Cl **00** *SC* *P* *L* # 86

Grow, Bob — RMG Consulting

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

The rejection of initial ballot comment #130 did not address the portion of the comment that P802.3bw introduces ambiguities into IEEE Std 802.3. The choice to use Clause 45 registers and the Clause 45 MDIO interface is incompatible with text in clause 22. Unlike the GMII in Clause 35 the Clause 22 specifications require complete implementation of the MII including the management interface. <CR><CR>Clauses 22 34 and 35 include statements that are in conflict with the proposed use of Clause 45 registers and the MDIO interface to access them. The GMII as specified in Std 802.3 includes use of the management interface specified in Clause 22.

SuggestedRemedy

The attached file includes proposed text changes to avoid P802.3bw P802.3bp and P802.3bv introducing ambiguities. While only the Clause 22 changes are required for P802.3bw all text changes are included in the hope that P802.3bw will join with P802.3bp and P802.3bv in proposing common changes for all three projects. These changes can be requested in the P802 revision initial Sponsor ballot but to have a reasonable chance of the Maintenance committee accepting the proposed changes all three TFs should enforse them. If the text is acceptable the Clause 22 PICS will also have to be modified to introduce optionality of portions of the MII as has been done for Clause 35 GMII by approved 1000 Mb/s projects done after the initial set of PHYs approved in 1999 and 1998.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The issue with Clause 22 affects many approved 802.3 amendments. For example 802.3az EEE uses MDIO Interface rather than the Clause 22 MII Management Interface so 100BASE-T devices with EEE need the Clause 45 MDIO interface. This is a cross IEEE 802.3 issue that is out of the scope of 802.3bw and should be handled by the maintenance committee. The maintenance committee is working on it. It is up to them and the WG to decide whether the solution should be incorporated in the current 802.3 revision or through a separate maintenance corrigenda or amendment.

The 802.3bw task group supports the resolution of the issue in the maintenance group.

Cl **00** *SC* *P* **11** *L* **22** # 83

Grow, Bob — RMG Consulting

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

The description of 802.3bw has not been provided as requested in initial ballot comment #131. Note that no response to this request was included in initial ballot responses (the response only addressed one of the points of the comment.

SuggestedRemedy

Please write a description acceptable to the P802.3bw TF so that the description can be used in subsequent amendments.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #23.

Cl **00** *SC* **0** *P* *L* # 2

Anslow, Pete — Ciena

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

The convention for headings, table titles and figure titles in 802.3 is to capitalise only the first letter unless they contain a proper noun.

SuggestedRemedy

Correct the capitalisation of the titles of: 96.4.7, 96.5.4, 96.5.4.1, 96.7.1.1, 96.10.4.4, Annex 96A title, 96A.1, 96A.2

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **0** *L* **12** # 76

Thompson, Geoff — GraCaSI S.A.

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

Page 12 (blank?) is missing. This throws off the match between page numbers for the rest of the document. Please fix. I suspect that the printer test table was supposed to be inserted here and was forgotten as the document was being assembled.

SuggestedRemedy

Insert 1 page printer test table chart at this location.

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **00** *P* **1** *L* **1** # 81

Grow, Bob — RMG Consulting

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

Title page still indicates this will be an amendment to 802.3-2012 yet the response to initial ballot comment #131 indicated the amendment will be to 802.3-2015.

SuggestedRemedy

Replace 802.3-2012 throughout document (title page headers etc.) with 802.3-20xx which is the convention for indication of a yet to be approved standard or 802.3-201x as appears on page 11.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #21.

Cl **00** *SC* **00** *P* **12** *L* **1** # 82

Grow, Bob — RMG Consulting

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

There is no document page 12 thus continuing the confusion of PDF page or document page number. Initial ballot comment #198 was not properly implemented.

SuggestedRemedy

Something in the front matter is forcing the page number perhaps a TOC problem. Fix it please so that the 802.3 convention of consecutive arabic page numbers is followed.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #76.

Cl **00** *SC* **1.4.x** *P* **20** *L* **29** # 1

Anslow, Pete — Ciena

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

comma missing in "IEEE Std 802.3 96.4.4"

SuggestedRemedy

Change to "IEEE Std 802.3, 96.4.4"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4** *P* **17** *L* **21** # 45

Chini, Ahmad — Broadcom

Comment Type **ER** *Comment Status* **D**

incorrect subclause number for the title from page 17 line 21 to page 19 line 10. For example, “code-group” should be 1.4.142 in page 18 line 21 and the “Control mode” should be 1.4.157 in page 18 line 30.
It was correct in D1.2. Need to fix all of them from page 17 line 21 to page 19 line 10 according to the D1.2.

SuggestedRemedy

Change "1.4.150 code-group" to "1.4.142 code-group"
Change "1.4.165 Control mode" to "1.4.157 Control mode"
and etc. until page 19 line 10 according to D1.2.

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Cl **01** *SC* **1.4.165** *P* **18** *L* **30** # 3

Anslow, Pete — Ciena

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

In the 802.3 revision D2.1 an additional definition for "Company Identifier (CID)" has been inserted as 1.4.162. This has had the effect of increasing the subclause number of definitions that were 1.4.162 and higher by one.

SuggestedRemedy

Change the subclause number of all of the existing definitions being modified that have subclause numbers above 1.4.162 by one.
This will result in "1.4.165 Control mode" becoming "1.4.166 Control mode" through to "1.4.397 ternary symbol" becoming "1.4.398 ternary symbol".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The P802.3bw draft Clause 1 will reflect work done in P802.3bx to match definition numbering.

Cl **01** *SC* **1.4.171** *P* **18** *L* **48** # 51
Chini, Ahmad Broadcom

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

TXD<3:0> should be reffered to as nibbles, not octets.

SuggestedRemedy

Change "octets" to "nibbles"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.325** *P* **19** *L* **12** # 57
Estes, Dave Spirent Communicatio

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

Type, "lause" should be "Clause"

SuggestedRemedy

Change "lause" to "Clause"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.326** *P* **19** *L* **21** # 58
Estes, Dave Spirent Communicatio

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

Type, there should be a comma separating Clause 65 and Clause 66.

SuggestedRemedy

Insert a comma between Clause 65 and Clause 66

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.x** *P* **20** *L* **16** # 4
Anslow, Pete Ciena

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

For the definitions in 1.4 the colon at the end of the term to be defined should be bold.

SuggestedRemedy

Change the colons after 4B/3B and SYMB_ID to be bold font.

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.x** *P* **20** *L* **16** # 6
Anslow, Pete Ciena

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

The position for the new definitions should be defined so that the editor applying the amendment knows where they go and they should be given individual numbers so that they can be cross-referenced.

SuggestedRemedy

Change "1.4.x 100BASE-T1" to "1.4.16a 100BASE-T1"
Change "1.4.x 4B/3B" to "1.4.87a 4B/3B"
Change "1.4.x FORCE mode" to "1.4.221a FORCE mode"
Change "1.4.x SYMB_1D:" to "1.4.392a SYMB_1D:"

Give each new definition its own Insert editing instruction. For example make the instruction for 100BASE-T1:
Insert the following new definition into the list after 1.4.16 100BASE-T:

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.x** *P* **20** *L* **19** # 59
Estes, Dave Spirent Communicatio

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

Typo, remove "the" before "100BASE-T1

SuggestedRemedy

Change "technique used by the 100BASE-T1" to "technique used by 100BASE-T1"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4.x** *P* **20** *L* **25** # 5
Anslow, Pete Ciena

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

In the definition "1.4.x SYMB_1D", 96.2.5.1 and 96.2.6.1 should be cross-references

SuggestedRemedy

Make 96.2.5.1 and 96.2.6.1 cross-references

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4xx** *P* **19** *L* **27** # 77

Thompson, Geoff GraCaSI S.A.

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

The new definition of FORCE mode is too specific to 100BASE-T1.
It is a function that might well be used in any set of link partners and is very likely to be used for 1000BASE-T1. Change the wording to make it more generally applicable. With that change I don't believe that the specific clause reference is required or appropriate.

SuggestedRemedy

Change wording to read:
FORCE mode is a PHY initialization procedure used for manual configuration of MASTER-SLAVE assignment to achieve link acquisition between two link partners that require MASTER-SLAVE assignment.

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.5** *P* **20** *L* **36** # 7

Anslow, Pete Ciena

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

The convention used in 1.5 of 802.3 is that the expansion of abbreviations use all lower case font except where the term is a proper noun.
Also, bandwidth, electromagnetic and crosstalk are one word each not two.
See http://www.ieee802.org/3/WG_tools/editorial/requirements/words.html for "crosstalk"

SuggestedRemedy

Change the expansions to lower case (except for FEXT and NEXT).
Change:
"Electro Magnetic" to "electromagnetic"
"Band Width" to "bandwidth"
"Cross Talk" to "crosstalk"

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.5** *P* **20** *L* **39** # 60

Estes, Dave Spirent Communicatio

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

Electromagnetic is one work

SuggestedRemedy

Change "Electro Magnetic" to "Electromagnetic"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #7.

Cl **01** *SC* **1.5** *P* **20** *L* **46** # 61

Estes, Dave Spirent Communicatio

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

Bandwidth is one word

SuggestedRemedy

In the definitions for RBW and VBW, change "Band Width" to Bandwidth"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #7.

Cl **01** *SC* **1.5** *P* **20** *L* **50** # 62

Estes, Dave Spirent Communicatio

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

Crosstalk is one word

SuggestedRemedy

Change "Cross Talk" to "Crosstalk"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #7.

Cl **30** *SC* **30.3.2.1.2** *P* **21** *L* **11** # 84

Grow, Bob — RMG Consulting

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

The editing instruction still is not precise.

SuggestedRemedy

Indicate insert point in the list. For example, insert after the 100BASE-T2 line.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
"Insert entry in APPROPRIATE SYNTAX as follows:"
to
"Insert entry in APPROPRIATE SYNTAX as follows and insert entry below 100BASE-T2:"

Cl **30** *SC* **30.5.1.1.4** *P* *L* # 85

Grow, Bob — RMG Consulting

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

The editing instruction still is not precise. Where in the paragraph.

SuggestedRemedy

Indicate insert point in the paragraph. For example insert after the 100BASE-TX etc. sentence.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
"Insert into the third paragraph in BEHAVIOUR DEFINED AS section of 30.5.1.1.4 as follows:"
to
"Insert into the third paragraph in BEHAVIOUR DEFINED AS section of 30.5.1.1.4 after the second sentence as follows:"

Cl **30** *SC* **30.5.1.1.4** *P* **21** *L* **45** # 78

Thompson, Geoff — GraCaSI S.A.

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

Where it says:
30.5.1.1.4 aMediaAvailable
Insert into the third paragraph in BEHAVIOUR DEFINED AS section of 30.5.1.1.4 as follows:
BEHAVIOUR DEFINED AS:
For 100BASE-T1 PHYs the enumerations match the states within the link monitor state diagram Figure 96-17.
In Figure 96-17 (which is on page 58).
The states specifically are:
LINK DOWN
HYSTERESIS
LINK UP

None of these match any of the existing syntax enumerations.
Are we supposed to create new (and redundant) enumerations just because you have not defined the mapping? If so then these have not yet been specified.
If we are supposed to map the state labels list above to existing syntax enumerations then the mappings need to be defined definitively and explicitly.

SuggestedRemedy

My guesses would be that:
LINK DOWN would map to: not available
HYSTERESIS would map to: other or unknown (I'm not sure pick one)
LINK UP would map to: available

Appropriate insertion text should be generated by the CRG so that the final text is not up to the editor.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
"For 100BASE-T1 PHYs the enumerations match the states within the link monitor state diagram Figure 96–17."
to
"For 100BASE-T1, a link_status of OK maps to the enumeration 'available'. All other states of link_status map to the enumeration 'not available'."

Cl **45** *SC* **2.1.131** *P* **24** *L* **12** # 30

Wu, Peter Marvell Semiconducto

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

change RW to R/W

SuggestedRemedy

change RW to R/W

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #10.

Cl **45** *SC* **45.2.1.10** *P* **23** *L* **27** # 9

Anslow, Pete Ciena

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

The table for PMA/PMD extended ability register bit definitions should be Table 45-14 rather than Table 45-13

SuggestedRemedy

Change to Table 45-14

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.10** *P* **23** *L* **38** # 8

Anslow, Pete Ciena

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

In register 1.11, there are only 5 reserved bits remaining. In order to make the best use of the remaining bits, recent projects have used them to "point" to another register for the individual PMD ability bits.
For example:
bit 1.11.9 is "P2MP ability" pointing to register 1.12 where there are 10 PMD ability bits.
bit 1.11.10 is "40G/100G extended abilities" pointing to register 1.13 where there are 14 PMD ability bits

At an informal discussion between the editors of various current 802.3 projects, a suggested allocation of bit 1.11.11 to "BASE-T1 extended
abilities" was made which would indicate that the PMD ability bits can be found in register 1.18 "BASE-T1 PMA/PMD extended ability"
This will enable additional "T1" PMDs without using up more bits in register 1.11.

SuggestedRemedy

In Table 45-13, change the inserted row to:
Bit(s): 1.11.11
Name: BASE-T1 extended abilities
Description:
1 = PMA/PMD has BASE-T1 extended abilities listed in register 1.18
0 = PMA/PMD does not have BASE-T1 extended abilities

Change the title and content of 45.2.1.10.a to:
45.2.1.10.a BASE-T1 extended abilities (1.11.11)
When read as a one, bit 1.11.11 indicates that the PMA/PMD has BASE-T1 extended abilities listed in register 1.18. When read as a zero, bit 1.11.11 indicates that the PMA/PMD does not have BASE-T1 extended abilities.

Insert a new subclause 45.2.1.14b and subclauses after 45.2.1.14 for register 1.18 in a similar was as for register 1.13.

Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.131** *P* **24** *L* **16** # 10

Anslow, Pete Ciena

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

A comment against P802.3bx D2.0 has changed the Description entry for all Reserved bits in the tables of Clause 45 to "Value always 0", which is different from what is used here.
Also, Bit 1.2100.15 has "RW", which should be "R/W"

SuggestedRemedy

In Tables 45-98a and 98b change "Ignore on read" to "Value always 0"
In Table 45-98a Bit 1.2100.15 change "RW" to "R/W"

Response *Response Status* **C**

ACCEPT.

Cl **95** *SC* **96.5.1.1** *P* **58** *L* **17** # 71

Dawe, Piers Mellanox

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

This says "The sensitivity of the PMA's receiver to radio frequency CM RF noise shall be tested according to...". This isn't a test spec: an 802.3 standard specifies what a thing has to do, not how to make it do it. It's OK to require that a thing should pass a test if or when tested, which is actually what matters, but not to require the testing. I expect testing each and every PMA's receiver would not be cost-effective anyway.
There is an equivalent problem in 96.5.1.2.

SuggestedRemedy

Change:
The sensitivity of the PMA's receiver to radio frequency CM RF noise shall be tested according to...
to:
The sensitivity of the PMA's receiver to radio frequency CM RF noise shall meet the specifications of ??? if tested according to...
Or if the spec limits are in the same document, it may be possible to simplify this to:
The sensitivity of the PMA's receiver to radio frequency CM RF noise shall meet the specifications given in ...
Make a similar change in 96.5.1.2

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

See response to Comment #72.

Cl **96** *SC* **1.2** *P* **28** *L* **32** # 31

Wu, Peter Marvell Semiconducto

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

missing space
Clause 22MII

SuggestedRemedy

Change to "Clause 22 MII"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #12.

Cl **96** *SC* **2** *P* **32** *L* **1** # 26

Wu, Peter Marvell Semiconducto

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

Figure 96-3-100BASE-T1 PHY interfaces in draft 1.3 "Technology Dependent Interface" was changed to "Technology Dependent Interface (Clause 28)" however 100BASE-T1 does not interface to Clause 28 which requires two twisted pairs.

SuggestedRemedy

Remove reference to Clause 28.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove the "Clause 28" reference from Figure 96-2, 96-3, and 96-13.

Cl **96** *SC* **2.1.2.1** *P* **30** *L* **47** # 28

Wu, Peter Marvell Semiconducto

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

PMA_LINK.indication (link_status) is defined with three possible values: READY, OK or FAIL
However the value READY is never assigned in Figure 96-17-Link Monitor state diagram

SuggestedRemedy

Delete the value READY from the definition.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Use commenters suggested remedy.

Additionally, Change
"The link_status parameter can take on one of three values: FAIL, READY, or OK."
to
"The link_status parameter can take on one of two values: FAIL or OK."

Cl **96** *SC* **3** *P* **53** *L* **1** # 33

Wu, Peter Marvell Semiconducto

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

No PCS loopback is normatively required. At D1.3, an internal loopback was list at 96A.1 set as informative . We understand the loopback is not required at normal mode, but it is very useful for host side debug. And MII and GMII do have a register bit for it and have PCS loopback

SuggestedRemedy

Add a new section 96.3.4 as PCS management, and add in the loopback mode or Move 96A.1 to this section. Use Register bit 3.0.14 for the mode. Default is zero for Normal mode.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

see comment #37.

Cl **96** *SC* **3.3.4** *P* **52** *L* **18** # 29

Wu, Peter Marvell Semiconducto

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

"Furthermore, it also changes the sign of its transmitted signals (TAn, TBn)." We have a requirement on the transmitter place in a section marked "optional". Is this a suggestion? Is this normative or informative?

SuggestedRemedy

Change text to:
"Furthermore, it shall invert its transmitted signals (TAn, TBn)."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Use commenters suggested remedy.

Additionally, add a PIC for this requirement.

Cl **96** *SC* **4.7.1** *P* **56** *L* **46** # 27

Wu, Peter Marvell Semiconducto

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

link_status is defined with three possible values: READY, OK or FAIL
However the value READY is never assigned in Figure 96-17-Link Monitor state diagram.

SuggestedRemedy

Delete the value READY from the definition.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **6** *P* **67** *L* **24** # 32

Wu, Peter Marvell Semiconducto

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

In Clause 45 new register space was defined for the 100BASE-T PHY, 1.2100 to 1.2102. It is not clear which previously defined registers (like 1.1.2 Receive link status) also apply or do not apply to 100BASE-T1.

SuggestedRemedy

Insert a table listing Clause 45 registers associated with 100BASE-T1.

Response *Response Status* **C**

REJECT.

CL96 uses all CL45 registers that are not PMD specific. No other PMD clauses specify such a table.

Cl **96** *SC* **95.5.3** *P* **61** *L* **14** # 13

Anslow, Pete — Ciena

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

In Figures 96-18 and 96-19 "10K O" should be "10 kO" where "O" stands for capital omega

SuggestedRemedy

In Figures 96-18 and 96-19, change "10K O" to "10 kO" where "O" stands for capital omega

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.1.1** *P* **27** *L* **18** # 42

Chini, Ahmad — Broadcom

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

"100ms" should be "100 ms"

SuggestedRemedy

Change "100ms" to "100 ms" on page 27 line 18

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.1.1** *P* **28** *L* **1** # 11

Anslow, Pete — Ciena

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

Recent projects have not included a list of objectives such as in 96.1.1, so preferably remove it.

If it is not removed "ISO16750" should be "ISO 16750" and there should be an entry in the references subclause 1.3 added for it

SuggestedRemedy

Either:
remove 96.1.1
or:
change "ISO16750" to "ISO 16750" and add an entry in the references subclause 1.3 added for it.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove 96.1.1

Cl **96** *SC* **96.1.1** *P* **28** *L* **16** # 25

Iwaoka, Mitsuru — Yokogawa Electric Cor

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

ISO16750 is refered here, but not listed in 1.3 nor Annex.A.

SuggestedRemedy

Add following document to Annex.A, and insert the references to these documents after "ISO16750" in page 28, line 16.

[B__] ISO 16750-2:2012, Road vehicles -- Environmental conditions and testing for electrical and electronic equipment -- Part 2: Electrical
[B__] ISO 16750-3:2012, Road vehicles -- Environmental conditions and testing for electrical and electronic equipment -- Part 3: Mechanical

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See response to comment #11.

Cl **96** *SC* **96.1.2** *P* **27** *L* **31** # 52

Chini, Ahmad — Broadcom

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

Typo in the text.

SuggestedRemedy

Change "100BASE-T1" to "100BASE-TX"

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.1.2** *P* **27** *L* **32** # 65

Amason, Dale — Freescale

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

Need space between Clause 22 & MII

SuggestedRemedy

Change "Clause 22MII" to "Clause 22 MII"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #12.

Cl **96** *SC* **96.1.2** *P* **28** *L* **33** # 12

Anslow, Pete Ciena

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

Space missing in "Clause 22MII"

SuggestedRemedy

Change to "Clause 22 MII"

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.10.4.1** *P* **73** *L* **31** # 16

Anslow, Pete Ciena

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

In the Value/Comment columns of the various PICS tables, the entry should start with a capital letter

SuggestedRemedy

Make the first letter of the entry in the Value/Comment columns of the various PICS tables a capital letter.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.10.4.2** *P* **75** *L* **6** # 17

Anslow, Pete Ciena

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

Item PCR1 has "See Figure 96–10a and Figure 96–10a"
Presumably, this should be: "See Figure 96–10a and Figure 96–10b"

SuggestedRemedy

Change to "See Figure 96–10a and Figure 96–10b"

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.10.4.4** *P* **75** *L* **40** # 79

Thompson, Geoff GraCaSI S.A.

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

PME6 There should be specific explicit place to record the value "N" used in the Value/Comment field of this PICs item.

SuggestedRemedy

Add text something like:
Value of "N" used ( )

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

In 96.5.2, Change
"The value of N shall be chosen such that N symbol period is greater than 500 ns. This sequence is repeated continually. For example, a PHY with test mode 1 enabled and N = 40 symbols (symbol period of 600 ns) would transmit a pattern sufficiently long enough for a 500 ns droop measurement."
to
"The value of N shall be a minimum of 34 symbol periods to achieve a symbol period greater than 500 ns. This sequence is repeated continually. For example, a PHY with test mode 1 enabled and N = 40 symbols (symbol period of 600 ns) would transmit a pattern sufficiently long enough for a 500 ns droop measurement."

In 96.10.4.4, Change
"Transmit N “+1” symbols
followed by N “–1” sym- bols. The value of N shall
be chosen such that N symbol
period is greater than
500 ns"

to

"Transmit N “+1” symbols
followed by N “–1” sym- bols. The value of N (minimum of 34) shall
be chosen such that N symbol
period is greater than
500 ns"

Cl **96** *SC* **96.10.4.4** *P* **77** *L* **14** # 19

Anslow, Pete — Ciena

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

The +/- symbol should not be separated from "100 ppm"

SuggestedRemedy

Move the +/- symbol to the next line

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.3.1.1** *P* **49** *L* **47** # 44

Chini, Ahmad — Broadcom

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

missing value definition for Variables below:
mii_fc_err (line 47)
pcs_rx_er (line 50)
pcs_rx_dv (line 51)
receiving (line 52)
rcv_jab_detected (page 50, line 1)

SuggestedRemedy

1. at page 49 line 47, insert "Values: TRUE or FALSE"
2. at page 49 line 50, insert "Values: TRUE or FALSE"
3. at page 49 line 51, insert "Values: TRUE or FALSE"
4. at page 49 line 53, insert "Values: TRUE or FALSE"
5. at page 50 line 1, insert "Values: TRUE or FALSE"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Subclause 96.3.3.1.1, not 96.3.1.1.

Cl **96** *SC* **96.3.1.1** *P* **50** *L* **4** # 47

Chini, Ahmad — Broadcom

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

typo for sychronous

SuggestedRemedy

Change
"sychronous"
to
"synchronous"

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.3.2.2** *P* **38** *L* **39** # 46

Chini, Ahmad — Broadcom

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

keep consistent format for value of ternary symbol

SuggestedRemedy

Change
"(–1, 0, 1)"
to
"{–1, 0, or 1}"

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.3.2.2.2** *P* **39** *L* **26** # 63

Estes, Dave — Spirent Communicatio

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

The word "packet" was incorrectly changed to "frame". The difference between a packet and a frame is illustrated in Subclause 3.1.1 Figure 3-1. A packet includes Preamble and SFD. This is significant in this clause because stuff bits need to be added when the number of bits in a packet (not a frame) is not a multiple of 3.

SuggestedRemedy

Change all instances of frame to packet in Subclauses 96.3.2.2.2, 96.3.2.3, 96.3.2.4.10, 96.3.3.1, 96.3.3.2, and 96.3.3.5.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
" As shown in Figure 96–6b and Figure 96–6c, when the number of bits of a frame is not multiple of three, the 4B/3B conversion shall append stuff bits to the end of a frame (1 or 2 bits), and correspondingly, the tx_enable signal remains TRUE until all the bits in a frame (appended with stuff bits if applicable) are rate converted."

to

" As shown in Figure 96–6b and Figure 96–6c, when the number of bits of a packet is not multiple of three, the 4B/3B conversion shall append stuff bits to the end of a packet (1 or 2 bits), and correspondingly, the tx_enable signal remains TRUE until all the bits in a packet (appended with stuff bits if applicable) are rate converted. Note, a packet includes preamble, SFD, and a MAC Frame as specified in 1.4.299."

Additionally, use commenters suggested remedy to change "frame" to "packet" in the subclauses listed.

Cl **96** *SC* **96.3.2.3** *P* **39** *L* **32** # 66

Amason, Dale — Freescale

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

Figures 96-6a, 96-6b, 96-6c should follow subclause 96.3.2.2.2 where they are referenced.

SuggestedRemedy

Move figures to follow subclause 96.3.2.2.2

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.3.2.3.1** *P* **41** *L* **23** # 64

Estes, Dave — Spirent Communicatio

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

Variables are not defined in the proper place. RAn, rem_rcvr_status, rxerror_status, RX_DV, RX_ER, rx_symb_vector, and RXD are not used by the Transmit function.

SuggestedRemedy

Move or remove these definitions

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

1) Page 40 line 48: Remove "RAn" definition.
2) Page 40 lines 50 and 51: Remove "rem_rcvr_status" definition.
3) Page 40 lines 52 and 53: remove "rxerror_status" definition.
4) Page 42 line 1 and 2, move "RX_DV" and "RX_ER" definitions to page 49 line 35.
5) Page 42 line 6 , move "RXD" definition to page 49 line 35.
6) Page 42 line 3,4 and 5, move "rx_symb_vector" definition to page 50 line 3.

Cl **96** *SC* **96.3.2.3.3** *P* **43** *L* **42** # 53

Estes, Dave — Spirent Communicatio

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

The definition for RSPCD belongs in the Receive Function definition

SuggestedRemedy

Move the definition for RSPCD to Subclause 96.3.3.1.3

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.3.2.4** *P* **43** *L* **34** # 67

Amason, Dale — Freescale

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

Figure 96-8 is drawn with different type face (Times Roman) than other figures in document (Helvetica/Arial).

SuggestedRemedy

Change type in Figure to be consistent with document.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.3.2.4.2** *P* **44** *L* **42** # 36

Zimmerman, George — CME Consulting, Inc.

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

Shall statement is ill defined. States "shall conform to the encoding rules, when applicable, from 40.3.1.3.2 and 40.3.1.3.3" , but doesn't address when they are applicable, or what the condition is.

SuggestedRemedy

Delete "when applicable".
(alternatively, specify the excluded cases)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove "when applicable".

Cl **96** *SC* **96.4.1** *P* **53** *L* **4** # 68

Amason, Dale — Freescale

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

Clause 28 referenced in Figure 96-13 is not highlighted in green as in other figures.

SuggestedRemedy

Update figure to be consistent with other figures.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The Clause 28 reference is deleted per comment #26.

Cl **96** *SC* **96.4.2** *P* **55** *L* **24** # 18

Anslow, Pete Ciena

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

As 45.2.1.7.4 is in the draft, this should be a cross-reference rather than green text.

Same issue for:
45.2.1.7.5 in 96.4.3 (Page 55, line 47)
45.2.1.7.4 in 96.10.4.3 (Page 75, line 31)
45.2.1.7.5 in 96.10.4.3 (Page 75, line 34)
Figure 96-16 in 96.10.4.3 (Page 75, line 36)

SuggestedRemedy

Change:
45.2.1.7.4 in 96.4.2 (Page 55, line 24)
45.2.1.7.5 in 96.4.3 (Page 55, line 47)
45.2.1.7.4 in 96.10.4.3 (Page 75, line 31)
45.2.1.7.5 in 96.10.4.3 (Page 75, line 34)
Figure 96-16 in 96.10.4.3 (Page 75, line 36)
to cross-references

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.4.7.1** *P* **56** *L* **40** # 56

Estes, Dave Spirent Communicatio

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

The definitions for the varibles tx_enable should not have been deleted. These variables are set by the PCS and used by the PMA. See the similar defitions in Clause 40 as a reference.

SuggestedRemedy

Add the definition for tx_enable

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Page 57 line 38, add the following definition:
"tx_enable
The tx_enable parameter generated by PCS Transmit as shown in Figure 96-8.
Values: TRUE or FALSE."

Cl **96** *SC* **96.4.7.1** *P* **56** *L* **40** # 55

Estes, Dave Spirent Communicatio

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

The definitions for the varibles config and tx_mode should not have been deleted. These variables are set by the PMA and used by the PCS. See the similar defitions in Clause 40 as a reference.

SuggestedRemedy

Add the definitions for config and tx_mode.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

1) Page 55 line 41, add the following definition:
"config
The PMA shall generate this variable continuously and pass it to the PCS via the PMA_CONFIG.indication primitive.
Values: MASTER or SLAVE"
2) Page 57 line 38, add the following definition:
"tx_mode
PCS Transmit sends code-groups according to the value assumed by this variable.
Values: SEND_N: This value is continuously asserted when code-group sequences representing a PCS code-group in PCS transmit function, control information, or idle mode are transmitted.
SEND_I: This value is continuously asserted when transmission of sequences of code-groups representing the idle mode is to take place.
SEND_Z: This value is asserted when transmission of zero code-groups is to take place."

Cl **96** *SC* **96.4.7.1** *P* **56** *L* **45** # 35

Zimmerman, George CME Consulting, Inc.

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

link_status values are inconsistent. This section says it is READY, OK or FAIL, subclause 96.2.1.2 also says READY, OK or FAIL, 96.3.2.3.1 says READY or OK (no FAIL), and no state diagrams show the value READY being set.

SuggestedRemedy

Delete READY value in 96.4.7.1 and 96.2.1.2
(alternatively, provide state diagram where ready is set)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See responses to comments #27 & #28.

Cl **96** *SC* **96.4.7.1** *P* **58** *L* **35** # 54

Estes, Dave — Spirent Communicatio

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

The "NOT_OK" value for scr_status was deleted

SuggestedRemedy

Add the "NOT_OK" value for scr_status.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Page 57 line 38, insert
"NOT_OK: The descrambler is not synchronized."

Cl **96** *SC* **96.5.1** *P* **8** *L* **8** # 72

Dawe, Piers — Mellanox

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

This says "A system integrating the 100BASE-T1 PHY shall comply with applicable local and national codes, or as agreed between customer and supplier, for the limitation of electromagnetic interference." I don't believe that's feasible: this is supposed to be a standard, not a procurement spec nor an offer for sale. No "customer" or "supplier" are identified. All the standard can do is require what the system integrating the 100BASE-T1 PHY shall do, and it has to do that pretty much universally. In this case regional variations may be allowed, but those variations are public knowledge, and the same for all. Of course there can be particular customer requirements, but they must be outside this document.

SuggestedRemedy

Delete "or as agreed between customer and supplier"
Also in 96.5.1.1 and 96.5.1.2.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

In 96.5.1,
Change
"A system integrating the 100BASE-T1 PHY shall comply with applicable local and national codes, or as agreed between customer and supplier, for the limitation of electromagnetic interference."
to
"A system integrating the 100BASE-T1 PHY shall comply with applicable local and national codes. In addition, the system may need to comply with more stringent requirements as agreed upon between customer and supplier, for the limitation of electromagnetic interference."

In 96.5.1.1,
Change
"The sensitivity of the PMA's receiver to radio frequency CM RF noise shall be tested according to the Direct Power Injection (DPI) method of IEC 62132-4, and comply with test limits agreed between customer and supplier."

to

"The sensitivity of the PMA's receiver to radio frequency CM RF noise may be tested according to the Direct Power Injection (DPI) method of IEC 62132-4, and may need to comply with more stringent requirements as agreed upon between customer and supplier."

In 96.5.1.2,
Change
"The emission of the PMA transmitter to its electrical environment shall be tested according to the 150 Ohm direct coupling method of IEC 61967-4, and comply with test limits agreed between customer and supplier."

to

"The emission of the PMA transmitter to its electrical environment may be tested according to the 150 Ohm direct coupling method of IEC 61967-4, and may need to comply with more stringent requirements as agreed upon between customer and supplier."

Note: Use Ohm symbol, not "Ohm" word.

Cl **96** *SC* **96.5.3** *P* **59** *L* **38** # 80

Thompson, Geoff GraCaSI S.A.

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

The text:
"There may be passive components between PHY and MDI as long as 100BASE-T1 PHY transmitter specification compliance can be attained at the MDI."

would seem to imply that the PHY contains no passive components and is fully encompassed within a silicon chip. Such is not the case. The PHY is everything behind the MDI until you get to the next layer up. Whether or not a portion is encompassed within the chip(s) is an implementation decision.

SuggestedRemedy

The 100BASE-T1 PHY transmitter specification compliance point is at the MDI.
or just delete the sentence entirely.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Remove
"There may be passive components between PHY and MDI as long as 100BASE-T1 PHY transmitter specification compliance can be attained at the MDI."

Cl **96** *SC* **96.5.3** *P* **60** *L* **37** # 74

Dawe, Piers Mellanox

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

We don't give tolerances for VNA impedance, voltage limits and so on. This case isn't different. Although +/-1% is good advice to a test fixture builder, it's not this standard's problem - because this isn't a test spec.
See 1.2.6, Accuracy and resolution of numerical quantities
"Unless otherwise stated, numerical limits in this standard are to be taken as exact, with the number of significant digits and trailing zeros having no significance."

SuggestedRemedy

If we don't give a tolerance, the limit is exact. We are saying what the e.g. droop should be if measured with an infinitely accurate test fixture as well as the infinitely linear voltmeter that's already implied in 96.5.4.1. Of course neither test fixture nor voltmeter are perfect - those doing the test know that and can give the tolerances of their measurements in test reports, if it matters.

Response *Response Status* **W**

REJECT.

The text that the commenter is referring to was not changed in this draft. The commenters similar comment was responded in D1.2 (comment #599). That response is still valid.

Cl **96** *SC* **96.5.3** *P* **60** *L* **37** # 73

Dawe, Piers Mellanox

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

This isn't a test spec so it can't say that any test fixture "shall be used".

SuggestedRemedy

In "The fixtures shown in Figure 96–18, Figure 96–19, and Figure 96–20, or their equivalents, shall be used...", change "shall" to "are". Doing so doesn't weaken compliance because there is another "shall" in 96.5.4 and more in e.g. 96.5.4.1, but you could have text in 96.5.4 like:
The transmitter shall meet the requirements of this section if measured with the appropriate test fixture specified in 96.5.3.

Response *Response Status* **W**

ACCEPT.

Cl **96** *SC* **96.5.3** *P* **61** *L* **10** # 69

Amason, Dale — Freescale

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

Figure 96-20 is drawn with Times Roman type instead of Helvetica.

SuggestedRemedy

Redraw with Helvetica type to be consistent with other figures in document.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.4.3** *P* **64** *L* **16** # 70

Amason, Dale — Freescale

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

Figure 96-22 drawn with Times Roman font instead of Helvetica.

SuggestedRemedy

Redraw figure to be consistent with other figures.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.4.3** *P* **64** *L* **48** # 75

Dawe, Piers — Mellanox

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

This says: "For all jitter measurements, the RMS value shall be measured over an interval..." This is off topic, because this isn't a test spec and the measurement is not a requirement - only the compliance is. The "shall" that the section needs is already in place above: "When in test mode 2, ... JTXOUT ... shall be less than 50 ps."

SuggestedRemedy

Change:
the RMS value shall be measured over an interval of not less than 1 ms
to:
the RMS value is defined over an interval of not less than 1 ms

Response *Response Status* **W**

ACCEPT.

Cl **96** *SC* **96.5.4.4** *P* **64** *L* **21** # 41

Chini, Ahmad — Broadcom

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

"pseudo random" should be "pseudo-random", same as page 59 line 30.

SuggestedRemedy

Change "pseudo random" to "pseudo-random" on page 64 line 21.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.4.4** *P* **64** *L* **28** # 49

Chini, Ahmad — Broadcom

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

There is an error in sweep time. It says ">1 s", where it should have said ">1 min"

SuggestedRemedy

Change "1> s" to ">1 min"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change
">1 s"
to
">60 s"

Cl **96** *SC* **96.5.4.4** *P* **64** *L* **29** # 50

Chini, Ahmad — Broadcom

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

A period is missing at the end of sentence

SuggestedRemedy

Add a period on page 64 line 29.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.4.4** *P* **65** *L* **32** # 14

Anslow, Pete — Ciena

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

In equations 96-4, 96-5, 96-6, 96-7, 96-8, 96-9, 96-10, and 96-11 there are spaces missing between the number and "MHz"

SuggestedRemedy

In equations 96-4, 96-5, 96-6, 96-7, 96-8, 96-9, 96-10, and 96-11 add a space between the number and "MHz" for all instances per equation.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.4.6** *P* **65** *L* **27** # 38

Chini, Ahmad — Broadcom

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

Missing a limit on peak transmit signal level

SuggestedRemedy

Add new sub clause 96.5.4.6 on page 65 line 22 as given in chini_3bw_09_032015.pdf

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.5.3** *P* **66** *L* **45** # 34

Zimmerman, George — CME Consulting, Inc.

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

Alien crosstalk test is ill-specified. Multiple defects exist. For example, transmission characteristics of test cable is not specified (is it worst-case meeting the link segment specs?), distance from injection point to receive MDI is not specified, interface at which bit error rate is measured is not identified (note, generally not defined for ethernet systems, (frame error rate is)), Further, reiterating earlier comment, test would nominally produce a ternary signal which does not adequately represent the result of alien crosstalk coupling, which produces a more Gaussian noise.

SuggestedRemedy

Fully specify intended test, including specify transmission characteristics of link segment, location of injection, frame error rate and packet size at MAC/PLS service interface, and preferably replace 100BASE-T1 transceiver with gaussian noise source of the appropriate level.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Page 66 line 1
change "The receive DUT is connected to a 100BASE-T1 transmitter with the test cable." to "The receive DUT is connected to a 100BASE-T1 transmitter with the link segment as defined in 96.7"
Page 66 line 2
Add at the end of paragraph " The noise is added at MDI of the device under test."
Also add after "The BER shall be less than 10–10." the following
"This specification shall be satisfied by a frame error ratio less than 10-7 for 125 octet frames measured at MAC/PLS service interface."

In addition, a noise source with Gaussian distribution and bandwith of 50 MHz and magnitude of -85 dBm/Hz is considered. This text will be added to 96.5.5.3.

Modify text in Figure 96-24 to read:
Noise Source
100BASE-T1 compliant transmitter
sending idles nonsynchronous
to the transmitter under test
or Gaussian signal generator

Cl **96** *SC* **96.5.5.3** *P* **67** *L* **5** # 15

Anslow, Pete Ciena

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

Figure 96-24 has some text in block capitals

SuggestedRemedy

Change text in block capital to normal case.

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.5.6** *P* **67** *L* **22** # 37

Chini, Ahmad Broadcom

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

There were suggestions to make the loop back tests normative.

SuggestedRemedy

1- Move the material in Annex 96A to page 67 line 22 under new sub clause 96.5.6. Then remove Annex 96A

2- For the new sub caluse "96.5.6 System level test modes" modify the fisrt sentence to read;

"The 100BASE-T1 PHY shall support two loopback test modes to assist the MAC in testing PHY functionality without the need to have a link partner.

3- Extend the pics to include support for these two test modes.

4- Assign Clause-45 registers to enable these two test modes.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Insert new subclause 96.3.4 as PCS Loopback

"96.3.4 PCS Loopback
The PCS shall be placed in loopback mode when the loopback bit in MDIO register 3.0.14 is set to a one. In this mode, the PCS shall accept data on the transmit path from the MII and return it on the receive path to the MII. Additionally, the PHY receive circuitry shall be isolated from the network medium, and the assertion of TX_EN at the MII shall not result in the transmission of data on the network medium."

Move Fig 96A-1 to section 96.3.4

Move 96A.2 to to new subclause "96.5.6 PMA Loopback Test Mode"
Delete subclause 96A.

Change:
"When the PHY is in the external loopback test mode (may also be called loopback at PMA Receive/transmit), the PMA Receive function utilizes the echo signals from the un-terminated MDI and decodes these signals to pass the data back to the MII Receive interface. The data flow of the external loopback is shown in Figure 96-xx (was 96A-2)."
to:
"The PMA shall be placed in local loopback mode when the PMA local loopback bit in MDIO register 1.0.0 is set to a one. When the PHY is in the PMA local loopback mode the PMA Receive function utilizes the echo signals from the unterminated MDI and decodes these signals to pass the data back to the MII Receive interface. The data flow of the external loopback is shown in Figure 96-xx (was 96A-2)."

Extend the PICS to include requirement for these two test modes.

Update Clause 45 register descriptions to enable these two test modes for 100BASE-T1.
PMA local loopback (1.0.0)
PCS Loopback (3.0.14)

Give editor license to modify Cl 45 and 96 to describe the use of these register bits.

Cl **96** *SC* **96.8.2.2** *P* **70** *L* **16** # 40
Chini, Ahmad Broadcom

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

Missing a clause on MDI mode conversion loss

SuggestedRemedy

Add new sub clause 96.8.2.2 on page 70 line 16 as given in chini_3bw_09_032015.pdf

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Text will be added once typos are corrected by author.

Cl **96** *SC* **96.8.3** *P* **70** *L* **17** # 39
Chini, Ahmad Broadcom

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

Missing a clause on MDI fault tolerance

SuggestedRemedy

Add new sub clause 96.8.3 on page 70 line 17 as given in chini_3bw_09_032015.pdf

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **96.9** *P* **70** *L* **21** # 43
Chini, Ahmad Broadcom

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

Delay constraint for TX and RX path needs to be updated.

SuggestedRemedy

Change "240 ns" to "360 ns"
Change "780 ns" to "960 ns"

Response *Response Status* **C**

ACCEPT.

Cl **96** *SC* **TOC** *P* **12** *L* # 48
Chini, Ahmad Broadcom

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

Page 12 in the document is missing.

SuggestedRemedy

Renumber document pages.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See the response to comment #76.

Cl **96A** *SC* **96A** *P* **80** *L* **1** # 20
Anslow, Pete Ciena

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

Annex 96A has the wrong draft number and the wrong date in the header.
(Of course, this would not happen if the method used in the 802.3 template had not been changed.)

SuggestedRemedy

Make the headers consistent throughout the draft.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Annex 96A is being removed. See response to comment #37.

Editor to follow up with commenter to make sure the appropiate method is followed to make other headers consistant throughout draft.

Cl **99** *SC* *P* **1** *L* **1** # 21
Anslow, Pete Ciena

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

The P802.3bw amendment will be an amendment to the result of the P802.3bx revision project. This is correctly reflected in the draft from page 17 onwards, but not in the frontmatter or TOC

SuggestedRemedy

Change the base_year variable in the frontmatter and TOC files to 201x

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **10** *L* **37** # 22

Anslow, Pete Ciena

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

In "At the date of IEEE Std 802.3xx-20xx publication...", the "802.3xx" should be "802.3bw"

SuggestedRemedy

Change "802.3xx" to "802.3bw"

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **11** *L* **22** # 23

Anslow, Pete Ciena

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

"This amendment includes [complete]" should be replaced by a brief description of the content of the amendment

SuggestedRemedy

Replace "This amendment includes [complete]" with a brief description of the content of the amendment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change to
"This amendment includes changes to IEEE Std 802.3-201x and adds Clause 96. This amendment adds 100 Mb/s Physical Layer (PHY) specifications and management parameters for operation on a single balanced twisted-pair copper cable."

Cl **99** *SC* *P* **13** *L* **1** # 24

Anslow, Pete Ciena

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

The table of contents does not reflect the contents of the latest draft (page numbers wrong, headings wrong)

SuggestedRemedy

Make the TOC update properly. (I can help do this if required).

Response *Response Status* **C**

ACCEPT.