

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 00 SC 0 P L # 96

Skinner, John Sifos Technologies, In

Comment Type E Comment Status A Editorial

There are a number of sentence constructs that use the "Oxford" comma style, example:

"...MARK_EV1, MARK_EV2, MARK_EV3, or MARK_EV4..."

and constructs that do not use this form, where the last comma is omitted, example:

"...MARK_EV1, MARK_EV2, MARK_EV3, MARK_EV4 and MARK_EV_LAST..."

SuggestedRemedy

The document should use a consistent comma style for listing multiple associated entities. (this commenter's preference is the Oxford style)

Response Response Status C

ACCEPT.

A man after my own heart...

EZ

Cl 1 SC 1.4 P 20 L 30 # 190

Dove, Daniel Dove Networking Solut

Comment Type ER Comment Status A Editorial

Link to 33.2.3 not valid

SuggestedRemedy

Add a hyperlink

Response Response Status C

ACCEPT.

EZ

Cl 1 SC 1.4 P 20 L 32 # 191

Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A Definitions

Definition of Single Singature PD doesn't clarify if it applies to all types of PDs, or only specific types. Since Type 1 and 2 PDs were never distinguished by signature type, I'm not clear whether this should only apply to Type 3 and Type 4, or we retro-define Type 1 and Type 2 PDs.

SuggestedRemedy

Task Force decide which types of PDs will identify as single-signature PDs and change as necessary.

Response Response Status C

ACCEPT IN PRINCIPLE.

Change Definitions in 1.4 to:

Single-signature: A property of a PD where it shares the same detection signature, classification signature, and maintain power signature between both pairsets (see IEEE 802.3, Clause 33).

Dual-signature PD: A property of a PD where it has independent detection signatures, classification signatures, and maintain power signatures on each pairset (see IEEE 802.3, Clause 33).

Cl 1 SC 1.4 P 20 L 34 # 192

Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A Definitions

Definition of Dual Singature PD doesn't clarify if it applies to all types of PDs, or only specific types. Since Type 1 and 2 PDs were never distinguished by signature type, I'm not clear whether this should only apply to Type 3 and Type 4, or we retro-define Type 1 and Type 2 PDs.

SuggestedRemedy

Task Force decide which types of PDs will identify as dual-signature PDs and change as necessary. Is such a change within scope of PAR/objectives/Criteria?

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 191.

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Cl 25 SC 25.1 P 1 L 1 # 6
 Zimmerman, George CME Consulting, Inc.

Comment Type ER Comment Status A Editorial

Page numbers jumped back to 1. (this is going to make hell of your comment processing)
 Note that there is another jump back to 1 after PDF page 200 (annex 33D start)

SuggestedRemedy

check page numbering parameters in frame file for clause 25, and annex 33D and make them continue from previous document in book.

Response Response Status C

ACCEPT.

EZ

Cl 25 SC 25.4.5 P 24 L 1 # 243
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A PMD

Existing text,

"A 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. A transmitter in a Type 2 Endpoint PSE or Type 2 PD delivering or accepting more than 13.0 W average power shall meet either the Open Circuit Inductance (OCL) requirement in 9.1.7 of TPPMD, or meet the requirements of 25.4.5.1."

should be improved to clarify meaning and to include new Types.

SuggestedRemedy

"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. A 100BASE-TX transmitter in a Type 2 or greater Endpoint PSE or Type 2 or greater PD delivering or accepting more than 13.0 W average power shall meet either the Open Circuit Inductance (OCL) requirement in 9.1.7 of TPPMD, or meet the requirements of 25.4.5.1."

Response Response Status C

ACCEPT.

Cl 25 SC 25.4.7 P 25 L 43 # 193
 Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A PMD

Text says Type 2, but earlier reference (pg 24, line 1) states "Type 2 or greater".

SuggestedRemedy

add the words "or greater" behind the words "Type 2" twice in this paragraph.

Response Response Status C

ACCEPT.

EZ

Cl 30 SC 30.9 P 6 L 5 # 113
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Management

We need to visit Clause 30.9 when Clause 33 is stable to implement all additions.

SuggestedRemedy

Add editors note to 30.9: "TODO: visit this section and make consistent with Clause 33 & 79".

Response Response Status C

ACCEPT.

EZ

Cl 30 SC 30.9.1.1.4 P 7 L 1 # 164
 Yseboodt, Lennart Philips

Comment Type T Comment Status A

original text: "An ENUMERATED VALUE that has one of the following entries: ... Pinout A and B listed"

4 pair pinout missing

SuggestedRemedy

Amend to list:
 both PSE Pinout Alternative A and Alternative B

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by comment 7.

EZ

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Cl 30 SC 30.9.1.1.4 P7 L1 # 7
 Zimmerman, George CME Consulting, Inc.

Comment Type TR Comment Status A Mangement

PSE Power Pairs needs updating to 4 pair and new contents of 33.5.1.1.4

SuggestedRemedy

Add enumerated values:
 both "PSE Pinouts on both Alternative A and B"
 Add sentence on line 12, prior to "If a Clause 22...":
 "The enumeration "both" indicates that PSE Pinout uses both Alternatives A and B for detection and power."

Response Response Status C

ACCEPT.

EZ

Cl 30 SC 30.9.1.1.6 P7 L53 # 165
 Yseboodt, Lennart Philips

Comment Type T Comment Status A Management

original text: "An ENUMERATED VALUE that has one of the following entries: ... Class 0 to 4 PD"

bt classes missing

SuggestedRemedy

Append to list:
 class5Class 5 PD
 class6Class 6 PD
 class7Class 7 PD
 class8Class 8 PD

Add editors note: "Dual signature also needs to be addressed here".

Response Response Status C

ACCEPT IN PRINCIPLE.

Add:

"Editor's Note (to be removed before working group ballot): Clause 30 to be reviewed and updated when Clause 33 and 79 are stable."

to beginning of Clause 30.

Cl 30 SC 30.9.1.1.6 P7 L53 # 8
 Zimmerman, George CME Consulting, Inc.

Comment Type TR Comment Status A Management

Classifications in Clause 30 need updating to include new PD classes

SuggestedRemedy

Add Classes 5 through 8, and Autoclass to the list of enumerated values.
 Add editor's note to P8 L5 (after end of paragraph) stating:
 "Editor's Note (to be removed prior to Working Group ballot): linkage to management registers to be aligned with resolution of issues on how to report more classes than there are bits available in 802.3-2015 Clause 33 PSE status register."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 165

Cl 30 SC 30.12.2.1.11 P13 L36 # 11
 Zimmerman, George CME Consulting, Inc.

Comment Type E Comment Status A Editorial

30.12.2.1.11 through 30.12.2.1.13,
 30.12.2.1.19 through 30.12.2.1.20,
 30.12.2.1.22 through 30.12.2.1.33,
 30.12.3.1.1 through 30.12.3.1.4,
 30.2.3.1.11 through 30.2.3.1.13, and
 30.2.3.1.19 through 30.2.3.1.27 are not related to PoE and are not needed in the draft.

SuggestedRemedy

Delete P13 L36 through P14 L14
 Delete P16 L28 through P17 L1
 Delete P17 L20 through P20 L4
 Delete P20 L13 through P21 L7
 Delete P22 L17 through P22 L49, and
 Delete P25 L1 through P26 L44

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 30 SC 30.12.2.1.14 P 14 L 19 # 166
 Yseboodt, Lennart Philips

Comment Type T Comment Status A Management

original text: "BIT STRING [SIZE (2)]"

"A GET attribute that returns a bit string indicating whether the local system is a PSE or a PD and whether it is Type 1 or Type 2. The first bit indicates Type 1 or Type 2. The second bit indicates PSE or PD. A PSE shall set this bit to indicate a PSE. A PD shall set this bit to indicate a PD.;"

SuggestedRemedy

"BIT STRING [SIZE (3)]"

"A GET attribute that returns a bit string indicating whether the local system is a PSE or a PD and whether it is Type 1, Type 2, Type 3 or Type 4. The first two bits indicate Type 1, Type 2, Type 3 or Type 4. The third bit indicates PSE or PD. A PSE shall set this bit to indicate a PSE. A PD shall set this bit to indicate a PD.;"

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 165

Cl 30 SC 30.12.2.1.14 P 14 L 23 # 10
 Zimmerman, George CME Consulting, Inc.

Comment Type TR Comment Status A

"A GET attribute that returns a bit string indicating whether the local system is a PSE or a PD and whether it is Type 1 or Type 2. The first bit indicates Type 1 or Type 2." Needs to be extended to include types 3 & 4

SuggestedRemedy

Add "Editor's Note (to be removed prior to Working Group Ballot) - Need to extend aLldpXdot3LocPowerType or another variable to manage types 3 and 4."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 165

Cl 30 SC 30.12.2.1.18a P 15 L 38 # 194
 Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A Management

For these new variables, I could not find a tolerance spec. Should there be one?

SuggestedRemedy

If so, please include a tolerance on the accuracy of the values provided.

Response Response Status C

ACCEPT IN PRINCIPLE.

This is protocol, accuracy is not specified.

No changes to the draft result from accepting this comment.

Cl 30 SC 30.12.2.1.18a P 15 L 44 # 167
 Yseboodt, Lennart Philips

Comment Type T Comment Status A Editorial

original text: "The PD measured voltage value is encoded according to Equation (79-x), where x is the decimal value of aLldpXdot3LocPDMeasuredVoltageValue." This calculation is actually in Table 79-6c.

SuggestedRemedy

"The PD measured voltage value is encoded according to Table 79-6c, the decimal value of bits is aLldpXdot3LocPDMeasuredVoltageValue."

Response Response Status C

ACCEPT.

EZ

Cl 30 SC 30.12.2.1.18b P 16 L 2 # 168
 Yseboodt, Lennart Philips

Comment Type T Comment Status A Editorial

original text: "The PD measured current value is encoded according to Equation (79-x), where x is the decimal value of aLldpXdot3LocPDMeasuredCurrentValue" This calculation is actually in Table 79-6c.

SuggestedRemedy

"The PD measured current value is encoded according to Table 79-6c, the decimal value of bits is aLldpXdot3LocPDMeasuredCurrentValue"

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 30 SC 30.12.2.1.18c P 16 L 14 # 169
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A Editorial
 original text: "The PSE measured voltage value is encoded according to Equation (79-x), where x is the decimal value of aLldpXdot3LocPSEMeasuredVoltageValue"
 This calculation is actually in Table 79-6d.
 SuggestedRemedy
 "The PSE measured voltage value is encoded according to Table 79-6d, the decimal value of bits is aLldpXdot3LocPSEMeasuredVoltageValue"
 Response Response Status C
 ACCEPT.
 EZ

Cl 30 SC 30.12.2.1.18d P 16 L 26 # 170
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A Editorial
 original text: "The PSE measured voltage value is encoded according to Equation (79-x), where x is the decimal value of aLldpXdot3LocPSEMeasuredCurrentValue"
 This calculation is actually in Table 79-6d.
 SuggestedRemedy
 "The PSE measured voltage value is encoded according to Table 79-6d, the decimal value of bits is aLldpXdot3LocPSEMeasuredCurrentValue"
 Response Response Status C
 ACCEPT.
 EZ

Cl 30 SC 30.12.3 P 12 L 28 # 12
 Zimmerman, George CME Consulting, Inc.
 Comment Type ER Comment Status A Editorial
 Need clause 30.12 header, otherwise Table of contents runs straight from 30.10.2 to 30.12.2.1.5 without heirarchy
 SuggestedRemedy
 Insert on P34 L28:
 30.12 Layer Management for Link Layer Discovery Protocol (LLDP)
 30.12.2 LLDP Local System Group managed object class
 30.12.2.1 LLDP Local System Group attributes
 Response Response Status C
 ACCEPT.
 EZ

Cl 30 SC 30.12.3.1.14 P 23 L 4 # 171
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A Management
 original text: "BIT STRING [SIZE (2)]
 BEHAVIOUR DEFINED AS:
 A GET attribute that returns a bit string indicating whether the remote system is a PSE or a PD and whether it is Type 1 or Type 2. The first bit indicates Type 1 or Type 2. The second bit indicates PSE or PD."
 Add new types
 SuggestedRemedy
 "BIT STRING [SIZE (3)]"
 "A GET attribute that returns a bit string indicating whether the remote system is a PSE or a PD and whether it is Type 1, Type 2, Type 3 or Type 4. The first two bits indicate Type 1, Type 2, Type 3 or Type 4. The third bit indicates PSE or PD.;"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 165.

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Cl 33 SC 0 P 0 L # 111
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A Editorial
 The capitalization of Class should only have been done when referring to a power Class.
 eg. Class 5, Class 7.
 Something like a 'class event' should not be capitalized.
 SuggestedRemedy
 Editor to go through document and check capitalization of Class and class.
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33 P 0 L 0 # 112
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A Editorial
 Page numbers in the PDF reset on clause boundary.
 SuggestedRemedy
 Editor to make sure page numbering keeps going such that PDF page nr matches with
 document page nr.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by comment 6
 EZ

Cl 33 SC 33.1 P 27 L 14 # 20
 Jones, Chad Cisco
 Comment Type E Comment Status R
 "This clause uses several terms defined in clause 1.4." I took an action item in Bonita
 Springs to enumerate these new terms.
 SuggestedRemedy
 add: " - See terms: 1-Event class signature, 1-Event classification, 1000BASE-T, 10BASE-
 T/100BASE-TX, 2-Event class signature, 2-Event classification, Dual-signature PD,
 Endpoint PSE, IPort, Link Section, Midpsan, Midpsan PSE, Midspan PSE, Midspan PSE,
 pairset, Power Interface (PI), Power Sourcing Equipment (PSE), Powered Device (PD),
 PSE Group, Single-signature PD, TP-PMD, Twisted Pair Medium Dependent Interface (TP
 MDI), Type 1 PD, Type 1 PSE, Type 2 PD, Type 2 PSE, Type 3 PD, Type 3 PSE, Type 4
 PD, Type 4 PSE, VPD, VPSE.
 Response Response Status C
 REJECT.

Cl 33 SC 33.1.1 P 27 L 52 # 13
 Zimmerman, George CME Consulting, Inc.
 Comment Type TR Comment Status A Objectives
 "c) Compatibility—Clause 33 utilizes the MDIs of 10BASE-T, 100BASE-TX, and 1000BASE-
 T, without modification.... The clause does not address the operation of 10GBASET. For
 10GBASE-T operation, the channel model specified in Clause 55 needs to be met without
 regard to DTE Power via MDI presence or operation.
 d) Simplicity—The powering system described here is no more burdensome on the end
 users than the requirements of 10BASE-T, 100BASE-TX, or 1000BASE-T."
 Needs to be modified to reflect addition of 10GBASE-T.
 SuggestedRemedy
 change first sentence of item (c) to read: "10BASE-T, 100BASE-TX, 1000BASE-T and
 10GBASE-T without modification."
 Delete "The clause does not address the operation of 10GBASE-T."
 change item (d) to read "10BASE-T, 100BASE-TX, 1000BASE-T, or 10GBASE-T."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Strike out all the removed text.
 Didn't we remove the objectives section completely?
 We Did. Line 40 has the editing instruction to delete section 33.1.1.

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Cl 33 SC 33.1.1 P 27 L 53 # 244
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Objectives

Existing text does not cover new types. Legacy text repeats (introduces) cabling requirements. Text covering 10-GBASE-T points to another Clause to get channel requirements. All other PHY data rates place channel requirements for power over DTE in Clause 33. Unnecessary text may confuse the reader.

"Type 1 operation adds no significant requirements to the cabling. Type 2 operation requires ISO/IEC 11801:1995 Class D or better cabling, and a derating of the cabling maximum ambient operating temperature. The clause does not address the operation of 10GBASET.

For 10GBASE-T operation, the channel model specified in Clause 55 needs to be met without regard to DTE Power via MDI presence or operation."

SuggestedRemedy

Replace text with the following,

"Type 1 operation adds no significant requirements to the cabling. Cable requirements for all PSEs are covered in 33.1.4."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 13.

Cl 33 SC 33.1.4 P 30 L 9 # 245
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A Types

The Task Force should discuss the sentence,
 "The power system is defined by the lowest Type of PSE or PD in a system and has certain basic parameters defined according to Table 33-1. "

The text permits PSEs that can provide class-8 power levels to be considered class 1 when connected to a PD consuming class 1 power. This permits CAT-3 cabling to be used. This results in a cable power dissipation increase of about 230x, which is about 9x more channel loss than a Type-1 system permits. This comment is related to another comment marked with CONCERN1.

SuggestedRemedy

Change how the power system is defined so that cabling requirements are dictated by,
 1.The maximum class power the PSE Type can provide, or
 2.The maximum class power the PSE can provide.
 The first choice is preferred because users may select PSEs based on Type because historically this has been the case.

Replace the called-out sentence with,
 "The power system is defined by the highest power class allowed for the Type of PSE in a system and has certain basic parameters defined according to Table 33-1. "

Or

"The power system is defined by the highest power class of the PSE in a system and has certain basic parameters defined according to Table 33-1. "

Response Response Status C

ACCEPT IN PRINCIPLE.

Change sentence to:
 "The power system has certain..."

Change title of Table 33-1 to: "System power parameters Vs PSE Type"

Make header of column 1: "PSE Type"

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Cl 33 SC 33.1.4 P 30 L 18 # 246
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A Pres: Fred1

Table 33-1 no longer represents system power levels correctly because Type 4 PSEs may provide class 1 to 8 power levels. Note this concern is related to a comment marked with CONCERN1. This comment may be OBE by another comment marked by CONCERN1 (three comments total).

SuggestedRemedy

Replace Type with the highest power class permitted with the referenced cable system. This results in these changes,

1. Replace Table 33-1 title with "System power parameters Vs PSE Class Power"
2. Replace Table 33-1 column one title "System Type (Lowest type of PSE and PD)" with "System Power Limit (PSE class)"
3. Type 1 becomes Class 3 or 0.
4. Type 2 becomes Class 4.
5. Type 3 becomes Class 5 and 6.
6. Type 4 becomes Class 7 and 8.

Response Response Status C

ACCEPT IN PRINCIPLE.

Editor to:

1. Replace Table 33-1 title with "System power parameters Vs Maximum PSE Class"
2. Replace Table 33-1 column one title "System Type (Lowest type of PSE and PD)" with "System Power Limit (Maximum PSE class)"
3. Type 1 becomes Class 0 to 3.
4. Type 2 becomes Class 4.
5. Type 3 becomes Class 5 and 6.
6. Type 4 becomes Class 7 and 8.

Cl 33 SC 33.1.4 P 30 L 22 # 15
 Zimmerman, George CME Consulting, Inc.

Comment Type ER Comment Status A Editorial

Table 33-1, header: R_ch (the underscore denotes subscript)
 This parameter appears everywhere else as R_Ch, with the C capitalized. The nomenclature for this is very close to R_Chan, which is the channel max, so it's confusing enough already.

SuggestedRemedy

Make all references to R_ch R_Ch, consistent.
 (change Table 33-1 header to R_Ch)

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.1.4 P 30 L 24 # 154
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

DC loop resistance values are not centered in Y-axis of cell.

SuggestedRemedy

Center values.

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.1.4 P 30 L 42 # 228
 Dwelley, David Linear Technology

Comment Type E Comment Status A Editorial

End of Note 2: "(fix reference when finalized)" is sure to be forgotten

SuggestedRemedy

Fix reference to 33.2.7.4.1. Remove paranthetical note.

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.1.4 P 30 L 45 # 229
 Dwelley, David Linear Technology
 Comment Type E Comment Status A Editorial
 I believe the study of unbalance and temperature rise has been completed.
 SuggestedRemedy
 Remove editor's note.
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.1.4 P 30 L 46 # 26
 Darshan, Yair Microsemi
 Comment Type E Comment Status A Editorial
 There is no need for the Editor Note regarding the effect of extended power.
 SuggestedRemedy
 Remove the Editor Note
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 229.

Cl 33 SC 33.1.4 P 30 L 41 # 195
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status R Unbalance
 Note 2 should only apply for Type 3 when in 4 pair operation. This note doesn't clarify that
 SuggestedRemedy
 In Type 3 and Type 4 operation, (when operating on all 4 pairs) the
 Response Response Status C
 REJECT.
 The note simply points them to the unbalance section which clearly contains this information.

Cl 33 SC 33.1.4.2.1 P 32 L 3 # 230
 Dwelley, David Linear Technology
 Comment Type E Comment Status A Unbalance
 33.1.4.2.1 just says "See Annex 33A", which also appears in 33.1.4.2.
 SuggestedRemedy
 Strike 33.1.4.2.1. Replace "within a twisted pair" with "for twisted pair cables" in 33.1.4.2.
 Fix ISO reference with newer reference that specs pair-to-pair balance. The editor's note in 33.1.4.2.1 can probably be removed as well.
 Response Response Status C

ACCEPT IN PRINCIPLE.
 Change section 33.1.4.2 to:
 Link sections for all types shall comply with the resistance unbalance requirements for twisted pair cabling as specified in ISO/IEC 11801:2002. Refer to Annex 33A for more information including 4-pair operation channel requirements for pair-to-pair resistance unbalance.
 Strike section 33.1.4.2.1

Cl 33 SC 33.2.0a P 32 L 33 # 247
 Schindler, Fred Seen Simply
 Comment Type TR Comment Status A Types
 Normative text is not present. The existing text is,
 "PSEs can be categorized as either Type 1, Type 2, Type 3, or Type 4 PSEs. Table 33-1a shows the permissible PSE types along with supported parameters."
 SuggestedRemedy
 Replace the text with,
 "PSEs can be categorized as either Type 1, Type 2, Type 3, or Type 4 PSEs. PSEs shall meet one or more of the PSE Type requirements provide in Table 33-1a."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 "PSEs can be categorized as either Type 1, Type 2, Type 3, or Type 4 PSEs. Table 33-1a summarizes the permissible PSE types along with supported parameters."

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Cl 33 SC 33.2.0a P 32 L 45 # 115
 Yseboodt, Lennart Philips
 Comment Type T Comment Status D Types
 Optional is misleading, see footnote as exception
 SuggestedRemedy
 Change to "Optional^2 or Mandatory"
 Change cell to the left of it (on Phys. Lay. Class.) to
 "Multiple-Event or Single-Event", so it matches in logical order.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

Cl 33 SC 33.2.0a P 32 L 47 # 75
 Johnson, Peter Sifos Technologies
 Comment Type E Comment Status A Types
 In Table 33-1a, under "Supports 4-pair power", the phrase "Allowed" is used to say that
 Type-3, Class 3&4 PSE's may provide 2 or 4 pair power. This is not typical terminology
 for tables in the standard.
 SuggestedRemedy
 Replace "Allowed" with "Optional".
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.0a P 33 L 1 # 264
 Stover, David Linear Technology
 Comment Type E Comment Status A Editorial
 Link to 33.3.8 not valid
 SuggestedRemedy
 Add hyperlink
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.3 P 41 L 36 # 196
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status A Types
 I don't think this statement is explicit enough
 SuggestedRemedy
 replace "use" with "use only the"
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.4 P 42 L 1 # 231
 Dwelley, David Linear Technology
 Comment Type E Comment Status A Editorial
 Editor's note on page 65 line 1 covers this
 SuggestedRemedy
 Strike this editor's note.
 Response Response Status C
 ACCEPT.
 EZ

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CI 33 SC 33.2.4.1 P 42 L 7 # 58
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PSE SD

The text "Detection, classification, and power turn-on timing shall meet the specifications in Table 33-4, Table 33-10, and Table 33-11."
 Need to be updated to include more tables with timing information.

SuggestedRemedy

Change ""Detection, classification, and power turn-on timing shall meet the specifications in Table 33-4, Table 33-10, and Table 33-11."

To:
 "Connection Check, Detection, classification, and power turn-on timing shall meet the specifications in Table 33-3a, Table 33-4, Table 33-10, Table 33-10a, and Table 33-11."

Response Response Status C

ACCEPT IN PRINCIPLE.

"Connection Check timing requirements are specified in Table 33-3a. Detection timing requirements are specified in Table 33-4. Classification timing requirements are specified in Table 33-10. Autoclass timing requirements are specified in Table 33-10a. Power turn-on timing requirements are specified in Table 33-11."

CI 33 SC 33.2.4.1 P 42 L 23 # 76
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A Editorial

"If a PSE performs detection using Alternative B (see 33.2.5.5...)" is a wierd phrase.
 Suggest replacing this.

SuggestedRemedy

Eliminate text up to and including parenthesis and just say:

"See 33.2.5.5 for more information on Alternative B detection backoff requirements."

Response Response Status C

ACCEPT IN PRINCIPLE.

Implement suggested remedy and merge with previous paragraph.

CI 33 SC 33.2.4.1 P 42 L 27 # 197
 Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status R PSE SD

I think this sentence only applies to Type 1 and Type 2 PSEs. Does this apply for the case of 4P powering PSE? Example: CC finds DS PD, Seq 0, starts both detections at once.

SuggestedRemedy

Replace "PSE" with "Type 1 or Type 2 PSE"

Response Response Status C

REJECT.

I'm not sure this is true. If a 4P PSE sees DS and gets an invalid sig on Alt A and an open on Alt B, it could be because there is a 2-Pair Midspan PSE on Alt B. The Alt A PSE should still do another detection within Tdbo...

TFTD

CI 33 SC 33.2.4.3 P 42 L 53 # 198
 Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A Pres: Bullock1

A cost improvement is possible if detection for dual-signature PDs can be performed in sequence rather than simultaneously.

SuggestedRemedy

See state diagram changes in bullock_01_3bt_1015 for detail, as I believe Chris addresses this in his presentation.

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt changes shown in Bullock_01_1015_rev_2.pdf on pages 7-14.

Add "Editor's Note: Chris/Dylan to update SD to include Primary/Secondary alternatives, update the test modes, brackets/paranthesis will be replaced by underscores, no two states at once, no nested ifs, no soft connects on the same page."

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.4 P 44 L 6 # 59
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PSE SD

The variable PD_4pair_cand in page 44 line 6 and PD_4pair_candidate in page 45 line 10:

Not clear they are two separate variables or different variables (the name is different and some of the content).

1. Clarify the intent.
2. The variable PD_4pair_can is for Type 3 and Type 4 only since Type 1 and 2 will work only with 2P.
3. the variable PD_4pair_candidate is for Type 3 and 4 so I guess it is the correct variable.
4. In the text of PD_4pair_candidate on page 45 lines 11-15 we need to use the term "on both modes" instead of "both pairsets" if we want to keep consistency with PD side terminology.

SuggestedRemedy

Clarify the use of the two variables or adopt the following remedy:

1. Delete PD_4pair_can in page 44 lines 6 -11.
2. Change from "on both pairsets" on page 45 lines 14 and 15 (two locations) to: "on both modes"

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete PD_4pair_candidate and replace all instances of PD_4pair_candidate with PD_4pair_cand.

Other instance on page 70, line 27.

Cl 33 SC 33.2.4.4 P 44 L 7 # 255
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A PSE SD

Variable PD_4pair_cand on page 66 and PD_4pair_candidate on page 67 appear to be for the same purpose. Neither variable is used.

SuggestedRemedy

1)Delete both variables and replace one of them with an Editors that reads, Editor's Note: Task force members that want a physical means for determining whether a legacy PD may be powered on both pairsets should provide a solution.

OR

2)Use only variable PD_4pair_candidate as this variable is used on page 92.

Response Response Status C

ACCEPT IN PRINCIPLE.

Add "Editor's Note: Classification section of state diagram to be updated with determination of variable PD_4pair_cand." below Figure 33-9d.

Cl 33 SC 33.2.4.4 P 45 L 5 # 207
 Dove, Daniel Dove Networking Solut

Comment Type E Comment Status A Pres: Bullock1

The sentence reads unclearly. It is a state machine that is being communicated with not an alternative.

SuggestedRemedy

replace with "to the Alternative A State Machine that the Alternative B State Machine is between"

Response Response Status C

ACCEPT IN PRINCIPLE.

Variable text to be updated so that new changes use suggest language for November presentation.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.4 P 45 L 10 # 265
 Stover, David Linear Technology

Comment Type TR Comment Status A PSE SD

Two versions of the same variable are present, PD_4pair_cand and PD_4pair_candidate.
 "cand" is used by SD, "candidate" is used in 33.2.5.6, 4PID requirements.

SuggestedRemedy

Pick a single name and definition. Correct outdated references to whichever name is removed.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by comment 59.

Cl 33 SC 33.2.4.4 P 45 L 23 # 116
 Yseboodt, Lennart Philips

Comment Type T Comment Status A PSE SD

"1: PSE performs Single-Event Physical Layer classification."

Since we now consider 1 class_ev + 1 mark_ev = Multiple-event, this is no longer correct for Type 3 and 4.

SuggestedRemedy

"1: A Type 1 PSE performs Single-Event Physical Layer Classification.
 A Type 2 PSE performs Single-Event Physical Layer Classification or Multiple-Event Physical Layer classification with a maximum of 1 Class event.
 A Type 3 or Type 4 PSE performs Multiple-Event Physical Layer classification with a maximum of 1 Class event."

Response Response Status C

ACCEPT IN PRINCIPLE.

"1: PSE performs Single-Event Physical Layer Classification or Multiple-Event Physical Layer classification with a maximum of 1 Class event."

Cl 33 SC 33.2.4.4 P 45 L 50 # 61
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PSE SD

The definition of lport-2P_other is incorrect.
 See details in updated Figure 33-14/a/b/c in page 5 of darshan_04_1015.pdf.

SuggestedRemedy

Change "lport-2P-other
 Output current on the other pairset, defined as IPort-2P-other = IPort - IPort-2P."
 To:
 lport-2P-other
 Output current on the other pairset, defined as IPort-2P-other = IPort - IPort-2P. lport-2P and lport-2P-other are pairs of the same polarity.

Response Response Status C

ACCEPT.

NonEZ

Cl 33 SC 33.2.4.4 P 46 L 12 # 29
 Darshan, Yair Microsemi

Comment Type T Comment Status D pres: Darshan2

The text "Type 3 and Type 4 PSEs shall use this value."
 The legacy powerup was canceled for Type 3 and 4.
 In order to keep interoperability between Type 3 systems that operate 4P and those who operate 2P it is better to delete the use of legacy powerup to Type 4 only.

SuggestedRemedy

Change from:
 "Type 3 and Type 4 PSEs shall use this value."
 To:
 "Type 4PSEs shall use this value."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

I don't follow the logic.

TFTD.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.4 P 46 L 15 # 117
 Yseboodt, Lennart Philips
 Comment Type T Comment Status D PSE SD
 "The PSE monitors either the DC or AC Maintain Power Signature (MPS, see 33.2.9.1)."
 AC MPS does not exist anymore in Type 3 and 4
 SuggestedRemedy
 "Type 1 and Type 2 PSEs monitor either the DC or AC Maintain Power Signature (MPS).
 Type 3 and Type 4 PSEs monitor the DC Maintain Power Signature (MPS, see 33.2.9.1)."
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

Cl 33 SC 33.2.4.4 P 46 L 27 # 261
 Schindler, Fred Seen Simply
 Comment Type TR Comment Status A PSE SD
 Variable mr_pse_alternative provides values, A, B, and BOTH, to indicate which PSE
 Alternative is used. The Task Force needs to decide whether all 2-mosfet PSES drive ALT-
 A when only one pairset is driven on a PSE that supports BOTH pairsets.
 SuggestedRemedy
 Recommend using a default of ALT-A for the case called out. This solution is used in the
 comment marked CONCERN2.
 Modify the existing text, on line 31, to provide this informative guidance,
 Values: A: The PSE uses PSE pinout Alternative A, which is also the default pinout when
 one pairset is driven on a PSE that supports BOTH pairsets.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 198

Cl 33 SC 33.2.4.4 P 46 L 32 # 57
 Darshan, Yair Microsemi
 Comment Type TR Comment Status D PSE SD
 Missing mr_pse_alternative A + B(x) in the following text and also we need to correct it
 while keeping old text unchanged:
 "mr_pse_alternative
 This variable indicates which Pinout Alternative the PSE uses to apply power to the link
 (see Table 33;V2). This variable is provided by a management interface that may be
 mapped to the PSE Control register Pair Control bits (11.3:2) or other equivalent function.
 Values:A: The PSE uses PSE pinout Alternative A.
 B: The PSE uses PSE pinout Alternative B.
 BOTH: The PSE uses both Alternative A and Alternative B."
 SuggestedRemedy
 Change from"
 "mr_pse_alternative
 This variable indicates which Pinout Alternative the PSE uses to apply power to the link
 (see Table 33-2). This variable is provided by a management interface that may be
 mapped to the PSE Control register Pair Control bits (11.3:2) or other equivalent function.
 Values:
 A: The PSE uses PSE pinout Alternative A.
 B: The PSE uses PSE pinout Alternative B.
 BOTH: The PSE uses both Alternative A and Alternative B."
 To:
 "mr_pse_alternative
 This variable indicates which Pinout Alternative the PSE uses to apply power to the link
 (see Table 33-2). This variable is provided by a management interface that may be
 mapped to the PSE Control register Pair Control bits (11.3:2) or other equivalent function.
 Values:
 A: The PSE uses PSE pinout Alternative A.
 B: The PSE uses PSE pinout Alternative B.
 BOTH1: The PSE uses both Alternative A and Alternative B.
 BOTH2: The PSE uses both Alternative A and Alternative B(x)."
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.
 Why is this needed in the SD section? We don't list whether the PSE uses Alt A or Alt
 A(X)...

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.4 P 46 L 52 # 62
 Darshan, Yair Microsemi
 Comment Type **TR** Comment Status **A** Pres: Bullock1
 The variable option_vport_lim need to be used in the Type 3 and 4 state machine.
 SuggestedRemedy
 Clarify where it is being used in Type 3 and 4 state machine.
 If not used: Add Editor Note: Editor Note: option_vport_lim need to be used in Type 3 and 4 state machine in the same way it was used in Type 1 and 2.
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 OBE by 198

Cl 33 SC 33.2.4.4 P 47 L 31 # 210
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **A** Pres: Bullock1
 The text in this sentence is incomplete or inaccurate.
 SuggestedRemedy
 Replace PSE with "A Type 1 or Type 2 PSE" since Type 3 and Type 4 use pwr_app_a/b?
 Response Response Status **C**
 ACCEPT.

Cl 33 SC 33.2.4.4 P 48 L 39 # 172
 Yseboodt, Lennart Philips
 Comment Type **TR** Comment Status **A** PSE SD
 "pse_skips_multiclass:
 The PSE can choose to bypass a portion of the classification state flow. A variable that is set in an implementation-dependent manner."
 Only applies to Type 2 PSEs that support DLL.
 SuggestedRemedy
 "pse_skips_multiclass:
 A Type 2 PSE can choose to bypass a portion of the classification state flow. A variable that is set in an implementation-dependent manner."
 Response Response Status **C**
 ACCEPT.
 EZ

Cl 33 SC 33.2.4.4 P 49 L 10 # 63
 Darshan, Yair Microsemi
 Comment Type **ER** Comment Status **A**
 It is not clear if Table 33-3 is about possible maximum class_num_events
 E.g. Type 3 can use only max of 1,2 or 4 and it may use 3 events.
 Or Table 33-3 tells that for type 3 we can use only 1,2 and 4.
 SuggestedRemedy
 Group to clarify the intent.
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 The table defines the allowed values for class_num_events variable, which has a definition of:
 "A variable indicating the maximum number of classification events performed by the PSE.
 A variable that is set in an implementation-dependent manner."
 So clearly, it is the maximum. A Type 3 or 4 PSE can use 3 fingers as shown in the SD.
 No changes result from accepting this comment.

Cl 33 SC 33.2.4.4 P 43 L 17 # 199
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **A** Pres: Bullock1
 There are a number of variables that are declared in text one way, and in the State Diagram in another way.
 SuggestedRemedy
 Editor review & reconcile all variables in text with diagram. Examples; Alt_A_pwr (text) alt_a_pwr (diagram)
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Variable section to be updated to match State Diagram for November presentation.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.4 P 43 L 38 # 200
 Dove, Daniel Dove Networking Solut
 Comment Type E Comment Status A PSE SD
 The text is not completely clear on how the negotiation takes place. Its implicit, but not explicit.
 SuggestedRemedy
 insert "via L2 classification" at the end of both lines
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 insert "via Data Link Layer classification" at the end of both lines

Cl 33 SC 33.2.4.4 P 43 L 43 # 201
 Dove, Daniel Dove Networking Solut
 Comment Type E Comment Status A Pres: Bullock1
 Minor editorial suggestion.
 SuggestedRemedy
 Insert "to be" between "is" and "2-pair"
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.4.4 P 43 L 44 # 202
 Dove, Daniel Dove Networking Solut
 Comment Type E Comment Status A Pres: Bullock1
 Minor editorial suggestion.
 SuggestedRemedy
 Insert "to be" between "is" and "4-pair"
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.4.4 P 44 L 24 # 203
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status A PSE SD
 pwr_app_a is a variable only used by the Type 3 and Type 4 state diagram. Should it be declared as only applying to them. This raises a general question since there are two SDs but the variable list is singular. Should we break out Type 1 and Type 2 variables, Type 3 and Type 4, and common variables? Or leave them all mixed up?
 SuggestedRemedy
 I will leave this to the Task Force to decide. It affects a number of variables.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Chris to update variable section(s) for November presentation.

Cl 33 SC 33.2.4.4 P 44 L 54 # 204
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status R Pres: Bullock1
 The text in this sentence is incomplete or inaccurate.
 SuggestedRemedy
 Replace "POWER_UP[A]" with "the POWER_UP[A] or IDLE[A] states."
 Response Response Status C
 REJECT.

Cl 33 SC 33.2.4.4 P 45 L 1 # 205
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status R Pres: Bullock1
 The text in this sentence is incomplete or inaccurate.
 SuggestedRemedy
 Replace "POWER_UP[A]" with "the POWER_UP[A] or IDLE[A] states."
 Response Response Status C
 REJECT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.4.4 P 45 L 2 # 206
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **R** Pres: Bullock1
 The text in this sentence is incomplete or inaccurate.
 SuggestedRemedy
 Replace "POWER_UP[A]" with "the POWER_UP[A] or IDLE[A] states."
 Response Response Status **C**
 REJECT.

CI 33 SC 33.2.4.4 P 45 L 7 # 208
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **R** Pres: Bullock1
 The text in this sentence is incomplete or inaccurate.
 SuggestedRemedy
 Replace "POWER_UP[A]" with "the POWER_UP[A] or IDLE[A] states."
 Response Response Status **C**
 REJECT.

CI 33 SC 33.2.4.4 P 45 L 8 # 209
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **R** Pres: Bullock1
 The text in this sentence is incomplete or inaccurate.
 SuggestedRemedy
 Replace "POWER_UP[B]" with "the POWER_UP[B] or IDLE[B] states."
 Response Response Status **C**
 REJECT.

CI 33 SC 33.2.4.4 P 48 L 16 # 211
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **D** PSE SD
 While this was not changed from 802.3at, it appears that the definition of the values for both True and False are incorrect. They appear to be values for pse_dll_enabled rather than pse_dll_capable.
 SuggestedRemedy
 Insert correct definitions.
 Proposed Response Response Status **Z**
 REJECT.
 This comment was WITHDRAWN by the commenter.

CI 33 SC 33.2.4.4 P 48 L 23 # 212
 Dove, Daniel Dove Networking Solut
 Comment Type **ER** Comment Status **A** PSE SD
 A variable cannot probe.
 SuggestedRemedy
 replace "probe" with "indicate that the PSE is ready to probe"
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Chris to implement for November presentation.
 Type 1/2 version cannot change.
 Type 3/4 version: implement suggested remedy.

CI 33 SC 33.2.4.4 P 48 L 46 # 213
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **A** PSE SD
 The text is not completely clear
 SuggestedRemedy
 replace "for Tlim within" with "for a time TLIM determined by"
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 replace "for Tlim within" with "for a time TLIM-2p determined by"

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.4.6 P 51 L 23 # 64
 Darshan, Yair Microsemi

Comment Type TR Comment Status R PSE SD

In the text:
 "When a PD requests a higher Class than a Type 3 or Type 4 PSE can support, the PSE assigns the PD Class 3, 4, or 6, whichever is the highest that it can support."

It is not clear why PSE can't assign the PD Class 3, 4, 5 or 6, whichever is the highest and only assigns the PD Class 3, 4, 5 or 6 as currently stated.

SuggestedRemedy

Change to:

"When a PD requests a higher Class than a Type 3 or Type 4 PSE can support, the PSE assigns the PD Class 3, 4, **5,** or 6, whichever is the highest that it can support."

Response Response Status C

REJECT.

This is physical layer class and is describing power demotion. A PSE cannot demote to class 5 since the PD can only tell the difference between 3 class events (class 4) and 4 class events (class 6).

CI 33 SC 33.2.4.6 P 51 L 37 # 65
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Lennart337

Addressing dual signature class codes by limiting DS PDs to up to value 4 (class 5).

SuggestedRemedy

Replace the editor note with the following text:
 Dual signature PDs is limited to use up to value 4 (class 5) per pairset.

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt changes shown in yseboodt_table_33_7_v130.pdf.

CI 33 SC 33.2.4.6 P 51 L 40 # 66
 Darshan, Yair Microsemi

Comment Type ER Comment Status A PSE SD

The mr_pd_class_detected is variable or function?
 It looks like variable and not belongs to the functions section.
 Is it part of the functio do_classification?
 In addition, there are missing values for class 5-8 or it is shown in other place?

SuggestedRemedy

Clarify if mr_pd_class_detected is part of do_classification. If YES than move mr_pd_class_detected to be aligned with the other function outputs. If NO than use the following remedy:

1. Move mr_pd_class_detected to section 33.2.4.4
2. Clarify where class 5-8 is used in mr_pd_class_detected or follow the suggested remedy:

Response Response Status C

ACCEPT IN PRINCIPLE.

It is part of the do_classification function.

Editor to move mr_pd_class_detected to the proper indentation so that it aligns with the other variables under the do_classification function.

EZ

CI 33 SC 33.2.4.6 P 52 L 5 # 256
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A PSE SD

The text on lines 5 and 19,
 "valid: The PSE has detected a PD requesting power."

Should correctly describe what a PSE has completed.

SuggestedRemedy

Replace text called out on line 5 and line 19 with,

"valid: The PSE has detected a valid PD detection signature."

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.6 P 53 L 16 # 232
 Dwelley, David Linear Technology

Comment Type E Comment Status A PSE SD

"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." This sentence and the subsequent sentences can be fixed by replacing the last "complete" with "successful".

SuggestedRemedy

Change "complete" to "successful" in three places. Strike the editor's note.

Response Response Status C

ACCEPT IN PRINCIPLE.

Delete all changes to paragraph with the exception of line 16. Replace Editor's note on line 26 with:

"Editor's note: This paragraph requires further study."

Cl 33 SC 33.2.4.6 P 53 L 32 # 24
 Darshan, Yair Microsemi

Comment Type TR Comment Status A PSE SD

There are missing parameter in the list of the following text:
 "When a PSE powers a PD of lower Type (TypePD) than its own native type (TypePSE), the PSE shall meet the PI electrical requirements of the PD Type (TypePD), except for ICon, ILIM-2P, Inrush, Inrush-2P, TLIM-2P, and PType (see Table 33-11), for which the PSE shall select to meet the requirements of any Type such that, TypePD <= applied Type <= TypePSE."
 The missing parameters is: Icon-2P_unb,

SuggestedRemedy

Change text to:
 "When a PSE powers a PD of lower Type (TypePD) than its own native type (TypePSE), the PSE shall meet the PI electrical requirements of the PD Type (TypePD), except for ICon, Icon-2P_unb, ILIM-2P, Inrush, Inrush-2P, TLIM-2P, and PType (see Table 33-11), for which the PSE shall select to meet the requirements of any Type such that, TypePD <= applied Type <= TypePSE."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 173

Cl 33 SC 33.2.4.6 P 53 L 32 # 233
 Dwelley, David Linear Technology

Comment Type TR Comment Status A PSE SD

This seems to imply that a Type 3/4 PSE shall only provide 2p power to a Type 1/2 PD:
 "When a PSE powers a PD of lower Type (TypePD) than its own native type (TypePSE), the PSE shall meet the PI electrical requirements of the PD Type (TypePD), except for ICon, ILIM-2P, Inrush, Inrush-2P, TLIM-2P, and PType (see Table 33-11), for which...".
 This goes against one goal of the bt project, which is to provide 4p power to existing Type 1 and 2 devices where possible.

SuggestedRemedy

Set the sentence in the positive: "A PSE shall meet the lcut-2p and lhold requirements of the PD it is connected to." These are the only requirements in Table 33-11 I see that might affect this situation. Or strike the sentence - lcut is optional and the lhold requirements are made clear in 33.2.9. Remove the editor's note.

Response Response Status C

ACCEPT IN PRINCIPLE.

Remove Editor's note on page 54, line 51.

Cl 33 SC 33.2.4.6 P 53 L 33 # 173
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A PSE SD

"When a PSE powers a PD of lower Type (Type PD) than its own..."
 "... the PSE shall meet the PI electrical requirements of the PD Type..."
 Yes, this paragraph again.

This statement has broad sweeping implications, for instance it forbids 4-pair powering of Type 1/2 PDs.

We have made a lot of changes to parameters for Type 3 and Type 4, it would be impractical for a Type 3/4 PSE to morph into a Type 1/2 PSE.

SuggestedRemedy

Revert this paragraph to the 802.3-2012 version, which only says what a Type 2 PSE must do.
 If there are specific interoperability issues between Type 3/4 and Type 1/2, we deal with those separately.

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.7 P 55 L 1 # 67
 Darshan, Yair Microsemi

Comment Type TR Comment Status A

Figure 33-9 is Type 1 and 2 state diagram.
 We agree that for Type 3 and 4 we will generate new state machine and we leave Type 1 and 2 state machine as it is in IEEE802.3-2012 version.

SuggestedRemedy

To verify with Dan Dove if it was changed.
 If Yes, to restore to the IEEE802.3-2012 version we will not have to spend time to review it.

Response Response Status C

ACCEPT IN PRINCIPLE.

We reverted to the original Figure 33-9.

No changes result from this comment.

eZ

Cl 33 SC 33.2.4.7 P 56 L 7 # 146
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A PSE SD

State "1-EVENT_CLASS" was renamed to "Single-Event_CLASS", probably by accident in the bulk rename of 1-Event to Single-Event.
 Undesired in state names.

SuggestedRemedy

Revert to "1-EVENT_CLASS".

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.7 P 57 L 5 # 266
 Stover, David Linear Technology

Comment Type TR Comment Status A Pres: Bullock1

Mixed use of e.g., "alt_a_pwr" and "alt_pwr(a)" for inspecting if a particular alt is powered, but only "alt_a/b_pwr" variables are defined.

SuggestedRemedy

Defer to PSE SD developer. If there exists a distinction, define "alt_pwr()". Else, revise SD to use "alt_a/b_pwr" nomenclature.

Response Response Status C

ACCEPT IN PRINCIPLE.

Chris/Dylan to update for a November presentation.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.7 P57 L7 # 263
 Schindler, Fred Seen Simply

Comment Type TR Comment Status A Pres: Bullock1

```
TEST_MODE
IF (mr_force_pwr_a) THEN
    Alt_a_pwrd <= TRUE
IF (mr_force_pwr_b) THEN
    Alt_b_pwrd <= TRUE
```

The TEST_MODE block exit does not facilitate one ALT having a fault while the other is functioning.

SuggestedRemedy

Break the existing test,

```
(mr_pse_enable = force_power)*(ovld_det_a + short_det_a+ ovld_det_b + short_det_b)
```

Into two, one path that

```
(mr_pse_enable = force_power)*(ovld_det_a + short_det_a)
```

That goes to a block,

```
TEST_ERROR_A
Alt_a_pwrd <= FALSE
```

Exit the block as was the case in TEST_ERROR.

And another path that

```
(mr_pse_enable = force_power)*(ovld_det_b + short_det_b)
```

That goes to a block,

```
TEST_ERROR_B
Alt_b_pwrd <= FALSE
```

Exit the block as was the case in TEST_ERROR.

Response Response Status C

ACCEPT IN PRINCIPLE.

Chris and Lennart to incorporate Suggested Remedy along with third state representing error on A and B for new draft.

Cl 33 SC 33.2.4.7 P57 L16 # 267
 Stover, David Linear Technology

Comment Type TR Comment Status A Pres: Bullock1

Mixed use of e.g., "pwr_app(a)" and "pwr_app_a" for inspecting if power is applied to a particular alt, but only "pwr_app_a/b" variables are defined.

SuggestedRemedy

Defer to PSE SD developer. If there exists a distinction, define "pwr_app()". Else, revise SD to use "pwr_app_a/b" nomenclature.

Response Response Status C

ACCEPT IN PRINCIPLE.

Chris to incorporate any resulting changes to variables/diagram for November presentation.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.7 P 59 L 5 # 262
 Schindler, Fred Seen Simply
 Comment Type TR Comment Status A Pres: Bullock1

The POWER_UP block (where in-rush occurs) should check that 4-pair power is permissible. This is also required at block POWER_ON (where power is stable). A solution provided in a comment marked CONCERN2 is used to deal with the case when a PSE is not allowed to power on both pairsets. This approach mirrors what the existing state diagram does in POWER_ON. The solution also fixes POWER_ON block so that both pairsets are used when the PSE provides this option.

```
POWER_UP
IF (mr_pse_alternative = a ) THEN
alt_a_pwr <= TRUE
```

```
IF (mr_pse_alternative = b ) THEN
alt_b_pwr <= TRUE
```

```
IF (sig_type = single) THEN
alt_a_pwr <= TRUE
alt_b_pwr <= TRUE
```

```
POWER_ON
IF (sig_type = single) THEN
IF ( dll_4PID = 0 ) +
(mr_pse_ss_mode = 0)) THEN
alt_a_pwr <= TRUE
alt_b_pwr <= FALSE
ELSE
alt_a_pwr <= TRUE
alt_b_pwr <= TRUE
```

```
IF( mr_PSE_alternative = a) THEN
alt_a_pwr <= TRUE
```

```
IF( mr_PSE_alternative = b) THEN
alt_b_pwr <= TRUE
```

SuggestedRemedy

```
POWER_UP
IF (mr_pse_alternative = a ) THEN
alt_a_pwr <= TRUE
```

```
IF (mr_pse_alternative = b ) THEN
alt_b_pwr <= TRUE
```

```
IF (((sig_type = single) + (dll_4PID = 1) )
```

```
* (mr_pse_alternative = BOTH))
THEN
alt_a_pwr <= TRUE
alt_b_pwr <= TRUE
ELSE
alt_a_pwr <= TRUE
```

```
POWER_ON
IF (sig_type = single) THEN
IF(dll_4PID = 0) +
(mr_pse_ss_mode = 0)) THEN
alt_a_pwr <= TRUE
alt_b_pwr <= FALSE
ELSE
IF( mr_PSE_alternative = BOTH) THEN
alt_a_pwr <= TRUE
alt_b_pwr <= TRUE
```

```
IF( mr_PSE_alternative = a) THEN
alt_a_pwr <= TRUE
```

```
IF( mr_PSE_alternative = b) THEN
alt_b_pwr <= TRUE
```

Response Response Status C

ACCEPT.

Chris to make change for new draft.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 **SC 33.2.4.7** **P 59** **L 42** # **110**
 Bennett, Ken Sifos Technologies, In

Comment Type **TR** **Comment Status** **A** **PSE SD**

The CLASS_EVAL box outputs in the State diagram of 33-9A needs to be updated.

The Class Eval box currently denies power in all cases when the PD request exceeds the PSE Available power.

The suggested remedy produces the behaviors described in Tables 33D-1 and 33D-2.

(Note: (pse_avail_pwr<2); 2="Class 3,0")

SuggestedRemedy
 Change Path leading to POWER_UP to:

```
ted_timer_done * [ (pd_req_pwr<=pse_avail_pwr) + [(pd_req_pwr>pse_avail_pwr) * (pse_avail_pwr>1)]]
```

Change Path leading to POWER_DENIED to:

```
!ted_timer_done + [ (pd_req_pwr>pse_avail_pwr) * (pse_avail_pwr<2) ]
```

Response **Response Status** **C**

ACCEPT.

Chris to implement

Cl 33 **SC 33.2.4.7** **P 64** **L 10** # **106**
 Bennett, Ken Sifos Technologies, In

Comment Type **TR** **Comment Status** **A** **PSE SD**

The Type 3 and 4 State diagram in 33-9D needs to be updated to provide the behaviors described in Table 33D-1 and 33D-2.

This is comment 1 of 4 and refers to the output of CLASS_EV1_LCF

(Note: (pse_avail_pwr<3); 3="Class 4")

SuggestedRemedy
 Change Path leading to MARK_EV_LAST to:

```
Tlcf_timer_done * [ [(sig_type=single) * [(mr_pd_class_detected<4) + (pse_avail_pwr<3)]] + [(sig_type=dual) * (pd_req_pwr>pse_avail_pwr)] ]
```

Change Path leading to MARK_EV1 to:

```
Tlcf_timer_done * [ [(sig_type=single) * [ (mr_pd_class_detected = 4) * (pd_req_pwr <= pse_avail_pwr) ] + [(sig_type=dual) * (pd_req_pwr <= pse_avail_pwr)] ]
```

Response **Response Status** **C**

ACCEPT.

Dave A. to implement

Cl 33 **SC 33.2.4.7** **P 64** **L 14** # **174**
 Yseboodt, Lennart Philips

Comment Type **TR** **Comment Status** **A** **PSE SD**

Figure 33-9d, Transition from CLASS_EV1_LCF to MARK_EV1:
 "tlcf_timer_done * !pse_skips_multiclass * ..."

pse_skips_multiclass does not apply to Type 3 or Type 4 PSEs.

SuggestedRemedy
 XX=remove
 "tlcf_timer_done * XX!pse_skips_multiclass *XX ..."

Response **Response Status** **C**

ACCEPT.

Dave A. to implement.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.7 P 64 L 21 # 107
 Bennett, Ken Sifos Technologies, In

Comment Type TR Comment Status A PSE SD

The Type 3 and 4 State diagram in 33-9D needs to be updated to provide the behaviors described in Table 33D-1 and 33D-2.

This is comment 2 of 4 and refers to the output of CLASS_EV2

(Note: (pse_avail_pwr>3); 3="Class 4")

SuggestedRemedy

Change Path leading to MARK_EV_LAST to:

```
Tcle2_timer_done * (mr_pd_class_detected=temp_var) *
[ [(sig_type=single) * (pd_req_pwr>=pse_avail_pwr)] +
(sig_type!=dual) ]
```

Change Path leading to MARK_EV2 to:

```
Tcle2_timer_done * (mr_pd_class_detected = temp_var) *
[ [(sig_type=single) * (pse_avail_pwr>3)] +
(sig_type=dual) ]
```

Response Response Status C

ACCEPT.

Dave A. to implement

Cl 33 SC 33.2.4.7 P 64 L 27 # 108
 Bennett, Ken Sifos Technologies, In

Comment Type TR Comment Status A PSE SD

The Type 3 and 4 State diagram in 33-9D needs to be updated to provide the behaviors described in Table 33D-1 and 33D-2.

This is comment 3 of 4 and refers to the output of CLASS_EV3

(Note: (pse_avail_pwr=4, pse_avail_pwr>4); 4="Class 5")

SuggestedRemedy

Change Path leading to MARK_EV_LAST to:

```
Tcle3_timer_done * [(mr_pd_class_detected=4) +
[ (sig_type=single) * (pd_req_pwr>pse_avail_pwr) * (pse_avail_pwr=4) ] +
[ (sig_type=dual) * [(mr_pd_class_detected = 0) + (pd_req_pwr > pse_avail_pwr)
]]
```

Change Path leading to MARK_EV3 to:

```
Tcle3_timer_done * [(mr_pd_class_detected!=4) *
[ (sig_type=single) * [(pd_req_pwr>pse_avail_pwr) * (pse_avail_pwr>4)] +
(pd_req_pwr<=pse_avail_pwr) ] +
[ (sig_type=dual) * [(mr_pd_class_detected=3) + (pd_req_pwr<=pse_avail_pwr)] ]
```

Response Response Status C

ACCEPT.

Dave A. to implement

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.7 P 64 L 35 # 109
 Bennett, Ken Sifos Technologies, In

Comment Type TR Comment Status A PSE SD

The Type 3 and 4 State diagram in 33-9D needs to be updated to provide the behaviors described in Table 33D-1 and 33D-2.

This is comment 4 of 4 and refers to the output of CLASS_EV4

SuggestedRemedy

Change Path leading to MARK_EV_LAST to:

```
Tcle3_timer_done * (mr_pd_class_detected = temp_var) *
[(mr_pd_class_detected<2) +
[(sig_type=single) * (pd_req_pwr>pse_avail_pwr)] +
(sig_type=dual) ]
```

Change Path leading to MARK_EV4 to:

```
Tcle3_timer_done * (mr_pd_class_detected=temp_var) *
[(mr_pd_class_detected>1) * [(sig_type=single) * (pd_req_pwr<=pse_avail_pwr)] +
(sig_type!=dual)] ]
```

Response Response Status C

ACCEPT.

Dave A. to implement

Cl 33 SC 33.2.4.7 P 65 L 3 # 155
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Editors note on the state diagram.

SuggestedRemedy

Append:
 "State diagram for Type 3 and 4 does not address dual-signature. Preferably this goes into a separate diagram to keep complexity manageable."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.4.7 P 57 L 27 # 215
 Dove, Daniel Dove Networking Solut

Comment Type ER Comment Status A PSE SD

Throughout the State Diagram, there are numerous connectors that run on-page. This is a question of style, but I believe it would be more readable if only off-page connectors are used and lines tying blocks together used on-page.

SuggestedRemedy

I will leave this to the Task Force to decide. It affects a number of connectors. Example: A is a connector that as an input to IDLE supports numerous off-page connections. For on-page, a line from each state combining together to a single return to A would be easier to follow.

Response Response Status C

ACCEPT IN PRINCIPLE.

Chris and Dylan to do their best.

Cl 33 SC 33.2.4.7 P 57 L 27 # 214
 Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A Pres: Bullock1

It will enable lower cost implementations if we allow staggering of detection for the dual-signature cases. Please see attached presentation.

SuggestedRemedy

See state diagram changes in bullock_01_3bt_1015 for detail, as I believe Chris addresses this in his presentation.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by adoption of Bullock1

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Cl 33 SC 33.2.4.7 P 59 L 1 # 216
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status A Pres: Bullock1
 We need a connector name here. C1?
 SuggestedRemedy
 Add connector and ensure that it connects to all appropriate locations within State Diagram.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Chris to update to C1 for next draft.
 Dave to update Class diagram to C1 for next draft.

Cl 33 SC 33.2.4.7 P 59 L 18 # 217
 Dove, Daniel Dove Networking Solut
 Comment Type E Comment Status A PSE SD
 The logic for this arc is located at the entry to the state rather than the exit. Is there a style convention here?
 SuggestedRemedy
 Follow style convention as it applies. I would presume the logic for exiting a state should go at the exit.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Chris to fix for next draft.

Cl 33 SC 33.2.4.7 P 59 L 20 # 218
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status D Pres: Bullock1
 Is there really a need for this state/arcs? The variable gets cleared in IDLE, then set down here. What if its set all the time?
 SuggestedRemedy
 There are three POWER_ON states (alt-A, alt-B, 4P) that all have this loop. Is it necessary? If not, remove.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.
 Wait for presentation

Cl 33 SC 33.2.4.7 P 59 L 23 # 219
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status A Pres: Bullock1
 The logic for this state appears not to be as indicated in text. There are other issues about the logic in this state, but if we intend to leave it, I recommend changing it.
 SuggestedRemedy
 By the time a 4P SS arrives at POWER_ON, it has already powered all 4 pair and inrushed them. Is this really how we want this to work? This logic should be (dll_4PID=0) * (mr_pse_ss_mode=0) so that EITHER of these variables being 1 will lead to operation in 4P mode.
 Response Response Status C
 ACCEPT IN PRINCIPLE.

Chris to update logic for November presentation.
 Need for logic to represent:
 We need 4PID to include physical layer somehow. We need Type 1/2 PDs to be able to request 2-pair power via DLL. Need to check dll_4PID value if PSE not DLL capable.

Cl 33 SC 33.2.4.7 P 61 L 13 # 220
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status A Pres: Bullock1
 Can't find pse_avail_pwr(a) defined. There is a PSE_avail_pwr but it doesn't appear to be defined on a pair-set basis, also CAPs rather than lower case.
 SuggestedRemedy
 Either add the variable where required or some text that articulates how this variable instance relates to PSE_available_power.same goes, for instance with pd_req_pwr(a) etc.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Chris to update for November presentation.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.4.7 P 64 L 6 # 221
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **A** Pres: Bullock1
 The logic for the entry arc is not necessarily the same logic as the exit logic on other pages that lead into it.
 SuggestedRemedy
 I think striking the logic is fine. The other pages that feed into it should have logic on exit from prior states. Also, this states PSE > 2. Given that it's a Type 3 and Type 4 state machine, wouldn't this always be the case?
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Dave A. to delete conditions on entry of A1 for next draft.

Cl 33 SC 33.2.4.7 P 64 L 51 # 223
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **A** Pres: Bullock1
 Exit Arc E is incorrect
 SuggestedRemedy
 Replace E with A?
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Dave A. to replace with Exit A.

Cl 33 SC 33.2.4.7 P 64 L 51 # 222
 Dove, Daniel Dove Networking Solut
 Comment Type **TR** Comment Status **A** Pres: Bullock1
 Exit Arc C is incorrect
 SuggestedRemedy
 Replace C with C1?
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Dave A. to update to C1 for next draft.

Cl 33 SC 33.2.5 P 87 L 37 # 248
 Schindler, Fred Seen Simply
 Comment Type **ER** Comment Status **A** Editorial
 Clause reference 33.2.7.1 is not a hyperlink.
 SuggestedRemedy
 Use a hyperlink.
 Response Response Status **C**
 ACCEPT.
 EZ

Cl 33 SC 33.2.5.0a P 66 L 9 # 156
 Yseboodt, Lennart Philips
 Comment Type **E** Comment Status **A** Editorial
 "While the exact method of the connection check is left to the implementer, the PSE shall..."
 Implementation is always decoupled from the specification. No need to call this out specifically here.
 SuggestedRemedy
 "During connection check, the PSE shall..."
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 "The exact method of the connection check is not specified. During connection check the PSE shall..."

Cl 33 SC 33.2.5.0a P 66 L 26 # 157
 Yseboodt, Lennart Philips
 Comment Type **E** Comment Status **A** Editorial
 Table 33-3a, Items 1 and 2, Max value is 0.40
 Convention seems to be to use 3 digits after the dot.
 SuggestedRemedy
 Replace 0.40 by 0.400 (twice).
 Response Response Status **C**
 ACCEPT.
 EZ

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Cl 33 SC 33.2.5.0a P 66 L 35 # 14
 Zimmerman, George CME Consulting, Inc.

Comment Type TR Comment Status A Connection Check

"The connection check shall be rerun before applying power if power up fails to meet the timing requirements or power is absent on both pairsets simultaneously after reaching the POWER_UP state."

The timing of this key specification is unclear. how long does power have to be absent for from both pairsets?

'if power up fails to meet the timing requirements' is unclear - which timing requirements, any of them?

SuggestedRemedy

Add 'in Section TBD' after "meet the timing requirements", to reference the timing requirement that needs to be met explicitly by name, table , section, or equation number. (sorry, but its so unclear I don't know which one to point to)

Add 'for at least TBD msec' after 'or power is absent on both pairsets simultaneously after reaching the POWER_UP state.'

Response Response Status C

ACCEPT IN PRINCIPLE.

Add 'in both Table 33-3a and section 33.2.7.12' after "meet the timing requirements"

Change to:

"...or if the state machine reaches the IDLE state."

Change "shall be" to "is".

Cl 33 SC 33.2.5.0a P 66 L 35 # 268
 Stover, David Linear Technology

Comment Type E Comment Status A Editorial

Paragraph is indented

SuggestedRemedy

Remove indentation

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.5.5 P 70 L 14 # 77
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status R Backoff

33.2.5.5 was referenced with regard to PSE's that perform detection using "only Alternative B..." (See 33.2.4.1) So to be consistent, suggest specifying "only Alternative B" here as well.

SuggestedRemedy

"If a PSE that is performing detection using only Alternative B (see 33.2.3)..."

This way, there is no confusion with 4-pair detection cases.

Response Response Status C

REJECT.

John to discuss with Peter.

Cl 33 SC 33.2.5.6 P 70 L 25 # 224
 Dove, Daniel Dove Networking Solut

Comment Type TR Comment Status A 4PID

There is a TBD in the text. This cannot persist into draft 2.0

SuggestedRemedy

This TBD will have to be removed prior to 2.0

Response Response Status C

ACCEPT IN PRINCIPLE.

No changes to the draft result from accepting this comment.

Cl 33 SC 33.2.6 P 70 L 29 # 175
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A Pres: Yseboodt1

This section needs to be made consistent with the new Figures 33-14.

SuggestedRemedy

See presentation yseboodt_1_1015_baseline_fig3314_vXX.pdf

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt changes in yseboodt_1_1015_fig3314_v233.pdf

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.6 P 70 L 48 # 93
 Skinner, John Sifos Technologies, In
 Comment Type E Comment Status A Editorial
 Description of classification missing clarifying language.
 SuggestedRemedy
 Replace:
 "...the PD responds with a current representing a limited number of power classifications."
 with:
 "...the PD responds to each class event with a current representing one of a limited number of power classifications."
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.2.6 P 71 L 14 # 158
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 The Pclass formula 33-3 and the parameter description have a Autoclass paragraph in between.
 SuggestedRemedy
 Reconnect Formula and parameter description.
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.2.6 P 71 L 20 # 94
 Skinner, John Sifos Technologies, In
 Comment Type E Comment Status A Editorial
 Paragraph discussing Autoclass based PSE minimum power setting refers to non-existent information from Table 33-10a.
 SuggestedRemedy
 The end of the last sentence on lines 19 and 20:
 "...may choose to use a lower Autoclass margin than those listed in Table 33-10a."
 should be changed to refer to the correct location of the margin information:
 "...may choose to use a lower Autoclass margin than those listed in Equation (33-3a)."
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.2.6 P 71 L 22 # 78
 Johnson, Peter Sifos Technologies
 Comment Type E Comment Status A Editorial
 Equation 33-3 was moved to its proper place relative to text, however, the variable descriptions for Eq. 33-3 were not moved.
 SuggestedRemedy
 Move variable descriptions "where ... Vpse ..." to just below Equation 33-3.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 158

CI 33 SC 33.2.6 P 72 L 1 # 176
 Yseboodt, Lennart Philips
 Comment Type TR Comment Status A Pres: Yseboodt337
 Table 33-7 does not provide dual-signature classes.
 SuggestedRemedy
 See yseboodt_table_33_7_v1XX.pdf
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 65

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.6 P72 L7 # 95
 Skinner, John Sifos Technologies, In

Comment Type E Comment Status A Pres: Beia

Table 33-7 Column heading "Number of Classification Events" is not fully descriptive, and does not communicate what the table is trying to convey.

SuggestedRemedy

Change column heading:

"Number of Classification Events"

to:

"Number of Classification Events Required to Achieve Minimum supported power levels."

Response Response Status C

wait for presentation.

Cl 33 SC 33.2.6 P72 L7 # 79
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

"NOTE 1 ..." pertains specifically to Pclass in header of column 3 of Table 33-7. This should be communicated.

SuggestedRemedy

Follow "(Pclass)" in column 3 heading with either footnote "1" or "see NOTE 1".

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.6 P72 L16 # 101
 Beia, Christian STMicroelectronics

Comment Type ER Comment Status A Pres: Beia

Table 33-7

Pclass values can be defined as a single number, in order to make the requirement clearer, and easily readable.

Today it is needed to compare Pclass with Ptype. The calculation of Ptype requires looking at different tables.

- Ptype definition in Table 33-11:

Icable * Vport_PSE_2p_min for Types1,2, and 3 up to Class4;
 2* Icable * Vport_PSE_2p_min for Type3 classes 5-8;
 90W-99.9W for Type4.

- Icable definition in Table 33-1:

0.35A for Type1;
 0.6A for Types2,3;
 0.96A for Type4.

- Vport_PSE_2p_min definition in Table 33-11:

44V for Type1;
 50V for Types2,3;
 52V for Type4.

The result of the calculation of Ptype is:

- 15.4W for Type 1
 - 30.0W for Type 2 and Type 3 classes 0-4
 - 60.0W for Type 3 classes 5-8
 - 90W for Type4

So, at the end Ptype is never lower than the defined Pclass and can be removed since it doesn't add any restriction to Pclass.

SuggestedRemedy

Change Table 33-7, third column (Pclass), classes 4 to 8, as follows:

Class 4: 30W
 Class 5: 45W
 Class 6: 60W
 Class 7: 75W
 Class 8: 90W

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Response **Response Status C**
 ACCEPT IN PRINCIPLE.
 OBE by 65

Cl 33 SC 33.2.6 P 73 L 37 # 80
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A Pres: Beia

Regarding Type-1 PSE classification with single event: "Valid classification results are Classes 0 up to and including 4, as listed in Table 33-7."

This phrase seems awkward in light of current structure of Table 33-7 where there are now Classes 0-8 and Class 4 row indicates "2 or 3" events. This is mostly non-normative, old text and it might be more accurate if it referenced Table 33-9 instead of Table 33-7. One possible solution is proposed here.

SuggestedRemedy

Modify to:

"...Single-Event Physical Layer classification. Valid classification results include Classes 0, 1, 2, 3, or 4 as listed in Table 33-9. A Type-1 PSE detecting Class 4 assigns that PD to Class 0. If a Type-1 PSE does not...."

The normative text for Type-1 PSE treatment of class 4 already exists in 33.2.6.1.

Response **Response Status C**
 ACCEPT IN PRINCIPLE.
 OBE by 65.

Cl 33 SC 33.2.6.1 P 74 L 37 # 82
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Missing space between "5" and "Class".

SuggestedRemedy

Change to "... maximum of 5 Class and 5 mark events."

Response **Response Status C**
 ACCEPT IN PRINCIPLE.
 OBE by 159
 EZ

Cl 33 SC 33.2.6.2 P 74 L 33 # 81
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Paragraph ends with "-" as defined in the state diagram in Figure 33-9".

Ultimately, reference could be to different or additional state diagram(s).

SuggestedRemedy

Editor Note: "Update Figure reference when state diagrams are completed."

Response **Response Status C**
 ACCEPT.
 EZ

Cl 33 SC 33.2.6.2 P 74 L 37 # 159
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

"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 5Class and 5 mark events."

Capitalization gone wrong.

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

Response **Response Status C**
 ACCEPT.
 EZ

Cl 33 SC 33.2.6.2 P 74 L 44 # 160
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

lclass is smaller letters than normal subscript.

SuggestedRemedy

Change the subscript to a larger font

Response **Response Status C**
 ACCEPT.
 EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.6.2 P75 L 16 # 161
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 "... as defined in Table 33-10 The timing specification... "
 Missing dot after 33-10
 SuggestedRemedy
 Add dot (period)
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.6.2 P75 L 22 # 83
 Johnson, Peter Sifos Technologies
 Comment Type T Comment Status A PSE Class
 The phrase "PSEs that implement CLASS_EV1_LCF, when connected..." is a description of state machine behavior squeezed between other paragraphs that are describing electrical characteristics.
 Also, "PSEs that implement CLASS_EV1_LCF" is a wordy way of saying "Type 3 and 4 PSEs".
 SuggestedRemedy
 Move this sentence down by 2 or 3 paragraphs to present line 40 (just before "If the result of the first Class...").
 Change "PSEs that implement CLASS_EV1_LCF" to "Type 3 and Type 4 PSEs".
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.6.2 P75 L 52 # 84
 Johnson, Peter Sifos Technologies
 Comment Type E Comment Status A PSE Class
 "...detected during CLASS_EV1_LCF is a 0, a Type 3 or Type 4 PSE treats a dual-signature PD as a Type 1 PD and shall omit the subsequent mark and Class events and classify the PD according to the result of the first Class event."
 Since we know the first class event is 0, save some words.
 SuggestedRemedy
 Change to:

"...detected during CLASS_EV1_LCF is a 0, a Type 3 or Type 4 PSE treats a dual-signature PD as a Type 1 PD and shall omit the subsequent mark and Class events and classify the PD as Class 0."
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.6.2 P76 L 4 # 147
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A Editorial
 "A Type 3 or Type 4 PSE connected to a single-signature PD shall..."
 "A Type 3 or Type 4 PSE connected to a dual-signature PD shall..."
 SuggestedRemedy
 dual-signature should be Dual-signature.
 Ditto for Single-signature.
 Response Response Status C
 ACCEPT.
 EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.6.2 P76 L7 # 85
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A PSE Class

"... The PSE shall classify the PD only once. Classification..."

Once for all time ? (there is a "shall" here...)

Also, the first half of this paragraph seems to apply to Single-Signature PD's. Suggest splitting this into two paragraphs.

Finally, the 2nd to last sentence "See Annex 33E..." needs to go - the following sentence "See Annex 33D..." is the one that belongs.

SuggestedRemedy

Modify to:

"... The PSE shall classify the PD only once following successful detection. Classification..."

Start new paragraph with "A Type 3 or Type 4 PSE connected to a dual-signature PD shall skip...."

Remove 2nd to last sentence starting with "See Annex 33E..."

Response Response Status C

ACCEPT IN PRINCIPLE.

Remove sentence "The PSE shall classify the PD only once."

Start new paragraph with "A Type 3 or Type 4 PSE connected to a dual-signature PD shall skip...."

Remove 2nd to last sentence starting with "See Annex 33E..."

Cl 33 SC 33.2.6.2 P76 L7 # 118
 Yseboodt, Lennart Philips

Comment Type T Comment Status A PSE Class

The sentence: "The PSE shall classify the PD only once".
 Seems to preclude classification of dual signature altogether. After all, a DS PD is ONE PD, but it needs to be classified on each pairset.

SuggestedRemedy

Remove "The PSE shall classify the PD only once"

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 85

Cl 33 SC 33.2.6.2 P76 L10 # 116
 Zimmerman, George CME Consulting, Inc.

Comment Type ER Comment Status A Editorial

"See Annex 33E for an overview of Multiple Event Physical Layer classification. See Annex 33D for an overview of Multiple-Event physical layer classification."

33D is the table of classification outcomes on type 3 and type 4 PSEs, and 33E is Rload_max and Rload_min

SuggestedRemedy

Delete "See Annex 33E... classification."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.2.6.2 P76 L16 # 177
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A PSE Class

Table 33-9 shows a direct link between class currents and "Class". This was true for af/at, but this is more complicated now.

The PSE section does not have a Table 33-16a equivalent. This should still be done.

SuggestedRemedy

Change "Class" to "class signature" in Table 33-9

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.6.2 P77 L1 # 148
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A Editorial
 Table 33-10 still uses "1-Event" terminology.
 SuggestedRemedy
 Change to Single-event in:
 - Header
 - Line 1,2 and 11.
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.2.6.2 P77 L27 # 119
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A PSE Class
 Table 33-10, item 8 on T_ME2.
 The add. info says:
 "The maximum value of T ME2 cannot exceed the maximum allowed time from end of detection until power-on which is limited by 33.2.7.12."
 This means the maximum time is Tpon, which is not the intention.
 SuggestedRemedy
 "The maximum value of T ME2 may not cause a violation of Tpon, as defined in section 33.2.7.12."
 Alternative: remove add. info.
 Response Response Status C
 ACCEPT.
 "The maximum value of T ME2 is limited by Tpon, as defined in section 33.2.7.12."

CI 33 SC 33.2.6.2 P77 L51 # 44
 Darshan, Yair Microsemi
 Comment Type TR Comment Status A PSE Class
 Table 33-10 item 13 TCLE 3 max value needs more margin.
 Increase it to 20msec.
 SuggestedRemedy
 Increase TCLE 3 max value to 20msec.
 Response Response Status C
 ACCEPT.
 Add Editor's Note below table 33-10. "Need to perform thermal analysis on new classification timings/events on both existing and new PDs."

CI 33 SC 33.2.6.3 P78 L7 # 68
 Johnson, Peter Sifos Technologies
 Comment Type E Comment Status A Editorial
 "Please see" seems like unusual language for a standard.
 Engineers usually aren't that polite.
 SuggestedRemedy
 Replace "Please see" with just "See".
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.2.6.3 P78 L44 # 120
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A Autoclass
 Autoclass window Tauto_PSE2 is not the correct.
 SuggestedRemedy
 Change to: "Autoclass window between Tauto_PSE1 and Tauto_PSE2"
 Response Response Status C
 ACCEPT.
 EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.6.3 P 88 L 43 # 257
 Schindler, Fred Seen Simply
 Comment Type ER Comment Status A Autoclass
 The units of Pac_margin and PAutoclass appear to be Watts but this is not called out. These variables are used in the formula above their description.
 SuggestedRemedy
 Call out Watts by adding the following text before the period on line 44, ", both variables are in Watts."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Add "in Watts" after "measured power" on line 44.
 Editor to fix formatting of equation. (unit formatting)

Cl 33 SC 33.2.7 P 78 L 51 # 162
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 "Table 33-11 limits show values that support worst-case operating limits."
 SuggestedRemedy
 "Table 33-11 limit values support operation under worst-case operating conditions."
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.7 P 79 L 1 # 234
 Dwelley, David Linear Technology
 Comment Type E Comment Status A Editorial
 I think we got them all
 SuggestedRemedy
 Strike this editor's note.
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.7 P 79 L 14 # 17
 Zimmerman, George CME Consulting, Inc.
 Comment Type E Comment Status A Editorial
 33.2.7.1 is forest green (an external reference) on item 1 - elsewhere it is a cross reference. Needs to be a live cross reference.
 Same goes for 33.2.9 twice, on lines 49 & 52 of page 81 (items 18 & 19 in the table)
 SuggestedRemedy
 Change references in items 1, 18 & 19 to cross references, and make same color as normal text (remove external tag)
 Response Response Status C
 ACCEPT.
 EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.7 P79 L 33 # 74
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A Pres: Yseboodt1

Icon in Table 33-11, item 4, is defined as the "Continuous total output current capability in POWER_ON state". The minimum value is then expressed as Pclass/Vport_pse_2p. This then requires that Pclass is the total power furnished by a PSE to a PD.

In draft 1.3, paragraph 33.2.6 added (p. 70, line 52) "For Type 3/DS and Type 4/DS PDs, Pclass applies to each pairset independently." This statement is also a problem with regard to the description of the Pclass equation where it says "...or Rchan = Rch/2 when powering using tow pairsets...".

These elements are contradictory and must be reconciled.

SuggestedRemedy

This may be a smaller piece of a bigger issue relating to Dual Signature PD's and whether those PD's generally constitute dual independent loads that are policed per pairset or without concern for pair-pair unbalance. Or if they are shared load devices where pair-pair unbalance interferes with policing per pairset.

I am not proposing a solution at this point for fear that this is not an easy fix until more funatmental issues about dual signature PD's are resolved.

If nothing else, an editors comment adjacent to Table 33-11 indicating that Icon and Pclass as used in Table 33-11 are not presently consistent with the handling of Dual Signature PD's.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 175.

CI 33 SC 33.2.7 P79 L 37 # 46
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan1

Table 33-11 item 4a.
 Icon-2P_unb is equal to lcut-2P minimum at its worst case conditions (at Vport_PSE minmum and worst case Rch in terms of E2EP2PRub).
 Therefore for increasing design flexibility, we can specify Icon-2P_unb as a fixed value as it is done currently or as a function of Kicut*Pclass/Vport_PSE-2P which is equal to lcut-2P min in similar concept used in 802.3at with the addition of Kicut factor to account for E2EP2PRunb.
 See details in darshan_01_1015.pdf page 16.

SuggestedRemedy

See two options for remedy in darshan_01_1015_Rev001.pdf page 16.

Response Response Status C

ACCEPT IN PRINCIPLE.

Adopt option 1 on page 17 of darshan_01_1015_Rev001.pdf.

CI 33 SC 33.2.7 P79 L 37 # 30
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan1

Table 33-11 item 4a, Icon-2P_unb need to be updated due to the following changes made for D1.2:
 1. Increasing PSE Vdiff to 10mV instead of 2mV.
 In addition, the following changes we made for Type 3 system:
 2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
 3. Type 4 systems stayed total 60mV vdiff:

SuggestedRemedy

Update Table 33-11 item 4a per darshan_01_1015.pdf page 3.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by comment 46.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.7 P 79 L 49 # 43
 Darshan, Yair Microsemi

Comment Type TR Comment Status R Pres: Darshan2

Table 33-11 item 5.
 Only PSE Type 1 and 2 should support Inrush=0.4A min to Type 1 and 2 PDs.
 We should not force Type 3 and 4 PSEs to meet this requirement as well due to the fact that PD type 1 and 2 need to meet much higher currents than 0.9A.
 Rationale:
 a) It could be a feature and not mandatory requirements.
 b) System vendors cannot be liable for poorly designed PDs or non-compliant PDs.
 See darshan_02_1015.pdf for details.

SuggestedRemedy

In Table 33-11 item 5, restore PSE Type as 1,2 and delete "all"

Response Response Status C

REJECT.

Vote:

Accept: 3

Reject: 10

Abstain: 7

CI 33 SC 33.2.7 P 80 L 7 # 45
 Darshan, Yair Microsemi

Comment Type TR Comment Status R Pres: Darshan2

Table 33-11 item 5a.
 PSE Types 3 and 4 can support all PDs and not only Type 3 and 4 PDs.
 Compliant PDs should stand more than 0.4A per pair set or total 0.9A.
 System vendors cannot be liable for poorly designed PDs or non-compliant PDs.
 See darshan_02_1015.pdf for details.

SuggestedRemedy

In Table 33-11 item 5a: In the additional information:
 Delete "For Type 3 and 4 PDs" or replace with "For all PDs".

Response Response Status C

REJECT.

See comment 43

CI 33 SC 33.2.7 P 80 L 15 # 25
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan1

Table 33-11 item 7, Additional Information K_lcut values need to be updated due to the following changes made for D1.2:
 1. Increasing PSE Vdiff to 10mV instead of 2mV.
 In addition, the following changes we made for Type 3 system:
 2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
 3. Type 4 systems stayed total 60mV vdiff:

SuggestedRemedy

Update Table 33-11 item 7, K_lcut values per darshan_01_1015.pdf page 4.

Response Response Status C

ACCEPT IN PRINCIPLE.

Update Table 33-11 item 7, K_lcut values per darshan_01_1015_Rev001.pdf page 4.

CI 33 SC 33.2.7 P 80 L 25 # 100
 Beia, Christian STMicroelectronics

Comment Type E Comment Status A Pres: Beia

Table 33-11
 The definition of Ilim_2P is explicit for all classes, except for Type2 Class 4 where it is 1.14*Icable.
 It can be calculated using Icable definition in Table 33-1 (0.6A for Types 2,3)

SuggestedRemedy

Replace Ilim_2P, column min, row PSE Type 2, 1.14*Icable, with 0.684

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.2.7 P 80 L 28 # 31
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan1

Table 33-11 item 9, ILIM-2P need to be updated due to the following changes made for D1.2:

1. Increasing PSE Vdiff to 10mV instead of 2mV.
- In addition, the following changes we made for Type 3 system:
2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
3. Type 4 systems stayed total 60mV vdiff:

SuggestedRemedy

Update Table 33-11 item 7 per darshan_01_1015.pdf page 5.

Response Response Status C

ACCEPT IN PRINCIPLE.

Update Table 33-11 item 7 per darshan_01_1015_Rev001.pdf page 5.

CI 33 SC 33.2.7 P 81 L 7 # 102
 Beia, Christian STMicrelectronics

Comment Type ER Comment Status A Pres: Beia

Table 33-11
 PSE power type minimum value can be calculated instead of leaving the burden to the reader.
 This makes the table clearer and avoids misinterpretations.

- I cable definition in Table 33-1:
 0.35A for Type1;
 0.6A for Types2,3;
 0.96A for Type4.

- Vport_PSE_2p_min definition in Table 33-11:
 44V for Type1;
 50V for Types2,3;
 52V for Type4.

The result of the calculation of Ptype is:

- 15.4W for Type 1
- 30.0W for Type 2 and Type 3 classes 0-4
- 60.0W for Type 3 classes 5-8

SuggestedRemedy

- Change Table 33-11 Item 12:
- split the first row and make one for PSE Type1 and another for PSE Type 2
 - For PSE Type 1 replace comumn Min I cable * (Vport_PSE-2p min) with 15.4
 - For PSE Type 2 replace comumn Min I cable * (Vport_PSE-2p min) with 30.0
 - For PSE Type 3(note1) replace comumn Min I cable * (Vport_PSE-2p min) with 30.0
 - For PSE Type 3 replace comumn Min 2*I cable * (Vport_PSE-2p min) with 60.0

Response Response Status C

ACCEPT.

CI 33 SC 33.2.7 P 81 L 21 # 36
 Darshan, Yair Microsemi

Comment Type T Comment Status A PSE Power

Table 33-11 item 14, Turn on rise time need to be per pairset.

SuggestedRemedy

Change "Turn on rise time" to "Turn on rise time per pairset".

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7 P 81 L 25 # 37
 Darshan, Yair Microsemi
 Comment Type T Comment Status A PSE Power
 Table 33-11 item 15, Turn off time need to be per pairset.
 SuggestedRemedy
 Change "Turn off time" to "Turn off time per pairset".
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.7 P 82 L 19 # 38
 Darshan, Yair Microsemi
 Comment Type T Comment Status A PSE Detection
 Table 33-11 item 23, Detection Timing, additional information:
 The time to complete detection of a PD is per a pairset or supply a reference for how to
 treat completion of detection for SS and DS PDs.
 SuggestedRemedy
 Change from: "Time to complete detection of a PD"
 To : "The per pairset time to complete detection of a PD"
 Response Response Status C
 ACCEPT IN PRINCIPLE.

Change from: "Time to complete detection of a PD"
 To : "Time to complete detection on a pairset."

Cl 33 SC 33.2.7 P 82 L 23 # 39
 Darshan, Yair Microsemi
 Comment Type T Comment Status A PSE Power
 Table 33-11 item 24, Error delay Timing, additional information:
 The time to is per pairset.

SuggestedRemedy
 Change from:
 "Delay before PSE may attempt subsequent powering after power removal because of
 error condition."
 To:
 "The per pairset delay before PSE may attempt subsequent powering after power removal
 because of error condition."

Response Response Status C
 ACCEPT IN PRINCIPLE.

Change from:
 "Delay before PSE may attempt subsequent powering after power removal because of
 error condition."
 To:
 "Delay before PSE may attempt subsequent powering of a pairset after power removal
 from that pairset because of an error condition."

Cl 33 SC 33.2.7 P 82 L 30 # 163
 Yseboodt, Lennart Philips
 Comment Type E Comment Status D PSE Power

Figure(s) 33-14 describe the required current capabilities and the current limits of a PSE.
 As such, these Figures do not belong in the short-circuit section, their scope is beyond
 that, but
 should be placed right after Table 33-11.

SuggestedRemedy
 Move Figure 33-14, 33-14a and 33-14b right after Table 33-11.

Proposed Response Response Status Z
 REJECT.

This comment was WITHDRAWN by the commenter.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7 P 82 L 33 # 40
 Darshan, Yair Microsemi
 Comment Type T Comment Status A Editorial
 Editor Note #1 can be removed.
 SuggestedRemedy
 Remove "1. PSE Vdiff is still under investigation. It may be changed."
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.7 P 82 L 39 # 235
 Dwelley, David Linear Technology
 Comment Type E Comment Status D PSE Power
 An active-balanced PSE needs no extra specs - it will act like a normal PSE with coincidentally perfect balance and should meet all unbalance specs easily
 SuggestedRemedy
 Remove Note 3.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.
 TFTD
 Should it be forced to support Icon-2p-unb?
 See comment 54

Cl 33 SC 33.2.7 P 82 L 42 # 236
 Dwelley, David Linear Technology
 Comment Type E Comment Status A Editorial
 Tlim_max is adequately described in 33.2.7.7: "Power shall be removed from a pairset before the pairset current exceeds the "PSE upperbound template" in Figure 33-14..."
 SuggestedRemedy
 Remove Note 4.
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.7 P 85 L 17 # 54
 Darshan, Yair Microsemi
 Comment Type TR Comment Status D PSE Power
 Addressing the editor note # 3 in page 82 lines 39-40 by adding text in page 85 after line 17. We need to address the case when PSE is using active or passive pair to pair current balancing. It will affect the minimum requirements for Icon-2P_unb, Icut-2P and ILIM-2P only for the pairs were the current is sensed.
 SuggestedRemedy
 Add the following text in page 85 line 17:
 PSEs that use active or passive pair to pair current or resistance balancing over the pairs where the current is sensed may optionally use lower Icon-2P_unb, Icut-2P, and ILIM-2P per the following equation TBD.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.
 TFTD
 See 235.

Cl 33 SC 33.2.7 P 101 L 14 # 249
 Schindler, Fred Seen Simply
 Comment Type ER Comment Status A Editorial
 Clause reference 33.2.7.1 is not a hyperlink.
 SuggestedRemedy
 Use a valid hyperlink.
 Response Response Status C
 ACCEPT.
 EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.2 P 83 L 24 # 18
 Zimmerman, George CME Consulting, Inc.
 Comment Type ER Comment Status A Editorial
 "VPort_PSE-2P" split across lines
 SuggestedRemedy
 suppress hyphenation breaking this up so it stays on one line.
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.2.7.4 P 83 L 46 # 97
 Skinner, John Sifos Technologies, In
 Comment Type ER Comment Status A Pres: Darshan3
 First paragraph uses the parameter name Icon-TBD when discussing dual-signature PDs, "as specified in Table 33-11."
 There is no parameter named Icon-TBD in Table 33-11.
 SuggestedRemedy
 Add the parameter "Icon-TBD" to Table 33-11, identify as Item 4b. If this parameter is not yet worked out, the Min and Max values should be listed as TBD.
 Alternatively - replace the reference to "Icon-TBD" in 33.2.7.4 line 46 with the parameter name "Icon", as the remainder of the normative statement specifies this is the continuous current on each pairset, and the existing parameter Icon already defines the continuous current on a pairset. If this remedy is accepted, the parameter "Icon-TBD" in the first sentence of the paragraph on page 84 line 1 will also need to be replaced with the parameter name "Icon".
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 175.

Cl 33 SC 33.2.7.4 P 83 L 46 # 48
 Darshan, Yair Microsemi
 Comment Type TR Comment Status A Pres: Darshan3
 See darshan_03_1015.pdf for details.
 The Icon-TBD need to be replaced with Icon-2P_unb.
 Rationale:
 DS PDs can have unbalance too in the positive pairs, in the negative pairs, or both.
 There is no way to know if it is single load or dual load unless the dual load present different class signature. In this case, no need to meet Icon-2P_unb
 SuggestedRemedy
 Change from:
 "PSEs connected to a single-signature PD shall meet Icon and Icon-2P_unb as specified in Table 33-11. PSEs connected to a dual-signature PD shall meet Icon-TBD on each pairset as specified in Table 33-11."
 To:
 "PSEs connected to a single-signature PD shall meet Icon and Icon-2P_unb as specified in Table 33-11.
 PSEs connected to a dual-signature PD with the same class over each pairset shall meet Icon-2P_unb on each pairset as specified in Table 33-11.
 PSEs connected to a dual-signature PD with a different class signature over each pairset are not required to meet Icon-2P_unb.
 PSEs connected to an isolated dual-signature PD are not required to meet Icon-2P_unb."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 175.

Cl 33 SC 33.2.7.4 P 84 L 1 # 178
 Yseboodt, Lennart Philips
 Comment Type TR Comment Status A Pres: Darshan3
 original text: "When connected to a dual-signature PD, Icon-TBD is the minimum current of a pairset that a PSE has to support."
 Get rid of TBD in variable name.
 SuggestedRemedy
 See presentation yseboodt_1_1015_baseline_fig3314_vXX.pdf
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 175.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.4 P 84 L 25 # 33
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan1

Updating Equation 33-4a (The Kipeak equation) due to the following changes made for D1.2:

1. Increasing PSE Vdiff to 10mV instead of 2mV.
- In addition, the following changes we made for Type 3 system:
2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
3. Type 4 systems stayed total 60mV vdiff:

SuggestedRemedy

Update Equation 33-4a per darshan_01_1015.pdf page 7.

Response Response Status C

ACCEPT IN PRINCIPLE.

Update Equation 33-4a per darshan_01_1015_Rev001.pdf page 7.

Cl 33 SC 33.2.7.4.1 P 85 L 2 # 32
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan1

Updating Equation 33-4b (PSE PI spec.) due to the following changes made for D1.2:

1. Increasing PSE Vdiff to 10mV instead of 2mV.
- In addition, the following changes we made for Type 3 system:
2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
3. Type 4 systems stayed total 60mV vdiff:

SuggestedRemedy

Update Equation 33-4b per darshan_01_1015.pdf page 6.

Response Response Status C

ACCEPT IN PRINCIPLE.

Update Equation 33-4b per darshan_01_1015_Rev001.pdf page 6.

Cl 33 SC 33.2.7.5 P 85 L 40 # 47
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Dwelley1

We need to allow A Type 3 or Type 4 PSE that is connected to a Class 0-4 single-signature PD and is in the POWER_UP state to transition between 2-pair and 4-pair power at any time, including after the expiration of Tinrush-2P.

SuggestedRemedy

Add the following text after line 40 in page 85:

A Type 3 or Type 4 PSE that is connected to a Class 0-4 single-signature PD and is in the POWER_UP state may transition between 2-pair and 4-pair power at any time, including after the expiration of Tinrush-2P.

Response Response Status C

ACCEPT IN PRINCIPLE.

This feature is allowed by the current draft.

No Changes to the draft result from accepting this comment.

Cl 33 SC 33.2.7.5 P 85 L 45 # 237
 Dwelley, David Linear Technology

Comment Type TR Comment Status D Pres: Dwelley1

linrush-2p should be linrush for all SS PDs (and DS single-load PDs if we define a way to identify them).

SuggestedRemedy

Change linrush-2p to linrush at lines 45, 47, and 49. Add a new sentence to the end of bullets a and b: "When connected to a DS PD, the minimum linrush specs apply to each pairset." Table 33-11 items 5 and 5a will need adjusting as well when we determine the final values for inrush.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.5 P 85 L 49 # 238
 Dwelley, David Linear Technology
 Comment Type TR Comment Status A Pres: Dwelley1
 linrush-2p minimum doesn't allow for unbalance effects when connected to a single-load PD. One pairset may fail to meet the minimum requirement when an unbalanced load is connected.
 SuggestedRemedy
 Define linrush (minimum) as total current for SS PDs (and DS single-load PDs if we define a way to identify them). See presentation dwelley_3bt_xx_1015.pdf.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 No changes to draft result from accepting this comment.
 Yair and Dave D. to work together.

Cl 33 SC 33.2.7.5 P 85 L 51 # 49
 Darshan, Yair Microsemi
 Comment Type TR Comment Status D PSE Inrush
 The text:
 "For Type 1 PSE, measurement of minimum linrush-2P requirement to be taken after 1 ms to allow startup transients."
 Is correct for all PSE types and not only Type 1 PSE.
 SuggestedRemedy
 Change from:
 "For Type 1 PSE, measurement of minimum linrush-2P requirement to be taken after 1 ms to allow startup transients."
 To:
 "For all PSE types, measurement of minimum linrush-2P requirement to be taken after 1 ms to allow startup transients."
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

Cl 33 SC 33.2.7.5 P 85 L 52 # 28
 Darshan, Yair Microsemi
 Comment Type ER Comment Status D PSE Inrush
 The text:
 A Type 2 PSE that uses 1-EventSingle-Event Physical Layer classification, and requires the 1 ms settling time, shall power up a cClass 4 PD as if it used 2Multiple-Event Physical Layer classification.

 It is not clear why this text should be part of the POWER_UP and not part of classification.
 SuggestedRemedy
 Move this text to classification section or clarify why it is inserted here.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

This was done through maintenance between AT and now. We don't have a right to change it. Additionally, this is an inrush spec not a classification spec and belongs here.

Cl 33 SC 33.2.7.5 P 86 L 6 # 239
 Dwelley, David Linear Technology
 Comment Type T Comment Status A Pres: Dwelley1
 Figure 33-13: The figure is described on line 26 as a template, but no minimum inrush current is shown. This could imply that the minimum inrush current is zero (especially since Figure 33-14 shows min and max).
 SuggestedRemedy
 Add a minimum line marked 0.40A(TBD), and adjust as needed based on agreement about Type 3 and 4 inrush levels (this may require adding extra figures as we did with Figure 33-14). Change "linrush-2p" labels to "linrush". Add a new sentence at the end of the section (after equation 33-5): "When connected to a DS PD, the linrush template applies to each pairset."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Change "template" in Figure 33-13 and on page 86, line 27 to "maximum limit".

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.5 P 86 L 24 # 69
 Johnson, Peter Sifos Technologies
 Comment Type E Comment Status A Pres: Dwelley1
 "Figure 33-13 - linrush-2P current..." figure description is missing a reference to Inrush from Table 33-11, item 5.
 SuggestedRemedy
 Re-title this to "Figure 33-13- linrush and linrush-2p current..."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 We need to fix this, but inrush is not stable enough yet.
 No change to draft.

Cl 33 SC 33.2.7.6 P 86 L 42 # 114
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A PSE Power
 original text: "If IPort-2P, the current supplied per pairset by the PSE to the PI, exceeds ICUT-2P for longer than TCUT-2P, the PSE may remove power from that pairset."
 It should be Icut-2P(min) and Tcut-2P(min)
 SuggestedRemedy
 "If IPort-2P, the current supplied per pairset by the PSE to the PI, exceeds ICUT-2P min for longer than TCUT-2P min, the PSE may remove power from that pairset."
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.2.7.7 P 87 L 5 # 250
 Schindler, Fred Seen Simply
 Comment Type TR Comment Status A Pres: Yseboodt1
 The text is should be normative.
 "Equation (33-6), Equation (33-7) and Figure 33-14 apply to PSEs that operate in 2-pair mode, as well as to Type 3 and Type 4 PSEs connected to dual-signature PDs. Equation (33-6a), Equation (33-7a) and Figure 33-14a apply to Type 3 PSEs connected to single-signature PDs, operating in 4-pair mode. Equation (33-6b), Equation (33-7b) and Figure 33-14b apply to Type 4 PSEs connected to single-signature PDs, operating in 4-pair mode."
 SuggestedRemedy
 Replace the text with,
 "Equation (33-6), Equation (33-7) and Figure 33-14 shall apply to PSEs that operate in 2-pair mode, as well as to Type 3 and Type 4 PSEs connected to dual-signature PDs. Equation (33-6a), Equation (33-7a) and Figure 33-14a shall apply to Type 3 PSEs connected to single-signature PDs, operating in 4-pair mode. Equation (33-6b), Equation (33-7b) and Figure 33-14b shall apply to Type 4 PSEs connected to single-signature PDs, operating in 4-pair mode."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 175.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.7 P 87 L 12 # 51
 Darshan, Yair Microsemi

Comment Type TR Comment Status R PSE Power

The text in lines 12-14:
 "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."

When PD gets to this situation it is already damaged so it is irrelevant if it takes TLIM or 2xTLIM to remove power.

SuggestedRemedy

Remove 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."

Response Response Status C

REJECT.

Vote:

Accept: 6

Reject: 10

Abstain: 6

Cl 33 SC 33.2.7.7 P 87 L 12 # 52
 Darshan, Yair Microsemi

Comment Type TR Comment Status R PSE Power

The text in lines 12-14:
 "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."

If power is removed from the first pair set, then all the current is going through one pair set and then power will be removed from that pair set too.
 This is already covered by the lines 10-12 therefore lines 12-14 is redundant.

SuggestedRemedy

Remove 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."

Response Response Status C

REJECT.

See 51

Cl 33 SC 33.2.7.7 P 87 L 12 # 50
 Darshan, Yair Microsemi

Comment Type TR Comment Status R PSE Power

The text in lines 12-14:
 "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."
 is redundant.
 The requirement is already covered by previous lines lines 10-12:
 Power shall be removed from a pairset of a PSE before the pairset current exceeds the "PSE upperbound template" in Figure 33-14, Figure 33-14a, and Figure 33-14b.

SuggestedRemedy

Remove 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."

Response Response Status C

REJECT.

See 51

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.7 P 87 L 12 # 251
 Schindler, Fred Seen Simply

Comment Type TR Comment Status R PSE Power

The existing 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."

provides unnecessary guidance. The prior sentence,
 "Power shall be removed from a pairset of a PSE before the pairset current exceeds the "PSE upperbound template""
 provides requirement.

On pages 100 to 101,
 "Power may be removed from both pairsets any time power is removed from one pairset. Editor's Note: All other instances of the above statement to be removed from draft. If commentators find any please comment against them." The first sentence called out in this comment is fits the concern expressed in the Editor's note.

The requirement in this section prevents one or both of the pairsets from crossing the PSE upperbound template. Concerns about delays in turning off one pairset then a second pairset may not warranted because the device connected to the PSE is no longer considered a PD. Having the ability to control pairsets individually permits system providers to build systems capable of removing power from a fault while still providing power on a nonfaulting pairset.

SuggestedRemedy

Strike the sentence,
 " 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."

Response Response Status C

REJECT.

See 51

Cl 33 SC 33.2.7.7 P 87 L 37 # 60
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Darshan4

Figure 33-14 title is incorrect.
 See details in updated Figure 33-14/a/b/c in page 6 of darshan_04_1015.pdf.

SuggestedRemedy

Replace:
 Figure 33-14—POWER_ON state, per pairset operating current templates for PSEs that operate in 2-pair mode, Type 3 and Type 4 dual-signature PSEs

With:
 Figure 33-14—POWER_ON state, operating current templates for Type 1 and Type 2 PSEs or Type 3 and Type 4 PSEs that operate in 2-pair mode.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 175.

Cl 33 SC 33.2.7.7 P 87 L 38 # 126
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

"Figure 33-14--POWER_ON state, per pairset operating current templates for PSEs that operate in 2-pair mode, Type 3 and Type 4 dual-signature PSEs"

SuggestedRemedy

dual-signature PSEs => Dual-signature PDs.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by Lennart's baseline if accepted.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.7 P 88 L 11 # 55
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Yseboodt1

- Figure 33-14a on Iport-2P axis:
To update the constant 0.8A/TBD to 0.9A for better margin.
- Figure 33-14a on Iport axis:
To update the 1.6A/TBD to $(60W/50V)*1.15=1.38A \implies 1.4A$
(The total current doesn't include unbalance so there is no need for twice the value of Iport-2P.)
- Page 89 line 19 equation 33-6a: To change from 0.8A to 0.9A

SuggestedRemedy

- Figure 33-14a on Iport-2P axis:
To update the constant 0.8A/TBD to 0.9A for better margin.
- Figure 33-14a on Iport axis:
To update the 1.6A/TBD to 1.4A
- Page 89 line 19 equation 33-6a: To change from 0.8A to 0.9A

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 175.

Cl 33 SC 33.2.7.7 P 88 L 13 # 56
 Darshan, Yair Microsemi

Comment Type TR Comment Status A Pres: Yseboodt1

Figure 33-14a line 13 and Figure 33-14b line 41:
As a greed in last meeting, we need to change the min equation and replace it with $I_{con-2P} = I_{con} - I_{port-2P-Other}$. We can also add in the baseline text that the max value of I_{con-2P} is I_{con-2P_unb} .

SuggestedRemedy

- Make the following changes in Figure 33-14b:
- Replace "min($I_{con-Iport-2P_other}$, I_{con-2P_unb})" with I_{con-2P} .
In the baseline text specify:
 $I_{con-2P} = I_{con-Iport-2P_other}$ or min($I_{con-Iport-2P_other}$, I_{con-2P_unb}).
See good example in Lennart's presentation.

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 175.

Cl 33 SC 33.2.7.7 P 88 L 26 # 127
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

Figures 33-14 a and b have incorrect aspect ratio.

SuggestedRemedy

Do not change aspect ratio.

Response Response Status C

ACCEPT.

Editor to correct aspect ratio (don't change aspect ratio from original).

Cl 33 SC 33.2.7.7 P 88 L 43 # 128
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Figure 33-14

Figure 33-14b: TLIMMIN is not consistent with TLIMMIN-2P in rest of figures

SuggestedRemedy

Change to: TLIMMIN-2P

Response Response Status C

ACCEPT.

Cl 33 SC 33.2.7.7 P 89 L 36 # 129
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

"is the maximum power PSE Type power" is strange sentence

SuggestedRemedy

"is the maximum power for a given PSE Type"

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 **SC 33.2.7.11** **P91** **L 22** # **252**
 Schindler, Fred Seen Simply
Comment Type **TR** **Comment Status** **A** *Unbalance*
 The text,
 "Type 2, Type 3 and Type 4 Endpoint PSEs shall meet the requirements of 25.4.5 in the presence of (lunb / 2)."
 Should be restricted to 100BASE-T operation.
SuggestedRemedy
 Replace the sentence with,
 "A 100BASE-TX transmitter in a Type 2, Type 3, and Type 4 Endpoint PSEs shall meet the requirements of 25.4.5 for in the presence of (lunb / 2)."
Response **Response Status** **C**
 ACCEPT.
 EZ

Cl 33 **SC 33.2.7.11** **P91** **L 33** # **260**
 Schindler, Fred Seen Simply
Comment Type **TR** **Comment Status** **R** *Pres: Schindler1*
 Type-4 PSEs, optimize power transferred to the PD by, using a fixed polarity, a higher supply voltage than other PSE Types, and provide 4-pair-only operation. The sentence,
 "Type 4 PSEs are not required to support PType if they are restricted to Class 7 power or lower."
 permits Type-4 PSEs to limit output power to class levels 1 to 7. Levels 1 to 6 are already provided by Type 1, 2, and 3, PSEs.
 This allowance introduces interoperability issues and adds unnecessary complexity when describing a system to customers or when providing requirements for a specification (see another comment market CONCERN1). Very little system power optimization benefit is provided. For example, a Type-4 PSE providing 25.5W to a PD attached with 30 m of CAT-5e requires 25.97W. The same transfer requires 26.01W from a 4-pair Type-3 PSE. This performance difference is not visible when using three significant digits used within this specification. Note that a Type-3 PSE can have identical performance to a Type-4 PSE when their voltage levels match.
 Legacy systems may be described using Type, which covers system power levels, and the cable infrastructure required. A Type-2 PSE powered a Type-2 PD. The added sentence introduces six Type-4 PSEs that will not power a Type-4 class-7 or 8 PD. The cable infrastructure for Type-4 systems needs to be determined using class power levels, which results in three different cabling infrastructures for Type-4 PSEs.
SuggestedRemedy
 Strike the referenced sentence, which results in Type-4 PSE providing class-7 or 8 power limits. This restores previous conventions and removes many cases that result in interoperability issues. This restriction also increases the likelihood that computer networks can co-exist with networks used to power lighting.
Response **Response Status** **C**
 REJECT.
 Vote:
 Accept: 7
 Reject: 3
 Abstain: 10

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.2.7.11a P 91 L 35 # 259

Schindler, Fred Seen Simply

Comment Type TR Comment Status D PSE Power

The input average current has been calculated with at least a 1 second window for the Type 1 and 2. It does not make sense to change the window to 4 seconds for Type 4, which increase the energy transferred when the PSE is providing power at the highest power level possible in this clause.

SuggestedRemedy

Have the Task Force discuss this. The preferred solution is to use a sliding window size of 1 second.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

Cl 33 SC 33.3.2 P 96 L 42 # 179

Yseboodt, Lennart Philips

Comment Type TR Comment Status A PD Class

"Type 3/SS PDs operating up to a maximum power draw corresponding to Class 3 or less implement a minimum of Single-Event Physical Layer Classification and advertise a Single-Event Class signature of 1,2, or 3."

Only Type 1 PDs perform Single-Event classification.
Replace Single-Event classification => Multiple-Event classification

SuggestedRemedy

"Type 3/SS PDs operating up to a maximum power draw corresponding to Class 3 or less implement a minimum of Multiple-Event Physical Layer Classification and advertise a Class signature of 1,2, or 3."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.2 P 97 L 1 # 104

Bennett, Ken Sifos Technologies, In

Comment Type T Comment Status A PD Class

The second sentence at the top of the page states:
Type 4/DS PDs only advertise Class 5.

Which does not match the two statements below:

Pg 96, Ln 54: "Type 4/DS PDs advertise a Class signature of 5 on at least one pairset."
Pg 107, Ln 45: "Dual-signature PDs may advertise a different Class signature on each pairset."

SuggestedRemedy

Change pg 97 Line 1 to:

...Type 4/DS PDs advertise Class 5 on at least one pairset.

Response Response Status C

ACCEPT.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.3.2 P 97 L 5 # 254
 Schindler, Fred Seen Simply

Comment Type TR Comment Status D PD Class

The modified legacy text exists to require PDs to provide an indication of under power. Unfortunately, the power level at which this is possible is not precisely called out. Ideally, the indicator should operate at the lowest PSE power class-1 level.

"A Type 2, Type 3 or Type 4 PD that does not successfully observe a Multiple-Event Physical Layer classification or Data Link Layer classification shall conform to Type 1 PD power restrictions and shall provide the user with an active indication if underpowered. The method of active indication is left to the implementer."

SuggestedRemedy

Change the sentence to,
 "A Type 2, Type 3 or Type 4 PD that does not successfully observe a Multiple-Event Physical Layer classification or Data Link Layer classification shall conform to Type 1 PD power restrictions and shall provide the user with an active indication if underpowered. The method of active indication is left to the implementer.

Type 3 or Type 4 PDs shall provide the active indication while operating within PD power class 1."

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

Do we really want to restrict them to class 1? Type 1, yes.

This would seem to be a feature, but not a requirement for interoperability.

Cl 33 SC 33.3.3.5 P 102 L 33 # 130
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

"Editor's Note: PD state diagram needs to be updated for Autoclass."

SuggestedRemedy

"Editor's Note: PD state diagram needs to be updated for Autoclass and detecting long class event."

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.5 P 105 L 10 # 149
 Yseboodt, Lennart Philips

Comment Type ER Comment Status A Editorial

Table 33-15a says in a Table note: "Any PD that is limited to Class 0-3 power levels may omit DLL support."

Next we have text that says (or should say, see other comment):
 "Single-signature PDs not capable of drawing more than Class 3 power levels may omit Data Link Layer classification (see 33.6)."

Slightly different statement with the same effect, on the same page.

SuggestedRemedy

Remove the text on line 46-48.
 Change Table 33-15a note to:
 "Single-signature PDs not capable of drawing more than Class 3 power levels may omit Data Link Layer classification (see 33.6)."

Response Response Status C

ACCEPT.

Cl 33 SC 33.3.5 P 105 L 46 # 269
 Stover, David Linear Technology

Comment Type E Comment Status A Editorial

Typo

SuggestedRemedy

Replace "PD's" with "PDs"

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 149

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.3.5 P 105 L 46 # 180
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A PD Class

"PD's of all Types not capable of drawing more than Class 3 power levels may omit Data Link Layer classification (see 33.6)."

Only true for SS PDs. DS PDs always need to support DLL + spell fix.

SuggestedRemedy

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

Possibly OBE by previous comment. (149)

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 149.

Cl 33 SC 33.3.5.1 P 106 L 30 # 188
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A PD Class

The Type 3 specific Class 0 signature current was removed from Table 33-16. While Class 0 no longer exists for Type 3, the Class signature '0' still does.

SuggestedRemedy

Restore missing Type 3 specific Class 0 signature from D1.2.

Response Response Status C

ACCEPT.

EZ

Why was it removed?

Cl 33 SC 33.3.5.2 P 106 L 47 # 99
 Skinner, John Sifos Technologies, In

Comment Type E Comment Status A Editorial

The state names "DO_CLASS_EV1", "DO_CLASS_EV2", "DO_CLASS_EV3", "DO_CLASS_EV4", "DO_CLASS_EV5", and "DO_CLASS_EV6" used in the text do not match the state names used in the state diagram shown in Figure 33-16. The state names in Figure 33-16 use the form "DO_CLASS_EVENTn".

SuggestedRemedy

Change the names of the states listed in lines 47 and 48 to match the names used in the state diagram shown in Figure 33-16.

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.5.2 P 106 L 48 # 98
 Skinner, John Sifos Technologies, In

Comment Type E Comment Status D PD Class

The descriptive text includes "DO_CLASS_EV6", which is also shown in Figure 33-16. The state diagram in Figure 33.9d, and the related tables and text in subclause 33.2.6 only define five class events (CLASS_EV5 the last).

There appears to be no use of, and therefore no need to describe a sixth class event in subclause 33.3.

SuggestedRemedy

Remove "DO_CLASS_EV6" from the paragraph at line 48, and remove the state "DO_CLASS_EVENT_6" from Figure 33-16.

If this remedy is accepted, it will also be necessary to remove "DO_CLASS_EVENT6" from the third paragraph under 3.3.5.2.1, page 108, line 34.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

The 6th class event state is used to define PD behavior for any class event greater than 5. It is needed, just as class event 3 was defined as part of AT. Defined behaviors make things much easier in case we need to add some more states later.

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.3.5.2 P 107 L 7 # 70
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A PD Class

Per earlier comment to D1.2, I still see the state variable names "class_sig_A" and "class_sig_B" as asking for trouble and creating confusion with Dual-Signature PD classification.

Prior response was AIP but needing a better substitute.

SuggestedRemedy

Solution 1:

Change 'class_sig_A' to 'class_sig_init'
 Change 'class_sig_B' to 'class_sig_final'

Solution 2 (picture the 2 and 3 events?):

Change 'class_sig_A' to 'class_sig_U'
 Change 'class_sig_B' to 'class_sig_W'

Solution 3:

Change 'class_sig_A' to 'class_sig_m'
 Change 'class_sig_B' to 'class_sig_n'

Change will require search and replace over 33.3 portions of document.

Response Response Status C

ACCEPT IN PRINCIPLE.

The TF is still searching for the right names. We welcome more suggestions.

Cl 33 SC 33.3.5.2 P 107 L 40 # 131
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

" a Type 2, Type 3 and Type 4 PD's pse_power_level state variable is set to '1'. "

Period not at end of sentence.

SuggestedRemedy

" a Type 2, Type 3, and Type 4 PD's pse_power_level state variable is set to '1'. "

Response Response Status C

ACCEPT IN PRINCIPLE.

" a Type 2, Type 3, or Type 4 PD's pse_power_level state variable is set to '1'. "

Cl 33 SC 33.3.5.2 P 107 L 45 # 121
 Yseboodt, Lennart Philips

Comment Type T Comment Status R PD Class

"Dual-signature PDs may advertise a different Class signature on each pairset."

Do we really want to write this out in the standard ?

It adds significant complication as it has:

- unique behaviour / rules for continuous power
- power demotion very tricky

SuggestedRemedy

Remove this sentence.

We don't forbid DS/unequal classes, we simply do not specify it at all.

Response Response Status C

REJECT.

Cl 33 SC 33.3.5.2 P 108 L 18 # 122
 Yseboodt, Lennart Philips

Comment Type T Comment Status A PD Class

Table 33-17, item 7 is Long first Class Event timing, Tlcf_pd, with range 75.5 to 87.5 ms.
 Tlcf = 88 to 105 ms.

The minimum makes sense, the maximum does not.

This parameter determines the conditions where a PD is allowed to deem a class event as 'long'.

As soon as a class event exceeds 88ms (= Table 33-10 / T_LCF).

Also see 33.3.8:

"Types 3 and 4 PDs which detect a long first Class event in the range of T LCF_PD may ..."

SuggestedRemedy

Remove maximum.

Response Response Status C

ACCEPT IN PRINCIPLE.

Insert text at end of 33.3.5.2

"Type 3 and Type 4 PDs may determine if the PSE they are connected to supports low MPS by measuring the length of the first class event. The default value for short_mps is FALSE. If it chooses to implement low MPS, a PD may set short_mps to TRUE if the first class finger is longer than Tlcf_pd min and shall set short_mps to True if the first class finger is longer than Tlcf_pd max."

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 33 SC 33.3.5.3 P 108 L 47 # 71
 Johnson, Peter Sifos Technologies

Comment Type E Comment Status A Editorial

Another "Please see"....

Engineers aren't that polite.

SuggestedRemedy

Replace "Please see.." with "See..".

Response Response Status C

ACCEPT.

I am that polite (and I wrote it).

EZ

Cl 33 SC 33.3.5.3 P 108 L 47 # 132
 Yseboodt, Lennart Philips

Comment Type E Comment Status A Editorial

original text: "Please see Annex 33B for more information on Autoclass."
 Wrong annex referenced

SuggestedRemedy

Please see Annex 33C for more information on Autoclass.

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.5.3 P 108 L 49 # 72
 Johnson, Peter Sifos Technologies

Comment Type T Comment Status A Autoclass

The phrase "A PD implementing Autoclass shall remove its classification current at Tacs (as defined in Table 33-17a), resulting in a classification signature of '0' for the remainder of CLASS_EV1." suggests 0mA class signature. This is inconsistent with 33.2.6.2 where it states "....lclass in the range of Class 0 after Tacs...".

So what is the actual requirement ? Class 0 or 0 mA ? (note this does have a 'shall' in it...)

Also, this requirement only has meaning if CLASS_EV1 is an LCF. In the PSE State Diagram, that state is now CLASS_EV1_LCF. We should stipulate that this only happens given Type 3 or Type 4 PSE.

SuggestedRemedy

Alter the phrase to:

"When connected to a Type3 or Type 4 PSE, a PD implementing Autoclass shall present a Class 0 signature starting at Tacs (as defined in Table 33-17a) for the remainder of CLASS_EV1_LCF."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 53

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

CI 33 SC 33.3.5.3 P 108 L 49-5 # 53
 Darshan, Yair Microsemi
 Comment Type TR Comment Status A Autoclass

The following text is not clear:
 "A PD implementing Autoclass shall remove its classification current at TACS (as defined in Table 33-17a), resulting in a classification signature of '0' for the remainder of CLASS_EV1. A PD implementing Autoclass carries out the rest of the Physical Layer classification as defined in section 33.3.5.1 or 33.3.5.2."

1. It says that the PD shall remove its classification current at TACS (table 33-17a) = 75.5msec to 87.5ms which is identical to the Long First Class event timing T_LCF_PD=75.5msec to 87.5msec (Table 33-17) resulting in a classification signature of '0' for FOR THE WHOLE periode of the class event and not only for the remainder of CLASS_EV1.
 So the "remiander of CLASS_EV1" is incorrect to use. If TACS WAS < T_LCF_PD than it was OK.

The text:
 "A PD implementing Autoclass carries out the rest of the Physical Layer classification as defined in section 33.3.5.1 or 33.3.5.2." may need further clarrrification by saying:
 "A PD implementing Autoclass carries out the rest of the Physical Layer classification (**the PD class response to the 2nd or more class events**) as defined in section 33.3.5.1 or 33.3.5.2."

SuggestedRemedy

Group to clarify the questions of adopt the following remedy:
 "A PD implementing Autoclass shall remove its classification current at TACS (as defined in Table 33-17a), resulting in a classification signature of '0' for the (Delete "remainder" **duration** of CLASS_EV1).
 A PD implementing Autoclass carries out the rest of the Physical Layer classification **(the PD class response to rest of class events)** as defined in section 33.3.5.1 or 33.3.5.2."

Note: I am aware of the fact that it takes time to PD to remove class current so the time left with class 0 is less than CLASS_EV1 so "remainder" may be OK to use but the whole thing is not so clear (what to do with the time when it is not class 0? etc.) but this is the best what I could suggest to start a discussion.

Response Response Status C
 ACCEPT IN PRINCIPLE.

Change to:

"A PD implementing Autoclass shall respond to Physical Layer classification as specified in 33.3.5.1 and 33.3.5.2 with the exception that the PD shall change its current during the first class event to class signature 0 no earlier than TACS min and no later than TACS max (as

defined in Table 33-17a). "

CI 33 SC 33.3.5.3 P 109 L 1 # 182
 Yseboodt, Lennart Philips
 Comment Type TR Comment Status A Autoclass

"After power up, a PD implementing Autoclass shall draw its highest required power throughout the period bounded by ..."

This statement may lead the reader to believe that a PD using Autoclass is not subject to power demotion (which it is).

SuggestedRemedy

"After power up, a PD implementing Autoclass shall draw its highest required power, subject to the requirements on Pclass_pd in 33.3.7.2, throughout the period bounded by ..."

Response Response Status C
 ACCEPT.

CI 33 SC 33.3.5.3 P 109 L 1 # 73
 Johnson, Peter Sifos Technologies
 Comment Type T Comment Status A Autoclass

Current text is:

"After power up, a PD implementing Autoclass shall draw its highest required power throughout the period bounded by ..."

So what happens when a Type 3 or Type 4 PSE cannot support Pclass_pd for this PD? Full loading by the PD during Autoclass will lead to power cycling with the PSE. Either the PD must restrict Autoclass load to its maximum power requirement GIVEN any particular power grant from the PSE (e.g. 13W, 25.5W, etc) or the Autoclass process needs to somehow abort.

SuggestedRemedy

Assuming the solution is that PD's must restrict Autoclass loads to PD's maximum power requirement *GIVEN* any particular power grant from the PSE:

"After power up, a PD implementing Autoclass shall draw its highest required power, in accordance with the pse_power_level resolved during classification, throughout the period bounded by"

Response Response Status C
 ACCEPT IN PRINCIPLE.

OBE by 182.

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Cl 33 SC 33.3.5.3 P 109 L 13 # 88
 Skinner, John Sifos Technologies, In

Comment Type T Comment Status D Autoclass

Tacs Max 87.5ms as defined in Table 33-17a does not appear to provide sufficient margin for a PD that supports Autoclass to be correctly recognized by a PSE that supports Autoclass.

A PSE is allowed to terminate CLASS_EV1_LCF at Tlcf min 88ms (as defined in Table 33-10). If there is any timer inaccuracy between the PSE and PD, the 500usec margin afforded by Tacs max could lead to a case where a PDs autoclass capability will not be identified, even though that PD is changing the class signature within the specified time frame. (would admittedly be poor design practice, but conformant)

A conservative approach would be to reduce the value of Tacs Max in Table 33-17a, to provide adequate margin to account for any timer inaccuracy between the PSE and PD.

SuggestedRemedy

Change the value of Tacs Max in Table 33-17a, Item 1 to 85.5 ms.

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

This value was increased in D1.3 due to PD timing margin requirements. It is up to the PSE to check the PD class current before it ends the LCF. 88ms is a minimum. I imagine most PSEs will have a timer set for 95ms or so and then will check the class current and then transition to mark...

Cl 33 SC 33.3.5.3 P 109 L 19 # 181
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A Autoclass

Table 33-17a, Item 3, Autoclass power draw end time needs to be updated to reflect changes in PSE section made to D1.3.

SuggestedRemedy

Change T_auto_pd2 from 3.28 to 3.65 seconds.

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.3.5.3 P 108 L 50 # 189
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A Autoclass

"A PD implementing Autoclass shall remove its classification current at T ACS (as defined in Table 33-17a), resulting in a classification signature of '0' for the remainder of CLASS_EV1."

Contradiction since classification signature of '0' is between 1mA and 4mA.

SuggestedRemedy

"A PD implementing Autoclass shall reduce its classification current at T ACS (as defined in Table 33-17a), resulting in a classification signature of '0' for the remainder of CLASS_EV1."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 53.

Cl 33 SC 33.3.6 P 109 L 30 # 123
 Yseboodt, Lennart Philips

Comment Type T Comment Status R Mutual ID

"A PD shall identify a PSE Type as a Type lower or equal to its own Type"
 "A PD connected to a higher PSE Type than its own may identify that PSE as its own Type."
 What does this do ?
 How can it be tested ?

SuggestedRemedy

Remove sentences ?

Response Response Status C

REJECT.

The commenter is invited to resubmit and suggest alternative text.

(CIRSAT)

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Cl 33 SC 33.3.7 P 110 L 27 # 183
 Yseboodt, Lennart Philips
 Comment Type **TR** Comment Status **A** PD Power
 Table 33-18, Item 1, PD input voltage.
 The values for Class 5/DS and Class 8 are different. They must be the same.
 Recalculating this results in 41.1826V.
 SuggestedRemedy
 Change Item 1, row Class 5/DS to 41.2V.
 Response Response Status **C**
 ACCEPT.
 EZ

Cl 33 SC 33.3.7 P 112 L 1 # 240
 Dwelley, David Linear Technology
 Comment Type **E** Comment Status **A** PD Power
 Note seems obsolete: item 4 no longer has values.
 SuggestedRemedy
 Strike this editor's note.
 Response Response Status **C**
 ACCEPT.
 The value has been moved to Table 33-16a.
 The note was there to remind us that we rounded up... I believe we are all ok with this.

Cl 33 SC 33.3.7.2 P 112 L 23 # 103
 Bennett, Ken Sifos Technologies, In
 Comment Type **ER** Comment Status **A** PD Power
 It's not clear that the PClass_PD limit in table 33-18 is determined by the Class assigned
 (or allocated) by the PSE. The suggested remedy adds a clarifying sentence to 33.3.7.2.
 SuggestedRemedy
 Add the following after the first sentence of 33.3.7.2:
 PClass_PD in table 33-18 is determined by the Class assigned by the PSE.
 Response Response Status **C**
 ACCEPT IN PRINCIPLE.
 Add new sentence as 1st sentence in 33.3.7.2.

Cl 33 SC 33.3.7.3 P 113 L 4 # 21
 Jones, Chad Cisco
 Comment Type **TR** Comment Status **A** PD Inrush
 This is a reminder of MR1277 that has been assigned to this TF for closure. Changes were
 previously made to close the MR and then subsequently further changes were made that
 may backed out the fix. This comment is being filed so that the TF can review the MR and
 ensure it is being properly addressed and to provide an Editor's Note warning of any future
 changes to the text.
 MR 1277: "RATIONALE FOR REVISION:
 PDs in the field turn on their DC-DC load during inrush. This leads to PD cap not charging
 up fully (even if PD cap is <180uf PSE is following inrush rules from Section 33.2.7.5).
 This may lead to operational problems after inrush. There is a Voff requirement in PD
 table 33-18 to ensure power supply remains turned off for V<30V, but customers seem to
 read this as applicable only "after power on" not during "power on" - hence ether turn on
 their DC-DC during inrush causing problems.

PROPOSED REVISION TEXT:
 Request the following text be added as note to section 33.4.1
 Add the following to section 33.3.7.3
 "PDs shall not draw more than the maximum current allowed by a PSE during inrush as
 outlined in section 33.2.7.5" Change 2nd paragraph of Section 33.3.7.1 as follows (change
 shown in underline) "The PD shall not turn on until a voltage
greater than Voff and less than or equal to Von"

SuggestedRemedy
 Restore the text as it stood after D0p4. Also, add an Editor's Note to the end of the
 paragraph to be removed before publishing, "Editor's Note: this paragraph has changed as
 a result of MR1277. Do not change this paragraph without consulting the request of
 MR1277."

History:
 D0p1: "Inrush current is drawn during the startup period beginning with the application of
 input voltage at the PI
 compliant with VPort_PD requirements as defined in Table 33-17, and ending when CPort
 is charged to 99 % 13 of its final value. This period should be less than TInrush min per
 Table 33-10."

D0p4: "Inrush current per pair-set is drawn beginning with the application of input voltage at
 the pair-set compliant with Vport_PD-2P requirements as defined in Table 33-18, and
 ending before TInrush-2P min per Table 33-11. After TInrush-2P min, the PD shall not
 exceed its per pair-set current threshold corresponding to its class level."

D1p3: "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, and ending when 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. After TInrush-
 2P min, Class 6 or Class 8 PDs shall meet Pclass at the PSE PI; all other PDs shall meet
 PClass_PD as specified in Table 33-18."

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Response *Response Status* **C**
 ACCEPT IN PRINCIPLE.

Remove the sentence on line 8 (last sentence of first paragraph): "After Tinrush-2P min, Class 6 or Class 8 PDs shall meet Pclass at the PSE PI; all other PDs shall meet Pclass_PD as specified in Table 33-18."

Remove the sentence on line 13 (first sentence of second paragraph): "Type 2, Type 3 and Type 4 PDs with pse_power_leveltype state variable set to 2, 3 and 4 respectively prior 13 to power-on shall behave like a Type 1 PD for at least Tdelay-2P min."

Add these sentences to the end of the first paragraph (at line 8). "All PDs shall consume a maximum of Class 3 power for at least Tdelay-2P min. This allows the PSE to properly complete inrush."

Add: "Editor's Note: this paragraph has changed as a result of MR1277. Do not change this paragraph without consulting the request of MR1277." below this change

Cl 33 **SC 33.3.7.3** **P 113** **L 30** # 150
 Yseboodt, Lennart Philips

Comment Type **ER** *Comment Status* **A** *PD Inrush*

original text: "See PSE-PD simplified Cport implementation model in Annex TBD."
 Do we really need an Annex to explain this implementation issue ?

BC:EYO

SuggestedRemedy
 Remove this line.
 If it really needs explanation that cannot be done in 33.3.7.3 we should submit actual Annex contents.

Response *Response Status* **C**
 ACCEPT IN PRINCIPLE.

Remove sentence.

Yair is invited to provide figure and new text (no Annex).

Cl 33 **SC 33.3.7.5** **P 116** **L 9** # 133
 Yseboodt, Lennart Philips

Comment Type **E** *Comment Status* **A** *PD Power*

"is the voltage at PSE"

SuggestedRemedy
 Change to: "is the voltage at the PSE PI"

Response *Response Status* **C**
 ACCEPT.
 EZ

Cl 33 **SC 33.3.7.6** **P 116** **L 38** # 134
 Yseboodt, Lennart Philips

Comment Type **E** *Comment Status* **A** *Editorial*

PClass_PD_max needs to be subscribed.

SuggestedRemedy
 Change to subscript

Response *Response Status* **C**
 ACCEPT.
 EZ

Cl 33 **SC 33.3.7.6** **P 116** **L 39** # 135
 Yseboodt, Lennart Philips

Comment Type **E** *Comment Status* **A** *Editorial*

"A Type 4 PD with peak power draw that does not exceed PClass PD max and has an input capacitance of 360mF or less requires no special considerations with regards to transients at the PD PI."

Typo.

SuggestedRemedy
 "A Type 4 PD with peak power draw that does not exceed PClass PD max and has an input capacitance of 360uF or less requires no special _considerations_ with regards to transients at the PD PI."

Response *Response Status* **C**
 ACCEPT.
 NonEZ

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Cl 33 SC 33.3.7.6 P 116 L 48 # 124
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A Editorial
 "A Type 2 ,Type 3, and Type 4 PD that demand less than Class 5 power levels shall ..."
 There are no Type 4 PDs at Class 5 or lower.
 s/demand/demands.
 SuggestedRemedy
 "A Type 2 or Type 3 PD that demands less than Class 5 power levels shall ..."
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.7.6 P 117 L 17 # 125
 Yseboodt, Lennart Philips
 Comment Type T Comment Status A Editorial
 "A Type 3 or Type 4 PD that demands Class 5 power levels shall meet both of the following:"
 There are no Type 4 PDs at Class 5.
 SuggestedRemedy
 "A Type 3 PD that demands Class 5 power levels shall meet both of the following:"
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Implement suggested remedy.
 Add "Editor's Note: Type 4 DS PDs need to be considered for following text (as do lower class DS PDs)" on line 16.

Cl 33 SC 33.3.7.6 P 117 L 24 # 136
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 original text: "...The input votage source drives both PD Modes ..."
 typo "votage"
 SuggestedRemedy
 "... The input voltage source drives both PD Modes ..."
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.7.6 P 117 L 36 # 137
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 original text: "...The input votage source drives both PD Modes ..."
 again typo "votage"
 SuggestedRemedy
The input voltage source drives both PD Modes ...
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.7.8 P 118 L 8 # 138
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 "... shall be valid within T_Class as specified in Table 33-18 ..."
 Parameter name is T_class (no capital)
 SuggestedRemedy
 "... shall be valid within T_class as specified in Table 33-18 ..."
 Response Response Status C
 ACCEPT.
 EZ

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Cl 33 SC 33.3.7.9 P 118 L 44 # 139
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 Table 33-18a, item 3, add. info says "See Annex 33A.5"
 Should be period.
 SuggestedRemedy
 "See Annex 33A.5"
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.7.9 P 118 L 46 # 184
 Yseboodt, Lennart Philips
 Comment Type TR Comment Status A Pres: Darshan1
 Table 33-18a, item 4, PD Power has value "Set to maximum per its Class".
 How exactly can the PD power be set ? This is not a controllable parameter in most PDs.
 SuggestedRemedy
 Remove item 4, perhaps add to the text that the PD should be put in a mode where it
 consumes maximum power where applicable.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Adopt changes shown on page 11 of darshan_01_1015_Rev001.pdf

Cl 33 SC 33.3.7.10.1 P 119 L 17 # 41
 Darshan, Yair Microsemi
 Comment Type T Comment Status A Editorial
 The title of figure 33-18a is incorrect.
 SuggestedRemedy
 Change from "Figure 33-18a—PI fault tolerance test circuit"
 To: "Figure 33-18a—PD PI pair-to-pair test circuit"
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.7.10.1 P 119 L 19 # 4
 Zimmerman, George CME Consulting, Inc.
 Comment Type TR Comment Status A Unbalance
 CONFUSION IN Rpair:
 "Rpair_max and Rpair_min represents PSE and channel effective source impedance that
 includes the effect of VPort_PSE_diff as specified by Table 33-11 item 1a."
 This is unclear, and possibly in conflict with P85 lines 10-14:
 "RPair_max is the maximum PSE common mode effective resistance in the powered pairs
 of same polarity.
 RPair_min is the minimum PSE common mode effective resistance in the powered pairs of
 same polarity."

Do RPair_min and RPair_max include the channel, or are they just in the PSE? Are they
 the combination of the PSE and channel? Are they maximum and minimum requirements
 OVERALL, or are they just the greater and lesser of the two Rpair values in a given
 installation? (that seems to be the case, but I am not sure).
 SuggestedRemedy
 Clarify what the definitions of Rpair_max and Rpair_min are. Delete either the definition on
 page 119 or the definition on page 85, and reference it in the other place.
 Response Response Status C
 ACCEPT.
 Replace Rpair_max, Rpair_min with Rsource_max, Rsource_min in Table 33-18a, Figure
 33-18a, and page 119 line 20.

Cl 33 SC 33.3.8 P 119 L 27 # 185
 Yseboodt, Lennart Philips
 Comment Type TR Comment Status A MPS
 "In order to maintain power, the PD shall provide a valid Maintain Power Signature (MPS)
 at the PI."
 This language prohibits NOT showing MPS if the goal is to become unpowered.
 SuggestedRemedy
 "A PD that requires power from the PI shall provide a valid Maintain Power Signature
 (MPS) at the PI."
 This makes the 'shall' conditional upon needing power or not.
 Response Response Status C
 ACCEPT.

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Cl 33 SC 33.3.8 P 119 L 31 # 140
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 "or a PD which does not detect a long first Class event,"
 In this case Class does not need to be capitalized.
 Occurs on line 31, 34 and 35.
 SuggestedRemedy
 "or a PD which does not detect a long first class event,"
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.8 P 119 L 34 # 141
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 "Types 3 and 4 PDs which detect..."
 SuggestedRemedy
 "Type 3 and Type 4 PDs that detect..."
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.3.8 P 119 L 41 # 186
 Yseboodt, Lennart Philips
 Comment Type TR Comment Status A MPS
 "PDs using Autoclass shall use the I port_MPS associated with the PD Class advertised during Physical Layer classification."
 The PSE MPS rules are determined by the Class assigned to the PD, not what it advertised.
 Example: A Class 5/Autoclass PD, that gets power demoted to Class 4, gets to use Class 4 MPS rules.
 SuggestedRemedy
 "PDs using Autoclass shall use the I port_MPS associated with the PD Class assigned by the PSE during Physical Layer classification."
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.3.8 P 119 L 44 # 151
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A Editorial
 "Editor's Note: To add line for Type 1 and Type 2 dual-signature."
 I don't think we want to describe the behaviour of Type 1/Type 2 dual-signature.
 SuggestedRemedy
 Remove editors note.
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.3.8 P 119 L 44 # 241
 Dwelley, David Linear Technology
 Comment Type ER Comment Status A Editorial
 "Editor's Note: To add line for Type 1 and Type 2 dual-signature." Such PDs do not officially exist and must meet the same specs as T1/2 SS PDs.
 SuggestedRemedy
 Strike this editor's note.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 151.

Cl 33 SC 33.3.8 P 119 L 46 # 142
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 original text: "See Annex TBD for PD design guidelines for MPS behavior."
 Annex TBD referenced.
 SuggestedRemedy
 Generate it as an empty structure and reference correctly.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Editor to assign next available Annex, create the annex and fill it with:
 "Editor's Note: This Annex to be filled with PD design guidelines for MPS."
 EZ

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Cl 33 SC 33.3.8 P 119 L 50 # 152
 Yseboodt, Lennart Philips
 Comment Type ER Comment Status A MPS
 "A PD that does not maintain the MPS components mentioned above may have its power removed..."
 Reference by relative physical location in the draft probably a bad idea.
 SuggestedRemedy
 "A PD that does not maintain the MPS components in section 33.3.8 may have its power removed..."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Move sentence to second sentence of 33.3.8 changing it to:
 "A PD that does not maintain a valid MPS may have its power removed..."

Cl 33 SC 33.3.8 P 121 L 36 # 143
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 Table 33-19a, lowermost/rightmost cell contains "by "short_mps = TRUE (T_LCF)"
 Some garbage crept in.
 SuggestedRemedy
 Replace by "short_mps = TRUE"
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.4.3 P 124 L 19 # 144
 Yseboodt, Lennart Philips
 Comment Type E Comment Status A Editorial
 "for a 10GBASE-T PHY" seems to be misplaced somehow.
 SuggestedRemedy
 Not clear where it belongs.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 George to provide instructions.
 NonEZ

Cl 33 SC 33.4.4 P 125 L 8 # 42
 Darshan, Yair Microsemi
 Comment Type T Comment Status A AES
 Replace TBD with:
 50 mV peak from 1MHz to 100MHz and 20 mV peak from > 1MHz and up to 500MHz.
 SuggestedRemedy
 Replace TBD with:
 50 mV peak from 1MHz to 100MHz and 20 mV peak from > 100MHz and up to 500MHz.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 19.

Cl 33 SC 33.4.4 P 125 L 8 # 19
 Zimmerman, George CME Consulting, Inc.
 Comment Type TR Comment Status A AES
 "For 10GBASE-T systems, TBD mV peak, for 1 MHz to 500 MHz."
 Need to fill in a number. Initial analysis of 35-40dB common mode to differential mode conversion magnetics suggests that 50mVpp (same as 100 and 1000BASE-T) would be about right. Phy developers are asking to mark with a TBD for now.
 SuggestedRemedy
 change "TBD mV peak" to "50 mVpp (TBD)"
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.4.9 P 129 L 1 # 242
 Dwelley, David Linear Technology
 Comment Type E Comment Status A Editorial
 Section 33.1.4.1 is updated
 SuggestedRemedy
 Strike this editor's note.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 OBE by 27
 EZ

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Cl 33 SC 33.4.9 P 129 L 1 # 27
 Darshan, Yair Microsemi
 Comment Type E Comment Status A Editorial
 Type 4 was adressed.
 We can remove the editor note.
 SuggestedRemedy
 Remove the Editor Note.
 Response Response Status C
 ACCEPT.
 EZ

Cl 33 SC 33.4.9.1.4 P 133 L 16 # 23
 Maguire, Valerie Siemon
 Comment Type T Comment Status A Cabling
 Not sure if this is in scope, but Category 5 cord requirements do not reside in ANSI/TIA-568-C.2
 SuggestedRemedy
 Replace "ANSI/TIA-568-C.2" with "ANSI/TIA/EIA-568-A:1995"
 Response Response Status C
 ACCEPT.

Cl 33 SC 33.5.1.2 P 138 L 40 # 9
 Zimmerman, George CME Consulting, Inc.
 Comment Type TR Comment Status A Management
 Need to allocate classes 5 through 8 and autoclass.
 SuggestedRemedy
 replace "101 Invalid Class" with "101 Class 5"
 replace "110 Reserved" with "110 Class 6"
 replace "111 Reserved" with "111 Class 7"
 add after table - "Editor's Note (to be removed before Working Group ballot) - Status register bits are used up, and clause 22 address space is used up as well. Contributions requested as to how to expand status, at a minimum to report Class 8 PD and Autoclass"

In 33.5.1.2.10, delete P140 L36: "The combinations '110' and '111' for bits 12.6:4 have been reserved for future use."
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Add after table - "Editor's Note (to be removed before Working Group ballot) - Status register bits are used up, and clause 22 address space is used up as well. Contributions requested as to how to expand status, at a minimum to report Class 8 PD and Autoclass"

Cl 33 SC 33.5.1.2.2 P 139 L 38 # 225
 Dove, Daniel Dove Networking Solut
 Comment Type ER Comment Status A Editorial
 Typo
 SuggestedRemedy
 Replace "pss_dll_enabled" with "pse_dll_enabled"
 Response Response Status C
 ACCEPT.
 EZ

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Cl 33 SC 33.6 P 141 L 11 # 187
 Yseboodt, Lennart Philips

Comment Type TR Comment Status A DLL

"Type 2, Type 3 and Type 4 PDs that require more than 13.0 W support Data Link Layer classification (see 33.3.5).
 Data Link Layer classification is optional for all other devices."

Dual-signature PDs must support DLL regardless of power consumption.

SuggestedRemedy

"Type 2, Type 3, and Type 4 PDs that require more than Class 3 power levels, or Type 3/DS and Type 4/DS PDs support Data Link Layer classification (see 33.3.5). Data Link Layer classification is optional for all other devices."

Response Response Status C

ACCEPT.

Cl 33 SC 33.6.3.1 P 142 L 14 # 258
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A DLL

Clarify values used for PD_DLL_MAX_VALUE, PD_INITIAL_VALUE, and PSE_INITIAL_VALUE.

SuggestedRemedy

After the variable PSE_INITIAL_VALUE description (line 3 on page 143) add,
 "Variables PD_DLL_MAX_VALUE, PD_INITIAL_VALUE, and PSE_INITIAL_VALUE, round up values to provide margin. Additional information on power levels for classes 6 and 8 may be found in 33.3.7.2."

Response Response Status C

ACCEPT IN PRINCIPLE.

After the variable PSE_INITIAL_VALUE description (line 3 on page 143) add,
 "Variables PD_DLL_MAX_VALUE, PD_INITIAL_VALUE, and PSE_INITIAL_VALUE, are quantized to fit the available resolution. Additional information on power levels for classes 6 and 8 may be found in 33.3.7.2."

Cl 33 SC 33.6.3.2 P 142 L 53 # 105
 Bennett, Ken Sifos Technologies, In

Comment Type TR Comment Status R DLL

PSE_INITIAL_VALUE settings for Class 6 and Class 8 are currently the extended-power limits. A range should be used for these so that non-extended values can be used.

SuggestedRemedy

Change "600" to "<= 600"
 Change "900" to "<= 900"

Response Response Status C

REJECT.

These values can't be a range.

Cl 33 SC 33.6.3.3 P 145 L 10 # 270
 Stover, David Linear Technology

Comment Type E Comment Status A Management

pse_power_type has since been renamed to pse_power_level in Figure 33-16 and supporting text

SuggestedRemedy

Rename pse_power_type to pse_power_level

Response Response Status C

ACCEPT.

EZ

Cl 33 SC 33.6.3.5 P 148 L 9 # 271
 Stover, David Linear Technology

Comment Type E Comment Status A Management

pse_power_type has since been renamed to pse_power_level in Figure 33-16 and supporting text

SuggestedRemedy

Rename pse_power_type to pse_power_level

Response Response Status C

ACCEPT.

EZ

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CI 33 SC 33.6.3.5 P 147 L 12 # 226
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status D Management
 Just observing that pse_dll_enabled not required on this arc? Is it possible that pse_dll_ready can be true while pse_dll_enabled is false?
 SuggestedRemedy
 address as appropriate.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

CI 33 SC 33.6.3.5 P 147 L 12 # 227
 Dove, Daniel Dove Networking Solut
 Comment Type TR Comment Status D Management
 Just observing that pd_dll_enabled not required on this arc? Is it possible that pd_dll_ready can be true while pd_dll_enabled is false?
 SuggestedRemedy
 address as appropriate.
 Proposed Response Response Status Z
 REJECT.
 This comment was WITHDRAWN by the commenter.

CI 33 SC 33.8.3.3 P 161 L 5 # 272
 Stover, David Linear Technology
 Comment Type E Comment Status A Management
 pse_power_type has since been renamed to pse_power_level in Figure 33-16 and supporting text
 SuggestedRemedy
 Rename pse_power_type to pse_power_level
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.8.3.3 P 161 L 36 # 273
 Stover, David Linear Technology
 Comment Type E Comment Status A Management
 pse_power_type has since been renamed to pse_power_level in Figure 33-16 and supporting text
 SuggestedRemedy
 Rename pse_power_type to pse_power_level
 Response Response Status C
 ACCEPT.
 EZ

CI 33 SC 33.8.3.5 P 165 L 18 # 22
 Maguire, Valerie Siemon
 Comment Type T Comment Status A Cabling
 Not sure if this is in scope, but Category 5 cord requirements do not reside in ANSI/TIA-568-C.2
 SuggestedRemedy
 Replace "ANSI/TIA-568-C.2" with "ANSI/TIA/EIA-568-A:1995"
 Response Response Status C
 ACCEPT.

CI 33 SC 33A.5 P 172 L 10 # 34
 Darshan, Yair Microsemi
 Comment Type T Comment Status A Pres: Darshan1
 Updating Annex 33A.5 due to the following changes made for D1.2:
 1. Increasing PSE Vdiff to 10mV instead of 2mV.
 In addition, the following changes we made for Type 3 system:
 2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
 3. Type 4 systems stayed total 60mV vdiff:
 SuggestedRemedy
 Update Annex 33A.5 per darshan_01_1015.pdf page 9.
 Response Response Status C
 ACCEPT IN PRINCIPLE.
 Update Annex 33A.5 per darshan_01_1015_Rev001.pdf page 9.

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Cl 33 SC Annex 33B P 173 L 43 # 35
 Darshan, Yair Microsemi

Comment Type T Comment Status A Pres: Darshan1

Updating Annex 33B Table 33B-1 due to the following changes made for D1.2:
 1. Increasing PSE Vdiff to 10mV instead of 2mV.
 In addition, the following changes we made for Type 3 system:
 2. Increasing system Vdiff for Type 3 to 70mV instead of 60mV to increase margins.
 3. Type 4 systems stayed total 60mV vdiff.

SuggestedRemedy

Update Table 33B-1 per darshan_01_1015.pdf page 10.

Response Response Status C

ACCEPT IN PRINCIPLE.

Update Table 33B-1 per darshan_01_1015_Rev001.pdf page 10.

Cl 33A SC 33A P 171 L 1 # 2
 Zimmerman, George CME Consulting, Inc.

Comment Type E Comment Status A Editorial

All annexes should be at the end of the book. I understand that they are easier to digest for task force review where they currently are, therefore, at this time I suggest an editorial note reminding the editor to move them before WG ballot.

SuggestedRemedy

Add editorial note immediately prior to Annex 33A:
 "Editorial note (to be removed prior to Working Group ballot) - All annexes are to be at the end of the draft. Prior to Working Group ballot, editor should move Clause 79 before Annex 33A in the frame book."

Response Response Status C

ACCEPT.

EZ

Cl 33A SC 33A.3 P 171 L 13 # 1
 Zimmerman, George CME Consulting, Inc.

Comment Type TR Comment Status A Annex

"Operation for all types requires that the resistance unbalance shall be 3% or less."
 Informative text cannot have requirements - no "shall" or "must" statements.

SuggestedRemedy

Replace "shall" with "should" in the above sentence.

Response Response Status C

ACCEPT IN PRINCIPLE.

strike the word "shall".

Cl 33A SC 33A.5 P 172 L 10 # 5
 Zimmerman, George CME Consulting, Inc.

Comment Type T Comment Status A Annex

"Rpair_max_PD" and "Rpair_min_PD"
 Rpair_max and Rpair_min were defined twice before (pages 107 and 141) in terms of the PSE. This is the only place Rpair_max_PD (or min) occur in the draft. Even though its a guideline, it needs a definition.

SuggestedRemedy

Define Rpair_max_PD, Rpair_min_PD. in 33A.5. (sorry, I really don't know what is the intended definition).

Response Response Status C

ACCEPT IN PRINCIPLE.

Add "Editor's Note: Yair to define for next meeting."

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl **33B** SC **33B** P **173** L **1** # **3**
 Zimmerman, George CME Consulting, Inc.

Comment Type **T** Comment Status **D** Annex

Perhaps we moved too much to the annex. Annex 33B (normative) appears to contain new requirements on PSEs that are not in the main body of Clause 33. The use of normative annexes, per the IEEE style guide is: "for conformance test procedures, tables, or printed source code. Normative annexes may also be used for context-specific applications of the standard."
 The key requirement references Equation 33-4b in 33.2.7.4.1, but it seems that Table 33B-1 is a set of additional requirements, perhaps in conflict with the main body of the text. A lot of what is in this annex appears to be test procedures, but the main requirement seems to be here too, and maybe should be in the body of clause 33.

SuggestedRemedy

Move page 173, lines 16 - 52 ("Equation (33-4b)..." through "attached to PSE PI." to the end of 33.2.7.4.1 page 85, line 17.

Proposed Response Response Status **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

Yair to work with George.

Cl **33D** SC **33D.1** P **4** L **1** # **153**
 Yseboodt, Lennart Philips

Comment Type **ER** Comment Status **A** Annex

Table 33D-2 on dual signature classification has a CLASS_EV5 column. There is no 5th event for DS PDs.

SuggestedRemedy

Remove CLASS_EV5 column.

Response Response Status **C**

ACCEPT.

EZ

Cl **79** SC **79.3.2** P **9** L **27** # **87**
 Skinner, John Sifos Technologies, Inc

Comment Type **TR** Comment Status **D** Pres: *Mattias*

Draft P802.3/D1.3 contains a modified Figure 79-3-Power Via MDI TLV format. This same figure designation was used in the 802.3at specification to define the Power Via MDI TLV format. Modifying Figure 79-3 is invalid, as it would therefore modify the specification of how the Power Via MDI TLV (in use today by Type 2 PSEs and PDs that conform to 802.3at)is formatted.

(There should be no expectation that existing parsers will recognize the new format, as the length field is the ONLY distinguishing characteristic that is now used to determine whether the received TLV is the old form defined by 802.1AB or the new form defined by 802.3at. This new form will indicate a different length, forcing newer parsers to handle 3 possible formats...).

The existing figure could be altered in such a way as to show the existing 12 octet version, and the extensions for the new (currently 22 byte) version. However, this would lead to an overly complicated figure. It would be much clearer to use a separate figure to describe the (extended, revised) TLV.

SuggestedRemedy

Remove the edits from "Figure 79-3-Power Via MDI TLV format", restoring it to the same figure as originally published in 802.3at.

Add a new figure, titled "Figure 79-3a-Power Via MDI TLV extended format", at the top of page 10, to document the new 22 octet form of the Power Via MDI TLV.

Modify the existing last two sentences in the explanatory paragraph located between lines 32 and 33 on page 9, which read:

"This TLV is also required to perform Data Link Layer classification as defined in 33.6. Figure 79-3 shows the format of this TLV."

to this statement:

"This TLV is also required to perform Data Link Layer classification as defined in 33.6. The format of the TLV to be used to perform Data Link Layer classification by Type 2 PSEs and PDs is shown in Figure 79-3. The format of the TLV to be used to perform Data Link Layer classification by Type 3 and Type 4 PSEs and PDs is shown in Figure 79-3a."

Proposed Response Response Status **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

wfp

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 79 SC 79.3.2 P 9 L 53 # 86
 Skinner, John Sifos Technologies, In

Comment Type ER Comment Status D Pres: Mattias

In Figure 79-3-Power Via MDI TLV format, the TLV information string length field states "TLV information string length = 14". This does not account for the additional fields "PD measurements" and "PSE Measurements", which are each 4 octets in length (therefore 8 octets total).

SuggestedRemedy

Correct the TLV information string length in Figure 79-3-Power Via MDI TLV format to indicate "...length = 22".

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

wfp

Cl 79 SC 79.3.2 P 10 L 3 # 89
 Skinner, John Sifos Technologies, In

Comment Type ER Comment Status D Pres: Mattias

There is an explanatory paragraph at the top of Page 10 that describes the revisions made to the legacy Power via MDI TLV originally defined by 802.1AB.

As the 802.3bt specification is again revising the Power via MDI TLV (most recently revised by and defined in 802.3at), an additional explanatory paragraph is warranted to describe the extensions that are being added to support Type 3 and Type 4 devices.

SuggestedRemedy

Add the following sentence to the end of the paragraph on Page 10, line 10:

"The TLV shown in Figure 79-3 has been and will continue to be used by Type 2 power entities."

Insert the following paragraphs after line 11, before the heading '79.3.2.1 MDI power support':

"The TLV shown in Figure 79-3a is a revision of the Power Via MDI TLV originally defined in 802.3at-2009 clause 79.3.2, and defines an extended format which includes additional fields that shall be used by Type 3 and Type 4 power entities.

In order to support Type 2 PDs, Type 3 and Type 4 PSEs will need to be able to recognize the TLV shown in Figure 79-3, as well as the TLV shown in Figure 79-3a. Per 79.3.2.7, only one format TLV should be present in an LLDPDU."

[NOTE that the figure reference in this remedy is related to acceptance of the comment that requires that a new figure titled "Figure 79-3a-Power Via MDI TLV extended format" be added to 79.3.2.]

Proposed Response Response Status Z

REJECT.

This comment was WITHDRAWN by the commenter.

TFTD

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 79 SC 79.3.2.2 P 10 L 44 # 90
 Skinner, John Sifos Technologies, In

Comment Type E Comment Status A Pres: Mattias

IETF RFC 3621 pethPsePortPowerPairs only defines "signal(1)" and "spare(2)". There is no allowance for other integer values (for example, 0 indicating unknown, or 3 indicating both pairs).

SuggestedRemedy

Add sentence at the end of the existing paragraph that is located on lines 43 and 44:

"Type 3 or Type 4 PSEs that are furnishing power on a single pairset shall use the value that defines that pairset (signal=Alternative A, spare=Alternative B). Either pairset may be indicated when furnishing power on both pairsets, as that condition is communicated by the PSE power status value field defined in 79.3.2.6a."

Response Response Status C

ACCEPT.

Cl 79 SC 79.3.2.5 P 12 L 14 # 91
 Skinner, John Sifos Technologies, In

Comment Type T Comment Status A Pres: Mattias

The valid values for the requested power value field in Table 79-5 have been changed from "decimal 1 through 255" to "decimal 1 through 999".

This field as defined for use by Type 2 power entities was the range "decimal 1 through 255". Values greater than 255 are not valid for pre-existing Type 2 implementations.

SuggestedRemedy

Change the statement in the Value/meaning column of Table 79-5 to:

"Valid value for these bits are decimal 1 through 255 for Type 2 PDs, and decimal 1 through 999 for Type 3 and Type 4 PDs."

Response Response Status C

ACCEPT IN PRINCIPLE.

Add : "Editor's Note: The interaction of DLL and Physical Layer Classification needs to be clarified. Comments are welcome."

to top of 33.3.5.

Cl 79 SC 79.3.2.6 P 12 L 38 # 92
 Skinner, John Sifos Technologies, In

Comment Type T Comment Status A Pres: Mattias

The valid values for the requested power value field in Table 79-6 have been changed from "decimal 1 through 255" to "decimal 1 through 999".

This field as defined for use by Type 2 power entities was the range "decimal 1 through 255". Values greater than 255 are not valid for pre-existing Type 2 implementations.

SuggestedRemedy

Change the statement in the Value/meaning column of Table 79-6 to:

"Valid value for these bits are decimal 1 through 255 for Type 2 PSEs, and decimal 1 through 999 for Type 3 and Type 4 PSEs. When a Type 3 or Type 4 is furnishing power to a Type 2 PD, the valid values will be limited to the Type 2 range, decimal 1 to 255."

Response Response Status C

ACCEPT IN PRINCIPLE.

OBE by 91.

Cl 79 SC 79.3.2.6b P 13 L 48 # 253
 Schindler, Fred Seen Simply

Comment Type ER Comment Status A Editorial

Correct text, "PD 4PID".

SuggestedRemedy

Replace this text with, "PD 4P-ID".

Response Response Status C

ACCEPT.

EZ

IEEE P802.3bt D1.3 4-Pair PoE 6th Task Force review comments

Cl 79 SC 79.3.2.6d P 15 L 22 # 145
Yseboodt, Lennart Philips
Comment Type E Comment Status A Editorial
original text: "Table 79-6c PD measurements"
Table caption wrong.
SuggestedRemedy
Table 79-6d PSE measurements
Response Response Status C
ACCEPT.
EZ