Cl **178A**	*SC* **178A.1.3**	*P***748**	*L***15**	#	47

Mellitz, Richard   Samtec

Comment Type **TR**   *Comment Status* **D**   *COM frequency range*

"It is recommended that the scattering parameters be measured with a uniform frequency step from a start frequency no greater than 10 MHz to a stop frequency of at least 67 GHz

SuggestedRemedy

Referencing wording in 179B.2.1 and 179B.3.1.
Insert line:
If, after specified filtering, significant power exists above the stop frequency or the stop frequency is near a local resonance or anti-resonance, differences in COM and ERL are to be accounted for.
See presentation showing delta COM up to 0.8 dB

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **174A**	*SC* **174A.7**	*P***666**	*L***9**	#	130

Slavick, Jeff   Broadcom

Comment Type **TR**   *Comment Status* **D**   *KER for xMII Extender*

This method is also valid for between a DTE_XS and PHY_XS.

SuggestedRemedy

Rename 174A.7 as "Error ratio tests for a PHY or XS using PCS statistics"

Add this to the end of the first paragraph of 174A.7 "The same method works for an Extender Sublayer which includes 200Gb/s signaling on one or more ISLs."

Remove PCS-to-PCS from the second paragph and add "or XS" to the end of the first sentence in the second paratph of 174A.7

Remove "in a PHY" and "in the PCS" from the first sentence and add "or XS" after PHY in the second sentence of 174A.7.1

Add "Note: The DTE and PHY XS sub-layers are functionally equivalent to a PCS for the purpose of this test method." to 174A.7.1

Create a new figure for the XS test structure leveragin Fig 174A-4 removing hte Inner FEC and PMD and changing PCS to XS.

Remove PCS from the title of 174A.7.1.2 and the first sentence of the section.

Implement with editorial license.

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

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Cl **176C**   *SC* **176C.4.3.1**   *P* **704**   *L* **19**   # 134

Slavick, Jeff   Broadcom

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

Listing the coefficients and presets that are supported by the PMD here will lay the groundwork for reuse of the 178B over interfaces with differing support.

SuggestedRemedy

Add the following with editorial license at the end of the second paragraph of 176C.4.3.1
"The coefficients and presets supported by the C2C transmiter during link training are:
-- k_list = {-3, -2 -1, 0, 1}
-- preset 1
-- preset 2
-- preset 3
-- preset 4
-- preset 5"

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **174**   *SC* **174.2.12**   *P* **231**   *L* **41**   # 155

Bruckman, Leon   Nvidia

Comment Type **TR**   *Comment Status* **D**   *(bucketp)*

ILT coordinates transition to DATA mode.

SuggestedRemedy

Change: "equalization, modulation, and precoding states on the link partner transmitter, and to indicate the receiver state."
To: "equalization, modulation, and precoding states on the link partner transmitter, to indicate the receiver state and to coordinate transition to DATA mode."

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179B**   *SC* **179B.4.1**   *P* **805**   *L* **21**   # 213

Brown, Matt   Alphawave Semi

Comment Type **T**   *Comment Status* **D**   *MTF ILDD*

Values for ILdd_MTFmax and ILdd_MTFmin are TBD.

SuggestedRemedy

Expect a contribution with proposals.

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179**   *SC* **179.9.4**   *P* **374**   *L* **22**   # 221

Rysin, Alexander   NVIDIA

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

J3u and JRMS measurements at TP2 are highly affected by the effects of slew rate and noise and do not reflect actual uncorrelated jitter. These effects are exacerbated by the characteristics of practical channels between TP0d and TP2 - loss and reflections, and are highly dependent on the transmitted signal amplitude. Accounting only for the faster edges does not work for practical channels at 106.25 Gbd rate and the currently proposed numbers cannot be met (and sometimes cannot be measured) even with commercial test equipment PPG. The issue was demonstrated in rysin_3dj_01a_2407. A different methodology that will better quantify phase-only uncorrelated jitter has to be explored. Presentation is planned.

SuggestedRemedy

Other method of uncorrelated jitter measurement should be considered.

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

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Cl **179A**   *SC* **179A.4**   *P* **799**   *L* **16**   # 266

Ghiasi, Ali   Ghiasi Qunatum/Marvell

Comment Type **TR**   *Comment Status* **D**   *(bucketp)*

Recommended channel IL in table 179A-1 don't add up

SuggestedRemedy

Assuming the via is part of channel, with loss of 2.45 dB connector and 3.8 dB HCB sums to 6.25 dB, the Max Host channel loss would be:
Host-Low=12.75-6.25=6.5 dB
Host-Med=17.75-6.25=11.5 dB
Host-High=22.75-6.25=16.5 dB

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179A**   *SC* **179A.4**   *P* **799**   *L* **12**   # 267

Ghiasi, Ali   Ghiasi Qunatum/Marvell

Comment Type **TR**   *Comment Status* **D**   *(bucketp)*

Host channels here is actually package+Host PCB

SuggestedRemedy

Suggest to call it Host package + host PCB, as the channel may implay the connector loss is incldued

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179A**   *SC* **179A.4**   *P* **800**   *L* **22**   # 268

Ghiasi, Ali   Ghiasi Qunatum/Marvell

Comment Type **TR**   *Comment Status* **D**   *Host Channel IL*

Ildd MTF loss of 9.75 dB is the target loss and not min loss

SuggestedRemedy

Remove minimum from the 179A-3 title and add target for the MTF loss

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **174A**   *SC* **174A.6.1.1**   *P* **663**   *L* **25**   # 431

Dudek, Mike   Marvell

Comment Type **T**   *Comment Status* **D**   *(bucketp)*

It would be helpful to describe where the pre-coder is in the testing.

SuggestedRemedy

In Figure 174A-1. 174A-2 , 174A-3   and 174A-4 change the title of the boxes to"PMD transmit function (including pre-coder if used)" and "PMD receive function (including pre-coder if used) or add a sentence at line 17 "The Transmit and Receive PMD functions include precoding when it is used."

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179B**   *SC* **179B.4.6**   *P* **810**   *L* **29**   # 525

Dawe, Piers   Nvidia

Comment Type **T**   *Comment Status* **D**   *(bucketp)*

Some parameters are in the paragraphs, others are in the tables.

SuggestedRemedy

Move the parameters fMin fMax fStep (max) to the table(s)

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179B**   *SC* **179B.4.6**   *P* **810**   *L* **30**   # 526

Dawe, Piers   Nvidia

Comment Type **T**   *Comment Status* **D**   *(bucketp)*

Don't put unnecessary ambiguity in a definition.

SuggestedRemedy

Change "maximum frequency spacing of 10 MHz" to " frequency spacing of 10 MHz"

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

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Cl **179B**   *SC* **179B.1**   *P* **803**   *L* **23**   # 527

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **D**   *(bucketp)*

Now that we have adopted a reference impedance of 92.5 ohm for ERL, we need to address the other specs. All these parameters are measured with a VNA which does the calculations for us, so we can use whatever impedances are suitable.

SuggestedRemedy

Adopt consistent reference impedances for all spec items in this annex.

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179B**   *SC* **179B.4.3**   *P* **807**   *L* **47**   # 529

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **D**   *ITF Measurement Bandwidth*

The maximum frequencies in this annex are a mix of 67 GHz and 60 GHz. If any are 67, we are committed to the expense and they can all be 67. Test fixtures, like other test equipment, should be specified more stringently than product. High frequencies are as important relative to low frequencies for mixed-mode and common-mode specs as for differential-mode specs.

SuggestedRemedy

Change the 60 GHz to 67 GHz, 3 places. Adjust the graphs accordingly.

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **179B**   *SC* **179B.4.2**   *P* **807**   *L* **7**   # 530

Dawe, Piers   Nvidia

Comment Type **TR**   *Comment Status* **D**   *(bucketp)*

The round trip loss to the MCB connector is 7.6 dB from one side, and more from the other, so an ERL of 10.3 dB is very weak.

SuggestedRemedy

Now that we have a suitable reference differential impedance, choose a suitable ERL limit.

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **178A**   *SC* **178A.1.3**   *P* **748**   *L* **15**   # 535

Dawe, Piers   Nvidia

Comment Type **T**   *Comment Status* **D**   *COM frequency range*

Unnecessary ambiguity, and 802.3 is not a test spec. We define terms by procedures, not write methods of implementation.

SuggestedRemedy

Change "from a start frequency no greater than 10 MHz to a stop frequency of at least 67 GHz" to "from a start frequency of 10 MHz to a stop frequency of 67 GHz."

Proposed Response   *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time. Proposed responses, as prepared by the editorial team, may be found in the following file: https://www.ieee802.org/3/dj/comments/D1p3/8023dj_D1p3_comments_proposed_id.pdf]

Cl **178B**   *SC* **178B**   *P* **765**   *L* **22**   # 544

Dawe, Piers   Nvidia

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

Explain the interaction between this annex and Clause 73 AN

SuggestedRemedy

Per comment

Proposed Response   *Response Status* **W**

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Cl **73** *SC* **73.5.1** *P***118** *L***38** # 547

Dawe, Piers Nvidia

Comment Type **TR** *Comment Status* **D** *AN DME swing*

The ancient "DME electrical characteristics" table needs updating. Compare the proposed default preset to start training: 800 to 1000 *0.75 +/-0.025 which is 580 to 775 mV, the traditional C2M max, 900 mV, and the XLPPI max, 850 mV.

SuggestedRemedy

Bring Table 73-1, DME electrical characteristics, into the draft. It contains:
Transmit differential peak-to-peak output voltage 600 to 1200 mV
Receive differential peak-to-peak input voltage   200 to 1200 mV.
Add two more rows, for anything capable of 200G/lane:
Transmit differential peak-to-peak output voltage 600 to 900 mV
Receive differential peak-to-peak input voltage   200 to 1000 mV.
Recommend that new product should comply to the newer limits, except product that only does 1000BASE-KX and/or 10GBASE-KX4 whose output should be 600 to 1000 mV (so they don't have to change voltage swing when going from AN to regular mode - their min is 800 mV). If the recommendation has to go through maintenance, add an editor's note "It has been proposed that" to gather feedback and build consensus.

Proposed Response *Response Status* **W**

[Editor's note: This comment was not addressed due to lack of comment resolution time.
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