Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33., Page: , Line:
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Hz is not capitalized conistantly. For instance, table 33-12 has both Hz and hz.

Suggested remedy:
Hz is the correct capitalization.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:30, Subclause: 30.9.1.1.8, Page: 11, Line: 37
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
The attributes in clause 30 are all designed to allow multiple independent management applications to access the values. Therefore, they do not use values that are cleared or reset because there would be no way of knowing that another manager had cleared the value since you last read it.

To do this, status indications should either report the current value or be a counter of times when a condition has occurred. Latching until cleared is not acceptable in Clause 30. (Such objects may be supported by an underlying latching until cleared indication over the MII since the MII has a single management agent that is doing the clearing.)

Suggested remedy:
Either change this object to report the present status or change it to two rollover counter objects, one for under current and one for over current.

Delete the Action that clears this object.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.1, Page: 18, Line: 43
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
It appears that this statement is inaccurate. There are reasonable attempts provide convenience that have not been made. Auto MDI/MDI-X ports are reasonably common. The situation of an auto MDI/MDI-X port on a PD or PSE should not be allowed to cause an inability to receive power.

Suggested remedy:
Require PDs to support polarity insensitivity.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.1, Page: 19, Line: 23
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
If a device is capable of two forms of operation than it has both of them implemented.

Suggested remedy:
Replace ""implementation and operation"" with ""Simultaneous operation""

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Technical), Clause:33, Subclause: 33.2.2, Page: 19, Line: 32
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
How does the reader know if something is ""specifically targeted""

Suggested remedy:
Change ""specfically targeted ...."" to ""the requirement includes an explicit statement that it only applies to one implementation.""

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.2.2, Page: 19, Line: 35
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
A small wording change makes this note unnecessary.

Suggested remedy:
Change the 2nd and 3rd sentences in the paragraph above the note to""PSEs that are coincident with a DTE .... PSEs which are not coincident with a DTE ....""

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.2, Page: 19, Line: 41
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
""Must"" should be ""shall"".
In IEEE standards speak, ""must"" is used only for an inevitable consequence (and that usage tends to occur rarely). ""Shall"" is used when stating a requirement. See also 33.2.5 and 33.2.5.2.

Suggested remedy:
Change ""must"" to ""shall""

Do a global search for must. and determine for each whether it should be shall.

Consider deleting the sentence in 33.2.5 because saying:""X shall meet the following requirements"" doesn't add anything.

Editor’s Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.2.3, Page: 19, Line: 50
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
For a given implementation, the period is not necessarily indeterminate, but the standard is not stating a requirement for the period.

Suggested remedy:
""This period of time is implementation dependent.""

Editor’s Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.4, Page: 20, Line: 7
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
I can't find an explicit statement of where this test is applied. Are P+ and P- meant to represent the negative Vport and positive Vport?

Suggested remedy:
Define P+ and P- or use an already defined term in place of them.

Editor’s Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.2.4, Page: 20, Line: 50
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
It is the behavior of the circuit rather than the circuit which is exhibited.

Suggested remedy:
Replace with ""The PSE shall exhibit the behavior of either the circuit in Figure 33.5 or the circuit Figure 33.6 in all detection states.""

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.5.1, Page: 21, Line: 19
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
The requirements here seem to imply that a midspan PSE can only support a single PD; that is, there can't be a case where a midspan PSE powered both DTEs on the link.

Suggested remedy:
If the assumption above is accurate, it should be explicitly stated. If not, then the impedence for detection will need to allow for two PDs in parallel. (For 10BASE-T and 100BASE-T, a midspan PSE could deal with each PD separately, because the spare lines don't need to be connected through the PSE, but for 1000BASE-T the pairs can not be interrupted.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.5.1, Page: 21, Line: 21
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Requirement c seems to be circular since the PSE is required to use Vdetect values that will produce a 2 Volt difference given the resistance. I don't understand the utility of requirement d. A 2 volt difference across a 19K to 26.5K resistance should change current by 75 to 105 uA.

Also, why is the ""and"" at the end of b rather than c?

Suggested remedy:
Delete c and d.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.5.3, Page: 21, Line: 36
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Does the classification step come out of the 500 ms or the 400 ms? How fast can the 5 steps of the PSE classification method be completed?

Suggested remedy:
Clarify the relationship of this requirement to classification.

Editor’s Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.2.6.2, Page: 22, Line: 29
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Please clarify. Is this voltage still applied through the detection circuit of 33.2.4?

Suggested remedy:

Editor’s Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.6.2, Page: 22, Line: 30
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
""terminals"" is not a defined word. What point of the PSE is ""its terminals""?

I assume you did not use MDI because it doesn't apply to a midstream PSE.

Suggested remedy:
Define a term for the line interface of a PSE that applies to both types of PSE.

Editor’s Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.7, Page: 23, Line: 26
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
This doesn't seem to mean anything. There is no criteria for when the PSE shall be able to operate in the mode where it meets the 1 second limit so if the PSE doesn't meet it, then the supplier can always say ""It wasn't in the 1 second mode."" Also, it is not clear how this spec relates to the timing criteria in 33.2.5.3

Suggested remedy:
Delete this or change it so it means something. Also, clarify its relationship to 33.2.5.3 or, better yet, combine them into one timing spec.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.7, Page: 23, Line: 26
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
3.2.3 states that the time between PD detection attempts is not specified and also that the PSE can choose to not apply power when it has detected a PD. The requirement here seems to conflict with that statement. Also, given that, what is the point of saying that the requirement of 33.2.7 doesn't apply in some cases and does apply in other cases in 33.2.7.1?

Suggested remedy:
Make the timing requirements consistant.

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.2.7.1, Page: 23, Line: 37
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Isn't the alternative A PSE testing across the 12 and 36 pair while the alternative B PSE is testing across the 45 and 78 pairs? Why do they interfere?

Suggested remedy:

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:3, Subclause: 3.2.8, Page: 24, Line:
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
The purpose of a table is not well served by having such long notes which spread the table out to multiple pages. The table becomes harder to use and the notes are cryptic.

Suggested remedy:
Move the information in the long notes into subclauses of 2.8 and just put a reference in the table.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.8, Page: 24, Line: 17
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Where is the PSE power supply output? The PSE has only one defined interface and output power can't be tested at some undefined internal point.

Suggested remedy:
Write a spec that applies to the PSE output port.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.8, Page: 24, Line: 23
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
What is the meaning of ""common mode and/or differential noise pair to pair values""? This should have a text paragraph rather than just a table note. Also, the meaning of part a is not entirely clear. Does it mean that the requirement does not apply to a DTE PSE which is using alternative B and not running 1000BASE-T? If it is a midspan PSE, does it always have to meet this requirement (because a midspan PSE doesn't know if the link is 1000BASE-T)?

Suggested remedy:
Clarify.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.8, Page: 24, Line: 30
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
These limits allow noise that is 50 mV but that is higher than 1000BASE-T is required to withstand. 40.6.1.3.4 requires that 1000BASE-T withstand 25 mV peak-to-peak of alien noise. Power supply noise injected across a pair presumably falls into that class - i.e. it isn't transmit or receive data dependent. 50 mV may also be higher than the noise tolerance of 100BASE-TX - I don't have the FDDI spec at hand to check. Also, there is no spec provided above 100 MHz. I can't find a requirement for low pass filtering in 1000BASE-TX. 100BASE-TX implementations often use considerable excess bandwidth and would be sensitive to noise above 100 MHz.

Also, it isn't clear what the low frequency cut off of a 1000BASE-T transceiver is. 150 mV at 500 KHz may be too much.

Suggested remedy:
Reduce the differential noise level to below that which 1000BASE-T is required to withstand. This may need to be less than 25 mV to allow for other external noise sources.

Extend the upper frequency range to cover to at least 200 MHz.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.8, Page: 26, Line: 5
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
TUDL doesn't seem to be defined anywhere. Also, I don't find any description of power off mode current 1 and power off mode current 2.

Suggested remedy:
Define TUDL, power off mode current 1 and power off mode current 2.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.8, Page: 26, Line: 23
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Why is Icut limited to less than 400 mA? What is the definition of a short load condition? There is no clear reason to separate out the overload and short detection

Suggested remedy:
Delete note at 9. The note at 8 covers the requirement and the ""may"" at 9 appears to contradict the note at 8. Change the note at 8 to ""If output current exceeds Icut for a duration greater than Tovld, the PSE shall disconnect the power from the port."" Delete TLIM because it is covered by the overload spec in 8 and 9. 10 to ""Output current limit"" and change the note to ""Max value of port current during any load including a short circuit."" Delete the minimum value. It isn't needed.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.9, Page: 26, Line: 52
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
The statement here contradicts the first paragraph. A specific behavior is required when the PSE approaches or reaches its maximum power subscription. The PSE is required not provide power to a link if it is unable to provide the maximum power level requested.

Suggested remedy:
Delete the sentence and ""Specifically,""

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.2.10, Page: 27, Line: 3
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Why is it ""will"" rather than ""shall""?

There is more than one current in table 33-12 (by the way, your table labeling is not consistant with 802.3 - they should all be in the form of 33-#). Also, the statement as it is requires current to be cut off at exactly 10 mA. There should be a tolerance between the minimum valid current and the point where underload detection is required. I think that is what Imin in table 33-5 was intended for.

Suggested remedy:
Begin the clause ""The PSE shall monitor the current utilized by the link for an underload condition or the PD data link status. It may monitor both.If the PSE monitors the PD data link, it shall create a value, PD_DATA_LINK which shall be the state of ....""

Change item 6 in table 33-5 to a single entry Under load detection current, IUDL. minimum 5 and maximum 10 see 33.2.10.Change the minimum current to IUDL.

Also, if it is a midspan PSE and choses to monitor data link status, does it need to monitor both directions? Clarify.

How long should a PSE wait between applying power and beginning to check data link status? I don't think we specify a power up time for any of the PMDs.

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.2.10, Page: 27, Line: 3
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Either change this subclause to also cover other power removal situations such as overload or rename something like Underload power removal.

Also, should there be a time specified for a minimum time that power shall be removed once one of these problems is detected?

Suggested remedy:

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.3.1, Page: 28, Line: 49
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:

Suggested remedy:
Change must to shallAlso, polarity insensitivity should be mandatory to maximize interoperability.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.3.1, Page: 28, Line: 52
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
The shalls is not appropriate here because they do not apply to the PD. The PD does not control which pair is at a higher potential. Also, the statements aren't true for the way power is supplied when the PSE is an auto MDI-X.

Suggested remedy:
Delete the last two sentences.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.3.2, Page: 29, Line: 24
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Also line 46. V-I slope should be pair-to-pair resistance or, to be more consistant with the other items, input resistance.

There should be a statement associated with a table that the resistance, capacitance and inductance are between the two pairs.

Also, where is the Voffset and Ioffset measured? Are those also pair-to-pair?

Suggested remedy:
Clarify.

Editor's Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.3.3, Page: 30, Line: 39
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
The classification signatures appear to require a different input resistance than the the detection signature.

How does the PD know that classification is in progress so that it can change its behavior?

For instance, the class 4 limits require an impedance of about 400 ohms. Also, there for some of the classes, there is no resistance that will produce the current specified for the voltage range. For example, for class 4 at 15 volts one would need an impedance between 357 and 417 ohms but that will produce too much current for the class at 20 V.

Suggested remedy:
Clarify the behavior required by the PD to support classification.

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.3.5, Page: 31, Line: 35
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Use the name you gave the current Iport.

Suggested remedy:

Editor's Recommendation:

Comment TypeAPPROVE WITH COMMENT(Editorial), Clause:33, Subclause: 33.3.4, Page: 32, Line: 7
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Same comment as on table 5. The long notes reduce table readability.

Suggested remedy:
Rewrite long notes as subclauses of 33.3.4 and provide references in the table.

Editor’s Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.3.4, Page: 33, Line: 12
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
Same comment as on table 5 ripple and noise. Values do not appear to be compatible with the PMD noise specs.

Suggested remedy:
Make them compatible.

Editor’s Recommendation:

Comment TypeDISAPPROVE (Technical), Clause:33, Subclause: 33.4, Page: 35, Line: 3
Name:Thaler, Pat, Emailpat_thaler@agilent.com, Phone916-788-5662

Comment:
""shall apply"" should be ""apply"". Also, it is not clear what is meant by ""when specified the requirements shall apply only to the transmit and receive pairs"". That seems to mean ""If a requirement says it applies only to the transmit and receive pairs than it applies to only those pairs."" but that wouldn't be necessary to say. Also, please clarify whether transmit and receive means data transmit and receive or power transmit and receive.

Suggested remedy:
Make this say whatever was intended.

Editor’s Recommendation: