

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 D EZ

"Task Force name" should not be in Chair's title...

SuggestedRemedy

Delete "Task Force name" on P8 L12 from chair's title

Proposed Response Response Status W

PROPOSED ACCEPT.

CI FM SC FM P9 L1 # 204

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

Comment Type E Comment Status D EZ

Stds board secretary is now Alpesh Shah

SuggestedRemedy

Change Konstantinos Karachalios to Alpesh Shah

Proposed Response Response Status W

PROPOSED ACCEPT.

CI FM SC FM P12 L53 # 205

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

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
(editor's comment - TFTD)

CI FM SC FM P13 L3 # 268

Baggett, Tim Microchip

Comment Type E Comment Status D 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."

Proposed Response Response Status W

PROPOSED 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 D Editorial

Noone has suggested new normative references.

SuggestedRemedy

Delete Section 1.3 and editing instruction (lines 3 to 7) from the draft.

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 1 SC 1.4 P21 L21 # 178

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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"?

Proposed Response Response Status W

PROPOSED 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.

Cl 1 SC 1.4.405a P21 L19 # 207

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

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 22 SC 22.1 P22 L22 # 252

Brandt, David Rockwell Automation

Comment Type T Comment Status D TCI

Figure 22-1 shows 10BASE-T1M with an MDI, wheras 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, ..."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Add note to Figure 22-1 below text:

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

Cl 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 D Editors Notes

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

SuggestedRemedy

delete editors note

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 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 D 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."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD - Editor's comment

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CI 45 SC 45.2.1.234 P30 L3 # 267

Baggett, Tim Microchip

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED 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)

CI 79 SC 79.3.9.2 P36 L45 # 211

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

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

CI 79 SC 79.3.9.3 P36 L19 # 210

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

Comment Type E Comment Status D EZ

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.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 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.

CI 79 SC 79.3.9.3 P37 L8 # 249

Brandt, David Rockwell Automation

Comment Type E Comment Status D 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)

Proposed Response Response Status W

PROPOSED 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"

CI 79 SC 79.3.9.3 P37 L10 # 269

Schreiner, Stephan Rosenberger Hochfrequenztechnik

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED 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 D 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"
Proposed Response Response Status W
PROPOSED 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- DPLCA supported"

CI 79 SC 79.3.9.3 P37 L13 # 250
Brandt, David Rockwell Automation
Comment Type T Comment Status D 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".
Proposed Response Response Status W
PROPOSED 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 D 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..."
Proposed Response Response Status W
PROPOSED 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 # 163
Maguire, Valerie Copperopolis; aff'l w/ CME Consulting
Comment Type E Comment Status D 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)
Proposed Response Response Status W
PROPOSED ACCEPT.

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|--|---------|--|----|------------|
| Cl 90 | SC 90.1 | P38 | L7 | # 213 |
| Zimmerman, George | | CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe | | |
| Comment Type | T | Comment Status | D | 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.." | | | | |
| Proposed Response | | Response Status W | | |
| PROPOSED ACCEPT IN PRINCIPLE. Editor's comment - TFTD 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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|---|---------|---------------------|----|------------|
| Cl 90 | SC 90.1 | P38 | L9 | # 251 |
| Brandt, David | | Rockwell Automation | | |
| Comment Type | E | Comment Status | D | 10BASE-T1S |
| Clause 168 ONLY operates in half-duplex. | | | | |
| SuggestedRemedy | | | | |
| Change from "Clause 168 in half-duplex operations" to "Clause 168". | | | | |
| Proposed Response | | Response Status W | | |
| PROPOSED ACCEPT IN PRINCIPLE. | | | | |
| Consider with comment 213. | | | | |
| OBE by new wording | | | | |

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|--|--------------|-------------------|----|-----------|
| Cl 148 | SC 148.4.4.6 | P42 | L4 | # 265 |
| Baggett, Tim | | Microchip | | |
| Comment Type | E | Comment Status | D | Editorial |
| Cl 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. | | | | |
| Proposed Response | | Response Status W | | |
| PROPOSED 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.. | | | | |

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|--|--------------|---------------------|-----|-----------|
| Cl 148 | SC 148.4.4.6 | P42 | L26 | # 166 |
| Jones, Chad | | Cisco Systems, Inc. | | |
| Comment Type | E | Comment Status | D | 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") | | | | |
| Proposed Response | | Response Status W | | |
| PROPOSED 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 D 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.
Proposed Response Response Status W
PROPOSED ACCEPT.

CI 148 SC 148.4.7.1 P47 L8 # 264
Baggett, Tim Microchip
Comment Type E Comment Status D 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..."
Proposed Response Response Status W
PROPOSED 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 D 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"
Proposed Response Response Status W
PROPOSED ACCEPT.

CI 148 SC 148.4.7.5 P50 L29 # 263
Baggett, Tim Microchip
Comment Type E Comment Status D 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"
Proposed Response Response Status W
PROPOSED ACCEPT.

CI 168 SC 168 P54 L7 # 214
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type E Comment Status D 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
Proposed Response Response Status W
PROPOSED ACCEPT.

CI 168 SC 168.1.1 P55 L16 # 253
Brandt, David Rockwell Automation
Comment Type T Comment Status D 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.
Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
Group to discuss. This will involve draft reorganization and misalignment with clause 147 - without necessarily adding any functionality.

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CI 168 SC 168.2 P56 L3 # 215
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type E Comment Status D Editors Notes
Note has been answered with text and is no longer needed
SuggestedRemedy
Delete Editor's note at 168.2
Proposed Response Response Status W
PROPOSED ACCEPT.

CI 168 SC 168.2 P56 L3 # 165
Maguire, Valerie Copperopolis; aff'l w/ CME Consulting
Comment Type E Comment Status D Editors Notes
A short description of the operation of 10BASE-T1M is provided.
SuggestedRemedy
Delete Editor's note on line 3-7.
Proposed Response Response Status W
PROPOSED ACCEPT.

CI 168 SC 168.2 P56 L9 # 266
Baggett, Tim Microchip
Comment Type E Comment Status D 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."
Proposed Response Response Status W
PROPOSED 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."

CI 168 SC 168.2 P56 L12 # 254
Brandt, David Rockwell Automation
Comment Type E Comment Status D EZ
Units should have space.
SuggestedRemedy
Change "50m" to "50 m".
Proposed Response Response Status W
PROPOSED ACCEPT.
(note to editor - nonbreaking space)

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

Cl 168 SC 168.4.2.7 P65 L4 # 168

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED 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 D 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

Proposed Response Response Status W

PROPOSED 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 D 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."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

Cl 168 SC 168.5 P73 L35 # 217

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

Comment Type E Comment Status D Editors Notes

Note has served its purpose for several cycles

SuggestedRemedy

Delete editor's note at 168.5 below Figure 168-10.

Proposed Response Response Status W

PROPOSED 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: Clause, Subclause, page, line

Cl 168

SC 168.5

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6/10/2024 3:49:53 PM

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CI 168 SC 168.5 P73 L35 # 170

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED 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 D Management

TBDs are not needed, name of the register is 10BASE1M/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)

Proposed Response Response Status W

PROPOSED 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 D 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

Proposed Response Response Status W

PROPOSED 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 D EZ

Figure 168-13, 180 is misplaced from the BALUN.

SuggestedRemedy

Move "180" to just below "0".

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 168 SC 168.6.3 P77 L32 # 256

Brandt, David Rockwell Automation

Comment Type T Comment Status D 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)"

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 168 SC 168.6.4 P77 L45 # 257

Brandt, David Rockwell Automation

Comment Type T Comment Status D 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."

Proposed Response Response Status W

PROPOSED 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)

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

CI 168 SC 168.8 P81 L21 # 220
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

CI 168 SC 168.8 P81 L28 # 219
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type E Comment Status D 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)

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 168 SC 168.8 P82 L10 # 222
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

CI 168 SC 168.8 P82 L21 # 221
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
Comment Type E Comment Status D 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."

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

CI 168 SC 168.8.1 P82 L33 # 270
Schreiner, Stephan Rosenberger Hochfrequenztechnik
Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED 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"

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CI 168 SC 168.8.1 P82 L39 # 272

Brandt, David Rockwell Automation

Comment Type T Comment Status D 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))..."

Proposed Response Response Status W

PROPOSED ACCEPT.

LATE comment - but the commenter is correct - this is an editorial transcription error.

Recommend TF to consider this.

CI 168 SC 168.8.2 P83 L3 # 172

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 168 SC 168.8.2 P83 L3 # 223

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

Comment Type T Comment Status D Editors Note

147.7.2 is no longer starting point - delete note

SuggestedRemedy

Delete editor's note at P83 L2-6

Proposed Response Response Status W

PROPOSED 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 D 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)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

CI 168 SC 168.8.4 P83 L17 # 225

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

Comment Type T Comment Status D Mixing Segment

No contributions have offered a need or a strawman coupling attenuation requirement.

SuggestedRemedy

Delete section 168.8.4 including editor's note.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

CI 168 SC 168.9 P83 L52 # 226

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

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Editor's comment - TFTD

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CI 168 SC 168.9 P84 L30 # 258

Brandt, David Rockwell Automation

Comment Type E Comment Status D 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."

Proposed Response Response Status W

PROPOSED 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..."

CI 168 SC 168.9.2 P85 L19 # 243

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

Comment Type T Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
TFTD - Editor's Comment - Big Ticket Item from last meeting. Consider with LATE comment 275 (same issue)

CI 168 SC 168.9.2 P85 L23 # 259

Brandt, David Rockwell Automation

Comment Type E Comment Status D EZ

Missing word.

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 168 SC 168.9.4 P85 L41 # 173

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 168 SC 168.10.2.1 P86 L48 # 174

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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".

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl **168** SC **168.12.4.6** P**94** L**16** # **244**
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type **E** Comment Status **D** Editorial
 No need for TBD in Value/Comment since the section is referenced.
 SuggestedRemedy
 Delete TBD from Value/Comment.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **168** SC **168.12.4.7** P**94** L**27** # **271**
 Schreiner, Stephan Rosenberger Hochfrequenztechnik
 Comment Type **T** Comment Status **D** EZ
 Item TC11 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 TC13
 SuggestedRemedy
 Remove TC11 and TC13 from table
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl **168.8** SC **168.8.1** P**82** L**39** # **273**
 DiMinico, Christopher PHY-SI/SenTekse/MC Communications
 Comment Type **TR** Comment Status **D** LATE
 Equation 168-3 [27] should be [-27]
 SuggestedRemedy
 change [27] to [-27]
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.
 OBE by comment 272.
 LATE comment - but the commenter is correct - this is an editorial transcription error.
 Recommend TF to consider this.

Cl **168.9** SC **168.9.1.1** P**85** L**9** # **274**
 DiMinico, Christopher PHY-SI/SenTekse/MC Communications
 Comment Type **TR** Comment Status **D** LATE
 Error in equation 168-5
 SuggestedRemedy
 Change equation 168-5.

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

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

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

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

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

Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 This is a LATE comment; however, it fixes an error in an important equation that was found late. Recommend TF to consider it.
 Change Equation 168-5 to read:

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

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

$$IL \leq -0.454 + (0.22/f) + 0.63 \cdot \text{SQRT}(f) - 0.18 \cdot f + 0.004 \cdot f^2 \quad 10 \leq f \leq 24$$
 where f is the frequency in MHz.
 TF to consider presentation (Editor has not reviewed) on requirements between 0.3 MHz and 1 MHz; proposed response is based on simplification of email discussion with submitter, and attempts to simplify the requirement rather than model a circuit.

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CI **168.9** SC **168.9.2** P**85** L**27** # **275**
 DiMinico, Christopher PHY-SI/SenTekse/MC Communications
 Comment Type **TR** Comment Status **D** 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
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 TFTD - Big Ticket Item from last meeting
 Consider with comment 243
 Editor recommends Task Force to consider this LATE comment as it opens no new issues.

CI **169** SC **169.1** P**96** L**9** # **175**
 Jones, Chad Cisco Systems, Inc.
 Comment Type **E** Comment Status **D** 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.
 Proposed Response Response Status **W**
 PROPOSED 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."

CI **169** SC **169.1.2** P**96** L**35** # **227**
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type **E** Comment Status **D** 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)
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

CI **169** SC **169.1.2** P**96** L**41** # **176**
 Jones, Chad Cisco Systems, Inc.
 Comment Type **E** Comment Status **D** 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.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 (correct case in response)
 Change "supported single pair" to "supported multidrop single pair"

CI **169** SC **169.1.2** P**96** L**43** # **177**
 Jones, Chad Cisco Systems, Inc.
 Comment Type **E** Comment Status **D** 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).
 Proposed Response Response Status **W**
 PROPOSED 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)"

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CI 169 SC 169.1.2 P96 L43 # 228
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status D 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."
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Editor's comment - TFTD

CI 169 SC 169.1.2 P97 L19 # 229
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type T Comment Status D 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."
 Proposed Response Response Status W
 PROPOSED 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."

CI 169 SC 169.3 P98 L4 # 195
 Jones, Chad Cisco Systems, Inc.
 Comment Type T Comment Status D 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"
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 169 SC 169.3 P98 L9 # 197
 Jones, Chad Cisco Systems, Inc.
 Comment Type T Comment Status D 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 169 SC 169.3 P98 L19 # 230
 Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSe
 Comment Type E Comment Status D 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.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 169 SC 169.3 P98 L22 # 199
 Jones, Chad Cisco Systems, Inc.
 Comment Type T Comment Status D 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.
 Proposed Response Response Status W
 PROPOSED REJECT.
 TFTD - This is going to need specific guidance. Recommend that we realign nomenclature after all power types are stable.

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Cl 169 **SC 169.3** **P98** **L26** # 198

Jones, Chad Cisco Systems, Inc.

Comment Type T **Comment Status D** *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

Proposed Response **Response Status W**
PROPOSED ACCEPT IN PRINCIPLE.
Awaiting presentation

Cl 169 **SC 169.3** **P98** **L28** # 196

Jones, Chad Cisco Systems, Inc.

Comment Type T **Comment Status D** *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)

Proposed Response **Response Status W**
PROPOSED ACCEPT.

Cl 169 **SC 169.4** **P98** **L42** # 179

Jones, Chad Cisco Systems, Inc.

Comment Type E **Comment Status D** *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..."

Proposed Response **Response Status W**
PROPOSED ACCEPT IN PRINCIPLE.
Add "to" in item e): "To sense, react to, and recover from..."

Cl 169 **SC 169.4.3** **P99** **L18** # 180

Jones, Chad Cisco Systems, Inc.

Comment Type E **Comment Status D** *EZ*

PI should be MPI.

SuggestedRemedy
replace PI with MPI.

Proposed Response **Response Status W**
PROPOSED ACCEPT.

Cl 169 **SC 169.4.3** **P99** **L30** # 246

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

Comment Type T **Comment Status D** *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."

Proposed Response **Response Status W**
PROPOSED ACCEPT IN PRINCIPLE.
TFTD - Editor's comment

Cl 169 **SC 169.4.3** **P99** **L31** # 231

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

Comment Type E **Comment Status D** *EZ*

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.

Proposed Response **Response Status W**
PROPOSED ACCEPT.

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Cl 169 SC 169.4.4.5 P103 L52 # 181
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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)
Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
Per convention, editor to ensure all entry blocks are circles, pentagons are inverted (point up), arrowheads go into the pentagons' points

Cl 169 SC 169.4.5 P105 L14 # 182
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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].
Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
(align with TPS/MPS comment)

Cl 169 SC 169.4.6 P105 L33 # 183
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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
Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 169 SC 169.4.6 P105 L34 # 184
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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
Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 169 SC 169.4.6 P105 L36 # 185
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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."
Proposed Response Response Status W
PROPOSED ACCEPT.

Cl 169 SC 169.4.8 P106 L51 # 186
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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)
Proposed Response Response Status W
PROPOSED ACCEPT.

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CI 169 SC 169.4.8 P107 L9 # 200

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change P{MPSE_16U} to P{MPSE},

do not change types (unless comment 199 is accepted)

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

CI 169 SC 169.4.10 P107 L46 # 187

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D EZ

PI should be MPI.

SuggestedRemedy

change PI to MPI

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 169 SC 169.4.11 P107 L53 # 188

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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..."

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.

Proposed Response Response Status W

PROPOSED 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.

CI 169 SC 169.5 P108 L22 # 164

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

Comment Type E Comment Status D EZ

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

SuggestedRemedy

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

Proposed Response Response Status W

PROPOSED ACCEPT.

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 D 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."
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 169 SC 169.5 P108 L22 # 189
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status D 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
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 169 SC 169.5.1 P108 L27 # 201
 Jones, Chad Cisco Systems, Inc.
 Comment Type T Comment Status D 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"
 Proposed Response Response Status W
 PROPOSED REJECT.
 TFTD - 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 D 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)"
 Proposed Response Response Status W
 PROPOSED 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 D EZ
 I believe V_MPD is a variable, not a constant.
 SuggestedRemedy
 Delete V_MPD and definition at P109 L47-48
 Proposed Response Response Status W
 PROPOSED ACCEPT.

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 D TCI
 Reference point for power is MPI, not TC3.
 SuggestedRemedy
 Change TC3 to MPI (5 instances) P110 L35-41)
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 TFTD - Editor's comment

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

Cl 169 **SC 169.5.3.3** **P110** **L42** # 234

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

Comment Type **T** **Comment Status** **D** **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)...)

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 169 **SC 169.5.3.3** **P110** **L51** # 241

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

Comment Type **E** **Comment Status** **D** **Editorial**

MPD TC should be MPD MPI.

SuggestedRemedy

Change MPD TC to MPD MPI.

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 169 **SC 169.5.3.6** **P113** **L51** # 191

Jones, Chad Cisco Systems, Inc.

Comment Type **E** **Comment Status** **D** **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)

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 169 **SC 169.5.3.6** **P115** **L17** # 235

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

Comment Type **E** **Comment Status** **D** **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)

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 169 **SC 169.5.3.6** **P115** **L17** # 236

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

Comment Type **E** **Comment Status** **D** **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)

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

Cl 169 **SC 169.5.3.6** **P115** **L36** # 237

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

Comment Type **T** **Comment Status** **D** **Power - General**

V_reset is not defined, probably should be V_Reset_th

SuggestedRemedy

Change V_reset to V_Reset_th

Proposed Response **Response Status** **W**

PROPOSED ACCEPT.

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

Cl 169 SC 169.5.4 P116 L1 # 192

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D 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.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 169 SC 169.5.5 P117 L10 # 202

Jones, Chad Cisco Systems, Inc.

Comment Type T Comment Status D 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"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.
See resolution of comment 199 - do not change types if rejected, but align other parameters per other comments.

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"

Cl 169 SC 169.5.5 P117 L25 # 238

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

Comment Type E Comment Status D 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

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 169 SC 169.5.5 P117 L36 # 242

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

Comment Type E Comment Status D Power - General

MPD TC3 capacitance should be MPD MPI capacitance

SuggestedRemedy

Change MPD TC3 to MPD MPI

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 169 SC 169.5.5 P117 L39 # 239

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

Comment Type E Comment Status D 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)

Proposed Response Response Status W

PROPOSED ACCEPT.

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

CI 169 SC 169.5.5.1 P117 L49 # 193
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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"
Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
(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 W
PROPOSED ACCEPT.

CI 169 SC 169.5.5.3 P118 L24 # 194
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D 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)

Proposed Response Response Status W
PROPOSED 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 D 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
Proposed Response Response Status W
PROPOSED ACCEPT IN PRINCIPLE.
TFTD.
Recommend accept with minor edits.
On 169.6.1.1.2, 2nd paragraph, where it says:

The shape of the impulses is 10/700 (10 µs virtual front time, 700 µs virtual time to half value), as defined in ITU-T Recommendation K.44." class

It looks like there is an extra " and the word class is hanging.

Delete " class from the response to read:

The shape of the impulses is 10/700 (10 µs virtual front time, 700 µs virtual time to half value), as defined in ITU-T Recommendation K.44.

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