

IEEE P802.3ct D3.3 100 Gb/s over DWDM systems 3rd Sponsor recirculation ballot comments

Cl 154 SC 154.11 P122 L36 # R3-1

Ran, Adeo Intel Corporation

Comment Type TR Comment Status X

"At the transmitter output the MDI coincides with TP2 and at the receiver input with TP3, as shown in Figure 154-2"

But Figure 154-2 clearly shows that TP2 does not coincide with the MDI; there is a patch cord in between. "The NOTE--Transmitter compliance testing is performed at TP2 as defined in 154.5.1, not at the MDI" also informs that TP2 and the MDI are different points.

The quoted sentence does not appear in other optical PMD clauses (which have common definitions of TP2, TP3, and MDI). Its inclusion here creates a contradiction which must be eliminated.

This sentence adds to the confusion about where the DWDM channel's end points are. There are several unsatisfied comments about that including #R2-13, so this should be considered in scope.

For a possible remedy, consider that the definition of TP2 is given in 154.5.1 as "the output end of a single-mode fiber patch cord (TP2), between 2 m and 5 m in length", and in a deployed system, that patch cord may not exist (or may be of a different length); these are indeed cases where the MDI and TP2 will coincide.

Therefore the suggested remedy is to change the quoted sentence to state that the MDI _may_ coincide with TP2 when the optical transmitter's output is not tested for compliance. In that case, the channel starts at the MDI (which is TP2).

Alternatively, if the task force decides that the patch cord leading to TP2 always exists and is not part of the channel, then the MDI should be redefined as the end of the patch cord (although this is different from previous optical PHYs). In that case, Figure 154-2 needs to be modified to move the left "MDI" to align with TP2; and 154.11 needs to be rewritten to state that the MDI cannot be a "PMD receptacle", and the NOTE should be deleted.

SuggestedRemedy

Change from
"At the transmitter output the MDI coincides with TP2 and at the receiver input with TP3, as shown in Figure 154-2"

to
"As shown in Figure 154-2, at the receiver input the MDI coincides with TP3. At the transmitter output, the MDI may coincide with TP2 when the output is not tested for compliance, and in that case any medium connected to the MDI is considered part of the DWDM channel".

Proposed Response Response Status O

Cl 154 SC 154.12.3 P124 L8 # R3-2

Ran, Adeo Intel Corporation

Comment Type TR Comment Status X

The PICS items TP1 and TP4 state that TP1 and TP4 "may be made available for use by implementers to certify component conformance" and point to 154.5.1. But 154.5.1 has no text suggesting that this is only an option.

In previous optical PMD clauses, the corresponding "PMD block diagram" clause included text describing TP1 and TP4, but in 154.5.1 it seems to have been omitted.

The suggested remedy is to add similar text in 154.5.1. Alternatively, the PICS items can be removed.

SuggestedRemedy

Add the following paragraph at the end of 154.5.1:
"TP1 and TP4 are informative reference points that may be useful to implementors for testing components (these test points will not typically be accessible in an implemented system)."

Proposed Response Response Status O

Cl 1 SC 1.4.237b P23 L16 # R3-3

Ran, Adeo Intel Corporation

Comment Type TR Comment Status X

*** Comment submitted with the file image.png attached ***

Joining unsatisfied comment R2-13.

The definition of the DWDM channel is between DWDM PHYs. The boundary of a DWDM PHY is its MDI, which coincides with TP3 at the receiver, but does not necessarily coincide with TP2 at the transmitter, as seen by Figure 154-2.

Text parentheses should clarify the main text, but here the terms "(TP2)" and "(TP3)" are only adding confusion. The definition would be clear without them.

SuggestedRemedy

Delete the parenthesized terms in this definition.

Proposed Response Response Status O

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Cl 1 SC 1.4.160a P23 L # R3-4

Ran, Adee Intel Corporation

Comment Type **TR** Comment Status **X**

The definition of an approach should not be specific to test points, especially when these do not have definitions in Clause 1. Stating the test points TP2 and TP3 in the definition makes it hard to understand.

This has been suggested in a previous comment I-87, which was resolved with AIP, but the remedy did not address the comment at all. Other comments since then show that the identification of TP2 with the MDI creates problems. Therefore the comment is submitted again with a specific change.

An acceptable alternative to the proposed change would be to delete "from TP2 to TP3".

SuggestedRemedy

Change "from TP2 to TP3" to "from a transmitter to a receiver".

Proposed Response Response Status **O**

Cl 1 SC 1.4.237b P23 L35 # R3-5

Dawe, Piers J G NVIDIA

Comment Type **TR** Comment Status **X**

As D3.0 comment 87, D3.1 comment 82 and D3.2 comment 13 pointed out, and as 154.5.1 and 154.11 say, TP2 is not at the PHY/MDI. It is important that readers are not misled so that transmitter testing is done correctly for all optical transmitters, at TP2.

SuggestedRemedy

Quick fix but not consistent with other optical clauses: change:

The transmission path from a transmitting DWDM PHY (TP2) to a receiving DWDM PHY (TP3)

to:

The transmission path from TP2 after a transmitting DWDM PHY to a receiving DWDM PHY (TP3)

and in 154.11, change:

The 100GBASE-ZR PMD is coupled to the DWDM black link medium at the MDI, being the interface between the PMD and the medium. At the transmitter output the MDI coincides with TP2 and at the receiver input with TP3, as shown in Figure 154-2.

to:

The 100GBASE-ZR PMD is coupled to a patch cord at the MDI then to the DWDM black link medium at TP2. At the transmitter output the MDI is before TP2 and at the receiver input the MDI coincides with TP3, as shown in Figure 154-2.

and in 154A.4, change:

where the PMDs at TP2 and TP3 are connected...

to:

where the PMDs are connected...

Better fix: make the "DWDM channel" consistent with the "DWDM black link medium" in 154.11, the "medium" in 154.1, the "channel" as in so many optical clauses, e.g. Figure 38-7, Fiber optic cabling model or Figure 151-7, Fiber optic cabling model, and with "link segment" (see 1.4.309), so that it extends from MDI to MDI - fixing 1.4.237b, 154.11 and 154A.4 another way.

Proposed Response Response Status **O**

Cl 154 SC 154.7.1 P115 L23 # R3-6

Dawe, Piers J G NVIDIA

Comment Type **T** Comment Status **X**

I am satisfied with the current draft as it relates to my comment 58 against D3.0, and comments 79, 84, 87 and 95 against D3.1.

SuggestedRemedy

Proposed Response Response Status **O**

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Cl 154 SC 154.2 P108 L25 # R3-7

Dawe, Piers J G NVIDIA

Comment Type T Comment Status X

With regard to D3.0 comment 59: this says "The SIGNAL_DETECT parameter can take on one of two values: OK or FAIL", consistent with comment 59's request. However, 154.5.4 says "... shall set the state of the SIGNAL_DETECT parameter to a fixed OK value".

SuggestedRemedy

Reconcile

Proposed Response Response Status O