

## 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, OnSem

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, OnSem

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, OnSem

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, OnSem

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.

CI 1 SC 1.4.405a P21 L19 # 207

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

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.

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

Cl 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.

Cl 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)."

Cl 30 SC 30.16.1.1.14 P26 L33 # 208

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

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.

Cl 45 SC 45.2.1.214.2 P29 L35 # 209

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

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.

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)

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

Cl 79	SC 79.3.9.3	P36	L19	# 210
-------	-------------	-----	-----	-------

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

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 168	SC 168.4.4	P36	L36	# 216
--------	------------	-----	-----	-------

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

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: (<UL> indicates underline start or stop)

"When the <UL>10BASE-T1M/S, <UL>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 <UL>10BASE-T1M/S, <UL>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. <UL>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.<UL> 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: (<UL> indicates underline start or stop)

"When the <UL>10BASE-T1M / 10BASE-T1S, <UL>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 <UL>10BASE-T1M / 10BASE-T1S, <UL>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

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

path. The speed of the loopback is selected by the PCS control 1 (register 3.0) defined in 45.2.3.1. <UL>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.<UL> 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."

<b>Cl 79</b>	<b>SC 79.3.9.2</b>	<b>P36</b>	<b>L45</b>	<b># 211</b>
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem				
<b>Comment Type</b>	<b>T</b>	<b>Comment Status</b>	<b>A</b>	<b>Editorial</b>
"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.				
<b>SuggestedRemedy</b>				
Insert "station" after LAN on line 45. Consider whether the word "local" (is needed on lines 41 and 45				
<b>Response</b>	<b>Response Status C</b>			
ACCEPT.				

<b>Cl 79</b>	<b>SC 79.3.9.3</b>	<b>P36</b>	<b>L49</b>	<b># 212</b>
Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, Marvell, OnSem				
<b>Comment Type</b>	<b>T</b>	<b>Comment Status</b>	<b>D</b>	<b>LLDP</b>
"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...				
<b>SuggestedRemedy</b>				
Change "should contain no more than one" to "shall contain no more than one"				
<b>Proposed Response</b>	<b>Response Status Z</b>			
PROPOSED REJECT.				

This comment was WITHDRAWN by the commenter.

<b>Cl 79</b>	<b>SC 79.3.9.3</b>	<b>P37</b>	<b>L8</b>	<b># 249</b>
Brandt, David Rockwell Automation				
<b>Comment Type</b>	<b>E</b>	<b>Comment Status</b>	<b>A</b>	<b>DPLCA</b>
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 30.16.1.1.2 PLCA status)

Change "Notes" for Bit 1 to: "30.16.1.1.2"

<b>Cl 79</b>	<b>SC 79.3.9.3</b>	<b>P37</b>	<b>L10</b>	<b># 269</b>
Schreiner, Stephan Rosenberger Hochfrequenztechnik				
<b>Comment Type</b>	<b>E</b>	<b>Comment Status</b>	<b>A</b>	<b>DPLCA</b>
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.

<b>Cl 79</b>	<b>SC 79.3.9.3</b>	<b>P37</b>	<b>L11</b>	<b># 247</b>
Brandt, David Rockwell Automation				
<b>Comment Type</b>	<b>E</b>	<b>Comment Status</b>	<b>A</b>	<b>DPLCA</b>
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"

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

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, OnSem

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</UL>, as well as 10BASE-T1S and 10BASE-T1M (Clause 147 and Clause 168) in half duplex multidrop operation,</UL> and for other PHY types in full-duplex mode."

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.

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

---

Cl 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

---

Cl 148	SC 148.4.4.6	P42	L4	# 265
--------	--------------	-----	----	-------

---

Baggett, Tim Microchip

Comment Type	E	Comment Status	R	Editorial
--------------	---	----------------	---	-----------

Cl 1.2: Qualifiers described by short phrases are enclosed in parentheses. The Term "!dp1ca\_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..

---

Cl 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.

---

Cl 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.

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

Cl 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..."

Cl 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.

Cl 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.

Cl 168 SC 168 P54 L7 # 214

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

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)

Cl 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.

Cl 168 SC 168.2 P56 L3 # 215

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

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.

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

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)

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...



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

Cl 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.

Cl 168 SC 168.5 P73 L35 # 217

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

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.

Cl 168 SC 168.6.2 P76 L9 # 218

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

Comment Type E Comment Status A 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)

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)

Cl 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.

Cl 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.

Cl 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.

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

Cl 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)

Cl 168 SC 168.8 P81 L18 # 221

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

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."

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

Cl 168 SC 168.8 P81 L21 # 220

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

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, OnSem

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, OnSem

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 168.8 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.

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

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.

Cl 168 SC 168.8.2 P83 L3 # 223

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

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.

Cl 168 SC 168.8.3 P83 L9 # 224

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

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 Equatioin 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)

Cl 168 SC 168.8.4 P83 L17 # 225

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

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.

Cl 168 SC 168.9 P83 L52 # 226

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

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.

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

Cl 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..."

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  $\leq 0.16$  dB  $1 \leq f < 10$

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

IL  $\leq 0.3$   $\leq f < 1$  (TBD)

$24 < f \leq 40$  (TBD)

f=MHz

See diminico\_SPMD\_01\_0624.pdf for TBD

Response Response Status C

ACCEPT IN PRINCIPLE.

Change Equation 168-5 to read:

IL  $\leq 0.6$  dB  $0.3 \leq f < 1$

IL  $\leq 0.16$  dB  $1 \leq f < 10$

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

IL  $\leq 0.145 \cdot f - 2.86$   $24 \leq f \leq 40$

where f is the frequency in MHz.

Cl 168 SC 168.9.2 P85 L19 # 243

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

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.

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

CI 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.

CI 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](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](https://www.ieee802.org/3/da/public/0524/diminico_SPMD_01_0524.pdf)

and  
 Remove editor's note P85 L17-21.

CI 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.

CI 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.

CI 168 SC 168.12.4.6 P94 L16 # 244

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

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.

CI 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.

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

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."

Cl 169 SC 169.1.2 P96 L35 # 227

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

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.

Cl 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"

Cl 169 SC 169.1.2 P96 L43 # 228

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

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. "

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

Cl 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)"

Cl 169 SC 169.1.2 P97 L19 # 229

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

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."

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, OnSem

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.



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

CI 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.

CI 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"

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: ITCI\_MSPE(min) - MSPE should be MPSE.

#### SuggestedRemedy

Change 941 to 1000 in ITCI\_MSPE(min)  
Change ITCI\_MSPE(min) to ITCI\_MPSE(min)

Response Response Status C

ACCEPT IN PRINCIPLE.  
Change I\_TCI\_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.

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

Cl 169 SC 169.4.3 P99 L30 # 246

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

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."

Cl 169 SC 169.4.3 P99 L31 # 231

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

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.

Cl 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

Cl 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)

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

Cl 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."

Cl 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.

Cl 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.

Cl 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.

Cl 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

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

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.

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 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.

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

Cl 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.

Cl 169 SC 169.5.3.2 P109 L37 # 233

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

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.

Cl 169 SC 169.5.3.2 P109 L47 # 232

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

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.

Cl 169 SC 169.5.3.3 P110 L35 # 240

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

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.

Cl 169 SC 169.5.3.3 P110 L42 # 234

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

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.

Cl 169 SC 169.5.3.3 P110 L51 # 241

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

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.

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

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.

CI 169 SC 169.5.3.6 P115 L17 # 235

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

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, OnSem

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, OnSem

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.

## 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 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.

Cl 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.

Cl 169 SC 169.5.5 P117 L25 # 238

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

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.

Cl 169 SC 169.5.5 P117 L36 # 242

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

Comment Type E Comment Status A Power - General EZ

MPD TC3 capacitance should be MPD MPI capacitance

#### SuggestedRemedy

Change MPD TC3 to MPD MPI

Response Response Status C

ACCEPT.

Cl 169 SC 169.5.5 P117 L39 # 239

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

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.

Cl 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"

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

Cl 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.

Cl 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)

Cl 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.

Cl 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