

IEEE 802.3cv D3.0 4-Pair PoE Maintenance Initial Sponsor ballot comments

CI 145 SC 145.2.5 P L # I-12

Ran, Adee Intel Corporation

Comment Type T Comment Status D

There are many variables in the original amendment, in 145.2.5.4, 145.2.5.6, and 145.2.5.7, which have the suffix (X), but it is unclear what this X means.

In 145.3.3.4 (which discusses PDs) there is a clear explanation of what X means and which values it can take, but there is nothing similar for 145.2.5.4 (which discusses PSEs).

SuggestedRemedy

Add a subclause similar to 145.3.3.4 to describe X for PSEs, or clarify this in some other way. This should be done for several variables in the original amendment that are not listed in this draft.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD

Give editorial license to: move 145.3.3.2 from the PD section to the PSE section to a new numbered subsection be part of 145.2.5.2 and to then reference it 145.3.3.2.

CI 0 SC 0 P L # I-20

Sanchez Reategui, Hugo Ricardo CONSULTANT

Comment Type T Comment Status R

From high level check, it seems a very good document. I look forward to add a little bit on this.

FYI I deal with generators and communication requirements as part of my role and for most of the solutions our P&C group recommends  
XX for communication via WiMAX of 1.8GHz bandwidth.

SuggestedRemedy

Response Response Status C

REJECT.

Thank you for complementing the document. As the comment neither identifies an issue, nor provides a proposed change, from a process perspective we are rejecting it. For further information regarding commenting on draft IEEE-SA standards please see <[https://standards.ieee.org/content/dam/ieee-standards/standards/web/governance/revcom/Guidelines\\_for\\_commenting\\_on\\_draft\\_standards.pdf](https://standards.ieee.org/content/dam/ieee-standards/standards/web/governance/revcom/Guidelines_for_commenting_on_draft_standards.pdf)>

CI 79 SC 79.3.2 P23 L6 # I-14

Rolfe, Benjamin Blind Creek Associates

Comment Type E Comment Status A

Editing instruction is incorrect. As the change (deletion) is shown the editing instruction should be "change last paragraph...".

SuggestedRemedy

Change "Delete" to "Change".

Response Response Status C

ACCEPT IN PRINCIPLE.

Change editing instruction to "Delete last paragraph of 79.3.2, as inserted by IEEE Std 802.3bt-2018."

Remove text on lines 8-14 of page 23.

CI 79 SC 79.3.2 P23 L25 # I-16

Zimmerman, George CME Consulting, Analog Devices Inc., Cisco Systems,

Comment Type E Comment Status A

Note should be in NOTE style (frame style, and Note should be "NOTE <em-dash>"

SuggestedRemedy

Change "Note: " and text on lines 25-29 to frame NOTE- style.

Response Response Status C

ACCEPT.

CI 79 SC 79.3.2 P23 L25 # I-1

Ran, Adee Intel Corporation

Comment Type E Comment Status A

informative note should start with "NOTE" and em dash. See section 10.1 in the style manual.

SuggestedRemedy

Change "Note:" to "NOTE—" (em dash).

Response Response Status C

ACCEPT.

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Cl 79 SC 79.3.2 P23 L25 # I-15

Rolfe, Benjamin Blind Creek Associates

Comment Type E Comment Status A

The editing instruction is "insert" so we expect all the text that follows is new. Why are there change bars shown for the Note, table and paragraph following the table? As this is the initial ballot, the presence of change bars is confusing.

SuggestedRemedy

Remove extraneous change bars.

Response Response Status C

ACCEPT.

Cl 79 SC 79.3.2 P23 L26 # I-2

Ran, Adee Intel Corporation

Comment Type E Comment Status A

"have greater than 12 octets" is awkward language.

SuggestedRemedy

Change to "have more than 12 octets" or "are longer than 12 octets".

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to "are longer than 12 octets".

Cl 79 SC 79.3.2 P23 L27 # I-3

Ran, Adee Intel Corporation

Comment Type E Comment Status A

In "12 octet TLVs" and "one valid 29 octet TLV", n-octet is a compound adjective, so a hyphen is required.

Also in many cells of Table 79-1a.

Proposed change is adding hyphens everywhere, but alternatively the table may be changed to have "number of octets in the TLV" as a column heading, and keep only numbers in the cells.

SuggestedRemedy

Change "12 octet" to "12-octet", and "29 octet" to "29-octet" in the text.

Change cells in Table 79-1a similarly.

Response Response Status C

ACCEPT.

Cl 79 SC 79.3.2 P23 L47 # I-17

Zimmerman, George CME Consulting, Analog Devices Inc., Cisco Systems,

Comment Type T Comment Status A

"based on the length of the first classification event or based on the length of a received Power via MDI TLV". In the first case, this is a time duration, in the second case, this is a number of octets. Using "length" for both is marginally correct, but a little confusing, since one is a physical (time) measurement and the other is logical (byte count).

SuggestedRemedy

Change "length of the first classification event" to "duration of the first classification event" on line 47.

Response Response Status C

ACCEPT.

Cl 145 SC 145.2.5.1 P26 L18 # I-4

Ran, Adee Intel Corporation

Comment Type E Comment Status A

"When this occurs, the PSE shall not apply a voltage greater than VOff to the PI for at least Tdbo... before attempting another detection, except in the case of an open circuit..."

This sentence is complicated for an uninitiated reader. It be improved by removing a level of negation (assuming my understanding is correct).

SuggestedRemedy

Change "When this occurs, the PSE shall not apply a voltage greater than VOff " to "When this occurs, the PSE shall apply a voltage lower than or equal to VOff ".

Response Response Status C

ACCEPT IN PRINCIPLE.

The comment resolution group believes that the proposed remedy makes a subtle technical change. As such, we have made changes to make the sentence easier to understand:

Change "shall not apply a voltage greater than Voff to the PI for at least Tdbo as defined in Table 145-16 before attempting another detection"

To: "shall not apply a voltage greater than Voff to the PI until after at least Tdbo, as defined in Table 145-16, has passed before attempting another detection"

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Cl 145 SC 145.2.5.1 P26 L19 # I-18

Zimmerman, George CME Consulting, Analog Devices Inc., Cisco Systems,

Comment Type T Comment Status A

"shall not apply a voltage greater than Voff to the PI for at least Tdbo as defined in Table 145-16 before attempting another detection" can be interpreted two ways. One way is clearer in the original text - voltages greater than Voff (for any time duration) are prohibited during the alternative b detection time (Tdbo) and after that time, another detection is performed. This was the meaning of the original struck-out text. This is also consistent with the corresponding PICS entry, PSE5 on page 42.

The other way is that the PSE shall not apply a voltage greater than Voff lasting greater than or equal to Tdbo prior to performing another detection (which can happen at any time). I believe the original text was clearer and avoided this ambiguity, and also aligns with the wording of the PICS item. I am not sure what defect in the original text is being fixed, but the unintended consequence is ambiguity.

SuggestedRemedy

Remove the strikeout of the original text from line 15 through 18, and delete the new text (underlined) on lines 18 through 20.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change "shall not apply a voltage greater than Voff to the PI for at least Tdbo as defined in Table 145-16 before attempting another detection"

To: "shall not apply a voltage greater than Voff to the PI until after at least Tdbo, as defined in Table 145-16, has passed before attempting another detection"

Update corresponding PIC statement (PSE5) to align with text.

Cl 145 SC 145.2.5.7 P30 L1 # I-13

Jones, Chad Cisco Systems, Inc.

Comment Type TR Comment Status X

\*\*\* Comment submitted with the file cjones\_D3p0comment.pdf attached \*\*\*

NOTE: this comment is against State Diagrams that aren't in the D3.0 document. Looking at the published standard, this comment is against Figure 145-15 on document page 144, 145 and Figure 145-16 on document page 148, 149.

Start of comment:

The single signature PSE state diagram (Figure 145-13) on page 139 allows the path from CLASSIFICATION to CLASS\_PROBE to CLASS\_RESET and to CLASS\_EV1\_LCE. This path allows a PSE to perform a class probe, perform a class reset and then immediately perform multi-event classification (without having to perform detection/CC).

Moving to the dual signature PSE state diagrams (we will talk only about the PRI diagram 145-15 since the SEC diagram is identical), at the top of page 144 we see the path is CLASSIFICATION\_PRI to CLASS\_PROBE\_PRI. contrasting the SS SD, there are two paths out of CLASS\_PROBE\_PRI, and either allows the PSE to perform a class reset and then move to multi-event classification. One arc travels to CLASS\_RESET\_PRI, to CLASS\_EV1\_LCE\_4PID\_PRI, then to MARK\_EV\_LAST\_PRI. Only one event is allowed in this case. If the PSE needs to perform multi-event classification, it must use the other arc back to IDLE\_PRI which requires a new detection and CC. There is no technical justification to force the two PSEs 'flavors' to behave differently in this case. My comment will modify the dual signature state diagrams to allow multi-event classification immediately after a class probe.

SuggestedRemedy

See the attachment, where the changes are marked up. the modification is shown against Figure 145-15, the same change will need made to Figure 145-16.

textual explanation:

pg 144

delete the IDLE\_PRI arc from CLASS\_PROBE\_PRI.

delete "\*" (pse\_avail\_pwr\_pri < 4)" from the arc to CLASS\_RESET\_PRI. [the only arc from CLASS\_PROBE\_PRI is to CLASS\_RESET\_PRI]

add an empty label arc into CLASS\_EV1\_LCE\_PRI.

pg 145

add "\*" (pse\_avail\_pwr\_pri < 4)" to the arc from CLASS\_RESET\_PRI to CLASS\_EV1\_LCE\_4PID\_PRI

add a new arc out to CLASS\_RESET\_PRI to CLASS\_EV1\_LCE\_PRI with the exit

condition: "tclass\_reset\_timer\_pri\_done \* (pse\_avail\_pwr\_pri ≥ 4)"

perform same changes to Figure 145-16 on page 148, 149.

Proposed Response Response Status W

TFTD.

Comment resolution group to review referenced pdf.

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Cl 145 SC 145.2.5.7 P30 L32 # I-5

Ran, Adeo Intel Corporation

Comment Type E Comment Status A

The assignment symbol in MEASURE\_ACS\_DONE is underlined. It suggests an insertion, but the whole table is replaced.

SuggestedRemedy

Remove the underline.

Response Response Status C

ACCEPT.

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Cl 145 SC 145.3.3.3.2 P32 L43 # I-6

Ran, Adeo Intel Corporation

Comment Type E Comment Status A

"the PD wants to abort" reads funny. A PD is an inanimate object and doesn't have a will. The text in 145.3.6.2 does not use "want" either.

SuggestedRemedy

Change "the PD wants to abort" to "the PD is about to abort", or possibly "the PD aborts"

Response Response Status C

ACCEPT IN PRINCIPLE.

Change "the PD wants to abort" to "the PD is aborting"

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Cl 145 SC 145.3.3.4.5 P35 L18 # I-7

Ran, Adeo Intel Corporation

Comment Type E Comment Status A

It seems that the only change in this state diagram (Figure 145-27) is in the "POWERED" state, but it is not easy to locate. It would help if the editorial instruction points to the change, as done in other cases.

If there are other changes they should also be included.

Similarly in Figure 145-42.

SuggestedRemedy

Change the editorial instruction to "Change the text inside state POWERED in Figure 145-27 as follows:"

Apply similar change in Figure 145-42.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change editorial instruction for Figure 145-27 (continued) to:  
"Change Figure 145-27 (continued) as follows (see changes in POWERED state):"

Change editorial instruction for Figure 145-42 (page 39, line 1) to:  
"Change Figure 145-42 as follows (see changes in left exit from PSE\_POWER\_REVIEW state):"

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Cl 145 SC 145.3.8.2 P36 L16 # I-8

Ran, Adeo Intel Corporation

Comment Type T Comment Status A

The inserted text creates a sentence that is logically ambiguous because it has both AND and OR with no "parentheses":

"A PD that has enabled Autoclass during Physical Layer classification and drew a power higher than Class 1 power during the period bounded by TAUTO\_PD1 and TAUTO\_PD2 or has requested Autoclass through DLL"

I assume the meaning is "that has either enabled Autoclass during classification and drew power, or requested Autoclass during DLL"

*SuggestedRemedy*

This can be improved somewhat by adding the word "either" after "that has" and a comma before the "or" (as in the comment) if my interpretation is correct.

If I got it wrong, then "either" should be placed after the "and".

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to:

"A PD that has either enabled Autoclass during Physical Layer classification and drew a power higher than Class 1 power during the period bounded by TAUTO\_PD1 and TAUTO\_PD2, or has requested Autoclass through DLL"

Cl 145 SC 145.5.3.2.2 P37 L7 # I-9

Ran, Adeo Intel Corporation

Comment Type T Comment Status A

The updated text creates a logical expression as the title of what looks like a column in a table in the text. It's not typical to have such logical expressions outside of state diagrams, and this condition is quite difficult to understand, as it's split across two lines.

It may help the reader if the condition is simply spelled out.

The comment also applies to pd\_initial\_value on page 40.

*SuggestedRemedy*

Insert the following paragraph after "This variable is set per this description.":

"If pd\_autoclass is TRUE and pd\_autoclass\_cancelled is FALSE, then this variable is set to the value 0xACAC (decimal 44204). Otherwise, it is set according to pse\_allocated\_pwr, as follows:"

Delete the first "column" and the last "row" in the table following "Values:".

Apply corresponding changes to pd\_initial\_value.

Response Response Status C

ACCEPT IN PRINCIPLE.

Remove first column of values table.

Change last entry of pse\_allocated\_pwr column to "Autoclass\*".

Add note below values table that says "\*\*If pd\_autoclass is TRUE and pd\_autoclass\_cancelled is FALSE, then pse\_initial\_value is set to the value 0xACAC (decimal 44204)."

Change last value of pse\_initial\_value to "44204".

Editorial license granted to fit solution to IEEE standard style and formatting.

Make similar changes to "pd\_initial\_value" on page 40, line 8.

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Cl 145 SC 145.5.3.2.2 P37 L18 # I-11

Ran, Adeo Intel Corporation

Comment Type T Comment Status D

The variable pse\_initial\_value\_alt(X) suggests that it is a function (based on input X) or multiple variables.

Is X one of the alternatives A or B? or is it "pri"/"alt"?

Also, the "values" table has one column which lists values for two variables. It is unclear which one should be used.

Is this "variable" actually a function?

*SuggestedRemedy*

Clarify the text to indicate how both variables affect the single value of the variable pse\_initial\_value\_alt(X).

If necessary, change the definition to a function and move it to the "functions" subclause.

Proposed Response Response Status W

PROPOSED REJECT.

TFTD

The meaning of alt(X) can be found in 145.5.3.2.1 of IEEE 802.3-2018.

Cl 145 SC 145.5.3.2.2 P37 L20 # I-10

Ran, Adeo Intel Corporation

Comment Type T Comment Status D

"derived from pse\_allocated\_pwr\_pri and pse\_allocated\_pwr\_sec variables (145.2.5.6), which is used in the PSE state diagrams..."

if "which" refers to pse\_allocated\_pwr\_pri and pse\_allocated\_pwr\_sec, shouldn't it be "which are used"?

But I don't see these variables in any state diagram; is it actually pse\_initial\_value\_alt(X) that is used (e.g. in Figure 145-42)? if so, the paragraph should instead start with "This variable is used in the PSE state diagrams".

Pointing to specific diagrams would be preferable.

*SuggestedRemedy*

Based on the answers to the question in the comment, update the text accordingly.

Consider pointing to the specific diagrams which the reader should refer to.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

TFTD (scope)

Change "which is used" to "which are used"

Cl 145 SC 145.5.3.2.5 P39 L2 # I-19

Zimmerman, George CME Consulting, Analog Devices Inc., Cisco Systems,

Comment Type E Comment Status D

Font size in the figure is 6 point. this is very hard to read, and the minimum in the IEEE-SA style manual for figures is 8 point (as are the other state diagrams in the draft). Somehow this escaped notice before, even though there is plenty of room on the page.

*SuggestedRemedy*

Convert 6 point text in figure 145-42 to 8 point.

Proposed Response Response Status W

PROPOSED ACCEPT.

TFTD to see if John can pull this off...