

IEEE P802.3da D1.2 10 Mbps Multidrop Enhancements

CI **FM** SC **FM** P8 L12 # 245
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type **E** Comment Status **A** EZ
"Task Force name" should not be in Chair's title...
SuggestedRemedy
Delete "Task Force name" on P8 L12 from chair's title
Response Response Status **C**
ACCEPT.

CI **FM** SC **FM** P9 L1 # 204
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type **E** Comment Status **A** EZ
Stds board secretary is now Alpesh Shah
SuggestedRemedy
Change Konstantinos Karachalios to Alpesh Shah
Response Response Status **C**
ACCEPT.

CI **FM** SC **FM** P12 L53 # 205
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type **E** Comment Status **A** 10BASE-T1S
"and optional provision of power over single balanced pair multidrop mixing segments based on the 10BASE-T1S specified in Clause 147 of IEEE Std 802.3-2022" doesn't read right, it sounds like the Provision of power is based on clause 147
SuggestedRemedy
Replace Amendment description with "Amendment X- This amendment includes changes to IEEE Std 802.3-2022 and adds Clause 168 and Clause 169. This amendment adds Physical Layer specifications and management parameters for enhancement of multidrop 10 Mb/s operation based on the 10BASE-T1S PHY specified in Clause 147 of IEEE Std 802.3-2022, and specifies optional provision of power over single balanced pair mixing segments."
Response Response Status **C**
ACCEPT.

CI **FM** SC **FM** P13 L3 # 268
Baggett, Tim Microchip
Comment Type **E** Comment Status **A** DPLCA
Should the 802.3da amendment description include the addition of Dynamic PLCA to Clause 148?
SuggestedRemedy
Consider adding to the end of the 802.3da amendment paragraph:
"Additionally, this amendment includes changes to Clause 148 introducing Dynamic PLCA."
Response Response Status **C**

ACCEPT IN PRINCIPLE.
(Commenter's response with description of dynamic PLCA):
Add the following to the description of the 802.3da amendment:
"Additionally, this amendment includes additions and changes to Clause 148 to automatically allocate node IDs (Dynamic PLCA)."

CI **1** SC **1.3** P21 L3 # 206
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type **E** Comment Status **A** Editorial
Noone has suggested new normative references.
SuggestedRemedy
Delete Section 1.3 and editing instruction (lines 3 to 7) from the draft.
Response Response Status **C**
ACCEPT.

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CI 1 SC 1.4 P21 L21 # 178

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Editorial

We need a definition for MPI.

SuggestedRemedy

add a new 1.4.405b (and renumber existing 1.4.405b to 1.4.405c): Multidrop Power Interface (MPI): The mechanical and electrical interface between the Multidrop Power Sourcing Equipment (MPSE) or Multidrop Powered Device (MPD) and the transmission medium.

This purely copies the PI definition. do we need to replace "transmission medium" with "mixing segment"?

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement commenter's suggested text with "transmission medium". The mixing segment may or may not be the transmission medium for the power, but transmission medium fits both.

add a new 1.4.405b (and renumber existing 1.4.405b to 1.4.405c): Multidrop Power Interface (MPI): The mechanical and electrical interface between the Multidrop Power Sourcing Equipment (MPSE) or Multidrop Powered Device (MPD) and the transmission medium.

CI 1 SC 1.4.405a P21 L19 # 207

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

Comment Type E Comment Status A EZ

Multidrop Powered Device and Multidrop Powe Sourcing Equipment definitions need to be bold.

SuggestedRemedy

Change format so the words defined in 1.4.405a and 1.4.405b are bold.

Response Response Status C

ACCEPT.

CI 22 SC 22.1 P22 L22 # 252

Brandt, David Rockwell Automation

Comment Type T Comment Status A TCI

Figure 22-1 shows 10BASE-T1M with an MDI, whereas Figure 168-1 shows the new TCI. (We do later state that the TCI is an MDI.)

SuggestedRemedy

Suggest changing "MDI" between PMD and MEDIUM to "MDI or TCI" and having 2 lists below MEDIUM "TCI: 10BASE-T1" and "MDI: 10BASE-T1L, 10BASE-T1S, ..."

Response Response Status C

ACCEPT IN PRINCIPLE.

Add note in underline and adjust editor's note to Figure 22-1

New text is below existing text:

"NOTE - the MDI for 10BASE-T1M is referred to as the TCI (see Clause 168)."

CI 30 SC 30.16.1.1.14 P26 L33 # 208

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

Comment Type T Comment Status A Editors Notes

Editor's note has served its purpose of evaluation by several cycles.

SuggestedRemedy

delete editors note

Response Response Status C

ACCEPT.

CI 45 SC 45.2.1.214.2 P29 L35 # 209

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

Comment Type E Comment Status A Editorial

The new text here is just a duplicate of the table. The change is good, as the paragraph is clunky, but perhaps we can do better. Suggest we do not duplicate the contents of Table 47-178.

SuggestedRemedy

Replace "The mapping of bits is as follows:..." (and subsequent list)" with "See description in Table 45-178 for the mapping of bits."

Response Response Status C

ACCEPT.

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Cl 45 SC 45.2.1.234 P30 L3 # 267

Baggett, Tim Microchip

Comment Type E Comment Status A 10BASE-T1S

Change 10BASE-T1M/T1S to 10BASE-T1S/T1M.
I expect that users of the 802.3 specification will make extensive use of the search function. The current use of 10BASE-T1M/T1S breaks this ability, even if it is alphabetical.

SuggestedRemedy

Change 10BASE-T1M/T1S to 10BASE-T1S/T1M throughout the document.

Response Response Status C

ACCEPT IN PRINCIPLE.
Commenter's proposed change, except to allow both searches to work.
Change "10BASE-T1M/T1S" to "10BASE-T1M / 10BASE-T1S" globally. (note to include spaces)

Cl 79 SC 79.3.9.2 P36 L45 # 211

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

Comment Type T Comment Status A Editorial

"of the local IEEE 802.3 LAN" - what is the "local LAN" I think this should say the "local IEEE 802.3 LAN station" as 79.3.9.1 says, but I'm still not sure what "local LAN station" is.

SuggestedRemedy

Insert "station" after LAN on line 45. Consider whether the word "local" (is needed on lines 41 and 45

Response Response Status C

ACCEPT.

Cl 79 SC 79.3.9.3 P36 L19 # 210

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

Comment Type E Comment Status A EZ-out

Editing instruction is imprecise. The new section will not be right after 79.3.8, but rather, after the last subsection in 79.3.8, which is 79.3.8.3

SuggestedRemedy

Change 79.3.8 to 79.3.8.3 in editing instruction.

Response Response Status C

ACCEPT IN PRINCIPLE.
Insert "(and its subclauses)" after 79.3.8 in the editing instruction. Editor to check other Editing instructions and implement this change as needed.

Cl 79 SC 79.3.9.3 P36 L49 # 212

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

Comment Type T Comment Status D LLDP

"An LLDPDU should contain no more than one PLCA TLV" - can it contain more than one? If so, how is that represented? I thought one node has one PLCA node ID...

SuggestedRemedy

Change "should contain no more than one" to "shall contain no more than one"

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

Cl 79 SC 79.3.9.3 P37 L8 # 249

Brandt, David Rockwell Automation

Comment Type E Comment Status A DPLCA

Table 79-21, Bit 1 is described as "status", but refers to AdminState.

SuggestedRemedy

Change "Notes" for Bit 1 to: "30.16.1.2" (i.e., aPLCAStatus)

Response Response Status C

ACCEPT IN PRINCIPLE.
(corrected pointer reference from 30.16.1.2 PLCA device actions to 30.16.1.2 PLCA status)
Change "Notes" for Bit 1 to: "30.16.1.1.2"

Cl 79 SC 79.3.9.3 P37 L10 # 269

Schreiner, Stephan Rosenberger Hochfrequenztechnik

Comment Type E Comment Status A DPLCA

Table 79-21: Bit 0 and Bit 2 as well as Bit 1 and Bit 3 have the same Field definitions.

SuggestedRemedy

Bit 2 and Bit 3 should be D-PLCA instead of PLCA

Response Response Status C

ACCEPT IN PRINCIPLE.
Accommodated by comments 247 and 250. Note that Bit 3 isn't just D-PLCA status, bt points to the aDPLCAAdminState. Comment 250 corrects the description too.

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CI 79 SC 79.3.9.3 P37 L11 # 247
Brandt, David Rockwell Automation
Comment Type E Comment Status A DPLCA
Table 79-21, Bit 2 should refer to DPLCA per 30.16.1.1.14
SuggestedRemedy
Change "Field definitions" for Bit 2 to: "Bit 2- DPLCA supported"
Response Response Status C
ACCEPT IN PRINCIPLE.
(function is called D-PLCA in almost all places, not DPLCA. The management object omits the - (presumably for syntax).)
Change "Field definitions" for Bit 2 to: "Bit 2- D-PLCA supported"

CI 79 SC 79.3.9.3 P37 L13 # 250
Brandt, David Rockwell Automation
Comment Type T Comment Status A DPLCA
Table 79-21, Bit 3 is described as "status", but refers to AdminState. Additionally, there is no aDPLCAStatus to reference because plca_status is common with DPLCA.
SuggestedRemedy
Change Bit 3: "Field definitions" to "Bit 3- DPLCA admin state" and "Value/Values" to "1 = enabled" and "0 = disabled".
Response Response Status C
ACCEPT IN PRINCIPLE.
(function is called D-PLCA in almost all places, not DPLCA. The management object omits the - (presumably for syntax).)
Change Bit 3: "Field definitions" to "Bit 3- D-PLCA admin state" and "Value/Values" to "1 = enabled" and "0 = disabled".

CI 79 SC 79.3.9.3 P37 L13 # 248
Brandt, David Rockwell Automation
Comment Type E Comment Status A DPLCA
Table 79-21, Bit 3 should refer to DPLCA per 30.16.1.1.11
SuggestedRemedy
Change "Field definitions" for Bit 3 to: "Bit 3- DPLCA..."
Response Response Status C
ACCEPT IN PRINCIPLE.
(function is called D-PLCA in almost all places, not DPLCA. The management object omits the - (presumably for syntax).)
Change "Field definitions" for Bit 3 to: "Bit 3- D-PLCA..."

CI 90 SC 90.1 P38 L7 # 213
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type T Comment Status A 10BASE-T1S
"The TSSI is defined for 10BASE-T1S (see Clause 147) in full- duplex and point-to-point half-duplex modes of operation, as well as Clause 168 in half-duplex operation, and for other PHY types in full- duplex mode." - if it works for clause 168, it works for clause 147 in multidrop mode; I believe the reason 802.3de did not add in multidrop here was because of the project being scope-limited to point-to-point.
SuggestedRemedy
Change sentence to read "The TSSI is defined for 10BASE-T1S (see Clause 147) in full-duplex and point-to-point half-duplex modes of operation, as well as 10BASE-T1S / M (Clause 147 and Clause 168) in half-duplex multidrop operation, and for other PHY types in full- duplex mode.."
Response Response Status C
ACCEPT IN PRINCIPLE.
Response changed to align with usage of "half duplex" rather than "half-duplex" and spelling out of 10BASE-T1S / 10BASE-T1M
Change sentence to read "The TSSI is defined for 10BASE-T1S (see Clause 147) in full-duplex and point-to-point half-duplex modes of operation, as well as 10BASE-T1S and 10BASE-T1M (Clause 147 and Clause 168) in half duplex multidrop operation, and for other PHY types in full-duplex mode."

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CI 90 SC 90.1 P38 L7 # 163
 Maguire, Valerie Copperopolis; aff'l w/ CME Consulting
 Comment Type E Comment Status A Editorial
 "Half duplex" appears 282 times in 802.3-2022 and "half-duplex" appears 37 times.
 SuggestedRemedy
 Grant Editor's license to replace all occurrences of "half-duplex" with "half duplex".
 Locations found with a search include: P38 - L8, P38 - L9, P54 - L24, P56 - L10 (2 locations)
 Response Response Status C
 ACCEPT.

CI 90 SC 90.1 P38 L9 # 251
 Brandt, David Rockwell Automation
 Comment Type E Comment Status A 10BASE-T1S
 Clause 168 ONLY operates in half-duplex.
 SuggestedRemedy
 Change from "Clause 168 in half-duplex operations" to "Clause 168".
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Consider with comment 213.
 OBE by new wording

CI 148 SC 148.4.4.6 P42 L4 # 265
 Baggett, Tim Microchip
 Comment Type E Comment Status R Editorial
 CI 1.2: Qualifiers described by short phrases are enclosed in parentheses. The Term "!dplca_en" should be enclosed in parenthesis.
 More examples are identified in the PDF related to this comment.

SuggestedRemedy
 See Baggett_3da_D1p2_CL148_StateDiagrams.pdf and enclose highlighted terms with parenthesis.

This change applies to:

Fig 148-3 P42
 Fig 148-4 P43
 Fig 148-8 P50

In general, if the transition contained only a single boolean term such as "!variable" or "variable = CONST" I then left it alone and unhighlighted as this seemed to be consistent and more readable.

Response Response Status C
 REJECT.
 While the commenter is correct that this is the guidance in clause 1.2, the style in most of IEEE Std 802.3 does not follow this. This goes way back, see, e.g. Figures 33-9, 36-5, 36-7, 46-11, 48-8, 55-15, 97-12, etc..

CI 148 SC 148.4.4.6 P42 L26 # 166
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status R Editorial
 off page connectors are not consistent. On page 42, they have arrows into the pentagon, on page 43 they do not. Looking at Clause 145, the convention should be to have the arrow head. Therefore, they need added to Figure 148-4 part b in 4 places
 We could decide to remove the arrows, but that means all my follow on comments will have to be AIP and swapped to give instructions to remove the arrowheads that I am not commenting on.

SuggestedRemedy
 add arrowheads to the lines going to the off page connectors in 4 places:
 pg 43, line 18 ("C"); line 22 ("B"); line 29 ("D"); line 52 ("B")

Response Response Status C
 REJECT.
 This is in the base standard. Convention is arrowhead into inverted pentagon. (point up).
 See, e.g., clause 82 (40GBASE-R) or similar optical "Pete Anslow" clauses...

Suggest we don't change, but can do it on revision, or if figure is redrawn.

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CI 148 SC 148.4.4.6 P43 L44 # 167
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status A EZ
 the transition from COMMIT to ABORT, the arrowhead does not touch the boundary of ABORT
 SuggestedRemedy
 make arrowhead for the transition from COMMIT to ABORT touch the boundary of ABORT.
 Response Response Status C
 ACCEPT.

CI 148 SC 148.4.7.1 P47 L8 # 264
 Baggett, Tim Microchip
 Comment Type E Comment Status A Editorial
 Second sentence of paragraph should probably refer to "nodes" in plural.
 "D-PLCA enables node to select a unique node ID..."
 SuggestedRemedy
 Change: "D-PLCA enables node to select a unique node ID..."
 To: "D-PLCA enables nodes to select a unique node ID..."
 Or: "D-PLCA enables a node to select a unique node ID..."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 (first option, but correcting plural construction)
 Change: "D-PLCA enables node to select a unique node ID..."
 To: "D-PLCA enables nodes to select unique node IDs..."

CI 148 SC 148.4.7.5 P50 L2 # 262
 Baggett, Tim Microchip
 Comment Type E Comment Status A EZ
 Transition into DISABLED state has misspelled variable "ldplca_en" in second term. Term should refer to variable "dplca_en"
 SuggestedRemedy
 Change "plca_reset + !ldplca_en + !plca_en"
 to "plca_reset + !dplca_en + !plca_en"
 Response Response Status C
 ACCEPT.

CI 148 SC 148.4.7.5 P50 L29 # 263
 Baggett, Tim Microchip
 Comment Type E Comment Status A EZ
 Second entry in LEARNING state refers to DPLCA_AGING in caps. This is a variable (defined in 148.4.7.2 P47L52) and not a constant. As such it should be in lower case letters.
 SuggestedRemedy
 Change "DPLCA_AGING" to "dplca_aging"
 Response Response Status C
 ACCEPT.

CI 168 SC 168 P54 L7 # 214
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type E Comment Status A Editors Notes
 After having reviewed the draft, Delete item 3 in editor's note - no longer needed.
 SuggestedRemedy
 Delete item 3 in editor's note
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Remove the entire editors note at the beginning of clause 168 (P54 L2-10)

CI 168 SC 168.1.1 P55 L16 # 253
 Brandt, David Rockwell Automation
 Comment Type T Comment Status R 10BASE-T1S
 Figure 168-1 shows no PMD in the stack, whereas Figure 22-1 shows a PMD. OPEN Alliance invented a PMD as a preferred implementation.
 SuggestedRemedy
 Group to discuss whether we want a PMD definition as an "enhancement" in Clause 168.
 Response Response Status C
 REJECT.
 Discussion highlighted potential uses for a PMD for different isolation environments, but no consensus to establish different PMDs at this time.

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Cl 168 SC 168.2 P56 L3 # 215

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

Comment Type E Comment Status A Editors Notes

Note has been answered with text and is no longer needed

SuggestedRemedy

Delete Editor's note at 168.2

Response Response Status C

ACCEPT.

Cl 168 SC 168.2 P56 L3 # 165

Maguire, Valerie Copperopolis; aff'l w/ CME Consulting

Comment Type E Comment Status A Editors Notes

A short description of the operation of 10BASE-T1M is provided.

SuggestedRemedy

Delete Editor's note on line 3-7.

Response Response Status C

ACCEPT.

Cl 168 SC 168.2 P56 L9 # 266

Baggett, Tim Microchip

Comment Type E Comment Status A EZ

Sentence incorrectly refers to the "10BASE-T1S PHY defined in Clause 148". Clause 148 is PLCA. The 10BASE-T1S reference should be to Clause 147.

When corrected, the sentence will still be awkwardly repetitive referring to the "10BASE-T1S PHY defined in Clause 147 when the Clause 147 PHY is running half-duplex in multidrop mode". Delete repetition.

Finally, "operation ON the" is awkward and should probably be "operation OF the".

SuggestedRemedy

Change: "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."

To: "The 10BASE-T1M PHY builds on the operation of the 10BASE-T1S PHY defined in Clause 147 when running half-duplex in multidrop mode."

Response Response Status C

ACCEPT IN PRINCIPLE.
(align with usage of half duplex)

Change: "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."

To: "The 10BASE-T1M PHY builds on the operation of the 10BASE-T1S PHY defined in Clause 147 when running half duplex in multidrop mode."

Cl 168 SC 168.2 P56 L12 # 254

Brandt, David Rockwell Automation

Comment Type E Comment Status A EZ

Units should have space.

SuggestedRemedy

Change "50m" to "50 m".

Response Response Status C

ACCEPT.
(note to editor - nonbreaking space)

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Cl 168 SC 168.4.2.7 P65 L4 # 168

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status R Editorial

this off page connector is a circle. Should be a pentagon? Does the circle mean something different?

Also, the pentagons on this page "point" the wrong way. The tip of the pentagon should point the same way as the arrow?

SuggestedRemedy

fix the off page connectors in Fig 168-5, part a (pg 65): B (line 4) is a pentagon pointing in, C (line 22) and A (line 51) are pointing out
part b (pg 66): A (line 1) and C (line 9) pentagon pointing in, B (line 34) pentagon pointing out

Response Response Status C

REJECT.

Convention is arrowhead into inverted pentagon. (point up). See, e.g., clause 82 (40GBASE-R) or similar optical "Pete Anslow" clauses...

Cl 168 SC 168.4.3.7 P70 L6 # 169

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status R Editorial

off page connectors, circles and pentagons pointing the wrong way

SuggestedRemedy

fix the off page connectors in Fig 168-7, part a (pg 70): B (line 6) is a pentagon pointing in, D (line 17) and A (line 48) are pointing out
part b: A (line 1) and D (line 26) pentagon pointing in, B (line 22), B (line 35), B (line 44) pentagon pointing out

Response Response Status C

REJECT.

Convention is arrowhead into inverted pentagon. (point up). See, e.g., clause 82 (40GBASE-R) or similar optical "Pete Anslow" clauses...

Cl 168 SC 168.4.4 P36 L36 # 216

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

Comment Type T Comment Status A Management

Register 45.2.3.1.2 doesn't reference clause 168 or even clause 147. This needs fixing.

SuggestedRemedy

Add 45.2.3.1.2 to the draft, with an instruction to change as follows: (indicates underline start or stop)

"When the 10BASE-T1M/S, 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 10BASE-T1M/S, 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 10BASE-T1S PCS during loopback is specified in 147.3.4.

The specific behavior of the 10BASE-T1M PCS during loopback is specified in

168.4.4.

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."

Response Response Status C

ACCEPT IN PRINCIPLE.

Editorial license to align with comment to change 10BASE-T1M/S to 10BASE-T1M / 10BASE-T1S (check order) per other comments.

Editorial license to align with other comments not listed here.

Add 45.2.3.1.2 to the draft, with an instruction to change as follows: (indicates underline start or stop)

"When the 10BASE-T1M / 10BASE-T1S, 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 10BASE-T1M / 10BASE-T1S, 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

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: Clause, Subclause, page, line

Cl 168

SC 168.4.4

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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 10BASE-T1S PCS during loopback is specified in 147.3.4. The specific behavior of the 10BASE-T1M PCS during loopback is specified in 168.4.4. 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."

CI 168	SC 168.5	P73	L35	# 170
Jones, Chad Cisco Systems, Inc.				
Comment Type	E	Comment Status	A	Editors Notes
Didn't we agree to delete this editors note last cycle? Regardless, this note has served it's purpose and is no longer needed. Delete				
SuggestedRemedy Delete the editors note on pg 73, line 35				
Response	Response Status C			
ACCEPT.				

CI 168	SC 168.5	P73	L35	# 217
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe				
Comment Type	E	Comment Status	A	Editors Notes
Note has served its purpose for several cycles				
SuggestedRemedy Delete editor's note at 168.5 below Figure 168-10.				
Response	Response Status C			
ACCEPT.				

CI 168	SC 168.6.2	P76	L9	# 218
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe				
Comment Type	E	Comment Status	A	Management
TBDs are not needed, name of the register is 10BASET1M/S test mode register, and the location should be 45.2.1.236				

SuggestedRemedy
Delete TBDs (2 places), change "10BASE-T1M test mode control" to "10BASE-T1M/S test mode control", and change 45.2.1.186f.1 to an active xref to 45.2.1.236

Make same changes in PICS PMAE2 (168.12.4.5.2, P92 L9)

Response	Response Status C
ACCEPT IN PRINCIPLE. Commenter's resolution, but align with other comment on 10BASE-T1M/S, if they are accepted.	

Delete TBDs (2 places), change "10BASE-T1M test mode control" to "10BASE-T1M / 10BASE-T1S test mode control", and change 45.2.1.186f.1 to an active xref to 45.2.1.236

Make same changes in PICS PMAE2 (168.12.4.5.2, P92 L9)

CI 168	SC 168.6.3	P77	L29	# 171
Jones, Chad Cisco Systems, Inc.				
Comment Type	E	Comment Status	A	EZ
rouge "0" and "180" floating in the drawing. Delete these.				

SuggestedRemedy
Delete the "0" and "180" that seem to have no purpose in Fig 168-13

Response	Response Status C
ACCEPT IN PRINCIPLE. OBE - see comment 255.	

CI 168	SC 168.6.3	P77	L32	# 255
Brandt, David Rockwell Automation				
Comment Type	E	Comment Status	A	EZ
Figure 168-13, 180 is misplaced from the BALUN.				

SuggestedRemedy
Move "180" to just below "0".

Response	Response Status C
ACCEPT.	

IEEE P802.3da D1.2 10 Mbps Multidrop Enhancements

CI 168 SC 168.6.3 P77 L32 # 256

Brandt, David Rockwell Automation

Comment Type T Comment Status A Editorial

Figure 168-13 measurement should be confirmed at both TC1 and TC2. See NOTE in Figure 168-17.

SuggestedRemedy

Add note similar to line 21 at line 31 "Testing at TC2 shown, Balun connections interchange with load for testing at TC1)"

Response Response Status C

ACCEPT.

CI 168 SC 168.6.4 P77 L45 # 257

Brandt, David Rockwell Automation

Comment Type T Comment Status A Testing

It is not clear that it is required to test transmitter electrical specifications at both TC1 and TC2 for PMAE11 through PMAE14

SuggestedRemedy

Suggest adding at line 45: "Transmitter electrical specifications shall be measured at both TC1 and TC2."

Response Response Status C

ACCEPT IN PRINCIPLE.

Commenters suggestion expanded to indicate that the 50 ohm load specified is not 50 ohms at each TC, but 100 ohms on each, which are in parallel.

Add at line 45: "Transmitter electrical specifications shall be measured at both TC1 and TC2.

When both TC1 and TC2 are terminated, the 50 /Ohm resistive differential load should be implemented as a 100 /Ohm termination on each of TC1 and TC2."

(/Ohm is ohm-symbol)

CI 168 SC 168.8 P81 L18 # 221

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

Comment Type E Comment Status A TCI

Rewrite to make it clear that a stub is not part of the mixing segment:

SuggestedRemedy

Change "where each TCI has two connections on 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-conductor connection facing the PMA (and any associated stub or service loop) (TC3) (see Figure 168–18)."

to

"where each TCI has two connections on 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-conductor connection facing the PMA (see Figure 168-18).

If implemented with an associated stub or service loop, that wiring is specified specifically to the DTE, and compliance of the attached DTE specified at points TC1 and TC2, including the stub or service loop."

Response Response Status C

ACCEPT IN PRINCIPLE.

Change "where each TCI has two connections on 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-conductor connection facing the PMA (and any associated stub or service loop) (TC3) (see Figure 168–18)."

to

"where each TCI has two connections on 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-conductor connection facing the DTE (see Figure 168-18).

If implemented with an associated stub or service loop, that wiring is part of the DTE, and compliance of the attached DTE is specified at points TC1 and TC2, including any effects of the stub or service loop."

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Cl 168 SC 168.8 P81 L21 # 220

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

Comment Type T Comment Status A TCI

We no longer specify anything to TC3. Referencing it here has no purpose.

SuggestedRemedy

Delete "(TC3)" from 2nd paragraph of 168.8 (P81 L21), also delete TC3 from Figure 168-17

Response Response Status C

ACCEPT IN PRINCIPLE.
Editor's comment - TFTD

Cl 168 SC 168.8 P81 L28 # 219

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

Comment Type E Comment Status A Editors Note

Editor's note has been answered by text, no longer needed.

SuggestedRemedy

Delete editor's note below 3rd paragraph of 168.8 (lines 27-32)

Response Response Status C

ACCEPT.

Cl 168 SC 168.8 P82 L10 # 222

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

Comment Type T Comment Status A TCI

Figure shows stub external to device but considered specific to device. Would be clearer if DTE were shown as including the stub.

SuggestedRemedy

Remove TC3 from figure 168-17 (2 places) and draw dotted line box around left most DET and stub. Move label "DTE" outside solid box, but inside new dotted box, and place label PMA within solid box.

Response Response Status C

ACCEPT.

Cl 168 SC 168.8.1 P82 L33 # 270

Schreiner, Stephan Rosenberger Hochfrequenztechnik

Comment Type E Comment Status A Loading

Text uses the word "dummy load". However, 168.9.1 introduces the word PMA load for the same type of load.

SuggestedRemedy

Replace "dummy load" by PMA load within document

Response Response Status C

ACCEPT IN PRINCIPLE.
Loading is not just the PMA, but the DTE as a whole. Suggest global replacement of "dummy load" and "PMA load" with "Simulated DTE load"

Cl 168 SC 168.8.1 P82 L39 # 272

Brandt, David Rockwell Automation

Comment Type T Comment Status A LATE

Equation 168-3 has an error in transcribing what was adopted. The sign is wrong for the first term for the upper frequency range. +27 should be -27, otherwise the IL is allowed to be 54 dB larger.

SuggestedRemedy

Change "27 - (53log10(f))..." to "-27 - (53log10(f))..."

Response Response Status C

ACCEPT.
OBE by 273 which fixes the same issue

Cl 168 SC 168.8.2 P83 L3 # 172

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Editors Note

Didn't we agree to delete this editors note last cycle?
Regardless, this note has served it's purpose and is no longer needed. Delete

SuggestedRemedy

Delete the editors note on pg 83, line 3

Response Response Status C

ACCEPT.

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CI 168 SC 168.8.2 P83 L3 # 223
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status A Editors Note
 147.7.2 is no longer starting point - delete note
 SuggestedRemedy
 Delete editor's note at P83 L2-6
 Response Response Status C
 ACCEPT.

CI 168 SC 168.8.3 P83 L9 # 224
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status A Mixing Segment
 Mode conversion needs to be constrained.
 SuggestedRemedy
 Insert Mode conversion loss specification from 147.7.3, including Equation 147-5. (insert text for review, not just a reference)
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Delete TBD and associated editor's note (lines 9-16)
 Insert Mode conversion loss specification from 147.7.3, including Equation 147-5. (insert text for review, not just a reference)

CI 168 SC 168.8.4 P83 L17 # 225
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status A Mixing Segment
 No contributions have offered a need or a strawman coupling attenuation requirement.
 SuggestedRemedy
 Delete section 168.8.4 including editor's note.
 Response Response Status C
 ACCEPT.

CI 168 SC 168.9 P83 L52 # 226
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status A TCI
 No need to mention TC3 here, nothing is specified there.
 SuggestedRemedy
 Delete (TC3) in first sentence of 2nd paragraph of 168.9 (P83 L52), and in Figure 168-18
 Response Response Status C
 ACCEPT.

CI 168 SC 168.9 P84 L30 # 258
 Brandt, David Rockwell Automation
 Comment Type E Comment Status A TCI
 Possibly I don't understand the examples. It is stated that "[1] The TCI may physically be implemented as a two-conductor connection to the DTE or [2] as an adapter separate from the DTE's PMA assembly or [3] the TCI and the PMA of the DTE may be located within a single assembly." then we state "The latter configuration presents a negligible stub length when the PMA attachment is open circuit." It is unclear how in [3], the PMA can be separated. I would read [1] as a T with some drop to the DTE, [2] as a kind of DTE plug with TC1/TC1 and no drop, and [3] as TC1 and TC2 built into the DTE.
 SuggestedRemedy
 Suggest "The second configuration may present a negligible stub length when the PMA attachment is open circuit."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 (note - this changes "latter" to "second", rewriting the sentence with number labels as the commenter has done in the comment to improve clarity):
 Change P84 L30-33 to read:
 "The TCI may physically be implemented as: (1) a two-conductor connection to the DTE, or (2) an adapter separate from the DTE's PMA assembly, or (3) integrated, where the TCI and the PMA of the DTE are located within a single assembly. The second configuration presents a negligible stub length when the PMA attachment is an open circuit. The third configuration must be replaced to allow connectivity when the DTE is not present. Either..."

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Cl 168 **SC 168.9.2** **P85** **L19** # **243**

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

Comment Type **T** **Comment Status** **R** **TCI**

Adopt proposal for TCI return loss in zimmerman_3da_01_06112024 (pending presentation)

SuggestedRemedy

Delete editor's note, adopt proposal in presentation and incorporate into equation 168-6.

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

REJECT.

This comment was WITHDRAWN by the commenter.

OBE by 275.

Cl 168 **SC 168.9.2** **P85** **L23** # **259**

Brandt, David Rockwell Automation

Comment Type **E** **Comment Status** **A** **EZ**

Missing word.

SuggestedRemedy

Change "determined Equation" to "determined using Equation".

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

ACCEPT.

Cl 168 **SC 168.9.4** **P85** **L41** # **173**

Jones, Chad Cisco Systems, Inc.

Comment Type **E** **Comment Status** **A** **EZ**

Table 168-4 allowed to span across pages. This table is not that big that it needs to span pages. Can we force it to stay together?

SuggestedRemedy

change table attributes to disallow spanning pages.

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

ACCEPT.

Cl 168 **SC 168.10.2.1** **P86** **L48** # **174**

Jones, Chad Cisco Systems, Inc.

Comment Type **E** **Comment Status** **A** **EZ**

Text is awkwardly spaced, looks like spacing setting is set to "justify" instead of "align left". Also on page 87, line 5

SuggestedRemedy

change line spacing attributes to match the surrounding text, i.e. "align left" instead of "whole line justify".

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

ACCEPT.

Cl 168 **SC 168.12.4.6** **P94** **L16** # **244**

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

Comment Type **E** **Comment Status** **A** **Editorial**

No need for TBD in Value/Comment since the section is referenced.

SuggestedRemedy

Delete TBD from Value/Comment.

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

ACCEPT.

Cl 168 **SC 168.12.4.7** **P94** **L27** # **271**

Schreiner, Stephan Rosenberger Hochfrequenztechnik

Comment Type **T** **Comment Status** **A** **EZ**

Item TCI1 Feature says without PMA loading. This is in contradiction to e.g. 168.9.1 " PMA loads specified for the TCI are to be connected if the DTE is electrically disconnected from the TCI.". Similiar for TCI3

SuggestedRemedy

Remove TCI1 and TCI3 from table

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

ACCEPT.

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Cl **168.8** SC **168.8.1** P82 L39 # **273**
 DiMinico, Christopher PHY-SI/SenTekse/MC Communications
 Comment Type **TR** Comment Status **A** LATE
 Equation 168-3 [27] should be [-27]
 SuggestedRemedy
 change [27] to [-27]
 Response Response Status **C**
 ACCEPT.

Cl **168.9** SC **168.9.1.1** P85 L9 # **274**
 DiMinico, Christopher PHY-SI/SenTekse/MC Communications
 Comment Type **TR** Comment Status **A** LATE
 Error in equation 168-5
 SuggestedRemedy
 Change equation 168-5.

$$IL \leq 0.16 \text{ dB } 1 \leq f < 10$$

$$-0.454 + (0.22/f) + 0.63 \cdot \text{SQRT}(f) - 0.18 \cdot f + 0.004 \cdot f^2 \text{ } 10 \leq f \leq 24$$

$$IL \leq 0.3 \leq f < 1 \text{ (TBD)}$$

$$24 < f \leq 40 \text{ (TBD)}$$

$$f = \text{MHz}$$
 See diminico_SPMD_01_0624.pdf for TBD

Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Change Equation 168-5 to read:

$$IL \leq 0.6 \text{ dB } 0.3 \leq f < 1$$

$$IL \leq 0.16 \text{ dB } 1 \leq f < 10$$

$$IL \leq -0.454 + (0.22/f) + 0.63 \cdot \text{SQRT}(f) - 0.18 \cdot f + 0.004 \cdot f^2 \text{ } 10 \leq f < 24$$

$$IL \leq 0.145 \cdot (f) - 2.86 \text{ } 24 \leq f \leq 40$$
 where f is the frequency in MHz.

Cl **168.9** SC **168.9.2** P85 L27 # **275**
 DiMinico, Christopher PHY-SI/SenTekse/MC Communications
 Comment Type **TR** Comment Status **A** LATE
 Equation 168-6 is TBD
 SuggestedRemedy
 Use RL equation slide 11
https://www.ieee802.org/3/da/public/0524/diminico_SPMD_01_0524.pdf
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Use RL equation slide 11
https://www.ieee802.org/3/da/public/0524/diminico_SPMD_01_0524.pdf
 and
 Remove editor's note P85 L17-21.

Cl **169** SC **169.1** P96 L9 # **175**
 Jones, Chad Cisco Systems, Inc.
 Comment Type **E** Comment Status **A** Editorial
 "MPoE is intended to provide a single pair Ethernet Physical Layer device with an interface to both the power and data." - we have a way to power SPE devices in clause 104. This is powering multidrop SPE devices, so we need to add multidrop to this sentence.
 SuggestedRemedy
 add multidrop to sentence: MPoE is intended to provide a MULTIDROP single pair Ethernet Physical Layer device with an interface to both the power and data.
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 (remove statement of intent, and also fix case of MULTIDROP in suggested remedy)
 Change "MPoE is intended to provide a single pair Ethernet Physical Layer device with an interface to both the power and data."
 to "MPoE provides a multidrop single pair Ethernet Physical Layer device with an interface to both the power and data."

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CI 169 SC 169.1.2 P96 L35 # 227

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

Comment Type E Comment Status A Editors Notes

Editor's note has been answered by text, no longer needed.

SuggestedRemedy

Delte editor's note at 169.1.2 (P96 L35-39)

Response Response Status C

ACCEPT.

CI 169 SC 169.1.2 P96 L41 # 176

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Editorial

"MPoE is an optional power entity to be used in conjunction with supported single pair Ethernet Physical Layers." - do we need multidrop in this sentence?

SuggestedRemedy

add multidrop to sentence: MPoE is an optional power entity to be used in conjunction with supported MULTIDROP single pair Ethernet Physical Layers.

Response Response Status C

ACCEPT IN PRINCIPLE.
(correct case in response)

Change "supported single pair" to "supported multidrop single pair"

CI 169 SC 169.1.2 P96 L43 # 228

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

Comment Type T Comment Status A Power - General

an MPSE or MPD doesn't have to have data on the wires it delivers power to. We should describe that.

SuggestedRemedy

Add at end of paragraph, "An MPSE or MPD may or may not be co-located with a DTE, and the power may be conferred over the same pairs as data or over dedicated pairs. "

Response Response Status C

ACCEPT IN PRINCIPLE.

Add at end of paragraph, "An MPSE or MPD may or may not be co-located with a DTE, and the power may be provided over the same pairs as the data or over dedicated pairs with power only. "

CI 169 SC 169.1.2 P96 L43 # 177

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Editorial

We've added MPI and the first appearance is in Fig 169-1 but we don't define it.

SuggestedRemedy

Add a new second-to last-sentence in the first paragraph of 169.1.2: The power is applied to the Multidrop Power Interface (MPI).

Response Response Status C

ACCEPT IN PRINCIPLE.
(add cross reference to definition, if comment 178 is accepted).

Add a new second-to last-sentence in the first paragraph of 169.1.2: The power is applied to the Multidrop Power Interface (MPI)"

If new definition is added by comment 178, also add "(See 1.4.405b)"

CI 169 SC 169.1.2 P97 L19 # 229

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

Comment Type T Comment Status A Editorial

The Editor's note should be represented in the figure.

SuggestedRemedy

Delete editor's note at P97 L18-22, add a note similar to that on Figure 169-2 to Figure 169-1, "NOTE - The MPI may not be exposed. If it is not exposed, limits are calculated from values at TC1 and TC2."

Response Response Status C

ACCEPT IN PRINCIPLE.
(improved language)

Delete editor's note at P97 L18-22, add a note similar to that on Figure 169-2 to Figure 169-1, "NOTE - The MPI may not be exposed. If it is not exposed, specified values are calculated from values observed at TC1 and TC2."

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Cl 169 SC 169.3 P98 L4 # 195

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status A Editorial

"An MPSE may transition between Type 0 and Type 1 during IDLE". no reason to enumerate type 0 and type 1 in this sentence. Genericizing this prepares the text for added types, in case we expand voltage or current.

SuggestedRemedy

change: "An MPSE may transition between Type 0 and Type 1 during IDLE"
to: "An MPSE may transition between types during IDLE"

Response Response Status C

ACCEPT.

Cl 169 SC 169.3 P98 L9 # 197

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status R Power - Types

having the unit loads set to 1 and 2 W means systems cannot fully allocate the available power. Need to lower this to a something that allows finer adjusts.

SuggestedRemedy

Change "For Type 0 MPDs, one unit load represents 1W. For Type 1 MPDs, one unit load represents 2W.
To: "For all MPD Types 1, one unit load represents 0.5W." AND change last row of Table 169-1 to from 1 and 2 to one merged cell of 0.5.

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 169 SC 169.3 P98 L19 # 230

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

Comment Type E Comment Status A EZ

The top row of Table 169-1 got messed up. The word contact should not be there, and System type should not be bold.

SuggestedRemedy

Delete header "Contact" in first column (leaving header blank), Make first body row (System type) not bold.

Response Response Status C

ACCEPT.

Cl 169 SC 169.3 P98 L22 # 199

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status R Power - Types

Suggest NOT naming system types a generic 0 or 1. Expansion will not be logical (i.e. in order from lowest to highest). If this is successful, we WILL be asked to add more types. I recommend we name the type based on the minimum PSE voltage followed by the current.

SuggestedRemedy

Table 169-1 system type row.

Change "0" to "26-1"

Change "1" to "45-1"

editors given license to change throughout clause 169 in case some are not captured by subsequent comments.

Response Response Status C

REJECT.

This is going to need specific guidance. Recommend that commenter resubmit to realign nomenclature after all power types are stable.

Cl 169 SC 169.3 P98 L26 # 198

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status A Power - General

Table 169-1. See related presentation.

With the change to 1A for both types, several items in this table change.

SuggestedRemedy

for 26V min PSEs, VMPDmin is 14V, PMPSE(min) is 14W, new item PMPSE(max) is 24.8W

for 45V min PSEs, VMPDmin is 33V, PMPSE(min) is 33W, new item PMPSE(max) is 43.8W

Response Response Status C

ACCEPT IN PRINCIPLE.

Change PMPSE(min) row to 45 W for "50V Max MPSE column"

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CI 169 SC 169.3 P98 L28 # 196

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status A Power - General

Table 169-1. As the channel is the same for each type, there is no reason one could supply 1A and the other could not.

Also, typo in variable name: ITCL_MSPE(min) - MSPE should be MPSE.

SuggestedRemedy

Change 941 to 1000 in ITCL_MSPE(min)

Change ITCL_MSPE(min) to ITCL_MPSE(min)

Response Response Status C

ACCEPT IN PRINCIPLE.

Change I_TCL_MSPE(min) to I_MPSE(min)

Editorial license to search and make replacement globally (note MSPE should be MPSE and the replacement is not just on the "min")

Change 941 to 1000 in I_MPSE (min) row.

CI 169 SC 169.4 P98 L42 # 179

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

item e), we added react in the last cycle. Reading again it should have been "react to".

SuggestedRemedy

Add "to" in item e): "To sense, react TO, and recover from..."

Response Response Status C

ACCEPT IN PRINCIPLE.

Add "to" in item e): "To sense, react to, and recover from..."

CI 169 SC 169.4.3 P99 L18 # 180

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

PI should be MPI.

SuggestedRemedy

replace PI with MPI.

Response Response Status C

ACCEPT.

CI 169 SC 169.4.3 P99 L30 # 246

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

Comment Type T Comment Status A Power - General

when TC1 and TC2 differ in voltage, and the MPI is not accessible, we need clarity on how to determine voltage.

SuggestedRemedy

Change "For compliance, voltage specifications shall be met at both TC1 and TC2 independently." to "For compliance, voltage specifications shall be met at both TC1 and TC2 independently. When the MPI is not accessible, compliance to voltage specifications for a minimum or maximum of the voltage at TC1 and TC2, depending on whether the specification in question is for a maximum value or a minimum threshold value, respectively."

Response Response Status C

ACCEPT IN PRINCIPLE.

Change "For compliance, voltage specifications shall be met at both TC1 and TC2 independently." to

"For compliance, voltage specifications shall be met at both TC1 and TC2 independently. When the MPI is not accessible, compliance to voltage specifications shall be met for a minimum or maximum of the voltage at TC1 and TC2, depending on whether the specification in question is for exceeding dropping below a threshold, respectively."

CI 169 SC 169.4.3 P99 L31 # 231

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

Comment Type E Comment Status A EZ-out

Figure 169-2 text is in the wrong font - should be sans-serif like other figures (Arial or similar - editor to check)

SuggestedRemedy

Change fonts in figure 169-2 to align with Figure 169-1.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change fonts in Figure 169-2 and Figure 169-5 to align with Figure 169-1.

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CI 169	SC 169.4.4.5	P103	L52	# 181
Jones, Chad		Cisco Systems, Inc.		
Comment Type	E	Comment Status	A	Editorial
More off page transitions without arrowhead on the connecting lines.				
SuggestedRemedy				
add arrowhead in 5 places: Pg 103 A (line 52) and C (line 52); page 104 A (line 41), D (line 43), D (line 52)				
Response		Response Status	C	
ACCEPT IN PRINCIPLE.				
Per convention, editor to ensure all entry blocks are circles, pentagons are inverted (point up), arrowheads go into the pentagons' points				

CI 169	SC 169.4.5	P105	L14	# 182
Jones, Chad		Cisco Systems, Inc.		
Comment Type	E	Comment Status	A	Editorial
Should we point the readers where to find info about overload, short circuit, or other fault? Additionally, we remove power because of the absence of MPS (or TPS). Add that here too.				
SuggestedRemedy				
change to: "Additionally, while voltage is applied, the MPSE monitors the current drawn and removes power if it detects an overload (see 169.4.9), short-circuit or other fault (see 169.4.10), or for the absence of MPS (See 169.4.11)" [or TPS - dependent on other decisions].				
Response		Response Status	C	
ACCEPT IN PRINCIPLE.				
change to: "Additionally, while voltage is applied, the MPSE monitors the current drawn and removes power if it detects an overload (see 169.4.9), short-circuit or other fault (see 169.4.10), or for the absence of TPS (See 169.4.11)" (see comment 194)				

CI 169	SC 169.4.6	P105	L33	# 183
Jones, Chad		Cisco Systems, Inc.		
Comment Type	E	Comment Status	A	Power - General
the text "is presenting a discover low event voltage in a DISCOVERY_LOW ..."we have several DISCOVERY_LOW states. Should we be more explicit? Seems to be a convention in the next paragraph to simply put an "x" at the end.				
SuggestedRemedy				
change DISCOVERY_LOW to DISCOVERY_LOWx				
Response		Response Status	C	
ACCEPT IN PRINCIPLE.				
change DISCOVERY_LOW to DISCOVERY_LOW_X				
change "When the MPSE is presenting a discover low event voltage in a DISCOVERY_LOW state, as shown in the state diagram of Figure 169–3 and Figure 169–4, the MPSE it shall supply V_{Discovery} voltage to the TCI subject to the TDiscovery_low timing specification."				
to				
"When the MPSE is presenting a discover low event voltage in any of the DISCOVERY_LOW states (e.g., DISCOVERY_LOW_TARE or DISCOVERY_LOW_TYPE0), as shown in the state diagram of Figure 169–3 and Figure 169–4 MPSE shall supply V_{Discovery} voltage to the TCI subject to the TDiscovery_low timing specification."				

CI 169	SC 169.4.6	P105	L34	# 184
Jones, Chad		Cisco Systems, Inc.		
Comment Type	E	Comment Status	A	EZ
two errors on this line. An extra "it" after MPSE that isn't needed. V_{Discovery} looks like a cut paste error where _{Discovery} should be subscript without the curly brackets or underscore.				
SuggestedRemedy				
delete "it" after MPSE and make V_{Discovery} match Table 169-3 item 2				
Response		Response Status	C	
ACCEPT.				

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CI 169 SC 169.4.6 P105 L36 # 185

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

three things on this line:
DISCOVERY_LOW again
need "the" before discovery event current
and need a comma after discovery event current

SuggestedRemedy

change to: "entrance of a DISCOVERY_LOWx state and measurement of the discovery event current, IDiscovery."

Response Response Status C

ACCEPT.

CI 169 SC 169.4.8 P106 L51 # 186

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Editorial

P{MPSE_16U} is awfully specific. Do we need to be that specific? Can it just be P{MPSE}?

SuggestedRemedy

Change P{MPSE_16U} to P{MPSE}. Also on pg 107, line 9 and line 30. further, editors given license to fix any other occurrences (search finds one more on page 98, line 30)

Response Response Status C

ACCEPT.

CI 169 SC 169.4.8 P107 L9 # 200

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status A Power - Types

PMPSE_16U is specific to only allowing 16 unit loads per mixing segment. A previous comment recommended changing this. If that was rejected, this should also be rejected.

SuggestedRemedy

if comment against pg 98 line 22 was accepted, change Type column: "0" to "26-1", "1" to "45-1"
item 2: change P{MPSE_16U} to P{MPSE}
item 2: change 26 to 14, change 42 to 33, change 100 for type 0 to 24.8, change 100 for type 1 to 43.8

Response Response Status C

ACCEPT IN PRINCIPLE.
Change P{MPSE_16U} to P{MPSE},
do not change types (unless comment 199 is accepted)
item 2: change change 42 to 45

CI 169 SC 169.4.10 P107 L46 # 187

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

PI should be MPI.

SuggestedRemedy

change PI to MPI

Response Response Status C

ACCEPT.

CI 169 SC 169.4.11 P107 L53 # 188

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

need an "if" before "short_circuit_detected is true" but I think this is better as a bulletized list.

SuggestedRemedy

either add to "...if overload_detected is TRUE, IF short_circuit_detected is TRUE, or if..."
OR
bulletize:
full operating voltage shall be removed from the TCI for any of the following reasons:
*in the absence of the MPD MPS
*if overload_detected is TRUE
*if short_circuit_detected is TRUE
*if commanded to do so by a management entity.

Response Response Status C

ACCEPT IN PRINCIPLE.
Change to read:
full operating voltage shall be removed from the TCI for any of the following reasons:
*in the absence of the MPD MPS
*if overload_detected is TRUE
*if short_circuit_detected is TRUE
*if commanded to do so by a management entity.

IEEE P802.3da D1.2 10 Mbps Multidrop Enhancements

CI 169 SC 169.5 P108 L22 # 190

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Power - General

"Where the MPD PI is not exposed, current values are calculated from observable currents at TC1 and TC2." Don't we also need to know the voltages?

SuggestedRemedy

change to: "Where the MPD PI is not exposed, values are calculated from observable voltages and currents at TC1 and TC2."

Response Response Status C

ACCEPT IN PRINCIPLE.

change to: "Where the MPD MPI is not exposed, values are calculated from observable voltages and currents at TC1 and TC2."

CI 169 SC 169.5 P108 L22 # 189

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

"Where the MPD PI is not exposed" either this is MPD MPI (which we just said two words earlier) or this is MPI. I'd suggested the latter.

SuggestedRemedy

change MPD PI to MPI

Response Response Status C

ACCEPT.

CI 169 SC 169.5 P108 L22 # 164

Maguire, Valerie Copperopolis; aff'l w/ CME Consulting

Comment Type E Comment Status A EZ-out

This condition is an event in time, not in location.

SuggestedRemedy

Replace "Where the MPD PI..." with "When the MPD PI..."

Response Response Status C

ACCEPT IN PRINCIPLE.

Change "Where" to "If"

CI 169 SC 169.5.1 P108 L27 # 201

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status R Power - Types

if comment against pg 98 line 22 was accepted, change: "Type 0" to "Type 26-1", "Type 1" to "Type 45-1"

SuggestedRemedy

if comment against pg 98 line 22 was accepted, change: "Type 0" to "Type 26-1", "Type 1" to "Type 45-1"

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

This is going to need specific guidance. Recommend that we realign nomenclature after all power types are stable.

CI 169 SC 169.5.3.2 P109 L37 # 233

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

Comment Type T Comment Status A Editorial

V_Discovery_th is missing from the constants

SuggestedRemedy

Add V_Discovery (in alphabetic order) to 169.5.3.2 with definition "Mark discovery threshold voltage (see Table 169-7)"

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3.2 P109 L47 # 232

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

Comment Type T Comment Status A EZ

I believe V_MPD is a variable, not a constant.

SuggestedRemedy

Delete V_MPD and definition at P109 L47-48

Response Response Status C

ACCEPT.

IEEE P802.3da D1.2 10 Mbps Multidrop Enhancements

CI 169 SC 169.5.3.3 P110 L35 # 240
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type E Comment Status A TCI
 Reference point for power is MPI, not TC3.
 SuggestedRemedy
 Change TC3 to MPI (5 instances) P110 L35-41)
 Response Response Status C
 ACCEPT.

CI 169 SC 169.5.3.3 P110 L42 # 234
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status A EZ
 V_Mark_th, V_Off_MPD, V_Reset_th, V_type0_th, and V_type1_th are constants, they are listed in the constant section. They can't also be variables.
 SuggestedRemedy
 Delete V_Mark_th, V_Off_MPD, V_Reset_th, V_type0_th, and V_type1_th from the variables section (along with their descriptions - (P110 L42 through P111 L5, except P110 L49-51 (V_MPD)...)
 Response Response Status C
 ACCEPT.

CI 169 SC 169.5.3.3 P110 L51 # 241
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type E Comment Status A Editorial
 MPD TC should be MPD MPI.
 SuggestedRemedy
 Change MPD TC to MPD MPI.
 Response Response Status C
 ACCEPT.

CI 169 SC 169.5.3.4 P111 L12 # 276
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status A LATE - inrush
 As part of proposing responses for D1.2 comment resolution, the editorial team found that pon_holdoff_timer does not have a duration. Add a duration to the timer.
 SuggestedRemedy
 add "; see T{Inrush_backoff} in Table 169-8" after 'threshold' on line 12.
 Response Response Status C

ACCEPT IN PRINCIPLE.
 Commenters suggestion with Editorial license to conform to style, plus additional edits to resolve state diagram and duplicative shalls in text...

add "; see T{Inrush_backoff} in Table 169-8 for duration" after 'threshold' on line 12.
 And in Figure 169-8
 change output condition (3rd line) of PON_EVAL to PON_LOAD_ON to be:
 ((mpd_type == mixed) & (V_MPD >= V_type0_th))
 And in Figure 169-8
 add editor's note to Figure 169-8 - "Editor's Note (to be removed after D1p3) - Commenters to consider condition from PON_EVAL to PON_MISMATCHED_TYPE when V_MPD < V_type0_th"

In 169.5.5.1 change "shall" to "does" in first paragraph (2 instances)

CI 169 SC 169.5.3.6 P113 L51 # 191
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status A Editorial
 More off page transitions without arrowhead on the connecting lines.
 SuggestedRemedy
 add arrowhead in 56 places: part a page 113, C (line 51), A and B line 53;
 part b page 114, A (line 47), B (line 52);
 part c page 115, B (line 38)
 Response Response Status C
 ACCEPT.

IEEE P802.3da D1.2 10 Mbps Multidrop Enhancements

CI 169 SC 169.5.3.6 P115 L17 # 235

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

Comment Type E Comment Status A EZ

Nomenclature in state diagrams is "=" for an equality condition, not "=="

SuggestedRemedy

Replace == with = on output branches from PON_EVAL and PON_LOAD_ON in Figure 169-8 (8 instances)

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3.6 P115 L17 # 236

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

Comment Type E Comment Status A EZ

Vtype1_th should be have type1_th in subscript

SuggestedRemedy

Change Vtype1_th to V_type1_th (subscript type1_th) on output branches of PON_EVAL and PON_LOAD_ON (6 instances)

Response Response Status C

ACCEPT.

CI 169 SC 169.5.3.6 P115 L36 # 237

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

Comment Type T Comment Status A Power - General

V_reset is not defined, probably should be V_Reset_th

SuggestedRemedy

Change V_reset to V_Reset_th

Response Response Status C

ACCEPT.

CI 169 SC 169.5.4 P116 L1 # 192

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A EZ

three things here:

need a comma after TRUE in the first paragraph.

Need a comma after FALSE in the second paragraph.

Two periods at the end of the second paragraph.

SuggestedRemedy

add comma after TRUE on line 1. add comma after FALSE on line 4. delete extra period at end of line 5.

Response Response Status C

ACCEPT.

CI 169 SC 169.5.5 P117 L10 # 202

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status R Power - Types

Table 169-1 needs updates if previous comments were accepted.

SuggestedRemedy

change Type column: "0" to "26-1", "1" to "45-1"

Item 1: change "16" to "14"; "34" to "33"

item 2: change 1 and 2 to one merged cell of 0.5

item 6: change "16" to "14"

item 7: change "34" to "33"

item 4: change min to 0.5W. Change max from "16" and "32" to "14" and "33"

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 169 SC 169.5.5 P117 L25 # 238

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

Comment Type E Comment Status A EZ

V_TYPE0_TH and V_TYPE1_TH have case inconsistent with variables in state diagrams

SuggestedRemedy

Make V_TYPE0_TH and V_TYPE1_TH V_type0_th and V_type1_th as in state diagrams

Response Response Status C

ACCEPT.

IEEE P802.3da D1.2 10 Mbps Multidrop Enhancements

CI 169 SC 169.5.5 P117 L36 # 242

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

Comment Type E Comment Status A Power - General

MPD TC3 capacitance should be MPD MPI capacitance

SuggestedRemedy

Change MPD TC3 to MPD MPI

Response Response Status C

ACCEPT.

CI 169 SC 169.5.5 P117 L39 # 239

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

Comment Type E Comment Status A EZ

I_MPD_DISABLED has case inconsistent with other values

SuggestedRemedy

Change I_MPD_DISABLED to I_MPD_Disabled in Table 169-8 and 169.5.5.1 (P118 L2)

Response Response Status C

ACCEPT.

CI 169 SC 169.5.5.1 P117 L49 # 193

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status R Power - Inrush

the text "...until VMPD crosses Vtype0_th and Tinrush_backoff time...", the table above has Vtype0_th and Vtype1_th. Need to genericize.

SuggestedRemedy

change "Vtype0_th" to "VtypeX_th"

Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

(need to specify that the threshold is appropriate for the MPD type)
(TFTD - presentation?)

change "Vtype0_th" to "VtypeX_th appropriate to the MPD type"

CI 169 SC 169.5.5.2 P118 L11 # 203

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status D Power - Types

If lowering PSE unit load to 0.5W was accepted, need the same change here.

SuggestedRemedy

change: "For Type 0 MPDs, one unit load represents 1W. For Type 1 MPDs, one unit load represents 2W.

A mixing segment can support up to 16 unit loads. Each MPD is allocated a minimum of 1 unit load and may consume no more than 16 unit loads. The MPD system type and unit load level should be clearly indicated so users can track loading on a mixing segment. The sum of unit loads on a mixing segment shall not exceed 16."

to:"One unit load represents 0.5W for all MPD types.

Each MPD is allocated a minimum of 1 unit load and may consume no more than 28 unit loads for a Type 26-1 and 66 unit loads for a Type 45-1. The MPD system type and unit load level should be clearly indicated so users can track loading on a mixing segment. The sum of unit loads on a mixing segment shall not exceed the maximum allowed by the MPSE type."

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

CI 169 SC 169.5.5.3 P118 L24 # 194

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status A Editorial

last cycle we changed MPS to TPS (likely an attempt to prevent confusing MPS and MPSE). I don't mind either term but we need to pick one and be consistent. The PSE section had MPS.

SuggestedRemedy

Either search document for MPS and replace with TPS, with editorial license to adjust any text around (i.e. to replace "maintain" with "transmit" as needed)

OR

replace transmit with maintain and TPS with MPS in this section, with editorial license to adjust any other occurrences of TPS outside of 169.5.5.3. (search implies TPS is only found in 169.5.5.3)

Response Response Status C

ACCEPT IN PRINCIPLE.

(we did agree to go with TPS)

search document for MPS and replace with TPS, with editorial license to adjust any text around (i.e. to replace "maintain" with "transmit" as needed)

CI 169	SC 169.6.1	P119	L5	# 260
Potterf, Jason		Cisco		
Comment Type	T	Comment Status	A	Power - Missing section
Isolation clause is absent. The proposed isolation clause is adapted from 4-Pair PoE Clause 145.4.1 Electrical isolation and PoDL 104.6.1 Isolation.				
SuggestedRemedy				
Adopt isolation clause in attached document - SPMD_Potterf_D1P2_Comment_Sub-Clause_169p6p1_Isolation_2024-06-07.docx				
Response		Response Status	C	
ACCEPT IN PRINCIPLE.				
Insert editor's note in 168.10 (to be removed prior to Working Group ballot) - Reviewers to consider whether an additional isolation requirement is needed when Clause 169 powering is not used with the PHY.				
Recommend accept updated document:				
SPMD_Potterf_D1P2_Comment_Sub-Clause_169p6p1_Isolation_2024-06-13.pdf.				

CI 169	SC 169.7	P119	L19	# 261
Potterf, Jason		Cisco		
Comment Type	T	Comment Status	A	Power - Missing section
Environmental Clause is absent. The proposed isolation clause is adapted from 4-Pair PoE Clause 145.6 Environmental and PoDL 104.8 Environmental.				
SuggestedRemedy				
Adopt environmental clause in attached document - SPMD_Potterf_D1P2_Comment_Sub-Clause_169p7_Environmental_2024-06-07.docx				
Response		Response Status	C	
ACCEPT IN PRINCIPLE.				
Accept updated text with editorial license as indicated in the referenced submission.				
SPMD_Potterf_D1P2_Comment_Sub-Clause_169p7_Environmental_2024-06-13.pdf				