

# IEEE P802.3da D1.1 Physical Layer Specifications and

**Cl 45**      **SC 45.2.1.16**      **P24**      **L31**      # **27**

Zimmerman, George      CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

**Comment Type T**      **Comment Status R**      **10BASE-T1S**

Need to add 10BASE-T1M to BASE-T1 PMA/PMD registers, but as a subset of the 10BASE-T1S PHY.

**SuggestedRemedy**

Add 45.2.1.16 to the draft, including Table 45-19, showing change of 1.18.3 "10BASE-T1S ability" to "10BASE-T1S/M ability". Change Description similarly.

**Response**      **Response Status Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Discuss with comment 121 - need to determine whether we want a separate 10BASE-T1M ability, or combine it with 10BASE-T1S.

10BASE-T1M/T1S ability"

**Cl 147**      **SC 147.1**      **P29**      **L7**      # **33**

Zimmerman, George      CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

**Comment Type E**      **Comment Status A**      **10BASE-T1S**

Probably a good idea to say something in the overview of clause 147 about clause 168.

**SuggestedRemedy**

Add 147.1 to the draft, inserting a new third paragraph reading "The PMA and PCS specifications of the 10BASE-T1S PHY when operating in multidrop mode are refined in the 10BASE-T1M Clause 168 PHY, which only supports multidrop mode. 10BASE-T1S and 10BASE-T1M PHYs use the same PMA and PCS control, status, and test registers."

**Response**      **Response Status C**

ACCEPT.

**Cl 168**      **SC 168.1**      **P46**      **L54**      # **39**

Zimmerman, George      CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

**Comment Type T**      **Comment Status A**      **10BASE-T1S**

Add text explaining the relationship of clause 168 and clause 147 PHYs to the end of the 3rd paragraph of 168.1 (explaining 10BASE-T1S aand 10BASE-T1M interoperability)

**SuggestedRemedy**

Insert new final sentence on 3rd paragraph of 168.1: "The PMA and PCS specifications of the 10BASE-T1S PHY when operating in multidrop mode are refined in the 10BASE-T1M Clause 168 PHY, which only supports multidrop mode. 10BASE-T1S and 10BASE-T1M PHYs use the same PMA and PCS control, status, and test registers."

**Response**      **Response Status C**

ACCEPT.

TFTD - there may be alternative ways of stating this.

## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 168 SC 168.2 P48 L11 # 134

Jones, Peter

Cisco

Comment Type TR Comment Status A 10BASE-T1S

Provide text for clause 168.2

*SuggestedRemedy*

168.2 Operation of 10BASE-T1M

The 10BASE-T1M PHY builds on the operation on the 10BASE-T1S/T1M PHY (see 148) when running half-duplex in multidrop mode. It uses half-duplex communications on a single balanced pair of conductors mixing segment, interconnecting up to at least 16 PHYs to a trunk up to at least 50m. PHYs are attached to the mixing segment using the Trunk Connection Interface (TCI) specified in 168.9. An overall effective data rate of 10 Mb/s is shared among the nodes. Larger PHY count and reach may be achieved provided the mixing segment specifications in 168.8 are met.

The 10BASE-T1M PHY utilizes two level Differential Manchester Encoding (DME). A 17-bit self-synchronizing scrambler is used to improve the EMC performance. Following scrambling of the data, 4B/5B encoding is performed (see 168.4.2.4). DME is a self-clocked and intrinsically balanced line coding that guaranteeing very low DC baseline wander and allowing for robust clock and data recovery in noisy environments. The 4B/5B mapping and the scrambler are contained within the PCS (see 168.4) while the DME encoder/decoder is contained in the PMA (see 168.5).

Response Response Status C

ACCEPT IN PRINCIPLE.

(minor edits for style and clarity)

168.2 Operation of 10BASE-T1M

The 10BASE-T1M PHY builds on the operation on the 10BASE-T1S PHY defined in Clause 148 when the Clause 147 PHY is running half-duplex in multidrop mode. The 10BASE-T1M PHY uses half-duplex communications over a single balanced pair of conductors forming a mixing segment. The mixing segment supports interconnecting up to at least 16 PHYs on a trunk of up to at least 50m. PHYs are attached to the mixing segment using the Trunk Connection Interface (TCI) specified in 168.9. An overall effective data rate of 10 Mb/s is shared among the nodes. Larger PHY count and reach can be achieved provided the mixing segment specifications in 168.8 are met.

The 10BASE-T1M PHY utilizes two level Differential Manchester Encoding (DME). A 17-bit self-synchronizing scrambler is used to improve the EMC performance. Following scrambling of the data, 4B/5B encoding is performed (see 168.4.2.4). DME is a self-clocked and intrinsically balanced line coding with very low DC baseline wander and allows for robust clock and data recovery in noisy environments. The 4B/5B mapping and the scrambler are contained within the PCS (see 168.4) while the DME encoder/decoder is contained in the PMA (see 168.5).

Cl 168 SC 168.4 P51 L19 # 135

Jones, Peter

Cisco

Comment Type TR Comment Status R 10BASE-T1S

Several of the sub-clauses in Clause 168 must align with the equivalent clauses in Clause 148 to enable interoperability as stated in 168.1 Overview – “The 10BASE-T1M PHY is interoperable with the Clause 147 10BASE-T1S PHY when the 10BASE-T1S PHY is in multidrop mode and the mixing segment is compliant with 147.8 and 168.8.”

Copying the text between the clauses creates risk that the two clauses will unintentionally “drift apart”.

*SuggestedRemedy*

Change the sub-clauses that repeat clause 148 text to referring to equivalent sub-clauses, with exceptions noted. Sub-clauses to be considered include:

147.3.1 PCS Reset function and 168.4.1 PCS Reset function

147.3.2 PCS Transmit and 168.4.2 PCS Transmit

147.3.3 PCS Receive and 168.4.3 PCS Receive

147.3.5 Collision detection and 168.4.5 Collision detection

147.3.6 Carrier sense and 168.4.6 Carrier sense

147.4.2 PMA Transmit function and 168.5.2 PMA Transmit function

147.4.3 PMA Receive function and 168.5.3 PMA Receive function

147.5.4 Transmitter electrical specification and 168.6.4 Transmitter electrical specification

147.5.5 Receiver electrical specifications and 168.6.5 Receiver electrical specifications

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

This is a good idea but needs a fully thought out text proposal. Some of the clauses (e.g., PMA electricals) have been modified because clause 168 does not have point to point, but clause 147 does - hence taking some pieces out of the text. Also the PMA electrical specs are at the TCI now, which is a little different than clause 147.

Suggest form a sub-group to look at what can be referenced clearly before working group ballot.

[HOMEWORK FOR GROUP - Need Volunteers]

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI **FM** SC **FM** P12 L28 # 21  
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
Comment Type **T** Comment Status **A** Editorial

Missing description for 802.3da amendment

**SuggestedRemedy**

Change "This amendment includes [complete]" to "Amendment X- This amendment includes changes to IEEE Std 802.3-2022 and adds Clauses 168 and 169. This amendment adds Physical Layer Specifications and management parameters for enhancement of 10 Mb/s operation and optional provision of power over Single Balanced Pair Multidrop Segments, based on the 10BASE-T1S PHY specified in IEEE Std 802.3-2022 Clause 147."

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Editorial license to implement. Specifically check if Single Balanced Pair Multidrop Segments should be capitalized, etc.

Change "This amendment includes [complete]" to "Amendment X- This amendment includes changes to IEEE Std 802.3-2022 and adds Clauses 168 and 169. This amendment adds Physical Layer specifications and management parameters for enhancement of 10 Mb/s operation and optional provision of power over Single Balanced Pair Multidrop Segments, based on the 10BASE-T1S PHY specified in IEEE Std 802.3-2022 Clause 147."

CI **22** SC **22** P20 L8 # 117  
Jones, Peter Cisco  
Comment Type **TR** Comment Status **A** Editorial

Change 802.3-2022 Figure 22(MII relationship to the ISO/IEC Open Systems Interconnection (OSI) reference model and the IEEE 802.3 CSMA/CD LAN model) to include 10BASE-T1M.

**SuggestedRemedy**

Replace "10BASE-T1L, 10BASE-T1S, 100 Mb/s, 1 Gb/s" with "10BASE-T1L, 10BASE-T1S, 10BASE-T1M, 100 Mb/s, 1 Gb/s"

Response Response Status **C**

ACCEPT IN PRINCIPLE.

Bring figure into clause 22. Editorial license to craft editing instruction and make the following change to the figure: Replace "10BASE-T1L, 10BASE-T1S, 100 Mb/s, 1 Gb/s" with "10BASE-T1L, 10BASE-T1M, 10BASE-T1S, 100 Mb/s, 1 Gb/s"

CI **90** SC **90.1** P28 L7 # 124  
Jones, Peter Cisco  
Comment Type **E** Comment Status **R** Editorial

Rewrite paragraph(s) for clarity/brevity.

**SuggestedRemedy**

Replace  
The TSSI is defined for the full-duplex mode of operation only. It supports MAC operation at various data rates. The MII (Clause 22), GMII (Clause 35), XGMII (Clause 46), 25GMII (Clause 106), XLGMII (Clause 81), CGMII (Clause 81), 50GMII (Clause 132), 200GMII (Clause 117), and 400GMII (Clause 117) specifications are all compatible with the generic Reconciliation Sublayer (gRS) defined in 90.5.  
With  
The TSSI supports MAC operation at various data rates and is defined for:  
•10BASE-T1S/T1M (Clause 147) in point-to-point half-duplex mode  
•10BASE-T1M (Clause 168) in half-duplex operation  
•other PHY types in full-duplex mode.

The following are compatible with the generic Reconciliation Sublayer (gRS) defined in 90.5:

- MII (Clause 22)
- GMII (Clause 35)
- XGMII (Clause 46)
- 25GMII (Clause 106)
- XLGMII (Clause 81)
- CGMII (Clause 81)
- 50GMII (Clause 132)
- 200GMII (Clause 117)
- 400GMII (Clause 117)

Response Response Status **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

CI **148** SC **148.2** P30 L5 # 34  
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
Comment Type **E** Comment Status **A** Editorial

The text has now survived several cycles of review, it can be considered stable.

**SuggestedRemedy**

Delete the editors note P30 L5-9 at the start of 148.2.

Response Response Status **C**

ACCEPT.

# IEEE P802.3da D1.1 Physical Layer Specifications and

CI 148 SC 148.4.7 P38 L3 # 126  
 Jones, Peter Cisco  
 Comment Type E Comment Status A Editorial  
 Rewrite for clarity.  
 SuggestedRemedy  
 Replace "D-PLCA" with "Dynamic PLCA (D-PLCA)"  
 Response Response Status C  
 ACCEPT.

CI 148 SC 148.4.7.1 P38 L26 # 58  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 "hard-aging-cycles and soft-aging-cycles can be configured to optimize convergence time and stability over time in different situations." Sentence isn't capitalized.  
 SuggestedRemedy  
 change hard to Hard. If the coice to not capitalize the sentence is bacuase the variable is named in lower case, then recraft the sentence to not have the varaible as the first word. Perhaps: "Convergence time and stability over time in different situations can be optimized by configuring hard-aging-cycles and soft-aging-cycles."  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Insert "The variables " before "hard\_aging\_cycles" in the above.  
 Editor to globally replace "-" with "\_" in hard\_aging\_cycles and soft\_aging\_cycles in document.

CI 168 SC 168 P46 L4 # 59  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 was going to say "delete the editors note" as it's been here since at least D0.6, but I see there is some useful stuff in there at line 24. The stuff prior to the list of items needing work can be deleted.  
 SuggestedRemedy  
 reduce editors note to just the last paragraph.  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168 P46 L33 # 38  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status A Editorial  
 The changes to align with PHY in 802.3-2022 have been announced for several drafts now. The note is no longer needed.  
 SuggestedRemedy  
 Delete editor's note at line P46 L33.  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.1 P46 L50 # 133  
 Jones, Peter Cisco  
 Comment Type E Comment Status A Editorial  
 Rewrite for clarity/brevity.  
 SuggestedRemedy  
 Replace "own media to operate the" with "own media for the" or "own media to use with the"  
 Response Response Status C  
 ACCEPT.  
 (pick the 2nd option given)  
 Replace "own media to operate the" with "own media to use with the"  
 so the sentence now reads:  
 "This allows implementers to specify their own media to use with the 10BASE-T1M PHY as long as the normative requirements included in this clause are met."

CI 168 SC 168.1.2.1 P47 L47 # 130  
 Jones, Peter Cisco  
 Comment Type E Comment Status R Editorial  
 The "168.1.2.1 State diagram notation" text seems to be identical to that in "146.1.3.1 State diagram notation".  
 SuggestedRemedy  
 Move this to 21.5.5 or 21.6.  
 Response Response Status Z  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

# IEEE P802.3da D1.1 Physical Layer Specifications and

CI 168 SC 168.1 P46 L48 # 131  
 Jones, Peter Cisco  
 Comment Type E Comment Status A Editorial  
 Rewrite for clarity/brevity.  
 SuggestedRemedy  
 Replace "mixing segment, defined in 168.8" with "mixing segment as defined in 168.8".  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.4.2.1 P51 L48 # 3  
 Maguire, Valerie Copperopolis; CME Consulting  
 Comment Type T Comment Status A Editorial  
 Pin assignments are generally associated with conductors (e.g., see Table 169-2), not wires. For transmission, "balanced pair of conductors" is more descriptive and meaningful than "wire pair".  
 SuggestedRemedy  
 Grant Editorial license to do a global search and replace of existing "wire" references with an appropriate "conductor" reference. E.g., Replace "wire pair" with "conductor pair" on p51 L48, replace "two-wire" with "two-conductor" on p73 L12, replace "two-wire" with "two-conductor" on p75 L22, replace "2 wires" with "2 conductors" in Figure 168-18, replace "two-wire" with "two-conductor" on p75 L51, replace "any wire to the other wire" with "any conductor to the other conductor" on p76 L33 and in PICS TC16, replace "2-wire" with "2-conductor" on p88 L23 (Editor's Note), and replace "two-wire" with "two-conductor" on p90 L9.

Response Response Status C  
 ACCEPT.

CI 168 SC 168.5 P65 L35 # 45  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status R Editorial  
 Editor's note has been in place for sveral drafts now. It has served its purpose  
 SuggestedRemedy  
 Delete editor's note at P65 L35  
 Response Response Status Z  
 REJECT.

This comment was WITHDRAWN by the commenter.

CI 168 SC 168.6.4.5 P71 L44 # 61  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 do we still need the highlighter?  
 SuggestedRemedy  
 delete highlight  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.8.1 P74 L3 # 1  
 Maguire, Valerie Copperopolis; CME Consulting  
 Comment Type E Comment Status A Editorial  
 No need to be redundant by mentioning interfaces after TCI. Remove reference to return loss from the insertion loss clause. Language could be improved.  
 SuggestedRemedy  
 Replace, "The mixing segment insertion loss is specified including any through-path insertion loss for the TCIs. See 168.9.1 for specification of the insertion loss and return loss (reflections) at the TCI interfaces." with "Mixing segment insertion loss includes any TCI insertion loss. See 168.9.1.1 for specification of TCI insertion loss."  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.10 P77 L16 # 69  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 The editors note asks to consider whether 168.10 is aligned with 802.3cr-2021. Reviewing 802.3cr-2021 and comparing to 168.10, 168.10 goes much further than what's found in CR or annex J. The one thing missing is compliance to J.1, but I don't find that requirement in clause 146 or 147 of CR. Therefore, i think we can delete the editor's note.  
 SuggestedRemedy  
 delete editor's note.  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 168 SC 168.12.4.6 P85 L3 # 47  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status A Editorial  
 Editor's note has been in place for sveral drafts now. It has served its purpose  
 SuggestedRemedy  
 Delete editor's note at P85 L3  
 Response Response Status C  
 ACCEPT.

CI 169 SC 169.4.3 P91 L22 # 78  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 Editor's note to convert 169-2 to Frame at least one draft before WG ballot. That time is now. Can we get a volunteer to draw in Frame?  
 SuggestedRemedy  
 replace Figure with a Frame drawing and delete the editor's note.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Editor to request Jon Lewis to draw figure, insert the figure, and delete Editor's note.

CI 169 SC 169.4.7 P97 L51 # 91  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 the sentence "Under all conditions, an MPSE shall present an invalid MPD discovery signature with one of the attributes as specified in Table 169-4." belongs in 169.4.6.  
 SuggestedRemedy  
 move the sentence "Under all conditions, an MPSE shall present an invalid MPD discovery signature with one of the attributes as specified in Table 169-4." to a new paragraph just before Table 169-3.  
 Response Response Status C  
 ACCEPT.

CI 169 SC 169.4.7 P98 L3 # 10  
 Maguire, Valerie Copperopolis; CME Consulting  
 Comment Type E Comment Status R Editorial  
 Delete column with no information.  
 SuggestedRemedy  
 Delete the "Additional Information" column in Table 169.5.  
 Response Response Status Z  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

CI 169 SC 169.4.11.1 P99 L9 # 95  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 "MPS shall be defined as being present in the POWER\_ON state when IMPSE is greater than or equal to IHold max for a minimum of TMPS." This sentence is missing a table reference. "as defined in Table 169-5."  
 Also, I note the text says "as defined" and "as specified". We need to pick one and be consistent. I suggest "as defined"  
 SuggestedRemedy  
 add "as defined in Table 169-5." to the end of the sentence.  
 Editors given guidance to search text for "as specified" and replace with as defined when referring back to a Table. Editorial license granted to modify all locations of "as specified" as needed.

Response Response Status C  
 ACCEPT.

CI 169 SC 169.5.2 P100 L31 # 103  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A Editorial  
 Table 169-6 requires the PD to be polarity insensitive, resolving this editor's note. Therefore, we can delete it.  
 SuggestedRemedy  
 Delete the editor's note.  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 169 SC 169.5.2 P100 L37 # 104

Jones, Chad Cisco Systems

Comment Type E Comment Status A Editorial

Editor's note to convert 169-6 to Frame at least one draft before WG ballot. That time is now. Can we get a volunteer to draw in Frame?

*SuggestedRemedy*

replace Figure with a Frame drawing and delete the editor's note.

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to request Jon Lewis to draw figure, insert the figure, and delete Editor's note.

Cl 22 SC 22 P20 L1 # 22

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type E Comment Status R Empty Clauses

It appears there are no changes necessary to clause 22 - delete from the draft

*SuggestedRemedy*

See comment.

Response Response Status C

REJECT.

Comment 117 is adding content to clause 22.

Cl 78 SC 78 P26 L1 # 40

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type E Comment Status A Empty Clauses

There have been no proposals for EEE, and it is expected to be similar to 10BASE-T1S. Clause 78 is therefore not needed.

*SuggestedRemedy*

Delete clause 78 from the draft.

Response Response Status C

ACCEPT.

Cl 79 SC 79 P27 L1 # 55

Jones, Chad Cisco Systems

Comment Type E Comment Status D Empty Clauses

There are no changes in clause 79. Do we foresee changes? If not delete this clause from the draft. Otherwise, reject this comment and assign someone to lead the changes for D1.2. Need this completed ASAP so we can move to WG ballot.

*SuggestedRemedy*

delete clause 79 if no changes are needed.

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

See comment 123

Cl 169 SC 169.6.1 P107 L26 # 115

Jones, Chad Cisco Systems

Comment Type T Comment Status R Empty Clauses

No text for the Isolation section. Need volunteers to write this section.

*SuggestedRemedy*

Assign the effort to volunteers, charter ad hoc if needed.

Response Response Status C

REJECT. (no change to draft)

Chair has chartered an ad hoc to generate text for the isolation and environment requirements. Ad hoc to consider what isolation requirements of existing applications are, as well as clause 104.

Cl 169 SC 169.7 P107 L40 # 116

Jones, Chad Cisco Systems

Comment Type T Comment Status R Empty Clauses

No text for the Environmental section. Need volunteers to write this section.

*SuggestedRemedy*

Assign the effort to volunteers, charter ad hoc if needed.

Response Response Status C

REJECT.

See comment 115 chartering ad hoc...

## IEEE P802.3da D1.1 Physical Layer Specifications and

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CI	FM	SC	FM	P1	L1	#	20
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Zimmerman, George	CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem
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Comment Type	E	Comment Status	A	EZ
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Editor to check that frontmatter is current per template

*SuggestedRemedy*

Check and update as necessary

Response	Response Status	C
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ACCEPT.

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CI	FM	SC	FM	P1	L29	#	54
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Zimmerman, George	CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem
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Comment Type	E	Comment Status	A	EZ
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Editor needs to get with 802 leadership and determine order of the da amendment assuming WG ballot out of either July or September

*SuggestedRemedy*

Update editor's note P1 L28-34, and test P1 L35-38, and introduction P12 to include other amendments as necessary.

Response	Response Status	C
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ACCEPT IN PRINCIPLE.  
TFTD - need to consider with timeline

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CI	00	SC	0	P3	L5	#	2
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Maguire, Valerie	Copperopolis; CME Consulting
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Comment Type	E	Comment Status	A	EZ
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Consider capitalization here as Powered Device is written as a proper noun elsewhere in the document.

*SuggestedRemedy*

Replace, "multiple powered devices" with "multiple Powered Devices".

Response	Response Status	C
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ACCEPT.

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CI	30	SC	30.16.1.1.8	P21	L48	#	23
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Zimmerman, George	CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem
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Comment Type	E	Comment Status	A	EZ
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SOFT\_AGING\_CYCLES (and HARD\_AGING\_CYCLES) has been changed to lower case in clause 148. Need to do the same here.

*SuggestedRemedy*

Change SOFT\_AGING\_CYCLES and HARD\_AGING\_CYCLES to lower case globally.  
(P21 L48, P22 L5, P43 L19, P43 P25, at least)

Response	Response Status	C
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ACCEPT.

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CI	45	SC	45.2.1.93a	P24	L31	#	25
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Zimmerman, George	CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem
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Comment Type	E	Comment Status	A	EZ
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Template is not needed for draft

*SuggestedRemedy*

delete P24 L31 - P25 L49

Response	Response Status	C
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ACCEPT.

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CI	148	SC	148.2	P30	L14	#	56
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Jones, Chad	Cisco Systems
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Comment Type	E	Comment Status	A	EZ
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"The method of determination of to\_timer by the management entity is beyond the scope of this standard." Modified this sentence last cycle to remove "the node ID and", leaving the sentence a little awkward. I think we needed to keep "the" in front of "to\_timer"

*SuggestedRemedy*

add the in front of to\_timer: "The method of determination of the to\_timer by the management entity is beyond the scope of this standard."

Response	Response Status	C
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ACCEPT IN PRINCIPLE.  
(may be overwritten by comment 125)



# IEEE P802.3da D1.1 Physical Layer Specifications and

CI 148 SC 148.4.4.6 P34 L31 # 35  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status A EZ  
 Arrow from "BURST" into "TRANSMIT" state overshoots the boundary...  
 SuggestedRemedy  
 Redraw state transition from BURST aligning arrowheads  
 Response Response Status C  
 ACCEPT.

CI 148 SC 148.4.4.6 P34 L31 # 57  
 Jones, Chad Cisco Systems  
 Comment Type E Comment Status A EZ  
 arrows from TRANSMIT to BURST and from BURST to TRANSMIT overshoots the boundary.  
 SuggestedRemedy  
 redraw such that arrowheads align to the top of the box.  
 Response Response Status C  
 ACCEPT.

CI 148 SC 148.4.7.3 P40 L27 # 129  
 Jones, Peter Cisco  
 Comment Type E Comment Status A EZ  
 Extra blank line.  
 SuggestedRemedy  
 remove blank line.  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168 P46 L1 # 36  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status A EZ  
 There are no annexes yet, but editorial instruction mentions them.  
 SuggestedRemedy  
 Delete "(see later in this amendment of the addition of corresponding annexes)" from editing instruction.  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.5.2 P66 L21 # 46  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status A EZ  
 Editor's note was accomplished in changes to draft 1.1, no longer needed.  
 SuggestedRemedy  
 Delete editor's note at P66 L21  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.6.3 P69 L36 # 4  
 Maguire, Valerie Copperopolis; CME Consulting  
 Comment Type E Comment Status A EZ  
 Easy is too subjective here... Improve language.  
 SuggestedRemedy  
 Replace, "To allow an easy synchronization of the measurement equipment," with "To facilitate synchronization of the measurement equipment,".  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.8 P73 L4 # 137  
 Jones, Peter Cisco  
 Comment Type ER Comment Status A EZ  
 Fix incorrect reference.  
 SuggestedRemedy  
 Replace "The 10BASE-T1M mixing segment (1.4.331)" with "The 10BASE-T1M mixing segment (1.4.403)".  
 Response Response Status C  
 ACCEPT.

CI 168 SC 168.8 P73 L8 # 41  
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem  
 Comment Type E Comment Status A EZ  
 No need for highlight on lines 8 to 12  
 SuggestedRemedy  
 Remove highlight lines 8 to 12  
 Response Response Status C  
 ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 168 SC 168.8 P73 L17 # 140

Jones, Peter Cisco

Comment Type ER Comment Status A EZ

Fix reference to TCI sub-clause.

*SuggestedRemedy*

Replace "The TCI is specified in 168.8" with "The TCI is specified in 168.9".

Response Response Status C

ACCEPT IN PRINCIPLE.

Make change and make it an active x-ref.

CI 168 SC 168.8.2 P74 L20 # 5

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Align structure with clause 168.8.1.

*SuggestedRemedy*

Insert the following two sentences as a new paragraph before the mixing segment return loss specification, "Mixing segment return loss includes any TCI return loss. See 168.9.1.2 for specification of TCI return loss."

Response Response Status C

ACCEPT.

CI 168 SC 168.9.1.1 P76 L11 # 6

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Insertion loss is not a proper noun.

*SuggestedRemedy*

Replace, "168.9.1.1 TCI Insertion Loss" with "168.9.1.1 TCI insertion loss"

Response Response Status C

ACCEPT.

CI 168 SC 168.9.1.2 P76 L17 # 7

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Return loss is not a proper noun.

*SuggestedRemedy*

Replace, "168.9.1.2 TCI Return Loss" with "168.9.1.2 TCI return loss"

Response Response Status C

ACCEPT.

CI 169 SC 169.2 P88 L30 # 71

Jones, Chad Cisco Systems

Comment Type E Comment Status A EZ

We should include a pointer to 168.8 for those that only come to read the PoE section so they can see the mixing segment specifications.

*SuggestedRemedy*

Add new sentence: "See 168-8 for a discussion of the mixing segment characteristics."

Response Response Status C

ACCEPT IN PRINCIPLE.

(fixed typo of - for intended .)

Add new sentence: "See 168.8 for mixing segment characteristics."

CI 169 SC 169.4.6 P97 L39 # 8

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Delete column with no information.

*SuggestedRemedy*

Delete the "Additional Information" column in Table 169.4.

Response Response Status C

ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 169 SC 169.4.7 P97 L42 # 90

Jones, Chad Cisco Systems

Comment Type T Comment Status A EZ

item 1, lbad, in Table 169-4 has a min of 30mA and a max of 0mA. I'm no mathematician, but 0 is lower than 30 so I don't understand how 0 can be the max. was that supposed to be something like 40 or 50 instead of 0?

#### SuggestedRemedy

replace the max of 0mA with the appropriate number. Or perhaps the numbers need flipped, 0mA min and 30mA max.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change lbad Max to -

(see [https://www.ieee802.org/3/da/public/1123/clause169\\_clean.pdf](https://www.ieee802.org/3/da/public/1123/clause169_clean.pdf) )

CI 169 SC 169.4.7 P98 L13 # 9

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Remove unnecessary parameter capitalizations in Table 169-5.

#### SuggestedRemedy

Replace, "Output Slew Rate" with "Output slew rate" (Item 3). Replace, "MPD Maintain power" with "MPD maintain power" (Item 7).

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3 P100 L41 # 11

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Follow Style guidelines.

#### SuggestedRemedy

Replace, "MPD State Diagram" with "MPD state diagram".

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3.3 P102 L2 # 12

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

MPS is not capitalized in 169.4.11.1

#### SuggestedRemedy

Replace, "Maintain Power Signature" with "maintain power signature".

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3.4 P102 L33 # 107

Jones, Chad Cisco Systems

Comment Type E Comment Status A EZ

Vmpd should be VMPD.

#### SuggestedRemedy

capitalize the subscript text. Editors given editorial license to fix any other subscript capitalization errors they notice.

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3.6 P105 L24 # 14

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Follow Style guidelines.

#### SuggestedRemedy

Replace, "Top Level MPD state diagram" with "Top level MPD state diagram".

Response Response Status C

ACCEPT.

CI 169 SC 169.5.4 P105 L31 # 13

Maguire, Valerie Copperopolis; CME Consulting

Comment Type E Comment Status A EZ

Follow Style guidelines.

#### SuggestedRemedy

Replace, "MPD Discovery." with "MPD discovery".

Response Response Status C

ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn

SORT ORDER: Topic

Topic EZ

Page 11 of 34

5/21/2024 10:46:14 AM

## IEEE P802.3da D1.1 Physical Layer Specifications and

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CI 169 SC 169.5.5 P106 L2 # 15  
Maguire, Valerie Copperopolis; CME Consulting  
Comment Type E Comment Status A EZ  
Follow Style guidelines.  
SuggestedRemedy  
Replace, "MPD Power" with "MPD power".  
Response Response Status C  
ACCEPT.

---

CI 169 SC 169.5.5.1 P106 L45 # 16  
Maguire, Valerie Copperopolis; CME Consulting  
Comment Type E Comment Status A EZ  
Follow Style guidelines.  
SuggestedRemedy  
Replace, "MPD Inrush" with "MPD inrush".  
Response Response Status C  
ACCEPT.

---

CI 169 SC 169.5.5.1 P106 L49 # 112  
Jones, Chad Cisco Systems  
Comment Type E Comment Status A EZ  
at least three occurrences of Vmpd, replace with VMPD  
SuggestedRemedy  
Replace Vmpd with VMPD.  
Response Response Status C  
ACCEPT.

---

CI 169 SC 169.5.5.2 P107 L5 # 19  
Maguire, Valerie Copperopolis; CME Consulting  
Comment Type T Comment Status A EZ  
Clause 169.5.5 is already named "MPD power". Consider a more descriptive clause header.  
SuggestedRemedy  
Replace, "MPD Power" with "MPD unit load".  
Response Response Status C  
ACCEPT.

---

CI 169 SC 169.6 P107 L22 # 17  
Maguire, Valerie Copperopolis; CME Consulting  
Comment Type E Comment Status A EZ  
Follow Style guidelines.  
SuggestedRemedy  
Replace, "Additional Electrical Specifications" with "Additional electrical specifications".  
Response Response Status C  
ACCEPT.

---

CI 169 SC 169.6.2 P107 L31 # 18  
Maguire, Valerie Copperopolis; CME Consulting  
Comment Type E Comment Status A EZ  
Follow Style guidelines.  
SuggestedRemedy  
Replace, "Fault Tolerance" with "Fault tolerance".  
Response Response Status C  
ACCEPT.

---

CI 30 SC 30.16.1.1.8 P21 L47 # 119  
Jones, Peter Cisco  
Comment Type ER Comment Status A EZ-Pull  
Variable names are in lower case in 148.4.7.2.  
SuggestedRemedy  
Change "SOFT\_AGING\_CYCLES" to "soft\_aging\_cycle"  
Response Response Status C  
ACCEPT IN PRINCIPLE.  
Change "SOFT\_AGING\_CYCLES" to "soft\_aging\_cycles"

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 30 SC 30.16.1.1.9 P22 L5 # 120

Jones, Peter Cisco

Comment Type ER Comment Status A EZ-Pull

Variable names are in lower case in 148.4.7.2.

#### SuggestedRemedy

Change "HARD\_AGING\_CYCLES" to "hard\_aging\_cycle".

Response Response Status C

ACCEPT IN PRINCIPLE.

(comment 23 handles this change globally, and, hits this spot as well.)

Change "HARD\_AGING\_CYCLES" to "hard\_aging\_cycles".

CI 79 SC 79.3.8 P27 L6 # 123

Jones, Peter Cisco

Comment Type TR Comment Status A LLDP

LLDP TLVs were proposed and adopted in Berlin 2023.

#### SuggestedRemedy

Please implement changes as proposed and accepted in  
[https://www.ieee802.org/3/da/public/0723/jones\\_3da\\_01\\_061223.pdf](https://www.ieee802.org/3/da/public/0723/jones_3da_01_061223.pdf) and  
[https://www.ieee802.org/3/da/public/0723/jones\\_3da\\_02\\_061223.pdf](https://www.ieee802.org/3/da/public/0723/jones_3da_02_061223.pdf).

Response Response Status C

ACCEPT.

CI 30 SC 30 P21 L1 # 118

Jones, Peter Cisco

Comment Type TR Comment Status A Management

Miscellaneous changes to clause 30 to support 10BASE-T1M.

#### SuggestedRemedy

Implement proposed text for for 10BASE-T1M PHY Management definitions as shown in attached file "8023da\_D1p1\_peter jones clause 30 text.docx"

Response Response Status C

ACCEPT IN PRINCIPLE.

Incorporate commenter's remedy, except:

1 - put new PHYType, PHYList, and MAUType 10BASE-T1M entries before 10BASE-T1S (and variants)

2 - change "10BASE-T1MD" to "10BASE-T1M" in clause 30.5.1.1.2 and 30.5.1.1.5 in Peter's text.

Peter to see if a version with revision marks is available to assist Val with implementation.

CI 30 SC 30.17 P23 L11 # 37

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status A Management

Multidrop power is going to need management parameters. (power is not connected to MDIO, so it is managed through clause 30, see 30.15 and 30.9)

#### SuggestedRemedy

Insert new subclause 30.17 Layer management for Multidrop Power over Ethernet (MPoE), with editor's note - management objects for clause 169 goes here

Response Response Status C

ACCEPT IN PRINCIPLE.

Insert new subclause 30.17 Layer management for Multidrop Power over Ethernet (MPoE), with "Editor's note - Placeholder for clause 169 Management objects. Contributions needed."

CI 45 SC 45.2 P24 L4 # 121

Jones, Peter Cisco

Comment Type TR Comment Status A Management

Editors note requests contributions to add MDIO definitions for clause 168 PHY to clause 45.

#### SuggestedRemedy

Implement proposed text for for 10BASE-T1M PHY MDIO definitions as shown in attached file "8023da\_D1p1\_peter jones clause 45 text.docx"

Response Response Status C

ACCEPT IN PRINCIPLE.

Proposed changes aligned with IEEE Std 802.3-2022 (rather than IEEE Std 802.3cg-2019) in version 3 provided by Peter. Peter to email version with revision marks to Val to assist with comment implementation.

Editorial license to always reference T1M before T1S.

Editorial license to align Table captions with register names (inserting tables as necessary).

Editorial license to globally align clause 45 cross-references in draft with 802.3-2022 (they are aligned with 802.3cg in Peter's contribution). George volunteered to implement this change.

## IEEE P802.3da D1.1 Physical Layer Specifications and

---

CI 45 SC 45.2 P24 L5 # 24

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status A Management

The 10BASE-T1M PHY is the same as the 10BASE-T1S PHY, therefore it does not need new management registers, only edits to 10BASE-T1S. Change note to reflect this.

*SuggestedRemedy*

Change editor's note at line 7, "The 10BASE-T1M PHY is the same as the 10BASE-T1S PHY, except that it only uses multidrop mode. Proposed text is needed to adjust the 10BASE-T1S registers (1.2297, 1.2298, and 1.2299) to include 10BASE\_T1M".

Add 1.2297, 1.2298, and 1.2299 to Table 45-3, changing the names from 10BASE-T1S to 10BASE-T1S/M, e.g., "10BASE-T1S/M PMA control" (or status, or test mode control, as appropriate).

Response Response Status C

ACCEPT IN PRINCIPLE.  
Delete Editor's Note on line 6-9.

---

CI 45 SC 45.2.3.73 P24 L31 # 49

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status A Management

Need to add 10BASE-T1M to 10BASE-T1S PCS status register definitions

*SuggestedRemedy*

Add 45.2.3.73 and subclauses to draft, changing "10BASE-T1S" to "10BASE-T1S/M" everywhere (headings, table captions, and text)  
Add new final sentence to 45.2.3.73.2 full-duplex capability: "10BASE-T1M PHYs are not capable of full-duplex capability."

Response Response Status C

ACCEPT IN PRINCIPLE.  
Much is resolved by comment 121, except :  
Change caption for Table 45-299 to "10BASE-T1M/T1S PCS status register bit definitions" and  
Add new final sentence to 45.2.3.73.2 full duplex capability: "10BASE-T1M PHYs do not have full duplex capability."

Editor to do a global replace "full-duplex" or "full duplex".

---

CI 45 SC 45.2.1.235 P24 L31 # 31

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to add 10BASE-T1M to the 10BASE-T1S PMA status register.

*SuggestedRemedy*

Add 45.2.1.235 (and subclauses) to the draft. Change "10BASE-T1S" to "10BASE-T1S/M" in the headers of each, and in the titles of Tables 45-197 and globally in the text.

Change 45.2.1.235.3 to read:

"<UL>For the 10BASE-T1S PMA, w<UL><SO>W<SO>hen read as a one, bit 1.2298.10 indicates that the 10BASE-T1S PMA supports multidrop mode (see Clause 147). When read as a zero, bit 1.2298.10 indicates that the 10BASE-T1S PMA does not support multidrop mode. If the 10BASE-T1S PMA supports multidrop mode, then it is controlled using bit 1.2297.10; otherwise, bit 1.2297.10 has no effect.<new paragraph><UL> For the 10BASE-T1M PMA, bit 1.2298.10 shall be set to one and writing to bit 1.2297.10 has no effect. <UL>"

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

---

CI 45 SC 45.2.1.16.4 P24 L31 # 28

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to update the text of the 10BASE-T1S ability to reflect 10BASE-T1M as well.

*SuggestedRemedy*

Add text of 45.2.1.16.4 to the draft, changing "10BASE-T1S" to "10BASE-T1S/M" everywhere (header & both sentences). Add new final sentence, "NOTE - 10BASE-T1S and 10BASE-T1M use the same PMA type, registers, and control, except that 10BASE-T1M only supports the multidrop mode of operation, and is defined in clause 168."

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

## IEEE P802.3da D1.1 Physical Layer Specifications and

---

CI 45 SC 45.2.1.214 P24 L31 # 29

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to add BASE-T1 PMA/PMD control register with 10BASE-T1M

*SuggestedRemedy*

Add 45.2.1.214, Table 45-178, and 45.2.1.214.2 to the draft, changing 10BASE-T1S to 10BASE-T1S/M in Table 45-178. In 45.2.1.214.2, change "the mode of operation is 10BASE-T1S" to "the mode of operation is 10BASE-T1S or 10BASE-T1M. Note that 10BASE-T1S and 10BASE-T1M use the same PMA type, registers, and control, except that 10BASE-T1M only supports the multidrop mode of operation, and is defined in clause 168."

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

---

CI 45 SC 45.2.3.74 P24 L31 # 50

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to add 10BASE-T1M to 10BASE-T1S PCS diagnostic 1 & 2 register definitions

*SuggestedRemedy*

Add 45.2.3.74 and 45.2.3.75 and subclauses to draft, changing "10BASE-T1S" to "10BASE-T1S/M" everywhere (headings, table captions, and text)

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

---

CI 45 SC 45.2.1.234 P24 L31 # 26

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to add 10BASE-T1S registers to the draft

*SuggestedRemedy*

Add 45.2.1.234, 45.2.1.235, and 45.2.1.236 to the draft, changing the name of the register to "10BASE-T1S/M" (PMA control, PMA status or test mode control)

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

---

CI 45 SC 45.2.3.72 P24 L31 # 48

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status A Management

Need to add 10BASE-T1M to 10BASE-T1S PCS control register definitions

*SuggestedRemedy*

Add 45.2.3.72 and subclauses to draft, changing "10BASE-T1S" to "10BASE-T1S/M" everywhere (headings, table captions, and text)  
Change external x-ref to 45.2.3.68c.1 in 168.4.1 to 45.2.3.72 (active x-ref), and remove TBD.

Response Response Status C

ACCEPT IN PRINCIPLE.

In 168.4.1, P51 L32, Change external x-ref to 45.2.3.68c.1 in 168.4.1 to 45.2.3.72 (active x-ref), and remove TBD.

## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 45 SC 45.2.1.236 P24 L31 # 32

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to add 10BASE-T1M to the 10BASE-T1S test mode control register

*SuggestedRemedy*

Add 45.2.1.236 and Table 45-198 to the draft, changing "10BASE-T1S test mode control register" to "10BASE-T1S/M test mode control register" (3 instances)  
Also, in 168.6.2, delete TBD next to register number (P68 L4), and change external x-ref of "45.2.1.186f.1 (TBD)" to "45.2.1.236" (no tbd, active x-ref) on P68 L5 (including similar changes in PICS PMAE2)

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 45 SC 45.2.1.234 P24 L31 # 30

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status R Management

Need to add 10BASE-T1M to the 10BASE-T1S PMA Control register.

*SuggestedRemedy*

Add 45.2.1.234 t (and subclauses) to the draft. Change "10BASE-T1S" to "10BASE-T1S/M" in the headers of each, and in the titles of Tables 45-196 and globally in the text.

Change 45.2.1.234.4 to read:

"<UL>For the 10BASE-T1S PMA, w<UL><SO>W<SO>hen Auto-Negotiation is implemented and enabled, writing to this bit shall have no effect on the PHY, and the PCS multidrop variable shall be set to FALSE. If multidrop mode is not supported according to bit

1.2298.10, then writing to bit 1.2297.10 shall have no effect, and the multidrop variable shall be set to

FALSE. Otherwise, if bit 1.2297.10 is set to one, the 10BASE-T1S PMA shall operate in multidrop mode,

and the multidrop variable is set to TRUE; and if bit 1.2297.10 is set to zero, the multidrop variable is set to

FALSE. If multidrop mode is supported according to bit 1.2298.10, then the default value of bit 1.2297.10

should be one.<new paragraph>

<UL> For the 10BASE-T1M PMA, bit 1.2297.10 shall be read only set to one and writing to bit 1.2297.10 shall have no effect. <UL>"

In 168.6.6, Delete TBD at P72 L38 next to "1.2297.13", and replace (external x-ref) "45.2.1.186d.5 (TBD)" with (active x-ref) "45.2.1.234.5" (no TBD). (Including similar changes in PICS PMAE18)

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.



## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 45 SC 45.2.3.1.2 P25 L46 # 122

Jones, Peter

Cisco

Comment Type E Comment Status R Management

Rewrite paragraph(s) for clarity/brevity.

*SuggestedRemedy*

Replace

When the 100BASE-T1, any MultiGBASE-T, or the 5/10GBASE-R mode of operation is selected for the PCS using the PCS type selection field (3.7.3:0), the PCS shall be placed in a loopback mode of operation when bit 3.0.14 is set to a one. When bit 3.0.14 is set to a one, the 100BASE-T1, 5/10GBASE-R, or any PCS in the MultiGBASE-T set shall accept data on the transmit path and return it on the receive path. The speed of the loopback is selected by the PCS control 1 (register 3.0) defined in 45.2.3.1. The specific behavior of the 100BASE-T1 PCS during loopback is specified in 96.3.5. The specific behavior of the 5/10GBASE-R PCS during loopback is specified in 49.2. The specific behavior for the 10GBASE-T PCS during loopback is specified in 55.3.7.3. The specific behavior for the 25GBASE-T and 40GBASE-T PCS during loopback is specified in 113.3.7.3. The specific behavior for the 2.5GBASE-T or 5GBASE-T PCS during loopback is specified in 126.3.7.3. For all other port types, the PCS loopback functionality is not applicable and writes to this bit shall be ignored and reads from this bit shall return a value of zero.

With

Setting bit 3.0.14 to one for any of the following PCSs, 100BASE-T1, MultiGBASE-T, 5/10GBASE-R; places the PCS into. The PCS accepts data on the transmit path and returns it on the receive path. The speed of the loopback is selected by the PCS control 1 (register 3.0) defined in 45.2.3.1.

PCS specific behavior during loopback is defined in:

- 96.3.5 for 100BASE-T1.
- 49.2 for 5/10GBASE-R.
- 55.3.7.3 for 10GBASE-T PCS.
- 113.3.7.3 for 25GBASE-T and 40GBASE-T.
- 126.3.7.3 for 2.5GBASE-T or 5GBASE-T.

For all other PCSs, this functionality is not applicable. Writes to this bit shall be ignored and reads from this bit shall return a value of zero.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 168 SC 168.6.6 P72 L38 # 136

Jones, Peter

Cisco

Comment Type TR Comment Status A Management

Replace TBDs.

The proposed resolution assumes my proposed text for clause 45 is accepted.

*SuggestedRemedy*

Replace "MDIO register 1.2297.13 (TBD), defined in 45.2.1.186d.5 (TBD)," with "MDIO register 1.2297.13, defined in 45.2.1.186d.5".

Response Response Status C

ACCEPT IN PRINCIPLE.

Replace "MDIO register 1.2297.13 (TBD), defined in 45.2.1.186d.5 (TBD)," with "MDIO register 1.2297.13, defined in 45.2.1.234.5".

Change 45.2.1.186d.5 to 45.2.1.234.5 in PICS PMAE18.

Cl 168 SC 168.1 P46 L48 # 132

Jones, Peter

Cisco

Comment Type E Comment Status A Mixing Segment description

Rewrite for clarity/brevity.

*SuggestedRemedy*

Replace "The medium supporting the operation of the" with "the mixing segment for the".

Response Response Status C

ACCEPT IN PRINCIPLE.

Replace "The medium supporting the operation of the" with "The mixing segment for the".

# IEEE P802.3da D1.1 Physical Layer Specifications and

**Cl 168**      **SC 168.8**      **P73**      **L28**      # **42**

Zimmerman, George      CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

**Comment Type T**      **Comment Status R**      *Mixing Segment description*

Replace TBD with objective length - it is just an example anyways, and not even expected to be worst case, only something that can be made within the specifications. Simulations have shown 50meters can meet the specifications.

*SuggestedRemedy*

Replace TBD with 50 m.

**Response**      **Response Status Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD  
(Note - editor AIP'ed his own proposal so that the group stops to consider)

**Cl 168**      **SC 168.8**      **P73**      **L30**      # **44**

Zimmerman, George      CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

**Comment Type E**      **Comment Status A**      *Mixing Segment description*

It needs to be abundantly clear that the lengths and gauges of wiring are simply an example.

*SuggestedRemedy*

Add the following NOTE after 4th paragraph of 168.8 "NOTE - Dimensions such as length and gauge of cabling in the example given are merely examples of a what a mixing segment compliant with the specifications of 168.8 (including TCIs compliant with 168.9) could be comprised of. They are not to be confused with normative specifications or a statement that all mixing segments constructed within that length and gauge of wiring would result in compliance with 168.8 and 168.9."

**Response**      **Response Status C**

ACCEPT IN PRINCIPLE.

Delete the sentence at P73 L28 beginning with "The example trunk comprises..."

**Cl 168**      **SC 168.8**      **P73**      **L48**      # **43**

Zimmerman, George      CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

**Comment Type E**      **Comment Status A**      *Mixing Segment description*

Make it clear that the figure is an example

*SuggestedRemedy*

Change title of Figure 168-17 to "Example mixing segment and reference points"

**Response**      **Response Status C**

ACCEPT.

**Cl 168**      **SC 168.8.1**      **P74**      **L11**      # **141**

DiMinico, Christopher      PHY-SI/SenTekse/MC Communications

**Comment Type TR**      **Comment Status A**      *Mixing Segment electrical*

168.8.1 Mixing Segment Insertion loss Equation (168-3)is TBD.

*SuggestedRemedy*

See diminico\_3da\_01\_051524.pdf

**Response**      **Response Status C**

ACCEPT IN PRINCIPLE.

Implement Mixing Segment insertion loss requirements on slide 13 with license.

**Cl 168**      **SC 168.8.1**      **P74**      **L15**      # **63**

Jones, Chad      Cisco Systems

**Comment Type T**      **Comment Status R**      *Mixing Segment electrical*

Take the suggestion from the Editors note and copy 147-3 as the starting point for EQ 168-3

*SuggestedRemedy*

copy EQ 147-3 to EQ 168-3

**Response**      **Response Status Z**

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD  
(suggestion is reasonable, but might limit reach unnecessarily, needs to be considered with proposal from comment 141)

## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 168 SC 168.8.2 P74 L26 # 142

DiMinico, Christopher

PHY-SI/SenTekse/MC Communications

Comment Type TR Comment Status R Mixing Segment electrical

168.8.2 Mixing Segment Return loss Equation (168-4)is TBD.

*SuggestedRemedy*

See diminico\_3da\_01\_051524.pdf

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD - pending receipt of proposal  
consider with 64

Defer: Implement Mixing Segment return loss requirements on slide 14 with license.

Cl 168 SC 168.8.2 P74 L30 # 64

Jones, Chad

Cisco Systems

Comment Type T Comment Status R Mixing Segment electrical

Take the suggestion from the Editors note and copy 147-4 as the starting point for EQ 168-4

*SuggestedRemedy*

copy EQ 147-4 to EQ 168-4

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD  
(may need some analysis, especially with loads that are powered - needs to be considered with proposal from 142)

Cl 169 SC 169.1.2 P87 L42 # 153

Paul, Michael

Analog Devices

Comment Type E Comment Status R PI

Need new 169-2 Picture

*SuggestedRemedy*

Create new figure. Were new figures presented at Denver '24?

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 169 SC 169.1.2 P88 L1 # 70

Jones, Chad

Cisco Systems

Comment Type T Comment Status A PI

Need to replace Fig 169-1. replace with submission from comment author.

*SuggestedRemedy*

replace Fig 169-1 with submitted figure

Response Response Status C

ACCEPT IN PRINCIPLE. Add definition for MPI and replace Figure 169-1 as shown in cjon\_3da\_02\_F169-1\_0524\_V2.pdf (George to redraw figure in Frame).

Replace Editor's Note on line 20-25 with, "Commenters to consider translating specifications at the MPI to a specification at an observable point."

Cl 169 SC 169.4 P90 L1 # 75

Jones, Chad

Cisco Systems

Comment Type T Comment Status A PI

"An MPSE is specified by its electrical and logical behavior as seen at the MPSE TCI" - TCI is part of the mixing segment. Did we not bring forward the concept of the PI to 169? This is probably partnered with the comment against P89 L1 for a new fig 169-1. This figure must include the PI.

*SuggestedRemedy*

change sentence to: "An MPSE is specified by its electrical and logical behavior as seen at the MPSE PI."

Response Response Status C

ACCEPT IN PRINCIPLE.  
change sentence to: "An MPSE is specified by its electrical and logical behavior as seen at the MPSE MPI."

## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 169 SC 169.4.3 P90 L32 # 88

Jones, Chad Cisco Systems

Comment Type E Comment Status A PI

the sentence "For compliance, MPSE current is measured as the sum of TCI currents, TC1+TC2." seems broken to me.  
Figured out this is because the PSE is always attached to TC3, but we don't state that.  
Therefore, I'm suggesting that we modify the sentence on line 23 and add text to Fig 169-2.

*SuggestedRemedy*

line 23, through TC3: "MPSEs supply power to the mixing segment through TC3. See Figure 169-2."  
Modify Fig 169-2 adding labels for TC1, TC2, TC3.

Response Response Status C

ACCEPT IN PRINCIPLE.  
Suggest trying to write relative to the PI, located at the place thought of as TC3, and may not be exposed... (see comment 98).

Line 23, through TC3. "MPSEs supply power to the mixing segment through the PI. See Figure 169-2."  
Modify Fig 169-2 adding lables for TC1, TC2, and MPI (at the "base" of the T).  
Add note to Figure 169-2:  
"NOTE - MPSE PI may not be exposed. If it is not exposed, limits are calculated from values at TC1 and TC2."

Cl 169 SC 169.5 P99 L27 # 98

Jones, Chad Cisco Systems

Comment Type E Comment Status A PI

If we decide to use the concept of PI (as suggested in an earlier comment), then it should be added here.

*SuggestedRemedy*

Replace MPD TCI with MPD PI on L28.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change sentence at line 27 from "Limits defined for an MPD are specified at the MPD TCI." to  
"Limits defined for an MPD are  
specified at the MPD MPI. Where the MPD PI is not exposed, current values are  
calculated from observable currents at TC1 and TC2."  
Add MPD MPI to figure 169-6, (in addition to TC1 and TC2) on the downward facing side of  
the TCI.  
Add note to figure 169-6, "NOTE - MPD MPI may not be exposed. If it is not exposed,  
limits are calculated from values at TC1 and TC2."

Cl 169 SC 169.5.2 P99 L52 # 99

Jones, Chad Cisco Systems

Comment Type T Comment Status A PI

"MPDs draw power from the mixing segment. MPDs are current sinks. See Figure 169-6."  
Like the MPSE, we do not state that MPDs are only connected to TC3, and Fig 169-6 lacks  
TCx labels.

*SuggestedRemedy*

add "from TC3" to the sentence: "MPDs draw power from the mixing segment from TC3."  
Add labels for TC1,2,3 to Fig 169-6.

Response Response Status C

ACCEPT IN PRINCIPLE.  
Accomodated by figure changes in comment 98

# IEEE P802.3da D1.1 Physical Layer Specifications and

CI 148 SC 148.2 P30 L12 # 125

Jones, Peter

Cisco

Comment Type E Comment Status A PLCA

Rewrite paragraph(s) for clarity/brevity.

## SuggestedRemedy

Replace

The working principle of PLCA is that transmit opportunities on a mixing segment are granted in sequence based on a node ID unique to the local collision domain (set by the management entity). The method of determination of the node ID and to\_timer by the management entity is beyond the scope of this standard. Node ID may be optionally allocated by the Dynamic PLCA (D-PLCA) control state diagram in 148.4.7.6. If the D-PLCA functionality is not implemented or is not enabled, node ID is allocated by the management entity using methods beyond the scope of this standard. When not using D-PLCA, proper Proper operation of the Clause 148 functionality assumes that the assigned node ID is unique in the local collision domain.

The node ID assignment value does not appear externally or in the payload packet format. The node ID

assignment value is fully contained within the local collision domain.

With

PLCA grants transmit opportunities on a mixing segment in sequence based on a node ID unique to the local collision domain. This enables the mixing segment to operate collision free enabling full utilization of the media and enforces as defined worst-case access time to the media for each node. The node ID is not contained within the frames on the media. The node ID may be set by management or allocated using Dynamic PLCA (D-PLCA, 148.4.7).

Response Response Status C

ACCEPT IN PRINCIPLE.

Minor rewrite of second sentence in last paragraph to flow better. ("This enables..." changed to "This defines" - and rest of sentence reordered)

Replace

The working principle of PLCA is that transmit opportunities on a mixing segment are granted in sequence based on a node ID unique to the local collision domain (set by the management entity). The method of determination of the node ID and to\_timer by the management entity is beyond the scope of this standard. Node ID may be optionally allocated by the Dynamic PLCA (D-PLCA) control state diagram in 148.4.7.6. If the D-PLCA functionality is not implemented or is not enabled, node ID is allocated by the management entity using methods beyond the scope of this standard. When not using D-PLCA, proper Proper operation of the Clause 148 functionality assumes that the assigned node ID is unique in the local collision domain.

The node ID assignment value does not appear externally or in the payload packet format. The node ID

assignment value is fully contained within the local collision domain.

With

PLCA grants transmit opportunities on a mixing segment in sequence based on a node ID unique to the local collision domain. This defines a worst-case access time to each node and enables the mixing segment to operate collision free, which allows full utilization of the

media. The node ID is not contained within the frames on the media. The node ID may be set by management or allocated using Dynamic PLCA (see clause 148.4.7).

CI 148 SC 148.4.7.1 P38 L7 # 127

Jones, Peter

Cisco

Comment Type E Comment Status A PLCA

Rewrite paragraph(s) for clarity/brevity.

## SuggestedRemedy

Replace

Implementations supporting the PLCA RS may optionally support D-PLCA as described in this subclause. If the D-PLCA option is implemented, it shall comply with the state diagrams in Figure 148–8 (D-PLCA Control State Diagram) and Figure 148–9 (D-PLCA Aging State Diagram). D-PLCA allows plug & play operation compared to statically configured PLCA, trading off some latency and throughput due to an increased number of collisions. D-PLCA allows nodes to start with a possibly non-unique PLCA node ID and autonomously select a unique node ID. Additionally, D-PLCA defines a method to designate a single node with ID = 0 (coordinator).

With

D-PLCA is an optional feature of the PLCA RS that reduces the amount of configuration required to use PLCA. D-PLCA enables node to select a unique node ID automatically and defines a method to designate a single node with ID = 0 (coordinator).

Response Response Status C

ACCEPT IN PRINCIPLE.

(commenter's solution deletes the 'shall' on the state diagrams)

Replace

Implementations supporting the PLCA RS may optionally support D-PLCA as described in this subclause. If the D-PLCA option is implemented, it shall comply with the state diagrams in Figure 148–8 (D-PLCA Control State Diagram) and Figure 148–9 (D-PLCA Aging State Diagram). D-PLCA allows plug & play operation compared to statically configured PLCA, trading off some latency and throughput due to an increased number of collisions. D-PLCA allows nodes to start with a possibly non-unique PLCA node ID and autonomously select a unique node ID. Additionally, D-PLCA defines a method to designate a single node with ID = 0 (coordinator).

With

D-PLCA is an optional feature of the PLCA RS that reduces the amount of configuration required to use PLCA. D-PLCA enables node to select a unique node ID automatically and defines a method to designate a single node with ID = 0 (coordinator). If the D-PLCA option is implemented, it shall comply with the state diagrams in Figure 148–8 (D-PLCA Control State Diagram) and Figure 148–9 (D-PLCA Aging State Diagram).

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 148 SC 148.4.7.1 P38 L17 # 128

Jones, Peter

Cisco

Comment Type E Comment Status A PLCA

Rewrite paragraph(s) for clarity/brevity.

*SuggestedRemedy*

Replace

If enabled, D-PLCA constantly adapts the parameters aPLCANodeCount and aPLCALocalNodeID to accommodate the current state of activity (transmit opportunity claims) of the nodes on a mixing segment. When mixing D-PLCA capable nodes with statically configured PLCA nodes, the D-PLCA capable nodes select IDs outside the space of the statically assigned ones. When D-PLCA is used, PHYs detect collisions which can occur until every node selects a unique ID.

With

D-PLCA adjusts aPLCANodeCount and aPLCALocalNodeID based on activity (transmit opportunity claims) of the nodes on a mixing segment. When a mixing segment contains a mixture of nodes with D-PLCA active and not active, the D-PLCA nodes select IDs outside the space of the statically assigned IDs. When D-PLCA is active, PHYs may detect collisions as part of the nodeID assignment process.

Response Response Status C

ACCEPT IN PRINCIPLE.

(minor change to last sentence avoid reserved word "may")

Replace

If enabled, D-PLCA constantly adapts the parameters aPLCANodeCount and aPLCALocalNodeID to accommodate the current state of activity (transmit opportunity claims) of the nodes on a mixing segment. When mixing D-PLCA capable nodes with statically configured PLCA nodes, the D-PLCA capable nodes select IDs outside the space of the statically assigned ones. When D-PLCA is used, PHYs detect collisions which can occur until every node selects a unique ID.

With

D-PLCA adjusts aPLCANodeCount and aPLCALocalNodeID based on transmit opportunity claims observed on a mixing segment. When a mixing segment contains a mixture of nodes with D-PLCA active and not active, the D-PLCA nodes select IDs outside the space of the statically assigned IDs. When D-PLCA is active, PHYs detect collisions as part of the nodeID assignment process.

CI 148 SC 148.4.7.2 P38 L36 # 86

McClellan, Brett

Marvell

Comment Type T Comment Status A PLCA State Diagrams

curlID is used in D-PLCA Control state diagram but is missing a definition in 148.4.7.2

*SuggestedRemedy*

add definition: "curlID

See 148.4.4.2"

Response Response Status C

ACCEPT.

CI 148 SC 148.4.7.5 P42 L10 # 81

McClellan, Brett

Marvell

Comment Type T Comment Status A PLCA State Diagrams

D-PLCA Control will lockup in the WAIT\_BEACON state when coordinator\_role\_allowed=FALSE. Details are presented in mcclellan\_3da\_01\_031324.pdf slide 3.

*SuggestedRemedy*

adopt the proposal on slide 3 of mcclellan\_3da\_01\_031324.pdf: 1- use dplca\_en to prevent forcing PLCA Control to DISABLE

when local\_nodeID = 255,

2 – use dplca\_en to exit DISABLE to RESYNC when local\_nodeID ≠ 0

Response Response Status C

ACCEPT.

CI 148 SC 148.4.7.5 P42 L22 # 82

McClellan, Brett

Marvell

Comment Type T Comment Status A PLCA State Diagrams

D-PLCA Control is intended to transition from COORDINATOR to LEARNING upon BEACON

detection from another node, however BEACON doesn't trigger a transition. Details are presented in mcclellan\_3da\_01\_031324.pdf slide 6.

*SuggestedRemedy*

adopt the proposal on slide 6 of mcclellan\_3da\_01\_031324.pdf: modify D-PLCA Control to allow transition to LEARNING upon BEACON detection

Response Response Status C

ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

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CI 148 SC 148.4.7.5 P42 L36 # 85

McClellan, Brett

Marvell

Comment Type T Comment Status A PLCA State Diagrams

D-PLCA Control transition from COORDINATOR to INCREASE\_NODE\_COUNT transition is missing condition of dplca\_new\_age used on alternate paths. Details are presented in mcclellan\_3da\_01\_031324.pdf slide 16.

*SuggestedRemedy*

add condition: \* dplca\_new\_age, see mcclellan\_3da\_01\_031324.pdf slide 16.

Response Response Status C

ACCEPT.

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CI 148 SC 148.4.7.5 P42 L45 # 84

McClellan, Brett

Marvell

Comment Type T Comment Status A PLCA State Diagrams

D-PLCA Control can lock up in FOLLOWER state when two nodes with the same local\_nodeID continue to send packets at the same time. Details are presented in mcclellan\_3da\_01\_031324.pdf slide 14.

*SuggestedRemedy*

adopt the proposal on slide 14 of mcclellan\_3da\_01\_031324.pdf to modify PLCA Control:  
1- Apply a SOFT claim on collision during transmission in COMMIT or TRANSMIT  
2 – Add a return transition to COMMIT with condition: COL & ~TX\_EN & packetPending  
3 – Add a return transition to TRANSMIT with condition: COL & (TX\_EN | CRS)

Response Response Status C

ACCEPT.

---

CI 148 SC 148.4.7.5 P42 L49 # 83

McClellan, Brett

Marvell

Comment Type T Comment Status A PLCA State Diagrams

D-PLCA Control transition from FOLLOWER to FOLLOWER is intended to pick a new local\_nodeID if ID is greater than plca\_node\_count, however the transition condition doesn't trigger a the selection of a new local\_nodeID. Details are presented in mcclellan\_3da\_01\_031324.pdf slide 10.

*SuggestedRemedy*

adopt the proposal on slide 10 of mcclellan\_3da\_01\_031324.pdf to modify PLCA control and D-PLCA control state diagrams

Response Response Status C

ACCEPT.

---

CI 169 SC 169.4.6 P96 L46 # 155

Paul, Michael

Analog Devices

Comment Type T Comment Status A Power - Discovery

Discovery details need to be filled in along with descriptive text. Detailed material was presented in Paul\_da\_03\_20240313\_v0.pdf and Paul\_da\_01\_20240124.pdf, but there were no comments filed against the sections so it has not been adopted.

*SuggestedRemedy*

See presentation paul\_da\_01\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Make changes from paul\_da\_01\_20240514  
slide 3: Change Table 169-3 MPSE Discovery Parameters

slide 4: add descriptive text to 169.4.6

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CI 169 SC 169.4.6 P97 L5 # 87

Jones, Chad

Cisco Systems

Comment Type E Comment Status A Power - Discovery

duplicate shall as this is covered in the second sentence of the preceding paragraph.  
"If discovery is not completed before the TDiscovery timer expires, the current discovery cycle shall be aborted and the MPSE shall return to BACKOFF."  
delete the second shall of the sentence and change return to returns

*SuggestedRemedy*

Change to: "If discovery is not completed before the TDiscovery timer expires, the current discovery cycle shall be aborted and the MPSE returns to BACKOFF."

Response Response Status C

ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 169	SC 169.4.6	P97	L9	# 89
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Jones, Chad Cisco Systems

*Comment Type* T *Comment Status* R *Power - Discovery*

Table 169-3, there are several TBD that we need to fill in DURING THIS CYCLE. Chair suggests forming an ad hoc to bring back initial numbers Wednesday morning for TF review.

*SuggestedRemedy*

replace TBDs with numbers provided by the ad hoc.

*Response* *Response Status* Z

REJECT.

This comment was WITHDRAWN by the commenter.

Consider at end of comment review.

CI 169	SC 169.5.4	P105	L33	# 145
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Paul, Michael Analog Devices

*Comment Type* T *Comment Status* A *Power - Discovery*

MPD discovery details missing.

*SuggestedRemedy*

See presentation paul\_da\_01\_20240514

*Response* *Response Status* C

ACCEPT IN PRINCIPLE.  
Make changes from paul\_da\_01\_20240514.pdf:  
slide 5: add new table in 169.4.5 for MPD Discovery Parameters

slide 6: Add text to 169.5.4

CI 169	SC 169.5.4	P105	L33	# 148
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Paul, Michael Analog Devices

*Comment Type* T *Comment Status* A *Power - Discovery*

Define Cpd during discovery as 10nF nominal.

*SuggestedRemedy*

Add another item in Table 169-7. See presentation paul\_da\_01\_20240514,

*Response* *Response Status* C

ACCEPT IN PRINCIPLE.  
Accommodated by comment 145, resolution to comment 145 is:  
Make changes from paul\_da\_01\_20240514.pdf:  
slide 5: add new table in 169.4.5 for MPD Discovery Parameters

slide 6: Add text to 169.5.4

CI 169	SC 169.5.4	P105	L33	# 110
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Jones, Chad Cisco Systems

*Comment Type* T *Comment Status* R *Power - Discovery*

No text for MPD Discovery. Need volunteers to write this section.

*SuggestedRemedy*

Assign the effort to volunteers, charter ad hoc if needed.

*Response* *Response Status* Z

REJECT.

This comment was WITHDRAWN by the commenter.

See comment 145  
Consider at end of comment resolution



## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 1 SC 1.4 P19 L11 # 97

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - General

Definitions are needed for MPSE and MPD. Are there any others needed?

#### SuggestedRemedy

insert two new definitions:

1.4.x Multidrop Powered Device (MPD): A device that is either drawing power or requesting power from an MPSE (see IEEE Std 802.3, Clause 169).

1.4.x Multidrop Power Sourcing Equipment (MPSE): A DTE device that provides power to a mixing segment which may also carry data (see IEEE Std 802.3, Clause 169).

Response Response Status C

ACCEPT IN PRINCIPLE.

Modify proposed response to include appropriate numbering and to remove DTE from MPSE definition (which would mean the PSE would HAVE to be a data node).

insert two new definitions between 1.4.405 "Multi-Channel Reconciliation Sublayer" and 1.4.406 "MultiGBASE-T"

1.4.405a Multidrop Powered Device (MPD): A device that is either drawing power or requesting power from an MPSE (see IEEE Std 802.3, Clause 169).

1.4.405b Multidrop Power Sourcing Equipment (MPSE): A device that provides power to a mixing segment which may also carry data (see IEEE Std 802.3, Clause 169).

CI 169 SC 169.3 P89 L16 # 73

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - General

Editors note regarding 24V systems. The 24V systems I'm aware of are capable of operating to at least 28V, therefore a 26V Vmin for the PSE doesn't preclude support of "24V" systems.

#### SuggestedRemedy

delete the editor's note.

Response Response Status C

ACCEPT.

CI 169 SC 169.3 P89 L16 # 154

Paul, Michael Analog Devices

Comment Type E Comment Status A Power - General

Editor's note is OBE

#### SuggestedRemedy

Remove editor's note

Response Response Status C

ACCEPT.

CI 169 SC 169.3 P89 L31 # 150

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - General

Typo in table 169-1, V\_{MPD,min} should be 16V

#### SuggestedRemedy

Change 18V to 16V

Response Response Status C

ACCEPT.

CI 169 SC 169.4 P89 L48 # 74

Jones, Chad Cisco Systems

Comment Type T Comment Status A Power - General

This list doesn't include a statement about policing power, i.e. removing power from an overloaded mixing segment. It only says to monitor power or to remove power when no longer needed. An overloaded system still requires power, so f) doesn't apply. "e) To sense and recover from system faults." is a possible place to address. This is the minimum required addition. I'm happy if the TF wants to go further.

#### SuggestedRemedy

change to: "e) To sense, react, and recover from system faults."

Response Response Status C

ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

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CI 169 SC 169.4.3 P90 L32 # 77

Jones, Chad Cisco Systems

Comment Type T Comment Status R Power - General

the sentence "For compliance, MPSE current is measured as the sum of TC1 currents, TC1+TC2." seems broken to me. For example if I have 1A on TC1 and the MPD draws 100mA, that means TC2 has 900mA. And TC1+TC2 is 1.9A. Or am I missing a subtlety that the current on TC2 is negative and what I really have it 1A + (-0.9A) = 0.1A? If that later part is the case, then we may want some descriptive text to make that obvious.

*SuggestedRemedy*

I don't know the answer as I not sure what exactly we are trying to say, but I wanted the comment so we can find an answer and fix the text.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

OBE by comment 88

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CI 169 SC 169.4.11.1 P99 L15 # 96

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - General

"The MPSE shall not remove power from the port when IMPD is greater than..." IMPD is not a defined variable. I assume this was meant to be Isubscript(MPD), meaning MPD current, let's just say that.

*SuggestedRemedy*

change to: "The MPSE shall not remove power from the port when the MPD current is greater than..."

Response Response Status C

ACCEPT IN PRINCIPLE.

There are 3 currents at the MPD. The PSE can't sense the MPD currents individually. Hence this must be the PSE's sourced current.

Change IMPD to I\_MPSE (MPSE is a subscript)

---

CI 169 SC 169.5.2 P100 L7 # 101

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - MPD

This is related to the MPSE comment made on this subject earlier, but this time the concern is valid. One of the currents on TC1 or TC2 will be a negative value, meaning the "sum" will actually be a difference. Let's be kind and add a sentence to let the reader know this.

*SuggestedRemedy*

add these sentences to the end of the paragraph on P100 L7: "It should be noted that one of the currents on TC1 or TC2 will be positive and one will be negative, making this "sum" a difference. This should make sense as the current used by the MPD will lower the current supplied to the output TC feeding the rest of the MPDs that follow in the mixing segment."

Response Response Status C

ACCEPT IN PRINCIPLE.  
Minor change for style.

Add the following after text at P100 L10, before figure.

"NOTE - One of the currents on TC1 or TC2 will be positive and the other will be negative; making this "sum" a difference. The current used by the MPD lowers the current supplied to the output TC feeding the rest of the MPDs that follow in the mixing segment."

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CI 169 SC 169.5.2 P100 L10 # 102

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - MPD

"For compliance, voltage specifications shall be met at both TC1 and TC2 independently." Does this sentence make sense for the MPD? The PD has no control over the voltage at ANY of the TC points.

*SuggestedRemedy*

delete the sentence.

Response Response Status C

ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

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CI 169	SC 169.5.3.2	P100	L52	# 105
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Jones, Chad Cisco Systems

Comment Type	T	Comment Status	R	Power - MPD
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Lots of TBDs in the constants section. Some of them would point to Table 169-7, but not all. Some should come from and ad hoc that should have been formed by an earlier comment. Assign defining these TBDs to that same ad hoc.

*SuggestedRemedy*

replace TBDs with values determined by ad hoc.

Response	Response Status	Z
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REJECT.

This comment was WITHDRAWN by the commenter.

Consider after comment resolution - see comment 161.

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CI 169	SC 169.5.3.3	P101	L44	# 106
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Jones, Chad Cisco Systems

Comment Type	T	Comment Status	R	Power - MPD
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more Table TBDs (I count at least 8) that need defined by the ad hoc.

*SuggestedRemedy*

replace TBDs with values determined by ad hoc.

Response	Response Status	Z
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REJECT.

This comment was WITHDRAWN by the commenter.

See comment 161

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CI 169	SC 169.5.3.2	P101	L100	# 162
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Paul, Michael Analog Devices

Comment Type	E	Comment Status	A	Power - MPD
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TBDs in Constants section, some need to be linked to table of MPD Power Supply Limits Table, some need to be linked to MPD Discovery Table.

*SuggestedRemedy*

Link relevant values to MPD Discovery table from presentation paul\_da\_01\_20240514. (Probably Table 169-7 in next draft). Make sure table symbols and state machine names are consistent

Response	Response Status	C
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ACCEPT IN PRINCIPLE.

Make changes according to slide 8 of paul\_da\_01\_20240514.pdf

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CI 169	SC 169.5.3.2	P101	L100	# 161
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Paul, Michael Analog Devices

Comment Type	E	Comment Status	A	Power - MPD
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TBDs in Constants section, some need to be linked to table of MPD Power Supply Limits Table, some need to be linked to MPD Discovery Table.

*SuggestedRemedy*

Link relevant values to MPD Power Supply Limits table (presently Table 169-7, probably Table 169-8 in next draft). Make sure table symbols and state machine names are consistent

Response	Response Status	C
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ACCEPT IN PRINCIPLE.

Make changes according to slide 9 of paul\_da\_01\_20240514.pdf

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CI 169	SC 169.5.3.5	P103	L1	# 108
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Jones, Chad Cisco Systems

Comment Type	T	Comment Status	A	Power - MPD
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No text for MPD functions. Need volunteers to write this section.

*SuggestedRemedy*

Assign the effort to volunteers, charter ad hoc if needed.

Response	Response Status	C
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ACCEPT IN PRINCIPLE.

Change editors note for 169.5.3.5 to read "Review MPD state diagrams when complete, and either add any necessary functions here, or delete this section."

## IEEE P802.3da D1.1 Physical Layer Specifications and

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Cl 169 SC 169.5.5 P106 L9 # 111

Jones, Chad Cisco Systems

Comment Type T Comment Status R Power - MPD

Five TBDs in T169-7. assign definition the ad hoc.

*SuggestedRemedy*

replace TBDs with numbers provided by the ad hoc.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

See comments 146, 147, 149

TFTD - consider at end of comment resolution

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Cl 169 SC 169.5.5 P106 L26 # 146

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPD

Item 6 is TBD

*SuggestedRemedy*

See presentation paul\_da\_01\_20240514. TBD value is the same threshold as V\_{MPD\_mark}

Response Response Status C

ACCEPT IN PRINCIPLE.

Make changes on slide 7 of paul\_da\_01\_20240514.pdf

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Cl 169 SC 169.5.5 P106 L33 # 147

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPD

Item 9 is TBD

*SuggestedRemedy*

This should be known...make sure label is consistent with state machine, look for data from Paul\_da\_01\_20240124.pdf and discovery model. See presentation paul\_da\_01\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Accommodated by comment 146, resolution to comment 146 is make changes according to slide 7 of paul\_da\_01\_20240514

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Cl 169 SC 169.5.5.1 P107 L3 # 113

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - MPD

We should give guidance on what is meant by active indication.

*SuggestedRemedy*

Add this text to the end of the paragraph at P100 L3: "The method of active indication is left to the MPD implementor. Two examples would be a flashing LED or a message from a console port."

Response Response Status C

ACCEPT.

---

Cl 169 SC 169.5.5 P107 L22 # 149

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPD

Need MPD MPS text description section

*SuggestedRemedy*

See presentation paul\_da\_03\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Make changes according to slide 6 of paul\_da\_03\_2024514.pdf

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Cl 169 SC 169.4.7 P98 L2 # 92

Jones, Chad Cisco Systems

Comment Type T Comment Status R Power - MPSE

Table 169-5 has MANY TBDs. These need to fill in DURING THIS CYCLE. Chair suggests forming an ad hoc to bring back initial numbers Wednesday morning for TF review.

*SuggestedRemedy*

replace TBDs with numbers provided by the ad hoc.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Consider after resolving comments

## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 169 SC 169.4.7 P98 L9 # 156

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPSE

What's up with item 2 units and values? 100mA max doesn't make sense

#### SuggestedRemedy

See presentation paul\_da\_02\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Change items 2 and 11 on Table 169-5 and the TBD on 169.4.8 as indicated on slide 11 of paul\_da\_02\_20240514.pdf

Cl 169 SC 169.4.7 P98 L14 # 157

Paul, Michael Analog Devices

Comment Type T Comment Status R Power - MPSE

Fill TBD for item 4 in table 169-6

#### SuggestedRemedy

See presentation paul\_da\_02\_20240514

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD - Pending presentation.  
(and I think it is item 4 in Table 169-5)

Cl 169 SC 169.4.7 P98 L22 # 158

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPSE

T\_MPDDO TBD can be filled in for item 7 in table 169-6

#### SuggestedRemedy

See presentation paul\_da\_03\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Make changes from paul\_da\_03\_20240514.pdf, slide 5.

Cl 169 SC 169.4.7 P98 L30 # 159

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPSE

Fill in item 11 in table 169-6

#### SuggestedRemedy

See presentation paul\_da\_02\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Accommodated by comment 156.

Resolution to comment 156 is:

Change items 2 and 11 on Table 169-5 and the TBD on 169.4.8 as indicated on slide 11 of paul\_da\_02\_20240514.pdf

Cl 169 SC 169.4.8 P98 L38 # 93

Jones, Chad Cisco Systems

Comment Type T Comment Status A Power - MPSE

"TBD is the minimum continuous power that the MPSE shall be capable of supplying as defined in Table 169-5."

The TBD needs replaced with what ever number the ad hoc decides for Table 169-5.

Further, this comment intends to spur discussion of putting 100W max in Table 169-5. I

feel the T169-5 should have em-dashes as the max number. The max power a PSE can

deliver is not required for interoperability, only the min is required. The max power delivered

is an artifact of external safety standards and desired safety classifications of PSEs and

PDs. We should state that a PSE shouldn't be capable of more than 100W, but I don't think

it's mandatory text (i.e. no shall).

#### SuggestedRemedy

replaced TBD on line 38 with the numbers the ad hoc decides for T169-5. It will likely need broken into two sentences: X W is the min power for Type 0; Y W is the min power for Type 1...

replace the max number in item 2 with an em-dash. (delete 100 in two places)

add these sentences to the end of 169.4.8: "External safety requirements limit the power an

MPSE can supply. Often this value is 100 W max, but an MPSE designer is encouraged to

refer to the safety standards that will govern the desired installation (i.e. the target market

for a given MPSE)."

Response Response Status C

ACCEPT IN PRINCIPLE.

See comments 156 and 160

add these sentences to the end of 169.4.8: "External safety requirements limit the power an

MPSE can supply. Often this value is 100 W max, but an MPSE designer is encouraged to

refer to the safety standards that will govern the desired installation (i.e., the target market

for a given MPSE)."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn

SORT ORDER: Topic

Topic Power - MPSE

Page 29 of 34

5/21/2024 10:46:14 AM

## IEEE P802.3da D1.1 Physical Layer Specifications and

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CI 169 SC 169.4.8 P98 L38 # 160

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - MPSE  
TBD in text block

*SuggestedRemedy*

TBD in text section needs to link to a table symbol in Table 169-5 and have the symbol's value defined. See presentation paul\_da\_02\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.  
Accommodated by comment 156.  
Resolution to comment 156 is:  
Change items 2 and 11 on Table 169-5 and the TBD on 169.4.8 as indicated on slide 11 of paul\_da\_02\_20240514.pdf

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CI 169 SC 169.4.9 P98 L43 # 94

Jones, Chad Cisco Systems

Comment Type T Comment Status A Power - MPSE  
"The cumulative duration of TCUT is measured using a sliding window of at least 1 second width."  
"At least" implies the window can be longer than 1 second. If one vendor implements a 1 sec window and another implements a 5 second window, we could get different behaviors between two supposed equivalent parts. This difference in behavior leads to customer dissatisfaction and phone calls to the system vendor.

*SuggestedRemedy*

delete "at least: from the sentence on P98 L44, making it say "using a sliding window of 1 second width."

Response Response Status C

ACCEPT.

---

CI 169 SC 169.4.4.5 P94 L6 # 79

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - State diagrams  
Editor's note to convert 169-3, 169-4, and 169-5 to Frame at least one draft before WG ballot. That time is now. Can we get a volunteer to draw in Frame?

*SuggestedRemedy*

replace Figures with a Frame drawing and delete the editor's notes (three places).

Response Response Status C

ACCEPT IN PRINCIPLE.  
Editor to request Jon Lewis to draw figure 169-3, 169-4, and 169-5; insert figures; and delete editor's notes (one at each figure).

---

CI 169 SC 169.4.5 P96 L35 # 80

Jones, Chad Cisco Systems

Comment Type T Comment Status A Power - State diagrams  
this is the MPSE overview - do we want SHALLS in this section? I'd expect an overview to have no requirements. Also, I would fully expect the two shalls (on L36 and L38) to be covered in the MPSE requirements.  
If we do want shalls in this section, then the last sentence on this section should be mandatory (that would be L43, replace "and removes power" with "and shall remove power"

*SuggestedRemedy*

replace shall with may in two places.  
OR replace "and removes power" with "and shall remove power"

Response Response Status C

ACCEPT IN PRINCIPLE.  
Suggest replace shall with "and removes power"

---

CI 169 SC 169.5.3.6 P103 L33 # 109

Jones, Chad Cisco Systems

Comment Type E Comment Status A Power - State diagrams  
Editor's note to convert 169-7, 169-8, and 169-9 to Frame at least one draft before WG ballot. That time is now. Can we get a volunteer to draw in Frame?

*SuggestedRemedy*

replace Figures with a Frame drawing and delete the editor's notes (three places).

Response Response Status C

ACCEPT IN PRINCIPLE.  
Editor to request Jon Lewis to draw figure 169-7, 169-8, and 169-9; insert figures; and delete editor's notes (one at each figure).

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 169 SC 169.3 P89 L1 # 72

Jones, Chad Cisco Systems

Comment Type T Comment Status R Power - Unit Loads

I propose a refinement of the unit load concept. With 1U = 1W for Type 0 and 2W for Type 1 but a limit of 16U on any mixing segment, we are not able to use all the available PSE power. A markup of 169.3 will be submitted as a presentation for TF review.

#### SuggestedRemedy

accept changes as shown in presentation.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

DEFER WITH 114

CI 169 SC 169.3 P89 L33 # 151

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - Unit Loads

Inconsistent values in table 169-1.  $16U \times 1W = 16W$ ,  $V_{MPD,min} = 16V$ ,  $16W/16V = 1A$ . So Type 0  $I_{TC1\_MPSE(min)}$  must be  $> 1A$ , Currently set to 866mA

#### SuggestedRemedy

Set  $I_{TC1\_MPSE(min)} > 1A$ , Show exact value and work in presentation  
paul\_da\_04\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Accommodated by 152, resolution to comment 152 is:

Make changes according to slide 4 of paul\_da\_02\_20240514.pdf

CI 169 SC 169.3 P89 L34 # 152

Paul, Michael Analog Devices

Comment Type T Comment Status A Power - Unit Loads

Inconsistent values in Table 169-1.  $1A \times 26V = 26W$ ,  $P_{MPSE\_16U(min)}$  should be greater than 26W

#### SuggestedRemedy

Set  $P_{MPSE\_16U(min)}$  greater than 26W, show work in presentation  
paul\_da\_04\_20240514

Response Response Status C

ACCEPT IN PRINCIPLE.

Make changes according to slide 4 of paul\_da\_02\_20240514.pdf

CI 169 SC 169.5.5.2 P107 L9 # 114

Jones, Chad Cisco Systems

Comment Type T Comment Status R Power - Unit Loads

this section will need aligned with changes made to the MPSE section, if accepted.

#### SuggestedRemedy

comment author volunteers to submit text based on the decisions made on the comments against the MPSE section.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

DEFER WITH 72

CI 168 SC 168.9.2 P76 L27 # 68

Jones, Chad Cisco Systems

Comment Type E Comment Status R TC3

"The DTE shall withstand without damage the application of any voltages between 0 V dc and 60 V dc with the source current limited to 2000 mA, applied across TC1 or TC2's BI\_DA+ and BI\_DA- in either polarity, under all operating conditions indefinitely." This statement implies that power can only be applied at TC1 or TC2. I've heard some state the desire to have the PSE connected at TC3. Need to add TC3 to the requirement.

#### SuggestedRemedy

Change to: "The DTE shall withstand without damage the application of any voltages between 0 V dc and 60 V dc with the source current limited to 2000 mA, applied across TC1, TC2, or TC3's BI\_DA+ and BI\_DA- in either polarity, under all operating conditions indefinitely."

Response Response Status C

REJECT.

This adds a new TC3 requirement, and we have been specifying connection at TC1 and TC2. the connection to the PMA is within the device and should not need such protection if the requirement is met at TC1 and TC2.

This text refers to the protection of a DTE that may not be a PD, and therefore it is appropriate to talk about power on the mixing segment, which is present at TC1 and TC2...

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed Z/withdrawn

SORT ORDER: Topic

Topic TC3

Page 31 of 34

5/21/2024 10:46:14 AM

## IEEE P802.3da D1.1 Physical Layer Specifications and

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Cl 168	SC 168.8	P73	L12	# 138
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Jones, Peter Cisco

Comment Type E Comment Status A TCI

Rewrite for clarity/brevity.

*SuggestedRemedy*

Replace "The TCI is part of the mixing segment, and the requirements of 168.8 are met with TCIs in place with or without attached DTEs as specified for the particular specification."

with

"The TCI is part of the mixing segment, and the requirements of the mixing segment are met with TCIs in place with or without attached DTEs".

Response Response Status C

ACCEPT.

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Cl 168	SC 168.9	P73	L16	# 139
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Jones, Peter Cisco

Comment Type E Comment Status A TCI

add reference.

*SuggestedRemedy*

Replace "(TCI)" with "(TCI, 1.4.558a)"

Response Response Status C

ACCEPT IN PRINCIPLE.

Reference should go after earlier mention on the same page - Change P73 L5:

"The TCI is an MDI for the shared..." to

"The TCI (1.4.558a) is an MDI for the shared..."

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Cl 168	SC 168.9.1.1	P76	L15	# 143
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DiMinico, Christopher PHY-SI/SenTekse/MC Communications

Comment Type TR Comment Status A TCI electrical

168.9.1.1 TCI Insertion Loss is TBD

*SuggestedRemedy*

See diminico\_3da\_01\_051524.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

TFTD - pending receipt of proposal

Implement TCI insertion loss requirements on slide 10 with license.

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Cl 168	SC 168.9.1.2	P76	L17	# 144
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DiMinico, Christopher PHY-SI/SenTekse/MC Communications

Comment Type TR Comment Status A TCI electrical

168.9.1.2 TCI Return Loss is TBD

*SuggestedRemedy*

See diminico\_3da\_01\_051524.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Insert editor's note at 168.9:

Editor's Note - (to be removed after draft 1.2) - Commenters are urged to respond with proposals to close the TCI return loss. Consider proposals in diminico\_3da\_01\_051524.pdf slide 11 or zimmerman\_3da\_01\_052024 slide 17. Decision needs to be made at D1.2 comment resolution.

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Cl 168	SC 168.9.1.2	P76	L23	# 53
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Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status A TCI electrical

We need to specify the TCI return loss (TC1/TC2). Several presentations have shown examples of possible implementations, others have shown analysis that gets us close, but we need a specific proposal for the text.

*SuggestedRemedy*

Replace Equation 168-5 with an RL mask - see presentation zimmerman\_3da\_01\_052024

Response Response Status C

ACCEPT IN PRINCIPLE.

Resolved in comment 144 - see comment 144.



## IEEE P802.3da D1.1 Physical Layer Specifications and

Cl 168 SC 168.8 P73 L9 # 51

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type E Comment Status A TCI nomenclature

We call out the TCI "Trunk connection interface" and then it has TC1, TC2, TC3 which are called out as just "TCx", "TCx interface", "TCx interface planes", or "TCx interface points". It gets confusing. Pick one. Suggest we remove the word "interface" in connection with TC1, TC2, or TC3 as well as "point", "plane", etc. This will make it simpler, hopefully without confusing the text.

#### SuggestedRemedy

P73 L8: Change "The mixing segment shall be a linear topology, with DTE attached at a TCI, where each TCI has two interfaces on the mixing segment, one interface facing in the direction of left edge termination of the mixing segment (TC1), and one facing in the direction of the right edge termination of the mixing segment (TC2), and a two-wire interface facing the PMA (and any associated stub or service loop) (TC3)" to

"The mixing segment shall be a linear topology, with DTE attached at a TCI, where each TCI has two connections along the mixing segment, one facing in the direction of left edge termination of the mixing segment (TC1), and one facing in the direction of the right edge termination of the mixing segment (TC2), and a two-wire connection facing the PMA (and any associated stub or service loop) (TC3)"

P73 L45 - (NOTE in Figure 168-17), change "the TC1 and TC2 interface points" to "TC1 and TC2"

P75 L18 - change "the TCI has two interfaces" to "the TCI has two connections"

P76 L20 - change "the other trunk interface" to "the other TC"

P75 L22 "Each TCI has one interface" to "Each TCI has one connection" and change, "and a two-wire interface" to "and a two-wire connection"

P75 L26 (Figure 168-18) delete the word "interface" from TC1, TC2 and TC3 labels

P90 L27, P90 L29, - change "interface" to "connection" (4 instances)

P100 L2, P100 L5, - change "interface" to "connection" (4 instances)

P71 L45 - change "across the TC3 (see Figure 168-17) interface of the TCI" to "across TC3 (see Figure 168-17" (note this is unnecessary if TC3 has been written out of this text by another comment)

Response Response Status C

ACCEPT IN PRINCIPLE.

Editorial license to remove any remaining instances of TC1 or TC2 "interface" (change to connections) that are not covered by other comments.

Cl 168 SC 168.8 P73 L45 # 62

Jones, Chad Cisco Systems

Comment Type E Comment Status A TCI nomenclature

The note in fig 168-17 says TC1 and TC2 interface points. These are connection points.

#### SuggestedRemedy

Change note to: "...TC1 and TC2 connection points..."

Response Response Status C

ACCEPT IN PRINCIPLE.

Change note in Figure 168-17 to read:

"NOTE - PMA transmit and receive specifications are met at TC1 and TC2. This applies whether or not an external stub is present."

Cl 168 SC 168.9 P75 L22 # 65

Jones, Chad Cisco Systems

Comment Type E Comment Status A TCI nomenclature

"Each TCI has one interface facing each direction of the mixing segment (TC1 and TC2), and a two-wire interface facing the PMA (and any associated stub or service loop) (TC3) as shown in Figure 168-18." confusing interface with connections. TCI is the interface the TCs are connections.

#### SuggestedRemedy

Change the text to: "Each TCI has one connection facing each direction of the mixing segment (TC1 and TC2), and a two-wire connection facing the PMA (and any associated stub or service loop) (TC3) as shown in Figure 168-18."

Response Response Status C

ACCEPT IN PRINCIPLE.

At least needs editorial correction of removing the comma.

Cl 168 SC 168.9 P75 L25 # 66

Jones, Chad Cisco Systems

Comment Type E Comment Status A TCI nomenclature

Figure 168-18 has TC1,2,3 interface. TCI is the interface, TC1,2,3 are connects of this interface. Delete the word interface

#### SuggestedRemedy

Delete interface in three spots.

Response Response Status C

ACCEPT.

## IEEE P802.3da D1.1 Physical Layer Specifications and

CI 168 SC 168.9.1.2 P76 L20 # 67

Jones, Chad Cisco Systems

Comment Type E Comment Status A TCI nomenclature

"...with the other trunk interface (i.e., TC2 or TC1, respectively)..." another use of interface when it should be connection

SuggestedRemedy

change to: "...with the other trunk connection (i.e., TC2 or TC1, respectively)..."

Response Response Status C

ACCEPT.

CI 169 SC 169.4.3 P90 L27 # 76

Jones, Chad Cisco Systems

Comment Type E Comment Status A TCI nomenclature

four more occurrences of TC1, 2 interface. (also on line 30).

SuggestedRemedy

change interface to connector in four spots. For the second occurrence in each sentence ("...of the same interface TC1 or TC2,..."), the sentence reads better if connector is moved after TC1,2 (i.e. change to "...of the same TC1 or TC2 connector,...").

Response Response Status C

ACCEPT IN PRINCIPLE.

change interface to connection in four spots. For the second occurrence in each sentence ("...of the same interface TC1 or TC2,..."), the sentence reads better if connection is moved after TC1,2 (i.e. change to "...of the same TC1 or TC2 connection,...").

CI 169 SC 169.5.2 P100 L2 # 100

Jones, Chad Cisco Systems

Comment Type E Comment Status A TCI nomenclature

four more occurrences of "TCx interface". Replace interface with connection in 4 places, in sentences on P100 L1 and L4.

SuggestedRemedy

change interface to connector in four spots. For the second occurrence in each sentence ("...of the same interface TC1 or TC2,..."), the sentence reads better if connector is moved after TC1,2 (i.e. change to "...of the same TC1 or TC2 connector,...").

Response Response Status C

ACCEPT.

CI 168 SC 168.6.4.5 P71 L45 # 60

Jones, Chad Cisco Systems

Comment Type E Comment Status R Test Modes

"...parallel impedance across the TC3 (see Figure 168–17) interface of the TCI..." TC3 is part of the TCI. TCI is the interface, TC3 is not an interface. Also, are we presenting impedance ACROSS TC3 or AT TC3? Lastly, do we need to say TC3 of the TCI?

SuggestedRemedy

change "...parallel impedance across the TC3 (see Figure 168–17) interface of the TCI..." to "...parallel impedance at TC3 (see Figure 168–17) ..."

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD - discuss with comment 52 which writes this text out of the draft.

CI 168 SC 168.6.4.5 P71 L45 # 52

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem

Comment Type T Comment Status A Test Modes

We fixed the reference to transmitter impedance in 168.5.2, but forgot to make a similar change in the test mode text. The text in 168.5.2 (which specifies what happens when 'I' is presented to the PMA), is now all about what is presented at TC1 and TC2, saying - "Meet the insertion loss specified from TC1 to TC2 in 168.9.1.1 and the return loss specified in 168.9.1.2 at TC1 and TC2. This shall happen within 40 ns after the additional DME encoded 0 has been transmitted."

Additionally, this section is a duplicate 'shall' on the PMA, where it should really just be a way to test the electrical characteristics presented when there is no data to transmit.

SuggestedRemedy

Change "In test mode 4, a transmitter shall present at least the minimum parallel impedance across the TC3 (see Figure 168–17) interface of the TCI to enable meeting the electrical specifications for the TCI with a DTE in place as specified in 168.9.1."

to

"In test mode 4, the PCS shall continuously present the special 5B symbol 'I' to the PMA (see 168.5.2)."

Response Response Status C

ACCEPT.