *Response Status* **C**

REJECT.

The use of "baseband" here is consistent with past practice.

Cl **71** *SC* **71.7.1.5** *P* **453** *L* **32** # i-146

Dawe, Piers J G IPtronics

Comment Type **T** *Comment Status* **A**

Ambiguous.

SuggestedRemedy

Please specify the base of the logarithm, as done 20 times already in Section 5.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Replace "log" with "log10" in the referenced location

Cl **82** *SC* **82.1.5** *P* **102** *L* **9** # i-147

Dawe, Piers J G IPtronics

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

Rogue ALL CAPITALS in Figure 82-2 Functional block diagram. This is not a "layer diagram" for which an exemption to the rules was written. There are very few block diagrams like this in 802.3. Figure 83-5 PMA Functional Block Diagram, Figure 85-2, Figure 86-2 and so on use mixed case.

SuggestedRemedy

Please change ENCODE to Encode, SCRAMBLE to Scramble, and so on.

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* **99** *P* **5** *L* **52** # i-148

Dawe, Piers J G IPtronics

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

There's only one Physical Layer.

SuggestedRemedy

"Physical Layers and sublayers" to "Physical Layer and sublayer types"

Response *Response Status* **C**

REJECT.

There are multiple physical layers specified by the 802.3 specification

Cl **55** *SC* **55.4.2.5** *P* **626** *L* **43** # i-149

Dawe, Piers J G IPtronics

Comment Type **E** *Comment Status* **A**

Bitmaps cannot be string-searched.

SuggestedRemedy

Please rework these "figures" using Frame's table feature.

Response *Response Status* **C**

ACCEPT.

Cl **85** *SC* **85.8.3** *P* **184** *L* **21** # i-150

Ran, Adee

Comment Type **E** *Comment Status* **A**

Some of the references in Table 85-5 are incorrect. For example, the reference to signaling rate should be 85.8.3.9 instead the reference incorrectly points to 85.8.3.8, which is DDJ. So correct the references as proposed.

SuggestedRemedy

"Signaling rate per lane: Change reference from 85.8.3.8 to 85.8.3.9
Make a similar change to corresponding PICS-DS5 on page 219: Change reference from 85.8.3.8 to 85.8.3.9
Unit interval nominal: Change reference from 85.8.3.8 to 85.8.3.9
Differential peak-to-peak output voltage (max) with Tx disabled: Change reference from 85.8.3.3 to 72.7.1.4 where diff peak-to-peak output with TX disabled is defined. Make a similar change in Table 85A-1 on page 373.
In Table footnote (f): DDJ is measured with PRBS9 as specified in 83.5.10. Change this reference from 85.5.10 to 85.8.3.8 where the DDJ measurement methodology is specified."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Make proposed changes except:
for Differential peak-to-peak output voltage (max) with Tx disabled: delete reference to 85.8.3.3. Do the same in Table 85A-1
Make no change to footnote f

Cl **85** *SC* **85.13.4.2** *P* **218** *L* **8** # i-151

Ran, Adee

Comment Type **E** *Comment Status* **A**

Reference for PICS MF2 is incorrect. Current reference points to subclause 85.7.7, which specifies PMD lane by lane disable function. Instead this reference should be 85.7.4, which defines Global PMD signal detect function.

SuggestedRemedy

for PICS MF2: Change reference from 85.7.7 to 85.7.4

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* *L* # i-152

Anslow, Peter

Comment Type **G** *Comment Status* **A**

When looking for cross-references that are text (not hyperlinks) in sections 1, 2 and 3 in response to Comment #i-56 and in the ICN Ad Hoc, the following issues were discovered. As these should be non-controversial, rather than waiting to submit them as comments against unchanged text in D3.1, it is proposed to request to the Task Force to submit them as a comment from the floor against D3.0:
Section 1
In 14.3.2.1, Page 387, line 34, Figure 14-7 is missing (blank)
Section 2
In 25.6.4.2, Page 241, line 40 change "10-9" to "10" followed by superscript "-9"
In 31B.3.4.4, Page 753, line 25 this is the second Figure 31B-1. Change to Figure 31B-2 and re-number onwards
In 31D.7.1, Page 768, line 11 in "can be found in Clause 21.Identification" the final word Identification should be a heading "31D.7.2 Identification"
In 33.2.7, Page 641, line 6 the second paragraph of 33.2.7 has incorrect formatting (large indents).
Section 3
In 40A, Page 339, line 14 change "10-10" to "10" followed by superscript "-10"
Section 6
In the heading for Table 85-8 change "10GBASE-CR4 and 10GBASE-CR10 ..." to "40GBASE-CR4 and 100GBASE-CR10 ..."

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT.