Handling Open Comments

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2/26/2020

Resubmitted Comments

- Comment Number is the Paper Trail
  - Draft 1.0 comment #59 → Draft 1.1 comment #10059
- Subclause, Page, Line of Draft 1.1
  - Previous references to Draft 1.0 added as editor note in comment
- Proposed Response Restarted for Draft 1.1

51 Open Comments

- 3 buckets
  - Discussion needed
  - Pending further work
  - Overtaken by events
- Commenters to disposition

Use of Ad Hoc Time

Comments to be Addressed Listed in Agenda

Review of Comment & Suggested Remedies

Review Affected Items in the Draft

Discuss

Capture Discussion in Proposed Response for Face-to-Face Meeting

Discussion of Comments 10016, 10017, 10018

Feb 26, 2020 Ad Hoc

These are open comment #16, #17, & #18 from Draft 1.0 – Cable Assembly COM

Draft 1.1: Pg 160, Ln 48 Comment #10016

Cl **162** *SC* **162.11.7.1** *P* **153** *L* **28** # 16

Mellitz, Richard Samtec

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

Fill in Zp TBD's with data from slide 8 of benartsi_3ck_01a_0719.

SuggestedRemedy

Change Line 28ff to Equation (93A-13) and Equation (93A-14) using zp = 110.3 mm in length and the parameter values given in {new table}, with the exception that Zc is 100 O, representing an insertion loss of 4.33 dB at 26.56 GHz on each PCB

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Implement suggested remedy with editorial license.

Draft 1.1: Pg 160, Ln 48 Comment #10017

Cl **162** *SC* **162.11.7.1** *P* **153** *L* **28** # 17

Mellitz, Richard Samtec

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

add {new table for 93A transmission line with data from slide 8 of benartsi_3ck_01a_0719.

SuggestedRemedy

gamma0, a1, a2 = [0 3.8206e-04 9.5909e-05]; tau=5.790E-03 ns/mm

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Implement suggested remedy with editorial license.

Draft 1.1: Pg 161, Ln 19 Comment #10018

Cl **162** *SC* **162.11.7.1.2** *P* **153** *L* **51** # 18

Mellitz, Richard Samtec

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

Fill in TBD's with data from slide 8 of benartsi_3ck_01a_0719.

SuggestedRemedy

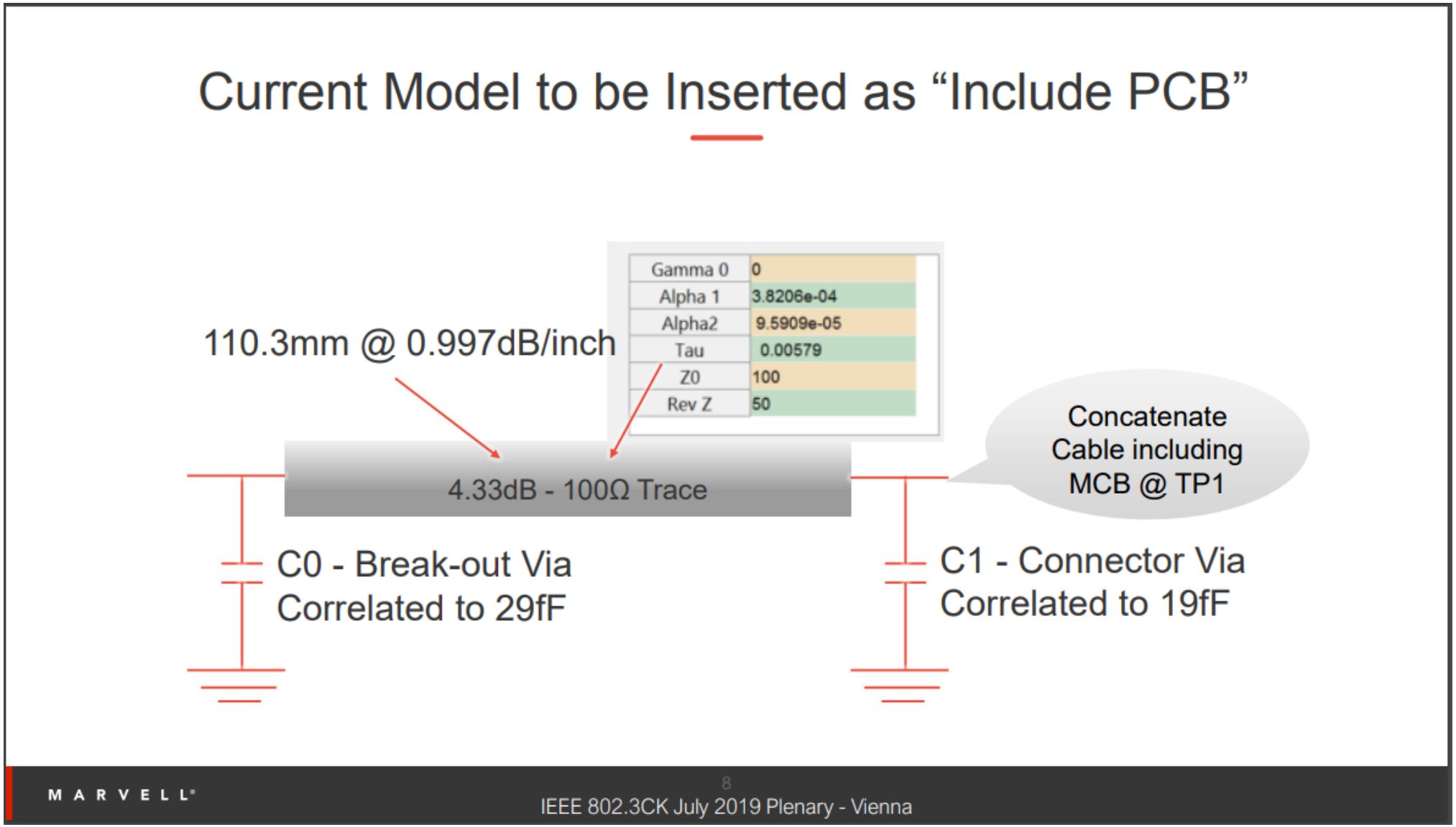
use same data as for signal path

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

[Editor's note: Changed subclause from 162.11.7.2 to 162.11.7.1.2]

Slide 8 from benartsi_3ck_01a_0719
http://www.ieee802.org/3/ck/public/19_07/benartsi_3ck_01a_0719.pdf



Discussion

- Proposed response from Draft 1.0: Accept In Principle (AIP)
- Begin with Rich Mellitz as commenter, then proceed to queue

Cl **162** *SC* **162.11.7.1** *P* **153** *L* **28** # 16

Mellitz, Richard Samtec

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

Fill in Zp TBD's with data from slide 8 of benartsi_3ck_01a_0719.

SuggestedRemedy

Change Line 28ff to Equation (93A-13) and Equation (93A-14) using zp = 110.3 mm in length and the parameter values given in {new table}, with the exception that Zc is 100 O, representing an insertion loss of 4.33 dB at 26.56 GHz on each PCB

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Implement suggested remedy with editorial license.

Cl **162** *SC* **162.11.7.1** *P* **153** *L* **28** # 17

Mellitz, Richard Samtec

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

add {new table for 93A transmission line with data from slide 8 of benartsi_3ck_01a_0719.

SuggestedRemedy

gamma0, a1, a2 = [0 3.8206e-04 9.5909e-05]; tau=5.790E-03 ns/mm

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Implement suggested remedy with editorial license.

Discussion of Comments 10061, 10062

Feb 26, 2020 Ad Hoc

These are open comment #61, & #62 from Draft 1.0 – C2M Wording

Cl **120G** SC **120G.3.4.1.1** P **224** L **12** # **61**

Dudek, Mike
Marvell

Comment Type **T** *Comment Status* **D** *C2M eye opening*

The sections referenced for measuring Eye height and VEC don't have the correct reference receiver and section 4.2 has more details about how to measure these.

SuggestedRemedy

Change "Eye height and VEC are then measured at TP1a based on the measurement methodology given in 120E.4.2 and vertical eye closure is measured according to 120E.4.3." to Eye height and VEC are then measured at TP1a as described in 120G.4.2 "

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **120G** *SC* **120G.3.4.1.1** *P* **224** *L* **22** # 62

Dudek, Mike Marvell

Comment Type **T** *Comment Status* **D** *C2M VEC*

Multiple presentations have shown that the VEC at TP1a is more critical for end to end performance than just the eye opening.

SuggestedRemedy

Add a VEC min specification to Table 120G-8. Value TBD. Move the sentence on line 22 beginnin with "In both cases" to a separate paragraph (to emphasis that it applies to both the high and low loss cases) and change it to "In both cases, the input VEC is less than TBD dB and greater than the value in table 120G-8

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

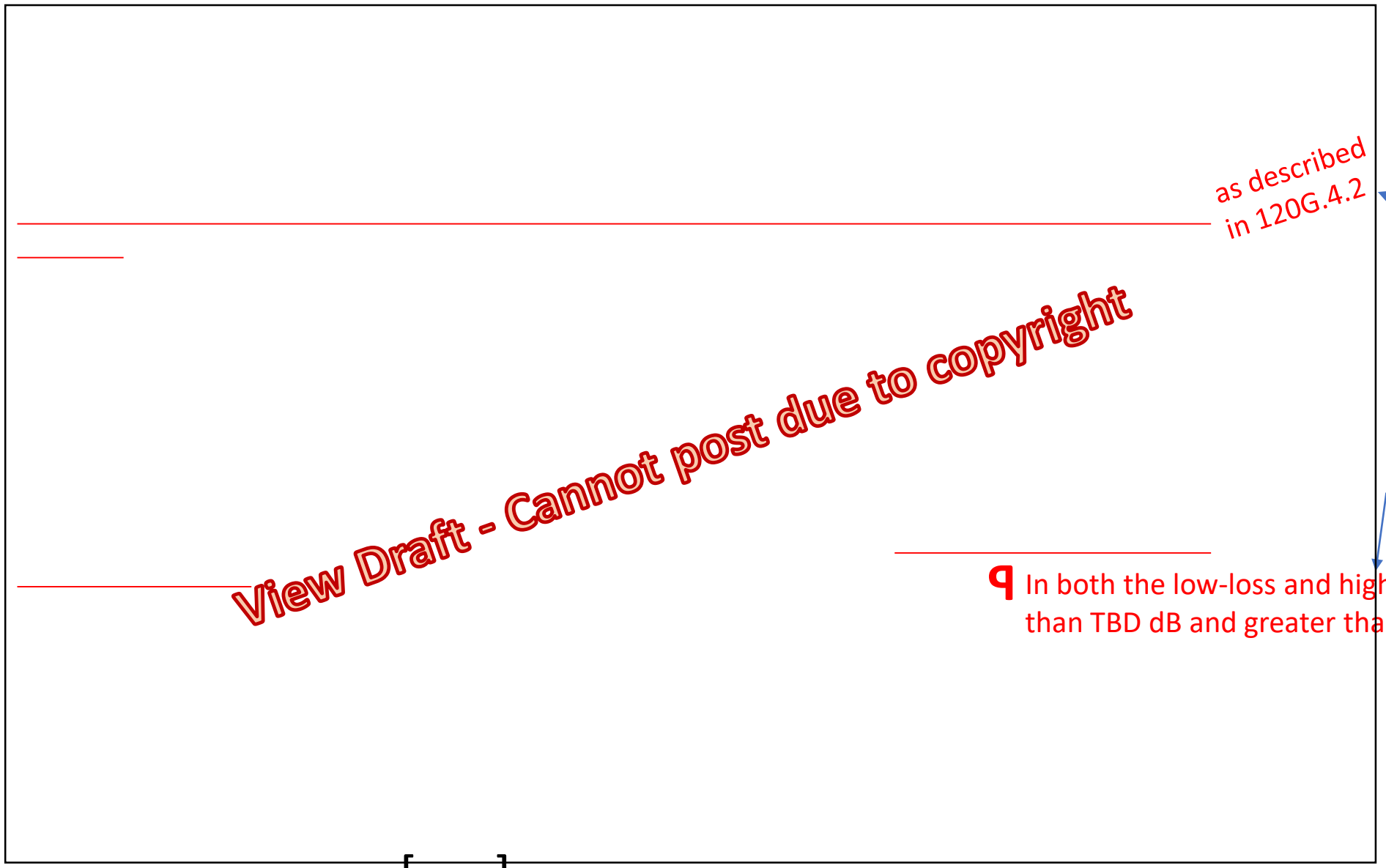
Move the sentence to a new paragraph and change to the following:

"In both the low-loss and high-loss cases, the input VEC is less than TBD dB and greater than the value in table 120G-8."

The TBD value might be chosen if the value in Table 120G-8 is also chosen.

For task force discussion.

[. . .]



Comment #10061 accept.

Begin discussion with Mike Dudek as commenter, then proceed to queue.

Comment #10062 Accept In Principle.

[. . .]

Discussion of Comments 10165, 10166

Feb 26, 2020 Ad Hoc

These are open comment #165 & #166 from Draft 1.0 – C2M: Np/Dp Values

Cl 120G SC 120G.4.2 P 226 L 24 # 165

Li, Mike Intel

Draft 1.1: Pg 232, Ln 45
Comment #10165

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

"Dp equal to 3" is not right as there are 3 pre-taps for the host

SuggestedRemedy

change "Dp equal to 3" to ""Dp equal to 4".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Host and module transmitter equalization architecture is not specified so there is no need to match the parameters in that regard.

The linear fit pulse response is intended only for determining the DFE sampling phase position. As such, the extra precision potentially gained by the larger Dp value may not be necessary.

On the other hand, since the measured data is filtered with any of the compliant CTLE settings applied, a larger value may be required for some CTLE settings.

Further evidence is required to determine if any changes are needed.

For task force discussion.

See comment 166.

Cl 120G SC 120G.4.2 P 226 L 24 # 166

Li, Mike Intel

Draft 1.1: Pg 232, Ln 45
Comment #10166

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

"Np equal to 200" is not appripriate as UI becomes half in second.

SuggestedRemedy

"Np equal to 200" to "Np equal to 400"

Proposed Response *Response Status* **W**

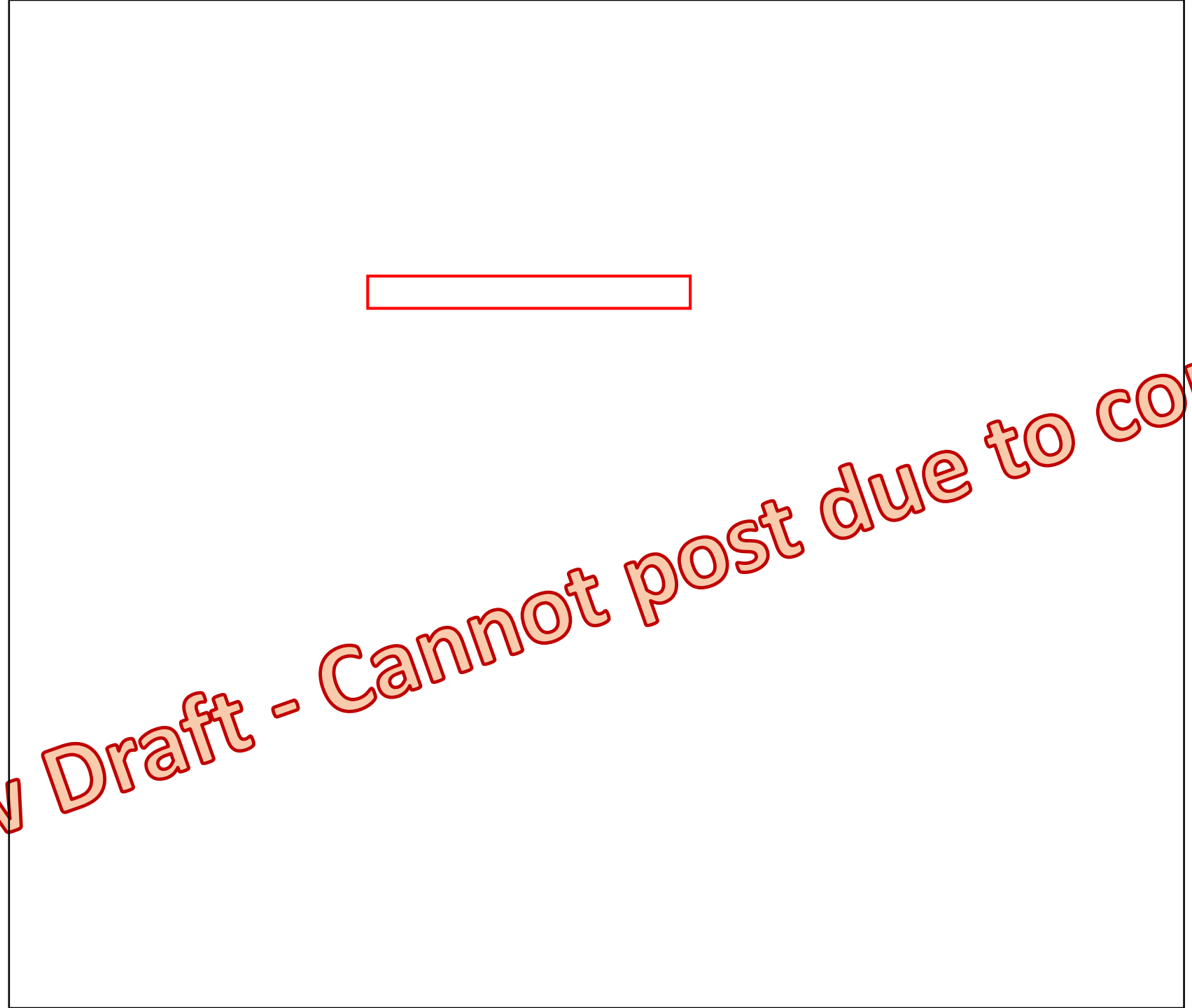
PROPOSED REJECT.

The linear pulse fit is intended for determining the DFE sampling phase position. As such, the extra precision potentially gained by the larger Np value likely is not necessary. In fact, it may be possible to reduce the value without impact.

Further evidence is required to determine if any changes are needed.

For task force discussion.

See comment 165.



Discussion

- Proposed response from Draft 1.0: Don’t change either number
- Begin with Mike Li as commenter, then proceed to queue

Cl **120G** SC **120G.4.2** P **226** L **24** # 165

Li, Mike Intel

Draft 1.1: Pg 232, Ln 45
Comment #10165

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

"Dp equal to 3" is not right as there are 3 pre-taps for the host

SuggestedRemedy

change "Dp equal to 3" to ""Dp equal to 4".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Host and module transmitter equalization architecture is not specified so there is no need to match the parameters in that regard.

The linear fit pulse response is intended only for determining the DFE sampling phase position. As such, the extra precision potentially gained by the larger Dp value may not be necessary.

On the other hand, since the measured data is filtered with any of the compliant CTLE settings applied, a larger value may be required for some CTLE settings.

Further evidence is required to determine if any changes are needed.

For task force discussion.

See comment 166.

Cl **120G** SC **120G.4.2** P **226** L **24** # 166

Li, Mike Intel

Draft 1.1: Pg 232, Ln 45
Comment #10166

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

"Np equal to 200" is not appripriate as UI becomes half in second.

SuggestedRemedy

"Np equal to 200" to "Np equal to 400"

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The linear pulse fit is intended for determining the DFE sampling phase position. As such, the extra precision potentially gained by the larger Np value likely is not necessary. In fact, it may be possible to reduce the value without impact.

Further evidence is required to determine if any changes are needed.

For task force discussion.

See comment 165.

Discussion of Comment 10144

Feb 26, 2020 Ad Hoc

These are open comment #144 from Draft 1.0 – C2M: Far-end ISI

Draft 1.1: Pg 224, Ln 50 Comment #10144

Cl 120G	SC 120G.3.2	P217	L 50	# 144

Dawe, Piers — Mellanox

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

Far-end pre-cursor ISI ratio has not been justified and doesn't fit well with the other C2M specs. Better to choose the reference receiver tap limits wisely.

SuggestedRemedy

Remove the row for far-end pre-cursor ISI ratio from the table.

Proposed Response *Response Status* **W**

PROPOSED REJECT.

The commenter has not provided sufficient evidence for the proposed change. However, there was no evidence provided to justify inclusion of this parameter. Given that the specification includes EH and VEC, this might be redundant.

For task force discussion.

Discussion

Proposed response from Draft 1.0:
Leave it as is

Begin discussion with Piers Dawe as commenter, then proceed to queue.

Discussion of Comment 10247

Feb 26, 2020 Ad Hoc

These are open comment #247 from Draft 1.0 – Copper Cable Adaptation During Operation

Cl 162 SC 162.8.11 P138 L32 # 247

Ran, Adee Intel

Draft 1.1: Pg 135, Ln 34
Comment #10247

Comment Type T *Comment Status* D

The PMD control function as currently specified is only effective during start up.

Operation across a wide range of temperatures in some environments may cause slow changes in channel and device characteristics that may require occasional changes of the Tx equalization, preferably without link flaps. It would be good to enable doing it while the link is up.

In Data mode, the startup (training) protocol is inactive. We can specify that when mr_training_en set to 0, instead of exchanging the control and status fields through the protocol, these fields will be written to and read from management registers if MDIO is implemented. Management can relay the control and status fields to/from the link partner through higher level messaging (such as LLDP).

A detailed proposal is planned, but the requested addition in the PMD clauses is a subclause for behavior of the PMD control function when training is false (data mode).

SuggestedRemedy

Add the following paragraphs:

When the training variable is set to false (see 136.8.11.7.1), the PMD control function may optiionally continue using Equalization control as defined 136.8.11.4 in the SEND_DATA state, using MDIO registers or alternative methods to exchange control and status fields with the link partner instead of the training frame specified in 136.8.11.1.

NOTE--When training is false, any update to variables corresponding to a change of the Modulation and precoding request bits or the Initial condition request bits, or to setting the Coefficient request bits to "No equalization", can be disruptive to a network.

Proposed Response *Response Status* W

PROPOSED REJECT.

Comment alludes to a future proposal. Propose deferring discussion of this topic until the proposal is presented. Request that commenter use the ad hoc for this purpose.

Discussion

- Proposed response from Draft 1.0: Reject

Begin with Adee Ran as commenter, then proceed to queue

SuggestedRemedy

Add the following paragraphs:

When the training variable is set to false (see 136.8.11.7.1), the PMD control function may optiionally continue using Equalization control as defined 136.8.11.4 in the SEND_DATA state, using MDIO registers or alternative methods to exchange control and status fields with the link partner instead of the training frame specified in 136.8.11.1.

NOTE--When training is false, any update to variables corresponding to a change of the Modulation and precoding request bits or the Initial condition request bits, or to setting the Coefficient request bits to "No equalization", can be disruptive to a network.