

IEEE P802.3cq D1.1 2-Pair PoE Maintenance 2nd Task Force review comments

Cl 1 SC 1.4.324 P18 L12 # 4
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **D** Definitions
 The definition of MDI in the 2018 published standard doesn't include a reference to clause 145.
SuggestedRemedy
 Change the following text in the referenced clause from: "(optional per IEEE Std 802.3, Clause 33)" to: "(optional per IEEE Std 802.3, Clause 33 and 145)"
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 33 SC 33 P19 L4 # 3
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **D** Editorial
 States that draft is drawn from IEEE Std 802.3-2018. Draft should be drawn upon IEEE Std 802.3 – 2018 plus published amendments. In particular, the one that is relevant is IEEE Std 802.3bt – 2018.
SuggestedRemedy
 Reformulate the note and rest the baseline draft to the current state of the standard.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 33 SC 33.1 P19 L15 # 5
 Thompson, Geoff GraCaSI S.A.
 Comment Type **ER** Comment Status **D** Editorial
 Clause does not sufficiently restrict the scope to the actual scope of the clause, i.e. multi-pair.
SuggestedRemedy
 Change: "...for deployment over balanced twisted-pair cabling."
 To: "...for deployment over multiple pair balanced twisted-pair cabling."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 33 SC 33.1.3 P21 L38 # 6
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **D** Definitions
 Circular reference
SuggestedRemedy
 Change "406" to "308" or (preferably to "link section".
 Proposed Response Response Status **W**
 PROPOSED REJECT.
 This sentence is referring to the PI which is defined in 1.4.406 in the 2018 standard.

Cl 33 SC 33.2.4.7 P35 L1 # 2
 Hajduczenia, Marek Charter Communicatio
 Comment Type **TR** Comment Status **D** Management
 Figure 33–9—PSE state diagram does not contain state ERROR_DELAY_OVER or ERROR_DELAY_SHORT, but instead ERROR_DELAY only. The problem exists in 2018 2015, and 2012 editions of the standard. The state "ERROR_DELAY_OVER" and "ERROR_DELAY_SHORT" were present in 2008 edition but merged thereafter, but the associated text has never been updated accordingly.
 Note that the changes needed are in Clause 30, which is *not* included in the draft right now
SuggestedRemedy
 In 30.9.1.1.9, change:
 "This counter is incremented when the PSE state diagram (Figure 33–9) enters the state ERROR_DELAY_OVER." to:
 "This counter is incremented when the PSE state diagram (Figure 33–9) enters the state ERROR_DELAY due to the ovld_detected variable being TRUE."
 In 30.9.1.1.10, change:
 "This counter is incremented when the PSE state diagram (Figure 33–9) enters the state ERROR_DELAY_SHORT." to:
 "This counter is incremented when the PSE state diagram (Figure 33–9) enters the state ERROR_DELAY due to the short_detected variable being TRUE."
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

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Cl 33 SC 33.2.7.8 P50 L 53 # 7
 Yseboodt, Lennart Signify

Comment Type T Comment Status X

The section on turn off time has this to say:
 "The PSE remains in the IDLE state as long as the average voltage across the PI is V Off."

This makes no sense... if this were true the state diagram would be stuck in IDLE forever, because the voltage is IDLE is required to be less than Voff.

SuggestedRemedy

Delete sentence.

Proposed Response Response Status W

TFTD

should we change it to "...in the range of Voff" or "...in the Voff range". The sentence makes sense as long as it is altered to include 0V to Voff (as opposed to just Voff).

Cl 33 SC 33.2.7.9 P51 L 6 # 8
 Yseboodt, Lennart Signify

Comment Type T Comment Status D PSE Power

"The specification for V Off in Table 33â€11 shall apply to the PI voltage in the IDLE State."

As we discovered in BT, there are more states where this needs to apply.
 Note: impacts legacy requirement.

SuggestedRemedy

Replace by:
 "The specification for V Off in Table 33-11 shall apply to the PI voltage in the BACKOFF, DISABLED, ERROR_DELAY, and IDLE states."

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 33 SC 33.2.8 P51 L 38 # 9
 Yseboodt, Lennart Signify

Comment Type T Comment Status D PSE Power

"A PSE does not initiate power provision to a link if the PSE is unable to provide the maximum power level requested by the PD based on the PD's class."

Statement is incorrect as it would disallow power demoting a Class 4 PD to Class 3. We fixed this in BT and the same text can serve us here.

SuggestedRemedy

Replace by:
 "A PSE does not initiate power provision to the link if the PSE has less than Class 3 power available and the connected PD requests more than the available power."

Proposed Response Response Status W

PROPOSED ACCEPT.

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Cl 33 SC 33.2.9.1.2 P52 L39 # 10
 Yseboodt, Lennart Signify

Comment Type T Comment Status X

There is a discrepancy in the DC MPS specifications, both in Clause 33 and Clause 145. We should keep these consistent.

One one hand:

"The PSE shall not remove power from the port when I Port is greater than or equal to I Hold max continuously for at least T MPS every T MPS + T MPDO , as defined in Table 33-11."

The state diagram on the other hand starts a tmpdo_timer (value: T_MPDO) and removes power unless mr_mps_present=TRUE before the timer is done. That variable only becomes TRUE when the current>lhold continuously for TMPS.

Summary: the text allows the TMPS window to be outside the TMPDO window, whereas the state diagram requires it to be inside the TMPDO window.

Looking at the values for these, if we follow the state diagram, with a minimum value of TMPDO (300ms) and maximum value of TMPS (60ms), a compliant PD will FAIL to remain powered.

SuggestedRemedy

Given that we can't change PD MPS timings, we need to change the state diagram such that it allows for TMPDO + TMPS windows. This can be achieved in the timer description.

In 33.2.4.5 change tmpdo_timer to read:

A timer used to monitor the dropout of the MPS; see T MPDO in Table 33-11. The value of this timer is set to TMPDO + TMPS, with a maximum value of TMPDO_max, as defined in Table 33-11.

Proposed Response Response Status W

TFTD

Overall I agree with your approach but I have one concern. Currently the text allows a PSE to choose a max value of TMPDO of 400ms and a TMPS of 60ms. The text would allow the PSE to remain powered if a 60ms current pulse appeared during a total of that 460ms.

By placing a max of TMPDO_max on the timer you are limiting the TMPDO+TMPS period to 400ms. If at 400ms the entire 60ms pulse has not shown up (and thus the MPS is not present), the PSE would need to shut down.

This means that the PSE could only choose a max TMPDO of 400ms - TMPS (for whatever TMPS it uses).

Cl 33 SC 33.5.1.2.8 P84 L18 # 1
 Hajduczenia, Marek Charter Communicatio

Comment Type TR Comment Status D Management

Figure 33–9—PSE state diagram does not contain state ERROR_DELAY_OVER or ERROR_DELAY_SHORT, but instead ERROR_DELAY only. The problem exists in 2018 2015, and 2012 editions of the standard. The state "ERROR_DELAY_OVER" and "ERROR_DELAY_SHORT" were present in 2008 edition but merged thereafter, but the associated text has never been updated accordingly.

SuggestedRemedy

In 33.5.1.2.7, change:

"This bit shall be set to one when the PSE state diagram (Figure 33–9) enters the state 'ERROR_DELAY.'" to:

"This bit shall be set to one when the PSE state diagram (Figure 33–9) enters the state 'ERROR_DELAY' due to the short_detected variable being TRUE."

In 33.5.1.2.8, change:

"This bit shall be set to one when the PSE state diagram (Figure 33–9) enters the state 'ERROR_DELAY_OVER.'" to:

"This bit shall be set to one when the PSE state diagram (Figure 33–9) enters the state 'ERROR_DELAY' due to the ovld_detected variable being TRUE."

In 33.8.3.7 Management function requirements, item MF30, change:

"Bit indicates an overload condition has been detected. Set to one when entering the ERROR_DELAY_OVER state" to:

"Bit indicates an overload condition has been detected. Set to one when entering the ERROR_DELAY state due to the ovld_detected variable being TRUE"

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Implement Suggested Remedy and also:

In 33.8.3.7, Item MF28, change: "Set to one entering ERROR_DELAY state."

to: "Set to one entering ERROR_DELAY state due to the short_detected variable being TRUE."