

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 79 SC 79.3.7 P 224 L 28 # 2  
 Skinner, John Sifos Technologies, In

Comment Type TR Comment Status A LLDP

Figure 79-7a indicates that the PD measurements field is 9 octets in length, and that the PSE measurements field is 9 octets in length. Table 79-7a defines the PD measurements field as 96 bits in length, and Table 79-7b defines the PSE measurements field as 96 bits in length. A 96 bit field requires 12 octets, so the stated field lengths are incorrect. Once these field lengths are corrected, the TLV information string length will also need to be corrected.

SuggestedRemedy

Modify the TLV information string length field to indicate 32 octets.  
 Modify the length specified in the TLV information string for the PD measurements field to 12 octets, and the length specified for the PSE measurements field to 12 octets.

Response Response Status C

ACCEPT IN PRINCIPLE.

Modify the TLV information string length field to indicate 26 octets.  
 Modify the length specified in the TLV information string for the PD measurements field to 12 octets, and the length specified for the PSE measurements field to 12 octets.

CI 33 SC 33.2.7.7 P 111 L 27 # 3  
 Darshan, Yair Microsemi

Comment Type TR Comment Status D PSE Power

Referring to the text:  
 "When connected to a single signature PD, a Type 3 or Type 4 PSE should (TBD) remove power from both pairsets before the current exceeds the "PSE upperbound template" on either pairset."  
 Due to the fact that we normally have addressed the requirements per pairset in order to protect each pairset and we already cover the pairset protection in the previous lines 25-26: "Power shall be removed from a pairset PI of a PSE before the pairset PI current exceeds the "PSE upperbound template" in Figure 33-14, Figure 33-14a, and Figure 33-14b."  
 So in single signature PD if current over a pairset approaches the upper bound template and as a result power is removed from that pairset, the whole current will flow through the remaining pairset and it will be disconnected as well, so there is no need for the redundant text in line 27.

SuggestedRemedy

Delete:  
 "When connected to a single signature PD, a Type 3 or Type 4 PSE should (TBD) remove power from both pairsets before the current exceeds the "PSE upperbound template"

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.7 P 101 L 11 # 4  
 Darshan, Yair Microsemi

Comment Type TR Comment Status D PSE Power

In order to control the P2P unbalance effects, it is required that the point of switching and measuring the current will be defined in the negative path for both Type 3/4 PSE and PD and for single port and multiport PSE systems.

*SuggestedRemedy*

1. Clause 33.2.7 page 101 line 11, Add the following text:  
 Multiport and Single port Type 3 and 4 PSEs, shall switch their power and measure their currents at least over the more negative power pairs.
2. Clause 33.3.7 page 135 line 7, Add the following text:  
 Type 3 and 4 PDs, shall switch their power and measure their currents at least over the more negative power pairs.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 33 SC 33.7.6 P 143 L 11 # 5  
 Darshan, Yair Microsemi

Comment Type TR Comment Status D PD Power

In the text:  
 "A PD shall continue to operate without interruption in the presence of transients at the PSE PI as defined in 33.2.7.2."

33.2.7.2 defines the transients at the PSE PI so when connected to the PD, the PD need to continue to operate.

The problem is that it is not clear what should we expect from the PD when it is tested when this transient behavior is applied directly to the PD PI?  
 It is obvious that the transients in the PSE PI are identical to PD PI transients at short cable which is one of the operating scenarios.

*SuggestedRemedy*

Change from:  
 "A PD shall continue to operate without interruption in the presence of transients at the PSE PI as defined in 33.2.7.2."  
 To:  
 "A PD shall continue to operate without interruption in the presence of transients applied at the PSE PI or applied at the PD PI as defined in 33.2.7.2."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.4.1 P 57 L 53 # 6  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PSE Power

There is missing text that clearly sets the polarity of the PSE voltages during its operating states as the one determined right after IDLE state. The voltage polarity of all PSE operating states (Detection, Connection Check, Classification, POWER\_UP and POWER\_ON) must be the same.

We can find the following:

a) Clause 33.2.5.1 Figure 33-11 and Figure 33-12, we clearly see that the polarity is the same as Vpse+ and Vpse- however there is no "shall" text involved.

b) Clause 33.2.6 P.92 Line 2:

"The PSE shall provide VClass with a current limitation of IClass\_LIM, as defined in Table 33-10 only for a pairset with a valid detection signature. Polarity shall be the same as defined for VPort\_PSE-2P in 33.2.3 and timing specifications shall be as defined in Table 33-10."

This text requires that Vclass polarity shall be the same as defined in 33.2.3 Table 33-2. It is not sufficiently clear that Vclass polarity should track detection voltage polarity.

c) Clause 33.2.6.2 P.97 Line 38-39:

"All class event voltages and mark event voltages shall have the same polarity as defined for VPort\_PSE-2P in 33.2.3."

This text requires that Vclass and Vmark polarity shall be the same as defined in 33.2.3. It is not sufficiently clear that Vclass polarity should track detection voltage polarity.

We need to make sure that:

1. POWER\_UP and POWER\_ON voltage polarity per 33.2.3 is similar to detection, connection check and classification polarity.
2. Changing polarity per the possibilities in 33.2.3 Table 33-2 is possible only after passing through IDLE state.

Currently, although the above is obvious, it is not clear from the standard that this is the requirement.

*SuggestedRemedy*

To add the following text in 33.2.4.1 page 57 after line 53:

"The polarity of PSE voltages during its operating states (Detection, Connection Check, Classification, POWER\_UP and POWER\_ON) shall be the same as was used in the Detection state and defined per Table 33-2 in 33.2.3."

Response Response Status C

ACCEPT IN PRINCIPLE.

To add the following text in 33.2.4.1 page 57 after line 53:

"The polarity of PSE voltages during its operating states (Detection, Connection Check, Classification, POWER\_UP and POWER\_ON) is the same as was used in the Detection state and defined per Table 33-2 in 33.2.3."

CI 33 SC 33.2.5 P 86 L 45 # 7  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PSE Power

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, \*\*except as specified in 33.2.7.1\*\*"

The part marked in \*\* is linked to 33.2.7.1 which is input voltage topic.

The logic to link it to 33.2.7.1 is not clear although we can guess that is related to 33.2.7.1 page 105 lines 16-17 regarding the transition between 2P and 4P.

"A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon.

This is unclear to a new reader, and it requires guessing which part of 33.2.7.1 we refer too.

*SuggestedRemedy*

Group to consider two options.

Option 1:

Change from:

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, except as specified in 33.2.7.1"

To:

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, except as specified in 33.2.7.1 regarding transition between 2-pair and 4-pair when single-signature PDs operated by Type 3 and Type 4 PSEs"

Option 2 (preferred):

1. Change from:

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, except as specified in 33.2.7.1"

To:

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, except as specified in 33.2.7.1.1"

2. Move the text in 33.2.7.1 page 105 lines 16-17 to new sub clause 33.2.7.1.1:

"33.2.7.1.1 PSE transition from 2-pair to 4-pair

A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon."

Response Response Status C

ACCEPT IN PRINCIPLE.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Change from:

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, except as specified in 33.2.7.1"

To:

"In any operational state, the PSE shall not apply operating power to a pairset until the PSE has successfully detected a valid signature over that pairset, except as specified in 33.2.7.1 regarding transitions between 2-pair and 4-pair power."

Cl 33 SC 33.2.5.0a P 87 L 43 # 8  
Darshan, Yair Microsemi

Comment Type TR Comment Status D Connection Check

The text says:

"If the voltage on either pairset rises above Vvalid max, (defined in Table 33–4) during connection check, the PSE shall reset the PD by bringing the voltage at the PI below Voff max, defined in Table 33–11 before performing classification."

We asked to work with up to Vvalid\_max and to reset at Voltage>Vvalid\_max without any gray area.

The reason for reset above Vvalid\_max is to prevent that any voltage above Vvalid\_max (=10v) will not be interpreted by PD as class event but Vclass is starting at 14.5V at the PD so we can generate gray area of 2V which allows design flexibility.

SuggestedRemedy

Change from:

"If the voltage on either pairset rises above Vvalid max, (defined in Table 33–4) during connection check, the PSE shall reset the PD by bringing the voltage at the PI below Voff max, defined in Table 33–11 before performing classification."

To:

"If the voltage on either pairset rises above Vvalid max to Vvalid max+2V, (Vvalid defined in Table 33–4) during connection check, the PSE shall reset the PD by bringing the voltage at the PI below Voff max, defined in Table 33–11 before performing classification."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Cl 33 SC 33.2.6 P 92 L 39 # 9  
Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan1

In order to clarify and simplify the spec we need to define DS PDs requirements per the following guide lines:

1. dual signature PDs shall be designed to have pclass-PD\_2P max on each pairset. 1.1 dual signature PDs will be tested to meet (1) with unbalanced PSE and channel according to 33.3.7.10 in order to guarantee that (1) is kept for all operating system (PSE +PD+Channel) conditions.
2. As a result of (1) and (1.1), the dual signature PD with same class and different class will be treated equally and we can use just the term dual-signature PD.
3. The fact that dual signature PD with the same class is also single load and therefore has unbalance issues as the same as single signature PD is resolved by (1) and (1.1).
4. PSE PI unbalance requirements need to be met for all PDs including DS PDs. This will ensure controlled environment to all PDs so the effect of PSE and channel unbalance on the dual signature PD (and single signature PD) will be known to PD designer so he can guarantee Pclass-PD-2P over each pairset.

SuggestedRemedy

Implement darshan\_01\_0116.pdf.

See also related comments addressing the need to update 33.2.6, 33.2.7.4 and other clauses per the above guidelines.

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt darshan\_01\_0116\_Rev7.pdf

Cl 33 SC 33.2.4.11 P 75 L 40 # 10  
Darshan, Yair Microsemi

Comment Type TR Comment Status D PSE SD

Class 5 is missing from mr\_pd\_class\_detected\_pri.

Also missing in mr\_pd\_class\_detected\_sec on page 76 line 17.

SuggestedRemedy

Add class 5 to the list of values for mr\_pd\_class\_detected\_pri and mr\_pd\_class\_detected\_sec.

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

This is the signature seen during a specific class event (which can only be 0-4). This is not the class of the PD.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.7.4 P 107 L 26 # 11  
 Darshan, Yair Microsemi  
 Comment Type TR Comment Status A Pres: Yseboodt2  
 The text:  
 "Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a single-signature PD, shall be able to source....."  
 Applies to dual signature PDs with the same class too.  
 This is the same concept used for Icon, Icon-2P and Icon-2P\_unb in pages 105-106.  
**SuggestedRemedy**  
 Change from:  
 "Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a single-signature PD, shall be able to source....."  
 To:  
 "Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a single-signature PD or dual-signature PD that advertise the same class signature on each pairset, shall be able to source....."  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 210

Cl 33 SC 33.2.7.4 P 107 L 42 # 12  
 Darshan, Yair Microsemi  
 Comment Type TR Comment Status A Pres: Yseboodt2  
 The text:  
 "Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a dual-signature PD, shall be able to source lpeak-2P on each pairset....."  
 Applies to dual signature PDs with different class and not just dual-signature PD. This is the same concept used for Icon-2P in pages 105-106.  
**SuggestedRemedy**  
 Change from:  
 "Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a dual-signature PD, shall be able to source lpeak-2P on each pairset....."  
 To:  
 "Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a dual-signature PD that advertised a different class signature on each pairset, shall be able to source lpeak-2P on each pairset....."  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 210

Cl 33 SC 33B.3 P 204 L 31 # 13  
 Darshan, Yair Microsemi  
 Comment Type ER Comment Status A Editorial  
 We have changed in D1.4 comment cycle Rpair\_max/min to Rpse\_min/max and the following text was forgotten.  
 "Verification of Icon-2P\_unb in step 6 confirms PSE RPair\_max and RPair\_min are in conformance to Equation (33-4f).  
**SuggestedRemedy**  
 Change from:  
 Verification of Icon-2P\_unb in step 6 confirms PSE RPair\_max and RPair\_min are in conformance to Equation (33-4f).  
 To:  
 Verification of Icon-2P\_unb in step 6 confirms PSE Rpse\_max and Rpse\_min are in conformance to Equation (33-4f).  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33B.3 P 204 L 26 # 14  
 Darshan, Yair Microsemi  
 Comment Type ER Comment Status A Editorial  
 Typo in the text:  
 "Swap R\_max, R\_min, repeat steps 1 and 2."  
**SuggestedRemedy**  
 Change from:  
 Swap R\_max, R\_min, repeat steps 1 and 2.  
 To:  
 Swap Rload\_max, Rload\_min, repeat steps 1 and 2.  
 Response Response Status C  
 ACCEPT.  
 EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.7 P 135 L 18 # 15  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Editorial

Table 33-18 item 1 parameter name:  
 "Input voltage per pairset."  
 It should be DC voltage.

SuggestedRemedy

Change from:  
 "Input voltage per pairset"  
 To:  
 "Input DC voltage per pairset"

Response Response Status C

ACCEPT.

Cl 33 SC 33.2.6 P 93 L 10 # 16  
 Darshan, Yair Microsemi

Comment Type ER Comment Status D Pres: Yseboodt3

Table 33-7a clarity can be improved by the following actions:

Column "Requested Class ALT A" is actually "PD Requested Class mode A" and  
 "Requested Class ALT B" is actually "PD Requested Class mode B".

SuggestedRemedy

1. Change "Requested Class ALT A" to "PD Requested Class mode A"
2. Change "Requested Class ALT B" to "PD Requested Class mode B".

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

WFP

This is the PSE spec. The PSE has alternatives defined, not modes.

Cl 33 SC 33.2.7 P 104 L 47 # 17  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Pres: Darshan6

This comment is marked as ED\_2  
 Editor Note #2.

"2. The following case needs to be addressed: If PSE is using active or passive pair-to-pair current balancing circuitry, K\_lcut may be lower (down to 0.5) per equation TBD."  
 We made some changes for K\_lcut in D1.4 so it is no longer exists.  
 Instead it should be replaced with new parameter or new description that is related to Icon-2P, Icon-2P\_unb, lpeak-2P, ILIM-2Pmin.

SuggestedRemedy

Change Editor Note #2 from:

"2. The following case needs to be addressed: If PSE is using active or passive pair-to-pair current balancing circuitry, K\_lcut may be lower (down to 0.5) per equation TBD."

To:  
 "2. The following case needs to be addressed: If PSE is using active or passive pair-to-pair current balancing circuitry, Icon-2P\_unb, lpeak-2P, ILIM-2Pmin may be lower per equation TBD."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 42

Cl 33 SC 33.3.7 P 137 L 30 # 18  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A PD Power

Table 33-18 items 11 and 12 (PD power supply turn on voltage, PD power supply turn off voltage, and PD classification stability time need to be per pairset.

SuggestedRemedy

Add to each parameter name of items 11 and 12: "per pairset"

Response Response Status C

ACCEPT IN PRINCIPLE.

Add to line 51 in 33.3.7.1

"For dual-signature PDs the requirements for Von and Voff apply to each pairset individually."

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.7.3 P 139 L 42 # 19  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A PD Power

Figure 33-17a.  
 The original intent for the Dual Signature PD drawing is that its Cport can be  $2 \times C_x$  if it is isolated and  $C_{port} = 2 \times C_x$  (or  $\leq 2 \times C_x$ ) when it is not isolated.  
 Currently the drawing shows isolated so the label need to be  $C_{port} = 2 \times C_x$  and not  $C_{port} \leq 2 \times C_x$ .

SuggestedRemedy

Change line 42 in Figure 33-17a from:  
 $C_{port} \leq 2 \times C_x$ .  
 To:  
 $C_{port} = 2 \times C_x$ .

Response Response Status C

ACCEPT IN PRINCIPLE.

Make bottom drawing of 33-17a have a  $C_x$  and a  $C_y$  and change to  $C_{port} = C_x + C_y$ .

Cl 33 SC 33.2.7.4 P 107 L 38 # 20  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Pres: Yseboodt2

The text:  
 "IPort-2P-other is the output current on the other pairset (see 33.2.4.4 (XREF))"

The reference should be 33.2.4.9.

SuggestedRemedy

Change to 33.2.4.9.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

Cl 1.4 SC 1.4 P 20 L 39 # 21  
 Darshan, Yair Microsemi

Comment Type T Comment Status D Definitions

In the definitions of Type3 and 4 PDs the support of LLDP is missing in Type 3.  
 "Type 3 PD: A PD that provides a Class 1 to Class 6 signature during Physical Layer classification, implements multiple-Event classification, and accepts power on both modes simultaneously (see IEEE 802.3, Clause 33)."

"Type 4 PD: A PD that provides a Class 7 or 8 signature during Physical Layer classification, implements multiple-Event classification, is capable of Data Link Layer classification, and accepts power on both Modes simultaneously (see IEEE 802.3, Clause33)."

SuggestedRemedy

To implement the following proposed remedy If there is no reason why support of LLDP was omitted in Type 3 PD definition.

Change from:

"Type 3 PD: A PD that provides a Class 1 to Class 6 signature during Physical Layer classification, implements multiple-Event classification, and accepts power on both modes simultaneously (see IEEE 802.3, Clause 33)."

To:

"Type 3 PD: A PD that provides a Class 1 to Class 6 signature during Physical Layer classification, implements multiple-Event classification, is capable of Data Link Layer classification, and accepts power on both modes simultaneously (see IEEE 802.3, Clause 33)."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

I believe we left this out because class 1-3 PDs are not required to support LLDP even if they are Type 3.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.7.10 P 145 L 31 # 22  
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan1

The following comments received during D1.3 and D1.4 regarding 33.3.7.10:  
 1.D1.5 requires in its Editor Note in page 145 line 31 to address longer channel as well since it appears from the current text that I<sub>con-2P\_unb</sub> need to be met only at short channel while it need to be met at all operating conditions.  
 On the other hand we know that if I<sub>con-2P\_unb</sub> is met when PD is tested at short channel (low resistance), it will be the worst case so at longer channel it will meet the requirement too so there is no need to measure the current at two extreme points. To fix this issue we change the text by changing the text from "PD shall meet this requirement ..." to PD shall have the pair current measured....".

2.The old test looks like compliance test and some commenters said that we shouldn't do it also there are many examples that we specify test circuit and ask to meet parameters when measured with the test circuit (see 33.4.2, 33.4.3, 33.4.4 33.4.5, 33.4.6, 33.4.9.2.1 and many more in 802.3.  
 Anyhow, this issue was addressed also by the fix for item 1 with a requirement to meet the I<sub>con-2P\_unb</sub> by measuring the current at specific conditions.

3.It need to be clear that the two common mode test resistors can flip locations and still the requirement should be met. This was fixed by ".....two common mode resistances of R<sub>source\_min</sub>=0.16 ? ± 1% and one with R<sub>source\_max</sub>=0.19 ? ± 1%"

4.It was noted also that the test circuit doesn't address the fact that R<sub>source</sub> min/max are very low resistance and it is not clear if the connectors are part of R<sub>source</sub> and if it is, the connectors may affect very much the total value of R<sub>source</sub> etc. To fix this problem the following changes were made:

- a)The drawing of the test circuit was modified to show clear boundaries of R<sub>source</sub> min/max
- b)The effect of the test circuit connector resistance on R<sub>source</sub> is minimized by specifying max connector resistance (plug of the test circuit, it is practical to use in test circuit side high quality connector) and substructing it from R<sub>source</sub>. In addition we increase the R<sub>source</sub> ABS numbers by 5% and allow 5% variations with negligible effect on current measurements. The PD RJ45 Jack is not part of the test circuit.

5. Differentiating between DS and SS PD in order to ensure DS PDs meets I<sub>con-2P\_unb</sub> as defined in Equation 33-3c with unbalanced PSE and channel.

*SuggestedRemedy*

Change the text per darshan\_01\_0116.pdf.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 9

Cl 33 SC 33.2.6 P 93 L 10 # 23  
 Darshan, Yair Microsemi

Comment Type T Comment Status A Editorial

Table 33-7 "Assigned Class" column title can be much clearer if it is explained.

*SuggestedRemedy*

- 1. Change "Assigned Class" to "Assigned Class^3" to include the footnote number.
- 2. Add footnote 3 at line 31 below Table 33-7:  
 "Assigned Class is the actual PD class that is assigned to the PSE based on the operating conditions of Table 33-7.

Response Response Status C

ACCEPT IN PRINCIPLE.

Add:

"Assigned class is the Class that results from the PD requested Class and the number of classification events produced by the PSE as shown in Table 33-7 and Table 33-7a."

to section 33.2.6 where appropriate.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.7 P 101 L 45 # 24  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan7

See darshan\_07\_0116.pdf for more details.

Is it correct to use  $I_{con-2p\_unb\_MIN}=I_{con}$  for Type 3 and 4 operating class 0-4 PDs?  
 The reason for this question is that it could be per the current spec that the  $I_{con-2P\_unb}$  min for class 4 will be greater than Class 5 which may raise confusion and the following analysis meant to explain why it happens for the record and suggest text for clarity.

Analysis:

- a) When Type 3 or 4 connected to class 0-4 PDs working over 2P or 4P we may have the following behaviors:  
 -If working over 2-pairs than  $I_{con-2P\_unb\_min}=I_{con}=P_{class}/V_{port} = 0.6A$  for class 4 as an example.  
 -If working over 4-pairs, the worst case unbalance will cause the current to be only 365mA on the pair with maximum current however per the current spec 0.6A will be the value for this case too ending with situation that class 4  $I_{con-2P\_unb}$  current is greater than class 5. But due to the fact that there are no unbalance requirements for class 0-4 operating over 4-pairs, we have no choice but to use for 2P and 4P operation with class 0-4 PD the same " $I_{con-2P\_unb}$ " min value which is  $I_{con}$  and we need to clarify this in the spec.

The same discussion is apply to  $I_{LIM-2P}$  in table 33-11 item 9 which is discussed in separate comment.

*SuggestedRemedy*

See darshan\_07\_0116.pdf for more details (the full remedy is shown below).

- 1.Change  $I_{con}$  to  $I_{con3}$  in Table 33-11 item 4a  $I_{con-2P\_unb}$  minimum value.
- 2.Add note 3 at the end of table 33-11 with the following text:  
 "3 For class 4,  $I_{con-2P\_unb}$  minimum value may be higher than their minimum values for class 5 due to the fact that class 4 pair-to-pair is not controlled."

Response Response Status C

ACCEPT IN PRINCIPLE.

adopt darshan\_07\_0116\_Rev2.pdf

Cl 33 SC 33.2.7.4 P 108 L 1 # 25  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Yseboodt2

$P_{peak\_PD-2P}$  is not defined in table 33-18.  
 Actually  $P_{peak\_PD-2P}$  in equation 33-4e is not defined.  
 It was defined in previous drafts as  $0.5 * P_{peak\_PD}$  while  $P_{peak\_PD}$  is defined in Table 33-18.

*SuggestedRemedy*

Change from:

" $P_{Peak\_PD-2P}$  is the total peak power a PD may draw for its Class on a pairset; see Table 33-18"

To:

$P_{Peak\_PD-2P}$  is the total peak power a PD may draw for its Class on a pairset and is defined as  $0.5 * P_{peak\_PD}$ .  $P_{peak\_PD}$  is defined in Table 33-18.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.7 P 103 L 7 # 26  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan10

See darshan\_10\_0116.pdf.  
 Table 33-11 item 9, ILIM-2P.  
 This item was planned to be modified from D1.4 to D1.5 with only editorial changes and better table clarity however some technical changes were made compare to D1.4 and need to be evaluated.

a) There is missing PD class information for PSE Type 1 and 2 rows 1 and 2 in the item number column. In D1.4 it was there. In D1.5 it is missing. (The text in rectangular brackets is not part of the baseline).

b) We can see that class 0-4 with Type 3,4 PSE is 0.68A and class 5 with Type 3,4 PSE is 0.562A which perceived as incorrect in initial review to have class 4 current > class 5 current. If we will run simulations to find ILIM-2P for class 4 when operated over 4pairs we will see that ILIM-2P for class 4 will be 0.410A and not 0.68A. The reason why we can't use the 0.410A value and need to use the 0.684A value is as follows:

We decided that that there are no unbalance requirements for class 4 and below. So if PD class 4 is connected to Type 3 PSE and operates with 4-pairs, the unbalance theoretically may be 100% i.e. all the current flows through one of the pairs. In this case ILIM-2P minimum value will be the same as required for Type 3 PSE connected to class 4 PD operating over 2P which is 0.684A. That is why it could be that ILIM-2P minimum of class 4 will be higher than class 5 (0.562A). Class 5 unbalance is controlled. Class 4 is not.

SuggestedRemedy

Update Table 33-11 item 9 per darshan\_10\_0116.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Update Table 33-11 item 9 per darshan\_10\_0116\_Rev3.pdf

CI 33 SC 33.3.7.3 P 138 L 42 # 27  
 Darshan, Yair Microsemi

Comment Type TR Comment Status D Pres: Darshan2

Does the requirement to finish lirus within Tinrus-2P min is only if PSE is incharge of controlling linrus i.e. Cpd<=180uF and if PD is limiting linrush than there is no Tinrush\_max requirement for the PD?  
 This interpretation makes sense to me since it fits the original intention to support Cport>180uF so time is not a concern.  
 If this is correct than it is not clear from clause 33.3.7.3

SuggestedRemedy

To be discussed by the group.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

CI 33 SC 33.2.7.4 P 107 L 27 # 28  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Yseboodt2

"Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a single-signature PD, shall be able to source IPeak , IPeak-2P , and IPeak-2P\_unb as specified in Table 33-11 and Equation (33-4d)."

IPeak , IPeak-2P , and IPeak-2P\_unb are not defined in Table 33-11. They are defined in pages 106 and 107.

SuggestedRemedy

Change:

"Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a single-signature PD, shall be able to source IPeak , IPeak-2P , and IPeak-2P\_unb as specified in Table 33-11 and Equation (33-4d)."

To:

"Type 3 and Type 4 PSEs operating in 4-pair mode, connected to a single-signature PD, shall be able to source IPeak , IPeak-2P , and IPeak-2P\_unb as specified in Equation (33-4d)."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6.3 P 100 L 47 # 29  
 Darshan, Yair Microsemi

Comment Type E Comment Status A Editorial

Comment 6 from D1.4 was not implemented completely.  
 "PAutoclass is the measured power during the Autoclass window between TAUTO\_PSE2 and TAUTO\_PSE2"

Typo in first occurrence of TAUTO\_PSE2

SuggestedRemedy

Change from;  
 "PAutoclass is the measured power during the Autoclass window between TAUTO\_PSE2 and TAUTO\_PSE2"

To:  
 "PAutoclass is the measured power during the Autoclass window between TAUTO\_PSE1 and TAUTO\_PSE2"

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.7.3 P 138 L 41 # 30  
 Darshan, Yair Microsemi

Comment Type E Comment Status A Editorial

Typo in the text regarding Table reference number since D1.3:  
 "Inrush current is drawn during the startup period beginning with the application of input voltage at the PI compliant with Vport\_PD-2P requirements as defined in Table \*\*33-16a\*\*,..."

It should be Table 33-18

SuggestedRemedy

Change to:  
 "Inrush current is drawn during the startup period beginning with the application of input voltage at the PI compliant with Vport\_PD-2P requirements as defined in Table 33-18,..."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.7.4 P 106 L 41 # 31  
 Darshan, Yair Microsemi

Comment Type E Comment Status A Editorial

Typo in.  
 "VPSE is the voltage at the PSE PI as defined in 1.4.423"

SuggestedRemedy

Change from:  
 VPSE is the voltage at the PSE PI as defined in 1.4.423  
 To:  
 VPSE is the voltage at the PSE PI as defined in 1.4.426

Response Response Status C

ACCEPT IN PRINCIPLE.

All definition references keep changing and need to be kept up to date...

NonEasy

Cl 33 SC 33.3.7.3 P 139 L 26 # 32  
 Darshan, Yair Microsemi

Comment Type E Comment Status A Editorial

Figure 33-17a  
 Change "PSE encounters Cx" to "PSE sees Cx".

SuggestedRemedy

Change from:  
 "PSE encounters ..."  
 to:  
 "PSE sees ..." in Figure 33-17a.  
 4 occurrences.

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.7 P 102 L 10 # 33  
 Darshan, Yair Microsemi

Comment Type E Comment Status A Pres: Darshan2

The following:  
 a) Table 33-11 item 5-5d and 33.2.7.5  
 b) Table 33-18 items 5-5d and 33.3.7.3  
 Can be simplified.

SuggestedRemedy

See proposal in darshan\_02\_0116.pdf.

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt darshan\_02\_0116\_Rev 011j.pdf

With the following changes:

1. remove "same class per pairset" where needed.
2. remove editor's note 1 at top of page 2.

CI 33 SC 33.2.7.4 P 106 L 4 # 34  
 Darshan, Yair Microsemi

Comment Type E Comment Status A Editorial

"ICon-2P is the current the PSE supports on each pairset and is defined by Equation Equation (33-3d)."

The word "Equation" appears twice.

SuggestedRemedy

Change from:  
 "ICon-2P is the current the PSE supports on each pairset and is defined by Equation Equation (33-3d)."  
 To:  
 "ICon-2P is the current the PSE supports on each pairset and is defined by Equation (33-3d)."

Response Response Status C

ACCEPT.

EZ

CI 33 SC 33.2.4 P 57 L 35 # 35  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Editorial

Type in line 35. Need to be Figure 33-10 and not 33-10e  
 "Type 1 and Type 2 PSEs shall provide the behavior of the state diagrams shown in Figure 33-9, Figure 33-9 continued, and Figure 33-10e.  
 Type 3 and Type 4 PSEs shall provide the behavior of the state diagrams shown in Figure 33-10a to Figure 33-10d and Figure 33-10e."

SuggestedRemedy

Change from:  
 "Type 1 and Type 2 PSEs shall provide the behavior of the state diagrams shown in Figure 33-9, Figure 33-9 continued, and Figure 33-10e.  
 Type 3 and Type 4 PSEs shall provide the behavior of the state diagrams shown in Figure 33-10a to Figure 33-10d and Figure 33-10e."  
 To:  
 "Type 1 and Type 2 PSEs shall provide the behavior of the state diagrams shown in Figure 33-9, Figure 33-9 continued, and Figure 33-10.  
 Type 3 and Type 4 PSEs shall provide the behavior of the state diagrams shown in Figure 33-10a to Figure 33-10d and Figure 33-10e."

Response Response Status C

ACCEPT.

EZ

CI 33 SC 33.2.7.5 P 110 L 5 # 36  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Pres: Darshan3

Figure 33-13:  
 a) Y axis lable lport-2P is too close to the Y axis end point.  
 b) linrush-2P\_max is too close to the Y axis.  
 c) The lable "Inrush-2P at Vpse-2P>30V" need to include now linrush as well.

SuggestedRemedy

Make the above suggested editing.  
 See darshan\_03\_0116.pdf for details.

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.7 P 102 L 47 # 37  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Editorial

Table 33-11 item 7, Icon-2P, Type 3,4 additional information column:  
 There is missing link to 33.2.7.4 that explains what is Icon-2P.

SuggestedRemedy

Add to the additional information column:  
 "See 33.2.7.4 for Icon-2P details."

Response Response Status C

ACCEPT IN PRINCIPLE.

add "33.2.7.4" to additional information column.

Cl 33 SC 33.2.7.4 P 106 L 28 # 38  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Editorial

"PClass-2P is PClass-2P as defined in Table 33-11"  
 Pclass-2P is not defined in Table 33-11. It is defined in Equation 33-3a

SuggestedRemedy

Change from:  
 "PClass-2P is PClass-2P as defined in Table 33-11"  
 To:  
 "PClass-2P is PClass-2P as defined in Equation 33-3a"

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.7.4 P 107 L 27 # 39  
 Darshan, Yair Microsemi

Comment Type ER Comment Status A Pres: Yseboodt2

The text "Icon-2P is the current.."  
 Is wrong. It should be Ipeak-2P.

SuggestedRemedy

Change from:  
 "Icon-2P is the current.."  
 To:  
 "Ipeak-2P is the current.."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

Cl 33 SC 33.3.7 P 137 L 6 # 40  
 Darshan, Yair Microsemi

Comment Type ER Comment Status D Editorial

Table 33-18 item 7 parameter name "Peak operating power" need to be "Total peak operating power"

SuggestedRemedy

Change Table 33-18 item 7 parameter name "Peak operating power"  
 to:  
 "Total peak operating power"

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

We don't call item 4 Total Input average power (we just say "Input average power").

We should be consistant.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC Annex 33B P 201 L 8 # 41  
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan9

[33.2.7.4.1 Page 108, Lines 37-38 in D1.5  
 Annex B: Page 201 - 204 in D1.5

Background

This comment tries to resolve comment #144 from D1.4.

Summary of comment and remedy of 144 from D1.4:

- a) When reading 33.2.7.4.1 (PSE P2PRunb) there is a link to Annex B which is normative and contains shalls and readers may miss to read these shalls.
- b) Annex 33B contains: 2 shalls, 2 musts. Do we need a normative annex for 2 shalls?
- c) Also, the shalls are very similar to each other.

The remedy for comment 144 from D1.4:

Proposed remedy: TF to discuss the 'musts' and either reword or turn into 'shalls'.

The final remedy: To consider moving the requirement into the appropriate section ,

33.2.7.4.1 seems like a good candidate.

Add "Editor's Note (TBRBD2.0): Yair working to move the shalls to clause 33. Readers are encouraged to work with him."

Response to the comments above:

- a)33.2.7.4.1 was modified by adding shall to meet Annex B requirements so annex B will not be overlooked for its shalls.
- b)Yes, we need the normative Annex due to the fact that we need to use the test circuit and procedure as proposed. In addition, the "shalls" there were clarified, some of the "must" converted to shall and some deleted by editorial changes. So far Annex B is the simplest way to achieve annex B objectives without complicating the standard body.
- c)The shalls are not exactly similar to each other, they are referring to different alternative tests and for each test different parameters are tested. Some editorial changes were made to clarify it.
- d)It was hard to move all the shalls to 33.2.7.4.1 as proposed, instead, 33.2.7.4.1 was modified to include shall for the test methods in Annex 33B without changing most of the shalls in Annex 33B.
- e) Some editorial changes made due to typos and other errors

SuggestedRemedy

See darshan\_09\_0116.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt darshan\_09\_0116.pdf with editorial liscence to merge with other adopted comments.

Cl 33 SC 33.2.7 P 104 L 47 # 42  
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan6

Editor Note #2.

"2. The following case needs to be addressed: If PSE is using active or passive pair-to-pair current balancing circuitry, K\_Icut may be lower (down to 0.5) per equation TBD."

The accuracy of this comment is addressed in the comment marked ED\_2 due to the fact that after D1.4 changes when K\_Icut was removed and other terms were used.

The following comment addresses the main issue of Editor Note #2.

- 1.According the current spec we can implement active or passive current balancing. This is not the issue.
- 2.According to the current spec if we build active or passive current balancer and we use the limits of Icon-2P\_unb, lpeak-2P\_unb and lLIM-2P we will surely be fine. This is not the issue too.
- 3.The issue is that if we leave that spec as it is, we can't benefit from using active or passive current balancer due to the fact that we are not allowed to use lower limits of Icon-2P\_unb, lpeak-2P\_unb and lLIM-2P (that was planned for the worst case unbalance) due to the improved unbalance now. As a result we can't optimize the PSE designs for lower cost as it the only reason for using current balancer.
- 4.The fact that we can use lLIM, Icon etc. which doesn't include unbalance effect doesn't help to PSEs that wants to have independent lport-2P measurements and protection over each pairset (this concept of XXX-2P is all over the spec now).

Example: In Type 4 class 8 lLIM-2P min is 0.99A which includes unbalance effect.

Normally PSEs set their lLIM-2P protection to >0.99A per each pairset e.g. 1.08A.

It means that the 2nd pair with the lowest current will have much lower current during normal operation: lport-2P\_other= (90W/52V/2 - (0.925A-90W/52V/2 ))=0.865A-0.0596A=0.805A :

So if there is a fault at the pair with the pair with the lowest current, the protection on this pairset will happen only when the pair with the lowest current will get to > 1.08A which is a current difference of 1.08A-0.805A=0.275A. This means that the PSE have to be designed to such conditions, it is not a problem to design it as such however we can relax requirements to PSE if PSE is using active or passive current balancer.

SuggestedRemedy

See presentation and proposed Remedy in darshan\_06\_0116.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

adoptvdarshan\_06\_0116.pdf

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6 P 91 L 50 # 43  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan12

This comment addresses the following topics:

1. 33.2.6 and 33.2.7.4 Contains editorial errors.
2. Ipeak text was planned to be with the same concept as Icon text regarding all PD types and Ipeak, Ipeak-2P, Ipeak-2P\_unb etc. however, dual-signature PD with the same class and different class was not addressed properly.
3. To update 33.2.6 and 33.2.7.4 per the agreement made in offline discussions that Dual Signature PDs will be responsible to meet Pclass-2P over each pairset.
4. Does DS signature PDs need to meet unbalance requirements i.e:
  - a) PSE PI Rpse\_min/max?: YES. PD is affected by PSE unbalance and will change Pclass-PD-2P vendor design.
  - b) Icon-2P\_unb?: No. Pclass-2P is controlled by PD so we need just to meet Icon-2P=Pclass-2P/VPSE.
  - c) PD PI unbalance requirements?: No. Pclass-2P is controlled by PD so whatever PD unbalance is, the PD need to handle it or by reducing Pclass-PD so Pclass-PD-2P will meet PD advertised class over that pairset or use current balancing techniques for utilization of maximum power available.

As a result, the working assumptions are:

DS PDs with the same class is a single load PD as well as SS PD does. This means that:

- a) PSE PI Rpse\_min/max requirements apply for all connected PDs (SS and DS)DS
- b) PD PI unbalance (requirements per 33.3.7.10) need to be updated for DS PDs to meet Icon-2P=Pclass-2P/Vpse over each pair set and not Icon-2P\_unb. In addition DS PDs and SS PDs will be continue to be tested per the test circuit I n33.3.7.10.
- c) DS PDs with different class is treated as DS PDs with the same class which resulted with no differentiation in the spec for DS PD with same class or different class.

*SuggestedRemedy*

See darshan\_012\_0116.pdf for proposed remedy.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210.

Cl 33 SC 33.3.7.10 P 145 L 8 # 44  
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PD Power

The text

"All Class 5 and higher PDs shall not exceed Icon-2P-unb for longer than TCUT-2P min as defined in Table 33-11 on any pair. PDs shall...."

Need to be updated to differentiate between single signature PD that need to meet Icon-2P\_unb and for dual-signature PD that need to meet Icon-2P=Pclass-2P/Vport as defined in Equation 33-3c AND YET both PDs need to be tested per 33.3.7.10 WITH UNBALANCED PSE+Channel to ensure that if PD vendor designed his PD to meet Pclass-PD-2P over each pair set, it will not be changed by Type 3 and Type 4 PSEs that doesn't meet PSE PI unbalance requirements.

So PD will have a controlled PSE and Channel environment of unbalance like he has with all other PSE parameters.

*SuggestedRemedy*

Change from:

"All Class 5 and higher PDs shall not exceed Icon-2P-unb for longer than TCUT-2P min as defined in Table 33-11 on any pair. PDs shall...."

To:

"All Class 5 and higher single-signature PDs shall not exceed Icon-2P-unb for longer than TCUT-2P min as defined in Table 33-11 on any pair. Dual-signature PDs shall not exceed Icon-2P as defined in Equation 33-3c for longer than TCUT-2P min as defined in Table 33-11. Single-signature PDs and dual-signature PDs shall....."

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.3.8 P 147 L 27 # 45  
 Darshan, Yair Microsemi

Comment Type TR Comment Status D PD MPS

See darshan\_11\_0116.pdf for details.  
 The use case under discussion is a Type 3 PSE (with asynchronous operation of its pairset) that wants to implement the MPS option in which he looks on the pair with maximum current (for a single signature PD only) and follow the MPS rules on that pair only, and the only PD load is minimum MPS current amplitude, modulated with short MPS (7msce every TMPDO) and the minimum load is introduced right after startup.  
 In addition there is unbalance e.g. 1mA on the 1st pair and 9mA over the 2nd pair.  
 In order to perform this task PSE needs to:  
 -sample pair A  
 -average pair A  
 -send the sample to the host (D1).  
 -sample pair B  
 -average pair B  
 -send the sample to the host (D2).  
 -Host to compare if A>B and follow MPS rules if to disconnect or not.  
 We can have two problems:  
 a)Sampling rate of the host for getting the information D1 and D2.  
 b)Sampling rate of the pairs to generate D1 and D2.  
 c)The sampling action is not synchronized i.e. there is a time shift between generating the data on pairs A and B and between the acquisition of the data by the host for pairs A and B.  
 Both (a) and (b) can result with missing the pulses on A or B or both and result with false MPS disconnect action.  
 When we don't have any issues?  
 1.If the PD load DC current is > MPS minimum current i.e. 30mA 100mA etc.  
 2.If the PD load current >= MPS DC current modulated with 75msec pulses every TMPDO.  
 When we have issues?  
 When the only load right after the startup is minimum MPS load modulated with 7msec for every TMPDO.  
 How we can solve the issues?  
 1.Increasing the sample rate of PSE analog driver to be < 7msec/(2xN).  
 Problem: No so cost effective I few want to use shared resources e.g. A/D for several ports instead of A/D for each port.  
 2.Increasing the sample rate of host in addition to (1) to be < 7msec/(2xNxNumber\_of\_Ports).  
 Problem: This looks impossible with the current low cost communication used between the host and to the PSE chips e.g. 100kbps which generate about 40-60msec sample rate between PSE chip samples (and this is just for MPS while there are many functions that the host do..)  
 3.To require PD that for 500msec only after startup, it will use Type 1 MPS values or higher and after 500msec it will continue to use Type 3 short MPS.  
 -It doesn't add new requirements to PSE.  
 -It doesn't add additional burden on PD since PD need to support both Type 1/ 2 and Type 3/4 MPS rules anyway and we just reuse it.

-It will guarantee high reliability of MPS detection at the PSE  
 -It will allow flexible design of PSEs

SuggestedRemedy

See darshan\_011\_0116.pdf for updated comment and remedy.

Proposed Response Response Status Z

PROPOSED REJECT.

This comment was WITHDRAWN by the commenter.

I expect Yair to withdraw this comment as there is an update (comment 47).

CI 33 SC 33.2.7.1 P 105 L 16 # 46  
 Darshan, Yair Microsemi

Comment Type TR Comment Status D PSE Power

The text:

"A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon."  
 is correct also when the PD assigned class is 5-8 and the PD power level at that time is at any power up to class 4.

SuggestedRemedy

Change the text from:

"A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon."

To:

"A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon.

"A Type 3 or Type 4 PSE that has assigned Class 5-8 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon only if during the time the PSE is transitioning between 2-pair and 4-pair power the actual power is below class 4"

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.3.8 P 147 L 27 # 47  
 Darshan, Yair Microsemi  
 Comment Type TR Comment Status D Pres: Darshan11

-It doesn't add additional burden on PD since PD need to support both Type 1/ 2 and Type 3/4 MPS rules anyway and we just reuse it.  
 -It will guarantee high reliability of MPS detection at the PSE  
 -It will allow flexible design of PSEs

*Suggested Remedy*

See darshan\_011\_0116.pdf for updated comment and remedy.

*Proposed Response*

*Response Status Z*

REJECT.

This comment was WITHDRAWN by the commenter.

Yair will present this material (with updates) next time.

This is updated comment to similar one regarding darshan\_11\_0116.pdf.  
 See darshan\_11\_0116.pdf for details.  
 The use case under discussion is a Type 3 PSE (with asynchronous operation of its pairset) that wants to implement the MPS option in which he looks on the pair with maximum current (for a single signature PD only) and follow the MPS rules on that pair only, and the only PD load is minimum MPS current amplitude, modulated with short MPS (7msec every TMPDO) and the minimum load is introduced right after startup.  
 In addition there is unbalance e.g. 1mA on the 1st pair and 9mA over the 2nd pair.  
 In order to perform this task PSE needs to:  
 -sample pair A  
 -average pair A  
 -host need to read the sample (D1).  
 -sample pair B  
 -average pair B  
 -host need to read the sample (D2).  
 -Host to compare if A>B and follow MPS rules if to disconnect or not.  
 We can have two problems:  
 a)Sampling rate of the host for getting the information D1 and D2.  
 b)Sampling rate of the pairs to generate D1 and D2.  
 c)The sampling action is not synchronized i.e. there is a time shift between generating the data on pairs A and B and between the acquisition of the data by the host for pairs A and B.  
 Both (a) and (b) can result with missing the pulses on A or B or both and result with false MPS disconnect action.  
 When we don't have any issues?  
 1.If the PD load DC current is > MPS minimum current i.e. 30mA 100mA etc.  
 2.If the PD load current >= MPS DC current modulated with 75msec pulses every TMPDO.  
 When we have issues?  
 When the only load right after the startup is minimum MPS load modulated with 7msec for every TMPDO.  
 How we can solve the issues?  
 1.Increasing the sample rate of PSE analog driver to be < 7msec/(2xN).  
 Problem: Not so cost effective If we want to use shared resources e.g. A/D for several ports instead of A/D for each port.  
 2.Increasing the sample rate of host in addition to (1) to be < 7msec/(2xNxNumber\_of\_Ports).  
 Problem: This looks impossible with the current low cost communication used between the host and to the PSE chips e.g. 100kbps which generate about >>7msec sample rate between PSE chip samples in multiport system (and this is just for MPS while there are many functions that the host do..)  
 3.To require PD that for 500msec only after startup, it will use Type 1 MPS values or higher and after 500msec it will continue to use Type 3 short MPS.  
 The advantages of the suggested 3rd solution option:  
 -It doesn't add new requirements to PSE.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.6.3.3 P 171 L 14 # 48  
 Bennett, Ken Sifos Technologies, In

Comment Type TR Comment Status A DLL

It seems like PSE\_DLL\_POWER\_TYPE should have been changed to PSE\_DLL\_POWER\_LEVEL in all instances, but was only changed in 33.3.3.3. Also, the definitions have the issues discussed below.

33.6.3.3 definition (Pg 171, In 24):  
 PSE\_DLL\_POWER\_TYPE: A control variable that indicates the Type of the PSE by which the PD is being powered...  
 PROBLEM: It doesn't; it is set by PSE\_POWER\_LEVEL in the State Diagram, which is based upon the Type that was assumed based upon the allocation.

33.3.3.3 definition (pg 124, In 17):  
 PSE\_DLL\_POWER\_LEVEL: a control variable output by the PD power control state diagram (Figure 33-28) that indicates the power level of the PSE by which the PD is being powered...  
 PROBLEM: PSE\_DLL\_POWER\_LEVEL isn't in 33-28. 33-28 uses PSE\_DLL\_POWER\_TYPE. Also, a given value does not convey a single power level.

SuggestedRemedy  
 Change all instances of PSE\_DLL\_POWER\_TYPE to PSE\_DLL\_POWER\_LEVEL.

Change the definitions to:  
 PSE\_DLL\_POWER\_LEVEL: A control variable output by the PD power control state diagram (33-28) that indicates the minimum PSE Type capable of providing the assigned Class.

Response Response Status C

ACCEPT IN PRINCIPLE.  
 Change all instances of PSE\_DLL\_POWER\_TYPE to PSE\_DLL\_POWER\_LEVEL.

Change the definitions to:  
 PSE\_DLL\_POWER\_LEVEL: A control variable output by the PD power control state diagram (33-28) that indicates the power level of the PSE by which the PD is being powered.

Ken, please review this...  
 Need to align with PSE\_power\_level variable.

CI 33 SC 33.3.2 P 121 L 32 # 49  
 Bennett, Ken Sifos Technologies, In

Comment Type ER Comment Status R PD Class

The text states: "Editor's Note: Classification section to be updated to move all Type 3 and Type 4 PSEs to multiple-event (Mark is considered an event)."

Legacy text has taught readers that when the word "Event" is followed by "Classification", the count is equal to the number of class pulses. In 802.3bt, it is being redefined to include a single-event classification (Class-Mark) as > 1. This is likely to confuse readers.

802.3bt text updates have been, and will continue to be, complicated by this. Consistency in this definition involves changes to be made to (at least) Tables 33-1a, 33-8, 33-15a, and several text references. The tables have rows that separate type 3 single-event and Multiple-event classifications, so the change isn't simple.

The suggested remedy is one possible option for a naming change.

SuggestedRemedy  
 Change "Multiple-Event classification" to "Marked-Event classification".  
 (Terms like "Single Marked-Event" or # Marked Events could then be used.)

Response Response Status C

REJECT.  
 The mark events are actually called events.

CI 33 SC 33.3.7.4 P 140 L 7 # 50  
 Bennett, Ken Sifos Technologies, In

Comment Type ER Comment Status R PD Power

Line 7 through 49, which discusses PD lport limits for current that includes AC ripple, appears to be redundant and adds unnecessary complexity.

If PClass\_PD and Ppeak\_PD limits are met, then everything discussed there will have been met.

SuggestedRemedy  
 Remove lines 7 through 49.

Response Response Status C

REJECT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.6.3.3 P 171 L 26 # 51  
 Bennett, Ken Sifos Technologies, In

Comment Type TR Comment Status A DLL

There are two different definitions for PSE\_POWER\_LEVEL, and each has inaccuracies.

PSE\_POWER\_LEVEL is defined in 33.6.3.3 as "a control variable output by the PD state diagram (Figure 33-16) to indicate the Type of PSE by which it is being powered..."

PROBLEM: It conveys the PSE Type based upon allocation, which may be lower than the actual PSE Type.

PSE\_POWER\_LEVEL is defined in 33.3.3.3 as "a control variable that indicates to the PD the level of power the PSE is supplying..." (pg 124, line 26)

PROBLEM: It doesn't convey a single power level. For instance, a value of 3 could be an allocation of class 5 or class 6.

*SuggestedRemedy*

Change both definitions to:

PSE\_POWER\_LEVEL: A control variable output by the PD state diagram that indicates the minimum PSE Type capable of providing the assigned class.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change both definitions to:

PSE\_POWER\_LEVEL: A control variable output by the PD state diagram that indicates the power level assigned by the PSE. This value is a result of the class requested by the PD and the power available from the PSE.

Cl 33 SC 33.2.7 P 101 L 7 # 52  
 Schindler, Fred Seen Simply

Comment Type E Comment Status A Editorial

Changed text,  
 "When the PSE provides power to the PI, it shall conform with Table 33-11. Table 33-11 limit values support operation under worst-case operating conditions."

May be improved.

*SuggestedRemedy*

Replace the text with,  
 "When the PSE provides power to the PI, it shall conform with Table 33-11. Table 33-11 values support worst-case operating conditions."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.7.6 P 114 L 26 # 53  
 Schindler, Fred Seen Simply

Comment Type E Comment Status A Pres: Yseboodt2

Formulas 33-7, 33-7a, 33-7b, and 33-7c are identical and should be replaced by one formula.

*SuggestedRemedy*

Delete formulas 33-7a, 33-7b, and 33-7c.

Replace references to the deleted formulas so that they point to formula 33-7. The corrected references are on page 111.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

**Cl 79**    **SC 79.3.2.4**                      **P 215**    **L 6**                      # **54**  
 Schindler, Fred                                      Seen Simply  
*Comment Type*    **ER**                      *Comment Status*    **A**                                      *Editorial*  
 Fix the typo, "TLV.."  
*SuggestedRemedy*  
 Replace with "TLV."  
*Response*                                      *Response Status*    **C**  
 ACCEPT.  
 EZ

**Cl 79**    **SC 79.3.2.6d**                      **P 220**    **L 18**                      # **55**  
 Schindler, Fred                                      Seen Simply  
*Comment Type*    **ER**                      *Comment Status*    **A**                                      *Editorial*  
 Table 79.6f is associated with section 79.3.2.6e but appears in the Link Aggregation TLV clause.  
*SuggestedRemedy*  
 Move the reference table to the clause that covers it.  
*Response*                                      *Response Status*    **C**  
 ACCEPT IN PRINCIPLE.  
 Is this just Frame sticking the Table where it fits? Editor to fix if possible...  
 EZ

**Cl 79**    **SC 79.3.7.1**                      **P 224**    **L 38**                      # **56**  
 Schindler, Fred                                      Seen Simply  
*Comment Type*    **ER**                      *Comment Status*    **A**                                      *LLDP*  
 Existing text may be improved by removing repeated text that is not required.  
 "The PD measured voltage value field may be included to carry the PD's measured voltage value at the port defined in Table 79-7a. The PD measured current value field may be included to carry the PD's measured current value at the port defined in Table 79-7a. The PD measured energy value field may be included to carry the PD's measured energy consumption value at the port defined in Table 79-7a."

*SuggestedRemedy*  
 "The PD measured voltage value field carries a PD measured voltage value at the PI defined in Table 79-7a. The PD measured current value field carries a PD measured current value at the PI defined in Table 79-7a. The PD measured energy value field carries a PD measured energy consumption value at the PI defined in Table 79-7a."  
*Response*                                      *Response Status*    **C**  
 ACCEPT.

**Cl 79**    **SC 79.3.7.1**                      **P 224**    **L 43**                      # **57**  
 Schindler, Fred                                      Seen Simply  
*Comment Type*    **ER**                      *Comment Status*    **A**                                      *Editorial*  
 Fix typo "(voltage)".  
*SuggestedRemedy*  
 Replace with "voltage".  
*Response*                                      *Response Status*    **C**  
 ACCEPT.  
 EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 79 SC 79.3.7.2 P 224 L 51 # 58  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A LLDP

Existing text may be improved by removing repeated text that is not required.

"The PSE measured voltage value field may be included to carry the PSE's measured voltage value at the port defined in Table 79-7b. The PSE measured current value field may be included to carry the PSE's measured current value at the port defined in Table 79-7b. The PSE measured energy value field may be included to carry the PSE's measured energy consumption value at the port defined in Table 79-7b."

SuggestedRemedy

Replace referenced text with,

"The PSE measured voltage value field carries a PSE measured voltage value at the PI defined in Table 79-7b. The PSE measured current value field carries a PSE measured current value at the PI defined in Table 79-7b. The PSE measured energy value field carries a PSE measured energy consumption value at the PI defined in Table 79-7b."

Response Response Status C

ACCEPT.

Cl 33 SC 33.2.7.4 P 107 L 54 # 59  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Fix the broken hyperlink on "Table 33-11".

SuggestedRemedy

Fix the broken hyperlink on "Table 33-11".

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.5 P 130 L 37 # 60  
 Schindler, Fred Seen Simply

Comment Type TR Comment Status D PD Class

"Single-signature PDs not capable of drawing more than Class 3 power levels may omit Data Link Layer classification (see 33.6)."

Is a stealth way to permit new PDs to omit DLL, which is not a goal of this standard. Type 3 and 4 PDs are required to provide DLL support.

This comment is related to others marked COMMENT-2.

SuggestedRemedy

Strike footnote-1

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

See 67

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.5 P 130 L 41 # 61  
 Schindler, Fred Seen Simply

Comment Type TR Comment Status D PD Class

Existing text,  
 "Type 2, Type 3, and Type 4 PDs at Class 4 or greater power levels shall implement both Multiple-Event class signature (see 33.3.5.2) and Data Link Layer classification (see 33.6)."

Is a stealth way to permit new PDs to omit DLL, which is not a goal of this standard. Type 3 and 4 PDs are required to provide DLL support. The legacy sentence modified to accomplish this appears to have been,  
 "Type 2 PDs implement both 2-Event class signature (see 33.3.5.2) and Data Link Layer classification (see 33.6)."

This comment is related to others marked COMMENT-2.

*SuggestedRemedy*

Replace the reference sentence with,  
 "Type 2, Type 3, and Type 4 PDs shall implement both Multiple-Event class signature (see 33.3.5.2) and Data Link Layer classification (see 33.6)."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

See 67.

Cl 33 SC 33.3.7.1 P 137 L 53 # 62  
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A PD Power

A"The PD shall turn on or off without startup oscillation and within the first trial at any load value when fed by VPort\_PSE-2P min to VPort\_PSE-2P max (as defined in Table 33-11) with a series resistance within the range of valid Channel Resistance."

The "valid Channel Resistance", covers the entire range of channel resistance values was restricted to Rch, which is the worst-case channel resistance. The standard provides interoperability for PSE that operate over a range of values not one specific value.

*SuggestedRemedy*

Restore the legacy text.

Response Response Status C

ACCEPT IN PRINCIPLE.

Replace with:

"...with a series resistance less than or equal to RCh".

"valid Channel Resistance" is not defined anywhere.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.4.11 P 77 L 52 # 63  
 Schindler, Fred Seen Simply  
 Comment Type TR Comment Status D PSE SD

This section only covers Type 3 and 4 PSEs.

*SuggestedRemedy*

Replace existing text,  
 "set\_parameter\_type  
 This function is used by a PSE to evaluate the Type of PD connected to the link based on Physical Layer classification or Data Link Layer classification results. The PSE's PI electrical requirements defined in Table 33-11 are set to values corresponding to either a Type 1, or Type 2, Type 3, or Type 4 PSE. This function returns the following variable:

parameter\_type: A variable used by a PSE to pick between Type 1, and Type 2, Type 3 and Type 4 PI electrical requirement parameter values defined in Table 33-11.

Values:

- 1: Type 1 PSE parameter values (default)
- 2: Type 2 PSE parameter values
- 3: Type 3 PSE parameter values
- 4: Type 4 PSE parameter values

When a Type 2 PSE powers a Type 2, Type 3 or Type 4 PD, the PSE may choose to assign a value of '1' to parameter\_type if mutual identification is not complete (see 33.2.6) and shall assign a value of '2' to parameter\_type if mutual identification is complete."

With,

"set\_parameter\_type

This function is used by a PSE to evaluate the Type of PD connected to the link based on Physical Layer classification or Data Link Layer classification results. The PSE's PI electrical requirements defined in Table 33-11 are set to values corresponding to either a Type 3 or Type 4 PSE. This function returns the following variable:

parameter\_type: A variable used by a PSE to pick between Type 3 and Type 4 PI electrical requirement parameter values defined in Table 33-11.

Values:

- 1: Type is not 3 or 4 (default)
- 2: Type is not 3 or 4
- 3: Type 3 PSE parameter values
- 4: Type 4 PSE parameter values

"

Strike the related Editor's Note.  
 Proposed Response Response Status Z  
 REJECT.

This comment was WITHDRAWN by the commenter.

TFTD, but I believe Type 1 and Type 2 values should still be there...

CI 33 SC 33.2.6.2 P 97 L 44 # 64  
 Schindler, Fred Seen Simply  
 Comment Type TR Comment Status A PSE Class

The text,  
 "Type 3 and Type 4 PSEs, when connected to single-signature PDs, shall transition directly from CLASS\_EV1\_LCF to MARK\_EV\_LAST if they implement only one class event."

Is no longer applicable to Type 4 PSEs.

*SuggestedRemedy*

Replace the sentence with,  
 "Type 3 PSEs, when connected to single-signature PDs, shall transition directly from CLASS\_EV1\_LCF to MARK\_EV\_LAST if they implement only one class event."

Response Response Status C  
 ACCEPT.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.1 P 120 L 40 # 65  
Schindler, Fred Seen Simply

Comment Type TR Comment Status D PD Power

The existing sentence, "PDs that are not implemented to be insensitive to polarity, are specifically not allowed by this standard."

provides an incomplete requirement.

*SuggestedRemedy*

Add the additional requirement after the referenced sentence that clarifies what insensitive means, "PDs shall have the same capabilities when powered using either polarity."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

See 78, 174

Cl 33 SC 33.3.1 P 120 L 46 # 66  
Schindler, Fred Seen Simply

Comment Type TR Comment Status R PD Power

Existing text, "The PD shall withstand any voltage from 0 V to 57 V at the PI indefinitely without permanent damage."

is not correct and should be removed. For example, page 99 provides an Editor's note, "Editor's note: Need to perform thermal analysis on new classification timings/events on both existing and new", which shows concern that PD may not accept a classification voltage indefinitely. It is also clear that providing 57V across MDI pins connected to Ethernet transformers should not be allowed. The original meaning of this sentence is no longer clear and the Task Force has not been able to find acceptable text.

*SuggestedRemedy*

Delete the sentence.

Response Response Status C

REJECT.

It is my understanding that this requirement was originally included to make sure PDs can handle being stuck in class indefinitely without permanent damage. That should still be a requirement.

Cl 33 SC 33.3.5 P 130 L 11 # 67  
Schindler, Fred Seen Simply

Comment Type TR Comment Status A PD Class

Added Table 33-15a replaced Table 33-8 to improve readability and remove PSE information. The new table consumes most of the page while not providing significant information. It takes some readers too much time to comprehend the table.

This comment is related to others marked COMMENT-2. The resolution of this comment provides two solutions, one that provides a translation of the table and a preferred one that translates the table AND corrects an error covered in COMMENT-2.

*SuggestedRemedy*

PREFERRED:

Delete the requirement on line 4 that references Table 33-15a. Replace this sentence with, "All PDs shall provide physical layer classification. Type-1 PDs optionally provides DLL classification (see 33.6) while Type-2, Type-3 and Type-4 PDs shall provide DLL classification. "

Delete Table 33-15a and its footnote.

TRANSLATION:

Delete the requirement on line 4 that references Table 33-15a. Replace this sentence with, "All PDs shall provide physical layer classification. Type-1 PDs optionally provides DLL classification (see 33.6) while Type-2, Type-3 and Type-4 PDs shall provide DLL classification. DLL classification may be omitted by Type 3 or Type-4 Single-signature PDs not capable of drawing more than Class 3 power levels."

Delete Table 33-15a and its footnote.

Response Response Status C

ACCEPT IN PRINCIPLE.

I thought we all agreed that DLL is not required for class 0-3.

Delete the requirement on line 4 that references Table 33-15a and the table.

Replace this sentence with,

"All PDs shall provide physical layer classification. Type 1 PDs and Class 1-3 Type 3 PDs optionally provide DLL classification (see 33.6) while Type 2 PDs, Class 4-6 Type 3 PDs, and Type 4 PDs shall provide DLL classification. "

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.3.8 P 145 L 46 # 68  
Schindler, Fred Seen Simply

Comment Type TR Comment Status A PD MPS

The existing text,  
"A Type 1 or Type 2 PD, or a PD which does not detect a long first class event, shall in addition show the input impedance with resistive and capacitive components defined in Table 33-19."

I assume PDs that want to be very power efficient would draw close to 0 current that would be swamped by the current drawn by Rpd\_d of Table 33-19. Only Type 3 and 4 PDs are provided requirements for Autoclassification.

The text, "or a PD which does not detect a long first class event" grants new PD Types with Autoclassification an allowance that would break compatibility legacy AC disconnect PSEs.

*SuggestedRemedy*

Task Force should discuss the implications of this. The preferred solution is replace the referenced text with,

"All PDs shall show the input impedance with resistive and capacitive components defined in Table 33-19 when connected to a Type 1 or 2 PSE."

This permits new systems to be power efficient and legacy systems to interoperate.

Response Response Status C

ACCEPT IN PRINCIPLE.

"A Type 1 or Type 2 PD, or a PD connected to a Type 1 or Type 2 PSE, shall in addition show the input impedance with resistive and capacitive components defined in Table 33-19."

CI 33 SC 33.2.4.4 P 61 L 25 # 69  
Schindler, Fred Seen Simply

Comment Type ER Comment Status D Editorial

To make the specification easier to comprehend replace Table 33-3 with text. The proposed text focus the reader on differences (exceptions) rather than reiterating things already covered in other parts of the specification.

The existing sentence above the table is,  
"PSEs shall meet at least one of the allowable variable definition permutations described in Table 33-3."

*SuggestedRemedy*

Delete Table 33-3 and the associated change statement.

Replace the called out sentence with,  
"Type 1 PSEs may classify using a single event. Type 2 PSEs shall use data link layer classification, covered in 33.6, when using single event classification."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

As we decided not to touch the Type 1/2 State Diagram, I would not recommend changin the associated variables.

CI 33 SC 33.2.5.3 P 90 L 5 # 70  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

The existing text,  
"A pairset with all of the characteristics specified in Table 33-5 shall be accepted as a valid PD detection signature by a PSE."

should be rewritten to improve clarity.

*SuggestedRemedy*

Replace the text with,  
"A valid PD detection shall occur when a pairset has all of the characteristics specified in Table 33-5."

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to:

"A PSE shall accept as a valid PD signature a pairset with all of the characteristics specified in Table 33-5."

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.5.5 P91 L 15 # 71  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Changes made to legacy text have made the specification more difficult to understand.

A new 33.2.5.5 indicates,  
 "If a PSE that is performing detection using Alternative B (see 33.2.3) determines that the impedance at the PI is greater than Ropen as defined in Table 33-6, it may optionally consider the link to be open circuit and omit the tdbo\_timer interval."

A modified legacy Section 33.2.4.1 p58, indicates,  
 "A PSE performing detection using only Alternative B may fail to detect a valid PD detection signature.  
 When this occurs, the PSE shall back off for at least Tdbo as specified in Table 33-11 before attempting another detection. During this backoff, the PSE shall not apply a voltage greater than VOff to the PI. See 33.2.5.5 for more information on Alternative B detection backoff requirements."

Stricken legacy text immediate follows this,  
 "If a PSE performs performing detection using Alternative B detects an open circuit (see 33.2.5.5 for more information on detection backoff requirements. ) on the link section, then that PSE may optionally omit the detection backoff."

It makes more sense to grouping text, as was previously done in the legacy specification. This also keeps related text on page 58 line 15 to 18 next to the related text above it.

*SuggestedRemedy*

The Task Force should discuss this and decide where the collected text (page 58 lines 5 to 18) should be placed.

Recommend,  
 Delete section 33.2.5.5.

Restore stricken text on page 58, lines 11 to 13, with the following adjustments,  
 "If a PSE performs performing detection using Alternative B detects an open circuit (see Table 33-6 ) on the link section, then that PSE may optionally omit the detection backoff."

Delete the last sentence of the paragraph on page 58 lines 6 to 9, so that this paragraph reads,  
 "A PSE performing detection using only Alternative B may fail to detect a valid PD detection signature.  
 When this occurs, the PSE shall back off for at least Tdbo as specified in Table 33-11 before attempting another detection. During this backoff, the PSE shall not apply a voltage greater than VOff to the PI."

Response Response Status C  
 ACCEPT IN PRINCIPLE.

Change text in 33.2.4.1 to:  
 "A PSE performing detection using only Alternative B may fail to detect a valid PD detection signature.  
 When this occurs, the PSE shall back off for at least Tdbo as specified in Table 33-11 before attempting another detection, except in the case of an open circuit as specified in 33.2.5.5. During this backoff, the PSE shall not apply a voltage greater than Voff to the PI."

CI 33 SC 33.2.5.6 P91 L 26 # 72  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Fix Typo "33.2.5.0aa"

*SuggestedRemedy*

Replace with "33.2.5.0a"

Response Response Status C  
 ACCEPT.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6.2 P 96 L 39 # 73  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

The text,  
"A PSE in the state CLASS\_EV1 shall provide to the PI VClass as defined in Table 33-10.  
The timing specification shall be as defined by TCLE1 in Table 33-10.

A PSE in the state CLASS\_EV1\_LCF shall provide to the PI VClass as defined in Table 33-10. The timing specification shall be as defined by TLCF in Table 33-10. The PSE shall measure IClass and classify the PD based on the observed current according to Table 33-9 between 6 ms and 75 ms after transitioning into the state CLASS\_EV1\_LCF. The PSE may continue to monitor the current past 75 ms. If the PSE did not measure IClass in the range of Class 0 before TACS min and the PSE measures IClass in the range of Class 0 after TACS max this indicates the PD will perform Autoclass. (see 33.3.5.3)."

provides incomplete and incorrect information. It is not clear which PSE Type requirements apply to.

SuggestedRemedy

Replace the referenced text with,

"A PSE in the state CLASS\_EV1 shall provide to the PI VClass as defined in Table 33-10.

The timing specification for Type 1 and 2 PSEs shall be as defined by Table 33-10 value TCLE1, and by TLCF for Type 3 or 4 PSEs. The PSE shall measure IClass and classify the PD based on the observed current according to Table 33-9 within Table 33-10 Tpd. Type 3 and 4 PSEs may continue to monitor the current past Tpd. If the Type 3 or 4 PSE does not measure IClass in the range of Class 0 before TACS min and the PSE measures IClass in the range of Class 0 after TACS max this indicates the PD will perform Autoclass. (see 33.3.5.3)."

Response Response Status C

ACCEPT IN PRINCIPLE.

Replace the referenced text with,

"A Type 1 or Type 2 PSE in the state CLASS\_EV1 or a Type 3 or Type 4 PSE in the state CLASS\_EV1\_LCF shall provide to the PI VClass as defined in Table 33-10. The timing specification for Type 1 and 2 PSEs shall be as defined by Table 33-10 value TCLE1, and by TLCF for Type 3 or 4 PSEs. The PSE shall measure Iclass and classify the PD based on the observed current according to Table 33-9 within Table 33-10 Tpd. Type 3 and 4 PSEs may continue to monitor the current past Tpd. If the Type 3 or 4 PSE does not measure Iclass in the range of Class 0 before TACS min and the PSE measures Iclass in the range of Class 0 after TACS max this indicates the PD will perform Autoclass. (see 33.3.5.3)."

Cl 33 SC 33.2.6.2 P 96 L 42 # 74  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Several broken hyperlinks are used for Table 33-10 on lines 42 and 43.

SuggestedRemedy

Use valid hyperlinks.

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.10 P 73 L 33 # 75  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

New text uses LCF to represent long-class-finger. Text on page 132 uses the word "finger." The legacy specification references class "events." Text should use existing terminology.

SuggestedRemedy

Replace all occurrences of LCF with LCE. Replace all occurrences of finger with event.

Response Response Status C

ACCEPT.

NonEasy

Cl 33 SC 33.2.6.2 P 97 L 32 # 76  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

The Editor's note may be removed:  
"Editor's note: Cleanup of previous paragraph due to bad readability (strikeouts/underlines).  
Remove note for D1.5."

SuggestedRemedy

Remove the referenced Editor's note.

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.7.6 P 111 L 30 # 77  
 Schindler, Fred Seen Simply  
 Comment Type ER Comment Status A Pres: Yseboodt2  
 Figures 33-14, 14a, 14b, and 14c, are missing one or more axis labels.  
 SuggestedRemedy  
 Add Iport-2P to y-axis of Figure 33-14, and time for the x-axis for all referenced figures.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 210

Cl 33 SC 33.3.1 P 120 L 40 # 78  
 Schindler, Fred Seen Simply  
 Comment Type ER Comment Status R PD Power  
 The existing sentence,  
 "PDs that are not implemented to be insensitive to polarity, are specifically not allowed by this standard."  
 Should be reworded to indicate what is required.  
 SuggestedRemedy  
 Replace the sentence with,  
 "PDs shall be insensitive to polarity of the applied voltage."  
 Response Response Status C  
 REJECT.

Cl 33 SC 33.3.5.2 P 132 L 46 # 79  
 Schindler, Fred Seen Simply  
 Comment Type ER Comment Status A Pres: Yseboodt2  
 The existing text,  
 "It is not recommended to use different class signatures if the dual-signature PD powers a single electrical load."  
 should be rewritten to show preference.  
 SuggestedRemedy  
 Replace the referenced text with,  
 "Dual-signature PDs with a single electrical load should use the same class signature."  
 Or use,  
 "It is recommended that Dual-signature PDs with a single electrical load use the same class signature."  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 "It is recommended that Dual-signature PDs with a single electrical load use the same class signature."

Cl 79 SC 79.3.2 P 213 L 37 # 80  
 Schindler, Fred Seen Simply  
 Comment Type TR Comment Status A Editorial  
 The length of the LLDP frame shown in Figure 79-3 is 18 octets. The value show in TLV information string length is 20, which is incorrect.  
 SuggestedRemedy  
 Replace the reference value 20 with 18.  
 Response Response Status C  
 ACCEPT.  
 EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

**Cl 79**    **SC 79.3.2.6b**    **P 218**    **L 34**    # **81**  
 Schindler, Fred    Seen Simply  
**Comment Type** **TR**    **Comment Status** **A**    *Editorial*  
 Please implement the accept D1.4 change to Bit 1 of Table 79.6b.  
*SuggestedRemedy*  
 Please implement the accept D1.4 change to Bit 1 of Table 79.6b. See comment 205.  
**Response**    **Response Status** **C**  
 ACCEPT IN PRINCIPLE.  
  
 OBE by 193  
  
 EZ

**Cl 79**    **SC 79.3.2.6b**    **P 220**    **L 1**    # **82**  
 Schindler, Fred    Seen Simply  
**Comment Type** **TR**    **Comment Status** **A**    *LLDP*  
 Table 79.6e is associated with section 79.3.2.6b but appears in the Link Aggregation TLV clause. This Table does not belong in the LLDP section. It belongs in a section that covers Autoclassification usage for the PSE and PD, which is similar in design to 33.6. This section should provide a state diagram that covers information contained in the table.  
*SuggestedRemedy*  
 The Task Force should discuss the implications of this. For now I recommend, moving the reference table to a new section 33.6.5. Add the Editor's note below the table, "Editor's Note: Participants are encouraged to provide text and a state diagram to complete the requirements for Autoclassification."  
  
 Delete the sentence on p 219 L29,  
 "The sequence of Autoclass as triggered by LLDP is listed in Table 79-6e."  
**Response**    **Response Status** **C**  
 ACCEPT.

**Cl 79**    **SC 79.3.7**    **P 224**    **L 29**    # **83**  
 Schindler, Fred    Seen Simply  
**Comment Type** **TR**    **Comment Status** **A**    *LLDP*  
 The length of the LLDP frame shown in Figure 33-3 is 24 octets. The value show in TLV information string length is 26, which is incorrect.  
*SuggestedRemedy*  
 Replace the reference value 26 with 24.  
**Response**    **Response Status** **C**  
 ACCEPT IN PRINCIPLE.  
  
 OBE by 2

**Cl 33**    **SC 33.3.7.3**    **P 138**    **L 42**    # **84**  
 Picard, Jean    Texas Instruments  
**Comment Type** **TR**    **Comment Status** **A**    *PD Inrush*  
 "... CPort has reached a steady state and is charged to 99% of its final value. This period shall be less than Tinrush-2P min per Table 33-11."  
  
 For more clarity, a link to the PSE inrush section is needed.  
*SuggestedRemedy*  
 "... Cport has reached a steady state and is charged to 99% of its final value. This period shall be less than Tinrush-2P min per Table 33-11, with the PSE minimum inrush behavior defined in 33.2.7.5 a, b, and c."  
**Response**    **Response Status** **C**  
 ACCEPT IN PRINCIPLE.  
  
 "... CPort has reached a steady state and is charged to 99% of its final value. This period shall be less than Tinrush-2P min per Table 33-11, with the PSE minimum inrush behavior defined in 33.2.7.5."

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.7.3 P 138 L 43 # 85  
 Picard, Jean Texas Instruments

Comment Type TR Comment Status A Pres: Darshan2

"All PDs shall consume a maximum of Class 3 power for at least Tdelay-2P min."

Referring to Class 3 is misleading and incorrect. What we want to say is a type 2 or 3 PD must ensure that regardless of its load power consumption, its capacitor must be charged within Tinrush-2P min, while not drawing more than 400 mA total (capacitor recharge + load power). We also want to apply this rule to type 4 PD when connected to Type 1, 2 or 3 PSE.

SuggestedRemedy

Remedy:  
 "Single signature PDs with assigned class 0-6 shall behave like a Type 1 PD for at least Tdelay min."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 33.

Cl 33 SC 33.2.7.5 P 109 L 12 # 86  
 Picard, Jean Texas Instruments

Comment Type TR Comment Status A

"Type 3 and Type 4 PSEs that apply power to both pairsets when connected to a single-signature PD shall reach the POWER\_ON state on both pairsets within Tinrush-2P max, starting with the first pairset transitioning into the POWER\_UP state."

Need to clearly state that both pairset do not necessarily have to turn on at same time, with the exception of Type 4 having allocated Class 7-8 power.

SuggestedRemedy

Insert the following sentence after the paragraph:

"The second pairset may transition to POWER\_UP within Tinrush-2P min."

Response Response Status C

ACCEPT IN PRINCIPLE.

Insert

"The second pairset may transition to POWER\_UP anytime within this time period."

after the commented sentence.

Cl 33 SC 33.2.4.12 P 85 L 4 # 87  
 Picard, Jean Texas Instruments

Comment Type TR Comment Status A Pres: Picard1

Needs an Updated PSE Classification state diagram (Type 3 and 4) for SS and DS PD.

SuggestedRemedy

See CLASS SD presentation (JP)

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt picard\_02\_0116.pdf, picard\_03\_0116.pdf, picard\_04\_0116.pdf, picard\_05\_0116.pdf.

With the changes:

1. removal of values '0' and '5' from class\_num\_events\_pri and class\_num\_events\_sec.
2. remove mention of single event physical layer class from the same variables.

Cl 33 SC 33.3.5.1 P 131 L 4 # 88  
 Lukacs, Miklos Silicon Labs

Comment Type ER Comment Status R PD Class

class\_sig\_B is left out from the first sentence.

SuggestedRemedy

"PDs implementing a Multiple-Event class signature shall return class\_sig\_A and class\_sig\_B in accordance with..."

Response Response Status C

REJECT.

This sentence is in the single-event classification section. Thus, only class\_sig\_A applies.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.1.4 P 46 L 6 # 89

Lukacs, Miklos Silicon Labs

Comment Type E Comment Status A Editorial

The title of the clause refers to Type 1 and 2 only.

SuggestedRemedy

Replace the title with:  
System parameters

Response Response Status C

ACCEPT.

This was already done. D1.4 shows the title as "System Parameters". Somehow that got reversed.

EZ

Cl 33 SC 33.1.4 P 46 L 9 # 90

Lukacs, Miklos Silicon Labs

Comment Type E Comment Status A Editorial

The text is talking about that PSEs and PDs are categorized by Type. However Types are not mentioned anyhow in the referenced tables (table 33-1, below the text). This is confusing, because the reader may think that the basic system parameters are based on Type.

SuggestedRemedy

Leave out the cited section from the first sentence:  
"A power system consists of a single PSE, link segment, and a single PD."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 172

TFTD

Cl 33 SC 33.2.4.11 P 74 L 12 # 91

Lukacs, Miklos Silicon Labs

Comment Type E Comment Status A Editorial

Typo: 'in' is not required.

SuggestedRemedy

This function initiates the Connection Check as specified in ...

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.11 P 75 L 33 # 92

Lukacs, Miklos Silicon Labs

Comment Type E Comment Status A Editorial

the indentation of the returned variable "mr\_pd\_class\_detected\_pri" is wrong

SuggestedRemedy

indent similarly like the other variables returned.

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.5.0a P 87 L 28 # 93

Lukacs, Miklos Silicon Labs

Comment Type E Comment Status A Editorial

This comment is about Table 33-3b.  
The unit for all parameters is [s].  
The precision of the values are not consistent, and 3 digit precision is not needed.

SuggestedRemedy

Use 1 digit precision after the decimal separator for all values (0.4; 0.4; 0.2)

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 112.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.5.1 P 131 L 17 # 94  
 Lukacs, Miklos Silicon Labs

Comment Type E Comment Status D PD Class

This text is nto clear enough:  
 "Type 1 and Type 2 PDs shall present one, and only one, classification signature during classification."

*SuggestedRemedy*

Type 1 and Type 2 PDs shall present one, and only one, classification signature during the whole (all events of the) classification.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Better language is welcome....

Cl 33 SC 33.2.4.9 P 72 L 19 # 95  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Reference to this Table 33-3a seem to be in error.

*SuggestedRemedy*

On page 57, line 42, a reference to Table 33-3a is in error that should point to Table 33-3b on page 87.

On page 87 line 16, line 20, line-40 should point to Table 33-3b as well.

On page 72 line-50 Table 33-3a should reference Table 33-3b.

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement suggested remedy plus:

On page 73 line-14 Table 33-3a should reference Table 33-3b.

NonEasy

Cl 33 SC 33.2.7 P 103 L 11 # 96  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Pres: Darshan10

Table 33-11, item-9 is for output current during a short circuit, but parameter lists two blank lines and then class ranges. This listing is not clear and contains incomplete information. I also want the Task Force to confirm the unbalance factors used for the current values.

*SuggestedRemedy*

In the Parameter column for item-9 replace the first parameter blank line with Class 0-3. Replace the second parameter blank line with Class 4.

Class-5 PSEs provide 45W over 4-pairs. This is,  $45/50/2 = 450$  mA per pairset. The value shown in the table is 1.25x more, which includes 1.05x for the ILIM adjustment and must use 1.19 for unbalance. Is this value of unbalance correct? If not we need to make corrections to Item-9 values.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 26

Cl 33 SC 33.2.7 P 103 L 10 # 97  
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Fix the broken hyperlink on Figure 33-14.

*SuggestedRemedy*

Fix the broken hyperlink on Figure 33-14.

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6 P 93 L 36 # 98  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Pres: Yseboodt3

Table 33-7a provides details that make the information provided more difficult to understand.

This comment is related to others referenced by COMMENT-3.

*SuggestedRemedy*

Replace the first table column label "PD Requested Class Alt A" with "ALT Classification". Delete the second table column with header "PD Requested Class Alt B". Replace the third table column header "Number of PSE Classification Events on Alt A" with "Number of PSE Classification Events". Delete the forth column labeled "Number of PSE Classification Events on Alt B"

Add a note below the table, "Table 33-7a provides data for dual-signature PDs providing the same signature on each PSE Alternative. PSEs classify each Alternative using the same number of classification events."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

Cl 33 SC 33.2.6 P 94 L 1 # 99  
Schindler, Fred Seen Simply

Comment Type ER Comment Status A Pres: Yseboodt3

Table 33-7a provides details that make the information provided more difficult to understand. The provide solution also reduces duplication of class power levels.

This comment is related to others referenced by COMMENT-3.

*SuggestedRemedy*

After Table 33-7a, add text (after the note created by related comment-3), "PSEs provide the ALT Classification power value on each pairset, Pclass-2p, to provide at least the Assigned Class power level."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210.

Cl 33 SC 33.2.6 P 95 L 4 # 100  
Schindler, Fred Seen Simply

Comment Type ER Comment Status D Editorial

The Task Force needs determine how to eliminate duplicated shall statements. We should use this example to help determine how other duplicates will be handled in subsequent draft reviews.

For example, Table 33-8, replaced legacy Table 33-8, both versions of the table duplicate information already provided in other parts of the specification. Therefore, the shall-statement related to this table located on page 94 is also duplicated.

"A PSE shall meet one of the allowable classification configurations permutations listed in Table 33-8."

For example, on page 95 line 34 duplicates the may allowance for Type-1 PSEs, "A Type 1 PSE may optionally implement Data Link Layer classification."

*SuggestedRemedy*

A solution is to replace the duplicate requirement on page 95 line 34 with, "PSEs meet one of the allowable classification configurations permutations listed in Table 33-8." which makes the Table informative.

A second solution is to, Delete Table 33-8.

Delete the modified legacy requirement that also affects new Types on page 94, "A PSE shall meet one of the allowable classification configurations listed in Table 33-8."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.4.9 P 72 L 19 # 101  
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A Pres: Picard5

Table 33-3a provides information that may permit unintended behavior. The unintended behavior could allow Type 4 PSEs to limit power output to less than class 7 power levels. The correct information in this table already appears elsewhere in the specification.

SuggestedRemedy

Delete Table 33-3a.

Delete the sentence, on line 16, "PSEs shall meet at least one of the allowable variable definition permutations described in Table 33-3a."

Replace the following text on line-36, "Editor's Note (remove prior to D2.0): Table 33-3a must be updated to take dual-signature into account. Reason: when connected to a DS PD, PSEs need to produce 3 events in order to verify Type." with,

"Editor's Note (remove prior to D2.0): Provide text that covers PSE connected to a DS PD, PSEs need to produce 3 events in order to verify Type."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 207.

CI 33 SC 33.3.7.4 P 140 L 2 # 102  
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A PD Power

Legacy text "Peak operating power shall not exceed PPeak max." provides a requirement that affects all Types. The value Ppeak is not defined or used in the specification. This appears to be a typo. I suspect the intended requirement is covered by requirements related to Ppeak\_PD.

SuggestedRemedy

I recommend striking the line on p140, "Peak operating power shall not exceed PPeak max." because it has no meaning.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change Ppeak to Ppeak\_PD.

CI 33 SC 33.2.7.6 P 112 L 41 # 103  
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A Pres: Yseboodt2

I am not able to parse this section in a reasonable amount of time. I see too much duplication that exists for no apparent reason. Comments already provided attempt to improve this section but continued review shows even more issues. For example, Figures 33-14b and 33-14c have the same titles, which is an error.

Figure 33-14b prevents operational modes that are important to architectures providing control of both pairsets. Figures also permit more power than is intended for compliant PD devices.

SuggestedRemedy

Correct typo in Figure-33-14c title by replacing "Type 3" with "Type 4". This is supported by text on page 111 lines 18 to 22.

Add Editor's note:

"Task Force members are encouraged to review this section to improve clarity. Figures may prevent operational modes PSEs with pairset control require. Figures also permit more power than is intended for compliant PD devices."

Response Response Status C

ACCEPT IN PRINCIPLE.

Add Editor's note:

"Task Force members are encouraged to review this section to improve clarity. Figures may prevent operational modes PSEs with pairset control require. Figures also permit more power than is intended for compliant PD devices."

CI 33 SC 33.2.4.10 P 72 L 48 # 104  
 Stover, David LTC

Comment Type E Comment Status A Editorial

tcc2det\_timer definition refers to Table 33-3a, which holds no information about tcc2det.

SuggestedRemedy

Replace reference to Table 33-3a with Table 33-3b.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 95

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.10 P73 L 13 # 105  
 Stover, David LTC  
 Comment Type E Comment Status A Editorial  
 tdet2det\_timer definition refers to Table 33-3a, which holds no information about tdet2det.  
 SuggestedRemedy  
 Replace reference to Table 33-3a with Table 33-3b.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 95  
 NonEasy

Cl 33 SC 33.2.4.11 P77 L 1 # 106  
 Stover, David LTC  
 Comment Type E Comment Status A Editorial  
 Stale "or" in definition of set\_parameter\_type: "...are set to values corresponding to either a Type 1, or Type 2, Type 3, or Type 4 PSE."  
 SuggestedRemedy  
 Replace with "Type 1, Type 2, Type 3, or Type 4 PSE."  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33.2.4.11 P77 L 4 # 107  
 Stover, David LTC  
 Comment Type E Comment Status A Editorial  
 Stale "and" in definition of parameter\_type: "...to pick between Type 1, and Type 2, Type 3, and Type 4 PI electrical requirement..."  
 SuggestedRemedy  
 Replace with "Type 1, Type 2, Type 3, and Type 4 PI electrical requirement..."  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33.2.4.11 P77 L 12 # 108  
 Stover, David LTC  
 Comment Type T Comment Status A PSE SD  
 Agree with editor's note "This paragraph is a Type 2 requirement and does not belong here." A Type 2 PSE will only power a Type 3, 4 PD if that PD is capable of operating as Type 2. No additional guidance on Type 2 PSE behavior is appropriate.  
 SuggestedRemedy  
 Strike paragraph beginning with "When a Type 2 PSE powers..." from this section.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Strike the paragraph and the editor's note.

Cl 33 SC 33.2.4.12 P78 L 7 # 109  
 Stover, David LTC  
 Comment Type TR Comment Status A PSE SD  
 The port state machine (Figure 33-10a) should command the pairset state machines to a safe state whenever it leaves PISM\_START, including asynchronous exits (e.g., mr\_pse\_enable changed).  
 SuggestedRemedy  
 Add assignment "pism <= false" to port states "TEST\_MODE" and "DISABLED".  
 Response Response Status C  
 ACCEPT.

Cl 33 SC 33.2.4.12 P80 L 5 # 110  
 Stover, David LTC  
 Comment Type T Comment Status A PSE SD  
 Transition logic between CLASS\_EVAL and POWER\_UP may be reduced with no effect on behavior.  
 SuggestedRemedy  
 Replace  
 $((pd\_req\_pwr < pse\_avail\_pwr) + ((pd\_req\_pwr > pse\_avail\_pwr) * (pse\_avail\_pwr > 2))) * ted\_timer\_done$   
 with  
 $((pd\_req\_pwr < pse\_avail\_pwr) + (pse\_avail\_pwr > 2)) * ted\_timer\_done$   
 Response Response Status C  
 ACCEPT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.12 P 81 L 5 # 111  
 Stover, David LTC

Comment Type T Comment Status A Pres: Stover1

The possibility exists for alt state machines to loop in perpetuity through detection, power\_on and power removal in a staggered fashion, while connection check is never updated.

SuggestedRemedy

See stover\_1\_0116.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Work to continue. No changes to the draft result from accepting this comment.

Cl 33 SC 33.2.5.0a P 87 L 24 # 112  
 Stover, David LTC

Comment Type E Comment Status A Editorial

Mixed precision in Table 33-3b (eg Tcc2det,max = 0.400; Tcc,min = 0.2)

SuggestedRemedy

Replace "0.400" with "0.4" for Tcc2det,max and Tdet2det,max

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to implement whatever the style guide says is correct.

EZ

Cl 33 SC 33.2.6.2 P 96 L 35 # 113  
 Stover, David LTC

Comment Type T Comment Status A PSE Class

"Type 2 PSEs shall provide a maximum of 2 class and 2 mark events. Type 3 PSEs shall provide a maximum of 4 class and 4 mark events. Type 4 PSEs shall provide a maximum of 5 class and 5 mark events."

Maximum allowable class/mark event for Type 3/4 PSEs is dependant upon signature of connected PD, which is not specified here.

SuggestedRemedy

"Type 2 PSEs shall provide a maximum of 2 class and 2 mark events. Type 3 PSEs shall provide a maximum of 4 class and 4 mark events for single-signature PDs and a maximum of 3 class and 3 mark events for dual-signature PDs. Type 4 PSEs shall provide a maximum of 5 class and 5 mark events for single-signature PDs and a maximum of 4 class and 4 mark events for dual-signature PDs."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.6.2 P 98 L 13 # 114  
 Stover, David LTC

Comment Type E Comment Status A Editorial

"...and transition directly to Mark\_EV\_LAST if the class..." MARK\_EV\_LAST is not proper case.

SuggestedRemedy

Replace "Mark\_EV\_LAST" with "MARK\_EV\_LAST".

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6.2 P 98 L 18 # 115  
 Stover, David LTC  
 Comment Type T Comment Status A PSE Class  
 "See Annex 33D for an overview of Multiple-Event physical layer classification." Annex 33D for classification was removed in D1.5, in favor of Table 33-7.  
 SuggestedRemedy  
 "See Table 33-7 for an overview of Multiple-Event physical layer classification."  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Remove sentence.

Cl 33 SC 33.2.7 P 103 L 10 # 116  
 Stover, David LTC  
 Comment Type E Comment Status A Editorial  
 Link to Figure 33-14 is broken in Table 33-11.  
 SuggestedRemedy  
 Repair link to Figure 33-14.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 97.

Cl 33 SC 33.2.7.7 P 111 L 31 # 117  
 Stover, David LTC  
 Comment Type E Comment Status A Pres: Yseboodt2  
 The top of new Figure 33-14 (I\_port-2p and "8.2ms") has been cropped from new Figure 33-14.  
 SuggestedRemedy  
 Repair Figure 33-14 to include top portion.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 210

Cl 33 SC 33.2.7.7 P 111 L 31 # 118  
 Stover, David LTC  
 Comment Type E Comment Status A Editorial  
 10µs and 8.2ms are related values, pertaining only to upperbound template, and so could benefit from living on the same axis.  
 SuggestedRemedy  
 Move "10µs" to same axis as "8.2ms" in all Figure 33-14 variants.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Need to merge with any changes from Yseboodt2

Cl 33 SC 33.2.7.7 P 113 L 23 # 119  
 Stover, David LTC  
 Comment Type E Comment Status A Pres: Yseboodt2  
 Figures 33-14b and 33-14c have identical caption text. As per 33.2.7.7 paragraph 1, 33-14c should reference Type 4 PSEs.  
 SuggestedRemedy  
 In Figure 33-14c caption, replace "Type 3" with "Type 4"  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 210

Cl 33 SC 33.2.7.7 P 114 L 7 # 120  
 Stover, David LTC  
 Comment Type E Comment Status A Pres: Yseboodt2  
 I\_TBDDNAME was not updated to I\_LPS. This is the only occurrence of I\_TBDDNAME.  
 SuggestedRemedy  
 Replace I\_TBDDNAME with I\_LPS.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 210

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.7.12 P 116 L 31 # 121  
 Stover, David LTC  
 Comment Type E Comment Status A Editorial  
 I\_Port-2P-other definition points to T1/T2 SD variables section. Should point to T3/T4 SD variables.  
 SuggestedRemedy  
 Replace description of I\_Port-2P-other with "is the output current on the other pairset (see 33.2.4.9)"  
 Response Response Status C  
 ACCEPT.  
 EZ

CI 33 SC 33.3.2 P 121 L 46 # 122  
 Stover, David LTC  
 Comment Type TR Comment Status A PD Class  
 "Such Type 3 PDs advertise a class signature of 4, 5, or 6, while Type 4 PDs advertise a class signature of 7 or 8." 5, 6, 7, and 8 are Class results, not class signatures. A proper example of usage may be found on page 122, line 1.  
 SuggestedRemedy  
 "Such Type 3 PDs advertise Class 4, 5, or 6, while Type 4 PDs advertise Class 7 or 8."  
 Response Response Status C  
 ACCEPT.  
 EZ

CI 33 SC 33.3.2 P 121 L 51 # 123  
 Stover, David LTC  
 Comment Type TR Comment Status A PD Class  
 "Type 3 dual-signature PDs advertise a class signature of 1, 2, 3, or 4 on each pairset, while Type 4 dual-signature PDs advertise a class signature of 5 on at least one pairset." Paragraph refers to class signature rather than Class result, which is clearly the intent.  
 SuggestedRemedy  
 "Type 3 dual-signature PDs advertise Class 1, 2, 3, or 4 on each pairset, while Type 4 dual-signature PDs advertise Class 5 on at least one pairset."  
 Response Response Status C  
 ACCEPT.  
 EZ

CI 33B SC 33B P 201 L 1 # 124  
 Stover, David LTC  
 Comment Type E Comment Status A Pres: Darshan9  
 Numbering for Annex 33B tables and figures has been updated; appears incorrect. For example, a reference to "Table 33B-1" on line 12 is now "Table 1".  
 SuggestedRemedy  
 Please reapply necessary numbering override to format figure and table references correctly in Annex 33B.  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Lennart to check with editorial staff on correct table numbering in annexes.

CI 33 SC 33.2.9.1.2 P 119 L 22 # 125  
 Stewart, Heath LTC  
 Comment Type T Comment Status A Pres: Stewart1  
 DC MPS requirements are unclear.  
 SuggestedRemedy  
 See stewart\_1\_0116.pdf  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Adopt hstewart\_01\_0116\_baseline\_v6.pdf

CI 1 SC 1.4 P 20 L 35 # 126  
 Stewart, Heath LTC  
 Comment Type T Comment Status D Pres: Stewart2  
 Number of specified PD configurations may be reduced.  
 SuggestedRemedy  
 See stewart\_2\_0116.pdf  
 Proposed Response Response Status Z  
 REJECT.  
 This comment was WITHDRAWN by the commenter.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6 P 93 L 36 # 144  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A Pres: Yseboodt3

Table 33-7a, covering Dual Signature mutual ID alternatives, may have a couple of issues:  
 1) Unlike Table 33-7 above, it does not cover any power demotion cases so it is inconsistent in that way.  
 2) It makes no allowance for a PSE that might power dual signature PD's independently to avoid multi-event classification when unable to furnish Type-2 power, for example.

*SuggestedRemedy*

Unless there is a more sweeping alternative to this table to be presented, there should be a comment added to present the above issues.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

Cl 33 SC 33.2.6.2 P 98 L 17 # 145  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A Pres: Picard1

"A Type 3 or Type 4 PSE connected to a dual-signature PD shall skip all subsequent class events and transition directly to MARK\_EV\_LAST if the class signature detected during CLASS\_EV3 is 0, 1, 2 or 4."

- 1) Has the state machine 'caught up' to this ?
- 2) What if CLASS\_EV3 is 3 because of a dual-signature (dual) Class 3 PD (i.e. signature is 3-3-3) ?

*SuggestedRemedy*

If this is not in the state machine and is not commented into the state machine during this cycle, an editor's note should be added to address these cases.

Also, is the case of mutual ID for dual signature with Class 3 clear ? What prohibits this PSE from getting 4 events ? Or does it 4 events by design ?

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 87.

Cl 33 SC 33.2.7 P 102 L 7 # 146  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Pres: Darshan2

Table 33-11, items 5, 5a, and 5c are all labeled "Output current in POWER\_UP state". We could better distinguish from 5b and 5d, and also remove "Additional Information" that says "Total current for both pairsets."

*SuggestedRemedy*

Label items 5, 5a, and 5c:  
 Total output current in POWER\_UP state.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 33.

Cl 33 SC 33.2.7 P 103 L 51 # 147  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Pres: Darshan4

Sub-heading in Table 33-18, item 17 says:  
 "DC MPS current to be met on both pairsets".

This could be a tad clearer.

*SuggestedRemedy*

Change to:

"DC MPS current to be met on each pairset."

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt darshan\_04\_116.pdf with the following change:

Merge 17, 17a, and 17b into item 17.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.7.1 P 105 L 15 # 148  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status D PSE Power

The final phrase:  
 "A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon."

This has no coverage in the state diagram for Type 3/4, at least that I can determine. Also, does this suggest that the PSE can revert from 4-pair powering to 2-pair powering ?

SuggestedRemedy

Assuming this phrase exists to address 2-pair inrush limiting by some PSE's, we need to get coverage in state diagram. (editorial note ?)

Secondly, it might be better phrased.

"A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and powered just one pairset of that PD, may apply power to the other pairset of that PD while in the POWER\_ON state."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

CI 33 SC 33.1.4 P 46 L 6 # 149  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Heading for 3.1.4 is Type 1 and Type 2 System parameters. Needs updating.

SuggestedRemedy

Change to:

System Parameters for Type 1, 2, 3, and 4 Systems

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 89.

EZ

CI 33 SC 33.1.4 P 46 L 36 # 150  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Footnote 2: In Type 3 and Type 4 operations, the current per pairset will be impacted by pair-to-pair system unbalance...

Pair-to-Pair unbalance not applicable if Dual Signature. Change "will" to "may".

SuggestedRemedy

In Type 3 and Type 4 operations, the current per pairset may be impacted by pair-to-pair system unbalance...

Response Response Status C

ACCEPT IN PRINCIPLE.

In Type 3 and Type 4 operations, the current per pairset may be impacted by pair-to-pair system unbalance...

NonEasy

CI 33 SC 33.1.4 P 46 L 44 # 151  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A System Parameters

The sentence:

All four twisted pairs, connected from PSE PI to PD PI are required to source greater than Class 4 power at the PSE PI - ....

This is awkward and technically incorrect because wire pairs don't source power at all.

SuggestedRemedy

Revise paragraph to:

Icable is the maximum continuous current on either one or both pairsets in the multi-twisted pair cable. Each pairset consists of one pair capable of carrying (+Icable) and the other pair capable of carrying (-Icable).

Response Response Status C

ACCEPT IN PRINCIPLE.

"All four twisted pairs, connected from PSE PI to PD PI are required \*\*in order for the PSE\*\* to source greater than Class 4 power at the PSE PI - ...."

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.0a P 48 L 23 # 152  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A PSE Types

Improve readability of Table 33-1a and delete a footnote.

*SuggestedRemedy*

Split 'Type-2' row under 'Physical Layer Classification' and 'Data Link Layer Classification' into 2 rows with following content:

Single Event | Mandatory

-----  
 Multiple Event | Optional

Remove footnote 2.

Response Response Status C

ACCEPT.

Cl 33 SC 33.2.4.8 P 66 L 41 # 153  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status D PSE SD

The constant CC\_DET\_SEQ describes four possible values with different descriptions of behavior. However, inspecting the state diagram, I don't see any differences in state behavior between CC\_DET\_SEQ= 0 and CC\_DET\_SEQ= 3. They are grouped together as (CC\_DET\_SEQ= 0 or CC\_DET\_SEQ= 3) throughout the state diagram.

Issue may be here or may be in state diagram.

*SuggestedRemedy*

Revise description in 33.2.4.8 or state diagram (Figure 33-10a), or at least make editor note about this.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD (Chris/Dylan, can you comment?)

Cl 33 SC 33.2.4.8 P 66 L 40 # 154  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A PSE SD

Description of CC\_DET\_SEQ value "1" says:  
 ..... and both pairsets for a dual-signature PD.

Description of CC\_DET\_SEQ value "0" says:  
 ..... and parallel detection for a dual-signature PD.

From the state diagram, it appears that they are both doing parallel detection for a dual signature PD. Suggest the same phrase.

*SuggestedRemedy*

Change description of CC\_DET\_SEQ value "1" to:

..... and parallel detection for a dual-signature PD.

Response Response Status C

ACCEPT.

Chris/Dylan: Is this correct?

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33.2.4.9 P 68 L 1 # 155  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A PSE SD

The variable det\_temp is described as:

A temporary variable that indicates whether a 4-pair PSE has completed detection on only one alternative.....

This whole description is awkward and can be improved:

*SuggestedRemedy*

Change to:

A temporary variable that indicates whether a 4-pair PSE has completed detection on a first pairset but not on a second pairset.

Values:

0: The PSE has either not completed detection of a first pairset or has completed detection of the second pairset.

1: The PSE has completed detection of a first pairset but not the second pairset.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to:

A temporary variable that indicates whether a 4-pair PSE has completed detection on a first alternative but not on a second alternative.

Values:

0: The PSE has completed detection on both alternatives or neither alternatives.

1: The PSE has completed detection on only one alternative.

CI 33 SC 33.2.4.10 P 73 L 15 # 156  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Error in table reference: ....See Table 33-3a.

*SuggestedRemedy*

Change to: ... See Table 33-3b.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 95

NonEasy

CI 33 SC 33.2.4.12 P 79 L 6 # 157  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status R

Figure 33-10a (continued)

The function DETECT\_EVAL has logic that sets "start tpon\_timer" if not det\_temp=1.

What if the signature was invalid ? tpon\_timer should not apply.

*SuggestedRemedy*

Logic in DETECT\_EVAL should be extended to include signature validity as a condition of starting the tpon\_timer.

Response Response Status C

REJECT.

I need specific remedies...

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.12 P 80 L 1 # 158  
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A

Figure 33-10a (continued)

There are two general problems that eventually need solutions in this diagram:

1) It appears there is a redundancy in setting alt\_pri\_pwrld <- TRUE and alt\_sec\_pwrld <- TRUE in both POWER\_UP and POWER\_ON. Seems like this should only happen in POWER\_UP or under some other condition in POWER\_ON.

2) The notion that 4-pair powering turns on both pairsets together if powering 4-pairs is inconsistent with text elsewhere including 33.2.7.1 where it says: "A Type 3 or Type 4 PSE that has assigned Class 1-4 to a single-signature PD and is in the POWER\_ON state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tpon."

SuggestedRemedy

I'm not sure, but I think the POWER\_ON (and POWER\_UP ?) logic needs to evolve to consider cases where power is not turned on simultaneously to both pairsets. Those cases include:

- 1) Cases such as described in 33.2.7.1
- 2) Dual signature powering where some PSE's will power one pairset prior to detection / classification of the other pairset.

This could be editor comment for now.

Response Response Status C

ACCEPT IN PRINCIPLE.

State diagram work on power up timing to continue...

No changes to draft result from accepting this comment.

Cl 33 SC 33.2.4.12 P 81 L 32 # 159  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Figure 33-10b:

This figure is titled Type 3 and Type 4 Alternative B dual-signature...

Also, figure 33-10b is continued on 3 pages with different titles but same figure number.

SuggestedRemedy

At a minimum, it needs to be changed to "Alternative A".

More generally, should Figure 33-10b (or whatever figure numbers these become) be titled "Primary Pairset" and "Secondary Pairset" rather than Alternative A and Alternative B ? Seems like this would be more consistent with the content and would not force Primary to be Alternative A.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 162

Cl 33 SC 33.2.5.6 P 91 L 26 # 160  
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Typo: ...described in 33.2.5.0aa..

SuggestedRemedy

Remove extra 'a'

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 72.

EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.12 P 78 L 24 # 161  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A PSE SD

SM: Fig 33-10a, exit arc from START\_CXN\_CHX  
 Condition: do\_cxn\_chk\_done \* (tcc\_timer > tcc\_min)

Not the usual way to check a timer.  
 Tcc has a minimum only, it is not a range.  
 It will evaluate as TRUE whenever the minimum is crossed.

SuggestedRemedy

Change to: do\_cxn\_chk\_done \* tcc\_timer\_done

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.12 P 81 L 32 # 162  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Figure 33-10b is titled "Type 3 and Type 4 Alternative B dual-signature pseudo-independent PSE state diagram"

SuggestedRemedy

Change to: "Type 3 and Type 4 Primary Alternative dual-signature <semi>-independent PSE state diagram"

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to change all PISMs to SISMs

Cl 33 SC 33.2.4.12 P 83 L 33 # 163  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Figure 33-10c is titled "Type 3 and Type 4 Alternative B dual-signature pseudo-independent PSE state diagram"

SuggestedRemedy

Change to: "Type 3 and Type 4 Secondary Alternative dual-signature <semi>-independent PSE state diagram"

Response Response Status C

ACCEPT.

Cl 33 SC 33.2.6 P 91 L 48 # 164  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

original text: "Physical Layer classification occurs before a PSE supplies power to a PD when the PSE asserts a voltage onto one or both pairsets and the PD responds to each class event with a current representing one of a limited number of classification signatures."  
 This text is too compact and the term class event is coming as a surprise. Change it to a real intro to the whole section

SuggestedRemedy

"Physical Layer classification occurs before a PSE supplies power to a PD, when the PSE asserts a voltage in the range of Vclass as defined in Table 33-10 onto one or both pairsets. This is called a class event. The PD responds to each class event with a current representing one of a limited number of classification signatures."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.6.2 P 98 L 20 # 165  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Caption of Table 33-9 is "PD classification" while in PSE section.  
 Also, it used to be that lclass indicated the PD Class.  
 With the current classification scheme, this is no longer true.

SuggestedRemedy

Change to: Class signature electrical requirements

Response Response Status C

ACCEPT IN PRINCIPLE.

Change to:

"PD classification signatures"

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6.3 P 100 L 20 # 166  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Table 33-10a does not describe any electrical parameters but only timing parameters.

SuggestedRemedy

Change header to: Autoclass timing requirements

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.7.7 P 111 L 27 # 167  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

single signature <= missing hyphen

SuggestedRemedy

Change to single-signature

Response Response Status C

ACCEPT.

EZ

Cl 25 SC 25.4.5 P 24 L 1 # 168  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

original text: "A 100BASE-TX receiver in a Type 2 or greater Endpoint PSE or Type 2 or greater PD (see Clause 33) shall meet the requirements of 25.4.7." in Clause 25 new types are included with the phrase "Type 2 or greater" which conceivably could be misinterpreted.

SuggestedRemedy

"A 100BASE-TX receiver in a Type 2, Type 3 and Type 4 Endpoint PSE or Type 2, Type 3 and Type 4 PD (see Clause 33) shall meet the requirements of 25.4.7."

Response Response Status C

ACCEPT IN PRINCIPLE.

Adding serial commas:

"A 100BASE-TX receiver in a Type 2, Type 3, and Type 4 Endpoint PSE or Type 2, Type 3, and Type 4 PD (see Clause 33) shall meet the requirements of 25.4.7."

EZ

Cl 30 SC 30 P 28 L 1 # 169  
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

The test that goes after BEHAVIOUR of an ATTRIBUTE should end with a period + semicolon. This is not always done.

SuggestedRemedy

Bulk-fix.

Response Response Status C

ACCEPT.

I have no idea what you are suggesting. An example would have been very helpful.

TFTD (Task Force to Discuss).

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

CI 33 SC 33 P 43 L 1 # 170  
Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

In order to prepare the document for WG ballot, we should consider what our final amendment will look like.

At the moment we are using Change/Add/Delete editing instructions at the paragraph and section level.

This has become quite convoluted.

The 802.3at endearment to 802.3-2008 replaced the complete Clause.

Since we are changing at least as much as the .at TF did, this seems like a good idea to repeat.

SuggestedRemedy

Add "Replace Clause 33 with the following:" before the Clause 33 title.

Remove redundant editing instructions.

Response Response Status C

ACCEPT.

CI 33 SC 33 P 43 L 1 # 171  
Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

The change bars in the draft are intended to show us where changes have been made.

The current change bars are the accumulative result of 9 draft revisions.

As a result on many pages the change bar is a continuous black line (there is nearly no part of the text untouched).

A possibility, which I believe will aid us in subsequent reviews, would be to reset the change bars for every draft. It would then be clearly visible which text has been touched as a result of the current draft cycle.

Question to the TF: which would you prefer?

- Maintain change bars as is
- Reset change bars for every draft

SuggestedRemedy

TFTD (Task Force To Decide)

Response Response Status C

ACCEPT IN PRINCIPLE.

Lennart to reset the change bars after deleting the editing instructions. Lennart to create diff document for D1.6 to 2012.

CI 33 SC 33.1.4 P 46 L 17 # 172  
Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Table 33-1 has become a bit clunky due to the Type 4 power range discussion. Using Class seems out of place.

SuggestedRemedy

Change Table caption to: "System parameters"

Change column 1 header to: "PSE Type"

Change column 1 entries into: "Type 1, Type 2, Type 3, Type 4"

Response Response Status C

ACCEPT.

This is reversing a change we made at the last meeting.

TFTD.

CI 33 SC 33.2.0a P 48 L 17 # 173  
Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Table 33-1a Optional features column essentially is an Autoclass yes/no selection.

SuggestedRemedy

Change header to "Autoclass" and in column use "Yes/No".

Response Response Status C

ACCEPT IN PRINCIPLE.

Change header to "Autoclass" and in column use "Optional/No".

NonEasy

CI 33 SC 33.3.1 P 120 L 40 # 174  
Yseboodt, Lennart Philips

Comment Type E Comment Status A PD Power

original text: "PDs that are not implemented to be insensitive to polarity, are specifically not allowed by this standard."

Remove triple negation for clarity

SuggestedRemedy

"PDs that are sensitive to polarity, are specifically not allowed by this standard."

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.7.5 P 142 L 6 # 175  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 In figure 33-18 we have "PClass PSE".  
 Words should be swapped.  
 SuggestedRemedy  
 Change to "PSE PClass"  
 Response Response Status C  
 ACCEPT.

Cl 33 SC 33A.3 P 197 L 13 # 176  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 "33A.3 Intra Pair Resistance Unbalance"  
 Section name has every word capitalized.  
 Not in line with Style Guide.  
 SuggestedRemedy  
 change to: "33A.3 Intra-pair resistance unbalance"  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33A.4 P 197 L 30 # 177  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 "33A.4 Recommended Channel Requirement For pair-to-pair Resistance  
 Unbalance in 4-Pair Operation"  
 Section name has every word capitalized.  
 Also, something is either a REQUIREMENT or RECOMMENDED, but not both.  
 Not in line with Style Guide.  
 SuggestedRemedy  
 Change to: "33A.4 Pair-to-pair channel resistance unbalance requirement for 4-pair  
 operation"  
 Response Response Status C  
 ACCEPT.  
 NonEasy

Cl 33 SC 33A.5 P 198 L 1 # 178  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 Figure 33A-4 is titled "PSE PI unbalance specification and E2EP2PRunb"  
 SuggestedRemedy  
 Change to "PD Resistance unbalance elements overview"  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33A.5 P 198 L 21 # 179  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Unbalance  
 "R Pair\_PD\_max and R Pair\_PD\_min represent PD common mode input effective  
 impedance of pairs of the same polarity. The effective resistance Z i is the measured..."  
 Concept of "resistance" and "impedance" is mixed up.  
 SuggestedRemedy  
 "R Pair\_PD\_max and R Pair\_PD\_min represent PD common mode input effective  
 resistance of pairs of the same polarity. The effective resistance R\_i in Figure 4 is the  
 measured..."  
 - Change Z to R in Figure 4.

Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Lennart has editorial license to change all Z's and impedances to R's and resistances in  
 Annex 33A.5

Cl 33 SC 33A.5 P 198 L 22 # 180  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Unbalance  
 "The effective resistance Z i is the measured voltage V\_eff\_pd\_i..."  
 Not clear what 'i' is about. Also choice of 'i' unfortunate since there are also currents  
 involved.  
 SuggestedRemedy  
 Clarify: "The effective resistance Z\_n (where n is the pair number) is the measured voltage  
 V\_eff\_pd\_n..."  
 Response Response Status C  
 ACCEPT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33B P 201 L 24 # 181  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 In Figure 33B-1 it shows "PD+Channel", this can be misread as the + channel.  
 SuggestedRemedy  
 Change to: "PD and Channel".  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33B.2 P 203 L 6 # 182  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Pres: Yseboodt1  
 Voltages V1 and V2 in Fig 33B-3 are not referenced to anything.  
 SuggestedRemedy  
 Replace by yseboodt\_1\_0116\_fig33b3\_v100.pdf.  
 In the measurement recipe below, change as follows:  
 2) Measure Vdiff  
 4) Measure Vdiff' in the same manner as Vdiff  
 Response Response Status C  
 ACCEPT.

Cl 33 SC 33B.3 P 204 L 7 # 183  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Pres: Yseboodt6  
 In Figure 33B-4 it is unclear if the load is a current sink or a constant power load.  
 Also PSE should be PSE PI.  
 Also 'PD + Channel' should be 'PD and Channel'.  
 SuggestedRemedy  
 Replace Figure by yseboodt\_6\_0116\_fig33b4\_v100.pdf  
 Response Response Status C  
 ACCEPT.

Cl 33 SC 79.3.7.2 P 225 L 54 # 184  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 Line missing at bottom of table 79-7a.  
 SuggestedRemedy  
 Add line.  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 79.3.7.2 P 227 L 54 # 185  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 Line missing at bottom of table 79-7b.  
 SuggestedRemedy  
 Add line.  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 79.4.2 P 232 L 49 # 186  
 Yseboodt, Lennart Philips  
 Comment Type E Comment Status A Editorial  
 Line missing at bottom of table 79-10.  
 SuggestedRemedy  
 Add line.  
 Response Response Status C  
 ACCEPT.  
 EZ

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.9 P 68 L 26 # 187  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Pres: Yseboodt2

"Editor's note (remove D1.6): Variables I Port , I Port-2P , and I Port-2P-other are not present in the current variable list. Section 33.2.7 depends on these. To be resolved."

If yseboodt\_2\_0116\_v4xx.pdf is adopted, there is no need for a definition of any of these terms in the variable list.

SuggestedRemedy

Remove note.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 210

Cl 33 SC 33.2.4.9 P 72 L 36 # 188  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Pres: Picard5

"Editor's Note (remove prior to D2.0): Table 33-3a must be updated to take dual-signature into account.

Reason: when connected to a DS PD, PSEs need to produce 3 events in order to verify Type."

Not correct. We might need a bit of text in the definition of class\_num\_events, but the Table values are correct for single and dual-signature.

SuggestedRemedy

Remove editor's note.

Response Response Status C

ACCEPT.

Cl 33 SC 33.2.2 P 50 L 1 # 189  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Editorial

Figures 33-4\* to 33-7\* use "2-Pair" and "4-Pair" in their captions. Should not be capitalized.

SuggestedRemedy

This should be "2-pair" and "4-pair".

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.4 P 59 L 9 # 190  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A PSE Power

"Iport: Output current (see 33.2.7.6)."

The referred section only talks about Iport-2P.

SuggestedRemedy

Change first lines of 33.2.7.6 to:

"If I\_Port, the current supplied by the PSE to the PI, exceeds I\_CUT-2P for longer than T\_CUT-2P, Type 1 and Type 2 PSEs may remove power from the PI.

If I\_Port-2P, the current supplied on a pairset by the PSE to the PI, exceeds I\_CUT-2P for longer than T\_CUT-2P, Type 3 and Type 4 PSEs may remove power from that pairset."

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.3.3.5 P 126 L 1 # 191  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Editorial

The D1.5 state machine is still drawn in draw.io format.  
 yseboodt\_8\_0116\_PD\_SM.pdf is a redrawn version in Visio.  
 It is identical in every way, except I've placed the states a bit different to get a better layout.

SuggestedRemedy

Adopt yseboodt\_8\_0116\_PD\_SM.pdf  
 In case any deviation is found between yseboodt\_8\_0116\_PD\_SM.pdf and the D1.5 SM, the D1.5SM is leading.  
 Other comments against the SM to be executed on yseboodt\_8\_0116\_PD\_SM.pdf

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33B P 201 L 1 # 192  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Editorial

Page numbers are missing for pages in Annex 33B.

SuggestedRemedy

Add page numbers.

Response Response Status C

ACCEPT.

EZ

Cl 79 SC 79.3.2.6b P 218 L 1 # 193  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Editorial

Accepted Comment no. 205 from D1.4 cycle was not implemented.

SuggestedRemedy

Implement comment no. 205 from D1.4.

Response Response Status C

ACCEPT.

EZ

Cl 79 SC 79.3.7.1 P 224 L 38 # 194  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A LLDP

79.3.7.1 PD measurements refers to 'port' when it should refer to PD PI + reword.

"The PD measured voltage value field may be included to carry the PD's measured voltage value at the port defined in Table 79-7a. The PD measured current value field may be included to carry the PD's measured current value at the port defined in Table 79-7a. The PD measured energy value field may be included to carry the PD's measured energy consumption value at the port defined in Table 79-7a."

SuggestedRemedy

"The PD's measured voltage value field may be included to carry the PD's measured voltage value at the PI or pairset as defined in Table 79-7a. The PD's measured current value field may be included to carry the PD's measured current value at the PI or pairset as defined in Table 79-7a. The PD's measured energy value field may be included to carry the PD's measured energy consumption value at the PI or pairset as defined in Table 79-7a."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 56

Cl 79 SC 79.3.7.2 P 224 L 51 # 195  
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A LLDP

79.3.7.1 PSE measurements refers to 'port' when it should refer to PSE PI + reword.

"The PSE measured voltage value field may be included to carry the PSE's measured voltage value at the port defined in Table 79-7b. The PSE measured current value field may be included to carry the PSE's measured current value at the port defined in Table 79-7b. The PSE measured energy value field may be included to carry the PSE's measured energy consumption value at the port defined in Table 79-7b."

SuggestedRemedy

"The PSE's measured voltage value field may be included to carry the PSE's measured voltage value at the PI or pairset as defined in Table 79-7b. The PSE's measured current value field may be included to carry the PSE's measured current value at the PI or pairset as defined in Table 79-7b. The PSE's measured energy value field may be included to carry the PSE's measured energy consumption value at the PI or pairset as defined in Table 79-7b."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 58

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 79 SC 79.3.7.3 P 226 L 5 # 196  
 Yseboodt, Lennart Philips  
 Comment Type ER Comment Status A Editorial  
 V\_Port\_PD should be V\_Port\_PD-2P.  
 SuggestedRemedy  
 Fix.  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 79 SC 79.3.7.3 P 228 L 34 # 199  
 Yseboodt, Lennart Philips  
 Comment Type ER Comment Status A Editorial  
 Table 79-7c, value cell, missing space between '1 through65535'  
 SuggestedRemedy  
 Fix.  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 79 SC 79.3.7.3 P 228 L 8 # 197  
 Yseboodt, Lennart Philips  
 Comment Type ER Comment Status A Editorial  
 V\_PORT\_PSE is capitalized.  
 I\_PORT and I\_PORT-2P is capitalized.  
 SuggestedRemedy  
 Change to:  
 V\_Port\_PSE-2P, I\_Port and I\_Port-2P respectively.  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 33 SC 33.2.8 P 117 L 4 # 200  
 Yseboodt, Lennart Philips  
 Comment Type ER Comment Status A PSE Power  
 original text: "A PSE shall not initiate power provision to a link if a PD would not be able to ascertain the available amount of power based on the number of classification events produced by the PSE."  
 Unless a reader already fully understands the intricacies of power demotion, this might have well been written in Klingon.  
 SuggestedRemedy  
 Better & shorter:  
 "A PSE shall not provide power to a Class 0 to 3 PD, unless the PSE can supply the requested Class of that PD."

Cl 79 SC 79.3.7.3 P 228 L 28 # 198  
 Yseboodt, Lennart Philips  
 Comment Type ER Comment Status A Editorial  
 Table 79-7c is missing a caption.  
 SuggestedRemedy  
 Caption = "Power price index value field"  
 Response Response Status C  
 ACCEPT.  
 EZ

Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 "A PSE shall not initiate power provision to a link or a pairset if the connected PD is not able to ascertain the available power based on the number of classification events produced by the PSE.  
 For example, a PSE that has less than Class 3 power would not provision power to the link or pairset for a PD requesting a Class 3 or higher power level."  
 "A PSE shall not provide power to a single-signature Class 0 to 3 PD, unless the PSE can supply the requested power of that PD."

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.12 P 85 L 1 # 201  
 Yseboodt, Lennart Philips  
 Comment Type T Comment Status A Pres: Yseboodt4  
 Autoclass behaviour is still missing from the SD.  
 SuggestedRemedy  
 Adopt yseboodt\_4\_0116\_Autoclass\_PSE\_v100.pdf  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Adopt pages 3 and 4 of yseboodt\_4\_0116\_Autoclass\_PSE\_v130.pdf

Cl 33 SC 33.3.3.5 P 126 L 1 # 202  
 Yseboodt, Lennart Philips  
 Comment Type T Comment Status A Pres: Yseboodt5  
 Autoclass is still missing from the PD SD.  
 SuggestedRemedy  
 Adopt yseboodt\_5\_0116\_Autoclass\_PD\_v100.pdf  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 Adopt pages 1 and 2 of yseboodt\_5\_0116\_Autoclass\_PD\_v100.pdf

Cl 33 SC 33.3.7.5 P 142 L 18 # 203  
 Yseboodt, Lennart Philips  
 Comment Type T Comment Status A Editorial  
 Figure 33-18 uses T\_CUT min which no longer exists.  
 SuggestedRemedy  
 Change to T\_CUT-2P min  
 Response Response Status C  
 ACCEPT.  
 EZ

Cl 79 SC 79.3.7.3 P 228 L 28 # 204  
 Yseboodt, Lennart Philips  
 Comment Type T Comment Status A LLDP  
 The meaning of the value of the Power price index field is not specified.  
 In order to future-proof this field, a bit should be allocated for future use.  
 SuggestedRemedy  
 The MSB bit set to 1 will have a reserved meaning.  
 Add a new row to Table 79-7c  

Bit	Function	Value/meaning
15	Future use	1 = Reserved / ignore field
.		0 = Power price index in bits 14:0

 Change existing row:  

Bit	Function	Value/meaning
14:0	Power price index	Power price index = decimal value of bits. Valid values for these bits are decimal 1 through
.		

 32767.  
 Response Response Status C  
 ACCEPT.

Cl 33 SC 33.2.4.9 P 67 L 28 # 205  
 Yseboodt, Lennart Philips  
 Comment Type TR Comment Status A Pres: Picard5  
 class\_num\_events:  
 "A variable indicating the maximum number of classification events performed by the PSE."  
 Does not take dual signature into account.  
 SuggestedRemedy  
 "A variable indicating the maximum number of classification events performed by the PSE on a pairset."  
 Works for both single and dual.  
 Type 3 dual will produce max 3 events/pairset (and 4 is allowed and needed for single)  
 Type 4 dual will produce max 4 events/pairset (and 5 is allowed and needed for single)  
 Response Response Status C  
 ACCEPT IN PRINCIPLE.  
 OBE by 87

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.4.9 P 68 L 43 # 206  
Yseboodt, Lennart Philips

Comment Type TR Comment Status A Pres: Yseboodt9

The variable list for the new SM contains mr\_mps\_valid, which serves no purpose in the SM.

mr\_mps\_valid\_pri and mr\_mps\_valid\_sec supersede it.

SuggestedRemedy

Remove mr\_mps\_valid from the variable list.

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt yseboodt\_9\_0116.pdf

Leave mr\_mps\_valid in the variable list pending further work.

Cl 33 SC 33.2.4.9 P 72 L 23 # 207  
Yseboodt, Lennart Philips

Comment Type TR Comment Status A Pres: Picard5

Type 4 PSEs are required to be capable of 5 class events.  
Table 33-3a allows 1,2,4 or 5.

SuggestedRemedy

Change the value of class\_num\_events for Type 4 to "5".

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt yseboodt\_10\_0116\_Table\_33\_3a.pdf as new Table 33-3a.

Cl 33 SC 33.2.4.9 P 72 L 27 # 208  
Yseboodt, Lennart Philips

Comment Type TR Comment Status A PSE SD

Table 33-3a shows the allowed PSE variable definition permutations.

Since this is in the Type 3+4 SD section, Type 1 and 2 should not be listed (that is in Table 33-3).

SuggestedRemedy

Remove the rows for Type 1 and Type 2

Change caption of Table to "Allowed Type 3 and Type 4 PSE variable definition permutations"

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.10 P 73 L 43 # 209  
Yseboodt, Lennart Philips

Comment Type TR Comment Status D PSE SD

The timer list for the new SM contains tmpdo\_timer, which serves no purpose in the SM.  
tmpdo\_timer\_pri and tmpdo\_timer\_sec supersede it.

SuggestedRemedy

Remove tmpdo\_timer from the variable list.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Tmpdo\_timer is used twice in figure 33-10a (page 80, line 41), as well as in figure 33-10e.

Cl 33 SC 33.2.6 P 91 L 29 # 210  
Yseboodt, Lennart Philips

Comment Type TR Comment Status A Pres: Yseboodt2

Dual-signature behaviour has been described in an inconsistent manner in 33.2.6, 33.2.7 and the relevant PD sections.

SuggestedRemedy

Adopt yseboodt\_2\_0116\_v4xx.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt yseboodt\_2\_0116\_v421.pdf

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.2.6 P 94 L 1 # 211  
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A Pres: Yseboodt3

Table 33-7b lists the power classifications for dual-signature PDs.  
 - it does not properly show power demotion for all the supported combinations  
 - it requires 3 class events in many cases where 1 or 2 is possible as well

SuggestedRemedy

Replace Table 33-7b by yseboodt\_3\_0116\_Table\_33\_7b\_v100.pdf

Response Response Status C

ACCEPT.

Cl 33 SC 33.3.3.5 P 126 L 4 # 212  
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A PD SD

Entry arc into IDLE uses variable V\_Reset which isn't listed in the constants section.  
 Note: this is wrong in 802.3-2012 as well.

SuggestedRemedy

Add:  
 "V\_Reset Reset voltage (see Table 33-17)"  
 to 33.3.3.2

Response Response Status C

ACCEPT.

NonEasy

Cl 33 SC 33.3.3.5 P 126 L 4 # 213  
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A Pres: Yseboodt7

PD state machine global entry arc into IDLE has following condition:  
 [ (Vpd < Vreset) + !power\_received ] \* mdi\_power\_required \* !pd\_reset

The effect is that at ANY voltage below Vport\_pd min, this condition will apply  
 and reset the state machine to IDLE.

The intent is to allow a global override to reset the SM to IDLE when the PI  
 voltage drops below Vreset.

SuggestedRemedy

Replace condition by:  
 (Vpd < Vreset) \* mdi\_power\_required \* !pd\_reset  
 See yseboodt\_7\_0116\_idlestuck.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Please file a maintenance request.

IEEE P802.3bt D1.5 4PPoE 8th Task Force review comments

Cl 33 SC 33.6.3.2 P 168 L 9 # 214  
Schindler, Fred Seen Simply

Comment Type TR Comment Status D DLL

Accepted D1.4 comments 161, 162, 158, 163, 160, and 164, broke how Extended power functions. Note that newly created Table 33-16a has incorrect values for PClass\_PD, and was referenced in many of these comments as the reason for the change. One incorrect table resulted in at least six changes to the draft. The changes resulted in Physical layer and DLL power values not agreeing. For example, if a PSE powers a Type-4 class-8-SS PD the PD gets Pclass of 90W using physical layer classification. After the Draft changes, the DLL initialized value is 71W. Therefore, if the PD is using extended power the PSE will see a PD request and power consumption that exceeds the 71W provided by the PSE. The PSE may then remove power to the PD. In the worst-case, the PD will consume more than 25% more than the power allocated by the PSE.

Physical and DLL values will match when D1.4-PSE DLL initial values are used and Table 33-16a are corrected. If required, a PSE supporting DLL can use the power negotiation mechanism to reduce the power supplied to the PD.

SuggestedRemedy

Restore the initial values before the changes made by comments 161, 162, 158, 163, 160, and 164.

On page 132 change PClass\_PD for Type-3, SS, class-6 PDs from 51.0 to 60.0, and change PClass\_PD for Type-4, SS, class-8 PDs from 71.0 to 90.0.

Note if the Task Force prefers, rather than restoring class-8 maximums to 99.0 W the value 90.0 W may be used. The value 90.0 W is required for correct Extended power operation. The value 99.0W permits Extended power and devices outside the standard to use power levels that meet LPS requirements.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD as this was changed as part of D1.4 comment cycle.