Cl **33** *SC* **33.1.4** *P* **25** *L* **44** # 28

Patoka, Martin — Texas Instruments

Comment Type **E** *Comment Status* **A** *cable*

Table 33-1 mixes TIA/EIA and ANSI terms for the cable type.

SuggestedRemedy

Suggest changine the CAT3 reference to Class C.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 518

Cl **33** *SC* **33.3.5** *P* **63** *L* **11** # 36

Patoka, Martin — Texas Instruments

Comment Type **T** *Comment Status* **R** *class pd*

To maintian the ongoing compliance of existing type 1 PDs, the statement should be altered to specify the minimum of class 0 (default or no intentional signature).

A Type 1 PD may implement any of the class signatures in 33.3.5 and 33.7.

SuggestedRemedy

A minimum requirement for a type 1 PD is to present a physical layer Class 0 1-event signature. Optionally, a type 1 PD may implement any of the class signatures in 33.3.5 and 33.7.

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

Table 33-5 updated to include Type 1, Class 0. See comment 203.

The update of table 33-5 makes it unnecesary to change the text.

Cl **33** *SC* **33.3.5.1** *P* **63** *L* **45** # 43

Patoka, Martin — Texas Instruments

Comment Type **TR** *Comment Status* **A** *ez*

Table 33-14

Icable went to 600mA from 720mA & 29.5W is no longer correct for Class 4.

SuggestedRemedy

I suggest that the limit be changed to: Icable * Vportmin (see table 33-17)

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change class 4 from 29.5W to:

Icable * Vportmin (see 33.1.4 and table 33-17)

Cl **01** *SC* **01.1.4** *P* **13** *L* **28** # 50

Anslow, Peter — Nortel Networks

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

There are definitions for "Type 1" and "Type 2"
When inserted in to 802.3 these definitions will appear next to
"Type: A 2 octet value that indicates the nature of the MAC client protocol. Type values are assigned by the IEEE Registration Authority. (See: IEEE 802.3, 3.2.6.)" which will be confusing

SuggestedRemedy

Change these to "PSE or PD Type x" to become:

1.4.x PSE or PD type 1: A PSE or PD that is designed for IEEE Std 802.3™-2005 power levels.
1.4.x PSE or PD type 2: A PSE or PD that is designed for greater than IEEE Std 802.3™-2005 power levels.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

We will submit a maintenance request to change Type to Ethertype throughout the rest of the document.

See 108

Cl **33** SC **33.3.7.4** P **68** L **16** # 54

Anslow, Peter — Nortel Networks

Comment Type **E** *Comment Status* **A** *Pport typo*

This subclause starts:
At any static voltage at the PI, and any PD operating condition, the peak current shall not exceed PPort max for more than 50 ms maximum and 5% duty cycle maximum.
It doesn't make sense to say that the peak current shall not exceed a power.

SuggestedRemedy

Change to:
At any static voltage at the PI, and any PD operating condition, the peak current shall not cause PPort max to be exceeded for more than 50 ms maximum and 5% duty cycle maximum.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 417

Cl **33** SC **33.4.8.2** P **81** L **18** # 55

Anslow, Peter — Nortel Networks

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

This clause starts:
When an Alternative A Midspan is connected to a 100BASE-TX PHY, the Midspan transfer function gain shall be greater than ...
What is a "midspan"?

SuggestedRemedy

Change to:
When an Alternative A Midspan PSE is connected to a 100BASE-TX PHY, the Midspan transfer function gain shall be greater than ...

Response *Response Status* **C**

ACCEPT.

Cl **33** SC **33.2.8** P **44** L **25** # 59

Darshan, Yair — Microsemi Corporation

Comment Type **ER** *Comment Status* **R** *class pse*

Draft D3.0

Interoggation is not defined in the standard however detecion does.

SuggestedRemedy

Replace Interoggation with detection

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

See comment 174.

Cl **33** SC **33.3.7.4** P **68** L **16** # 61

Darshan, Yair — Microsemi Corporation

Comment Type **T** *Comment Status* **A** *Pport typo*

Draft D3.0:

we change peak current to peak power

SuggestedRemedy

Change peak current to peak power

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 417

Cl **33** *SC* **33.1.4** *P* **25** *L* **41** # 69

Darshan, Yair
Microsemi Corporation

Comment Type **T** *Comment Status* **R**

We are using "mA" units in Table 33-9 and other locations so it is better to use mA in Table 33-1 as well to prevent confusion.

SuggestedRemedy

Change Units to mA and change numbers to 350 and 600.

Response *Response Status* **C**

REJECT.

There is an effort to change all mA references to A to remove the 1000 factor from all the equations.

355

Cl **33** *SC* **33.3.5** *P* **63** *L* **6** # 71

Darshan, Yair
Microsemi Corporation

Comment Type **TR** *Comment Status* **A** *class pd*

Draft D3.0:
According to the:
1. Classification base line concept and
2. Associated motions and
3. Current text in 802.3 that define that the physical layer classification information is the maximum power that the PD will ever need.
the text should explicitly note that a PD that asks more power than advertised in L1 hardware classification is specifically not compliant.

The rational for this was to prevent interoperability issues such as when a PD that advertized through its Layer 1 classification that it needs e.g. 12.95W and through L2 requires more power then 12.95W. In this scenario when it is connected to PSE that equiped with L2 the PD will fully work and when connected to a PSE that doesnt equipped with L2 it may or will not work.
As a result we mandate PD type 2 to support both L1 and L2 classification and specify that hardware classification results are max. Power values.

SuggestedRemedy

1) Add the following text right after line 19:
"PD that asks more power by using Data Link Layer classification than advertised in its physical layer classification is not compliant to this standard".

Other equivalent wording is welcomed.
2) In addition add to 33.7.6.2 page 94 ,line 18 the following text.
"The "NEW_VALUE" shall not be higher then specified in mr_pd_class_detected variable.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The issues in the comment are addressed in Table 33-5 and Table 33-14.

Acceptance results in no change to text.

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **48** # 77

Darshan, Yair — Microsemi Corporation

Comment Type **TR** *Comment Status* **R** *class pd*

Draft 3.0:
Add clarification that Data Link Layer takes precedence over physical layer classification only when system requires using lower power than advertised by the physical layer classification.

SuggestedRemedy

Replace
"NOTE-Data Link Layer classification takes precedence
over Physical Layer classification."

With:
"NOTE-Data Link Layer classification takes precedence
over Physical Layer classification only when system requires to use lower power than advertised by the physical layer classification."

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

Update text as follows:
"NOTE-Data Link Layer classification takes precedence over Physical Layer classification when system requires lower power than advertised by the Physical Layer classification."

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **17** # 105

Vladan, Ionel Marius — ON Semiconductor

Comment Type **T** *Comment Status* **R** *class pd*

The text suggests that all measurements of Iclass shall be taken after 6 ms to ignore initial transients, but the minimum class event timing is 6 ms. Since the PD classification time Tclass = 5ms (see table 33-17 and subclause 33.3.7.8) , would be better to recommend taking Iclass measurements after 5 ms.

SuggestedRemedy

Change "All measurements of Iclass shall be taken after 6 ms to ignore initial transients." in "All measurements of Iclass shall be taken after 5 ms to ignore initial transients."

Response *Response Status* **C**

REJECT.

PD required to settle within 5ms. PSE required to start after 6ms. No problem found.

Cl **01** *SC* **01.4** *P* **13** *L* **27** # 108

LANDRY, MATTHEW — SILICON LABS

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

The current definitions of "Type 1" and "Type 2" are rather vague and not too helpful. At best, they would encourage the reader to go look up an old, deprecated version of Clause 33 to get an idea of what the terms mean.

Tables 33-5 and 33-1 do an admirable job of capturing many of the Type 1/2 behaviors. They should be used as the basis for the definitions.

SuggestedRemedy

Replace definitions with some semblance of the following:

Type 1: A PSE or PD that meets the criteria for Type 1 in Table 33-1 and Table 33-5.

Type 2: A PSE or PD that meets the criteria for Type 2 in Table 33-1 and Table 33-5.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 274, 275

Cl **33** *SC* **33.2.8** *P* **44** *L* **25** # 127

Frazier, Howard — Broadcom

Comment Type **TR** *Comment Status* **A** *class pse*

Where is "mutual identification" defined? What constitutes mutual identification? Does it correspond to a state in a state machine?

SuggestedRemedy

Provide an unambiguous definition of mutual identification

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Mutual Identification is partially defined on page 44, L 27.

"Mutual identification is the mechanism
that allows a Type 2 PD to differentiate Type 1 PSEs from Type 2 PSEs."

Add this sentence afterward: "Additionally mutual identification allows Type 2 PSEs to differentiate between Type 1 and Type 2 PDs."

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **38** # 135

Johnson, Peter — Sifos Technologies

Comment Type **T** *Comment Status* **A** *class pd*

Table 33-6 suggests that the Minimum Power Level at the PSE Output for Class 0 would be Ptype from Table 33-9. Ptype can be 30W for Type 2. Since classification is purely a property of a PD, a class 0 PD should never draw more than 15.4 Watts at the PSE interface.

SuggestedRemedy

Change minimum power level at the PSE to 15.4 W for Class 0.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 322

Cl **33** *SC* **33.1.4.1** *P* **25** *L* **50** # 138

Alan Flatman — LAN Technologies

Comment Type **TR** *Comment Status* **A** *cable*

Type 2 operation requires Class D or better cabling as specified in ISO/IEC 11801:1995 but then Category 5e components are required. This does not make sense.

SuggestedRemedy

Delete 2nd sentence ("When Class D . . . . . ISO/IEC 11801:2002").

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 519

also, 300, 474, 392

Cl **00** *SC* **00** *P* *L* # 141

Thomas Dineen — Dineen Consulting

Comment Type **TR** *Comment Status* **R**

Delete or modify Objectives 5, 9 10, 11, and 12! Objective should be clear, crisp, and concise thus making it straight forward for the reviewer of your draft to determine if they have been met! Keep in mind here that I consider this comment to be well within the proper scope of a WG Ballot in that part of the ballot review involves a determination of whether the draft meets the objectives.

Keep in mind here that I am not opposed to you project, I am concerned however that you objective list is bloated with non specific items that should be deleted of replaced with something more specific.

By this point in the project your "research", "vigorous pursuit", and "revisiting" should be concluded with concise results that can be boiled down to proper objectives.

"Objective 5 The enhanced standard will provide the maximum power to the PD as allowed within practical limits"

Objective 5 should be deleted because it is redundant to objective 6 and yet less specific thus offering no value. Also Objective 5 is in appropriate and non specific.

"Objective 9 Research potential extension of power classification to support PoEPlus modes"

Objective 9 is an inappropriate and non specific objective and should therefor be deleted or replaced. We do not specify "research" in an objective. How is the reader of the draft to determine if the research has been completed properly and thus the objective met? You either support the extension of power classification or you do not. No research Please delete or replace with something more specific.

"Objective 10 PoE Plus will vigorously pursue supporting the operation of midspan PSEs for 1000BASE-T."

Objective 9 is an inappropriate and non specific objective and should therefor be deleted or replaced. We do not specify "vigorously pursue" in an objective. How is the reader of the draft to determine if the if the appropriate degree of vigor has been achieved and thus the objective met? You either specify operation with 1000BASE-T or you do not. No research. Please delete or replace with something more specific.

"Objective 11 Research the operations of midspan and endpoint PSEs for 10GBASE-T including providing cable heating data for evaluation by IEEE P802.3an."

Objective 11 is an inappropriate and non specific objective and should therefor be deleted or replaced. We do not specify "research" in an objective. How is the reader of the draft to determine if the research has been completed properly and thus the objective met? You either specify operation with 10GBASE-T or you do not. No research. Please delete or replace with something more specific.

"Objective 12 That IEEE 802.3af power over the MDI isolation requirements be revisited as part of the PoE Plus work"

Objective 12 is an inappropriate and non specific objective and should therefor be deleted or replaced. We do not specify "revisited" in an objective. How is the reader of the draft to determine if the revisiting has been completed properly and thus the objective met? You either specify MDI isolation requirements or you do not. No revisits. Please delete or replace with something more specific.

SuggestedRemedy

Delete or modify comments as discussed above.

Response *Response Status* **W**

REJECT.

It is absolutely correct that it is in scope to comment on if the draft meets the objectives - it isn't in scope to comment on the objectives themselves - this is done during the adoption of the objectives by the Working Group.

The comment contents have been referred to the P802.3at TF and 802.3 WG chairs via e-mail for further disposition but as comment makes no specific recommendation for changes to the draft it is rejected.

Cl **33** *SC* **33.2.8** *P* **44** *L* **25** # 174

Reshef, Tamir Microsemi Corp

Comment Type **ER** *Comment Status* **R** *class pse*

The word interrogation does not appear in any other place in the standard and therefore it is undefined, however detection is part of the mutual identification between a PSE and a PD

SuggestedRemedy

Remove the word interrogation and put detection instead

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

The intent of the word interrogation in this paragraph is to describe the probing portion of the classification mechanism. It does not mean detection.

If not defined in the standard, one should use an English dictionary as a basis for definition of a term.

Cl **33** *SC* **33.1** *P* **23** *L* **32** # 176

Dove, Daniel — ProCurve Networking

Comment Type **E** *Comment Status* **R** *cable*

The paragraph starting with "The detection and powering..." should have a "NOTE:" comment in front of it.

SuggestedRemedy

Insert the word "Note: "

Response *Response Status* **C**

REJECT.

This is informative introductory text. There are no 'shalls'. In essence, this text is all a note.

See 375

Cl **33** *SC* **33.3.5.2** *P* **64** *L* **34** # 200

Tziony, Noam — Microsemi

Comment Type **T** *Comment Status* **R** *class pd*

Table 33-16
Item 2: Mark event voltage (VMark) 10V max

In order to simplify the PD front-end, Mark event maximum should be the same as the Detection voltage maximum.

SuggestedRemedy

Change to:
Mark event voltage (VMark) 10.1V max

Response *Response Status* **C**

REJECT.

The challenging part of the PD front-end design is to land a threshold between 10 and 14.5V. Moving the Mark range to 10.1V actually makes the PD design slightly more difficult.

A secondary design requirement of the PD front-end is to maintain Mark characteristics throughout the Mark range of 7-10V. Extending this range to 10.1V actually makes the PD design slightly more difficult.

The signature range extending to 10.1V was intended to insure the PD maintains signature beyond the highest possible PSE probing voltage of 10V. (This could be argued not necessary.)

If a change were to be made to align these limits, it would make more sense to lower the PD signature range from 10.1V to 10.0V

Cl **33** *SC* **33.3.5.2** *P* **64** *L* **38** # 201

Tziony, Noam — Microsemi

Comment Type **T** *Comment Status* **R** *class pd*

Table 33-16
Item 4: Mark event threshold (VMark_th) 10V min

In order to simplify the PD front-end, Mark event threshold minimum should be the same as the Detection voltage maximum.

SuggestedRemedy

Mark event threshold (VMark_th) 10.1V min

Response *Response Status* **C**

REJECT.

See 200

Cl **33** *SC* **33.2.8** *P* **45** *L* **14** # 203

Tziony, Noam — Microsemi

Comment Type **TR** *Comment Status* **A** *class pd*

Table 33-5
For the following Permutation:
PD Type: Type-2
Physical Layer classification: None
Data Link Layer classification: No
The Table says that:PD allowed?: N/A which doesnt make sense due to the fact that this is a Type 2 PD and it must support L1 and L2.

SuggestedRemedy

Change to:
PD allowed?: No OR explain what does it mean N/A or explain how to read this Table?

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

N/A is confusing.

Change table as follows:

PD Allowed?
N
Y
N
N
N (Was N/A)
N (Was N/A)
Y
Y
Y
Y
N (Was N/A)
N (Was N/A)

Cl **33** *SC* **33.2.8** *P* **45** *L* **16** # 204

Tziony, Noam — Microsemi

Comment Type **TR** *Comment Status* **A** *class pd*

Table 33-5
For the following Permutation:
PD Type: Type-2
Physical Layer classification: None
Data Link Layer classification: Yes
The Table says that:PD allowed?: N/A which doesnt make sense due to the fact that this is a Type 2 PD and it must support L1 and L2.

SuggestedRemedy

Change to:
PD allowed?: No OR explain what does it mean N/A or explain how to read this Table?

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 203.

Cl **33** *SC* **33.2.8** *P* **45** *L* **23** # 205

Tziony, Noam — Microsemi

Comment Type **TR** *Comment Status* **A** *class pd*

Table 33-5
For the following Permutation:
PD Type: Type-1
Physical Layer classification: None
Data Link Layer classification: No
PD allowed?: N/A

Type-1 PD without Physical Layer classification is not allowed. Class 0 is a class and PD without special classification hardware, if it presents 0 to 4mA it is class zero. So in this case PD is not allowed.

SuggestedRemedy

Change to:
PD allowed?: No OR explain what does it mean N/A or explain how to read this Table?

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 203

Cl **33** *SC* **33.2.8** *P* **45** *L* **25** # 206

Tziony, Noam Microsemi

Comment Type **TR** *Comment Status* **A** *class pd*

Table 33-5
For the following Permutation:
PD Type: Type-1
Physical Layer classification: None
Data Link Layer classification: Yes
PD allowed?: N/A

Type-1 PD without Physical Layer classification is not allowed. Class 0 is a class and PD without special classification hardware, if it presents 0 to 4mA it is class zero. So in this case PD is not allowed.

SuggestedRemedy

Change to:
PD allowed?: No, OR explain what does it mean N/A or explain how to read this Table?

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 203

Cl **33** *SC* **33.3.5.2** *P* **64** *L* **36** # 207

Tziony, Noam Microsemi

Comment Type **TR** *Comment Status* **R** *class pd*

Table 33-16
Item 3:
Mark event current (IMark) is 0.25mA min
This minimum value is not require. A zero value is OK too.
Rational:
Until PD gets to Vmark_th, the current is 40mA which discharge the port.
When PD detects Vmark_th, current can be zero.
The requirement of 0.25mA limits implementations.

SuggestedRemedy

Change to:
Mark event current (IMark) 0mA min

Response *Response Status* **W**

REJECT.

Limiting PD behavior often eases PSE design and vise versa.

The requirement for the PD to draw 0.25mA minimum reduces design requirements for the PSE. PSEs are typically designed with one-sided drivers that can assert voltage onto the port, but are unable to discharge the port. By mandating a minimum load current, the PSE can be designed without needing to implement a discharge circuit. Additionally, PSE stablity requriements are eased when there is a limited range of load currents.

It can be aruged that the 0.25mA requirement limits PD implementations, however practically speaking, PDs will draw some current in order to maintain state memory. PDs are also required to present an invalid signature which can be implemented by shorting the port with a ~10Kohm resistor thereby meeting both minimum current draw and invalid signature requirments.

Cl **33** SC **33.3.5.2.1** P **64** L **47** # 208

Tziony, Noam — Microsemi

Comment Type **TR** *Comment Status* **A** *class pd*

At Table 33-16, item 4 (VMark_th), additional information "See 33.3.5.2.1".

I've looked at subsection 33.3.5.2.1 and I didn't find any explanations regarding VMark_th

SuggestedRemedy

Add the following text to 33.3.5.2.1:
"Vmark_th is the operating range of the Mark event to be detected by the PD.
The mark event voltage as specified in Table 33-16 item 2 is actually the PSE mark event range after worst case cable voltage loss as measured at the PD PI.
Once the PD detects Vmark_th, it may reduce its current from Iclass to Imark.
When PD gets to Mark event voltage range, the PD shall consume Imark"

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Insert text at the end of 33.3.5.2.1:

"Vmark_th is the PI voltage threshold at which the PD implementing 2-event classification transistions into and out of the DO_CLASS_EVENT1 or DO_CLASS_EVENT2 states as shown in Figure 33-17."

Cl **33** SC **33.3.5.2** P **64** L **36** # 210

Tziony, Noam — Microsemi

Comment Type **TR** *Comment Status* **A** *class pd*

Table 33-16
Item 3:
Mark event current (IMark) is 2mA max

We allow Imark_lim to be 5mA minimum.
So Imark can be up to <5mA.
It is possible to get PSE voltage down too 7V with Imark up to 5mA.

SuggestedRemedy

Table 33-16 Item 3:
Mark event current (IMark) 4mA maximum

Response *Response Status* **W**

ACCEPT.

Cl **33** SC **33.3.7.4** P **68** L **16** # 217

Stanford, Clay — Linear Technology

Comment Type **E** *Comment Status* **R** *Pport typo*

Paragraph on Peak Operating Current incorrectly uses term current when it should use pwoer and peak when it should use average.

SuggestedRemedy

IS:
At any static voltage at the PI, and any PD operating condition, the peak current shall not exceed PPort max for more than 50 ms maximum and 5% duty cycle maximum. Peak operating power shall not exceed PPeak max.

SHOULD BE:
At any static voltage at the PI, and any PD operating condition, the peak power shall not exceed PPort max for more than 50 ms maximum and 5% duty cycle maximum. Average operating power shall not exceed PPort.

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

See commetn 417

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **3** # 218

Stanford, Clay — Linear Technology

Comment Type **T** *Comment Status* **A** *class pd*

Add requirement to wait 6ms in order to ignore startup transients.

Additions shown in [square brackets].

SuggestedRemedy

EXISTING TEXT:
The PSE in the state CLASS_EV1 shall provide to the PI VClass as defined in Table 33-8. The timing specification
shall be as defined by TCLE1 in Table 33-8. The PSE shall measure IClass and classify the PD based
on the observed current according to Table 33-7.

APPEND TO THIS PARAGRAPH:
[Measurement to be taken after TCLE1_MIN to ignore initial transients.]

Response *Response Status* **C**

ACCEPT.

See 105

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **10** # 219

Stanford, Clay — Linear Technology

Comment Type **T** *Comment Status* **A** *class pd*

Add requirement to wait 6ms in order to ignore startup transients.

Additions shown in [square brackets].

SuggestedRemedy

EXISTING TEXT:
When the PSE is in the state CLASS_EV2, the PSE shall provide to the PI VClass, subject to the TCLE2 timing
specification, as defined in Table 33-8. The PSE shall measure IClass and classify the PD based on the
observed current according to Table 33-7.

APPEND TO THIS PARAGRAPH:
[Measurement to be taken after TCLE2_MIN to ignore initial transients.]

Response *Response Status* **C**

ACCEPT.

See 105

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **6** # 223

Stanford, Clay — Linear Technology

Comment Type **TR** *Comment Status* **A** *class pd*

Because of capacitance on the port, behavior during the transition from Class to Mark may be confusing to the observer. Additionally, this complicates Mark timing. Add text to clarify.

Additions shown in [square brackets].

SuggestedRemedy

TEXT IS:
When the PSE is in the state MARK_EV1, the PSE shall provide to the PI VMark as defined in Table 33-8.
The timing specification shall be as defined by TME1 in Table 33-8.

APPEND TO THIS PARAGRAPH:
[The MARK_EV1 event commences when the PI voltage falls below VClass_min and ends whe the PI voltage exceeds VClass_min.

The PI VMark requiremnet is to be met with load currents in the range of 0.25 to 2mA. In a properly operating PoE system, the port may or may not discharge to the VMark range due to the combination of channel capacitance and PD current loading. This is normal and acceptable PoE system operation. For compliance testing, it is necessary to discharge the port in order to observe the VMark voltage. Discharge can be accomplsihed with a 2mA load for 3ms, after which Vmark can be observed with minimum and maximum load current.]

Response *Response Status* **C**

ACCEPT.

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **13** # 224

Stanford, Clay — Linear Technology

Comment Type **TR** *Comment Status* **A** *class pd*

Because of capacitance on the port, Mark timing needs clarification.

Add text to clarify.

Additions shown in [square brackets].

SuggestedRemedy

TEXT IS:
When the PSE is in the state MARK_EV2, the PSE shall provide to the PI VMark as defined in Table 33-8.
The timing specification shall be as defined by TME2 in Table 33-8.

APPEND TO THIS PARAGRAPH:
[The MARK_EV2 event commences when the PI voltage falls below VClass_min and ends whe the PI voltage exceeds VClass_min.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The MARK_EV2 event commences when the PI voltage falls below VClass_min and ends when the PI voltage exceeds VClass_min.

Cl **33** *SC* **33.3.5** *P* **63** *L* **15** # 248

LANDRY, MATTHEW — SILICON LABS

Comment Type **TR** *Comment Status* **A** *class pd*

The classification permutation table, Table 33-5, explicitly shows that a Type 2 PD must implement both 2-Event class signature and Data Link Layer classification.

Thus, the statement that, "Type 2 PDs shall implement both ..." is redundant in the use of "shall."

SuggestedRemedy

Strike "shall."

Response *Response Status* **C**

ACCEPT.

Cl **33** *SC* **33.3.5.1** *P* **63** *L* **33** # 249

LANDRY, MATTHEW SILICON LABS

Comment Type **TR** *Comment Status* **R** *class pd*

Table 33-14 is wrong in two regards.

First, the power for Class 4 is no longer correct, as the maximum current for a Type 2 PSE changed in March 2008.

Second, the Class 0, 3, and 4 powers should be restated in terms of "ICable * VPort min."

SuggestedRemedy

Replace the powers for Class 0, 3, and 4 with "ICable * VPort min" or "PPort max as defined in Table 33-17."

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

(Note: Correction of 29.5W to Icable*Vport performed in comment 43.)

Class 3 PD power is fixed at 12.95W regardless of cable capacity. Comment suggests to make PD power a function of Icable and Vport. This would allow a Class 3 PD to draw 25.5W, which is not the intent of the specification. Comment could be implemented if further information on port voltage and cable type was provided, but seems counter productive.

Cl **01** *SC* **01.4** *P* **13** *L* **28** # 274

Barrass, Hugh Cisco

Comment Type **ER** *Comment Status* **A** *power levels*

"A PSE or PD that is designed for IEEE Std 802.3T-2005 power levels"

IEEE Std 802.3-2005 will shortly be replaced by a newer revision. That revision will, in turn be replaced by another revision (probably including this amendment).

Do not refer to a specific revision of 802.3. If you wish to specify a power level, then state the power level.

SuggestedRemedy

Replace

"A PSE or PD that is designed for IEEE Std 802.3T-2005 power levels"

with

"

A PSE or PD that is designed for power levels between 0.5 and 12.95W (at the PD)"

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Replace

"1.4.x Type 1: A PSE or PD that is designed for IEEE Std 802.3™-2005 power levels."

with

"1.4.x Type 1 PD: A PD that advertizes a power draw less then or equal to 12.95W (at the PD).

1.4.x Type 1 PSE: A PSE that is designed to support a Type 1 PD."

See 275, 404

Cl **01** *SC* **01.4** *P* **13** *L* **30** # 275

Barrass, Hugh Cisco

Comment Type **ER** *Comment Status* **A** *power levels*

"A PSE or PD that is designed for IEEE Std 802.3T-2005 power levels"

IEEE Std 802.3-2005 will shortly be replaced by a newer revision. That revision will, in turn be replaced by another revision (probably including this amendment).

Do not refer to a specific revision of 802.3. If you wish to specify a power level, then state the power level.

SuggestedRemedy

Replace

"A PSE or PD that is designed for IEEE Std 802.3T-2005 power levels"

with

"A PSE or PD that is designed for power levels greater than 12.95W (at the PD)"

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Replace

"1.4.x Type 2: A PSE or PD that is designed for greater than IEEE Std 802.3™-2005 power levels."

with

"1.4.x Type 2 PD: A PD that advertizes a power draw greater than 12.95W (at the PD).

1.4.x Type 2 PSE: A PSE that is designed to support either a Type 1 or a Type 2 PD."

see 274, 404

Cl **33** *SC* **33.1** *P* **25** *L* **52** # 300

Frank , Yang CommScope

Comment Type **T** *Comment Status* **A** *cable*

... shall consist of Category 5e components as specified...
This paragraph indicates that users shall cat5e cord or connectors even if the the horizontal cabling is cat6 or better. This isn't desirable from cabling perspectively.

SuggestedRemedy

... shall consist of Category 5e or better components as specified...

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 519

Cl **33** *SC* **33.1** *P* **23** *L* **15** # 301

Vetteth, Anoop Cisco

Comment Type **E** *Comment Status* **R**

There could be a problem with the structure of this sentence. I could be wrong also.

SuggestedRemedy

Please check the structuring of this sentence.

Response *Response Status* **C**

REJECT.

It says "a single interface to both the data it requires and the power to process this data"

This was carefully worded in AF. It is a single interface to:
1. the data
AND
2. the power to process the data.

Cl **33** SC **33.3.7.4** P **68** L **16** # 307

Vetteth, Anoop Cisco

Comment Type **E** *Comment Status* **A** *Pport typo*

typo
peak current shall not exceed Pport max

SuggestedRemedy

Replace
peak current shall not exceed Pport max
with
peak power shall not exceed Pport max

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 417

Cl **33** SC **33.1.4** P **25** L **43** # 320

Vetteth, Anoop Cisco

Comment Type **TR** *Comment Status* **A** *cable*

Table 33-1
The second row in the table shows parameter "Channel DC loop resistance".

SuggestedRemedy

This parameter should read "Maximum Channel DC loop resistance"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 518

Cl **33** SC **33.2.8** P **46** L **37** # 322

Vetteth, Anoop Cisco

Comment Type **TR** *Comment Status* **A** *class pd*

Table 33-6 shows minimum power level at output for Class 0 as Ptype.
Ptype for a type-2 PSE is 30W with 600mA of cable current. But Class 0 minimum power level is 15.4W irrespective of the type of the PSE.

SuggestedRemedy

Change Ptype for Class 0 to 15.4W

Response *Response Status* **C**

ACCEPT.

Cl **33** SC **33.1.4** P **25** L **41** # 355

Pavlick Rimboim Microsemi corp.

Comment Type **T** *Comment Status* **R**

Table 33-1 uses "A" for maximum DC cable current, as other tables (33-9) and past standard used "mA" to describe current, it will be better to keep the same units all over the standard

SuggestedRemedy

Change units from "A" to "mA"

Response *Response Status* **C**

REJECT.

There is an effort to change all mA references to A to remove the 1000 factor from all the equations.

69

Cl **33** SC **33.2.8** P **46** L **44** # 356

Hopwood, Keith Phihong

Comment Type **E** *Comment Status* **R** *class pd*

Class 4 Power refers to a table 33-9. This is not clear
Lets make it easy and make it 30W (600mA 50V)

SuggestedRemedy

Replace reference to Table 33-9 to 30W

Response *Response Status* **C**

REJECT.

Group could not form a concensus to resolve comment.

CommentType field empty, set to E as default

Amend table as below:

CLASS	Pmin Type 1	Pmin Type 2
0	Pclass=15.4W	Pclass=15.4W
1	Pclass=4W	Pclass=4W
2	Pclass=7W	Pclass=7W
3	Pclass=15.4W	Pclass=15.4W
4	Pclass=15.4W	Pclass=30W
4	Pclass = Vportmin * Icable	

see 322

Cl **01** *SC* **1.3** *P* **13** *L* **11** # 364

Piers Dawe Avago Technology

Comment Type **TR** *Comment Status* **A** *cable*

As http://ieee802.org/3/at/public/mar08/3n864.pdf says, there is an approved work item proposal (NWIP - like a PAR) for developing ISO/IEC TR 29125; the NWIP is at http://isotc.iso.org/livelink/livelink/fetch/2000/2122/327993/755080/1054034/2541793/JTC001-N-8766.pdf?nodeid=6786149 but I could not see any sign that even a draft TR exists yet.

SuggestedRemedy

As this TR is essential for Type 2 ????CHECK****, a draft of P802.3at cannot be considered technically complete until it exists

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 478

Cl **33** *SC* **33.1** *P* **23** *L* **33** # 374

Piers Dawe Avago Technology

Comment Type **TR** *Comment Status* **A** *cable*

Text says 'The detection and powering algorithms are likely to be compromised by cabling that is multipoint as opposed to point-to-point, resulting in unpredictable performance and possibly damaged equipment.' while Fig 33-1 and 33-2 shows a medium running past the MDI, shared-medium style.

SuggestedRemedy

First, is 'multipoint' the right word? Isn't that how PONs are? Second, if DTE Power should not be used on shared-medium Ethernet, show the medium coming to but not past the MDI/PI in Fig 33-1 and 33-2

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

PONs are not an issue as we don't support power over optics.

Fig 33-1, 33-2 and 33-3 need updated with 'zig-zag' lines running off to the right and by moving the left hand end of the medium line closer to the MDI.

176, 375

Cl **33** *SC* **33.1** *P* **23** *L* **33** # 375

Piers Dawe Avago Technology

Comment Type **T** *Comment Status* **R** *cable*

unpredictable performance and possibly damaged equipment': I wonder if there might be a risk of overheating also and a stronger warning, caution or whatever should be made

SuggestedRemedy

per comment

Response *Response Status* **C**

REJECT.

Insufficient detail to satisfy commenter. Need editoral suggestions.

Cl **33** *SC* **33.1.4** *P* **25** *L* **32** # 381

Piers Dawe Avago Technology

Comment Type **TR** *Comment Status* **A**

A system? What does that mean? A switch? Or just that portion powered/powering via a single MDI?

SuggestedRemedy

Be clearer

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change
"A system defined as either Type 1 or Type 2..."

to
"A power system, consisting of a single PSE, link segment and a single PD, defined as either Type 1 or Type 2..."

Cl **33** *SC* **33.1.4** *P* **25** *L* **40** # 391

Piers Dawe Avago Technology

Comment Type **TR** *Comment Status* **A** *cable*

Maximum DC cable current, about half an ampere? is that per cable (bundled) as it says, or per conductor, or per MDI (two conductors each way)?

SuggestedRemedy

Be clearer

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Add footnote: Icable is the maximum output current per PI in normal powering mode.

Cl **33** *SC* **33.1.4.1** *P* **25** *L* **52** # 392

Piers Dawe Avago Technology

Comment Type **T** *Comment Status* **A** *cable*

Normative text says 'Type 2 operation requires Class D ... the cabling system components ... shall consist of Category 5e components as specified in ANSI/TIA/EIA-568-B.2 ... while NOTE says 'ANSI/TIA/EIA-568-B.2 provides a specification (Category 5e) for cabling that meets the minimum requirements for Type 2 operation.'

SuggestedRemedy

Is this a distinction between cabling system components and cabling? Or can the NOTE be deleted?

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Delete the note on page 26 line 1

See new text in 519

Cl **01** *SC* **1.4** *P* **13** *L* **28** # 404

Booth, Brad AMCC

Comment Type **TR** *Comment Status* **A** *power levels*

Poor use of reference.

Considering 802.3at will become part of the 802.3 standard, having a reference to a past version of the standard as a means to determine between Type 1 and Type 2 is a poor choice.

SuggestedRemedy

Change reference to the standard to be a reference to the actual power level in IEEE Std. 802.3af.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 274, 275

Cl **33** *SC* **33.1.4.1** *P* **25** *L* **50** # 405

Booth, Brad AMCC

Comment Type **TR** *Comment Status* **A** *cable*

Confusing conflict of references. ISO/IEC 11801:1995 Class D cabling is different than ISO/IEC 11801:2002 Class D cabling. The statement that Type 2 requires ISO/IEC 11801:1995 Class D, but that all the components of the cabling system shall comply with ISO/IEC 11801:2002 Class D cabling.

SuggestedRemedy

Change paragraph to read:
Type 2 operation shall require Class D or better cabling as specified in ISO/IEC 11801: 2002.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 519

Cl **01** *SC* **1.4** *P* **13** *L* **30** # 406

Zimmerman, George — Solarflare Communicat

Comment Type **E** *Comment Status* **A** *power levels*

Type 2 is specified to be "greater than 802.3-2005" power levels. From this specification, I believe this should be "greater than 802.3-2005, but less than or equal to 802.3at-2xxx" power levels". Otherwise, we're classifying nonstandard devices as "Type 2".

SuggestedRemedy

Add ", but less than or equal to 802.3at-2xxx" power levels" to the type 2 description.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 274, 275

Cl **33** *SC* **33.1.4** *P* **25** *L* **45** # 413

Zimmerman, George — Solarflare Communicat

Comment Type **TR** *Comment Status* **A** *cable*

Table 33-1, Row "cable type" should be "minimum cable type". (I assume 802.3at either Type 1 or Type 2 will work on Class E or Class Ea cabling). Note that line 50 goes on to say in the text that Type 2 works on Class D or better. The table is inconsistent AND there is no similar statement I see for Type 1.

SuggestedRemedy

Either: replace "Cable Type" row heading by "Minimum Cable Class", OR,
add "or better" to the row entries (prefered for clarity, if not for wordiness).

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

OBE 518

Cl **33** *SC* **33.3.7.4** *P* **68** *L* **16** # 417

Stanford, Clay — Linear Technology

Comment Type **E** *Comment Status* **A** *Pport typo*

This comment is resubmitted and my previous comment shall be withdrawn.

Paragraph on Peak Operating Current incorrectly uses term current when it should use power.

SuggestedRemedy

IS:
At any static voltage at the PI, and any PD operating condition, the peak current shall not exceed PPort max for more than 50 ms maximum and 5% duty cycle maximum.

SHOULD BE:
At any static voltage at the PI, and any PD operating condition, the peak power shall not exceed PPort max for more than 50 ms maximum and 5% duty cycle maximum.

Response *Response Status* **C**

ACCEPT.

Cl **33** *SC* **33.3.5.1** *P* **63** *L* **46** # 442

Vetteth, Anoop — Cisco

Comment Type **TR** *Comment Status* **R** *ez*

Table 33-14
Power corresponding to class 4 has not been updated

SuggestedRemedy

Change 29.5W to 25.5W

Response *Response Status* **C**

REJECT.

This comment was WITHDRAWN by the commenter.

See 43

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **36** # 443

Vetteth, Anoop — Cisco

Comment Type **TR** *Comment Status* **A** *class pd discuss*

Table 33-6
Pclass has fixed values for the different classes. We changed the overload current on page 50 (Ipeak) to be dependent on Ppd_peak, Vport and Rch. We should do the same here

SuggestedRemedy

Use parameter "Pclass_pd" for the values in table 33-14 page 63

Replace the table 33-6 with the following equation

Pclass = Vport x [Vport - sqrt(Vport^2 - 2 x Rch x Pclass_pd)] / Rch

A type 1 PSE can treat Class 4 as Class 0 so I don't think we need to differentiate between type 1 and type 2 PSEs for class 4

Replace Rch in eq 33-1 with Rch/2

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Append "Pclass_pd" to the title of Table 33-14 page 63

add this equation and text :
Pclass = Vport x [Vport - sqrt(Vport^2 - 4 x Rch x Pclass_pd)] / (2*Rch)

"PSE implementations may optionally use Vpse = Vport_min and Rch = Rch_max to arrive at the values in Table 33-6."
before Table 33-6

Change Rch in table 33-1 to 12.5 | 20
and add note after Table 33-1:
"Note: Rch is the net result of the loop resistance of a single twisted pair."

Cl **33** *SC* **33.1.4.1** *P* **25** *L* **52** # 447

McCormack, Michael — Texas Instruments

Comment Type **T** *Comment Status* **A** *cable*

Category 5e can be bettered,

SuggestedRemedy

Catrgory 5e or better

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 519

Cl **33** *SC* **33.2.8** *P* **44** *L* **53** # 455

Jones, Chad — Cisco

Comment Type **TR** *Comment Status* **A** *class pse*

"If a PSE successfully completes detection of a PD, but the PSE fails to complete classification of a PD, then a Type 1 PSE shall assign the PD to Class 0; the operation of a Type 2 PSE is implementation dependent."

We are making the same mistake that we made in AF all over again. The reason we couldn't use Class 4 by itself is because we allowed the PSE to power a poorly behaved PD, and we are doing it again here. The proper way to future proof the standard is define this as a non-powered state.

Additionally, classification is no longer optional for Type 2 PSEs; you have to complete some sort of classification to complete the whole discovery process for Type 2 devices. If classification has failed, discovery has failed. We certainly don't let a device that has failed discovery get power anyway - and certainly not 30W!

SuggestedRemedy

Operation for Type 1 PSEs is grandfathered in and cannot be corrected but it can be fixed for the Type 2 PSE.

Change: "the operation of a Type 2 PSE is implementation dependent."

to: "the Type 2 PSE shall restart the Detection Cycle"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The proposed change aligns text with existing PSE state machine, however PSE should return to the IDLE state prior to detection.

Change: "the operation of a Type 2 PSE is implementation dependent."

to: "the Type 2 PSE shall return to the IDLE state."

Cl **33** *SC* **33.2.8.2** *P* **46** *L* **16** # 456

Jones, Chad — Cisco

Comment Type **TR** *Comment Status* **A** *class pd*

"If any measured IClass is equal to or greater than IClass_LIM min as defined in Table 33-8, the PSE shall classify the PD as Class 4."

Same as previous comment:
We are making the same mistake that we made in AF all over again. The reason we couldn't use Class 4 by itself is because we allowed the PSE to power a poorly behaved PD, and we are doing it again here. The proper way to future proof the standard is define this as a non-powered state.

Additionally, classification is no longer optional for Type 2 PSEs; you have to complete some sort of classification to complete the whole discovery process for Type 2 devices. If classification has failed, discovery has failed.

SuggestedRemedy

Change: "If any measured IClass is equal to or greater than IClass_LIM min as defined in Table 33-8, the PSE shall classify the PD as Class 4."

to: "If any measured IClass is equal to or greater than IClass_LIM min as defined in Table 33-8, the PSE shall restart the Detection Cycle by allowing the voltage at the PI to drop below Vmarkmin."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change text to:

"If any measured IClass is equal to or greater than IClass_LIM min as defined in Table 33-8, the Type 1 PSE shall classify the PD as Class 0, the Type 2 PSE shall return to the IDLE state."

Cl **33** *SC* **33.2.8** *P* **44** *L* **30** # 460

Geoff, Thompson — Nortel

Comment Type **E** *Comment Status* **A** *class pse*

The text:
"Physical Layer classification occurs before power-on when the PSE asserts a voltage onto the PI...."
is confusing as just what is powered on and what is not.

SuggestedRemedy

change text to:
"Physical Layer classification occurs before a PSE supplies power to a PD when the PSE asserts a voltage onto the PI..."

Response *Response Status* **C**

ACCEPT.

CommentType empty, set to E as default

Cl **00** *SC* **00** *P* *L* # 467

Geoff, Thompson — Nortel

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

The current ballot claims that it is referenced against P802.3ay Draft 2.1.
As of the date of the close of this ballot, 2.1 is not longer the current draft

SuggestedRemedy

The next draft should be referenced against the draft of P802.3ay that is current at the time the next ballot is issued. Any changes to the P802.3at draft that are a result of changes to the P802.3ay since D2.1 should be marked with an editor's note saying as much.

Response *Response Status* **C**

ACCEPT.

Editor to check AY for changes that affect our draft.

Cl **33** *SC* **33** *P* **23** *L* **1** # 469

Geoff, Thompson Nortel

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

Given the inadequacy of the compare documents referenced in the cover letter, the balloting instruction, the referenced documents which are: "...to assist in your review compare documents..."
The balloting instruction to:
"Please DO NOT submit comment against the above documents"
is completely inappropriate!
A editorial instruction that says: "Replace Clause 33:" (PDF Page 1, line 1) is of no use "to assist..."

SuggestedRemedy

Where the draft switches modes from editorial instructions to major section replacement (e.g. pg 23, line 1) insert an editorial instruction that says:
Editorial note, to be removed prior to publication.
The precise delete/insert instructions against what is taken as the base standard (P802.3ay/D2.1 draft of 802.3REV expected to be published as Std 802.3-2008) can be found in a compare document which can be accessed at:
http//:www.ieee802.org/3/at/private/D3.0/P802d3at_D3p0-8023_33_CMP.pdf
(This will be even more important in Sponsor Ballot where you have less control over the packaging of the ballot material.)

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.4** *P* **13** *L* **30** # 470

Geoff, Thompson Nortel

Comment Type **ER** *Comment Status* **A** *power levels*

The text: "...for greater than IEEE Std 802.3T-2005 power levels."
is not appropriate. It will be difficult for the normal user of the resulting standard to have access to this information. There is no need to make things that difficult for a normal user.

SuggestedRemedy

Change to:
"for greater than the power levels specified in Table 33-6, class 3."

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 274, 275

Cl **33** *SC* **33.1.4** *P* **25** *L* **52** # 474

Geoff, Thompson Nortel

Comment Type **ER** *Comment Status* **A** *cable*

There is no such thing as Category 5e components specified in 11801:2002.
the term "5e" is a TIA term, not an ISO/IEC term

SuggestedRemedy

Change text to read:
"...shall consist of Category 5e components as specified in ANSI/TIA/EIA-568-B.2 and Category 5 components as specified in ISO/IEC 11801:2002.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 519

Cl **01** *SC* **1.3** *P* **13** *L* **11** # 478

Geoff, Thompson Nortel

Comment Type **TR** *Comment Status* **A** *cable*

The text: "Draft document number ISO/IEC JTC 1/SC 25 N XXXX.X."
is inappropriate and insufficiently complete for a document to go to Working Group Ballot.

SuggestedRemedy

There are several appropriate choices to remedy this, among them are:
- Admit that the document was not complete and thus, by rule, not qualified to go to Working Group Ballot and, therefore, withdraw the draft from Working Group Ballot until it is complete, thensubmit it again to 802.3 for WG Ballot.
- Provide an appropriately mature outside reference and access to copies of it so that the balloting group can judge the technical information.
- Drop the reference, establish the relevants parameters and their validity (with appropriate documentation) within 802.3 and then use the home grown numbers.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Use option 3, remove the normative reference. We are not using the document as a normative reference; we are extracting information.

Cl **00** *SC* **00** *P* *L* # 484
Geoff, Thompson Nortel

Comment Type **TR** *Comment Status* **A** *00*

The text provided for managment via LLDP is not complete. I recognize that the IETF is no longer willing to do the SMNP and 802.3 will be doing that job.
As far as I know this change of situation has not lead to any change in requirements for 802.3 development projects, thus for the P802.3at draft to be complete, it needs to include the management material normally included in Annex 30A (OID registration arcs) and Annex 30B (enumerated values for syntax).

SuggestedRemedy

Add appropriate material for Annex A and Annex B
Since the WG Ballot was conducted (inappropriately) on an incomplete draft the Working Group Ballot should be reinitiated or (at a minimum) the recirculation should have an extended period AND open the entire draft for comment.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Geoff to work with Adhoc to add appropriate material for Annex A and Annex B.

WG chair to rule on recirc/reballot requirement.

Cl **01** *SC* **1.4** *P* **13** *L* **28** # 485
Ganga, Ilango Intel

Comment Type **E** *Comment Status* **A** *power levels*

Replace "IEEE Std 802.3-2005" to "IEEE 802.3", so we do not have to change this for every revision.

SuggestedRemedy

Type 1: A PSE or PD that is designed for IEEE 802.3 power levels

Type 2: A PSE or PD that is designed for greater than IEEE 802.3 power levels

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 274, 275

Cl **33** *SC* **33.1.4** *P* **25** *L* **44** # 500
Diab, Wael Broadcom

Comment Type **T** *Comment Status* **A** *cable*

Table 33-1
The cabling type in this table is ambigious.

SuggestedRemedy

Please use the nomenclature in Clause 1 for Cat 3 (see 1.4.89). Also, pls add a footnote to Table 33-1 indicating where Cat 3 and Class D are defined so there is no ambiguity.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 518

Cl **00** *SC* **00** *P* *L* # 504
Diab, Wael Broadcom

Comment Type **TR** *Comment Status* **A**

Please resolve where the TLVs for 802.3at will reside. Will it be in 802.1, 802.3 at or somewhere else

SuggestedRemedy

Please see comment

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

We intend to keep it in 802.1 hence, we have requested an IEEE Std 802.1AB "IEEE 802.3 subtype" (IEEE 802.3 organizaitonally specific TLV) from IEEE802.1 with the intent of including LLDP TLVs in 802.3at.

Cl **01** *SC* **1.3** *P* **13** *L* **11** # 510
Law, David 3Com

Comment Type **E** *Comment Status* **A** *cable*

A draft of ISO/IEC TR 29125 has been issued designated ISO/IEC JTC 1/SC 25 N 874.

SuggestedRemedy

Change ISO/IEC JTC 1/SC 25 N XXXX.X. to read ISO/IEC JTC 1/SC 25 N 874.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 478 which removed the reference.

Cl **33** *SC* **33.1.1** *P* **23** *L* **23** # 511

Law, David 3Com

Comment Type **E** *Comment Status* **A** *cable*

We normally say beyond the scope of the standard.

SuggestedRemedy

Change '... beyond the scope of the clause.' to read 'beyond the scope of the standard.'.

Response *Response Status* **C**

ACCEPT.

Cl **33** *SC* **33.1.4** *P* **25** *L* **43** # 517

Law, David 3Com

Comment Type **TR** *Comment Status* **R** *cable*

I believe that a Type 1 and Type 2 system are only defined by the maximum DC cable current. The two other parameter provided in Table 33-1, 'Channel DC loop resistance' and 'Cable type' don't define Type 1 and Type 2, instead they are requirements to support Type 1 and Type 2 operation.

SuggestedRemedy

Delete the 'Channel DC loop resistance' and 'Cable type' rows from Table 33-1 as these aren't parameter that define Type but are instead requirements.

If there is a desire to summarize the cabling requirements for both Type 1 and Type 2 operation please create a new Table 33-2 and include it in subclause 33.1.4.1 which would have to be changed to be titled 'Cabling requirements'. If this is done more accurate description of cable type will be required.

Response *Response Status* **W**

REJECT.

Opposite of 518, which is accept

320, 518, 28, 500, 413

Cl **33** *SC* **33.1.4** *P* **25** *L* **43** # 518

Law, David 3Com

Comment Type **TR** *Comment Status* **A** *cable*

If my other comment to delete the rows 'Channel DC loop resistance' and 'Cable type' from Table 33-1 is not accepted the entries for 'Cable type' need to be corrected.

SuggestedRemedy

[1] Make it clear that these cable entries provide the minimum cabling requirements - since the other two rows in this table provide maximum values.

[2] Is it really correct that we require the use of Cat 3 cabling for Type 1 operation, remember that 10BASE-T operates over DIW as well as Cat-3. In addition we should fully specify Cat-3.

[3] We should fully specify what we mean by Class D since ISO/IEC 11801:1995 Class D is Cat 5 whereas ISO/IEC 11801:2002 is Cat 5e. Further even meeting ISO/IEC 11801:1995 Class D is not enough - we place an additional requirement that the loop resistance has to be 25 Ohms of less. This fact should be footnoted.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Change Table 33-1 to
Parameter | Symbol | Units | Type 1 value | Type 2 value
Maximum DC cable current | ICable | A | 0.35 | 0.6
Maximum Channel DC pair loop resistance | RCh | Ω | 20 | 12.5
Minimum Cable type | | | UTP per Clause 14 | Class D

500, 413

Cl **33** *SC* **33.1.4.1** *P* **25** *L* **50** # 519

Law, David 3Com

Comment Type **TR** *Comment Status* **A** *cable*

It is necessary, but not sufficient, to state that Type 2 operation require ISO/IEC 11801:1995 Class D cabling or better. ISO/IEC 11801:1995 Class D specifies a maximum loop resistance of 40 Ohms - see SC25/WG3 response 1 in ISO/IEC JTC 1/SC 25/WG 3 N 807 [http://www.ieee802.org/3/at/public/nov06/3n807.pdf]. We need to also state that we are placing an additional requirement that the loop resistance has to be less that 25 Ohms.

SuggestedRemedy

Change '.. Class D or better cabling as specified in ISO/IEC 11801:1995.' to read '.. Class D, or better, cabling as specified in ISO/IEC 11801:1995 with the additional requirement that channel DC loop resistance shall be 25 Ohms or less.'.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change: "Type 2 operation requires Class D or better cabling as specified in ISO/IEC 11801:1995. When Class D cabling is used, the cabling system components (cables, cords, and connectors) used to provide the link segment shall consist of Category 5e components as specified in ANSI/TIA/EIA-568-B.2 and ISO/ IEC 11801:2002."

to: "Type 2 operation requires Class D, or better, cabling as specified in ISO/IEC 11801:1995 with the additional requirement that channel DC loop resistance shall be 25 Ohms or less. These requirements are also met by Category 5e or better cable and components as specified in ANSI/TIA/EIA-568-B.2."

Also, 405

Cl **33** *SC* **33.1.4** *P* **25** *L* **45** # 526

Schindler, Fred Cisco Systems

Comment Type **E** *Comment Status* **A** *cable*

The IEEE normally references international standards.

SuggestedRemedy

Replace CAT-3 with class C.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE 518