

P802.3ab Draft 5.0 Comments

Cl 00 SC 1.4 P1-1 L25 # 3

Robert M. Grow

Comment Type E Comment Status A

Superflous content inconsistent with previous definitions

SuggestedRemedy

For 1000BASE-T, a vector of four 8B1Q4 coded quinary symbols that when representing data, conveys an octet.

Proposed Response Response Status C

ACCEPT.

Cl 00 SC 40B-1 P40-123 L # 1

Donald Heirman

Comment Type E Comment Status A

Table 40B-1: Recommended margin fo rdifferential mode voltage limit be increased.

SuggestedRemedy

It is a good practice to allow at least a margin of 3 dB when conducting EMC type tests. Therefore, it is recommended that the limit for the differential mode voltage be increased to ensure a margin of 3 dB. From the original submission by Robert Campbell of Lucent Technologies on November 9, 1998 the maximum differential mode signal observed was 31 mVpp. Since the cable clamp drive was changed from 2 Vrms to 1 Vrms, the differential mode voltage was scaled by the same amount. Therefore, the 31 mVpp became 16.5 mVpp. Placing the differential mode voltage limit 3 dB above this requires the limit be increased from 20 mVpp to 22 mVpp.

Proposed Response Response Status C

ACCEPT.
1-30 2.4+19.6 . . .

Cl 00 SC 40B-1 P40-123 L # 2

Donald Heirman

Comment Type T Comment Status A

Recommended margin for common mode voltage limit be increased.

SuggestedRemedy

It is a good practice to allow at least a margin of 3 dB when conducting EMC type tests. Therefore, it is recommended that the limit for the common mode voltage be increased to ensure a margin of 3 dB. From the original submission by Robert Campbell of Lucent Technologies on November 9, 1998 the maximum common mode signal observed was 1.52 mVpp. Since the cable clamp drive was changed from 2 Vrms to 1 Vrms, the common mode voltage was scaled by the same amount. Therefore, the 1.52 mVpp became 0.76 mVpp. Placing the common mode voltage limit 3 dB above this requires the limit be increased from 0.76 mVpp to 1.07 mVpp.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
For 30-80 line change Common Mode Voltage to 1.07 V pp
80-250 1.07-0.6.....
1-30 0.1+0.97(f/30)

Cl 01 SC 1.4 P L # 28

Rich Seifert

Comment Type E Comment Status A

For all new definitions, add a parenthetical: "(See IEEE 802.3, Clause 40)". This will clarify the context when the definitions are swept into the IEEE Dictionary.

SuggestedRemedy

Proposed Response Response Status C

ACCEPT.

Cl 01 SC 1.4 P1-1 L13 # 120

David Law

Comment Type E Comment Status A

It appears that the text 'Unshielded Twisted Pair' has been removed from the existing definition in 802.3-1998. If this was intentional it should be shown as strike-out, if not it should be restored.

SuggestedRemedy

Suggest the text '... and 120 Ohm cables ...' should read
'... and 120 Ohm Unshielded Twisted Pair (UTP) cables and ...'

Proposed Response Response Status C

ACCEPT. Missing text re-inserted

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Cl 01 SC 1.4 P1-1 L33 # 26
 Robert M. Grow
 Comment Type E Comment Status A
 Inconsistent addition, and poor language (I doubt Table 40-1 will generate symbols).
 SuggestedRemedy
 Change to read:
 ...four quinary symbols as specified in Table 40-1.
 Proposed Response Response Status C
 ACCEPT.

Cl 01 SC 1.4 P1-1 L54 # 107
 Zweig
 Comment Type E Comment Status R
 Please write out Gigabit Media Independent Interface (GMII).
 SuggestedRemedy
 Proposed Response Response Status C
 REJECT.

Cl 01 SC 1.4 P1-3 L1 # 108
 Zweig
 Comment Type E Comment Status A
 Modes do not signal things. The first sentence is incorrect in its English construction.
 SuggestedRemedy
 Change the first part of the sentence to: "In 1000BASE-T, the end of a frame is accompanied by a transition to the Control mode, which..."
 Proposed Response Response Status C
 ACCEPT.

Cl 01 SC 1.4 P1-3 L3 # 51
 Rich Seifert
 Comment Type E Comment Status A
 Change "steam" to "stream".
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 01 SC 1.4 P1-3 L7 # 39
 Rich Seifert
 Comment Type E Comment Status A
 "Data Mode" is not just at the start of a frame, as per the definition.
 SuggestedRemedy
 Clarify the definition to reflect the complete meaning of Data Mode.
 Proposed Response Response Status C
 ACCEPT. Have revised definitions of Control, Data and Idle Mode so they begin with declarative sentences.

Cl 01 SC 1.4.157 P1-1 L # 89
 Brad Booth
 Comment Type E Comment Status A
 Definition for MDI needs to be updated.
 SuggestedRemedy
 change text to read "... or PHY (100BASE-T, 1000BASE-X or 1000BASE-T)."
 Proposed Response Response Status C
 ACCEPT.

Cl 01 SC 1.4.xxx P1-3 L31 # 90
 Brad Booth
 Comment Type E Comment Status A
 Definition for Multi-port device is limited due to stipulation of PMA-MDI pair.
 SuggestedRemedy
 change definition to read "A device with multiple instances of MDI."
 Proposed Response Response Status C
 ACCEPT.

Cl 22 SC P22-1 L13 # 41
 Rich Seifert
 Comment Type E Comment Status A
 The subclause number is incorrect.
 SuggestedRemedy
 Change "22.2.4.7.7" to "22.2.4.3.7"
 Proposed Response Response Status C
 ACCEPT.

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Cl 22 SC P22-1 L 5,8 # 30
 Robert M. Grow
 Comment Type E Comment Status A
 Correct the editing instructions. I believe the intended table is \ 22.6.
 SuggestedRemedy
 Change Table 22-4 to Table 22-6.
 Proposed Response Response Status C
 ACCEPT.

Cl 22 SC table 22-9 P22-1 L 13 # 31
 Robert M. Grow
 Comment Type E Comment Status A
 Correct the section number.
 SuggestedRemedy
 Change to 22.2.4.3.7.
 Proposed Response Response Status C
 ACCEPT.

Cl 22 SC Table 22-9 P22-1 L 15 # 32
 Robert M. Grow
 Comment Type E Comment Status A
 The word "described" is not a strong as the word "specified".
 The grammar is also bad.
 SuggestedRemedy
 Change to read: Register 9 provides bit values for 1000BASE-T2 (as specified in 32.5) and 1000BASE-T (as specified in 40.5).
 Proposed Response Response Status C
 ACCEPT.

Cl 22 SC Table 22-9 P22-1 L 22 # 33
 Robert M. Grow
 Comment Type E Comment Status A
 The word "described" is not a strong as the word "specified".
 The grammar is also bad.
 SuggestedRemedy
 Change to read: Register 10 provides bit values for 1000BASE-T2 (as specified in 32.5) and 1000BASE-T (as specified in 40.5).
 Proposed Response Response Status C
 ACCEPT.

Cl 22 SC Table 22-9 P22-1 L 3 # 29
 Robert M. Grow
 Comment Type e Comment Status A
 The editing instruction for safety should include the two references to the footnote.
 SuggestedRemedy
 Delete note b attached to table 22-9 and its two references in the table.
 Proposed Response Response Status C
 ACCEPT.

Cl 28B SC P28B1 L 36 # 43
 Rich Seifert
 Comment Type E Comment Status A
 Capitalize "A" in "Annex".
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 28B SC 28B.2 P28B-3 L # 44
 Rich Seifert
 Comment Type E Comment Status R
 Change "...these bits indicates the availability..." to "... these bits indicate the availability..."
 SuggestedRemedy
 Proposed Response Response Status C
 REJECT.
 Text appears ok as written-- the setting indicates

Cl 28B SC 28B.3 P28B-2 L 17 # 122
 Law
 Comment Type E Comment Status R
 typo
 SuggestedRemedy
 Suggest 'bit s' should read 'bits'
 Proposed Response Response Status C
 REJECT. The Frame document shows "bits", not "bit s" The gap appears to be a PDF artifact.

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Cl 28B SC 28B.3 P28B-2 L20 # 123
 Law
 Comment Type E Comment Status A
 typo
 SuggestedRemedy
 Suggest '28B3' should read '28B-3'
 Proposed Response Response Status C
 ACCEPT.

Cl 30 SC 30.5.1.1.11 P30-1 L11 # 42
 Rich Seifert
 Comment Type E Comment Status A
 Change "test" to "text".
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 28C SC 28C P28C-1 L34 # 124
 aw
 Comment Type E Comment Status A
 typo
 SuggestedRemedy
 Suggest 'Auto_Negotiation' should read 'Auto-Negotiation'
 Proposed Response Response Status C
 ACCEPT.

Cl 34 SC 34.4 P34-1 L18 # 121
 Law
 Comment Type E Comment Status A
 Please move the text 'Suitable entries ...' to be above the table title and format the text as normal. At the moment it appears that this text is a editorial instruction, it is in fact part of the text that needs to appear in Clause 34.
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 28C SC 28C P28C-1 L47 # 125
 Law
 Comment Type E Comment Status A
 Incorrect cross refrence
 SuggestedRemedy
 Suggest '... defined in 4.4.1.1.' should read '... defined in 40.5.1.2.'
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC P L # 46
 Rich Seifert
 Comment Type E Comment Status A
 A "section" or "paragraph" should always be referred to as a "subclause". This is a global comment. Similarly, sometimes the term "Clause" is used when "subclause" is intended. (Non-exhaustive) examples include:
 p40-3 ln 1, p40-65 lns 8 and 10, p40-76 ln 35, p40-81 lns 5, 30, p 40-85 ln 3 and 4, p40-90 ln 9 and 13
 SuggestedRemedy
 Change term to "subclause" as appropriate.
 Proposed Response Response Status C
 ACCEPT.

Cl 28C SC 28C.10 P28C1 L46 # 45
 Rich Seifert
 Comment Type E Comment Status A
 The reference is incorrect. 4.4.1.1 is the MAC Clause, unrelated to Auto-Negotiation.
 SuggestedRemedy
 Correct the reference.
 Proposed Response Response Status C
 ACCEPT.

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Cl 40 SC P L # 37

Pat Thaler

Comment Type tr Comment Status A

The material distributed with the sponsor ballot in the response to Howard Frazier's comment was inappropriate and misleading. The motion in the Working Group was:
TECHNICAL MOTION:
 That the response to Howard Frazier's disapprove comment be modified to:
 "While we appreciate your concern, we expect the existence proofs to be available by Sponsor Ballot. Given the simulation results and the design experience, it is appropriate to go forward to Sponsor Ballot with the existing draft."

I was the maker of this motion. I made the motion because I strongly disagreed with the rationale of the response drafted by the task force. In particular, I believe that proof of technical feasibility to the level appropriate for approval of a standard does imply a working prototype. I believe that this is particularly true for physical layer standardization.

Therefore, I made motion was to modify the response by replacing it with the new text. The original task force response should not have been circulated with the ballot.

SuggestedRemedy

In any future circulations of this comment, only the final response from the Working Group should be included.

Proposed Response Response Status W

ACCEPT.

Cl 40 SC P L # 36

Pat Thaler

Comment Type TR Comment Status R

There are no operational implementations of 1000BASE-T at this point. This is a complex standard and, while simulations are useful for development, they are not comprehensive enough to replace operation of an actual system as evidence of adequacy of the specification. I can think of two cases where IEEE 802.3 allowed approval of a PHY standard before the demonstration of implementations: 10BASE-FP and 100BASE-T2. In both cases, products were never produced to the specifications.

When Howard Frazier made his comment at Working Group ballot, it looked possible that sample implementations would be operational before the completion of Sponsor ballot, so I supported going ahead with sponsor ballot. Unfortunately, such implementations have not become available and I cannot support further progression of this draft in their absence.

SuggestedRemedy

Completion of this standard should be delayed until there are at least sample implementations available for test. The experience gained is likely to produce new comments which should be incorporated into the draft before submittal to RevCom.

Proposed Response Response Status U

REJECT.

See response to 119

Cl 40 SC P L # 119

Frazier

Comment Type TR Comment Status R

Comment # 298 from the Working Group ballot on 802.3ab has not been satisfied. To date, no data from a "live" test of a 1000BASE-T implementation has been presented to the 802.3 WG.

The 802.3 WG dealt with my comment by passing the following motion:

WG Response to comment 298 (November 12, 1998):
TECHNICAL MOTION: That the response to Howard Frazier's disapprove comment be modified to: "While we appreciate your concern, we expect the existence proofs to be available by Sponsor Ballot. Given the simulation results and the design experience, it is appropriate to go forward to Sponsor Ballot with the existing draft."
 M: Ms. P. Thaler S: Mr. K. Daines
 Y: 42 N: 0 A: 2 Approved.

Thus, I believe that the 802.3 Working Group as a whole also expects to see existence proofs at this stage of the process.

SuggestedRemedy

Do not progress the document any further until existence proofs have been demonstrated to the satisfaction of the 802.3 Working Group.

Proposed Response Response Status U

REJECT. The task force believes that the level of evidence for technical feasibility as provided by technical simulations and other data is sufficient to support approval of 802.3ab as a standard.

(Vote of 1/21/99)
 Y 11
 N 0
 A 7

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Cl 40 SC P L # 58

Gene Milligan

Comment Type E Comment Status A

The redundant overhead of the ballot and comment forms should be automated.
Page numbers in the following comments refer to pdf file pages of 150 pages.

SuggestedRemedy

The redundant overhead of the ballot and comment forms should be automated.
Page numbers in the following comments refer to pdf file pages of 150 pages.
I can not stumble on how to generate more comments. So I will dump the rest into this one.
Sorry about that.

- 1) In 1.4.xxx Technology Ability Field: Change "Within 802.3," to "Within IEEE 802.3,"
- 2) In 1.4.xxx Technology Ability Field: why is 1000BASE-T not discussed?
- 3) On page 9 line 9 a space is needed in "TXD<7:0>". Same on page 23 line 52 and elsewhere. Global change.
- 4) On page 14 line 9 "ISO/IEC8802-3/DAD 19954" is "19954" correct?
- 5) On page 14 line 18 what is the intent of "Suitable entries for table G4 of ISO/IEC 11801:1995 Annex G would be:?" Is it a critique on 11801?
- 6) Are the strange symbols on line 32 correct?
- 7) On page 21 line 28 to be in context delete "must".
- 8) The title and content of 40.1.2 Relationship of 1000BASE-T to other standards do not match. This clause discusses only OSI and does not discuss ISO/IEC 11801 nor other standards in other clauses.
- 9) On page 23 line 1 "The following paragraphs summarize the PCS and PMA sections of this document." is followed by a figure not paragraphs. I think the reference should be to a specific range of clauses not paragraphs.
- 10) 40.1.6 "Conventions in this Clause" should be "Precedence, Conventions, Tolerances, and Defaults in this Clause". Conventions are given also elsewhere in this clause (e.g., 40.3.1.3.5). In addition in this instance which clause is being referred to by "this clause"? The latter comment is mute if all instances of clause are all encompassing and do no refer to just a subclause. (The use of the term paragraphs and "The body of this Clause" has given me the impression the terminology is used loosely.
- 11) On page 34 line 30 is the meaning of the horizontal line clear to others? It is not to me.
- 12) The bottom of Figure 40-5 has a spurious arrow head.
- 13) On page 36 line 46 the unfortunate circumstance of "{2, 0, -2}" coming at the end of the line makes it unclear whether the symbol is a hyphen at line end or a minus sign. I notice that in the document hyphenation is used so I can not tell.
- 14) 40.6.1.2 Transmitter electrical specifications uses both "this clause" and "this section".
- 15) Does IEEE normally use italics for notes? Other standards use italics for referenced standards and for variables but not for notes. See page 86. After review I see that some notes (ignoring editor's notes to be removed before publication) are in italics and some are not.
- 16) On page 93 consider making MATLAB code for Distortion Post Processing a subclause.
- 17) The notes (?) at the bottom of Figure 40-26 are jumbled together and a little confusing to parse what is included in the paranthesis.
- 18) On page 102 it is confusing to have the footnote citation tied to the equation. This would be even worse if another footnote makes this one greater than 1. I suggest the citation be moved elsewhere in the sentence.
- 19) On page 103 line 17 there is confusion between hyphen and minus at the end of line.
- 20) In Figure 40C-1 is "Note: This signal is the combination of link_control and M/S being resolved" clear as to what it means and which signal it refers to?

21) On page 147 why are the notes for Figure 40-2 so greatly distanced from Figure 40-2 on page
SuggestedRemedy =

Proposed Response Response Status C

- ACCEPT IN PRINCIPLE (some--see list below).
1. Accept, will change
 2. The Technology Ability Field is not used for 1000BASE-T; see 40.5.
 3. Reject Style has been TXD<n:n>
 4. Page 34-1: will check
 5. This provides an entry for the appropriate table in 11801.
 6. Yes
 7. Page 40-1: Accept
 8. Reject
 9. Page 40-3: AIP, "paragraphs" changed to "subclauses"
 10. Page 40-7: Reject, this section defines general conventions that apply across the clause. The term "clause" is used to refer to a specific chapter (e.g., Clause 40.) The term "paragraphs" has been changed to "subclauses."
 11. Page 40-14: Figure redrawn as per another comment.
 12. Page 40-15 Accept, arrowhead removed in redraw
 13. Page 40-16 AIP--changed to {+2, 0, -2}
 14. Page not clear: global change from "section" to "subclause"
 15. Editor's notes are done in bf italics. Permanent notes done in special format.
 16. Reject: We feel it is important to keep explanatory information with the MatLab code.
 17. Page 40-78: AIP: will tune text
 18. Page 40-81--changed from footnote to technical note.
 19. Page 40-83--this is a formatting artifact that does not appear in the Frame version of the document.
 20. Page 40-125 AIP--will clarify before posting D5.1.
 21. Page 40-127 - Figure 40C-2 takes up a full page so the notes must appear on the preceding page.

Cl 40 SC P40-90 L29,43 # 84

Rich Seifert

Comment Type E Comment Status A

Delete "functional" (2 places).

SuggestedRemedy

Proposed Response Response Status C

ACCEPT.

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Cl 40 SC 40.1.2 P40-1 L36 # 126
Law

Comment Type E Comment Status A

The PHY contains sub-layers, not layers.

SuggestedRemedy

Suggest the text 'The PHY layers shown ...' should read 'The PHY sub-layers ...'.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.1.2 P40-2 L15-19 # 127
Law

Comment Type E Comment Status A

There is no explanation of the shading seen in figure 40-1.

SuggestedRemedy

Suggest the text in 40.1.2, Page 40-1, line 36, 'The PHY layers shown in Figure 40-1 connect ...' should read 'The 1000BASE-T PHY sublayers (shown shaded) in Figure 40-1, in combination with the Auto-Negotiation sub-layer, connect ...

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.1.3.1 P40-5 L15 # 128
Law

Comment Type T Comment Status A

Is it correct that 'TX_EN' is passed across that PMA Service interface as shown in Figure 40-3 as this means there are two different TX_EN's. The TX_EN on the GMII shown on the left of the PCS TRANSMIT ENABLE block and TX_EN on the right of the PCS TRANSMIT ENABLE block. Isn't the TX_EN state passed across the PMA Service Interface by the PMA_TXENSTATUS.request(tx_enable) primitive. In addition tx_error and tx_enable are output by the PCS Transmit state machine (see 40-8), not TX_EN.

SuggestedRemedy

Suggest that the signal from PCS TRANSMIT ENABLE correctly marked TX_EN should read tx_enable.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.1.3.1 P40-5 L49 # 130
Law

Comment Type T Comment Status A

Is it the received_clock or the recovered_clock that is looped back to the PMA TRANSMIT block for loop timing. According to the diagram above it is the recovered_clock, according to this text it is the receive_clock.

SuggestedRemedy

Suggest the text 'Note: The received_clock ...' should read 'Note: The recovered_clock ...'.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
tx_enable to PCS TRANSMIT,
TX_EN to PHY CONTROL (from L input into PCS TRANSMIT ENABLE)

recovered_clock

Cl 40 SC 40.1.3.1 P40-5 L6 & 34 # 129
Law

Comment Type E Comment Status R

Why are the full primitives PMA_UNITDATA.request(tx_symb_vector) and PMA_UNITDATA.indicate(rx_symb_vector) shown in Figure 40-3 when in all other cases only the parameter of the primitive is shown.

SuggestedRemedy

Suggest 'PMA_UNITDATA.request(tx_symb_vector)' should read 'tx_symb_vector' and that 'PMA_UNITDATA.indicate(rx_symb_vector)' should read 'rx_symb_vector'.

Proposed Response Response Status C

REJECT. WITHDRAWN BY COMMENTOR

Cl 40 SC 40.1.3.1 P40-6 L8 # 92
Brad Booth

Comment Type E Comment Status A

Incorrect reference

SuggestedRemedy

PCS is specified in 40.3 not 40.2.

Proposed Response Response Status C

ACCEPT.

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Cl 40 SC 40.1.4 P40-6 L38 # 93
Brad Booth

Comment Type E Comment Status A

Description for signaling relates signaling only to the PCS, yet some of the objectives listed are not performed by the PCS.

SuggestedRemedy

Change sentence to read "1000BASE-T signaling is performed by the PCS generating continuous code-group sequences that the PMA transmits over each wire pair."

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.1.4 P40-7 L7 # 94
Brad Booth

Comment Type E Comment Status A

The paragraph is out of context and seems to be more a description of the PCS and PMA interaction rather than about signaling.

SuggestedRemedy

Change paragraph to read:
"The PHY operates in two basic modes: normal mode or training mode. In normal mode, the PCS generates code-groups that represent data, control or idles for transmission by the PMA. In training mode, the PCS is directed to generate only idle code-groups for transmission by the PMA which enable the receiver at the other end to train until it is ready to operate in normal mode."

Remove "(See the PCS reference..."

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.1.5 P40-7 L14 # 96
Brad Booth

Comment Type E Comment Status A

Heading for 40.1.5 and 40.1.5.1 are inaccurate.

SuggestedRemedy

Remove 40.1.5.1 and change 40.1.5 to be "Inter-sublayer interfaces"

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.1.5.1 P40-7 L21-22 # 48
Rich Seifert

Comment Type T Comment Status A

The statement, "The behavior of all systems is identical to that with a full GMII implementation." cannot be true. Clearly, if I have a GMII, I can exhibit behaviors (such as asserting observable GMII signals) that I cannot do without one. I believe you mean to say that system operation from the perspective of signals at the MDI and Management objects are identical whether the GMII is implemented or not.

SuggestedRemedy

Clarify wording to avoid confusion.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.1.5.1 P40-7 L24 # 49
Rich Seifert

Comment Type E Comment Status A

In other places in the standard, it states that a crossover cable is required for DTE-DTE connections.

SuggestedRemedy

Either clarify the statement (such that a crossover cable isn't considered special) or eliminate the statement. It doesn't appear to say anything useful.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

Cl 40 SC 40.1.5.1 P40-7 L24 # 95
Brad Booth

Comment Type TR Comment Status A

Statement that 1000BASE-T needs no special cabling for a DTE to DTE connection is not true. The auto crossover function is optional and if not implemented on either PHY, than a crossover cable is required in a DTE to DTE connection.

SuggestedRemedy

Remove sentence.

Proposed Response Response Status C
ACCEPT.

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Cl 40 SC 40.1.6 P40-7 L28 # 34
 Brad Booth
 Comment Type TR Comment Status A
 "shall" is not required
 SuggestedRemedy
 change "... state diagram shall prevail." to "... state diagram prevails."
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.10.2.2 P40-90 L 34-39 # 85
 Rich Seifert
 Comment Type TR Comment Status A
 I suspect that this subclause is discussing issues related to 1000BASE-T transceivers (PHYs) that may be physically separate from the device with the MAC. However, the GMII is not specified as an exposed interface; it is intended for chip-to-chip or internal subassembly interconnections. With no cable or connector specification, it is unsuitable for external PHYs.
 (In reality, all PHYs are externally connected, at least at the MDI, so the wording of the first sentence is inappropriate, anyway.)
 There is no such GMII signal as "circuit ground". Furthermore, the GMII is not an external interface available for connection to safety grounds.
 The "warning" implies that there is some safety problem associated with the use of 1000BASE-T and double-insulated equipment. In fact, there should be no safety problem--double insulation is a very effective means of providing electrical safety protection.
 SuggestedRemedy
 = Delete the subclause in its entirety. If the subclause does remain, clarify the point to which a safety ground connection should be made (other than "GMII ground", which does not exist). Also, change the "warning" to a "note", if it remains at all.
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.10.2.2 P40-90 L37 # 103
 Thompson
 Comment Type TR Comment Status A
 The assumption in the warning is unsustainable for the type of equipment being supported. A very significant portion of the market for LAN stations at the outside end of horizontal cabling is either battery powered or powered by a fully isolated battery recharging device. All indications are that this configuration (i.e. laptops with some sort of docking facilities or other LAN attachment system) will have a growing market share for some time to come.
 SuggestedRemedy
 Remove the warning and take whatever additional steps are appropriate to the requirements so that floating systems can be safely accommodated.
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Satisfied by response to 85

Cl 40 SC 40.10.2.4 P4-91 L9 # 99
 Rich Seifert
 Comment Type E Comment Status A
 Change "Gigabit Ethernet" to "1000BASE-T".
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.10.2.4 P40-91 L8 # 104
 Thompson
 Comment Type T Comment Status A
 The age of Internet Telephony is upon us. One of the results of this is that there will be line-powered EtherPhones plugging into the jacks that we use. Numerous parties are moving forward on putting power for EtherPhones onto the RJ-45. It is no longer appropriate to characterize this situation as a "wiring hazard" which implies that there is something wrong. It is very likely to be the normal future.
 SuggestedRemedy
 Add a requirement that 1000BASE-T can withstand a telephone battery supply from the outlet. Revise text accordingly
 Proposed Response Response Status C
 ACCEPT IN PRINCIPLE.
 Copy and edit text from 14.7 to require no damage to PHY in presence of battery voltage.

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Cl 40 SC 40.12 P40-93 L3 # 155

Law

Comment Type E Comment Status A

Suggest that the first sentence be re-worded to read as per 36.5.

SuggestedRemedy

ds ...' should read 'In half duplex mode proper operation of a CSMA/CD LAN demands ...'.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.12 P40-93 L7 - 8 # 154

Law

Comment Type T Comment Status A

The delay constrains apply for both half duplex and full duplex. In the case of full-duplex this is to constrain the response time to PAUSE messages. In addition full-duplex constraints are provided in Table 40-14.

SuggestedRemedy

Remove the text 'In full duplex mode of operation single port devices are not required to conform to the constraints specified in this section'. Add a new second paragraph that reads 'In full duplex mode, predictable operation of the MAC Control PAUSE operation (Clause 31, Annex 31B) also demands that there be an upper bound on the propagation delays through the network. This implies that MAC, MAC Control sublayer, and PHY implementers must conform to certain delay maxima, and that network planners and administrators conform to constraints regarding the cable topology and concatenation of devices.'

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Text already removed; add paragraph

Cl 40 SC 40.12, Table 40-15 P40-93,94 L7-9, 25-30 # 87

Rich Seifert

Comment Type TR Comment Status A

The statement that none of the constraints of this section apply to FDX devices is contradicted by Table 40-14. Also, the constraints should be maintained both for single-port FDX devices and multi-port FDX devices (e.g., switches).

SuggestedRemedy

Delete the last sentence of the first paragraph of 40.12. In Table 40-15, row 2, insert "Half Duplex Only" in the event description. In Table 40-15, row 3, insert "Half Duplex Only" in the event description. Add a specification to Table 40-15 for the delay from MDI in to Data Received at MAC for a FDX device with an unexposed GMII.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Rename table to DTE delay constraints (half duplex mode)

delete last sentence of first paragraph of 40.12 (In full duplex mode . . .)

Cl 40 SC 40.12.1 P40-94 L9 # 159

Law

Comment Type E Comment Status A

typo

SuggestedRemedy

Rx_DV' should read 'RX_DV'.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.12.2 P40-94 L15 # 157

Law

Comment Type T Comment Status A

I believe the constrains stated here apply only to half-duplex mode.

SuggestedRemedy

Add the text '(half duplex only)' to the title. Change the text '... In Table 40-15.' to read '... In Table 40-15 for half duplex operation.'. Change the text '(unexposed GMII)' to read '(half duplex only)' in the title for Table 40-15."

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Check text insertions

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.12.2 P40-94 L24 # 158
Law

Comment Type T Comment Status A

The constraint MDI Input to MDI output (worse-case nondeferred transmit) is missing from table 40-15. This is a very important parameter as it contributes to the acquisition time of a network, that is the time a transmission must take place for before it is know that a collision will not take place in a correctly configured network."

SuggestedRemedy

Add the 'MDI Input to MDI output (worse-case non-deferred transmit)' value to table 40-15.

Proposed Response Response Status C

ACCEPT.
See table 36-10
440/1st symbol of SSD/1st symbol of SSD

Cl 40 SC 40.12.2 P40-94 L32 # 156
Law

Comment Type T Comment Status A

The constraints on Carrier de-assertion/assertion matching seems to be missing. See 36.5.3 for the 1000BASE-X equivalent.

SuggestedRemedy

constraint (half duplex mode)', subclause text 'To ensure fair access to the network, each DTE operating in half duplex mode shall, additionally, satisfy the following: (MAX MDI to MAC Carrier De-assert Detect) - (MIN MDI to MAC Carrier Assert Detect) < 16 Bits'

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Delete last sentence (17-18) on 40-93.
Insert sentence --could follow 36.5.3.

Cl 40 SC 40.13 P40-95 L11 - 12 # 161
Law

Comment Type E Comment Status A

SuggestedRemedy

Do the PICS copyright release as per 36.7 for example.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13 P40-95 L5 # 163
Law

Comment Type E Comment Status A

IEEE 802.3ab should not be mentioned in the subclause introduction.

SuggestedRemedy

Suggest that text '... conform to IEEE 802.3ab ...' should read '... conform to Clause 40 ...'

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13 P40-95 L5,6,38, 39 # 162
Law

Comment Type E Comment Status A

the first letters of Physical Coding Sublayer and Physical Medium Attachment should be upper case.

SuggestedRemedy

see comment

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13 P40-96 L # 74
Brad Booth

Comment Type E Comment Status A

Symbols for options/capabilities should be used throughout the PICS.

SuggestedRemedy

Update PICS to reflect which options or capabilities control their implementation

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Cl 40 SC 40.13 P40-97 L # 70
Brad Booth

Comment Type E Comment Status A

PICS "Feature" and "Value/Comment" fields need to be cleaned up.

SuggestedRemedy

Cleanup fields.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.13 P40-97-113 L1 # 160
Law

Comment Type E Comment Status A

The text 'PICS pro forma for' is not required in the titles for the PICS tables.

SuggestedRemedy

Suggest for example 'PICS pro forma table for clause conventions' should read 'Clause conventions'.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13.2 P40-96 L # 73
Brad Booth

Comment Type TR Comment Status A

Require item for auto crossover function

SuggestedRemedy

Add to table:
*ACO PHY supports auto crossover 40.x O Yes/No

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13.2 P40-96 L11 # 71
Brad Booth

Comment Type TR Comment Status A

There is no defined "Exposed PMA service interface" or any indication of how to integrate into symbol level repeater core (beyond the scope of this standard).

SuggestedRemedy

Remove *PMA

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13.2 P40-96 L11-13 # 164
Law

Comment Type E Comment Status A

I did not believe that 1000BASE-T was supporting a exposed PMA interface nor was supporting symbol level repeaters. I guess this is a 100Mb/s repeater hangover from 100BASE-T2.

SuggestedRemedy

Delete Item PMA.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13.2 P40-96 L14 & 17 # 166
Law

Comment Type E Comment Status A

The items on these two lines have the same Item name, suggest these should be different.

SuggestedRemedy

Suggest that item on line 17 be changed from AN to OMS or anything else considered appropriate.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13.2 P40-96 L19 # 72
Brad Booth

Comment Type E Comment Status A

FDX should be *FDX, and HDX should be *HDX. Both should also have the No option

SuggestedRemedy

Change and add No option

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.13.2 P40-96 L19 & 22 # 167
Law

Comment Type E Comment Status A

As both items FDX and HDX are optional they need both Yes and No options in the support column.

SuggestedRemedy

Change support column from 'Yes[]' to 'Yes[] No[]'.

Proposed Response Response Status C

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.13.2 P40-96 L28 # 165
Law

Comment Type E Comment Status A

The optional Auto-crossover function is not listed in the options list, it should be added.

SuggestedRemedy

Add Item: AXO, Feature: Auto-Crossover, Subclause: 40.8.3, Status: O, Support: Yes[] No[], Value/comment:

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.13.3 P40-97 L6 # 69
Brad Booth

Comment Type TR Comment Status A

CCO1 should be removed based upon a previous TR comment

SuggestedRemedy

Delete CCO1 from table, rename CCO2 to CCO1

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.13.7 P40-113 L # 170
Law

Comment Type E Comment Status A

These items are all installation and cabling issues not under the control of the PHY vendor and therefore not Mandatory, they should be predicated by INS.

SuggestedRemedy

Change status column of all 40.13.7 (items LKS1 to LKS14) from 'M' to 'INS:M', support column from 'Yes[]' to 'N/A Yes[]'.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.13.8 P40-115 L31-33 # 168
Law

Comment Type E Comment Status A

Auto-Crossover should be listed as a major capability and the option should be deleted from the MDI requirements table (See my other comment adding this to the major options table).

SuggestedRemedy

Delete Item MDI7 from table of subclause 40.13.8. Renumber the remaining items.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.13.8 P40-115 L35 - 42 # 169
Law

Comment Type E Comment Status A

These items are all optional depended on the support of Auto-crossover and are no Mandatory.

SuggestedRemedy

Change status column for items MDI8 to MDI11 from 'M' to 'AXO:M', support column from 'Yes[]' to 'N/A Yes[]'.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.13.9 P40-116 L # 171
Law

Comment Type E Comment Status A

Some of these items are installation issues not under the control of the PHY vendor and therefore not Mandatory, they should be predicated by INS

SuggestedRemedy

Change status column of items ENV2, ENV4 and ENV6 from 'M' to 'INS:M', support column from 'Yes[]' to 'N/A Yes[]'.

Proposed Response Response Status C
ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.2 P40-8 L # 97
Brad Booth

Comment Type E Comment Status A

Comment about changes to 40.2 (insertion of PCS Service Interface and PMA Service Interface) would also require moving PMA_LINK.request and PMA_LINK.indicate out of the PMA Service Interface definition because these service primitives are not associated with the PMA Service Interface

SuggestedRemedy

Insert the following:
"40.2.3 Technology-Dependent Interface
1000BASE-T uses the following service primitives to exchange status indications and control signals across the Technology-Dependent Interface as specified in Clause 28:
PMA_LINK.request(link_control)
PMA_LINK.indicate(link_status)"
Move 40.2.5 PMA_LINK.request and 40.2.6 PMA_LINK.indicate to be 40.2.3.1 and 40.2.3.2, respectively.
Re-number accordingly.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.2 P40-8 L1 # 131
Law

Comment Type E Comment Status A

typo

SuggestedRemedy

Suggest '1000BASE_T' should read '1000BASE-T'.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.3 P4-15 L10 # 16
Rich Seifert

Comment Type E Comment Status A

Management *functions* are not really specified in Clause 30, only the management *objects*.

SuggestedRemedy

Clarify wording.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.
Text in 30.1 refers to "managed elements, managed objects, attributes and behaviors."
Will tune appropriately.

Cl 40 SC 40.3 P40-15 L # 62
Brad Booth

Comment Type TR Comment Status A

The PCS functional specification mentions a PCS Collision Presence function. This function does not exist as a separate entity but is performed by the PCS Transmit function

SuggestedRemedy

= page 40-15, line 3, change "five" to "four"
page 40-15, line 4, change to read: "... PCS Receive and PCS Carrier Sense."
page 40-15, line 8, change "five" to "four"
Figure 40-5, remove the PCS COLLISION PRESENCE block, draw COL exiting from PCS TRANSMIT, draw link_status entering PCS TRANSMIT
page 40-16, new paragraph after line 25:
"The PCS Transmit function generates the GMII signal COL based on whether a reception is occurring simultaneously with transmission. The PCS Transmit function is not required to generate the GMII signal COL in a 1000BASE-T PHY that does not support half duplex operation."
Delete 40.3.1.6.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.3 P40-15 L1 # 68
Brad Booth

Comment Type E Comment Status A

Change heading to simpler format

SuggestedRemedy

Change to read "40.3 Physical Coding Sublayer (PCS)"

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.3.1.1 P40-16 L10 # 38
Rich Seifert

Comment Type TR Comment Status A

There is no provision for passing a "Reset" request from the PMA/PHY Control to the PCS. This signal is not present as a parameter in any of the service interfaces.

SuggestedRemedy

Add "reset" as a parameter to an appropriate interface primitive, or add a new primitive to pass the variable across.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.
Delete 40.3.1.1 "c" condition

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.3.1.3 P40-17 L20 # 111
Zweig

Comment Type T Comment Status A
The bits from the side-stream scrambler are not actually random.

SuggestedRemedy
Change "random" to "pseudorandom".

Proposed Response Response Status C
ACCEPT as editorial comment.

Cl 40 SC 40.3.1.3.1 P40-17 L3 # 110
Zweig

Comment Type T Comment Status A
If the scrambler state is initialized to all zeroes, the scrambler will not work. The last two sentences make it sound like any combination of bits is OK.

SuggestedRemedy
Add sentence to end of paragraph: "In no case shall the scrambler state be set to all zeroes."

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.3.1.3.1 P40-17 L36,37 # 6
Rich Seifert

Comment Type E Comment Status A
The sentence implies that the implementation shown is "the only one".

SuggestedRemedy
= Change "The implementation ... Figure 40-6."
to
"An implementation ... Figure 40-6. Other implementations are possible and are permitted by this standard."

Change the caption for Figure 40-6 from "Realization of ..."
to
"A Realization of ..."

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.3.1.5 P40-31 L # 55
Brad Booth

Comment Type E Comment Status A
Paragraph is confusing

SuggestedRemedy
Change to read:
"The PCS Carrier Sense function generates the GMII signal CRS, which the MAC uses for deferral in half duplex mode. The PCS shall conform to the Carrier Sense state diagram as depicted in Figure 40-11 including compliance with the associated state variables as specified in 40.3.3.
The PCS Carrier Sense function is not required in a 1000BASE-T PHY that does not support half duplex operation."

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.3.1.6 P40-31 L34,35 # 7
Rich Seifert

Comment Type TR Comment Status A
First, the signals tx_enable and tx_error are defined to take the values TRUE or FALSE, not zero or one. Second, the condition upon which COL should be set is ambiguous. The way it is written, it could be read as:

$COL \leq TX_EN + (TX_ER * receiving)$

or

$COL \leq (TX_EN + TX_ER) * receiving$

which are not equivalent. I believe the intent is the latter.
SuggestedRemedy = Change "=1" to "= TRUE" (2 places)

Include in the text the logic equation shown in my comment for the correct formulation of the COL signal.

SuggestedRemedy

Proposed Response Response Status C
ACCEPT IN PRINCIPLE. See esolution of 62

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.3.2 P40-32 L1-18 # 8

Rich Seifert

Comment Type TR Comment Status A

Frame structure for 802.3 is defined in Clause 3. It cannot be redefined here. There is a conformance requirement on line 3 that is untestable. The Figure is labeled "PCS-to-PMA sublayer stream structure", which has two problems. First, the subclause is titled "Frame Structure". Second, the figure shows a 4-pair parallel interface, but there is no such interface defined between the PCS and PMA.

SuggestedRemedy

Change the subclause title to "Stream Structure".
Eliminate the "shall" conformance requirement.
Rename Figure 40-7 so that it properly reflects the signals that are actually being depicted.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Rename figure to "The tx_symb_vector and rx_symb_vector structure"

Cl 40 SC 40.3.3.1 P40-33 L 12 # 57

Brad Booth

Comment Type E Comment Status A

= ENCODE function is in defined in the variables, and there is a typo in the definition.

SuggestedRemedy

Move ENCODE function description to 40.3.3.2.
Change DECODE in last sentence to ENCODE.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.3.3.1 P40-33 L 50 # 132

Law

Comment Type T Comment Status A

The loc_rcvr_status parameter is sourced from the PMA receiver (see Figure 40-3), not the PMA Link Monitor as stated in the variable definition

SuggestedRemedy

Suggest the text '... the PMA Link Monitor function ...' should read '... the PMA Receive function ...'

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.3.3.1 P40-33 L 52 # 133

Law

Comment Type T Comment Status A

The value 'SCR_OK' is not listed in the primitive definition nor in the sourcing function (40.4.4.1).

SuggestedRemedy

Remove the value 'SCR_OK' from the variable values list.

Proposed Response Response Status C

ACCEPT.
Values are OK or NOT_OK

Cl 40 SC 40.3.3.1 P40-33 L 8 # 56

Brad Booth

Comment Type E Comment Status A

DECODE function is in defined in the variables.

SuggestedRemedy

Move DECODE function description to 40.3.3.2.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.3.3.1 P40-33 L 8-14 # 9

Rich Seifert

Comment Type T Comment Status A

The ENCODE and DECODE *functions* are listed as *variables*.

SuggestedRemedy

Move ENCODE and DECODE to the "Functions" subclause 40.3.3.2.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.3.3.1 P40-34 L 27,52 # 10

Rich Seifert

Comment Type T Comment Status A

A variable cannot take two values simultaneously.

SuggestedRemedy

Change "ERROR and NO_ERROR" to "ERROR or NO_ERROR"

Also, delete the word "set" on line 52. (Boolean is sufficient)

Proposed Response Response Status C

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.3.3.1 P40-35 L1-3 # 11
Rich Seifert
Comment Type E Comment Status A
= Change "packet" to "stream" (2 places).
SuggestedRemedy
Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.4 P40-42 L1 # 75
Brad Booth
Comment Type E Comment Status A
Heading could be much simpler
SuggestedRemedy
= change to "40.4 Physical Medium Attachment (PMA) sublayer"
Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.4.2.3 P40-43 L47 # 27
Rich Seifert
Comment Type E Comment Status A
This subclause covers only the PMA, not the entire PHY.
SuggestedRemedy
Change PHY to PMA.
Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.4.2.3 P40-43 L49 # 15
Rich Seifert
Comment Type TR Comment Status A
The statement appears to require that a PMA provide a 10^-10 BER with no qualification on S/N ratio. Clearly it is impossible to meet this requirement.
SuggestedRemedy
Specify, or provide a reference to the specification for, the noise environment under which this BER must be achieved.
Proposed Response Response Status C
ACCEPT IN PRINCIPLE.
Use text "Over a channel meeting the requirements of 40.7."

Cl 40 SC 40.4.5.1 P40-48 L31 # 136
Law
Comment Type T Comment Status A
TX_EN is not passed across the PMA Service Interface (see 40.4.6). Suggest that tx_enable should be used instead as this is passed across the PMA Service interface by PMA_TXENSTATUS.request
SuggestedRemedy

Suggest that 'TX_EN = FALSE' should read 'tx_enable = FALSE'. Add the variable tx_enable to the variable list (40.4.4.1), this should read 'The tx_enable parameter generated by PCS Transmit as specified in Figure 40-8. Values:TRUE or FALSE' as per 40.3.3.1, Page 40-35, line 8.
Proposed Response Response Status C
ACCEPT IN PRINCIPLE.
Remove PMA.TXENSTATUS.request
line 19 on 40-8
text 40-13 24/37
figure 40-4 (bottom line)
global search and remove)

Cl 40 SC 40.4.5.1 P40-48 L6-29 # 137
Law
Comment Type E Comment Status A
typo
SuggestedRemedy
Suggest all cases of 'Start timer_name' should read 'start timer_name' as defined in 14.3.2.3.
Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.4.5.2 P40-49 L52 # 135
Law
Comment Type E Comment Status A
typo
SuggestedRemedy
Suggest 'stabilize_timer_done = TRUE' should read 'stabilize_timer_done'. See other examples of timers done in 40-14.
Proposed Response Response Status C
ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.4.6 P40-49 L # 65

Brad Booth

Comment Type E Comment Status A

Sub-clause is not required as service interface was specified earlier in the draft, and the PMA_LINK messages are not part of the PMA service interface

SuggestedRemedy

Remove 40.4.6.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.4.6 P40-49 L31-52 # 4

Rich Seifert

Comment Type E Comment Status A

This subclause is a replication of the material in 40.2 (although with LESS information).

SuggestedRemedy

Delete the subclause entirely.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.4.6 P40-49 L52 # 134

Law

Comment Type E Comment Status A

typo

SuggestedRemedy

Suggest 'PMA.TXENSTATUS.request' should read 'PMA_TXENSTATUS.request'.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Term deleted

Cl 40 SC 40.5 P40-50 L3 # 138

Law

Comment Type E Comment Status A

The management functions are provided by the MII Management Interface, see 22.2.4.

SuggestedRemedy

Suggest that text '... provided by the Media Independent Interface (Clause 22)' should read '... provided by the MII Management Interface (22.2.4)'.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.5.1.1 P40-51 L17 # 140

Law

Comment Type E Comment Status A

typo

SuggestedRemedy

Suggest that '... the MASTER-SLAVE configuration Enable bit ...' should read '... MASTER-SLAVE Manual Configuration Enable bit ...' (see 32.5.3.1).

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.5.1.1 P40-51 L22 & 25 # 141

Law

Comment Type E Comment Status A

typo

SuggestedRemedy

Change two instances of '1000Base-T' in Name column to '1000BASE-T'.

Proposed Response Response Status C

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.5.1.1 P40-51 L28 # 139
Law

Comment Type E Comment Status A
It is normal to mark reserved bits as write as 0, ignore on read as well as reserved (see 22.2.4.1, bit 0.5:0 for example)

SuggestedRemedy
Suggest that text 'Reserved' in description should read 'Write as 0, ignore on read'.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.5.1.2 P40-53 L12 # 112
Zweig

Comment Type E Comment Status A
Is the bit-order sufficiently well-defined that "8" is a clear definition of M10:M0?

SuggestedRemedy
Specify the bit-ordering explicitly, if necessary.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE. Yes

Cl 40 SC 40.5.1.2 P40-53 L20 # 142
Law

Comment Type E Comment Status A
typo

SuggestedRemedy
Missing close parenthesis, text should read '... duplex')

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.5.2 P40-54 L24 # 18
Rich Seifert

Comment Type E Comment Status A
Missing space

SuggestedRemedy
Insert a space between "Table 40-5" and "is defined".

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.5.2 P40-54 L24 # 143
Law

Comment Type E Comment Status A
typo

SuggestedRemedy
Suggest text '... 40-5is ...' should read '... 40-5 is ...'.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.5.2 P40-55 L33 # 113
Zweig

Comment Type T Comment Status A
I have two issues with this paragraph. First, the discussion appears to be about pseudorandom sequences, not truly random seeds. Secondly, the second half (from "A seed counter shall...") of the paragraph almost makes it sound like the same 7 values of pseudorandom number could be used over and over (which is absurd).

SuggestedRemedy
Change "random" to "pseudorandom" throughout. Break into two paragraphs, with the seed-counter material in the second. Add a requirement that the same seed value shall not appear twice in the sequence more closely than every 2**10 values.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.
Use term "random or pseudorandom"

reject request for additional requirement

Cl 40 SC 40.5.2 P40-55 L44 # 144
Law

Comment Type E Comment Status A
typo

SuggestedRemedy
Suggest text 'MAS TER' should read 'MASTER'.

Proposed Response Response Status C
ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.5.2 P40-56 L4 # 114
Zweig

Comment Type E Comment Status A

The phrase "...by failing link_status..." is imprecise, since it relies on a non-standard usage of the verb to "fail".

SuggestedRemedy

Change "...by failing link_status..." to "...by setting link_status to FAIL,..."

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.6 P40-57 L5-6 # 19
Rich Seifert

Comment Type TR Comment Status A

Clause 35 (GMII) does not define any signal as a "ground circuit". Neither does Clause 22 (MII). Also, there is no requirement to provide either a GMII *or a chassis*, yet this subclause requires either a GMII ground or a chassis ground.

This is not a trivial problem to solve. I understand what you are saying, but the reference point for common-mode tests can be quite implementation-specific. You could reference CM signals to "earth ground", but then I could slip by the tests by not having any low-impedance connection between my product and earth. If you instead reference CM signals to the logic reference of the device, this penalizes anyone who provides good isolation between logic and earth in their product.

SuggestedRemedy

Discuss methods for resolving the specification issue. I will work with the Task Force towards this end.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
See 20

Cl 40 SC 40.6.1.1 P40-57 L12 # 20
Rich Seifert

Comment Type T Comment Status A

There is no requirement to have a frame ground.

SuggestedRemedy

Change "frame ground" to "frame ground (if any)".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Common mode tests use as a reference the Common mode return point.

Cl 40 SC 40.6.1.1 P40-57 L15 # 152
Law

Comment Type T Comment Status A

I believe that in 1997 IEC issues all existing publications a designation in the 60000 series. Thus IEC 60 became IEC 60060, IEC 950 became IEC 60950. IEEE 802.3-1998 has been published with these changes made, I believe that 802.3ab should make these corrections now.

SuggestedRemedy

Also on:-
Page 40-57, Line 16
Page 40-57, Line 19
Page 40-57, Line 21
Page 40-80, Line 10
Page 40-90, Line 5
and the PICS references to the above.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.6.1.1.1 P40-58 L19 # 115
Zweig

Comment Type E Comment Status A

The use of "all frequencies" is incorrect, since (in the usual way of interpreting English) a value of y that causes the attenuation to violate 40.7.2.1 at some frequencies would fulfill the requirement not to violate it at all frequencies.

SuggestedRemedy

Rephrase in the positive as: "...meets the requirements in 40.7.2.1 at all frequencies..." (2 places)

Proposed Response Response Status C

ACCEPT IN PRINCIPLE. Change to "any frequency"

Cl 40 SC 40.6.1.1.2 P40-58 L32 # 145
Law

Comment Type E Comment Status A

Suggest reword of last two sentences of this paragraph would make it clearer.

SuggestedRemedy

Suggest replace last two paragraphs with the text 'PHYs without a GMII shall provide a means to enable these modes for conformance testing'.

Proposed Response Response Status C

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.6.1.1.2 P40-59 L2 # 116
Zweig

Comment Type T Comment Status A

My understanding of crosstalk issues suggests that the relative phase of the symbols on each of the 4 pairs in each of the test modes matters. Either the test mode should output the nonzero symbols simultaneously (to maximize crosstalk) or locked out-of-phase (so that the impact on the other pairs could be measured). Otherwise, it seems that there might be apples-to-oranges comparisons between implementations if some test modes are implemented in-phase and others out-of-phase.

SuggestedRemedy

Define the relative phase of the sequences of symbols to be output in each test mode on each of the channels. A sentence like "Each channel commences with the sequence simultaneously." would be sufficient, unless the channels need to be held out-of-phase.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

Already done
See page 40-59 line 33 and page 40-43 line 32

Cl 40 SC 40.6.1.1.2 P40-60 L26 # 146
Law

Comment Type E Comment Status A
typo

SuggestedRemedy

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.6.1.1.2 P40-61 L2 & 26 # 147
Law

Comment Type E Comment Status A
typo

SuggestedRemedy

Remove the title from the top of these two figures as they already have correctly IEEE formatted titles below them.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.6.1.1.3 P40-64 L4 # 21
Rich Seifert

Comment Type E Comment Status A

Footnotes are generally reserved for pointers to reference documents. They are not used for technical notes. Technical notes should be provided in the running text, as a "Note--".

This is a global comment. The problem occurs here, and on p 40-64 ln 37, p40-79 ln 7, p40-81 ln 38, p40-82 ln 34

SuggestedRemedy

Move the footnote to a text Note.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.6.1.2 P40-65 L7 # 148
Law

Comment Type T Comment Status A
Incorrect cross-reference

SuggestedRemedy

40.3.1.3 is the PCS TX function, 40.4.2.2 is the PMA transmit function. As the text is referring to the PMA Tx function suggest the text '... Transmit function specified in 40.3.1.3 ...' should read '... Transmit function specified in 40.4.2.2 ...'.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.6.1.2.1 P40-65 L30 & 31 # 149
Law

Comment Type E Comment Status A
Suggest reword of the sentence.

SuggestedRemedy

Suggest text '... shall differ from 0.5 times the average of the absolute values of the peaks of the wave form at points A and B by less than 2%.' should read shall differ less than 2% from 0.5 times the average of the absolute values of the peaks of the wave form at points A and B.'.

Proposed Response Response Status C
ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.6.1.2.3 P40-68 L9 # 117
Zweig

Comment Type E Comment Status A

The values in Tables 40-10 and 40-11 ought to be made available electronically. I would suggest having a .TXT file appended to the .PDF file for the electronic version of the standard, and/or made available on a Web site.
SuggestedRemedy =

SuggestedRemedy

Proposed Response Response Status C

ACCEPT.
In addition:
1. Post MatLab code permanently to 802.3 website
2. Add URL reference to document

Cl 40 SC 40.6.1.2.4 P40-73 L15 # 100
Thompson

Comment Type TR Comment Status A

The "Editor's Note" on lines 14-16 is not appropriate for a final standard. Further, there is no normative reference to "MATLAB" and access to it is most certainly a requirement for establishing conformance to this proposed standard.

SuggestedRemedy

Remove the "Editor's Note" on lines 14-16.
Add a normative reference to MATLAB and procurement information in the normative reference section.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.6.1.2.4 P40-73 L15-16 # 22
Rich Seifert

Comment Type E Comment Status A

IEEE 802.11 distributes a floppy disk with their standard containing the formal code specification of their MAC

SuggestedRemedy

Include a floppy disk (or CD ROM) with any appropriate MATLAB code, if needed.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
The task force will explore having this information permanently posted to the IEEE802 website.

Cl 40 SC 40.6.1.3 P40-76 L34 # 150
Law

Comment Type T Comment Status A

Incorrect cross-reference

SuggestedRemedy

40.3.1.4 is the PCS RX function, 40.4.2.3 is the PMA receive function. As the text is referring to the PMA Rx function suggest the text '... Receive function specified in 40.3.1.4 ...' should read '... Receive function specified in 40.4.2.3 ...'

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.6.1.3.1 P40-76 L43 # 24
Rich Seifert

Comment Type TR Comment Status A

The frame loss rate specified does not correspond EITHER to a 10⁻¹⁰ symbol error rate OR a 10⁻¹⁰ BER. This affects 40.6.1.3.4, p40-78 ln 2-3 also.

SuggestedRemedy

Change the measurement requirement to a frame loss rate of less than 10⁻⁷ for 125 octet frames (2 places), which at least corresponds to the correct BER.

Proposed Response Response Status C

ACCEPT.
With 125 octet frames . .

Cl 40 SC 40.6.1.3.1 P40-76 L43 # 23
Rich Seifert

Comment Type E Comment Status A

The term "bring up" is undefined slang.

SuggestedRemedy

Change to "reset completion" or another appropriate term.

Proposed Response Response Status C

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.6.1.3.3 P40-77 L13-14 # 53

Rich Seifert

Comment Type T Comment Status A

It is unclear whether the copper reference plane should be connected to an earth reference or not.

SuggestedRemedy

Clarify whether or not the plane should be connected to an earth reference.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Add text to clarify--implicit connections between chassis grounds of equipment under test and ground plane of test fixture

Cl 40 SC 40.6.1.3.3 P40-77 L3 - 20 # 151

Law

Comment Type T Comment Status A

There appears to be no reference in the text to the Balun(s) shown in the associated diagram (40-25). Also the text states that the cable be 'connected between two 1000BASE-T PHYs (line 8) and terminated in 'MDI connector plug specified in 40.8.1' (line 10) making it unclear where the Balun fits in this arrangement. Suggest that this be clarified if necessary.

SuggestedRemedy

see comment

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Delete baluns
dimension--clamp to receiver is 20cm

Bob Campbell to provide choke data (and baluns data in annex)
ensure that pointer mentions clamp, baluns and choke data are in annex

Cl 40 SC 40.6.1.3.3 P40-77 L4 # 25

Rich Seifert

Comment Type E Comment Status A

CM noise is generated by ANY EM field, not just high-energy ones.

SuggestedRemedy

Change "high-energy" to "electromagnetic".

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.6.1.4 P4-78 L26-50 # 5

Rich Seifert

Comment Type E Comment Status A

This subclause (and all included subclauses) belongs in the section on MDI specifications, not PMA.

SuggestedRemedy

Move this and all included subclauses to the appropriate place within 40.8.

Proposed Response Response Status C

ACCEPT.

Cl 40 SC 40.6.1.4.4 P40-80 L # 78

Rich Seifert

Comment Type TR Comment Status A

There is a requirement for shorts of any individual pair, but no requirement to protect against shorts between pairs, which may be a common occurrence.

SuggestedRemedy

Include a requirement for fault tolerance for shorts of any wire to any other wire within a 4-pair cable.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.
Already in

Cl 40 SC 40.6.1.4.4 P40-80 L3 # 40

Rich Seifert

Comment Type E Comment Status A

The term "port of the MDI" is undefined. The MDI comprises a connector with wire pairs, not system ports.

SuggestedRemedy

Change "Each duplex port of the MDI..." to "Each wire pair of the MDI" or other appropriate term.

Proposed Response Response Status C

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.7.2 P40-81 L29 # 79
 Rich Seifert
 Comment Type E Comment Status A
 Delete the word, "Also"
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.7.4 P40-83 L45 # 80
 Rich Seifert
 Comment Type E Comment Status A
 Change "...four channels is properly assembled..." to "...four channels can be properly re-assembled..."
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.7.5 P40-84 L11 # 81
 Rich Seifert
 Comment Type E Comment Status A
 Change "inteferece's" to "interference" (Delete "apostrophe-s").
 SuggestedRemedy
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.7.5 P40-84 L34 # 118
 Zweig
 Comment Type E Comment Status A
 The definition of ISI is incomplete. It isn't clear from it that the interference is with another symbol on the same channel at some other point in time.
 SuggestedRemedy
 Add the words "on the same channel" before the period at the end of item (d).
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.8 P40-85 L3 # 52
 Brad Booth
 Comment Type E Comment Status A
 Paragraph is confusing
 SuggestedRemedy
 "The link topology requires a crossover function in a DTE-to-DTE connection. See 40.x.x for a description of the optional auto crossover function."
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.8.1 P40-85 L8 # 101
 Thompson
 Comment Type E Comment Status A
 The reference to the 8-way connector spec uses the old IEC numbering scheme. This does not match the reference clause call-out of the 8-way connector spec in IEEE Std. 802.3 1998 Edition. (Geoff stipulated "ER," but Database does not allow "ER.")
 SuggestedRemedy
 Change to IEC 60603-7.
 Check and correct additional instances of this error throughout the rest of the draft by doing a global search on the string "IEC".

Proposed Response Response Status C
 ACCEPT.

Cl 40 SC 40.8.1 P40-85 L8 - 9 # 153
 Law
 Comment Type T Comment Status A
 I believe that in 1997 IEC issues all existing publications a designation in the 60000 series. IEEE 802.3-1998 has been published with these changes made, I believe that 802.3ab should make these corrections now.
 SuggestedRemedy
 Suggest that 'IEC 603-7' should now read 'IEC 60603-7:1990'.
 Proposed Response Response Status C
 ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.8.3 P40-86 L # 76

Brad Booth

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

Sub-clause 40.8 describes the MDI, but it cannot describe the auto-crossover state machine because the state machine requires access to signals only associated with the PHY.

SuggestedRemedy

Move 40.8.3 to 40.4.3.3.

Proposed Response Response Status **C**

ACCEPT.

Cl 40 SC 40.8.3 P40-86 L 17 # 102

Thompson

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

There has never been an acknowledged "need" for crossover cables for any implementation of 802.3 on balanced pair. In fact the recommendation of 802.3 has always been that anything is better than using crossover cables. This text should not be here as it implies that crossover cables are an acceptable way of dealing with the problem when the optional automatic configuration method is not provided.

SuggestedRemedy

1. Change the text so that the term "crossover cable" is eliminated. If required the preferred methods are:
 - a) A switch on the box for MDI/MDI-X
 - b) A connector adapter that provides a cross-over function
2. Eliminate the problem entirely. Make it non-optional, i.e. mandatory

Proposed Response Response Status **C**

ACCEPT IN PRINCIPLE.

Work with option 1

Provide additional text to explain how to perform the crossover function in the absence of Auto Xover capability, by modifying text from T4.

Cl 40 SC 40.8.3.1.2 P40-87 L 41 # 67

Brad Booth

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

There is no explanation as to how the auto crossover state machine gets access to linkpulse which is an internal variable within Clause 28 auto-negotiation

SuggestedRemedy

Add a service primitive to Clause 28 (and a description in Clause 40) that permits the passing of the linkpulse variable from the Clause 28 to Clause 40.

"28.2.6.3 PMA_LINKPULSE.request

This primitive is generated by Auto-Negotiation to indicate that a valid Link Pulse as transmitted in compliance with Figure 14-12 has been received.

28.2.6.3.1 Semantics of the service primitive

PMA_LINKPULSE.request(linkpulse)

The linkpulse parameter shall assume one of two values: TRUE or FALSE.

The linkpulse=FALSE mode shall be used by the Auto-Negotiation function to indicate that the Receive State Diagram has performed a state transition.

The linkpulse=TRUE mode shall be used by the Auto-Negotiation function to indicate that a valid Link Pulse has been received.

28.2.6.3.2 When generated

The Auto-Negotiation function shall generate this primitive to indicate to the PHY how to respond, in accordance with the state diagram of Figure 28-15.

Upon power-on or reset, if the Auto-Negotiation function is enabled

(mr_autoneg_enable=true) the PMA_LINKPULSE.request(FALSE) message shall be issued to all technology-dependent PMAs. If Auto-Negotiation is disabled at any time including at power-on or reset, the state of PMA_LINKPULSE.request(linkpulse) is implementation dependent.

28.2.6.3.3 Effect of receipt

The effect of receipt of this primitive shall be governed by the receiving technology-dependent PMA function, based on the intent specified in the primitive semantics."

Change linkpulse definition in 28.3.1 to read:

"linkpulse

This variable is defined in 28.2.6.3.1."

Add corresponding additions to the PICS of Clause 28. Add definition to Clause 40.

Proposed Response Response Status **C**

ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC 40.8.3.1.2 P40-87 L45 # 66
Brad Booth

Comment Type E Comment Status A

The reference to 36.2.5.1.3 should not be used as this POWER_ON variable has no relationship to 1000BASE-X.

SuggestedRemedy

Change to read:
"POWER_ON
Condition that is true until such time as the power supply for the device that contains the PCS has reached the operating region. The condition is also true when the device has low power mode set via Control register bit 0.11.
Values: FALSE; The device is completely powered (default).
TRUE; The device has not been completely powered.
NOTE—POWER_ON evaluates to its default value in each state where it is not explicitly set."

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40.9 P40-89 L3-4 # 83
Rich Seifert

Comment Type TR Comment Status A

Currently, you have some MDI specifications within the PMA subclause, yet this statement indicates that it is not necessary to expose any PMA interface, which would include the MDI! The only PCS or PMA interface that may or may not be exposed is the GMII, which is already declared optional. In addition, the requirement for a GMII (if implemented) to conform to Clause 35 is already present elsewhere in the standrd (i.e., in Clause 35). Thus, this subclause is completely redundant.

SuggestedRemedy

Delete the entire subclause.

Proposed Response Response Status C
ACCEPT.

Link to comment 5--Move MDI specs to single location

Cl 40 SC 40A.2 P40A-119 L6 # 105
Thompson

Comment Type E Comment Status A

through line 27.
The drawing style of this drawing is a significant departure from elsewhere in the standard, particularly with respect to line weight. This is true to such an extent that these 2 figures stick out like a sore thumb.

SuggestedRemedy

Redraw with lighter line weights. Fig 14-2 while not particularly beautiful is another example of the same type of diagram.

Proposed Response Response Status C
ACCEPT.

Cl 40 SC 40B. P40B-120 L10 # 106
Thompson

Comment Type E Comment Status A

The reproduction quality of Figure 40B-1 is very poor. In particular the quality of the text reproduction in the figure is abysmal. Since it is my suspicion that the source of the figure is the same as that of Figure 40B-2 this seems like a problem that should be fixable.

SuggestedRemedy

Import figure 40B-1 on something other than a bit-map basis or at least jump the resolution to that used in Figure 40B-2. On closer inspection 40B-2 isn't all that great either but it sure is better than 40B-1.

Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

Cl 40 SC Fig 40-10a P40-39 L # 35
Brad Booth

Comment Type TR Comment Status A

"receiving" variable no longer exists

SuggestedRemedy

change "receiving" to "1000BTrceive"

Proposed Response Response Status C
ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC Fig 40-13 P40-42 L40-49 # 13
Rich Seifert
Comment Type E Comment Status A
Move the vertical line indicating "MDI" to the left, to properly align with the MDI signals.
SuggestedRemedy
Proposed Response Response Status C
ACCEPT IN PRINCIPLE. Figure redrawn

Cl 40 SC Fig 40-29 P40-80 L 12-22 # 77
Rich Seifert
Comment Type E Comment Status A
In 1000BASE-T, the DUT has both a driver AND a receiver on each wire pair.
SuggestedRemedy
Show a transceiver in the figure, rather than just a driver symbol.
Proposed Response Response Status C
ACCEPT IN PRINCIPLE.

Cl 40 SC Fig 40-3 P40-5 L 39-47 # 47
Rich Seifert
Comment Type E Comment Status A
The MDI vertical aligns with "AutoNegotiation" rather than the MDI.
SuggestedRemedy
Move the vertical line to properly align with the MDI.
Proposed Response Response Status C
ACCEPT. Figure redrawn

Cl 40 SC Fig 40-4 P40-13 L 30 # 50
Rich Seifert
Comment Type E Comment Status A
Eliminate extraneous horizontal line.
SuggestedRemedy
Proposed Response Response Status C
ACCEPT. Figure redrawn

Cl 40 SC Fig 40-5 P40-15 L 18,41 # 14
Rich Seifert
Comment Type E Comment Status A
Change "TX_EN" to "tx_enable" (the proper name for the signal in the PCS).
Elimiate extraneous left arrow on line 41.
SuggestedRemedy

Proposed Response Response Status C
ACCEPT. Figure redrawn

Cl 40 SC Fig 40-8 P40-37 L # 12
Rich Seifert
Comment Type E Comment Status A
Move the exit condition for the "Disable Data Transmission" state closer to the exit line.
It would be clearer if the "Else" exit condition for the "Enable Data Transmission" state were labeled "tx_mode = SEND_N".
SuggestedRemedy

Proposed Response Response Status C
ACCEPT.

Cl 40 SC Figure 40-13 P40-42 L # 61
Brad Booth
Comment Type TR Comment Status A
Auto-negotiation is not part of the PMA sublayer
SuggestedRemedy
Remove arrows and "PMA" at the bottom of the figure
Proposed Response Response Status W
ACCEPT.

Cl 40 SC Figure 40-15 P40-49 L 26 # 63
Brad Booth
Comment Type E Comment Status A
Link should be in lower case.
SuggestedRemedy
change "... Link_control and Link_status..."to "... link_control and link_status
Proposed Response Response Status C
ACCEPT.

P802.3ab Draft 5.0 Comments

Cl 40 SC Figure 40-3 P40-5 L # 91
 Brad Booth
 Comment Type TR Comment Status A
 Diagram contains too much detail and incorrect information. Auto-negotiation is not part of the PMA, nor does it interface to the MDI.
 SuggestedRemedy
 Change diagram to be similar to that used in Clause 24 and Clause 36. Proposed solution to be submitted to editor and reflector prior to ballot closing date.
 Proposed Response Response Status W
 ACCEPT.

Cl 40 SC Figure 40-4 P40-14 L # 98
 Brad Booth
 Comment Type TR Comment Status A
 Figure shows auto-negotiation as part of the PMA when in fact it is not.
 SuggestedRemedy
 Remove arrows indicating PCS, PMA and PHY from the bottom of the diagram
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC Figure 40-4 P40-14 L # 64
 Brad Booth
 Comment Type E Comment Status A
 Miscellaneous line in the lower left hand corner of the figure.
 SuggestedRemedy
 Remove line
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC Figure 40-5 P40-15 L # 86
 Brad Booth
 Comment Type E Comment Status A
 TX_EN on the right hand side of the diagram doesn't come from the PCS TRANSMIT ENABLE block.
 SuggestedRemedy
 Connect the TX_EN arrow on the right hand side to the TX_EN input on the left hand side
 Proposed Response Response Status C
 ACCEPT. Figure redrawn by Booth and Law

Cl 40 SC Figure 40-5 P40-15 L # 54
 Brad Booth
 Comment Type E Comment Status A
 Miscellaneous arrow in the lower right hand corner
 SuggestedRemedy
 Remove.
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC Figure 40-9 P40-38 L # 60
 Brad Booth
 Comment Type E Comment Status A
 1000BTtransmit is missing the last "t" in states "1st CSReset VECTOR", "2nd CSReset VECTOR", "ESD1 VECTOR" and "ESD2_ext_1 VECTOR"
 SuggestedRemedy
 Change "1000BTtransmi" to "1000BTtransmit"
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC Figure 40-9 P40-38 L14 # 59
 Brad Booth
 Comment Type TR Comment Status A
 Incorrect variable name used
 SuggestedRemedy
 Change "COL <= receiving" to "COL <= 1000BTreceive"
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC Table 40-12 P40-85 L # 82
 Rich Seifert
 Comment Type E Comment Status A
 The second column is completely redundant, and is not referenced in the text.
 SuggestedRemedy
 Delete the column labeled "PHY".
 Proposed Response Response Status C
 ACCEPT.

Cl 40 SC Table 40-3 P40-52 L27 # 17

Rich Seifert

Comment Type E Comment Status A

There are extraneous change bars shown. This is a global comment; the problem occurs in other places in the document, including p 40-52 ln 38, p 40-53 ln 1, p 40-53 ln 12, etc.

SuggestedRemedy

Eliminate all change bars in Clause 40, as it is all new material.

Proposed Response Response Status C

ACCEPT.

Cl 42 SC 42-3 P42-1 L9 # 109

Zweig

Comment Type E Comment Status A

The need for crossover cabling between two DTEs is muddied. The text in this sentence does more harm than good. My reading of the bidirectional nature of the connection is that straight-through cabling connecting two DTEs or a DTE to a DCE will work fine. The crossover in 40.8 appears to be needed to cope with wiring that is not straight-through (it is actually an un-crossover, if I understand correctly). The proposed text does not explain this.

SuggestedRemedy

Add explanation that crossover is only needed if the installed cable plant swaps certain pairs.

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.