Cl **30** *SC* **30.17** *P* **27** *L* **5** # 58

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

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

remove editor's note and section if there are no management objects added.

SuggestedRemedy

see comment.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
Revisit at conclusion of comment resolution

Cl **168** *SC* **168.1** *P* **55** *L* **23** # 101

Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type **T** *Comment Status* **D** *Mixing Segment*

"…mixing segment is compliant with 147.8 AND 168.8. " The definition of the mixing segment is very different. The measurement points, the values and the topology with the new TCI are different. For my point of view, this "AND" constraint seems not to be feasible.

SuggestedRemedy

Because T1M and T1S have the same PMA and PCS, I would assume that a T1M is interoperable with a T1S on a 147.8 link segment. Thus remove "and 168.8"

Proposed Response *Response Status* **W**

PROPOSED REJECT.
DEFER
The proposed remedy only works if a 147.8 mixing segment is a strict subset of 168.8 mixing segments (that is, all 147.8 mixing segments comply with 168.8). If that is true, then the AND works. However, that has yet to be shown, and is probably not true. As the commenter points out, the definitions are different.

Cl **168** *SC* **168.6.4.4** *P* **80** *L* **21** # 79

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

Comment Type **T** *Comment Status* **D** *Editorial*

Not sure why we don't show numbers instead of (10/4.5) and (10/6.5)? Is this much precision required?

SuggestedRemedy

Replace "(10/4.5)" with "2.2" (no parens) and "(10/6.5)" with "1.5" (no parens)

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
The ratios make it clear that the ranges fit without steps or gaps. Truncating to 1 decimal place makes for discontinuous masks, but would be simpler. Task force to discuss and determine which is preferable.

Cl **168** *SC* **168.6.5.2** *P* **81** *L* **15** # 61

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *PMA Electrical*

The alien crosstalk rejection test needs to be inserted. The figure needs to show and be adjusted for the terminations on the mixing segment, and the noise level shouldn't change, because the alien crosstalk coupling is the same, but reference to the receive DUT's TCI and impedances need to be cleaned up.

SuggestedRemedy

Delete Editor's note at P81 L15-20, change figure 168-16 and text as per attached: zimmerman_alienxtalk.pdf. At the end of the first sentence change "present at the TCI" to "present at the receive DUT's TCI".

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
TFTD

Cl **168** *SC* **168.9.3** *P* **86** *L* **37** # 96

Paul, Michael
Analog Devices

Comment Type **T** *Comment Status* **D** *General Safety*

"The DTE shall withstand without damage the application of any voltages between 0 V dc and 60 V dc with the source current limited to 2000 mA" ... 2000mA may not be a good idea for DTE. DTE shouldnt be able to pass the requirement by shunting 2A with an S1B diode at the TCI. 2000mA exception is only for MPSEs

SuggestedRemedy

Remove the text "with source current limited to 2000mA"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
DEFER
There may be implications with regards to clause 147 devices.

Cl **169** *SC* **169.1.2** *P* **97** *L* **40** # 3

Jones, Chad
Cisco Systems, Inc.

Comment Type **T** *Comment Status* **D** *Power*

"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. The interface of the power entity to the medium is the MPI, with connection points MP1 and MP2 to the power trunk. When the power is provided over the same pairs as data, the MPI and the TCI are the same connection to the medium and the MPI must also meet the requirements for the TCI needed for the PHY (see, e.g., 168.9). However, when data and power are carried on separate conductors, the MPI may be separate from the TCI and the related TCI requirements do not apply."
Not sure why we are specifying operation when power is on a separate pair. This might be lingering from earlier work. The overview states: "These entities allow devices to supply/draw power using the same cabling that is used for data transmission. MPoE provides a multidrop single pair Ethernet Physical Layer device with an interface to both the power and data." as this is SPE, that single cable should be just two conductors. to me, anything beyond two conductors in therefore beyond our scope.

SuggestedRemedy

Delete the text that talks about dedicated power pairs.
change to:
"An MPSE or MPD may or may not be co-located with a DTE, and the power is provided over the same pairs as the data. The interface of the power entity to the medium is the MPI, with connection points MP1 and MP2 to the power trunk. The MPI and the TCI are the same connection to the medium and the MPI must also meet the requirements for the TCI needed for the PHY (see, e.g., 168.9)."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
This text was changed based on comments accepted last cycle to reflect discussions that the power protocols in clause 169 may be used on conductors not carrying data. Nowhere in clause 169 is data required for use. The overview text did not get modified with similar changes (and isn't the scope of the project - which includes power 'associated' with multidrop, not necessarily same-pair), because it properly reflects that clause 169 ALLOWS (but does not require) power to be on the same pairs as the data. TF needs to discuss whether to specifically limit to same-pair (implementing the change suggested or similar), or, whether to add further clarification to the overview text reflecting the power may be on separate pairs.

Cl **169** *SC* **169.4.2** *P* **100** *L* **4** # 64

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **E** *Comment Status* **D** *MPSE*

"is required" isn't proper language. Requirements need to be identified by "shall"; however, the requirement isn't clear -and seems just to be a statement that the polarity is defined by the MPSE - that an MPSE doesn't switch polarities…

SuggestedRemedy

Change "An MPSE is required to operate in a single polarity." to "An MPSE provides a single polarity."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
Change "An MPSE is required to operate in a single polarity." to "An MPSE shall conform to the pinout of Table 169-2 and provide a single polarity."

Cl **169** *SC* **169.4.3** *P* **100** *L* **31** # 48

Jones, Peter Cisco

Comment Type **E** *Comment Status* **D** *EZ -Pulled*

Redundant text in the following:
"compliance to voltage specifications is met at MP1 and MP2, and both MPs shall meet the specification."

SuggestedRemedy

remove ", and both MPs shall meet the specification"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.4.3** *P* **100** *L* **33** # 49

Jones, Peter Cisco

Comment Type **E** *Comment Status* **D** *EZ - Pulled*

Language:
"That is, if the specification calls for the voltage to exceed a value, then the minimum of the voltages at MP1 and MP2 exceeds the threshold, whereas if the specification calls for the voltage to be below a value, then the maximum of the two MP voltages is below the value"

SuggestedRemedy

Change to:
"If the specification calls for the voltage to be above a value, or below a value, both MP1 and MP2 must meet the criteria."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.4.4.2** *P* **102** *L* **27** # 17

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *State Diagrams*

power_stable has a value for "The MPSE has begun steady-state operation and is ready to enter the POWER_ON state".
What does this report when the MPSE is in the POWER-ON state?

SuggestedRemedy

Review values and definitions. Do we need changes or a new value here?

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD
Looking at the state diagram, power_stable shows up as a condition that determines whether you exit INRUSH properly or exit inrush improperly, and is only checked on the transition (not in either the INRUSH or POWER-ON state), when the mpse_inrush_timer expires. This makes the state of this variable moot in the POWER-ON state, but also raises the question of whether it should be replaced by a new voltage threshold.

Cl **169** *SC* **169.4.4.3** *P* **102** *L* **35** # 18

Jones, Peter Cisco

Comment Type **E** *Comment Status* **D** *State Diagrams*

The first para of " 169.4.4.3 Timers" includes modifications to the behaviors described in 14.2.3.2. Other clause have "Conventions in this clause " subclauses for this.

SuggestedRemedy

Move this, and similar, text to new sub-clause "169.1.2 Conventions in this clause " similar to 168.1.2.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Commenters proposed response with different numbering because 169.1.2 is taken, and with more content, because the bigger problem is that clause 169 uses the "IF-THEN-ELSE" construct which is another addition to the conventions of clause 21…

Insert new clause 169.1.3 Conventions in this clause, copying in the text from 168.1.2, 168.1.2.1, 168.1.2.2, and 168.1.2.3

Cl **169** *SC* **169.4.4.3** *P* **102** *L* **43** # 19

Jones, Peter Cisco

Comment Type **E** *Comment Status* **D** *State Diagrams*

Language - "A timer used to delay measurement of the mark current after applying a high mark voltage". Is this applying or detecting?
Same question for 169.4.4.3 mark_timer and measure_timer.

SuggestedRemedy

Review definition and update if appropriate (or is it just me?)

Proposed Response *Response Status* **W**

PROPOSED REJECT.
Language is correct. It delays measurement until after applying the voltage. See Fig 169-3:

HIGH_MARK state and DISCOVERY_HIGH_MARK state.
HIGH_MARK does "present_mark" (which applies the voltage, Mark_timer keeps the MPSE in that state, holding off the transition to DISCOVERY_HIGH_MARK which then executes the do_discovery_high function to measure the current.
Same thing for measure_timer, DISCOVERY_LOW_PRESENT, present_low, DISCOVERY_LOW, and do_discovery_low…

Cl **169** *SC* **169.4.4.4** *P* **103** *L* **10** # 20

Jones, Peter Cisco

Comment Type **E** *Comment Status* **D** *State Diagrams*

The first para of " 169.4.4.4 Functions" includes generic behaviours in this clause. Other clause have "Conventions in this clause " subclauses for this.

SuggestedRemedy

Move this, and similar, text to new sub-clause "169.1.2 Conventions in this clause " similar to 168.1.2.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
This particular nomenclature is best left by the functions for clarity. It appears only one other place in IEEE Std 802.3-2022 - in clause 145 - in exactly the same way.

Cl **169** *SC* **169.4.4.5** *P* **105** *L* **9** # 57

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *State Diagrams*

It seems reasonable that a discover_fault event should not go straight into IDLE, but rather do the full MPSE reset and backoff entering the backoff state, just like other faults such as an open_circuit. This then goes to IDLE after resetting the MPSE state and a short wait.

SuggestedRemedy

Move open-ended entry point with condition "discover_fault * mpse_enable" from entering IDLE to entering BACKOFF (similar to entry point "A").

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.4.4.5** *P* **105** *L* **10** # 98

Paul, Michael Analog Devices

Comment Type **T** *Comment Status* **D** *State Diagrams*

A discover_fault condition leads to IDLE, which then reenters HIGH_MARK with 0 wait. Discover_fault can result in an infinitel loop

SuggestedRemedy

discover_fault and mpse_enable should enter the backoff state, or backoff state should always follow IDLE

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Consider with Comment 57
Move open-ended entry point with condition "discover_fault * mpse_enable" from entering IDLE to entering BACKOFF (similar to entry point "A").

Cl **169** *SC* **169.4.4.5** *P* **106** *L* **43** # 89

Law, David HPE

Comment Type **T** *Comment Status* **D** *State Diagrams*

The transition condition from the POWER_ON to the ERROR_DELAY state in Figure 169–3 'Top level MPSE state diagram, part a' includes the term '... + !power_available'. The variable 'power_available' is, however, not defined in subclause 169.4.4.2 'Variables'.

SuggestedRemedy

Suggest that the following variable definition is added to subclause 169.4.4.2:

power_available
Variable that is set in an implementation-dependent manner when the PSE is no longer capable of sourcing sufficient power to support the attached MPD load.
FALSE: PSE is no longer capable of sourcing power to the MPD load.
TRUE: PSE is capable of continuing to source power to the MPD load.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
(commenters suggestion with PSE changed to MPSE)
Add the following variable definition to 169.4.4.2:
the following variable definition is added to subclause 169.4.4.2:

power_available
Variable that is set in an implementation-dependent manner when the MPSE is no longer capable of sourcing sufficient power to support the attached MPD load.
FALSE: MPSE is no longer capable of sourcing power to the MPD load.
TRUE: MPSE is capable of continuing to source power to the MPD load.

Cl **169** *SC* **169.4.4.5** *P* **106** *L* **44** # 99

Paul, Michael Analog Devices

Comment Type **T** *Comment Status* **D** *State Diagrams*

ttpsdo_timer_done exit from POWER_ON returns to IDLE, which allows a port to immediately re-enter discovery

SuggestedRemedy

This arc should return on arc A instead

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.4.6** *P* **107** *L* **26** # 27

Jones, Peter Cisco

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

I don't really understand the usage of "mark event" and "mark event voltage" here. It first shows up in "169.4.6 Discovering the presence of an MPD before powering".

SuggestedRemedy

Add an explanation of what a "mark event" and/or "mark event voltage" are.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER - See Michael Paul's presentation

The sentence is redundant: "When the MPSE is presenting a mark event voltage in a HIGH_MARK and DISCOVERY_HIGH_MARK
state, as shown in the state diagram of Figure 169–3 and Figure 169–4, the MPSE supplies VMark voltage to
the TCI subject to the TDiscovery_high timing specification."
"presenting a mark event voltage" means "supplies Vmark voltage"…

Change "When the MPSE is presenting a mark event voltage in a HIGH_MARK and DISCOVERY_HIGH_MARK
state, as shown in the state diagram of Figure 169–3 and Figure 169–4, the MPSE supplies VMark voltage to
the TCI subject to the TDiscovery_high timing specification." to
"When the MPSE is in a HIGH_MARK or DISCOVERY_HIGH_MARK
state, as shown in the state diagram of Figure 169–3 and Figure 169–4, the MPSE supplies VMark voltage to
the TCI subject to the TDiscovery_high timing specification."

Cl **169** *SC* **169.4.6** *P* **107** *L* **52** # 28

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *Editorial*

The sentence "Unless acting as an MPD, an MPSE" doesn't cover what happens if the MPSE is acting as a device that doesn't implement MPoE (not an MPSE or MPD).
Do we need to talk about these devices?

SuggestedRemedy

Discuss, do we need to add additional text regarding nodes that don't implent MPoE? For example, do they affect discovery?

Proposed Response *Response Status* **W**

PROPOSED REJECT.
DEFER
No change to the draft - a device that doesn't implement MPoE can't be an MPSE or MPD… It wouldn't be subject to this clause.

Cl **169** *SC* **169.4.6** *P* **108** *L* **41** # 97

Paul, Michael Analog Devices

Comment Type **T** *Comment Status* **D** *State Diagrams*

Reject discovery - open circuit max is set to 200uA. MPD Mark event current min (item 4 in table 169-7) is set to 100uA min.

SuggestedRemedy

Change Reject discovery - open circuit max to 75uA so it does not overlap MPD mark current range

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.4.8** *P* **109** *L* **13** # 5

Jones, Chad Cisco Systems, Inc.

Comment Type **T** *Comment Status* **D** *TBDs*

TBDs in the output slew rate entry for Table 169-5. If we want to move to WG ballot, we need numbers here. I'm hoping we get a presentation or comment with reasons for replacing the TBDs with numbers, but this comment is here in case we don't. I'd ask the chair to charter an ad hoc to derive numbers to put in during this meeting.

SuggestedRemedy

If there is a comment to replace the TBDs with numbers, happy to withdraw this comment. If not, please charter an ad hoc to bring numbers back to the group to replace the TBDs.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Big Ticket Item - Technical Completeness

Cl **169** *SC* **169.4.11.1** *P* **110** *L* **21** # 66

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *State Diagrams*

"The MPSE shall not remove power from the port …" this prohibits the MPSE removing power for ANY reason if there is current above the threshold. This isn't what we mean. We WANT an MPSE to remove power if there is a fault, etc.

SuggestedRemedy

Change "The MPSE shall not remove power from the port when IMPSE is greater than or equal to IHold max continuously for at least TTPS every TTPS + TTPSDO, as defined in Table 169–5. " to "The MPSE shall not consider TPS absent, and should not remove power when IMPSE is greater than or equal to IHold max continuously for at least TTPS every TTPS + TTPSDO, as defined in Table 169–5, except as defined for entry to the ERROR_DELAY state in Figure 169-4."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD
Consider with comment 83.
Commenters resolution may not be best wording… The functionality to remove power is described in the state diagram…

Cl **169** *SC* **169.4.11.1** *P* **110** *L* **21** # 83

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

Comment Type **E** *Comment Status* **D** *State Diagrams*

This should not be a "shall" statement.

SuggestedRemedy

Replace, "The MPSE shall not remove power…" with "The MPSE does not remove power…"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Consider with comment 66. It isn't clear exactly what we want here, but this shouldn't be a shall statement. However, there are instances where the MPSE could remove power…

Cl **169** *SC* **169.5.2** *P* **110** *L* **51** # 32

Jones, Peter Cisco

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

Simplify language.

SuggestedRemedy

Change "Current at an MPD MPI is defined as positive when current flows into the higher voltage pin of the MP1 or MP2 connection and flows out of the lower voltage pin of the same MP1 or MP2 connection, respectively"
to "Current at an MPD MPI is defined as positive when current flows into the higher voltage pin of an MPI connection and flows out of the lower voltage pin of the same connection"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
DEFER

Cl **169** *SC* **169.5.2** *P* **111** *L* **10** # 33

Jones, Peter Cisco

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

Simplify language.

SuggestedRemedy

Change "Current at an MPD MPI is defined as negative when current flows out of the higher voltage pin of the MP1 or MP2 connection and flows into the lower voltage pin of the same MP1 or MP2 connection, respectively"
to "Current at an MPD MPI is defined as negative when current flows out of the higher voltage pin of an MPI connection and flows into the lower voltage pin of the same connection"

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
DEFER

Cl **169** *SC* **169.5.2** *P* **111** *L* **13** # 67

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *Editorial - Pulled*

"Current shall be measured" - is a requirement on the user of the standard, and therefore inappropriate for a shall.

SuggestedRemedy

Change "shall be measured" to "is measured" at line 13

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.5.2** *P* **111** *L* **20** # 6

Jones, Chad Cisco Systems, Inc.

Comment Type **E** *Comment Status* **D** *EZ - Pulled*

Figure 169-5, V(A,B) has a greater sign after it. Not sure if it is a typo or if it suppose to indicate V(A,B) > V(C,D). In either case, something needs done to the drawing. Either we delete the > symbol, or we move V(C,D) closer to make it obvious what we are trying to say. I'd lean towards it being a typo as we don't discuss that V(A,B) has to be greater than V(C,D) [even though logically it should be].

SuggestedRemedy

delete the ">" from the drawing.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.5.3.2** *P* **112** *L* **4** # 55

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *State Diagrams*

I believe there is no need for a separate threshold after comparing V_Mark threshold operation to Figure 145-27 in PoE, which has similar function, there is no hysteresis in the state diagram and the PoE diagram also uses only one threshold so there is no need to add VMark_th. Any hysteresis can be accomplished by implementers using the allowed variation in VDiscovery_th in Table 169-7.

SuggestedRemedy

Delete editor's note and Vmark_th at P112 Lines 4 through 10 (note and variable).

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD

Cl **169** *SC* **169.5.3.5** *P* **114** *L* **3** # 54

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

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

delete editor's note - remove section if still empty after comment resolution.

SuggestedRemedy

delete editor's note - remove section if still empty after comment resolution.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
Revisit at conclusion of comment resolution

Cl **169** *SC* **169.5.3.6** *P* **115** *L* **9** # 87

Law, David HPE

Comment Type **T** *Comment Status* **D** *State Diagrams*

In the 'Top level MPD state diagram', the 'present_mismatch_indication' variable is set to FALSE in the OFFLINE state; the 'present_mismatch_indicator' variable is set to TRUE in the PON_MISMATCHED_TYPE state; and the 'present_mismatch_indicator' variable is set to FALSE in the PON_NO_POWER state. Neither the 'present_mismatch_indication' variable nor the 'present_mismatch_indicator' variable are defined in subclause 169.5.3.3 'Variables'.

SuggestedRemedy

Use one of the two variable names (either 'present_mismatch_indication' or 'present_mismatch_indicator') throughout the 'Top level MPD state diagram' and add a definition of the variable to subclause 169.5.3.3 'Variables'.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Consider after comment 100 (which could delete present_mismatch_indicator). If the indicator is not deleted:

P117 L24: Change "present_mismatch_indicator" to "present_mismatch_indication" in PON_MISMATCHED_TYPE and PON_NO_POWER states

P113 L1:
Add "present_mismatch_indication' variable to 169.5.3.3 in alphanumeric order (with editorial indents to match section) as follows:
present_mismatch_indication
Controls presenting an indication that an MPD type is mismatched to the MPSE type on the mixing segment
Values:
FALSE: The MPD does not indicate a type mismatch
TRUE: The MPD indicates a type mismatch

Cl **169** *SC* **169.5.3.6** *P* **117** *L* **24** # 100

Paul, Michael Analog Devices

Comment Type **T** *Comment Status* **D** *State Diagrams*

PON_MISMATCHED_TYPE state doesn't need to be a separate state from PON_NO_POWER. Both are states where the MPD has power applied, but the power is not in a useable range

SuggestedRemedy

This page of the state diagram needs to be redrawn and all conditions rechecked. This is too complicated to fix in excel. See presentation paul_da_01_2024_09_04.pdf

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
TFTD - Awaiting presentation.
The difference between PON_MISMATCHED_TYPE is the presentation of a mismatch indicator on the MPD. However, as it is right now this blinks on & off immediately in PON_NO_POWER. Either the "MISMATCHED" state needs to be deleted or the indicator needs to be latched for a period of time.
(this also may effect comment 87)

Cl **169** *SC* **169.5.3.6** *P* **117** *L* **27** # 52

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *State Diagrams*

The exit from PON_LOAD_ON to PON_NO_POWER seems incorrect. It says:
((mpd_type = 1) * (VMPD > Vtype1_th)) + ((mpd_type = 0) * (VMPD < Vtype1_th))
Vtype1_th is greater than the operating range (VPort_MPD) for type 0, so VMPD for a type 0 MPD would ALWAYS be less than Vtype1_th in operation.
Therefore, a type 0 MPD would immediately go to power off. similarly, a type 1 MPD's opertating range is greater than Vtype1_th, and it would also immediately power off.
Then there is the fact that there seems to be no way for an mpd_type = mixed to power off.

I'm thinking this should be going to power off when the MPD is less than the lowest threshold (Vtype0_th), OR, it's appropriate threshold (if type 1), resulting in an undervoltage power off. However, there may be other conditions (such as overvoltage power off) to consider.

SuggestedRemedy

Change exit condition from PON_LOAD_ON to PON_NO_POWER in Figure 169-8 to:
(VMPD < Vtype0_th) + ((mpd_type = 1) * (VMPD < Vtype1_th))

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.

Cl **169** *SC* **169.5.5.2** *P* **120** *L* **8** # 8

Jones, Chad Cisco Systems, Inc.

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

MPDs consume integer units of load, known as “unit loads”.
Repetitive text…

SuggestedRemedy

change to : "MPDs consume integer units of power, known as “unit loads”."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT.
DEFER - consider after fractional unit load comment

Cl **169** *SC* **169.5.5.2** *P* **120** *L* **10** # 105

Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type **T** *Comment Status* **D** *Unit Loads*

For mixed Types, having a difference in the unit load equivalent power may cause confusion.

e.g. A device requires 4W and is a mixed type device it would have 4 unit loads on a type 0 segment and 2 unit loads on a type 1 segment. Thus the device would be described with two unit loads - depending on the type.

SuggestedRemedy

Assign 1W to one unit load.
Type 0 is capable of providing 16 unit loads, type 1 is capable of providing 32 unit loads.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
Group needs to consider possible impacts elsewhere in the draft.

Cl **169** *SC* **169.5.5.2** *P* **120** *L* **10** # 35

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *MPD*

If we want to come back later and define other MPD types that need less power (e.g., 0.25W), do we have a path to that?

SuggestedRemedy

Discuss, consider clarification.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
DEFER
No change to draft proposed.

Cl **169** *SC* **169.6.1.1** *P* **121** *L* **17** # 37

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *General Safety*

In "169.6.1.1 Electrical isolation environments" it defines MPoE environments A,B,C.
I'm concerned that these do not cover all possibilities. What makes buildings special? If I plug two machines together with an external cable what happens then? Are A+C = (!B)?

SuggestedRemedy

Discuss, consider clarification.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
DEFER
Commenter provides insufficient information for a remedy

Cl **169** *SC* **169.7.3** *P* **123** *L* **29** # 40

Jones, Peter Cisco

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

Language/readability, re-order last para in "169.7.3 Installation and maintenance guidelines" .

SuggestedRemedy

Change "Automotive environmental conditions are generally more severe than those found in many commercial and industrial environments. The target automotive, industrial, or commercial environment(s) require careful analysis prior to implementation."
To " The target automotive, industrial, or commercial environment(s) require careful analysis prior to implementation. Automotive environmental conditions are generally more severe than those found in many commercial and industrial environments."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
Are these sentences about "target applications" really necessary or even all that informative? Will a reader know what are the "target" environments in the future?

Cl **169** *SC* **169.7.5** *P* **123** *L* **50** # 13

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *General Safety*

"169.7.5 Telephony voltages" does not include the following text that is in 12.10.2 and 14.7.2.4 . Does it belong in 146, 147, 168, 169?

"NOTE—Wiring errors may impose telephony voltages differentially across XXXX transmitters or receivers. Because the termination resistance likely to be present across a receiver's input is of substantially lower impedance than an off-hook telephone instrument, receivers will generally appear to the telephone system as off-hook telephones. Therefore, full-ring voltages will be applied for only short periods. Transmitters that are coupled using transformers will similarly appear like off-hook telephones (though perhaps a bit more slowly) due to the low resistance of the transformer coil."

SuggestedRemedy

Discuss, add text if appropriate.

Proposed Response *Response Status* **W**

PROPOSED REJECT.
DEFER
however, a receiver for clause 168 (or 147) has high impedance, so it is the editor's recommendation that this does not apply.

Cl **169** *SC* **169.8** *P* **125** *L* **4** # 63

Zimmerman, George CME Consulting/ADI,APLGp,CSCO,MRVL,ONSmi,So

Comment Type **T** *Comment Status* **D** *Editorial*

PICS for clause 169 need to be filled in, per editor's note

SuggestedRemedy

delete editor's note, create PICS from shalls, descriptions, and conditions in D1p4_shalls.xlsx, with editor's license to align with comment resolution.

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
TFTD with editorial license.

Cl **J** *SC* **J.1** *P* **127** *L* **1** # 14

Jones, Peter Cisco

Comment Type **T** *Comment Status* **D** *General Safety*

Update Annex J.1 to include clause 168 and 169. It currently references Clause 33 and Clause 145. It does not reference Clause 104 and it probably should.

SuggestedRemedy

Discuss, add text if appropriate.
Change "NOTE 1—If the MDI is also a Clause 33 or Clause 145 PI then see 33.4.1 or 145.4.1 for specific requirements associated with option c)."
to "NOTE 1— If the MDI is a PI or MPI then see the relevant "Electrical isolation" subclause for specific requirements associated with option c)."

Proposed Response *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
DEFER
Clause 104 does not refer to Annex J.1 so Annex J.1 does not apply. Also, Clause 104 is out of scope for 802.3da.

The NOTE in Annex J isn't the operative text, the operative text is the text in the clause which calls out Annex J. Clauses 33 and 145 call out Annex J.1 with specific conditions. This note is calling attention to that.

This text wouldn't apply to clause 168 as annex J isn't called out.

However, those same conditions are present in 169.6.1.1.1 and 169.6.1.1.2, and so 169.6.1.1.1 (and .2) may be called out, but doesn't need to be. Suggest:
ACCEPT IN PRINCIPLE
Add Annex J to the draft, changing NOTE 1 in J.1 as follows:
Change "NOTE 1—If the MDI is also a Clause 33 or Clause 145 PI then see 33.4.1 or 145.4.1 for specific requirements associated with option c)."
to "NOTE 1— If the MDI is a PI or MPI then see the relevant "Electrical isolation" subclause for specific requirements associated with option c)."