

P802.3ak Draft 5.1 Comments

Cl 45 SC 2.1.7.4 P11 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 2.1.7.5 P12 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 48 SC Figure 48-1 P15 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 10.4.5 P48 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 5.1 P23 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 occurrences of "cable assembly" with "twinaxial cable assembly".

Proposed Response Response Status C

ACCEPT IN PRINCIPLE.

Will 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.

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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 P24 L28 # 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 P24 L28 (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 P25 L18 # 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 P25 L43 # 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".

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Cl 54 SC 54.10.4 P44 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 6.3.2 P28 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.

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Cl 54 SC 6.3.6 P31 L5 # 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 7.7 P40 L45 # 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 P41 L11 # 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 8.2 P41 L9 # 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 P42 L3 # 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."