*Cl* **33** *SC* **33.1.1** *P* **19** *L* **52** # 115

Yseboodt, Lennart Philips

*Comment Type* **TR** *Comment Status* **D** *Cabling*

Reference to ISO/IEC 11801:1995.
In other parts of Clause 33 we refer to ISO/IEC 11801:2002 for channel parameters.
ISO/IEC 11801:1995 has been withdrawn by ISO.

*SuggestedRemedy*

Change ISO/IEC 11801:1995 to ISO/IEC 11801:2002

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.3** *P* **21** *L* **38** # 141

Jones, Chad Cisco

*Comment Type* **T** *Comment Status* **D** *Definitions*

Maintenance Request #1273 on behalf of George Zimmerman, CME Consulting/LTC

Text in the existing standard is ambiguous and is inconsistent with the more precise definition in the definitions section. The imprecise language “generic term” does not point to a specific interface point necessary for the specifications attached to the PI, including a pin-out. In contrast the language in the definitions section is more precise.

*SuggestedRemedy*

Change: The Power Interface (PI) is the generic term that refers to the mechanical and electrical interface between the PSE or PD and the transmission medium.
To: The Power Interface (PI) is the mechanical and electrical interface between the Power Sourcing Equipment (PSE) or Powered Device (PD) and the transmission medium as defined in 1.4.324 (1.4.336 in P802.3bx/D2.0). In an Endpoint PSE and in a PD the Power Interface is the MDI as defined in 1.4.256 (1.4.268 in P802.3bx/D2.0)

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.4** *P* **22** *L* **10** # 111

Yseboodt, Lennart Philips

*Comment Type* **T** *Comment Status* **D** *Cabling*

Table 33-1 lists the "Channel Pair-set maximum DC loop resistance" parameter name as "Rchan".
This is not correct, Rchan is the actual DC loop resistance in a system.

*SuggestedRemedy*

What is meant is Rch. In 802.3-2012 this parameter was also called Rch.
Replace Rchan by Rch.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.4** *P* **22** *L* **15-1** # 116

Yseboodt, Lennart Philips

*Comment Type* **TR** *Comment Status* **D** *Cabling*

Reference to ISO/IEC 11801:1995.
In other parts of Clause 33 we refer to ISO/IEC 11801:2002 for channel parameters.
ISO/IEC 11801:1995 has been withdrawn by ISO.

*SuggestedRemedy*

Change ISO/IEC 11801:1995 to ISO/IEC 11801:2002

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.4** *P* **22** *L* **22** # 50

Beia, Christian STMicroelectronics

*Comment Type* **E** *Comment Status* **D** *Cabling*

Note1 after able 33-1 refers to Annex 33A inaccurately. It is about channel pair to pair resistance unbalance, not about inter-pair unbalance

*SuggestedRemedy*

Replace:
See informative annex 33A for inter-pair unbalance.
With:
See informative annex 33A for Channel pair to pair resistance unbalance.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.4** *P* **22** *L* **22** # 4

Maguire, Valerie Siemon

*Comment Type* **T** *Comment Status* **D** *Cabling*

Clarify type of unbalance (i.e. resistance or current)

*SuggestedRemedy*

Replace "inter-pair unbalance" with "inter-pair resistance unbalance"

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment #50.

EZ

*Cl* **33** *SC* **33.1.4** *P* **22** *L* **23** # 12

Darshan, Yair Microsemi

*Comment Type* **TR** *Comment Status* **D** *Cabling*

Comment number 2 below Table 33-1.
The comment is correct for Type 3 and 4 but yet it is reffering to Type 3 only.

*SuggestedRemedy*

Change "In Type 3, 60W operation, the current..... See details in section TBD"

To:
"In Type 3 and 4 operation, the current..... See details in Table 33-11 item 4a"

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.4** *P* **22** *L* **23** # 113

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *Cabling*

Footnote 2 below Table 33-1
"In Type 3, 60W Operation, the current per pair-set might be impacted by pair to pair system resistance unbalance."
Better to refer to class.

*SuggestedRemedy*

"In Type 3, Class 6 Operation, the current per pair-set might be impacted by pair to pair system resistance unbalance."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment #12.

EZ

*Cl* **33** *SC* **33.1.4.1** *P* **22** *L* **41** # 140

Jones, Chad Cisco

*Comment Type* **T** *Comment Status* **D** *Cabling*

Maintenance WG Ballot comment #59 on behalf of GEOFF THOMPSON, GRACASI S.A./LINEAR TECHNOLOGY

(through line 6, i.e. the first paragraph of 33.1.4.1)
Simplify the first paragraph by updating the reference to the 2002 version of 11801 which incorporates the additional requirement.

*SuggestedRemedy*

33.1.4.1 Cabling requirement
Operation requires Class D, or better, cabling as specified in ISO/IEC 11801:2002. These requirements are also met by Category 5e or better cable and components as specified in ANSI/TIA-568-C.2; or Category 5 cable and components as specified in ANSI/TIA/EIA-568-A.
The second paragraph of this clause can remain unchanged unless the referenced cabling documents already cover this material.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.1.4.1** *P* **23** *L* **5** # 1

Maguire, Valerie Siemon

*Comment Type* **ER** *Comment Status* **D** *Cabling*

Use correct draft Standards name

*SuggestedRemedy*

Globally replace "TSB-184A" with "TSB-184-A" (3 locations)

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.01** *P* **24** *L* **29** # 59

Schindler, Fred Seen Simply

*Comment Type* **ER** *Comment Status* **D** *Types*

New text in the specification uses the word can rather than the word may.
For example,

Can operate as 2-pair under fault conditions

"May" provides permission whereas "can" states ability.

*SuggestedRemedy*

Replace constructs using "can" that provide permission with "may. " End notes containing these constructs with a period.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Add period to end of note 1.

Replace Note 4 with: "May operate over 2 pairs under fault conditions."

EZ

*Cl* **33** *SC* **33.2.1** *P* **24** *L* **42** # 49

Stencel, Len Bourns, Inc.

*Comment Type* **TR** *Comment Status* **D** *Types*

Need to Add 2 diagrams showing Alt A and Alt B for an End PSE. Only midspan version is shown.

*SuggestedRemedy*

Add 2 Additional figures:
figure 33-1a 10BASE-T/100BASE-TX Endpoint PSE Alt A and Alt B
Figure 33-2a 1000BASE-T/10GBASE-T Endpoint PSE Alt A and Alt B
or
Add Figure 33-5 to text and make these two diagrams figures 33-5a and 33-5b.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

Need to create figures…

EZ

*Cl* **33** *SC* **33.2.3** *P* **31** *L* **1** # 117

Yseboodt, Lennart Philips

*Comment Type* **T** *Comment Status* **D** *Types*

"A PSE device may provide power via one of two valid four-wire connections."
Forbids 4P power.

*SuggestedRemedy*

"A PSE device may provide power via one or both of two valid four-wire connections."
or
"A PSE device may provide power via at least one of two valid four-wire connections."
or
"A PSE device may provide power via one or two valid four-wire connections."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Replace text with "A PSE device may provide power via one or both of two valid four-wire connections."

EZ

*Cl* **33** *SC* **33.2.4.1** *P* **32** *L* **20-2** # 118

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Detection*

"A Type 3 or Type 4 PSE that is capable of delivering power over both Alternative A and Alternative B simultaneously is not required to meet backoff algorithm."
'the' misses between meet and backoff

*SuggestedRemedy*

"A Type 3 or Type 4 PSE that is capable of delivering power over both Alternative A and Alternative B simultaneously is not required to meet the backoff algorithm."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.4.1** *P* **32** *L* **21** # 43

Stencel, Len Bourns, Inc.

*Comment Type* **E** *Comment Status* **D** *PSE Detection*

text correction

*SuggestedRemedy*

Change "meet backoff algorithm" to "meet the backoff algorithm requirement".

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment #118.

EZ

*Cl* **33** *SC* **33.2.4.1** *P* **32** *L* **31** # 9

Bustos Heredia, Jairo Würth Elektronik eiSo

*Comment Type* **E** *Comment Status* **D** *PSE Detection*

If a PSE performing detection using Alternative A detects an invalid signature, it should complete a second detection in less than Tdbo min after the beginning of the first detection attempt.

*SuggestedRemedy*

As we are referring to a time value, it may bring the reader to confusion on whether "min" stands for "minimum" or "minutes". Actually, Tdbo has only one defined value in Table 33-11. Therefore I believe "min" is not needed. Thus, I would suggest the followin:

If a PSE performing detection using Alternative A detects an invalid signature, it should complete a second detection in less than Tdbo after the beginning of the first detection attempt.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.4.4** *P* **37** *L* **37-3** # 89

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

"or a PSE that has hardware limitation."

*SuggestedRemedy*

"or a PSE that has a hardware limitation."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.4.5** *P* **38** *L* **13** # 21

Darshan, Yair Microsemi

*Comment Type* **E** *Comment Status* **D** *PSE State Diagram*

It seems that there is a Typo here:
The timer name is tlcf_timer and then the text says in line 16: See Tclf in Table 33-7. So we need to decide if it is tclf or tlcf.

In addition, it is Table 33-10 and not 33-7 in lines 13, 15, 36, 40, 44.
In Table 33-10 it is Tclf.

*SuggestedRemedy*

Change Tlcf_timer to Tclf.
Change "..in Table 33-7" to "...in Table 33-10 and verify the link is correct.
Correct in lines 13, 15, 36, 40, 44.
Scan the draft for similar for all Tlcf and Tclf occurrences and correct accordingly.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change all occurences of Tclf to Tlcf. The "lcf" was meant to stand for long class finger. The state diagram uses lcf and everything should match it.

EZ

*Cl* **33** *SC* **33.2.4.5** *P* **38** *L* **15** # 68

Schindler, Fred Seen Simply

*Comment Type* **TR** *Comment Status* **D** *PSE State Diagram*

Fix Typo for TCLf

*SuggestedRemedy*

Use TCLF

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 21.

EZ

*Cl* **33** *SC* **33.2.5.1** *P* **44** *L* **25, 4** # 92

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Detection*

Figure numbers 33-1 and 33-2 are incorrect, also references to them incorrect.

*SuggestedRemedy*

Figure 33-1 => Figure 33-11
Figure 33-2 => Figure 33-12

References to fix:
Lines: 10, 29 and 44/45

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.5.1** *P* **44** *L* **49** # 48

Stencel, Len Bourns, Inc.

*Comment Type* **ER** *Comment Status* **D** *PSE Detection*

incorrect table number`

*SuggestedRemedy*

change Table 33-1 to Table 33-4.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Fix all table references in the PSE Detection sections (33.2.5.1-33.2.5.5).

EZ

*Cl* **33** *SC* **33.2.5.2** *P* **45** *L* **46** # 45

Stencel, Len Bourns, Inc.

*Comment Type* **ER** *Comment Status* **D** *PSE Detection*

Incorrect tablenumber. link is good.

*SuggestedRemedy*

change table 33-1 to table 33-4.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 48.

EZ

*Cl* **33** *SC* **33.2.5.3** *P* **45** *L* **54** # 46

Stencel, Len Bourns, Inc.

*Comment Type* **ER** *Comment Status* **D** *PSE Detection*

Incorrect table number

*SuggestedRemedy*

change table 33-2 to Table 33-5

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 48.

EZ

*Cl* **33** *SC* **33.2.5.4** *P* **46** *L* **30** # 47

Stencel, Len Bourns, Inc.

*Comment Type* **ER** *Comment Status* **D** *PSE Detection*

incorrect table number

*SuggestedRemedy*

change table 33-3 to Table 33-6

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 48.

EZ

*Cl* **33** *SC* **33.2.6** *P* **47** *L* **30-3** # 110

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

"Alternatively, PSE implementations may use V PSE = V Port_PSE-2P min and R Chan = R Ch max when powering
using two-pairs, or R Chan = R Ch max/2 when powering using four-pair ***systems and*** to arrive at over-
margined values as shown in Table 33â€“4."

Issue 1: ***systems and*** should be removed.
Issue 2: R_Ch max is redundant. R_Ch is the maximum DC loop resistance of a pairset.

*SuggestedRemedy*

1: remove "and"
2: change Rch max to Rch

"Alternatively, PSE implementations may use V_PSE = V_Port_PSE-2P min and R_Chan = R_Ch when powering
using two-pairs, or R_Chan = R_Ch/2 when powering using four-pairs to arrive at over-
margined values as shown in Table 33â€“4."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.6** *P* **48-49** *L* **-** # 119

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

Table 33-8 is incorrectly broken up over pages 48 and 49.

*SuggestedRemedy*

Close table on page 48.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Possibly OBE by comment # 112.

EZ

*Cl* **33** *SC* **33.2.6** *P* **49** *L* **34-3** # 81

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

"Subsequent to successful detection, all Type 2 PSEs perform classification using at least one of the
following: 2-Event Physical Layer classification; 2-Event Physical Layer classification and Data Link Layer
classification; or 1-Event Physical Layer classification and Data Link Layer classification."

2-Event should be Multiple-Event.

*SuggestedRemedy*

"Subsequent to successful detection, all Type 2 PSEs perform classification using at least one of the
following: Multiple-Event Physical Layer classification; Multiple-Event Physical Layer classification and Data Link Layer
classification; or 1-Event Physical Layer classification and Data Link Layer classification."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.6** *P* **49** *L* **8** # 99

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

Table 33-8, Type 2, Physical Layer Classification column, first cell says "2-Event".
Should be "Multiple-Event".

*SuggestedRemedy*

Replace "2-Event" by "Multiple-Event".

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

Possible OBE by comment # 112.

EZ

*Cl* **33** *SC* **33.2.6.1** *P* **50** *L* **3** # 83

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classificaiton*

"Polarity shall be the same as defined for V Port_PSE-2P in 33.2.3 and timing specifications shall be as defined
by T pdc in Table 33â€“7."
T_pdc is not defined in Table 33-7, but in 33-10.

*SuggestedRemedy*

"Polarity shall be the same as defined for V Port_PSE-2P in 33.2.3 and timing specifications shall be as defined
by T_pdc in Table 33-10."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.6.1** *P* **50** *L* **5-6** # 84

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

"The PSE shall measure the resultant I Class and classify the PD based on the observed current according to
Table 33-6."
I believe Table 33-9 is meant (please check).

*SuggestedRemedy*

"The PSE shall measure the resultant I Class and classify the PD based on the observed current according to
Table 33-9."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.6.1** *P* **50** *L* **5-6** # 85

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

"All measurements of I Class shall be taken after the minimum relevant class event timing in Table 33-7."
Wrong Table reference.

*SuggestedRemedy*

"All measurements of I Class shall be taken after the minimum relevant class event timing in Table 33-10."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.6.2** *P* **50** *L* **31** # 60

Schindler, Fred Seen Simply

*Comment Type* **ER** *Comment Status* **D** *PSE Classification*

a TBD table (figure etc) exists please begin using a construct like TBD-# to identify the table to be used. If the table (figure etc) needs to be created use a construct like TBD-unavailable.

*SuggestedRemedy*

Please consider using the above suggestion to make the text easier to review.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 33.

EZ

*Cl* **33** *SC* **33.2.6.2** *P* **50** *L* **31** # 33

Darshan, Yair Microsemi

*Comment Type* **T** *Comment Status* **D** *PSE Classification*

Table 33-TBD is Table 33-9

*SuggestedRemedy*

Replace Table 33-TBD with Table 33-9.
Same in line 45 and 53

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.6.2** *P* **50-51** *L* **1-54** # 87

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

There are 10 references to Table 33-7, all incorrect.

*SuggestedRemedy*

Change every instance of Table 33-7 to Table 33-10 in 33.2.6.2

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.7** *P* **52** *L* **46** # 22

Darshan, Yair Microsemi

*Comment Type* **E** *Comment Status* **D** *PSE Classification*

The intention of the additional information for TME2 in Table 33-10 was meant to say that the fact that the maximum value of TME3 is not defined, doesn't mean that it can be any number, it actually limited by Tpon.
This may not be clear by the additional information however.

*SuggestedRemedy*

Change the additional information text from:
The time from end of detection until power-on is limited by 33.2.7.12.

Change the additional information text to:
The maximum value of TME2 is limited by the maximum allowed time from the end of detection until power-on according to 33.2.7.12.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.7** *P* **54** *L* **12** # 138

Darshan, Yair Microsemi

*Comment Type* **ER** *Comment Status* **D** *PSE Unbalance*

Table 33-11 item 4a:
We need to remeber that Icont-2P-unb for extended power will be higher than what what specified in Table 33-11 item 4. It will be adressed in seperate work and will required two new row in Table 33-11 to defined the maximum Icont-2P_Ufor extended power.

In Extended power, Ppd at short cable will be higher than 51W (may be close to Ptype_min) and also the same case with Type 4.

We will need separate requirements for PD that want to use extended power were the burden will be on PD to limit P2P_Iunb and Ipeak PD_Peak power so total effect on current will be cost effective. This need more work.
At worst case we need to set Pclass_PD=Pclass(PSE) which I did already few month ago and waiting to finish first the typical use cases.

We have the results for extended power with the same system unbalance parameters used for the typical use cases:
Type 3: Icont-2P=600mA, Icont-2P_unb=Icable=773mA
Type 4: Icont-2P=865mA, Icont-2P_unb=Icable=1087mA.
This will need to be specified to allow transformer design at worst case condition after some new spec requirement for PD in order to reduce this numbers.
TIA will have to tell us regarding temperature rise if total 4P total current is 2*Icable per Table 33-1, what if total 4P current is kept but one of the pairs has the above pair with maximum Icont-2P_unb and the other pair has the rest, if they expect increase in temperature rise. Based on mathematical work that I did, I expect that it will not affect temperature rise over the cable.

*SuggestedRemedy*

Add additirial note below Table 33-11 as follows:
[Editorial note: Icont-2P and Ipeak_2P need to be adressed for Extended power case were Pclass_PD is very close to Pclass. It will result with higher currents on the pair with minimum resistance but will not change the total 4P current. For the above parameters in extended power, we will have to add two new rows that will specify maximum current at this case. Total PSE power will not change]

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.7** *P* **55** *L* # 18

Darshan, Yair Microsemi

*Comment Type* **T** *Comment Status* **D** *PSE MPS*

DC MPS current Table 33-11 item 17 and 33.2.9.1.2.

Table 33-11 item 17 do not cover Ihold range for all PSE - PD class and Type combinations in the presensence of system pair to pair unbalance and/or P2P balanced conditions and for single and dual signature PDs.
Many of the PSE=PD combinations will not work with the current Ihold range specified for Type 1 and Type 2 PSEs.

There is a need to set two different sets of Ihold range for measuring total Ihold current over 4 pairs or over 2pairs in order to allow different MPS detection schemes and reduce unbalace requirements on PD as much as possible.

The proposed solution in darshan_01_0515.pdf allows the following with cost effective way:
-Support current Type 1,2 PDs and new Type 3 and 4 PDs.
-No requirements for MPS current unbalance for Type 1, 2, 3 class 0-8 PDs connected to PSE Type 3 and 4 PSEs.
-PSE with flexible MPS detection implementations to cover different PSE

The above proposal offer:
-Simple PD spec.
-Simple test setup.
-Simple PSE MPS detection implementation.

See DC Disconnect PSE and PD requirements baseline proposal presentation attched.

*SuggestedRemedy*

See proposal and baseline text in the attached presenttaion darshan_01_0515.pdf

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

This item needs to be updated. As you are presenting a proposal, I will leave it to that.

Accepting this comment results in no changes to the text.

EZ

*Cl* **33** *SC* **33.2.7** *P* **55** *L* **40** # 62

Schindler, Fred — Seen Simply

*Comment Type* **ER** *Comment Status* **D** *PSE Unbalance*

Define variable a.

*SuggestedRemedy*

Define variable a.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Alpha is the unbalance factor between the pair sets. It should be noted somewhere.

OBE by comment # 30

EZ

*Cl* **33** *SC* **33.2.7** *P* **55** *L* **41** # 30

Darshan, Yair — Microsemi

*Comment Type* **T** *Comment Status* **D** *PSE Unbalance*

The parameter "a" is not explained in Note 1.
To define "a" and explain it.

*SuggestedRemedy*

a=The effect of the system end to end pair to pair resistance/current unbalance that is not specified in this standard explicitly.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.7** *P* **55** *L* **41** # 29

Darshan, Yair — Microsemi

*Comment Type* **E** *Comment Status* **D** *PSE Unbalance*

Missing full stop at the end of Note 1.

*SuggestedRemedy*

Insert full stop at the end of Note 1 text.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.7.11** *P* **61** *L* **35** # 64

Schindler, Fred — Seen Simply

*Comment Type* **ER** *Comment Status* **D** *PSE Unbalance*

The senetence applies to Types 2,3 and 4.

*SuggestedRemedy*

Type 2, Type 3, and Type 4 Endpoint PSEs shall meet the requirements of 25.4.5 in the presence of (Iunb / 2).

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.7.7** *P* **59** *L* **19** # 90

Yseboodt, Lennart — Philips

*Comment Type* **E** *Comment Status* **D** *PSE Power*

"A PSE may remove power from a pair-set of a PI if the *the* pair-set current..."

*SuggestedRemedy*

"A PSE may remove power from a pair-set of a PI if the pair-set current..."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.9.1.1** *P* **62** *L* **30-3** # 130

Yseboodt, Lennart — Philips

*Comment Type* **E** *Comment Status* **D** *PSE MPS*

Reference to Table 33-1 wrong.

*SuggestedRemedy*

Replace Table 33-1 by Table 33-12.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.9.1.1** *P* **63** *L* **1** # 82

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE MPS*

The Table titled "PSE PI parameters for AC disconnect-detection functions" is incorrectly numbered Table 33-1.

*SuggestedRemedy*

Replace "Table 33-1" by Table "33-12".

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.9.1.2** *P* **63** *L* **2** # 34

Darshan, Yair Microsemi

*Comment Type* **ER** *Comment Status* **D** *PSE MPS*

Duplicate table 33-1 name.
We have Table 33-1 in page 22.
I belive it is 33-12 (AC disconnect parameters)

*SuggestedRemedy*

Change to 33-12.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.2.9.1.2** *P* **64** *L* **18** # 131

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PSE MPS*

Reference to Table 33-1 wrong.

*SuggestedRemedy*

Replace Table 33-1 by Table 33-12.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.1** *P* **65** *L* **6** # 97

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PD PI*

In Table 33-13, conductor 2, mistyped Positive V_p

*SuggestedRemedy*

Replace by "Positive V_PD"

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.2** *P* **65** *L* **32** # 65

Schindler, Fred Seen Simply

*Comment Type* **ER** *Comment Status* **D** *PD Types*

Replace the Type 1 row, "May be" with "Allowed."

*SuggestedRemedy*

See above.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Possible OBE by comment # 109

make change if comment #109 is not resolved with a change to this text.

EZ

*Cl* **33** *SC* **33.3.2** *P* **65** *L* **33** # 106

Yseboodt, Lennart Philips

*Comment Type* **TR** *Comment Status* **D** *PD Types*

Table 33-13a, column DLL classification, Type 1 / 13W row, content = "May be".
Strange formulation, optional would be more apt.

*SuggestedRemedy*

Replace "May be" with "Optional".
See replacement table suggestion in yseboodt_D04_Table_33-13a_v100.pdf

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Possible OBE by comment # 109

make change if comment #109 is not resolved with a change to this text.

EZ

*Cl* **33** *SC* **33.3.2** *P* **66** *L* **10** # 134

Yseboodt, Lennart Philips

*Comment Type* **T** *Comment Status* **D** *PD Classification*

"Type 3 and Type 4 PDs operating with a max power draw corresponding to Class 4 or greater implement
both multiple-Event Physical Layer classification (see 33.3.5.2) and Data Link Layer classification (see
33.6) and advertise a class signature of 4, 5, 6, or 7."

Class 8 missing.

*SuggestedRemedy*

"Type 3 and Type 4 PDs operating with a max power draw corresponding to Class 4 or greater implement
both multiple-Event Physical Layer classification (see 33.3.5.2) and Data Link Layer classification (see
33.6) and advertise a class signature of 4, 5, 6, 7, or 8."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.2** *P* **66** *L* **4-8** # 132

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PD Types*

'Max power' should be 'Maximum power' (two instances)

*SuggestedRemedy*

Replace 'Max power' by 'Maximum power'

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.3.3** *P* **68** *L* **34** # 55

Beia, Christian STMicroelectronics

*Comment Type* **TR** *Comment Status* **D** *PD State Diagram*

pse_power_level value #4 in pse_power_level variable description should indicate the maximum power supplied by a Type4 PSE, which is Class 8.

*SuggestedRemedy*

Replace:
4: The PSE is delivering the PD's requested power or Class 7 power, whichever is less.
With:
4: The PSE is delivering the PD's requested power or Class 8 power, whichever is less.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment #136

EZ

*Cl* **33** *SC* **33.3.3.3** *P* **68** *L* **34** # 136

Yseboodt, Lennart Philips

*Comment Type* **T** *Comment Status* **D** *PD State Diagram*

"4: The PSE is delivering the PD's requested power or Class 7 power, whichever is less."

Should be Class 8.

*SuggestedRemedy*

"4: The PSE is delivering the PD's requested power or Class 8 power, whichever is less."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.3.4a** *P* **69** *L* **8** # 93

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *PD State Diagram*

Bad reference to Table 33-7

*SuggestedRemedy*

Table 33-7 => Table 33-10

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment #56.

EZ

*Cl* **33** *SC* **33.3.3.4a** *P* **69** *L* **8** # 53

Beia, Christian STMicroelectronics

*Comment Type* **ER** *Comment Status* **D** *PD State Diagram*

Function do_class_timing: the classification event timing requirements to evaluate PD MPS timings are not defined in Table 33-7. Actually they should be defined in Table 33-17 (but they aren't - another comment is addressing this)

*SuggestedRemedy*

Change text:
The classification event timing requirements are defined in Table 33–7
With:
The classification event timing requirements are defined in Table 33–17

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.5.1** *P* **74** *L* **14** # 135

Yseboodt, Lennart Philips

*Comment Type* **T** *Comment Status* **D** *PD Classification*

"Since 1-Event classification is a subset of Multiple-
Event classification, Type 2, Type 3 and Type 4 PDs operating with a maximum power draw corresponding
to class 4, 5, 6 , or 7 respond to 1-Event classification with a Class 4 signature.

Class 8 missing.

*SuggestedRemedy*

"Since 1-Event classification is a subset of Multiple-
Event classification, Type 2, Type 3 and Type 4 PDs operating with a maximum power draw corresponding
to class 4, 5, 6, 7, or 8 respond to 1-Event classification with a Class 4 signature."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

"Since 1-Event classification is a subset of Multiple-
Event classification, Type 2, Type 3 and Type 4 PDs operating with a maximum power draw corresponding
to class or higher respond to 1-Event classification with a Class 4 signature."

EZ

*Cl* **33** *SC* **33.3.5.3** *P* **76** *L* **20** # 66

Schindler, Fred Seen Simply

*Comment Type* **ER** *Comment Status* **D** *PSE Classification*

Replace " the PD to which it is connected." with

*SuggestedRemedy*

" the connected PD."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.7** *P* **77** *L* **29** # 23

Darshan, Yair Microsemi

*Comment Type* **E** *Comment Status* **D** *PD Power*

Typo.
Redundant 33.3.7.1 in additional informatione columnn of Table 33-18 item 1.

*SuggestedRemedy*

Change from 33.3.7.133.3.7.1 to 33.3.7.1.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.7** *P* **78** *L* **15** # 24

Darshan, Yair Microsemi

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

Table 33-18 item 4: Input average power for class 5 to 8 TBDs can now be calculated and inserted instead of TBDs.
See darshan_03_0515.pdf for details

The equation to be used is:
Pclass_PD=[W]=Pclass - 6.25*(Pclass/Vpse_min)^2=:
Pclass_PD=39.94W for Pclass=45W (Class 5).
Pclass_PD=51W for Pclass=60W (Clas 6).
class_PD=51W for Pclass=75W (Clas 7).

*SuggestedRemedy*

Update TBDs in item 4 Table 33-18 with:

Pclass_PD=39.94W for Class 5.
Pclass_PD=51W for Class 6.
Pclass_PD=51W for ClasS 7.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Correcting for typos and signifcant digits

Update TBDs in item 4 Table 33-18 with:

Pclass_PD=39.9W for Class 5.
Pclass_PD=51W for Class 6.
Pclass_PD=62W for ClasS 7.

EZ

*Cl* **33** *SC* **33.3.7** *P* **78** *L* **15-1** # 100

Yseboodt, Lennart Philips

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

PD Powers can now be calculated from Pclass.

*SuggestedRemedy*

Class 5: 39.9W Pclass_pd(max)
Class 6: 51.0W Pclass_pd(max)
Class 7: 62.0W Pclass_pd(max) (note: rounded up by 1.6mW)
Class 8: 71.3W Pclass_pd(max) (note: rounded up by 22.3mW)

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

OBE by comment # 24.

EZ

*Cl* **33** *SC* **33.3.7** *P* **78** *L* **45-4** # 126

Yseboodt, Lennart Philips

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

Item 11, Von/Voff only listed for Type 1 and 2.

*SuggestedRemedy*

Add extra lines for Type 3 and 4 with TBD.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.7** *P* **78** *L* **45-4** # 125

Yseboodt, Lennart Philips

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

Items 8 and 9, Input current transient and PI capacitance are only listed for Type 1 and 2.

*SuggestedRemedy*

Add extra lines for Type 3 and 4 with TBD.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.8** *P* **84** *L* **33** # 57

Schindler, Fred — Seen Simply

*Comment Type* **E** *Comment Status* **D** *PD MPS*

Strike "In addition," to make the sentence more consise and powerful.

*SuggestedRemedy*

See above.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.3.8** *P* **84** *L* **40** # 124

Yseboodt, Lennart — Philips

*Comment Type* **E** *Comment Status* **D** *PD MPS*

Reference to Zac2 in Table 33-1.
This should be Table 33-12, but note, Table 33-12 is erroneously listed as Table 33-1.
See other comment on this.

*SuggestedRemedy*

Change reference to Table 33-12.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.4.8** *P* **92** *L* **15** # 2

Maguire, Valerie — Siemon

*Comment Type* **T** *Comment Status* **D** *AES*

Use terminology consistent with rest of draft.

*SuggestedRemedy*

Replace "channel unbalance currents" with "channel current unbalance"

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.4.9.1.2** *P* **96** *L* **33-3** # 127

Yseboodt, Lennart — Philips

*Comment Type* **E** *Comment Status* **D** *AES*

"For 10GBASE-T operation, insertion loss for **Mispan** PSE devices shall meet the values determined by
Equation (33-19a) when measured **fro** the **trasmit** and receive pairs from 1 MHz to 500 MHz."

*SuggestedRemedy*

Mispan -> Midspan
fro -> from
trasmit -> transmit

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.4.9.1.3** *P* **96** *L* **50** # 129

Yseboodt, Lennart — Philips

*Comment Type* **E** *Comment Status* **D** *AES*

Reference to Table 33-1 wrong.

*SuggestedRemedy*

Replace Table 33-1 by Table 33-20.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.4.9.1.3** *P* **97** *L* **1** # 128

Yseboodt, Lennart — Philips

*Comment Type* **E** *Comment Status* **D** *AES*

Table "Connector return loss" should be numbered Table 33-20.

*SuggestedRemedy*

Replace Table 33-1 by Table 33-20.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

*Cl* **33** *SC* **33.4.9.2.1** *P* **99** *L* **23** # 52

Beia, Christian STMicroelectronics

*Comment Type* **ER** *Comment Status* **D** *AES*

Figure 33-1.
The figures numbering on this page till the end of clause 33 is wrong, because it restarts from 33-1, while it should continue as 33-26.

*SuggestedRemedy*

Renumber Figure 33-1 on page 99 as 33-26; 33-2 on page 110 as 33-27; 33-3 on page 111 as 33-28.

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

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*Cl* **33** *SC* **33.6** *P* **104** *L* **24-2** # 79

Yseboodt, Lennart Philips

*Comment Type* **T** *Comment Status* **D** *DLL*

"Type 2 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."

Last scentence needs to be adjusted for Type 3 and 4.

*SuggestedRemedy*

Replace text by:
"Type 2, 3 and 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."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

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*Cl* **33** *SC* **33.6.2** *P* **104** *L* **41** # 80

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *DLL*

"*A* Type 2, 3, and 4 PSEs shall send an LLDPDU containing..."

*SuggestedRemedy*

"Type 2, 3, and 4 PSEs shall send an LLDPDU containing..."

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ

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*Cl* **33** *SC* **33.6.3.3** *P* **108** *L* **38-4** # 133

Yseboodt, Lennart Philips

*Comment Type* **E** *Comment Status* **D** *DLL*

'Max power' should be 'Maximum power' (two instances)

*SuggestedRemedy*

Replace 'Max power' by 'Maximum power'

*Proposed Response* *Response Status* **W**

PROPOSED ACCEPT.

EZ