

CI 00 SC 0 P 4 L 9 # 50  
 GANGA, ILANGO S Individual  
 Comment Type E Comment Status D  
 First use of 802.3an, 802.3aq, 802.3as should have the trade mark TM.  
 SuggestedRemedy  
 Add TM symbol as per comment  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 00 SC 0 P 4 L 28 # 9  
 THALER, PATRICIA A Individual  
 Comment Type E Comment Status D  
 Why do we include the whole introduction? We could just have the 802.3ap paragraph with an instruction to insert it into the Introduction similar to what was done for 1.4 - then we wouldn't need the note about what is expected to complete before us.  
 SuggestedRemedy  
 Only include the new material with an insertion note to editor.  
 Proposed Response Response Status W  
 PROPOSED REJECT.

The complete introduction should be provided per 2005 IEEE standards style manual (section 9.1).

All the amendments to 802.3-2005 (803.3an, 802.3aq, 802.3as and Cor1) include complete introduction.

CI 00 SC 0 P 5 L 29 # 51  
 GANGA, ILANGO S Individual  
 Comment Type E Comment Status D  
 The hyper link to web page interpretations is incorrect. It points to errata. Fix the weblink  
 SuggestedRemedy  
 Fix the weblink as per comment  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 00 SC 0 P 6 L 8 # 8  
 THALER, PATRICIA A Individual  
 Comment Type E Comment Status D  
 Chairr should have only one r  
 SuggestedRemedy  
 Chair  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.  
 See comment #49.

CI 00 SC 0 P 6 L 8 # 49  
 GANGA, ILANGO S Individual  
 Comment Type E Comment Status D  
 Typo "Chairr"  
 SuggestedRemedy  
 Fix typo to Vice Chair  
 Proposed Response Response Status W  
 PROPOSED ACCEPT.

CI 01 SC 1.4 P 20 L 34 # 10  
 THALER, PATRICIA A Individual  
 Comment Type E Comment Status D  
 Can we adjust the wording so we don't have to update the definition if DME is used in a later addition to .3?  
 SuggestedRemedy  
 Proposed Response Response Status W  
 PROPOSED REJECT.  
 The definition is added to differentiate from the prior definition in 802.5 standard.

**Cl 30**    **SC 30.5.1.1.13**    **P 21**    **L 38**    # **55**  
 GANGA, ILANGO S    Individual

**Comment Type T**    **Comment Status D**

The capabilities and packages for IEEE 802.3 Management are specified in Table 30-1 through Table 30-5 (subclause 30.2.5 Capabilities). Currently the FEC attributes are only listed in Table 30-5 under EFM capabilities. The FEC attributes are also used by Backplane Ethernet. Hence this attributes should also be listed in Table 30-5e Capabilities under oMAU managed object class.

**SuggestedRemedy**

Add FEC attributes to Table 30-5e Capabilities under oMAU managed object class as appropriate.

**Proposed Response**    **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

Add the following text and table to Clause 30:

**30.2.5 Capabilities**

Insert the following new rows into Table 30-1e below aFalseCarriers, and insert the new column (10GBASE-R Forward Error Correction Package (Optional)) in Table 30-1e to the right of 10GBASE-T Operating Margin package(as ammended by Std 802.3an-2006).

aFECability ATTRIBUTE GET X  
 aFECmode ATTRIBUTE GET-SET X  
 aFECCorrectedBlocks ATTRIBUTE GET X  
 aFECUncorrectableBlocks ATTRIBUTE GET X

**Cl 30**    **SC 30.5.1.1.13**    **P 21**    **L 42**    # **11**  
 THALER, PATRICIA A    Individual

**Comment Type E**    **Comment Status D**

"the optional FEC sublayer" comment also applies to page 22 line 5.

**SuggestedRemedy**

Since there is more than one FEC sublayer in IEEE 802.3, should this be "an optional FEC sublayer"

**Proposed Response**    **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

Change "the optional FEC sublayer" to "an optional FEC sublayer" in page 21, line 42.

Make the same change to page 22 line 5.

**Cl 45**    **SC 45.2.1.1**    **P 25**    **L 16**    # **4**  
 MARRIS, ARTHUR    Individual

**Comment Type E**    **Comment Status D**

There is a note in IEEE 802.3an saying that Table 45-4 is going to be amended by 802.3ap. 802.3ap needs to delete this note.

**SuggestedRemedy**

Add editorial instruction saying the note needs to be deleted and crossed out text:  
 NOTE--The encoding of bits 13 and 6 is stated to be the same as Clause 22 in the body text above but Table 45-4 is not aligned to the Clause 22 definition. This encoding of these bits in Table 45-4 is expected to be aligned to the Clause 22 definition in amendment IEEE P802.3ap, at date of publication.

**Proposed Response**    **Response Status W**

PROPOSED ACCEPT.

**Cl 45**    **SC 45.2.1.1.4**    **P 25**    **L 28**    # **6**  
 MARRIS, ARTHUR    Individual

**Comment Type E**    **Comment Status D**

IEEE Std 802.3aq-2006 has now been published so the Editor's note needs to be updated to reflect this.

**SuggestedRemedy**

Change references from P802.3aq/D4.0 to IEEE Std 802.3aq-2006 and update editor's notes as appropriate throughout Clause 45.

**Proposed Response**    **Response Status W**

PROPOSED ACCEPT.

**Cl 45**    **SC 45.2.1.1.4**    **P 28**    **L 29**    # **12**  
 THALER, PATRICIA A    Individual

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

Normal format for Editor's note has a box around the note and the statement "to be removed prior to final publication" Also grammar is messed up on the sentence starting "Below". Is it suppose to say "The change instruction and table markup below are based on a combination of the IEEE Std 802.3an-2006 and P802.3aq/D4.0 updates."?

**SuggestedRemedy**

Use correct format and correct grammar

**Proposed Response**    **Response Status W**

PROPOSED ACCEPT IN PRINCIPLE.

The format for the editor's note will be corrected.

802.3aq has now been published and the note will be updated to reflect this also.

*Cl* 45    *SC* 45.2.7.6    *P* 46    *L* 42    # 13  
 THALER, PATRICIA A    Individual  
*Comment Type*    **E**    *Comment Status*    **D**  
 subject verb agreement  
*SuggestedRemedy*  
 "use" should be "uses"  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* 45    *SC* 45.5.3.9    *P* 56    *L* 36    # 45  
 MCCLELLAN, MR BRETT A    Individual  
*Comment Type*    **GR**    *Comment Status*    **D**  
 PICS AM22 as published in 802.3an-2006 is ambiguous and should be clarified for 802.3ap.  
 The text "Writing the bit to one is ignored" is unclear.  
 It does not state the condition under which writing to the bit will be ignored.  
*SuggestedRemedy*  
 Add AM22 to this section and change AM22 from:  
 "Writing the bit to one is ignored"  
 to:  
 "Writing this bit to one is ignored if 7.1.3 = 0 or Auto-Negotiation is disabled."  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* 48    *SC* 48.2.7    *P* 57    *L* 8    # 15  
 BAUMER, HOWARD A    Individual  
*Comment Type*    **E**    *Comment Status*    **D**  
 Redundant wording  
*SuggestedRemedy*  
 change:  
 When the PCS is used with a 10GBASE-KX4 PMD, see Clause 73 for a description of the Auto-Negotiation process. The following requirements apply to a PCS used with a 10GBASE-KX4 PMD.  
 to  
 When the PCS is used with a 10GBASE-KX4 PMD, see Clause 73 for a description of the Auto-Negotiation process, the following requirements apply.  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* 48    *SC* 48.7.4.2    *P* 57    *L* 22    # 42  
 HEALEY, ADAM B    Individual  
*Comment Type*    **E**    *Comment Status*    **D**  
 Typo: trailing "t" in "follows:t"  
*SuggestedRemedy*  
 Per comment.  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* 49    *SC* 49.2.16    *P* 58    *L* 7    # 16  
 BAUMER, HOWARD A    Individual  
*Comment Type*    **E**    *Comment Status*    **D**  
 Redundant wording  
*SuggestedRemedy*  
 change  
 When the PCS is used with a 10GBASE-KR PMD, see Clause 73 for a description of the Auto-Negotiation process. The following requirements apply to a PCS used with a 10GBASE-KR PMD.  
 to  
 When the PCS is used with a 10GBASE-KR PMD, see Clause 73 for a description of the Auto-Negotiation process, the following requirements apply.  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

*Cl* 49    *SC* 49.3.6.5    *P* 58    *L* 20    # 41  
 HEALEY, ADAM B    Individual  
*Comment Type*    **E**    *Comment Status*    **D**  
 Typo: trailing "t" in "functionst"  
*SuggestedRemedy*  
 Per comment.  
*Proposed Response*    *Response Status*    **W**  
 PROPOSED ACCEPT.

Cl **69A** SC **69A.1** P **181** L **9** # **47**  
 SAWYER, T SHANNON Individual

Comment Type **TR** Comment Status **D**

As a pile on to ghiasi\_01\_0906 (comment 260), there is no explicit test to ensure transceiver interoperability for systems with low frequency jitter, wander, noise or other system effects.

*SuggestedRemedy*

Add a low frequency RX jitter tolerance test similar to 802.3ae which tests both the RX CDR loop BW and the RX DFE loop BW in the presence of a sinusoidal aggressor on the RX data. This is meant to extend the low frequency corner of the RX Interference Tolerance test.

Proposed mask for 1000BASE-KX, 10GBASE-KX4 and 10GBASE-KR:

200kHz 1.0UIpp

5MHz 0.1UIpp

f1 0.1UIpp (f1 is frequency of port type in table 69B-1)

Proposed Response Response Status **W**

PROPOSED REJECT.

Pending task force discussion...

Cl **69A** SC **69A.2.1** P **216** L **15** # **28**  
 BAUMER, HOWARD A Individual

Comment Type **T** Comment Status **D**

This is actually against 69A.2.1: Wrong condition specified. A minimum transition for the transmitted signal is a best case condition where as a maximum transition time a worse case condition. In order to get the receiver tested to the allowable transmitter states the worse case condition should be used and if it is not obtainable then the test setup should be derated from there.

*SuggestedRemedy*

change ".. less than minimum specified transition time of the port type being tested" to ".. less than the maximum specified transition time of the port type being tested" also Tr(min) on line 22 should be changed to Tr(max)

Proposed Response Response Status **W**

PROPOSED ACCEPT IN PRINCIPLE.

The commenter was led to believe that transition time refers to the values in the transmitter characteristics tables but it is intended to apply to the interference tolerance parameters. The interference tolerance parameters specify a minimum transition time for the pattern generator that is the maximum value in the range allowed for a compliant transmitter. In this context, "minimum" is the correct word.

To improve clarity, refer to this parameter as "Applied transition time" to be consistent with other values in the interference tolerance table and clearly differentiate it from the transmitter compliance values.

CI **69B** SC **69B** P **185** L **2** # **43**  
 JONES, WILLIAM W Individual

Comment Type **TR** Comment Status **D**

I'm extremely pleased with changes in the 69B.4 channel parameters; specifically the removal of the PILD equation (69B-24) and the Psys equation (69B-25), and the accounting for these penalties directly in the ICRmin equation (69B-26). ICR now adequately enables flexibility in design trade-offs for backplane interconnects. These changes remove my concerns on making the channel parameters normative. Normative channel parameters are essential to enabling appropriate tests by which to assess the claim for conformance of the implementation.

*SuggestedRemedy*

Clause: 69B, Page 185, Line: 2  
 Replace: informative With: normative  
 Clause: 69B.2, Page 185, Line: 9-10  
 Delete: informative  
 Clause: 69B.4.1, Page 186, Line: 5-6  
 Delete: informative  
 Clause: 69B.4.1, Page 186, Line: 8-9  
 Delete: informative  
 Clause: 69B.4.1, Page 186, Line: 11-12  
 Delete: informative  
 Clause: 70.8, Page 66, Line: 9-10  
 Delete: informative  
 Clause: 71.8, Page 82, Line: 29-30  
 Delete: informative  
 Clause: 72.8, Page 115, Line: 9-10  
 Delete: informative  
 Clause: 69B.4.6, Page: 191, Line 41-43  
 Replace: The following equations and informative model assume that aggressors and victim may driven by a compliant PHY of any type.  
 With: The following equations and model assume that aggressors and victim may driven by a compliant PHY of any type.  
 Clause: 69B.4.6.4, Page 192, Line 16:  
 Replace: It is recommended that ICRfit be greater than than or equal to ICRmin as defined by the following equation:  
 With: ICRfit shall be greater than or equal to ICRmin as defined by the following equation:  
 Subclause: 69B.4.5, Page 190, Line 47-48:  
 Replace: It is recommended that the channel return loss, RL, measured in dB at TP1 and TP4, be greater than or equal to RLmin as defined by the following equations:  
 With: The channel return loss, RL, measured in dB at TP1 and TP4, shall be greater than or equal to RLmin as defined by the following equations:  
 Subclause: 69B.4.4.  
 Page 190: Line 8-9  
 Replace: It is recommended that ILD be within the high confidence region defined by the following equations:  
 With: The ILD shall be within the high confidence region defined by the following equations:

Proposed Response Response Status **W**  
 PROPOSED REJECT.

Refer to the reponse to Draft 3.0 comment #16.

This point was debated by the Task Force and it was decided that the channel parameters would remain informative, which is consistent with the position assumed throughout working group ballot.

The commenter offers no new points to influence the discussion so earlier decision stands.

CI **69B** SC **69B.4** P **220** L # **44**  
 MCCLELLAN, MR BRETT A Individual

Comment Type **TR** Comment Status **D**

The channel parameters in this section have been updated in draft 3.1. However, these parameters will only ensure interoperability if they are specified as normative requirements rather than informative text.

*SuggestedRemedy*

Change informative references to normative requirements.

Proposed Response Response Status **W**  
 PROPOSED REJECT.

Refer to comment #43

CI **69B** SC **69B.4.1** P **221** L **5** # **37**  
 HEALEY, ADAM B Individual

Comment Type **E** Comment Status **D**

In Table 69B-1, the cross-references to IL\_max, ILD\_min, and ILD\_max unecessarily favors these parameters and adds no real value.

*SuggestedRemedy*

Delete these rows from the table.

Proposed Response Response Status **W**  
 PROPOSED ACCEPT.

**Cl 69B**    **SC 69B.4.6**                      **P 230**                      **L 7**                      # **29**  
 BAUMER, HOWARD A                      Individual  
*Comment Type*    **E**                      *Comment Status*    **D**  
 This is actually against 69B.4.6: missing "be"  
*SuggestedRemedy*  
 change ".. victim may driven .." to ".. victim may be driven .." .. victim are driven .."  
*Proposed Response*                      *Response Status*    **W**  
 PROPOSED ACCEPT IN PRINCIPLE.  
 Change to "...victim are driven..."

**Cl 69B**    **SC 69B.4.6.4**                      **P 231**                      **L 49**                      # **30**  
 BAUMER, HOWARD A                      Individual  
*Comment Type*    **E**                      *Comment Status*    **D**  
 69B.4.6.4This is actually against : extra "than"  
*SuggestedRemedy*  
 remove extra "than"  
*Proposed Response*                      *Response Status*    **W**  
 PROPOSED ACCEPT.

**Cl 69B**    **SC 69B.4.6.4**                      **P 232**                      **L 10**                      # **31**  
 BAUMER, HOWARD A                      Individual  
*Comment Type*    **E**                      *Comment Status*    **D**  
 This is actually against 69B.4.6.4: missing "a"  
*SuggestedRemedy*  
 change "It also assumes 3 dB .." to "It also assumes a 3 dB .."  
*Proposed Response*                      *Response Status*    **W**  
 PROPOSED ACCEPT.

**Cl 70**    **SC 70.1**                                      **P 69**                      **L 18**                      # **17**  
 BAUMER, HOWARD A                      Individual  
*Comment Type*    **T**                      *Comment Status*    **D**  
 Mandatory Clause 73 missing  
*SuggestedRemedy*  
 Add row to table 70-1  
 73--Auto-Negotiation for Backplane Ethernet | Required  
*Proposed Response*                      *Response Status*    **W**  
 PROPOSED ACCEPT.  
 Also see comments #5,18,19,53,54,56

**Cl 70**    **SC 70.7.2**                                      **P 69**                      **L 12**                      # **53**  
 BROWN, MATTHEW                      Individual  
*Comment Type*    **T**                      *Comment Status*    **D**  
 According to Table 69-1 auto-negotiation is required for all three backplane PMDs. It would be helpful to indicate that requirement within each of the respective clauses.  
*SuggestedRemedy*  
 In Table 70-1, 71-1, and 72-1, add row to state that Clause 73 Auto-Negotiation is required.  
*Proposed Response*                      *Response Status*    **W**  
 PROPOSED ACCEPT.  
 Also see comments #5,17,18,19,54,56.

**Cl 70**    **SC 70.7.2.1**                                      **P 78**                      **L 30**                      # **38**  
 HEALEY, ADAM B                      Individual  
*Comment Type*    **E**                      *Comment Status*    **D**  
 m\_TC refers to a parameters calculated from channel data (per Equation 69A-6). This row defines the minimum value specified for this test.  
*SuggestedRemedy*  
 Change "m\_TC" to "m\_TC (min)".  
*Proposed Response*                      *Response Status*    **W**  
 PROPOSED ACCEPT.

Cl 71 SC 71.1 P 88 L 16 # 54  
BROWN, MATTHEW Individual

Comment Type G Comment Status D

According to Table 69-1 auto-negotiation is required for all three backplane PMDs. It would be helpful to indicate that requirement within each of the respective clauses.

*SuggestedRemedy*

In Table 70-1, 71-1, and 72-1, add row to state that Clause 73 Auto-Negotiation is required.

Proposed Response Response Status W

PROPOSED ACCEPT.

Also see comments #5,17,18,19,53,56.

Cl 71 SC 71.1 P 88 L 24 # 18  
BAUMER, HOWARD A Individual

Comment Type T Comment Status D

Mandatory Clause 73 missing

*SuggestedRemedy*

Add row to table 71-1  
73--Auto-Negotiation for Backplane Ethernet | Required

Proposed Response Response Status W

PROPOSED ACCEPT.

Also see comments #5,17,19,53,54,56

Cl 71 SC 71.7.2.1 P 99 L 7 # 39  
HEALEY, ADAM B Individual

Comment Type E Comment Status D

m\_TC refers to a parameters calculated from channel data (per Equation 69A-6). This row defines the minimum value specified for this test.

*SuggestedRemedy*

Change "m\_TC" to "m\_TC (min)".

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 6.10.2.3 P 114 L 45 # 1  
SZCZEPANEK, ANDRE Individual

Comment Type E Comment Status D

"The format of the coefficient update field shall be shown in Table 72-5"  
This makes it normative that the format be shown in the table, not that the table be normative !

*SuggestedRemedy*

"The format of the coefficient update field shall be as shown in Table 72-5"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 6.10.2.4 P 117 L 4 # 2  
SZCZEPANEK, ANDRE Individual

Comment Type E Comment Status D

"The format of the status report field shall be shown in Table 72-6"

*SuggestedRemedy*

"The format of the status report field shall be as shown in Table 72-6"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 7.2.1 P 138 L 40 # 3  
SZCZEPANEK, ANDRE Individual

Comment Type E Comment Status D

"The receiver interference tolerance shall consist of two separate tests be measured as described in Annex 69A"  
remove redundant text "be measured"

*SuggestedRemedy*

"The receiver interference tolerance shall consist of two separate tests as described in Annex 69A"

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 72.1 P 109 L 30 # 56  
 BROWN, MATTHEW Individual

Comment Type T Comment Status D

According to Table 69-1 auto-negotiation is required for all three backplane PMDs. It would be helpful to indicate that requirement within each of the respective clauses.

SuggestedRemedy

In Table 70-1, 71-1, and 72-1, add row to state that Clause 73 Auto-Negotiation is required.

Proposed Response Response Status W

PROPOSED ACCEPT.

Also see comments #17,18,19,53,54.

Table 69-1 indicates mandatory support for AN but 73.1 indicates it is optional. Need to resolve the conflict.

See comment #5

Cl 72 SC 72.1 P 109 L 43 # 19  
 BAUMER, HOWARD A Individual

Comment Type T Comment Status D

Mandatory Clause 73 missing

SuggestedRemedy

Add row to table 71-1  
 73--Auto-Negotiation for Backplane Ethernet | Required

Proposed Response Response Status W

PROPOSED ACCEPT.

Also see comments #17,18,53,54,56.

Table 69-1 indicates mandatory support for AN but 73.1 indicates it is optional. Need to resolve the conflict.

See comment #5

Cl 72 SC 72.6.10.2.3 P 114 L 45 # 20  
 BAUMER, HOWARD A Individual

Comment Type E Comment Status D

Missing "as"

SuggestedRemedy

Change ".. field shall be shown .." to ".. field shall be as shown .."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 72.6.10.2.4 P 117 L 4 # 21  
 BAUMER, HOWARD A Individual

Comment Type E Comment Status D

Missing "as"

SuggestedRemedy

Change ".. field shall be shown .." to ".. field shall be as shown .."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 72.6.10.3.2 P 121 L 21 # 33  
 THALER, PATRICIA A Individual

Comment Type E Comment Status D

My comment on alphabetizing last time should also have been applied to timers.

SuggestedRemedy

max\_timer should be before wait\_timer

Proposed Response Response Status W

PROPOSED ACCEPT.



Cl 72 SC 72.6.10.4.2 P 102 L 18 # 46  
 VALLIAPPAN, MAGESH Individual

Comment Type TR Comment Status D

The initial condition of the TXFIR for 10GKR training is over constrained.  
 Clause 72.6.10.4.2 says -  
 At the start of training the initial value of c(0) shall be set such that v2 is at least 140 mV and satisfies the constraints of 72.7.1.10. Rpre, Rpst and v2 are defined in 72.7.1.10.  
 140mV leaves no margin for INL/DNL and mismatch tolerances in the TXFIR tap weights when amplitude is 800mVpp. In fact, the amplitude would have to be > 900mVpp, within the +/-10% bounds of Rpre/Rpst. I think the intent is that amplitude should be > 800mVpp. So we should just say that.

SuggestedRemedy

Rpre, Rpst are defined in 72.7.1.10. At the start of training the initial value of c(0) shall be set such that the constraints of 72.7.1.10 are satisfied and the peak-peak differential output voltage shall be greater than or equal to 800mVpp for 1010 pattern.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 72 SC 72.6.10.4.3 P 125 L 22 # 34  
 HEALEY, ADAM B Individual

Comment Type E Comment Status D

Figure 72-6 needs some editorial touch-up. The graphics frame is clipping the top of the figure and the text could be better positioned within the state blocks. Confirmed that these issues also appear in the clean version.

SuggestedRemedy

Per comment.

Proposed Response Response Status W

PROPOSED REJECT. Figure looks OK in clean version

Cl 72 SC 72.7.1 P 105 L 52 # 32  
 GHIASI, ALI Individual

Comment Type TR Comment Status D

Max ouptut jitter specifications is not clear with 3 jitter components adding to 0.335 UI but listing total jitter of 0.28 UI

SuggestedRemedy

Propose to define  
 Max Jitter Ouptut = 0.28 UI  
 Max Deterministic Jitter = 0.15 UI  
 In the table foot note add note "Max Duty Cycle Jitter Portion of DJ < 0.035 UI".  
 In Section 72.7.1.8 You can reference MJSQ as well as define max RJ = 0.28 - DJ.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change Table 72-6 jitter section to read:  
 Random Jitter (BER=10e-12)  
 Deterministic Jitter (Includes Duty Cycle Distortion)  
 Duty Cycle Distortion:  
 Total Jitter: (RJ + DJ) see note a

Note a: Total jitter specification does not allow both RJ and DJ to be at maximum.

Eliminate all other notes

Cl 72 SC 72.7.1.10 P 132 L 9 # 35  
 HEALEY, ADAM B Individual

Comment Type E Comment Status D

The contents of the 72.7.1.10 and 72.7.1.11 were reversed as part of the Draft 3.0 comment resolution. While this was expected to improve the flow of the text, the end result does not flow well either. What is now 72.7.1.11 contains introductory text, which now follows the text it was intended to introduce (e.g. what is now 72.7.1.10). Perhaps the correct approach is to create a separate introductory clause as 72.7.1.10 with subclauses 72.7.1.10.1 or 72.7.1.10.2 which describe the waveform measurement process and transmitter requirements respectively. An alternative is the revert to the original flow of the text, which is how the transmitter jitter requirements 72.7.1.8 and 72.7.1.9 are currently organized.

SuggestedRemedy

Per comment.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.  
 Move Figure 72-12, and the paragraphs before and after Figure 72-12 from 72.7.1.11 to the beginning of 72.7.1.10.

**Cl 72**    **SC 72.7.1.11**    **P 134**    **L 21**    # **22**  
 BAUMER, HOWARD A    Individual

**Comment Type T**    **Comment Status D**  
 Vague requirement

**SuggestedRemedy**  
 Change "For each row of Table 72-7 the magnitude of the values shall vary by no more than 5mV." to "For each row of Table 72-7 the magnitude of the difference between any two columns shall vary by no more than 5mV."

**Proposed Response**    **Response Status W**  
 PROPOSED ACCEPT.

**Cl 72**    **SC 72.7.1.11**    **P 134**    **L 5**    # **36**  
 HEALEY, ADAM B    Individual

**Comment Type E**    **Comment Status D**  
 The footnotes associated with Table 72-8 presents the information in a haphazard way. The information would be better presented as a paragraph in the body text.

**SuggestedRemedy**  
 Move the requirements associated with footnotes (a), (b), and (c) into the body text.

**Proposed Response**    **Response Status W**  
 PROPOSED ACCEPT.

**Cl 72**    **SC 72.7.2.1**    **P 137**    **L 42**    # **48**  
 ABLER, JOSEPH M    Individual

**Comment Type T**    **Comment Status D**  
 In changing the table format the definition of test patterns to be used was changed from pattern 2 OR 3 to 2 AND 3.

**SuggestedRemedy**  
 change back to test pattern 2 OR 3.

**Proposed Response**    **Response Status W**  
 PROPOSED ACCEPT.

**Cl 72**    **SC 72.7.2.1**    **P 138**    **L 10**    # **40**  
 HEALEY, ADAM B    Individual

**Comment Type E**    **Comment Status D**  
 m\_TC refers to a parameters calculated from channel data (per Equation 69A-6). This row defines the minimum value specified for this test.

**SuggestedRemedy**  
 Change "m\_TC" to "m\_TC (min)".

**Proposed Response**    **Response Status W**  
 PROPOSED ACCEPT.

**Cl 73**    **SC 73.1**    **P 125**    **L 7**    # **5**  
 MARRIS, ARTHUR    Individual

**Comment Type T**    **Comment Status D**  
 My understanding is that implementation of auto-negotiation is mandatory for backplane Ethernet. However I cannot find a shall statement to that effect. Table 69-1 implies it is mandatory but there is nothing explicit in the text.

**SuggestedRemedy**  
 Change: The use of Auto-Negotiation is optional.  
 To: Although the use of Auto-Negotiation is optional, 100BASE-KX, 10GBASE-KX4 and 10GBASE-KR port types shall implement Auto-Negotiation.

**Proposed Response**    **Response Status W**  
 PROPOSED ACCEPT IN PRINCIPLE. The best place to put a requirement that applies to a port type is in the Clause that specifies that port type where implementers of the port type are most likely to see it. This also should get it listed as a requirement in the PICS for the PMD Clause.

Add a line for Clause 73 mandatory to the tables in Clauses 70, 71 and 72 that specify the associated PHY layer Clauses. Add PICS entries that cover the requirements and options in these tables (currently none of the lines are reflected in the PICS).

We can also add the statement to Clause 73:  
 While implementation of Auto-Negotiation is mandatory for Backplane Ethernet PHYs, use of Auto-Negotiation is optional.

CI 73 SC 73.1 P 153 L 35 # 52  
 GANGA, ILANGO S Individual

Comment Type T Comment Status D

The line 35 in 73.1 states "It is recommended that a device that has negotiated 1000BASE-KX operation through this clause not perform Clause 37 auto-negotiation". It does not state explicitly state to disable Clause 37. So there is a high possibility that the device at one end either has Clause 37 AN disabled or the PCS/PMA associated with 1000BASE-KX PHY does not have Clause 37 implemented (both are valid configurations) and the link partner at the other end has the Clause 37 enabled. If this situation happens then the link will not come up. (Per Clause 37 AN state machine).

*SuggestedRemedy*

There are two possibilities to resolve this issue. 1. To disable Clause 37 AN when link partners use Clause 73 for AN. 2. The device that desires to turn on Clause 37 should ensure through other implementation dependent mechanisms that link partner supports Clause 37 AN and intends to enable it. Provide appropriate text or a warning note in 73.1 to this effect.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The text in Clause 36 explicitly states that Clause 37 auto-negotiation should be disabled for 1000BASE-KX.

"The variable mr\_an\_enable should be false to disable Clause 37 Auto-Negotiation."

However, this doesn't cover parallel detect well for compatibility with legacy devices so replace with:

"The variable mr\_an\_enable should be false and the variable xmit shall be DATA when 1000BASE-KX operation was negotiated through Clause 73 Auto-Negotiation. When operation was initiated by parallel detection and Clause 37 Auto-Negotiation is present, it shall be used to control the xmit variable. If Clause 37 is not present, xmit shall be DATA." Editor's note: we have no current statement requiring Clause 37 implementation in a 1000BASE-KX PHY.

In 73.1,

A device that performs Clause 37 Auto-Negotiation after Clause 73 Auto-Negotiation will not interoperate with a device that does not perform Clause 37 Auto-Neogation. Therefore, a device that desires to enable Clause 37 Auto-Negotiation after Clause 73 Auto-Negotiation has completed shall ensure through an implementation specific mechanism that the link partner supports Clause 37 Auto-Negotiation and intends to enable it. If Clause 37 Auto-Negotiation is performed after this clause's Auto-Negotiation, then the advertised abilities used in the Clause 37 negotiation shall match those advertised abilities used in the Clause 73 negotiation.

CI 73 SC 73.10.1 P 173 L 42 # 24  
 BAUMER, HOWARD A Individual

Comment Type E Comment Status D

since there is no longer parallel detection for KR the link\_status\_[10GKR] is no longer needed.

*SuggestedRemedy*

delete item 3

Proposed Response Response Status W

PROPOSED REJECT. The variable is still used in the AN GOOD CHECK state to check that the link has come up.

CI 73 SC 73.10.4 P 180 L 17 # 25  
 BAUMER, HOWARD A Individual

Comment Type E Comment Status D

link\_status variable not the same between definition and state diagram. Sub-clause 73.10.1 has link\_stats\_[KX] & link\_status\_[KX4]. State diagram has link\_stats\_KX and link\_status\_KX4.

*SuggestedRemedy*

change p 173, sub-clause 73.10.1, l 40&41 and this state diagram to be the same: link\_stats[KX] & link\_status[KX4]

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 73 SC 73.10.4 P 180 L 38 # 7  
 THALER, PATRICIA A Individual

Comment Type TR Comment Status D

When the AN GOOD CHECK state, the link\_fail\_inhibit\_timer will be started. It will restart auto-negotiation if the selected link takes longer than 40-50 ms to come up (i.e. to produce the signal link\_status=OK from the PCS). However, Clause 72 allows training for 10GBASE-KR to take 500 ms and the link\_status=OK won't occur until that has happened. As a result, valid 10GBASE-KR links may be unable to reach the AN GOOD state.

*SuggestedRemedy*

Change the link\_fail\_inhibit\_timer to use 500-510 ms for the time out when the HCD is 10GBASE-KR. Use the existing time out value when the link is 10GBASE-KX4 or 1000BASE-KX. This is consistent with what was done in Clause 28 to fix a similar problem for 10GBASE-T.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 73 SC 73.11.4.2 P 183 L 13 # 27  
BAUMER, HOWARD A Individual

Comment Type E Comment Status D  
Improper nomenclature, there is no such thing as "baud rate". Baud is a measure of a rate itself (e.g. 10.3125G baud)

SuggestedRemedy  
change "baud rate" to "signaling rate"

Proposed Response Response Status W  
PROPOSED ACCEPT IN PRINCIPLE.  
Actually, it appears that this PICS entry has been obsolete since Draft 2.0. Delete the PICS entry.

Given the current text of 73.5.1.1, the only electrical specifications for DME are peak-to-peak transmit and receive voltages. Should the following text be there?  
"When transmitting DME pages, the transmitter shall comply with the electrical specifications that apply to the supported PHY with the lowest signaling rate. If that is a 10GBASE-KX4 PHY, DME pages shall be transmitted on Lane 0 and Lane 1 to Lane 3 transmitters should be disabled as specified in 71.5.7."

Cl 73 SC 73.3 P 154 L 49 # 23  
BAUMER, HOWARD A Individual

Comment Type T Comment Status D  
Need clarification: is this lane 1 of lanes 1, 2, 3, 4 or lane 1 of lanes 0, 1, 2, 3? Clause 71 uses some references that indirectly indicate the lanes are lanes 0, 1, 2, 3. If the late is true then change this to lane 0.

SuggestedRemedy  
change "then lane 1 of the MDI" to "then lane 0 of the MDI"

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 73 SC 73.9.1.1 P 167 L 18 # 14  
THALER, PATRICIA A Individual

Comment Type E Comment Status D  
"one of three values"

SuggestedRemedy  
SB "one of two values"

Proposed Response Response Status W  
PROPOSED ACCEPT.

Cl 74 SC 74.7.3 P 195 L 48 # 26  
BAUMER, HOWARD A Individual

Comment Type E Comment Status D  
Improper nomenclature, there is no such thing as "baud rate". Baud is a measure of a rate itself (e.g. 10.3125G baud)

SuggestedRemedy  
change "baud rate" to "signaling rate"

Proposed Response Response Status W  
PROPOSED ACCEPT.