Cl **00** *SC* *P* *L* # **20**

Thompson, Geoff — Nortel

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

All reference in the body text that refer to a clause number, a sub-clause number, a table by number or a figure by number should be automatic cross-references.

SuggestedRemedy

Link thoughout the draft.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **0** *P* **1** *L* **29** # **22**

Dawe, Piers — Agilent

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

STd

SuggestedRemedy

Std

Proposed Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **1.4** *P* **4** *L* **12** # **59**

Grow, Robert — Intel

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

The insertion is independent of 802.3ae.

SuggestedRemedy

Change to read ""Insert the following alphabetically into 1.4, and renumber as required.""

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #12

Cl **00** *SC* **EDITORIAL NOTE** *P* **11** *L* **2** # **56**

Grow, Robert — Intel

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

802.3ak when approved on schedule should be the fourth amendment to IEEE Std 802.3. Having reviewed both D5.0 and D5.1 to look for proper modifications to the standard with approved amendments, I find no changes in 802.3ak to either 802.3af or 802.3aj. There are only a few changes where text in 802.3 is changed by 802.3ae and subsequently changed by 802.3ak (e.g., 30.5.1.1.2, where the editorial instruction is correct). I disagree with D5.0 comment 164. Nothing in 802.3ak/D5.1 is dependent on either 802.3aj and 802.3af. The insert alphabetically and renumber additions in 802.3ak/D5.1 are independent of similar instructions in 802.3ae and 802.3af as the same text will result independent of the order in which the insertions to 1.3 and 1.4 are done. I restate my recommendation of D5.0 comment #133.

SuggestedRemedy

Add a sentence to the end of the first paragraph: ""(This amendment does not modify any text of IEEE Std 802.3af-2003 or IEEE std 802.3aj-2003.)"" This is similar to a statement published in 802.3aj.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will add to the end of the second sentence: ", however, the 802.3ak task force believes that the changes contained herein have no impact upon the IEEE Std 802.3af-2003 or IEEE Std 802.3aj-2003 documents. "

Cl **00** *SC* **General** *P* *L* # **57**

Grow, Robert — Intel

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

Most changes are to text published in 802.3ae and not subsequently changed by 802.3af or 802.3aj. My appologies for my recommendation in D5.0 comment 127. Contrary to my understanding at that time, the text ""(IEEE Std 802.3ae-2002)"" should not be included in changes to new clauses introduced by 802.3ae

SuggestedRemedy

Either defer to the publication editor or delete ""(IEEE Std 802.3ae-2002)"" on change instructions on pages 7 through 16 and 19.

Proposed Response *Response Status* **C**

ACCEPT.

Will defer to the publication editor.

Cl **01** *SC* **1.3** *P* **4** *L* **3** # **58**

Grow, Robert Intel

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

This isn't a change, it is an insert. The text doesn't occur in 802.3 or 802.3ae.

SuggestedRemedy

Change editorial instructions to read: ""Insert the following paragraph alphabetically in 1.3.""

Proposed Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **3** *P* **4** *L* **3** # **11**

Thompson, Geoff Nortel

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

The text providing editorial directions that says: ""Change this subclause, as amended by IEEE Std 802.3ae-2002, as follows:"" does not make provision for other 802.3 standards that have been approved since IEEE Std 802.3ae-2002.

SuggestedRemedy

Change to read:"" ""Change this subclause, as amended by drafts previously approved as standard, as follows:"" or some functional equivalent. Make the equivalent change throughout the draft in each appropriate place.

Proposed Response *Response Status* **C**

ACCEPT.

See comment #12

Cl **01** *SC* **4** *P* **4** *L* **12** # **12**

Thompson, Geoff Nortel

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

The text providing editorial directions that says: ""Insert the following alphabetically into 1.4, as amended by IEEE Std 802.3ae-2002, Renumber as required.:"" does not make provision for other 802.3 standards that have been approved since IEEE Std 802.3ae-2002.

SuggestedRemedy

Change to read:"" ""Insert the following alphabetically into 1.4, as amended by drafts previously approved as standard, as follows:"" or some functional equivalent.

Proposed Response *Response Status* **C**

ACCEPT.

Will use "... as amended by all IEEE 802.3 drafts previously approved as standard, ..."

Cl **01** *SC* **4** *P* **4** *L* **15** # **13**

Thompson, Geoff Nortel

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

The definition: ""Twinaxial cable: A cable similar to coaxial cable in construction but containing two insulated inner conductors rather than one."" is adequate and matches the searches that I did on the web. I did also look in the IEC dictionary and some IEEE dictionaries/glossaries. The one I found is marginally better. It already exists in IEEE Std 610.7-1995. Please consider it as a substitute. I do acknowledge that this should certainly no be a gating item in the project schedule.

SuggestedRemedy

Consider: ""twinaxial cable: A cable consisting of two conductors, insulated from each other, within and insulated from another conductor of larger diameter.""

Proposed Response *Response Status* **C**

REJECT.

The 802.3ak task force prefers the current definition.

Cl **01** *SC* **4** *P* **4** *L* **20** # **23**

Dawe, Piers Agilent

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

Per D5.0 comment 109. If we could succinctly make it clear in the definition that in a 4-lane system, UI represents the time quantum of each lane separately, so much the better. For info: http://www.atis.org/tg2k/ has "unit interval: In isochronous transmission, the longest interval of which the theoretical durations of the significant intervals of a signal are all whole multiples."

SuggestedRemedy

If ak is going to beat ah to publication, add 'unit interval' to the definitions list 1.4: The period of time allocated for transmission of one symbol; the inverse of the signaling rate.

Proposed Response *Response Status* **Z**

WITHDRAWN

Cl **30** *SC* **5.1.1.2** *P* **5** *L* **10** # **24**

Dawe, Piers Agilent

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

See what?

SuggestedRemedy

See 30.2.5. ? as in the base document?

Proposed Response *Response Status* **C**

ACCEPT.

Changed to "See 30.2.5" as in the base document. This was somehow dropped in the editing process.

Cl **45** *SC* **2.1.7.4** *P* **11** *L* **36** # **1**

Dove, Daniel HP ProCurve Networki

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

Line 35 - case messed up on word ""CHange"". Line 43,44 the term ""<XREF>"" is visible.

SuggestedRemedy

Line 35 change the word ""CHange"" to ""Change"". Line 43,44 - Make the term ""<XREF>"" invisible.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **2.1.7.4** *P* **11** *L* **36** # **25**

Dawe, Piers Agilent

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

Change

SuggestedRemedy

Change (also 45.2.1.7.5)

Proposed Response *Response Status* **C**

ACCEPT.

See comment #1

Cl **45** *SC* **2.1.7.4** *P* **11** *L* **44** # **14**

Thompson, Geoff Nortel

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

The reference in the sentence that says: ""The description of the transmit fault function for the 10GBASE-CX4 PMD is given in 54.4.10."" should be indicated with an automatic cross reference

SuggestedRemedy

Change to: ""The description of the transmit fault function for the 10GBASE-CX4 PMD is given in <XREF>54.4.10.""

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #2. All references to 54 or 54.* have been checked and changed to framemaker cross references, the "<XREF>" text is not used.

Cl **45** *SC* **2.1.7.4** *P* **11** *L* **45** # **2**

Dove, Daniel HP ProCurve Networki

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

Reference is messed up. Says ""54.4.10"" should be ""54.5.10""

SuggestedRemedy

Change ""54.4.10"" to ""54.5.10""

Proposed Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **2.1.7.4** *P* **11** *L* **45** # **26**

Dawe, Piers Agilent

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

Non-functioning cross reference.

SuggestedRemedy

Activate "54.4.10", and "54.4.11." in the next subclause.

Proposed Response *Response Status* **C**

ACCEPT.

See comment #2

Cl **45** *SC* **2.1.7.4** *P* **12** *L* **4** # **15**

Thompson, Geoff Nortel

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

The reference in the sentence that says: ""The description of the receive fault function for the 10GBASE-CX4 PMD is given in 54.4.11."" should be indicated with an automatic cross reference

SuggestedRemedy

Change to: ""The description of the receive fault function for the 10GBASE-CX4 PMD is given in <XREF>54.4.11.""

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #14 for "<XREF>" usage. See comment #4 for text change.

Cl **45** *SC* **2.1.7.5** *P* **11** *L* **49** # **3**

Dove, Daniel HP ProCurve Networki

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

Line 49 - case messed up on word ""CHange"".

SuggestedRemedy

Line 49 change the word ""CHange"" to ""Change"".

Proposed Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **2.1.7.5** *P* **12** *L* **2** # **5**

Dove, Daniel HP ProCurve Networki

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

Line 2,3 the term ""<XREF>"" is visible.

SuggestedRemedy

Line 2,3 - Make the term ""<XREF>"" invisible.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **2.1.7.5** *P* **12** *L* **4** # **4**

Dove, Daniel HP ProCurve Networki

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

Reference is messed up. Says ""54.4.11"" should be ""54.5.11""

SuggestedRemedy

Change ""54.4.11"" to ""54.5.11""

Proposed Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **2.1.8** *P* **12** *L* **26** # **16**

Thompson, Geoff Nortel

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

The reference in the sentence that says: ""The transmit disable function for 4-lane electrical PMDs is described in 54.5.6."" should be indicated with an automatic cross reference There are 2 other cross references in the same paragraph that have the same problem that should be fixed too (they are out of scope for this recirc)

SuggestedRemedy

Change to: ""The transmit disable function for 4-lane electrical PMDs is described in <XREF>54.5.6."" (and fix the other missing links too.)

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

See comment #14 for "<XREF>" usage.

Will add the following editor's note: "- Search and replace all references, other than to Clause 54, with appropriate cross references."

Cl **45** *SC* **45.2.1.7.4** *P* **11** *L* **35** # **60**

Grow, Robert Intel

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

Typo.

SuggestedRemedy

Change ""CHange"" to ""Change"". Also on line 48.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **45** *SC* **45.2.1.7.6** *P* **12** *L* **6** # **61**

Grow, Robert Intel

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

Font problem.

SuggestedRemedy

Fix the ""I"" of Insert to be of Italic bold and not underlined.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **48** *SC* **48B** *P* **19** *L* **6** # **62**

Grow, Robert Intel

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

Change instruction not consistent with publication style.

SuggestedRemedy

Change to read: ""Change the first paragraph of 48B as follows:

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Changed to read: "Change the first paragraph of 48B ...".

Cl **48** *SC* **Figure 48-1** *P* **15** *L* **19** # **17**

Thompson, Geoff Nortel

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

The term in the layer diagram: ""LLC—LOGICAL LINK CONTROL"" is technically insufficient. Unfortunately, this error exists else where in the standard although clauses 14, 31, 32 and 43 have it shown more correctly.

SuggestedRemedy

Change to: ""LLC or other MAC Client"" or match text in Figure 54-1

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **10** *P* **44** *L* **6** # **21**

Thompson, Geoff Nortel

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

Throughout the PICS, all reference in the tables that refer to a clause number, a sub-clause number, a table by number or a figure by number should be automatic cross-references.

SuggestedRemedy

Link thoughout the PICS.

Proposed Response *Response Status* **C**

ACCEPT.

All references to clause 54 sub-clauses are links. Any reference to a clause other than 54 are not since 802.3ak does not contain those clauses in their entirety.

Cl **54** *SC* **10.3** *P* **44** *L* **1** # **47**

Dawe, Piers Agilent

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

The order of subclauses seems to be different from other clauses. I expected:
54.10.1 Introduction
54.10.2 Identification
54.10.2.1 Implementation identification
54.10.2.2 Protocol summary
54.10.2.3 Major capabilities/options
54.10.3 PICS proforma tables for ...
54.10.3.1 PMD functional specifications

SuggestedRemedy

Move 54.10.4 Major capabilities / options to become 54.10.2.3, and 54.10.4.1 PMD Functional specifications and following to become 54.10.3.1 and following. Move the mini-table containing CC1 to an in-sequence position e.g. a new subclause 54.10.4.5.

Proposed Response *Response Status* **C**

REJECT.

The 802.3ak task force believes the pics table ordering and numbering are fine and any changes to them add nothing to the completeness of the draft.

Cl **54** *SC* **10.4** *P* **44** *L* **15** # **45**

Dawe, Piers Agilent

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

Following changes to 54.1 the first three items may need revision.

SuggestedRemedy

Delete the first two: the PMD doesn't connect directly to either XGE or XGXS so some other item can support their interfaces, or not. Either delete the third, or add 'No' option, and/or delete '54.1'.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The 802.3ak task force believes it is helpful to the user of these pics to have these optional entries included. This is consistent with the pics for clause 53.

Will add "No [ ]" option to PCS pics item.

Also, see comment #69.

Cl **54** *SC* **10.4** *P* **44** *L* **24** # **46**

Dawe, Piers Agilent

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

The * before MD was there to signify that other items were conditional on this one.

SuggestedRemedy

Reinstate it. Consult 802.3 and EFM officers re explaining this convention. Maybe you should add a sentence of explanation at the end of 54.10.1.

Proposed Response *Response Status* **C**

ACCEPT.

Will add the following footnote to 54.10.4: "A "*" preceeding an "Item" identifier indicates there are other pics that depend on whether or not this item is supported."

Cl **54** *SC* **10.4.1** *P* **45** *L* **43** # **48**

Dawe, Piers Agilent

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

Wrong size font, Feature column, PF12-17, DS9, DS16 and Value/Comment, PF14 and PF17, DS11, DS17, RS4, CA8, CA10, CA11.

SuggestedRemedy

Reapply style to tables.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **10.4.2** *P* **46** *L* **14** # **67**

Grow, Robert Intel

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

Font size or font type problem in many places from here on.

SuggestedRemedy

It looks like a smaller fonts starts with PF18 through the end of the PICS section. Fix.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **10.4.3** *P* **47** *L* **31** # **10**

Dove, Daniel HP ProCurve Networki

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

DS11 Value/Comment font size is not matching within field

SuggestedRemedy

Review fonts within all fields for consistency.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **10.4.3** *P* **47** *L* **6** # **49**

Dawe, Piers Agilent

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

Following changes to main clause, DS1 needs revision.

SuggestedRemedy

Change 'Test performed at TP2' to 'Meets specifications at TP2'. Also font size of '54.6.3'.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **10.4.5** *P* **48** *L* **23** # **52**

Dawe, Piers Agilent

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

Cable characteristic impedance being optional is kind of odd. If this because it really is optional - who cares what the impedance is as long as all the losses and specs are met - then it shouldn't be a PICS, it's just informational. But you may wish to tie down the reference impedance for the subsequent loss and reflection specs.

SuggestedRemedy

Change 54.7.1 to: '54.7.1 Characteristic impedance and reference impedance. The nominal differential characteristic impedance of the cable assembly is 100 ohms. The differential reference impedance for cable assembly specifications is [or, shall be] 100 ohms.' If you still have a 'shall', change CA1 from 'Characteristic Impedance' to 'Differential reference impedance', status conditionally mandatory.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **10.4.5** *P* **48** *L* **23** # **51**

Dawe, Piers Agilent

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

Cable assembly PICS should be conditionally dependent, and some of these are not, or not wholly, applicable to cable assembly.

SuggestedRemedy

Create a major capability option (with a *) for cable assembly; Make CA1-10 and CA12 dependent on it; Move CA11 to PF15, and rename Feature per another comment; Copy CA12 to PF16.

Proposed Response *Response Status* **C**

REJECT.

This comment is outside of the scope of the D5.1 recirculation.

Furthermore, 54.10.4.5 is similar to "40.12.8 Characteristics of the link segment" which does not have a conditional dependency.

Cl **54** *SC* **3** *P* **22** *L* **51** # **28**

Dawe, Piers Agilent

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

You say "... must consider the delay maxima, ... consider the delay constraints regarding the cable topology and concatenation of devices." and refer to Clause 31, Annex 31B. The reader needs to be referred to the relevant place where delay is addressed, not just 31 and 31B (which do not refer to 44.3 either).

SuggestedRemedy

Add new sentence: 'See 44.3.' or copying 52, 'A description of overall system delay constraints and the definitions for bit-times and pause_quanta can be found in 44.3.'

Proposed Response *Response Status* **C**

ACCEPT.

Will add "A description of the overall system delay constraints and the definitions for bit-times and pause_quanta can be found in 44.3" as last sentence to first paragraph.

Cl **54** *SC* **5.1** *P* **23** *L* **20** # **54**

Thaler, Pat Agilent

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

Clause 45 indicates that the objective was to operate over a "twinaxial cable assembly" and that is the term that was added to the definitions. However, Clause 54 never uses the term. It always says "cable assembly" a term which appears to have no formal definition.

SuggestedRemedy

If "cable assembly" is intended to be a broader than cable assembly, then add a definition for cable assembly and insert something into the Clause 54 (probably in 54.1 or 54.5) to explain why Clause 45 says twinaxial and Clause 54 doesn't. E.g. a statement that they cable assembly typically uses twinaxial cable but other cable types are acceptable if the specifications are met. Otherwise, replace all occurrances of "cable assembly" with "twinaxial cable assembly".

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Wiil add "These cable assembly specifications are based upon twinaxial cable characteristics but other cable types are acceptable if the specifications are met." to the end of the first paragraph of 54.7.

Added "1.4.xxx Cable assembly: An assembly containing one or more insulated conductors, terminated in a connector at each end, for use as a link segment between MDIs." to 1.4

See comment #6 for a change in 54.6.2.

Cl **54** *SC* **5.10** *P* *L* # **64**

Bradshaw, Peter BitBlitz Comm

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

The PMD_Transmit_Fault and PMD_Receive_Fault functions are treated inconsistently between 45.2.1.7.4:5 and 54.5.10:11:- in the former, the two bits are indicated as optional, whereas in the latter they are listed as mandatory. (This is not quite my original comment, but is the upshot of the discussion in Sacramento), unless one interprets 'has detected' as allowing the possibility not to be able to. It should be noted that 52.4.8:9 and 53.4.10:11 list the functions as optional, but if implemented, require them to be mapped to the requisite relevant bits. (see also MD4 & MD5 in 52.15.3.2, and MR6 & MR7 in 53.15.4.3). I continue to be concerned about this discrepancy.

SuggestedRemedy

Decide whether these should be mandatory in 54 (unlike elsewhere) and ammend 45 appropriately, OR keep as optional, and adjust clauses 54.5.10:11 appropriately

Proposed Response *Response Status* **C**

REJECT.

54.5.10 and 54.5.11 are out of scope for this D5.1 recirculation.

Cl **54** *SC* **5.4** *P* **24** *L* **24** # **68**

Grow, Robert Intel

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

Usage of u for micro.

SuggestedRemedy

Correct to symbol.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **5.4** *P* **24** *L* **28** # **7**

Dove, Daniel HP ProCurve Networki

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

Signal Detect is based upon an INPUT condition.

SuggestedRemedy

Change ""output"" to ""input"" on line 28 and line 30.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **5.4** *P* **24** *L* **28 (also 3** # **63**

Bradshaw, Peter BitBlitz Comm

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

The SIGNAL_DETECT function is inherently a function of the input voltage. D5.0 incorrectly used 'output voltage' in lines 20 and 26 of page 21 (section 54.5.4). D5.1 has fixed the first occurrence of this error at line (now) 24 on page 24, BUT HAS NOT FIXED lines 28 and 30 (the second section of the second paragraph was rephrased, hence doubling the original error). This needs a correction. I cannot withdraw my TR until this is fixed (see, I knew an E would not get the necessary attention!).

SuggestedRemedy

Finish correction by changing 'output voltage' to 'input voltage' on lines 28 & 30.

Proposed Response *Response Status* **C**

ACCEPT.

See comment #7.

Cl **54** *SC* **5.7** *P* **25** *L* **18** # **19**

Thompson, Geoff Nortel

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

54.5.7 and 54.5.8 There is a philosophy in standards that options are a bad thing. Options that can allow a user to trash a network (as opposed to merely turning himself off) are a terrible thing. (Note our experience with ""Monitor Mode"" in early coax.) Both of these seem like really bad ideas to use in a network as opposed to a bench test of a PMD.

SuggestedRemedy

Remove completely or make such that the test modes can not activate when hooked in a network (e.g. hooked to an MII).

Proposed Response *Response Status* **C**

REJECT.

54.5.7 and 54.5.8 have been in this draft from the beginning. There are no change bars on line 18 or 32 of D5.1. Therefore the 802.3ak task force believes that this comment is out of the scope of this recirculation ballot / comment cycle.

Cl **54** *SC* **5.8** *P* **25** *L* **34** # **66**

Grow, Robert Intel

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

Confusing use of transmitter and receiver. The loopback functions connect the transmit and receive paths, not the transmitter and receiver.

SuggestedRemedy

Loopback mode shall be provided for the 10GBASE-CX4 by the transmit and receive logic of a device as a test function to the device. When loopback mode is selected, transmission requests on the transmit path are shunted directly to the recieve path, overriding any signal detected by the receiver on its attached link. The tansmitters shall not be disabled when loopback mode is enabled. A device must be explicitly placed in loopback mode because loopback mode is not the normal mode of operation of a device. Loopback applies to all lanes as a group (i.e., the lane 0 transmit path is directly connected to the lane 0 receive path, the lane 1 transmit path is directly connected to the lane 1 receive path, etc.) The method of implementing loopback mode is not defined by this standard.

Proposed Response *Response Status* **C**

REJECT.

Comment is out of scope, the only change made in this paragraph are the change from "L" to "l' for all instances of word "loopback".

Cl **54** *SC* **5.8** *P* **25** *L* **43** # **30**

Dawe, Piers Agilent

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

This sentence 'Control of the loopback function is specified in 45.2.1.1.4.' seems too strong, as the MDIO electrical interface is optional (see 45.1). But 45.2.1.1.4 itself says 'The loopback function is mandatory' which adds to the misleading effect.

SuggestedRemedy

Could go back to the previous sentence: 'Control of the loopback function may be supported through the MDIO management interface of 45 or equivalent.' or if that is seen as too optional, too wordy and not specific enough, 'The loopback function is controlled through the MDIO (see 45.2.1.1.4) or equivalent.'

Proposed Response *Response Status* **C**

REJECT.

The statement is correct and resolves comment #145 on D5.0 which brought up a concern about unnecessary redundancy on the optionality of the MDIO. The control of the loopback function is specified in 45.2.1.1.4. Also, 54.1 states "... management functions which are optionally accessible through the management interface defined in Clause 45, or equivalent".

Cl **54** *SC* **54.10.4** *P* **44** *L* **20** # **69**

Grow, Robert Intel

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

If I hadn't already cast my ballot I would be tempted to make this a TR. The status of PCS should be M.

SuggestedRemedy

Change status to M.

Proposed Response *Response Status* **C**

REJECT.

54.1 informatively describes what to combine with the PMD, described in Clause 54, in order to create a complete PHY. There is no shall in 54.1 and hence the "O" status for all three pics items, "XGE", XGXS", "PCS".

Cl **54** *SC* **6.2** *P* **26** *L* **26** # **31**

Dawe, Piers Agilent

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

Missing space in '15m'.

SuggestedRemedy

15 m , and on p34 line 14. Also p28 line 34, '20dB' and p37 line 37, 38 line 50, and p39 line 39 '100MHz', '2000MHz', and p47 line 10 '3.125GBd'

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.2** *P* **26** *L* **26** # **6**

Dove, Daniel HP ProCurve Networki

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

The specification includes a definition for twinaxial cable assemblies, but does not actually use that term in the document.

SuggestedRemedy

Change ""twinaxial cables"" to ""twinaxial cable assemblies""

Proposed Response *Response Status* **C**

ACCEPT.

"twinaxial cable assembly" is used on page 7 line 15.

Cl **54** *SC* **6.3.2** *P* **28** *L* **33** # **50**

Dawe, Piers Agilent

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

I thought we had it perfect, but this item and its PICS is still problematical. We shouldn't be specifying test equipment and especially not the implementation methods of test equipment, but stick to our brief of specifying the DTE components. Here we are specifying tolerances of test equipment when in practice different combinations of tolerance, margining, calibration and post-processing in software could all be used to screen for compliance. On the other hand we do want to define the reference impedance. We do a much cleaner job in 54.6.3.5 with 'The reference impedance for differential return loss measurements shall be 100 ohms.' and the associated PICS DS9. It's easier to write a standard without mentioning measurement accuracy at all, and just leave it as an exercise for the implementer. But the 20dB return loss is good advice.

SuggestedRemedy

Preferred remedy: change 'shall be' to 'is' and remove PICS DS2. Then, to improve the flow of the document, consider removing the subheading '54.6.3.2 Test fixture impedance' so that the one sentence in this subclause joins 54.6.3.1. (Finally, add a full stop to the sentence.) and please consider changing the sentence to 'The reference differential impedance of the transmit test fixture depicted in Figure 54-3 is 100 ohms. A return loss greater than 20 dB from 100 MHz to 2000 MHz, or appropriate calibration, is strongly advised. Another way out would be to remove 'used' and add 'or equivalent' to the end of DS2 Value/Comment: '100 ohms differential load with return loss > 20 dB, or equivalent' or just 'Measurements referred to 100 ohms differential'

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Comment changed from "TR" to "T" since the commenter is not in the Sponsor Ballot Group.

The 802.3ak Task Force notes that test fixtures have been specified in 1000BASE-T and 100BASE-TX in similar ways and believes it is necessary to do so in this case.

Will remove "used" from PICS item DS2.

Cl **54** *SC* **6.3.4** *P* **29** *L* **29** # **33**

Dawe, Piers Agilent

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

Wrong font for NOTE

SuggestedRemedy

Reapply style. Also p40 line 50.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.3.6** *P* **31** *L* **24** # **8**

Dove, Daniel HP ProCurve Networki

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

Figure contains obsolete transition time thresholds

SuggestedRemedy

Remove the threshold markers to make the figure more clean.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.3.6** *P* **31** *L* **5** # **55**

Thaler, Pat Agilent

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

On the original ballot, I submitted comment 170 pointing out that testing a transmitter with the other transmitters disabled could produce results that don't reflect the operation performance of the transmitter and that this test must be done with all transmitters active to ensure interoperability. The comment was accepted. Unfortunately, the execution was faulty. The second sentence of the paragraph (which is the one with the "shall" requirement) still says "with all other transmitters disabled" (line 5). Line 7 in a description of the measurement was changed to "with all other transmitters active." Therefore the "shall" statement says the other transmitters are disabled and an apparently informative statement about the measurement technique contradicts it saying the other transmitters are to be active.

SuggestedRemedy

Change the text on line 5 to "with all other transmitters active".

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.4.1** *P* **33** *L* **29** # **9**

Dove, Daniel HP ProCurve Networki

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

semantics.. ""...due to a higher reflections...""

SuggestedRemedy

Change to ""...due to higher reflections...""

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.4.1** *P* **33** *L* **29** # **71**

Grow, Robert Intel

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

Superflous article.

SuggestedRemedy

Delete ""a"" to read ""... on the system due to higher ...""

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.4.3** *P* **33** *L* **44** # **70**

Grow, Robert Intel

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

Second sentence grammar could be improved.

SuggestedRemedy

""This will limit inrush current to ...""

Proposed Response *Response Status* **C**

REJECT.

Comment is out of scope, the only change to this paragraph is the removal of a comma and applying the proper format for the "note".

Cl **54** *SC* **6.4.4** *P* **33** *L* **49** # **72**

Grow, Robert Intel

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

Font size problem

SuggestedRemedy

Correct.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.4.4** *P* **33** *L* **50** # **35**

Dawe, Piers Agilent

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

Font size for 'peak-to-peak'.

SuggestedRemedy

Reapply style

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.4.5** *P* **34** *L* **6** # **37**

Dawe, Piers Agilent

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

Another quantity to be italicised.

SuggestedRemedy

Put this f in italics like the others. Also p39 line 39.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **6.4.5** *P* **34** *L* **9** # **53**

Thaler, Pat Agilent

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

Why did we switch from the Ohm symbol to "ohms"? I thought the Ohm symbol was our usual practice (though there are occasional instances of writing it out - not counting the ones in clause 30 where we have to stick to ASCII). If we are writing it out, I believe that the normal IEEE practice for units that are people's names, e.g. Ohm and Watt, is to capitalize the unit. Note that in this spot in 5.0, there was no space between "100" and the Ohm symbol. There should be a space.

SuggestedRemedy

Preferably go back to the ohm symbol, but if not at least capitalize it.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will change "ohm" to "Ohm" through out clause 54. In Annex 30B.2 will change "100 ohms" to "100-Ohm" to match the rest of the annex. It was recommended that "Ohm" be used and not the Omega symbol because the Omega symbol cannot be used with the comment tool. It is being recommended to the standards editor to change Ohm(s) to the Omega symbol, for clause 54, upon publication of the standard.

Cl **54** *SC* **7.5.2** *P* **39** *L* **27** # **38**

Dawe, Piers Agilent

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

I don't believe variable names should be split across lines. 'ELFEXT' seems to have been.

SuggestedRemedy

Is there a 'keep on one line' attribute in Frame?

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **7.7** *P* **40** *L* **40** # **65**

Grow, Robert Intel

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

The use of ""n"" and ""i"" is inconsistent in the document (e.g., DLn<n>). Page 40 uses both (figure 54-11 versus the note). Page 23 uses ""n"", page 29 uses ""i"". The parameters (e.g., PMD_transmit_disable_n) use ""n"".

SuggestedRemedy

Pick one, I recommend ""n"" and make consistent. also make use of italics consistent (e.g., page 29 lines 14 and 29).

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **7.7** *P* **40** *L* **45** # **42**

Dawe, Piers Agilent

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

Table 54-7 shows 8 signal shields, half as many as signal pins, and a link shield while this diagram shows one quarter as many signal shields as signal 'sides', and no link shield.

SuggestedRemedy

Assuming the table is right, bring the figure in line: show two signal shields (crossing over) and one link shield.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **8.1** *P* **41** *L* **11** # **40**

Dawe, Piers Agilent

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

This sentence doesn't seem right; 'These connectors have ... the signal quality and electrical requirements of 54.6 and 54.7.' because 54.6 and 54.7 specify the PMD and the cable assembly respectively.

SuggestedRemedy

Not sure what you mean; would this work: 'These connectors have a pinout matching that in Table 54-7, and electrical performance consistent with the signal quality and electrical requirements of 54.6 and 54.7.' ?

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **8.1** *P* **41** *L* **9** # **39**

Dawe, Piers Agilent

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

Spelling

SuggestedRemedy

receptacle Also p41 line 30.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **8.2** *P* **41** *L* **9** # **43**

Dawe, Piers Agilent

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

The MDI is an interface, maybe not just one side of it.

SuggestedRemedy

Change 'The connector for the MDI' to 'The MDI connector of the PMD'.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **8.2** *P* **41** *L* **9** # **44**

Dawe, Piers Agilent

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

Figures 54-12 and 54-13 are not referred to in the text near here - we can't be sure which subclause they belong to, though we can guess.

SuggestedRemedy

Change to 'defined by IEC 61076-3-113 and illustrated in Figure 54-12' and 'defined by IEC 61076-3-113 and illustrated in Figure 54-13'.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **8.2** *P* **42** *L* **3** # **41**

Dawe, Piers Agilent

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

This sentence in its new place could be improved: 'The mechanical connector used in 10GBASE-CX4 comprises 16 signal pins, as described in 54.8.1.' It doesn't comprise 16 pins, but contains other stuff. 54.8.1 does not describe 16 pins. Referring to 54.8.1 in the first sentence of 54.8.2 seems out of place in this case.

SuggestedRemedy

How about: 'The mechanical connector used in 10GBASE-CX4 and defined in 54.8.1 comprises 16 signal pins, eight signal shield pins [if pins they are] and one link shield {pin|connection|shell}.' or shorter: 'The MDI connector comprises 16 signal pins, eight signal shield pins [if pins they are] and one link shield {pin|connection|shell}.'

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will change the first sentence to: "The MDI connector of the PMD comprises 16 signal connections, eight signal shield connections and one link shield connection."

Cl **54** *SC* **Figure 54-1** *P* **22** *L* **08** # **27**

Dawe, Piers Agilent

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

0R contains a zero

SuggestedRemedy

OR with letters

Proposed Response *Response Status* **C**

ACCEPT.

Thank you for the di1igent review!

Cl **54** *SC* **Figure 54-2** *P* **23** *L* **36** # **18**

Thompson, Geoff Nortel

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

I understand that this comment may be out of scope for this ballot However, I believe that the figure is misleading and if not fixed now will probably never get fixed. The figure title says that ""(half link is shown)"" but the depiction of the connector seems to depict an entire connector. That would lead me to believe that TWO cable assemblies are needed (xmit plus rcv) for ONE link segment

SuggestedRemedy

Change the connector portion of the drawing on the bottom from a schematic depiction of a ""tab"" to a jagged edge to indicate that there is more of the connector than is shown.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Break added into the connector between the signal shield and link shield.

Cl **54** *SC* **Figure 54-2** *P* **23** *L* **39** # **29**

Dawe, Piers Agilent

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

The L-shaped lines near 'PMD' (twice) are distracting: they look like left-over pieces of signal detect wiring.

SuggestedRemedy

Remove them.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **Table 54-2** *P* **24** *L* **34** # **36**

Dawe, Piers Agilent

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

A few excess capitals to hunt down.

SuggestedRemedy

Change (Informative) to (informative) here and in tables 54-3, 54-5.

Proposed Response *Response Status* **C**

ACCEPT.

Cl **54** *SC* **Table 54-3** *P* **27** *L* **11** # **32**

Dawe, Piers Agilent

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

per lane' implies to me that there is a situation where we multiply the number of lanes by this rate, which I don't think is the case, so 'per' introduces an irrelevant concept.

SuggestedRemedy

Change 'per lane' to 'each lane', here and in table 54-5.

Proposed Response *Response Status* **C**

REJECT.

The 802.3ak task force prefers this wording, which is the same that is used in Clause 53 (i.e. Table 53-7).

Cl **54** *SC* **Table 54-4** *P* **32** *L* **7** # **34**

Dawe, Piers Agilent

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

Per D5.0 comment 120: Line thicknesses

SuggestedRemedy

Please use the thick or double line between 2nd and 3rd columns and between 6th and 7th. Please reset line thickness under '0.740'.

Proposed Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Custom ruling and shading are reset to "IEEE format", which is the same as what is used in 802.3ae. A double line was added between coulmns 4 and 5 to separate the upper and lower template limits.