

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 00 SC FM P1 L37 # 185
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D EZ
change copyright variate & dates to 2025, editor should check globally
SuggestedRemedy
change copyright (variable and dates globally if hardcoded) to 2025.
Proposed Response Response Status W

CI 00 SC FM P3 L3 # 186
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D Editorial
abstract doesn't change the 10BASE-T1S physical layer.
SuggestedRemedy
suggest change "modifications to the 10BASE-T1S Physical Layer (including reconciliation sublayers), management..." to "modifications to enhance the 10 Mb/s shared-medium (multidrop) mode of the 10BASE-T1S Physical Layer in a new, multidrop-only physical layer specification. This includes reconciliation sublayers, management..."
Proposed Response Response Status W

CI 00 SC FM P3 L5 # 187
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D Editorial
There is no such thing as 10BASE-T1 - it shouldn't be a keyword
SuggestedRemedy
suggest delete 10BASE-T1 as a keyword.
Proposed Response Response Status W

CI 00 SC FM P1 L34 # 184
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D EZ
draft is for initial Working Group ballot - not Task Force review
SuggestedRemedy
Change "Task Force review" to "Recirculation Working Group Ballot" (which will be appropriate for 2.1)
Proposed Response Response Status W

CI 00 SC 0 P0 L0 # 271
Dawe, Piers Nvidia
Comment Type E Comment Status D EZ
pdf metadata says:
Title: IEEE P802.3xx name of Task Force
Author: IEEE P802.3xx Task Force
Subject: IEEE P802.3xx amendment
Keywords: P802.3xx,
SuggestedRemedy
Correct the metadata
Proposed Response Response Status W

CI 00 SC 0 P3 L1 # 303
Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
Comment Type E Comment Status X Front Matter
The text reads: "This amendment to Specifies additions and appropriate modification to the 10BASE-T1S Physical Layer". However, the 10BASE-T1S Physical Layer is specified within 147 which is only touched in the overview section. Instead of modifications to 10BASE-T1S, a new 10BASE-T1M Physical Layer is created.
SuggestedRemedy
This amendment to IEEE Std 802.3-2022 specifies additions and appropriate modifications to enhance 10 Mb/s half duplex multidrop Physical Layer (PHY) specifications ...
Proposed Response Response Status W

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CI 00 SC 0 P 8 L # 115

Lusted, Kent Independent

Comment Type E Comment Status D EZ

List of balloters is empty.

SuggestedRemedy

Add the list

Proposed Response Response Status W

CI 00 SC 0 P 42 L 6 # 203

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D EZ

Font size is larger in the Length and Format columns than others. This is not consistent with other clause 79 tables.

SuggestedRemedy

Change font size of the contents of the Length and Format Columns to be consistent with the rest of the table.

Proposed Response Response Status W

CI 00 SC Keywords P 3 L 8 # 273

Dawe, Piers Nvidia

Comment Type E Comment Status D EZ

physical layer

SuggestedRemedy

Physical Layer

Proposed Response Response Status W

CI 1 SC 1.4 P 22 L 4 # 266

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status D EZ

The subclause numbers in 1.4 don't match the numbers in 8023-2022, which is the most recent published version that all changes should apply to.

SuggestedRemedy

Correct both instructions and subclause numbers per the following:

change 1.4.63 to 1.4.59

change 1.4.427 to 1.4.405

change 1.4.433 to 1.4.411

change 1.4.582 to 1.4.558

Proposed Response Response Status W

CI 1 SC 1.4 P 22 L 10 # 146

Baggett, Tim Microchip

Comment Type E Comment Status D Front Matter

Definition 1.4.206 BASE-T1 definition to include 10BASE-T1M, clause 188.

SuggestedRemedy

Insert following text into draft. **insert** --delete--

/Change 1.4.206 as follows:/

1.4.206 BASE-T1: PHYs that belong to the set of specific Ethernet PCS/PMA/PMDs that operate on a single twisted-pair copper cable, including 10BASE-T1L, 10BASE-T1S, **10BASE-T1M,** 100BASE-T1, and 1000BASE-T1. (See IEEE Std 802.3, Clause 96, Clause 97, Clause 146, --and-- Clause 147**, and Clause 188**.)

Proposed Response Response Status W

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CI 1 SC 1.4.63a P 22 L 7 # 188

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type TR Comment Status D Naming

I have found that 10BASE-T1M gets confused in the industry as a totally new phy, with "10BASE-T1S" being short-reach, T1L being long reach, and T1M, instead of being "M" for "multidrop", MEDIUM reach... I suggest a better naming would be the relationship between 10BASE-T and 10BASE-Te, where the only real difference is the PMD/media spec. Therefore, I would suggest a global change to 10BASE-T1Sm or perhaps 10BASE-T1Se. indicating that it is the same PHY with some restriction.

Definition should parallel how 10BASE-Te relates to 10BASE-T and reference the 10BASE-T1S PHY. (SUBTYPE_MASTER_COMMENT)

SuggestedRemedy

Globally change references to 10BASE-T1M to 10BASE-T1Sm.
change references 10BASE-T1M / 10BASE-T1S to 10BASE-T1S / T1Sm
Change definition to read "IEEE 802.3 Physical Layer specification for a version of 10BASE-T1S supporting only the multidrop mode of operation (with an enhanced mixing segment specification) for a 10 Mb/s Ethernet local area network using a single balanced pair of conductors as a shared medium. (See IEEE Std 802.3, Clause 188.)"

Proposed Response Response Status W

CI 1 SC 1.4.127b P 22 L 18 # 189

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D Editorial

A reference to clause 189, similar to those on the definition of MPD and MPSE would be useful here.

SuggestedRemedy

Add "(see IEEE Std 802.3, Clause 189)." to the end of the definition for the MPI. (Clause 189 is a cross ref)

Proposed Response Response Status W

CI 1 SC 1.4.206 P 22 L 10 # 147

Baggett, Tim Microchip

Comment Type E Comment Status D Front Matter

Even before adding 10BASE-T1M to the 1.4.206 BASE-T1 definition and to the draft, we have a problem. The definition specifies "single twisted-pair copper cable". This is not true for 10BASE-T1L, 10BASE-T1S, and 10BASE-T1M which are defined to operate over a "balanced pair of conductors" which could be ribbon cable, twinax, or PCB differential traces in addition to single twisted-pair cable".

SuggestedRemedy

In 1.4.206, change "single twisted-pair copper cable" to "single pair of conductors".

Proposed Response Response Status W

CI 1 SC 1.4.427c P 22 L 21 # 47

Ran, Adeo Cisco

Comment Type T Comment Status D MPSE

"A device that provides power to a mixing segment which may also carry data"

The definition is ambiguous: is it the device that may also carry data or the mixing segment?

My guess is that it is the mixing segment - but why is it necessary to state in this definition that a mixing segment can carry data?

SuggestedRemedy

Delete "which may also carry data".

Proposed Response Response Status W

CI 1 SC 1.4.433 P 22 L 25 # 267

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status D EZ

The term being defined is supposed to be in bold print.

SuggestedRemedy

BOLD "network interface device (NID)"

Proposed Response Response Status W

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CI 1 SC 1.4.582a P 22 L 28 # 48

Ran, Adeo Cisco

Comment Type T Comment Status D MDI

The definition of TCI makes it an instance of MDI. From the definition, it is unclear why a new term is used instead of just MDI. But the description in 188.9 and Figure 188-18 suggests that it is quite different from an MDI.

Based on the text in 188.9 the definition would better be "The interface of the Clause 188 PHY to the mixing segment" or something similar.

A reference to clause 188 would be helpful (especially after this amendment is integrated into the next revision).

SuggestedRemedy

Change the definition to "An interface of a 10BASE-T1M PHY to a mixing segment (see Clause 188)" or something similar.

Proposed Response Response Status W

CI 1 SC 1.4.582a P 22 L 30 # 190

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D Editorial

A reference to clause 188, similar to those on the definition of 10BASE-T1M, MPD, and MPSE would be useful here.

SuggestedRemedy

Add "(see IEEE Std 802.3, Clause 188)." to the end of the definition for the TCI. (Clause 188 is a cross ref)

Proposed Response Response Status W

CI 22 SC 22 L 2 P 23 # 49

Ran, Adeo Cisco

Comment Type E Comment Status D MII

If Clause 22 is opened for editing it would be good to correct the title to include GMII and to differentiate it from other clauses that define Reconciliation Sublayer, such as clause 46, 81, etc.

SuggestedRemedy

Change the title to "Reconciliation Sublayer (RS) and Media Independent Interface for 10 and 100 Megabit (MII) and 1 Gigabit (GMII) ".

Proposed Response Response Status W

CI 22 SC 22.1 P 23 L 17 # 238

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D Editorial

white outline box around the text "RECONCILIATION" in the left hand column (MII/PLS/AUI...)

SuggestedRemedy

delete the box, basically copy the right hand RECONCILIATION box.

Proposed Response Response Status W

CI 22 SC 22.1 P 23 L 30 # 50

Ran, Adeo Cisco

Comment Type E Comment Status D Editorial

The new NOTE should be underlined

SuggestedRemedy

Per comment

Proposed Response Response Status W

CI 22 SC 22.1 P 23 L 31 # 281

Dawe, Piers Nvidia

Comment Type E Comment Status D Editorial

If the NOTE is new

SuggestedRemedy

it should be underlined

Proposed Response Response Status W

CI 22 SC 22.1 P 23 L 34 # 51

Ran, Adeo Cisco

Comment Type E Comment Status D MII

The title of Figure 22-1 should include both MII and GMII.

SuggestedRemedy

Change "MII" to "MII and GMII".

Proposed Response Response Status W

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 22
SC 22.1

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CI 30 SC 30.2.5 P 24 L 22 # 239
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D EZ
Table 30-11, left margin has double lines the first three entries
SuggestedRemedy
make them single lines like the rest of the table.
Proposed Response Response Status W

CI 30 SC 30.2.5 P 24 L 22 # 191
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D EZ
Why are there double horizontal lines in the first column above the first 3 table rows (these rows are together)
SuggestedRemedy
Change double horizontal lines in the first column to single lines ...
Proposed Response Response Status W

CI 30 SC 30.3.2 P 24 L 36 # 192
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type TR Comment Status D Naming
If the construct for 10BASE-T1M to become 10BASE-T1Sm (a variant of 10BASE-T1S) is accepted, then, following the usage for 10BASE-T vs 10BASE-Te, there is no need for separate PhyType and MauType - you just use 10BASE-T1S. (SUBTYPE)
SuggestedRemedy
Delete 30.3.2 and subclauses. (P24 L36-54)
Proposed Response Response Status W

CI 30 SC 30.6 P 25 L 14 # 193
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type TR Comment Status D Management
No autonegotiation is defined for multidrop - hence addition of 10BASE-T1M to auto-negotiation management is inappropriate.
SuggestedRemedy
Delete 30.6 and subclauses (P25 L144-26)
Proposed Response Response Status W

CI 30 SC 30.6 P 25 L 20 # 52
Ran, Adeo Cisco
Comment Type TR Comment Status D Management
188.1.1 says that Auto-negotiation is not available for 10GBASE-T1M. So why does this subclause need to be changed to add 10BASE-T1M?
SuggestedRemedy
Delete 30.6 and its subclauses.
Proposed Response Response Status W

CI 30 SC 30.6.1.1.5 P 25 L 26 # 42
Jones, Peter Cisco Systems
Comment Type TR Comment Status D Management
Since T1M doesn't do autoneg, I don't understand why we should add a aAutoNegLocalTechnologyAbility for it.
SuggestedRemedy
remove 30.6.1.1.5 aAutoNegLocalTechnologyAbility
Proposed Response Response Status W

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CI 30 SC 30.16.1.1.3 P 25 L 40 # 318
Law, David HPE
Comment Type T Comment Status D Management
Since subclause 30.16.1.1.3 defines the aPLCANodeCount attribute, it seems it should map to the plca_node_count variable rather than the local_nodeID variable as stated. In addition, this is an attribute, not a parameter.
SuggestedRemedy
Suggest that the text 'This parameter maps to the local_nodeID variable in 148.4.4.2.' is changed to read 'This attribute maps to the plca_node_count variable in 148.4.4.2.'
Proposed Response Response Status W

CI 30 SC 30.16.1.1.4 P 25 L 47 # 319
Law, David HPE
Comment Type T Comment Status D Management
Since subclause 30.16.1.1.4 defines the aPLCALocalNodeIDattribute, it seems it should map to the local_nodeID variable rather than the plca_node_count variable as stated. In addition, this is an attribute, not a parameter.
SuggestedRemedy
Suggest the text 'This parameter maps to the plca_node_count variable in 148.4.4.2.' is changed to read 'This attribute maps to the local_nodeID variable in 148.4.4.2.'
Proposed Response Response Status W

CI 30 SC 30.16.1.1.13 P 27 L 16 # 124
Huber, Thomas Nokia
Comment Type E Comment Status D EZ
Since the enumerated values are TRUE and FALSE, why not make the syntax BOOLEAN?
SuggestedRemedy
Change Appropriate Syntax to BOOLEAN
Proposed Response Response Status W

CI 30 SC 30.16.1.1.14 P 27 L 27 # 125
Huber, Thomas Nokia
Comment Type E Comment Status D EZ
Since the enumerated values are TRUE and FALSE, why not make the syntax BOOLEAN?
SuggestedRemedy
Change Appropriate Syntax to BOOLEAN
Proposed Response Response Status W

CI 30 SC 30.17.1.1.1 P 28 L 21 # 43
Jones, Peter Cisco Systems
Comment Type T Comment Status D Management
The attribute is named aMPSEAdminState but is described as " operational state". It's either operational or administrative.
SuggestedRemedy
replace
"A read-only value that identifies the operational state of the MPSE function"
with
"A read-only value that identifies the administrative state of the MPSE function."
Proposed Response Response Status W

CI 30 SC 30.17.1.1.2 P 28 L 41 # 44
Jones, Peter Cisco Systems
Comment Type TR Comment Status X Management
In aMPSEPowerState, the mappings from the states to the enums are not obvious, e.g., what does HIGH_MARK map to. We need to define the mappings, here is probably the best place.
SuggestedRemedy
Create a mapping table either here or in 189.4.4.5 that defines how these values are mapped.
Proposed Response Response Status O

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CI 30 SC 30.17.1.1.3 P 28 L 50 # 194

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type T Comment Status D Management

the aMPSETypeDiscovery enumerated values miss the case where type "mixed" MPDs are discovered... they just have the case where Both type 0 and type 1 MPDs have been discovered. This case should also include type "mixed" discovered, as listed in 30.17.2.1.1 (as well as in clause 189)

SuggestedRemedy

Change description of "mixed" to read "Type Mixed, or a mixture of MPD Types"

Proposed Response Response Status W

CI 30 SC 30.17.1.1.3 P 28 L 52 # 53

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

Missing space "in189.4.6"

SuggestedRemedy

Insert space

Proposed Response Response Status W

CI 30 SC 30.17.1.1.3 P 28 L 53 # 45

Jones, Peter Cisco Systems

Comment Type TR Comment Status D EZ

The reference for aMPSETypeDiscovery is wrong.

SuggestedRemedy

replace
"MPD(s) as specified in189.4.6.;"
with
"MPD(s) as specified in 189.3.;"

Proposed Response Response Status W

CI 30 SC 30.17.1.1.3 P 28 L 53 # 195

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D EZ

189.4.6 is the wrong cross reference for MPD types. 189.5.1 lists MPD types

SuggestedRemedy

Change cross-reference to 189.5.1 and put space prior to cross-reference.

Proposed Response Response Status W

CI 30 SC 30.17.1.1.4 P 29 L 8 # 240

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D EZ

"...to the POWER_ON state in from the MPI..." extra word "in" in the sentence.

SuggestedRemedy

Delete "in", making it "...to the POWER_ON state from the MPI..."

Proposed Response Response Status W

CI 30 SC 30.17.1.1.4 P 29 L 8 # 3

Jones, Peter Cisco Systems

Comment Type E Comment Status D EZ

aMPSEPoweringCounter is described as
"This counter is incremented when the MPSE transitions to the POWER_ON state in from the MPI as specified in Figure 189-4.;"
"transitions to the POWER_ON state in from the MPI" doesn't make sense.

SuggestedRemedy

Fix description.

Proposed Response Response Status W

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CI 30 SC 30.17.1.1.4 P 29 L 8 # 46
Jones, Peter Cisco Systems
Comment Type TR Comment Status X Management
aMPSEPoweringCounter is described as
"This counter is incremented when the MPSE transitions to the POWER_ON state in from the MPI as specified in Figure 189-4.;"
I think the counter variable and it's update should be part of the state machine.
SuggestedRemedy
For this and similar counters, e.g. aMPSEShortCircuitCounter, define a counter variable and show the increment in the state machine.
Proposed Response Response Status O

CI 30 SC 30.17.1.1.5 P 29 L 18 # 196
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type T Comment Status D EZ
189.4.9 is short circuit current, 189.4.8 is overload....
SuggestedRemedy
Change 189.4.9 cross-ref to point to 189.4.8
Proposed Response Response Status W

CI 30 SC 30.17.1.1.6 P 29 L 28 # 197
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type T Comment Status D EZ
189.4.10 is the power removal section, 189.4.9 is short circuit
SuggestedRemedy
Change 189.4.10 cross-ref to point to 189.4.9
Proposed Response Response Status W

CI 30 SC 30.17.1.1.7 P 29 L 39 # 4
Jones, Peter Cisco Systems
Comment Type TR Comment Status D Management
the description for aMPSEActualPower says:
"The sampling frequency and averaging is vendor-defined."
If this is relevant to the consumer of clause 30, we need to report what it is. If they don't care, then we should remove this.
SuggestedRemedy
Remove "The sampling frequency and averaging is vendor-defined." from the description.
Proposed Response Response Status W

CI 30 SC 30.17.1.1.7 P 29 L 39 # 257
Wienckowski, Natalie IVN Solutions LLC
Comment Type E Comment Status D Management
subject/verb agreement
SuggestedRemedy
change: frequency and averaging is vendor-defined
to: frequency and averaging are vendor-defined
Proposed Response Response Status W

CI 30 SC 30.17.1.1.8 P 29 L 48 # 241
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D EZ
"...aMPSEActualPower in \pm milliwatts.;" extraneous character in the text.
SuggestedRemedy
delete " \pm "
Proposed Response Response Status W

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CI 30 SC 30.17.1.1.8 P 29 L 48 # 5

Jones, Peter Cisco Systems

Comment Type T Comment Status X Management

The description for aMPSEPowerAccuracy includes
"indicating the accuracy associated with aMPSEActualPower"
I'm wondering if we need to say anything about how this is determined?

SuggestedRemedy

Consider adding text described how power accuracy can be assessed.

Proposed Response Response Status O

CI 30 SC 30.17.1.1.8 P 29 L 48 # 54

Ran, Adeo Cisco

Comment Type T Comment Status D EZ

"the accuracy associated with aMPSEActualPower in \pm milliwatts" - it is unclear what "in \pm milliwatts" means.
The suggested remedy is my interpretation.

Also applies in 30.17.2.1.9.

SuggestedRemedy

Change "in \pm milliwatts" to "in milliwatts (e.g., a value of 1 means \pm 1 mW).

Apply similar changes in 30.17.2.1.9.

Proposed Response Response Status W

CI 30 SC 30.17.1.1.9 P 30 L 8 # 6

Jones, Peter Cisco Systems

Comment Type T Comment Status X Management

aMPSECumulativeEnergy is described as
"A count of the cumulative energy supplied by the MPSE as measured at the MDI in kilojoules."
Do we need to say anything about how this is measured?

SuggestedRemedy

Consider adding text described how power measurement can be done..

Proposed Response Response Status O

CI 30 SC 30.17.1.2.1 P 30 L 18 # 198

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D Editorial

"This action provides a means to alter 189.4.4.2 mpse_enable.;" seems like this got editorially jumbled...

SuggestedRemedy

Change to read: "This action provides a means to alter mpse_enable as specified in 189.4.4.2.;"

Proposed Response Response Status W

CI 30 SC 30.17.1.2.1 P 30 L 19 # 7

Jones, Peter Cisco Systems

Comment Type E Comment Status D Editorial

acMPSEAdminControl is described as
"This action provides a means to alter 189.4.4.2 mpse_enable.;"
A little more description would be useful.

SuggestedRemedy

replace
"This action provides a means to alter 189.4.4.2 mpse_enable.;"
with
"This action provides a means to alter 189.4.4.2 mpse_enable and the change is reflected in aMPSEAdminState".;

Proposed Response Response Status W

CI 30 SC 30.17.2.1.2 P 30 L 47 # 8

Jones, Peter Cisco Systems

Comment Type E Comment Status D Editorial

the aMPDAdminState description includes the following:
"A read-only value that identifies the operational state of the MPD functions"
"The operational state of the MPD function"
It's either operational or administrative.

SuggestedRemedy

replace both instances of
"operational state "
with
"administrative state."

Proposed Response Response Status W

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CI 30 **SC 30.17.2.1.2** **P 30** **L 48** # **55**

Ran, Adeel Cisco

Comment Type E **Comment Status X** **Management**

"An interface which can provide the MPD functions specified in Clause 189 will be enabled to do so when this attribute has the enumeration "enabled"."

The word "will" is deprecated and its usage here suggests (incorrectly) that the enumeration controls the enablement.

SuggestedRemedy

Change the quoted sentence and the one that follows (which is about "disabled") to:
"An interface that supports the MPD functions specified in Clause 189 indicates that these functions are available when this attribute has the enumeration "enabled" and that these functions are not available when this attribute has the enumeration "disabled"."

Proposed Response **Response Status O**

CI 30 **SC 30.17.2.1.3** **P 31** **L** # **201**

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type T **Comment Status D** **Management**

The states listed for the MPD power state are not consistent with the state diagram, more explanation is needed - identifying state names with the descriptions .

SuggestedRemedy

change idle description to "MPD idle (PON_NO_POWER state)"
change discovery description to "MPD discovery (DO_MARKn, DO_DISCOVERYn, and DISCOVERY_LOW_TYPE_x, states)"

and change powered description to "MPD powered (PON_EVAL, INRUSH, or PON_LOAD_ON states)".

Proposed Response **Response Status W**

CI 30 **SC 30.17.2.1.3** **P 31** **L 13** # **9**

Jones, Peter Cisco Systems

Comment Type TR **Comment Status X** **Management**

In aMPDPowerState, the mappings from the states to the enums are not obvious, e.g., what does PON_EVAL map to. We need to define the mappings, here is probably the best place.

SuggestedRemedy

Create a mapping table either here or in 189.5.3.5 that defines how these values are mapped.

Proposed Response **Response Status O**

CI 30 **SC 30.17.2.1.4** **P 31** **L 22** # **199**

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E **Comment Status D** **EZ**

DO_MARK1 is in Figure 189-6, not 189-8. (189-6 is part a of the state diagram and 189-8 is part c...)

SuggestedRemedy

Change cross-refernece to Figure 189-6

Proposed Response **Response Status W**

CI 30 **SC 30.17.2.1.4** **P 31** **L 22** # **10**

Jones, Peter Cisco Systems

Comment Type TR **Comment Status X** **Management**

aMPDDiscoveryCounter is described as
"This counter is incremented when the MPD enters the DO_MARK1 state in Figure 189-8.;"
I think the counter variable and it's update should be part of the state machine.

SuggestedRemedy

For this and similar counters, e.g. aMPDMismatchCounter , define a counter variable and show the increment in the state machine.

Proposed Response **Response Status O**

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CI 30 SC 30.17.2.1.5 P 31 L 31 # 200
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type T Comment Status D Editorial
There is no longer any PON_MISMATCHED_TYPE state. It has been replaced by
present_mismatch_indicator being set to true.
SuggestedRemedy
Change "enters the PON_MISMATCHED_TYPE state" with "present_mismatch_indication is
set to true"
Proposed Response Response Status W

CI 30 SC 30.17.2.1.8 P 32 L 1 # 242
Jones, Chad Cisco Systems, Inc.
Comment Type ER Comment Status D Management
aMPDActualPower - this requires a PD to measure its power, this is a big requirement to
place on some of the PDs targeted by this standard. I see we say the PD reports 0 if the MPI
is not powered. What does an MPD report if it doesn't support power measurement?
SuggestedRemedy
Add a value that designates that the MPD doesn't support this feature.
"An MPD that does not support measuring MPI power reports 1 mW."
Proposed Response Response Status W

CI 30 SC 30.17.2.1.8 P 32 L 9 # 11
Jones, Peter Cisco Systems
Comment Type TR Comment Status D Management
the description for aMPDActualPower says:
"The sampling frequency and averaging is vendor-defined."
If this is relevant to the consumer of clause 30, we need to report what it is. If they don't care,
then we should remove this.
SuggestedRemedy
Remove "The sampling frequency and averaging is vendor-defined." from the description.
Proposed Response Response Status W

CI 30 SC 30.17.2.1.8 P 32 L 10 # 258
Wienckowski, Natalie IVN Solutions LLC
Comment Type E Comment Status D Management
subject/verb agreement
SuggestedRemedy
change: frequency and averaging is vendor-defined
to: frequency and averaging are vendor-defined
Proposed Response Response Status W

CI 30 SC 30.17.2.1.9 P 32 L 19 # 12
Jones, Peter Cisco Systems
Comment Type T Comment Status X Management
The description for aMPDPowerAccuracy includes
"indicating the accuracy associated with aMPDActualPower"
I'm wondering if we need to say anything about how this is determined?
SuggestedRemedy
Consider adding text described how power accuracy can be assessed.
Proposed Response Response Status O

CI 30 SC 30.17.2.1.9 P 32 L 19 # 243
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D EZ
"...aMPDActualPower in \pm milliwatts.;" extraneous character in the text.
SuggestedRemedy
delete " \pm "
Proposed Response Response Status W

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Cl 30 SC 30.17.2.2.1 P 32 L 35 # 244
Jones, Chad Cisco Systems, Inc.
Comment Type ER Comment Status D Editorial
"APPROPRIATE SYNTAX: Same as aMPDAdminState" - why make a reader page back to see what this is? Make it easy, cut and paste it here, we aren't trying to optimize the number of bits required to display the standard.
SuggestedRemedy
Here's the text from aMPDAdminState that should be copied in:
An ENUMERATED VALUE that has one of the following entries:
enabled MPD functions enabled
disabled MPD functions disabled
Proposed Response Response Status W

Cl 30 SC 30.17.2.2.1 P 32 L 38 # 13
Jones, Peter Cisco Systems
Comment Type E Comment Status X Management
the acMPDAdminControl description includes
"This action provides a means to alter 189.5.3.3 mpd_reset and dte_power_required. A "disabled" to "enabled" transition"
to "disabled"
A little more description would be useful, as would breaking up the paragraph
SuggestedRemedy
replace
"This action provides a means to alter 189.5.3.3 mpd_reset and dte_power_required. A "disabled"....."
with
"This action provides a means to alter 189.5.3.3 mpd_reset and dte_power_required, and the change is reflected in aMPDAdminState.
A "disabled"....."
Proposed Response Response Status W

Cl 45 SC 45.2.1.16 P 33 L 32 # 202
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type T Comment Status D Naming
If the construct for 10BASE-T1M to become 10BASE-T1Sm (a variant of 10BASE-T1S) is accepted, then, following the usage for 10BASE-T vs 10BASE-Te, there is no need for new identification of 10BASE-T1M in the extended ability register, or the PMA/PMD control register. (SUBTYPE)
SuggestedRemedy
Delete 44.2.1.16 and 45.2.1.214 from the draft (P33 L21-54)
Proposed Response Response Status W

Cl 45 SC 45.2.1.234 P 35 L 5 # 179
Maguire, Valerie Copperopolis; aff'l w/ CME Consulting and Cisco
Comment Type E Comment Status D EZ
This clause is an example where center justifying the paragraph causes non-uniform spacing for the phrase "10BASE-T1M / 10BASE-T1S"
SuggestedRemedy
Globally insert non-breaking spaces between "10BASE-T1M" and the "/" and between the "/" and "10BASE-T1S".
Proposed Response Response Status W

Cl 45 SC 45.2.1.234.3 P 35 L 42 # 14
Jones, Peter Cisco Systems
Comment Type TR Comment Status X Management
I think its odd to have low-power mode defined only in clause 145.
I think it should be mentioned in clause 188, and there probably should be a PICS.
SuggestedRemedy
Specify low-power mode in clause 188 or remove T1M from 45.2.1.234.3/45.2.1.235.2
Proposed Response Response Status O

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CI 45 SC 45.2.1.235.4 P 37 L 4 # 15

Jones, Peter Cisco Systems

Comment Type TR Comment Status X Management

In the description of 45.2.1.235.4 Receive fault ability it says
When read as a one, bit 1.2298.9 indicates that the 10BASE-T1M / 10BASE-T1S PMA has
the ability to detect a fault condition on the receive path.
I don't see anything in 188.5 that describes how to detect a fault condition.

SuggestedRemedy

Either add text to 188.5 describing how to detect a fault condition, or remove T1M from
45.2.1.235.4/5.

Proposed Response Response Status O

CI 45 SC 45.2.1.236 P 37 L 22 # 56

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

Missing dash in "10BASET1S"

SuggestedRemedy

Insert a dash

Proposed Response Response Status W

CI 45 SC 45.2.1.236 P 37 L 24 # 16

Jones, Peter Cisco Systems

Comment Type TR Comment Status X Editorial

The bit descriptions for "10BASE-T1M / 10BASET1S test mode control register" just identify
a "Test mode 4", but don't say what it does.

SuggestedRemedy

Add text from "188.6.2 Test modes" saying what the tests do, or add a cross reference to
188.6.2.

Proposed Response Response Status O

CI 45 SC 45.2.1.236 P 37 L 29 # 57

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

Missing 10 in "BASE-T1S"

SuggestedRemedy

Insert "10"

Proposed Response Response Status W

CI 45 SC 45.2.3 P 37 L 44 # 126

Huber, Thomas Nokia

Comment Type E Comment Status D EZ

In all the changed register names, 10BASE=T1S should be 10BASE-T1S, and there should
be a space after the /

SuggestedRemedy

Add a space after the / and change = to - (in all 4 rows)

Proposed Response Response Status W

CI 45 SC 45.2.3 P 37 L 48 # 58

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

"=" should be "-", multiple instances in Table 45-233

SuggestedRemedy

Change per comment

Proposed Response Response Status W

CI 45 SC 45.2.3.72.3 P 39 L 5 # 127

Huber, Thomas Nokia

Comment Type E Comment Status D EZ

Stray space in 10BASE- T1M

SuggestedRemedy

Delete the space after the hyphen

Proposed Response Response Status W

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 45
SC 45.2.3.72.3

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CI 45 SC 45.2.3.73.1 P 39 L 28 # 17

Jones, Peter Cisco Systems

Comment Type TR Comment Status X Management

The text for "45.2.3.73.1 Fault" includes
"the 10BASE-T1M / 10BASE-T1S PCS has detected a fault condition on either the transmit
or receive path."
I don't see anything in clause 188 that defines what a fault condition is and how to detect it.

SuggestedRemedy

Either add text to 188.5 describing how to detect a fault condition, or remove T1M from
45.2.3.73.1.

Proposed Response Response Status O

CI 45 SC 45.2.3.73.2 P 39 L 40 # 59

Ran, Adeel Cisco

Comment Type T Comment Status D Full Duplex

"10BASE-T1M PHYs do not have full duplex capability." = but this subclause is about the
register, not about the capability; it is not stated what the register reads in this case..

SuggestedRemedy

Change the quoted sentence to "For 10BASE-T1M PHYs this bit always reads as a zero"..

Proposed Response Response Status W

CI 45 SC 45.2.3.74 P 40 L 10 # 18

Jones, Peter Cisco Systems

Comment Type TR Comment Status X Editorial

The register bit definitions say
"16-bit field counting the number of remote jabber errors received since last read of this
register".
I think this needs a cross reference to where remote jabber errors are specified in clause 188
for T1M, and clause 147 to T1S

SuggestedRemedy

Add cross references in table or in text above.

Proposed Response Response Status O

CI 45 SC 45.2.3.75 P 40 L 27 # 19

Jones, Peter Cisco Systems

Comment Type TR Comment Status X Management

The table of bit definitions for "10BASE-T1M / 10BASE-T1S PCS diagnostic 2 " contains
'CorruptedTxCnt', but I don't see any text defining what this is and how it's counted.

SuggestedRemedy

Either add text to 188 to specify How to count it, or remove T1M from 45.2.3.75

Proposed Response Response Status O

CI 45 SC 45.3.72.3 P 39 L 5 # 259

Wienckowski, Natalie IVN Solutions LLC

Comment Type E Comment Status D EZ

extra space

SuggestedRemedy

change: 10BASE- T1M PCS
to: 10BASE-T1M PCS

Proposed Response Response Status W

CI 78 SC 78.3 P 41 L 17 # 122

Jones, Peter Cisco Systems

Comment Type TR Comment Status D New Feature

It's been assumed the MPoE will provide the equivalent function to the "Power via MDI
Measurements TLV" defined for 4 pair PoE, but we have not specified this in the draft.

SuggestedRemedy

Implement proposal to be submitted at least one week before January interim

Proposed Response Response Status W

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CI 78 SC 78.3 P 41 L 17 # 121
Jones, Peter Cisco Systems
Comment Type TR Comment Status D New Feature
It's always been assumed the MPoE will use LLDP to exchange status and negotiate power for MPoE, but we have not specified this in the draft.
SuggestedRemedy
Implement proposal to be submitted at least one week before January interim
Proposed Response Response Status W

CI 79 SC 79.3.9.3 P 41 L 6 # 284
Dawe, Piers Nvidia
Comment Type E Comment Status D EZ
Uneven font size
SuggestedRemedy
Remove formatting overrides
Proposed Response Response Status W

CI 79 SC 79.3.9.3 P 41 L 48 # 60
Ran, Adeo Cisco
Comment Type E Comment Status D LLDP
This subclause is titled "PLCA TLV usage rules" but it does not contain any rules - only recommendations.
SuggestedRemedy
Change the title to "PLCA TLV usage".
Proposed Response Response Status W

CI 79 SC 79.3.9.3 P 41 L 52 # 128
Huber, Thomas Nokia
Comment Type T Comment Status D LLDP
The last sentence of the paragraph seems out of place. It is unclear what "this field" is. The subclause is about TLV usage rules, not a field within the TLV.
SuggestedRemedy
Name the field that has the value 255, or move the sentence to the appropriate subclause if it belongs somewhere else.
Proposed Response Response Status W

CI 79 SC 79.3.9.3 P 41 L 52 # 282
Dawe, Piers Nvidia
Comment Type T Comment Status X LLDP
"this field reports 255", but this subclause is about a TLV not a field.
SuggestedRemedy
If you mean the PLCA nodeId field, say so, and move the sentence to the relevant subclause, 79.3.9.2.
Proposed Response Response Status O

CI 79 SC 79.3.9.3 P 41 L 52 # 61
Ran, Adeo Cisco
Comment Type TR Comment Status D LLDP
"If PLCA is not enabled, this field reports 255"
Which field? The subclauses title is "PLCA TLV usage rules" and it does not mention any specific field.
SuggestedRemedy
Clarify or delete this sentence.
Proposed Response Response Status W

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Cl 79 **SC 79.3.9.3** **P 41** **L 52** # **283**

Dawe, Piers

Nvidia

Comment Type **T** **Comment Status** **X** **PLCA**

"If PLCA is not enabled, this field reports 255": it is not clear what "not enabled" means here. Presumably not supported is not enabled, and according to 148.4.6.1, INACTIVE or FAIL would be disabled. Also, if PLCA is not enabled, it seems strange that a PLCA TLV would be sent at all.

SuggestedRemedy

If a station without PLCA or with it not enabled would not send a PLCA TLV, delete the sentence. If it would, explain, and tie the language to that in Clause 148.

Proposed Response **Response Status** **O**

Cl 79 **SC 79.3.9.3** **P 42** **L 6** # **285**

Dawe, Piers

Nvidia

Comment Type **T** **Comment Status** **X** **Management**

This is normative behaviour, so the references should go to normative material, not auxiliary material such as Management.

SuggestedRemedy

In the Notes column, add or change the references to refer to the relevant places in 148.

Proposed Response **Response Status** **O**

Cl 79 **SC 79.3.9.3** **P 42** **L 8** # **286**

Dawe, Piers

Nvidia

Comment Type **T** **Comment Status** **D** **LLDP**

TRUE or FALSE doesn't make sense for a status. 30.16.1.1.2 (too arcane) says that aPLCAStatus indicates whether PLCA Control state diagram is receiving BEACON indication or transmitting BEACON request, but then it refers to 148.4.6.2 where the values are OK or FAIL, which is more understandable.

SuggestedRemedy

Refer to 148.4.6.2 and change TRUE and FALSE to OK and FAIL.
30.16.1.1.2 could be improved sometime, but that's maintenance.

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

Cl 79 **SC 79.5.1** **P 43** **L 30** # **287**

Dawe, Piers

Nvidia

Comment Type **T** **Comment Status** **X** **LLDP**

79.3.9.3 says should not shall, so it's not a requirement, and a PICS is not appropriate

SuggestedRemedy

Delete PICS PLC3 or change should to shall in 79.3.9.3

Proposed Response **Response Status** **O**

Cl 79 **SC 79.5.13** **P 43** **L 30** # **62**

Ran, Adeo

Cisco

Comment Type **TR** **Comment Status** **D** **LLDP**

"PLCA support/status TLV should contain no more than one PLCA TLV" is a recommendation, not an option. Recommendations typically don't have PICS items. It is unclear why this is not a mandatory requirement (what usage model has more than one TLV) and assuming it's optional, is it important that an implementation reports whether it sends more than one?

SuggestedRemedy

Delete PICS item PLC3, unless the "rule" is made mandatory.

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

Cl 79 **SC 79.5.13** **P 43** **L 30** # **129**

Huber, Thomas

Nokia

Comment Type **E** **Comment Status** **D** **EZ**

The comment for PLC3 should be talking about the LLDPDU rather than the PLCA TLV.

SuggestedRemedy

Change the comment to "LLDPDU should contain no more than one PLCA TLV":

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

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Cl 79 SC 79.5.13 P 43 L 30 # 20

Jones, Peter Cisco Systems

Comment Type TR Comment Status D EZ

The "Value/Comment" item for PLC3 in the PLCA TLV table (below) doesn't match many similar descriptions and doesn't make sense.

"PLCA support/status TLV should contain no more than one PLCA TLV"

SuggestedRemedy

replace
"PLCA support/status TLV should contain no more than one PLCA TLV"
with
"LLDPDU contains no more than one"

Proposed Response Response Status W

Cl 147 SC 147.1 P 45 L 10 # 63

Ran, Adeo Cisco

Comment Type TR Comment Status X Naming

The new paragraph inserted makes a statement about a PHY in another clause, which is unclear (what does "refined" mean?).

This statement is not required in clause 147 and is out of scope (the project is not intended to change the 10BASE-T1S PHYs). It is also repeated in 188.1, where it seems to belong.

SuggestedRemedy

Delete this statement (and the whole of clause 147).

Proposed Response Response Status W

Cl 147 SC 147.1 P 45 L 10 # 288

Dawe, Piers Nvidia

Comment Type T Comment Status X Naming

Specifications for one PHY are "refined" in the clause for another PHY. That's weird, and leaves the reader at a loss to know what to obey. Same problem in 188.1. It seems that 188 is complete, in that it does not rely on 147.

SuggestedRemedy

Change "refined" to "given", each time.

Proposed Response Response Status W

Cl 148 SC 148.2 P 46 L 13 # 289

Dawe, Piers Nvidia

Comment Type E Comment Status X Editorial

unique to

SuggestedRemedy

unique in

Proposed Response Response Status W

Cl 148 SC 148.2 P 46 L 15 # 204

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D D-PLCA

This is the first instance of "Dynamic PLCA" it seems appropriate to introduce the acronym D-PLCA here.

SuggestedRemedy

Change "Dynamic PLCA (see 148.4.7)" to "Dynamic PLCA (D-PLCA, see 148.4.7)"

Proposed Response Response Status W

Cl 148 SC 148.4.4 P 46 L 21 # 320

Law, David HPE

Comment Type T Comment Status X D-PLCA

It appears that the description in IEEE Std 802.3-2022 subclause 148.4.4.1 'PLCA Control state diagram' needs to be updated based on the addition of DPLCA to the PLCA Control state diagram. As an example, it appears that the second paragraph of subclause 148.4.4.1 reads, 'To achieve error free operation the PLCA node should be configured ...' and then says that 'Each local_nodeID is unique to the local collision domain.' needs to be updated to reflect that this is only the case for a node that does not support DPLCA or does, but does not have it enabled. As another example, it appears that the antepenultimate paragraph of subclause 148.4.4.1 starts 'When condition (2) occurs ...' should perhaps be updated to reflect that COMMIT is appended to transmissions if DPLCA is enabled.

SuggestedRemedy

Add IEEE Std 802.3-2022 subclause 148.4.4.1 'PLCA Control state diagram' to the draft and modify as required to account for the addition of DPLCA.

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

Cl 148

SC 148.4.4

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CI 148 SC 148.4.4.2 P 46 L 29 # 205
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D EZ
"Values:TRUE" lacks a space after the colon. This lack of space between the value and the description appears for every variable in 148.4.4.2, except dplca_txop_claim.
SuggestedRemedy
insert space after colon at P46 L29, L33, L48, L52, and P47 L3.
Proposed Response Response Status W

CI 148 SC 148.4.4.2 P 46 L 33 # 321
Law, David HPE
Comment Type TR Comment Status X D-PLCA
The definition of the dplca_en variable in subclause 148.4.4.2 says, 'This signal maps to TRUE when aDPLCAAdminState is enabled and to FALSE when aDPLCAAdminState is disabled.'. Since IEEE Std 802.3 subclause 30.1 'Overview' says, 'Implementation of part or all of Layer Management is not a requirement for conformance to any other clause of this standard.', the D-PLCA state diagram has to be able to operate in the absence of this attribute.
SuggestedRemedy
Suggest that the text 'This signal maps to TRUE when aDPLCAAdminState is enabled and to FALSE when aDPLCAAdminState is disabled.' be deleted.
Proposed Response Response Status O

CI 148 SC 148.4.4.2 P 47 L 3 # 150
Baggett, Tim Microchip
Comment Type T Comment Status X D-PLCA
The description for node count seems wrong in PLCA/DPLCA. The variable plca_node_count and attribute aPLCANodeCount in 30.16.1.1.3 describe it as "number of nodes getting a transmit opportunity before a new BEACON is generated". It essentially sets the number of transmit opportunities between BEACONS in the PLCA bus cycle.
dplca_txop_node_count is a copy of plca_node_count so it takes the same range.
A value of 0 currently is permitted, but according to the description this would allow for no transmit opportunities makes no sense. Instead a value of 0 yields one transmit opportunity between BEACONS. See exit from NEXT_TX_OPPORTUNITY to RESYNC via B in Figure 148-4.

Recommend to disallow the value of zero in these variables/attributes.
SuggestedRemedy
P47 L3 (dplca_txop_node_count)
Change: "Values: integer from 0 to 255"
To: "Values: integer from 1 to 255"
In Clause 148.4.4.2, change the valid values for plca_node_count from "0 to 255" to "1 to 255"
P25 L40 (30.16.1.1.3 aPLCANodeCount)
Change: "Valid range is 0 to 255, inclusive."
To: "Valid range is 1 to 255, inclusive."

Proposed Response Response Status W

CI 148 SC 148.4.4.6 P 48 L 46 # 117
Huszak, Gergely Kone
Comment Type E Comment Status D Editorial
Non-elementary expressions shall be embraced in a pair of parentheses
SuggestedRemedy
Change "!CRS" to "(!CRS)" at exit from SYNCING, RECEIVE, and ABORT states (across 2 pages)
Proposed Response Response Status W

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CI 148 SC 148.4.4.6 P 49 L 30 # 206
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D State Diagrams
Transition from BURST back to TRANSMIT crosses over transition line from WAIT_TO to NEXT_TX_Opportunity and Transition from TRANSMIT to BURST, making it hard to follow.
SuggestedRemedy
Change transition out of Burst to TRANSMIT to go to a tag (I believe it would be E) , and have that tag be the entry to TRANSMIT.
Proposed Response Response Status W

CI 148 SC 148.4.4.6 P 49 L 33 # 322
Law, David HPE
Comment Type TR Comment Status X D-PLCA
The bc variable is defined as an integer from 0 to 255 (see subclause 148.4.4.2). The first action on entry to the BURST state in Figure 148-4 'PLCA Control state diagram' is to set bc to equal bc + 1. There is then an IF-THEN-ELSE statement that tests if bc > 0. If it is, the burst_timer is started (the THEN condition). If it isn't, the append_commit_timer is started (the ELSE condition).
The intent seems to be to append COMMIT after a packet transmission when bursting is not enabled. Since, however, bc is set to 0 in the COMMIT state and incremented on entry to the BURST state, the bc variable will always be > 0 when the IF-THEN-ELSE statement is reached. As a result, the THEN condition will always execute (start burst_timer), and the ELSE condition (start append_commit_timer) will never be reached.
What will happen is then deb=pendant on the setting of burst_timer when bursting isn't enabled. If it is set to zero, it appears that COMMIT will not be appended after a packet transmission. If it is set to the default of 128 bit times (see subclause 30.16.1.1.7), the appended COMMIT will be longer than the append_commit_timer duration of 22 bit times.

SuggestedRemedy

Proposed Response Response Status W

CI 148 SC 148.4.4.6 P 51 L 49 # 323
Law, David HPE
Comment Type TR Comment Status X D-PLCA
When Figure 148-4 'PLCA Control state diagram' enters the NEXT_TX_OPPORTUNITY state, it will set dplca_txop_claim to TRUE. Since the exit conditions from the NEXT_TX_OPPORTUNITY state are an equation and an ELSE, one of the two will be true. As a result, the state diagram will exit the NEXT_TX_OPPORTUNITY state immediately, either transitioning to the RESYNC or WAIT_TO state. If the nodeID is non-zero, the PLCA Control state diagram will immediately transition to the WAIT_TO state, where it sets dplca_txop_claim to NONE.

When dplca_aging is ON, the operation of the Figure 148-9 'D-PLCA Aging State Diagram' is controlled by the dplca_txop_end variable from the PLCA Control state diagram. When dplca_txop_end is set TRUE by the PLCA Control state diagram, the D-PLCA Aging State Diagram will immediately transition from the WAIT_TXOP_END state to the TXOP_END state. The actions in the TXOP_END state will execute instantaneously, and then the D-PLCA Aging State Diagram will transition immediately to the UPDATE_SOFT, NOTIFY or UPDATE_HARD state depending on the value of dplca_txop_claim.

As a result, there is a form of race condition between the variables set in the PLCA Control state diagram and their use in the D-PLCA Aging State Diagram. The PLCA Control state diagram sets the variable dplca_txop_claim to TRUE in the NEXT_TX_OPPORTUNITY state immediately followed by setting the dplca_txop_claim variable to NONE in the WAIT_TO state (in the cases where the nodeID is non-zero). The D-PLCA Aging State Diagram state diagram exits the WAIT_TXOP_END state due to dplca_txop_end being TRUE, executes the actions in the WAIT_TXOP_END state, and then transitions either to the UPDATE_SOFT, NOTIFY or UPDATE_HARD state depending on the value of dplca_txop_claim.

Since actions inside a state block execute instantaneously (IEEE Std 802.3-2022, subclause 21.5.1), and the PLCA Control state diagram will exit the NEXT_TX_OPPORTUNITY state immediately, it is not clear if the value of dplca_txop_claim will be tested by the D-PLCA Aging State Diagram before or after it is set to NONE by the PLCA Control state diagram. If it is after it is set to NONE by the PLCA Control state diagram, the D-PLCA Aging State Diagram will not operate correctly as it will never reach the UPDATE_SOFT or UPDATE_HARD states.

Suggest that the PLCA Control state diagram should not transition out of the NEXT_TX_OPPORTUNITY state until the D-PLCA Aging State Diagram has tested the value of dplca_txop_claim. This can be achieved by waiting in the NEXT_TX_OPPORTUNITY state until the dplca_txop_table_upd is set to TRUE in the NOTIFY state of the D-PLCA Aging State Diagram. This condition should be ignored when dplca_aging is OFF.

SuggestedRemedy

Suggest that:

[1] The transition condition for the transition from the NEXT_TX_OPPORTUNITY state to the RESYNC state in Figure 148-4 'PLCA Control state diagram, part b' is changed to:

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((local_nodeID = 0) * (curID >= plca_node_count)) + (curID = 255) * (dplca_txop_table_upd + dplca_aging = OFF)

[2] The transition condition for the transition from the NEXT_TX_OPPORTUNITY state to the WAIT_TO state in Figure 148–4 'PLCA Control state diagram, part b' is changed to:

((local_nodeID != 0) + (curID < plca_node_count)) * (curID != 255) * (dplca_txop_table_upd + dplca_aging = OFF)

Proposed Response Response Status **O**

CI 148 SC 148.4.5.7 P 51 L 51 # 118

Huszak, Gergely

Kone

Comment Type **E** Comment Status **D** Editorial

Non-elementary expressions shall be embraced in a pair of parentheses

SuggestedRemedy

Change "!plca_txen" to "(!plca_txen)" at exit from ABORT and COLLIDE states (across 2 pages)

Proposed Response Response Status **W**

CI 148 SC 148.4.7 P 53 L 3 # 290

Dawe, Piers

Nvidia

Comment Type **E** Comment Status **D** EZ

Dynamic (D-PLCA) - ungrammatical

SuggestedRemedy

Change to: Dynamic PLCA (D-PLCA)

Proposed Response Response Status **W**

CI 148 SC 148.4.7.1 P 53 L 5 # 324

Law, David

HPE

Comment Type **T** Comment Status **X** D-PLCA

While subclause 148.4.7.1 'D-PLCA state diagram overview' provides a high-level overview of the operation of DPLCA, it does not provide the level of detail offered by subclause 148.4.4.1 'PLCA Control state diagram', subclause 148.4.5.1 'PLCA Data state diagram' and subclause 148.4.6.1 'PLCA Status state diagram' regarding the operation of the respective state diagrams. While strictly speaking, only the normative requirements (in this case, the state diagram) is required, it is difficult to review the operation of the state diagram without the additional description.

SuggestedRemedy

Suggest that subclause 148.4.7.1 'D-PLCA state diagram overview' be updated to provide a high-level description of the operation of the state diagram.

Proposed Response Response Status **O**

CI 148 SC 148.4.7.1 P 53 L 12 # 325

Law, David

HPE

Comment Type **TR** Comment Status **D** Editorial

Subclause 148.4.7.1 'D-PLCA state diagram overview' says that 'D-PLCA adjusts aPLCANodeCount and aPLCALocalNodeID based on transmit opportunity claims ...'. aPLCANodeCount and aPLCALocalNodeID are, however, management attributes that reflect the values of the plca_node_count and local_nodeID variables, respectively. Since IEEE Std 802.3 subclause 30.1 'Overview' says, 'Implementation of part or all of Layer Management is not a requirement for conformance to any other clause of this standard.', the D-PLCA state diagram has to be able to operate in the absence of these attributes.

SuggestedRemedy

Suggest that the text 'D-PLCA adjusts aPLCANodeCount and aPLCALocalNodeID based on transmit opportunity claims ...' is changed to read 'D-PLCA adjusts plca_node_count and local_nodeID based on transmit opportunity claims ...'.

Proposed Response Response Status **W**

CI 148	SC 148.4.7.2	P 54	L 9	# 207
Zimmerman, George				
CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So				
Comment Type	T	Comment Status	D	D-PLCA
shouldn't hard_aging_cycles (and the associated soft_aging and counters) have a range?				
Not sure what it would be right now...				
SuggestedRemedy				
Consider ranges for aging cycles variables.				
Proposed Response		Response Status	W	

CI 148	SC 148.4.7.2	P 54	L 39	# 148
Baggett, Tim				
Microchip				
Comment Type	T	Comment Status	X	D-PLCA
There are only 255 usable transmit opportunities, 0->254. The local_nodeID value of 255 is reserved for PLCA disabled. This can be seen by the global transition into the DISABLE state of Figure 148-3 - PLCA Control state diagram. This global transition condition includes the term (local_nodeID=255). Also, the transition from NEXT_TX_OPPORTUNITY to RESYNC (via B) to transmit begin a new PLCA cycle occurs when curlD=255, after curlD was incremented in NEXT_TX_OPPORTUNITY. There is no Transmit Opportunity 255.				
A number of variables and functions need to be updated to reflect this.				
SuggestedRemedy				
P54 L39 (txop_claim_table)				
Change: "...claim state of the 256 transmit opportunities IDs."				
To: "...claim state of the 255 transmit opportunity IDs."				
P54 L51 (txop_claim_table)				
Change: "Array of 256 elements..."				
To: "Array of 255 elements..."				
P55 L14 (CLEAR_TXOP_TABLE)				
Change: "...all of the 256 elements..."				
To: "...all of the 255 elements..."				
P55 L19 (HARD_CLAIMING)				
Change: "...range of 0 to 255..."				
To: "...range of 0 to 254..."				
P55 L40 (SOFT_CLAIMING)				
Change: "...range of 0 to 255..."				
To: "...range of 0 to 254..."				
Proposed Response		Response Status	O	

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 148 SC 148.4.7.4 P 55 L 47 # 326

Law, David

HPE

Comment Type TR Comment Status X D-PLCA

Subclause 148.4.7.4 'Timers' says that wait_beacon_timer '... is defined by the aDPLCAwaitBeaconTimer configuration Parameter.'. aDPLCAwaitBeaconTimer, however, is not a configuration parameter but a management attribute, one of four types of elements found in a managed object (see the third paragraph of subclause 30.1.4 'Management model'). Further, IEEE Std 802.3 subclause 30.1 'Overview' says, 'Implementation of part or all of Layer Management is not a requirement for conformance to any other clause of this standard.'. This timer, therefore, must be defined to operate in the absence of this attribute.

SuggestedRemedy

[1] Suggest that 30.16.1.1.12 'aDPLCAwaitBeaconTimer' is changed to read:

30.16.1.1.12 aDPLCAwaitBeaconTimer

ATTRIBUTE

APPROPRIATE SYNTAX:

INTEGER

BEHAVIOUR DEFINED AS:

A GET operation returns the current wait_beacon_timer value in bit times (see 148.4.7.4).

A SET operation changes the wait_beacon_timer value. The value of this attribute is preserved across reset, including loss of power.;

[2] Suggest that wait_beacon_timer in subclause 148.4.7.4 'Timers' is changed to read:

wait_beacon_timer

Represents the time the D-PLCA state diagram waits for a BEACON indication.

Duration: 40 bit times.

Tolerance: +/- 1 bit time.

Proposed Response Response Status O

CI 148 SC 148.4.7.5 P 56 L 12 # 151

Baggett, Tim

Microchip

Comment Type T Comment Status X D-PLCA

DPLCA is intended to work with nodes statically assigned node IDs. If a node is statically assigned to a node ID greater than 7 then it is possible that the DPLCA coordinator will never expand the node count and therefore the number of transmit opportunities enough to allow for the statically assigned node to gain an transmit opportunity. This occurs because the plca_node_count is initialized to 8, allowing for TOs 0-7. If no node ever claims TO 7, then the DPLCA coordinator will never increase the plca_node_count upwards.

A proposed solution is to change the assigned initialization value of plca_node_count from 8 to 255 in the WAIT_BEACON state. This will start the DPLCA coordinator with the longest possible PLCA cycle with all possible transmit opportunities available and giving the statically assigned nodes a chance to hard commit. The DPLCA coordinator will then shrink the plca_node_count downwards. The disadvantage is that this may increase the convergence time.

SuggestedRemedy

In the WAIT_BEACON state of Figure 148-8, change the initialization value of plca_node_count from 8 to 255.

Proposed Response Response Status O

CI 148 SC 148.4.7.5 P 56 L 31 # 119

Huszak, Gergely

Kone

Comment Type E Comment Status D Editorial

Non-elementary expressions shall be embraced in a pair of parentheses

SuggestedRemedy

Change "!dplca_new_age" to "(!dplca_new_age)" at exit from INCREASE_NODE_COUNT

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 148 SC 148.4.7.5 P 56 L 35 # 149

Baggett, Tim Microchip

Comment Type T Comment Status X D-PLCA

There are only 255 usable transmit opportunities, 0->254. The local_nodeID value of 255 is reserved for PLCA disabled. This can be seen by the global transition into the DISABLE state of Figure 148-3 - PLCA Control state diagram. This global transition condition includes the term (local_nodeID=255). Also, the transition from NEXT_TX_OPPORTUNITY to RESYNC (via B) to transmit begin a new PLCA cycle occurs when curlD=255, after curlD was incremented in NEXT_TX_OPPORTUNITY. There is no Transmit Opportunity 255.

Figure 148-8 DPLCA Control State Diagram incorrectly allows for the PLCA bus cycle to expand to allow Transmit Opportunity ID 255 to exist.

SuggestedRemedy

In the Figure 148-8 state transition from COORDINATOR to INCREASE_NODE_COUNT,
Change: "(plca_node_count < 255) **"
To: "(plca_node_count < 254) **"

Proposed Response Response Status O

CI 148 SC 148.4.7.6 P 57 L 2 # 120

Huszak, Gergely Kone

Comment Type E Comment Status D Editorial

Non-elementary expressions shall be embraced in a pair of parentheses

SuggestedRemedy

Change "dplca_aging = OFF" to "(dplca_aging = OFF)" at entry to DISABLED,
"dplca_txop_claim = SOFT" to "(dplca_txop_claim = SOFT)" at entry to UPDATE_SOFT,
"dplca_txop_claim = NONE" to "(dplca_txop_claim = NONE)" at entry to NOTIFY,
"dplca_txop_claim = HARD" to "(dplca_txop_claim = HARD)" at entry to UPDATE_HARD,
and "!dplca_txop_end" to "(!dplca_txop_end)" to exit from NOTIFY

Proposed Response Response Status W

CI 148 SC 148.4.7.6 P 57 L 19 # 327

Law, David HPE

Comment Type E Comment Status D State Diagrams

Both soft_aging_cycles and hard_aging_cycles are defined as variables in subclause 148.4.7.1. As a result, their use in Figure 148-9 'D-PLCA Aging State Diagram' should be in lowercase.

SuggestedRemedy

Suggest that in the TXOP_END state:

[1] 'IF short_cnt = SOFT_AGAIN_CYCLES THEN' should be changed to read 'IF short_cnt = soft_aging_cycles THEN'.
[2] 'IF long_cnt = HARD_AGING_CYCLES THEN' should be changed to read 'IF long_cnt = hard_aging_cycles THEN'.

Proposed Response Response Status W

CI 148 SC 148.4.7.6 P 57 L 19 # 328

Law, David HPE

Comment Type E Comment Status D Editorial
Typo.

SuggestedRemedy

In the TXOP_END state, '... = SOFT_AGAIN_CYCLES ...' should read '... = SOFT_AGING_CYCLES ...'.

Proposed Response Response Status W

CI 148 SC 148.4.7.6 P 57 L 26 # 329

Law, David HPE

Comment Type E Comment Status D State Diagrams

The CLEAR_TXOP_TABLE() function is defined in subclause 148.4.7.3. As a result, its use in Figure 148-9 'D-PLCA Aging State Diagram' should be in uppercase. This is the case in the DISABLED state but not the TXOP_END state.

SuggestedRemedy

Suggest that in the TXOP_END state 'clear_txop_table(txop_claim_table_new)' should read 'CLEAR_TXOP_TABLE(txop_claim_table_new)'.

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

Cl 148 **SC 148.7.5** **P 56** **L 18** # **299**

McClellan, Brett

Marvell

Comment Type **TR** **Comment Status** **D** **D-PLCA**

In Figure 148–8 D-PLCA Control State Diagram, in the COORDINATOR state, a coordinator lockup happens when two nodes send the BEACON at the same time. The PLCA is not able to register activity from other nodes while transmitting BEACON.

SuggestedRemedy

I will submit a presentation on proposed changes to the D-PLCA Control State Diagram.

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

Cl 188 **SC 188** **P 60** **L 1** # **177**

Maguire, Valerie

Copperopolis; aff'l w/ CME Consulting and Cisco

Comment Type **E** **Comment Status** **D** **EZ**

and' seems like a better word choice than 'to' here.

SuggestedRemedy

Replace "Insert Clause 188 to Clause 189 in numeric order:" with "Insert Clause 188 and Clause 189 in numeric order:"

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

Cl 188 **SC 188** **P 60** **L 1** # **155**

Baggett, Tim

Microchip

Comment Type **T** **Comment Status** **D** **10BASE-T1S**

Clause 147 specifies a PHY with three fundamentally different analog drivers/receivers: Multidrop, point-to-point half duplex and point-to-point full duplex. The analog impedances are different, and full-duplex requires an echo canceller / hybrid. Because of this multidrop has primarily been implemented in the market. Where point-to-point is needed, 10BASE-T1L or 100BASE-T1 seems to be a better choice.

To aid in market acceptance of 10BASE-T1M as the same technology as 10BASE-T1S (multidrop), recommend deprecating/deleting point-to-point full and half duplex from Clause 147. Then merging Clause 188 into Clause 147 by adding 10BASE-T1M TCI and segment.

SuggestedRemedy

Delete point-to-point full and half duplex from Clause 147.

Merge Clause 188 into Clause 147 *adding* specifications for TCI and enhanced mixing segment specifications. We do not delete existing Clause 147 multidrop MDI and mixing segment specifications.

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

Cl 188 **SC 188** **P 60** **L 4** # **123**

Jones, Peter

Cisco Systems

Comment Type **T** **Comment Status** **D** **New Feature**

We have discussed physical topology discovery many times, but we have not specified it in the draft.

SuggestedRemedy

Implement proposal to be submitted at least one week before January interim

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

Cl 188 **SC 188.1** **P 60** **L 14** # **208**

Zimmerman, George

CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type **T** **Comment Status** **D** **10BASE-T1S**

if the clause 188 specification is a refinement and subtype of clause 147, then this needs to be stated in the overview (SUBTYPE)

SuggestedRemedy

Insert at the end of the first paragraph of 188.1 "The 10BASE-T1Sm PCS and PMA specifications in this clause are refinements of the specifications in Clause 147 when the multidrop mode of operation is the only mode used. In some cases they are tightened for improved interoperability, or restated for clarity. Mixing segment specifications and the specifications for the interface from the PHY to the medium are restated and altered to improve usability and increase plug-and-play functionality.

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

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.1 P 61 L 13 # 145

D'Ambrosia, John

Futurewei, U.S. Subsidiary of Huawei

Comment Type TR Comment Status D MII

Fig 188-1 indicates that the MII is optional via Note 1. However, other parts of Clause 188 are written in such a way that assumes the MII is present. Therefore, it is assumed that Note 1 is really discussing a physical implementation of the MII.

Other BASE-T clauses address this by inclusion of a subclause that addresses interfaces and notes that implementations of the xMII interface are optional. Reference 165.1.5

SuggestedRemedy

Following changes are proposed -

1. Modify Note 1 of Figure 188-1 to read "Physical implementation of MII is optional."

2. Add new subclause -

Interfaces

All 10BASE-T1M PHY implementations are compatible at the MDI and at the MII, if implemented. Physical implementation of the MII is optional. Designers are free to implement circuitry within the PCS and

PMA in an application-dependent manner provided that the MDI and MII (if the MII is implemented) specifications are met. System operation from the perspective of signals at the MDI and management objects are identical whether the MII is physically implemented or not.

Proposed Response

Response Status W

CI 188 SC 188.1.2.2 P 61 L 46 # 64

Ran, Adeel

Cisco

Comment Type E Comment Status X State Diagrams

"All timers operate in the manner described in 40.4.5.2"

This statement appears in 188.1.2.2 and in 189.1.3.2.

The referenced subclause, 40.4.5.2, points to 14.2.3.2, where timer conventions are described; it also makes an additional convention (regarding "stop timer") that is not used in clause 188 (in this amendment it is only used in Figure 148-4).

Also, 189.4.4.3 and 189.5.3.4 repeat the timers convention with the same text as in 40.4.5.2.

The result is a bit messy: apparent contradictory cross-references, which are in fact duplicate, and unnecessary indirect cross references due to a convention that is not used.

SuggestedRemedy

In 188.1.2.2 and 189.1.3.2, change the cross-reference to 14.2.3.2.

In 189.4.4.3 and 189.5.3.4, delete the "conventions" statements (they are duplicates and covered by the general conventions in the subclauses above).

Proposed Response

Response Status W

CI 188 SC 188.2 P 62 L 11 # 209

Zimmerman, George

CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type E Comment Status D EZ

"two level Differential Manchester Encoding" should have "two level" hyphenated, as it is a compound adjective.

SuggestedRemedy

Change two level to two-level

Proposed Response

Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.3 P 63 L 18 # 158

Baggett, Tim Microchip

Comment Type E Comment Status D Primitives

Remove PCS_STATUS.indication from diagram. It is not used since point-to-point is not supported.

SuggestedRemedy

Remove PCS_STATUS.indication from diagram at line 18
Remove Remove PCS_STATUS.indication(pcs_status) at line 51

Proposed Response Response Status W

CI 188 SC 188.3 P 63 L 49 # 247

Opsasnick, Eugene Broadcom Inc.

Comment Type T Comment Status D Primitives

PMA_LINK.indication and PMA_LINK.request are listed as two of the service primitives across the PMA service interface, but they do not appear in Figure 188-2 between the PMA and PCS blocks, nor do they have a description in the 188.3.x subclauses.

SuggestedRemedy

These two primitives should be removed from this list or else added to figure 188-2 and defined further in a subclause within 188.3.

Proposed Response Response Status W

CI 188 SC 188.3 P 63 L 49 # 260

Wienckowski, Natalie IVN Solutions LLC

Comment Type T Comment Status X Primitives

remove service primitives that aren't in figure 188-2

SuggestedRemedy

Delete PMA_LINK.indication (link_status) and PMA_LINK.request (link_control) from list of service primitives.

Proposed Response Response Status W

CI 188 SC 188.3 P 63 L 49 # 157

Baggett, Tim Microchip

Comment Type E Comment Status D Primitives

The PMA_LINK.request/indication service primitives do not exist in 10BASE-T1M since AutoNeg is not supported. They do not appear in figure 188-2, and therefore should not appear in the list of service primitives.

SuggestedRemedy

Delete the following lines:
P63 L49: PMA_LINK.indication (link_status)
P63 L50: PMA_LINK.request (link_control)

Proposed Response Response Status W

CI 188 SC 188.3 P 63 L 49 # 21

Jones, Peter Cisco Systems

Comment Type TR Comment Status D Primitives

In "188.3 Service primitives and interfaces", the PMA_LINK.indication () and PMA_LINK.request () service primitives need to be removed.
These are only used by Autoneg/Technology Dependent Interface (see 98.4.1) which does not apply to T1M, so should be removed.

SuggestedRemedy

Remove PMA_LINK.indication () and PMA_LINK.request () from the list.

Proposed Response Response Status W

CI 188 SC 188.3 P 63 L 51 # 248

Opsasnick, Eugene Broadcom Inc.

Comment Type T Comment Status D Primitives

PCS_STATUS.indication is listed as one of the primitives on the PMA service interface and is shown in Figure 188-2 along with PMA_UNITDATA.indication, PMA_UNITDATA.request, and PMA_CARRIER.indication. PMA_UNITDATA.indication is defined in subclause 188.3.1. PMA_UNITDATA.request is defined in subclause 188.3.2. PMA_CARRIER.indication is defined in 188.3.3. PCS_STATUS.indication has no definition.

SuggestedRemedy

Add subclause 188.3.4 to define the semantics, when generated, and effect upon receipt of this primitive.

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

Cl 188 **SC 188.3.2.3** **P 64** **L 48** # **159**

Baggett, Tim Microchip

Comment Type E **Comment Status D** **Primitives**

Text refers reader to DME encoding rules in 188.5. The DME rules are, however, in 188.5.2.

SuggestedRemedy

Change:

"DME following rules in 188.5"

To:

"DME following rules in 188.5.2"

Note: If this change is accepted, I would like to make the same correction in 147.2.2.3 either in 3.da or maintenance.

Proposed Response **Response Status W**

Cl 188 **SC 188.4** **P 65** **L 21** # **130**

Huber, Thomas Nokia

Comment Type E **Comment Status D** **PCS**

The two sentences in this paragraph are not self-consistent. The first says the PCS consists of 3 functions that are shown in figure 188-3, the second describes 4 functions within the PCS.

SuggestedRemedy

add "and the PCS Loopback function" to the end of the first sentence. Or delete the clause in the second sentence that points to the loopback function.

Proposed Response **Response Status W**

Cl 188 **SC 188.4** **P 65** **L 23** # **210**

Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So

Comment Type T **Comment Status D** **PCS**

PCS loopback isn't a "function" as in a functional block. It is an operation. In 188.4.4 it is called a mode.

SuggestedRemedy

Change "and the PCS Loopback function is explained in 188.4.4" to "and operation in PCS Loopback mode is explained in 188.4.4".

Proposed Response **Response Status W**

Cl 188 **SC 188.4.2.1** **P 66** **L 1** # **22**

Jones, Peter Cisco Systems

Comment Type TR **Comment Status D** **PCS**

In "Figure 188–3—PCS reference diagram", the "Technology Dependent Interface" should not be here. It's only used by AutoNeg which is not supported by T1M.

SuggestedRemedy

Remove "Technology Dependent Interface" and associated signals.

Proposed Response **Response Status W**

Cl 188 **SC 188.4.2.1** **P 66** **L 2** # **160**

Baggett, Tim Microchip

Comment Type E **Comment Status X** **PCS**

Link control is not needed since AutoNeg is not supported and therefore needs to be fully removed.

SuggestedRemedy

Make the following changes:

P66 L2 - Delete from Figure 188-3 the Technology Dependent Interface and link_control lines to PCS TRANSMIT and PCS RECEIVE boxes.

P67 L10 - Delete the link_control variable entry (lines 10-15)

P71 L4 - Figure 188-4 - Change the transition logic into the SILENT state from:

pcs_reset + (link_control = DISABLE)

to:

pcs_reset

P73 L51 - Delete the link_control variable entry (lines 51-53)

P76 L3 - Figure 188-7 - Change the transition logic into the WAIT_SYNC state from:

pcs_reset + (transmitting) + (link_control = DISABLE)

to:

pcs_reset + (transmitting)

Proposed Response **Response Status W**

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.4.2.1 P 66 L 38 # 211
Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
Comment Type E Comment Status D PCS
Figure 188-3 doesn't show PCS loopback (neither do the similar figures in 802.3)
SuggestedRemedy
Add to Figure 188-3, "NOTE - PCS Loopback not shown for clarity."
Proposed Response Response Status W

CI 188 SC 188.4.2.2 P 67 L 11 # 65
Ran, Adeo Cisco
Comment Type TR Comment Status X PCS
link_control definition says "This variable is generated by the Auto-Negotiation function" - but 188.1.1 says this function is not available for this PHY.
The definition makes it unclear whether this is a control variable or a status indicator. If it is programmable it should be mapped to some MDIO register?
SuggestedRemedy
Delete the text about Auto-Negotiation, and clarify if this variable is a control or a status indicator. Add MDIO register mapping if necessary.
Proposed Response Response Status O

CI 188 SC 188.4.2.2 P 67 L 11 # 23
Jones, Peter Cisco Systems
Comment Type TR Comment Status D EZ
link_control is only used by AutoNeg which is not supported by T1M.
SuggestedRemedy
Remove the definition of link_control.
Proposed Response Response Status W

CI 188 SC 188.4.2.3 P 68 L 2 # 249
Opsasnick, Eugene Broadcom Inc.
Comment Type E Comment Status X PCS
The constant BEACON is missing from the list of constants.
SuggestedRemedy
Add BEACON "5B symbol defined as 'N' in the 4B/5B encoding" in alphabetical order in the list of constants in 188.4.2.3.
Proposed Response Response Status W

CI 188 SC 188.4.2.7 P 71 L 15 # 250
Opsasnick, Eugene Broadcom Inc.
Comment Type TR Comment Status X State Diagrams
In Figure 188-4, the transition condition for the state SILENT to go back to itself contains an assignment which is not appropriate for a state transition condition. It also has an unbalanced parenthesis. The condition is "STD * (!TX_EN) * (tx_sym <= TXCMD_ENCODE(tx_cmd))".
SuggestedRemedy
This state transition should probably be "STD * (!TX_EN) * (tx_cmd != COMMIT)".
Proposed Response Response Status O

CI 188 SC 188.4.2.7 P 71 L 15 # 131
Huber, Thomas Nokia
Comment Type T Comment Status D State Diagrams
The last term in the transition from SILENT back to SILENT is "(tx_sym <- TXCMD_ENCODE(tx_cmd))", which appears to be a copy-paste error. Presumably the intent is tx_cmd != COMMIT, as that would cover all the cases that are not covered by the other two transitions.
SuggestedRemedy
Change "tx_sym <- TXCMD_ENCODE(tx_cmd)" to "tx_cmd != COMMIT"
Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.4.2.7 P71 L15 # 164

Baggett, Tim Microchip

Comment Type TR Comment Status D State Diagrams

Figure 188-4 - PCS Transmit state diagram, part a
The transition condition from SILENT to SILENT is different from Clause 147 Figure 147-4.
The last term was (tx_cmd!=COMMIT) but is now (tx_sym<=TXCMD_ENCODE(tx_cmd)).
The new term isn't equivalent and having an assignment in a state transition condition makes no sense.

SuggestedRemedy

In the transition condition from SILENT to SILENT, change the last term from:
(tx_sym <= TXCMD_ENCODE(tx_cmd))
to:
(tx_cmd != COMMIT)

Proposed Response Response Status W

CI 188 SC 188.4.2.7 P71 L15 # 66

Ran, Adeo Cisco

Comment Type TR Comment Status D State Diagrams

In Figure 188-4, the condition for the transition arc from SILENT to itself contains the phrase "(tx_sym <= TXCMD_ENCODE(tx_cmd))" - this is an assignment that cannot be a condition. It looks like a copy of the assignment within this state, rather than the intended condition; perhaps the intent was "tx_cmd != COMMIT".

SuggestedRemedy

Correct the condition to whatever it should be, without an assignment.

Proposed Response Response Status W

CI 188 SC 188.4.2.7 P72 L13 # 24

Jones, Peter Cisco Systems

Comment Type TR Comment Status D New Feature

"188.4.2.9 Jabber functional requirements" describes how to detect jabber, and that's implemented in Figure 188-5, but there isn't a definition to a counter to record the error.

SuggestedRemedy

Define a "local jabber" counter in "188.4.2.2 Variables" and increment it in the "PCS Transmit state diagram".
Add a clause 45 object to expose this.
Base the new object on "45.2.3.74 10BASE-T1M / 10BASE-T1S PCS diagnostic 1"

Proposed Response Response Status W

CI 188 SC 188.4.2.8 P72 L41 # 1

He, Xiang Huawei Technologies

Comment Type E Comment Status D EZ

The term "self-synchronizing scrambler" has been used all over this subclause and is the preferred term in 802.3. "multiplicative scrambling" is used in the first sentence.

SuggestedRemedy

Change "multiplicative" to "self-synchronizing".

Proposed Response Response Status W

CI 188 SC 188.4.2.8 P72 L48 # 251

Opsasnick, Eugene Broadcom Inc.

Comment Type E Comment Status X PCS

In the last paragraph on page 72, the scrambler reset description states:

"The scrambler is reset upon execution of the PCS Reset function. If the PCS Reset is executed, all bits of the 17-bit vector representing the self-synchronizing scrambler state are arbitrarily set. The initialization of the scrambler state is left to the implementer. In no case shall the scrambler state be initialized to all zeros."

The sentence "The initialization of the scrambler state is left to the implementor." is redundant with the previous sentence that states "... all bits of the ... scrambler are arbitrarily set." and can be removed. However, the next sentence that states the scrambler shall not be reset to all zeros which contradicts the statement that the initial state can be completely arbitrary.

SuggestedRemedy

Suggest changing the quoted text to something like:

"The scrambler is reset upon execution of the PCS Reset function. When the PCS Reset is executed, the 17-bit vector representing the self-synchronizing scrambler state shall be set to a non-zero value."

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.4.2.8 P72 L49 # 67
 Ran, Adeel Cisco
 Comment Type TR Comment Status X PCS

"In no case shall the scrambler state be initialized to all zeros."

This is a valid requirement for an additive scrambler, but it is not necessary for a multiplicative (self-synchronizing) scrambler. Furthermore, it is impossible to detect whether this requirement is met; the scrambler state can occasionally be set to zero even during normal operation (assuming the incoming data in TXD is random, it will statistically happen once every 2^{17} bits, many times per second). A temporary zero state is not a problem; the state will change whenever a nonzero bit appears in TXD, and the output is DME-encoded anyway so there is no clock recovery issue. Neither is it a problem if it is initialized to this value at PCS reset.

Compare to the self-synchronizing scrambler of 49.2.6 (which is used in multiple high-speed PCS sublayers); it has no requirements for initialization, and in fact its state is initialized to 0 in many implementations.

There is also a PICS item for this unnecessary requirement.

SuggestedRemedy

Delete the quoted sentence.
 Delete PICS item PCST5.

Proposed Response Response Status O

CI 188 SC 188.4.2.9 P73 L16 # 261
 Wienckowski, Natalie IVN Solutions LLC
 Comment Type E Comment Status D Editorial

There is a run-on sentence that needs a comma to make it readable.

SuggestedRemedy

Add comma between "receivers" and "then" in the following sentence.
 If the packet being transmitted continues longer than the specified time duration, the PCS Transmit sends an ESD, ESDJAB symbol sequence to notify the receivers then inhibits further transmissions for at least the duration of unjab_timer.

Proposed Response Response Status W

CI 188 SC 188.4.2.9 P73 L18 # 262
 Wienckowski, Natalie IVN Solutions LLC
 Comment Type E Comment Status D Editorial

There is a run-on sentence that needs a comma to make it readable.

SuggestedRemedy

Add comma between "cleared" and "or" in the following sentence.
 The PCS Transmit may return to normal operation automatically after unjab_timer elapsed and the error condition has been cleared or it may keep silent until reset.

Proposed Response Response Status W

CI 188 SC 188.4.3.1 P73 L39 # 253
 Opsasnick, Eugene Broadcom Inc.
 Comment Type E Comment Status X PCS

The use of "either or" indicates a choice between two options or possibilities. In the 4th paragraph of 188.4.3.1, it is used awkwardly to present a choice between three options.

SuggestedRemedy

Suggest changing this sentence from:

"The DATA state, in which 5B symbols are decoded into MII data, is left when ESD or ESDBRS followed by either ESDOK, ESDERR, or ESDJAB symbol is encountered or when the PMA detects SILENCE on the media (e.g., the transmitter prematurely stops data transmission)."

to:

"The DATA state, in which 5B symbols are decoded to MII data, is left when an ESD or ESDBRS symbol is followed by an ESDOK, ESDERR, or ESDJAB symbol or when the PMA detects SILENCE on the media (e.g., the transmitter prematurely stops data transmission)."

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.4.3.3 P74 L28 # 254

Opsasnick, Eugene

Broadcom Inc.

Comment Type E Comment Status X PCS

BEACON should be defined in 188.4.2.3 since it is also used by the transmit function (as defined in the TXCMD_ENCODE function on page 69). So the definition of BEACON should be moved to 188.4.2.3. But BEACON is not the only constant used in the RX state diagrams; other constants used include SYNC, SSD, and ESD, among others.

SuggestedRemedy

Move the definition of BEACON constant from 188.4.3.3 to 188.4.2.3. In addition, add text to 188.4.3.3 that all constants defined in 188.4.2.3 have the same meaning when used in the RX state diagrams. Something like:

"The constants BEACON, ESD, ESDERR, ESDJAB, ESDOK, ESDBRs, SILENCE, SSD, SYNC, and COMMIT have the same value as defined in 188.4.2.3."

Proposed Response Response Status W

CI 188 SC 188.4.3.4 P74 L39 # 263

Wienckowski, Natalie

IVN Solutions LLC

Comment Type E Comment Status D Editorial

"value" is in the sentence twice, with just the variable between them.

SuggestedRemedy

Delete the second "value".

Proposed Response Response Status W

CI 188 SC 188.4.3.7 P76 L4 # 255

Opsasnick, Eugene

Broadcom Inc.

Comment Type E Comment Status D EZ

The condition to enter the WAIT_SYNC state in Figure 188-7 has an extra space between "transmitting" and the end parenthesis.

SuggestedRemedy

Replace "(transmitting)" with "(transmitting)"

Proposed Response Response Status W

CI 188 SC 188.4.3.7 P76 L9 # 133

Huber, Thomas

Nokia

Comment Type E Comment Status D EZ

Inconsistent nomenclature between figure 188-7, where "fc_supported" is used, and 188.4.3.3, where the constant FC_SUPPORTED is defined.

SuggestedRemedy

Modify figure 188-7 to align with the name of the constant as specified in 188.4.3.3.

Proposed Response Response Status W

CI 188 SC 188.4.3.7 P76 L9 # 161

Baggett, Tim

Microchip

Comment Type E Comment Status D EZ

Judging from P74 L30 (188.4.3.2) we want to change the constant from fc_supported (in CL147) to FC_SUPPORTED. If so, this change needs to be made throughout the draft.

SuggestedRemedy

Change fc_supported to FC_SUPPORTED in Figure 188-7 on page 76 in the following places:

L9 from SYNCING to WAIT_SYNC
L24 from SYNCING to BAD_SSD
L35 from COMMIT to WAIT_SYNC
L35 from WAIT_SSD to WAIT_SYNC
L38 from WAIT_SSD to BAD_SSD
L41 from COMMIT to BAD_SSD

Proposed Response Response Status W

CI 188 SC 188.4.3.7 P76 L10 # 252

Opsasnick, Eugene

Broadcom Inc.

Comment Type E Comment Status D EZ

In Figure 188-7 "fc_supported" is a constant as defined in 184.3.3 and should be capitalized.

SuggestedRemedy

Replace "fc_supported" with "FC_SUPPORTED" in several places in Figure 188-7. Alternatively, define fc_supported as a variable, and move its definition from 188.4.3.3 to 188.4.3.2.

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.4.3.7 P 76 L 11 # 256

Opsasnick, Eugene

Broadcom Inc.

Comment Type T Comment Status D PCS

The variable rx_cmd is assigned the constant value NONE in Figure 188-7 (and also COMMIT and BEACON in Figures 188-7 and 188-8. But the constants NONE, COMMIT and BEACON are not defined in the constants subclause 188.4.3.3. And the definition of rx_cmd does not help.

SuggestedRemedy

For the definition of rx_cmd in 188.4.3.2 on page 74 line 7, replace:

"PLCA signalling decoded by the PCS."

with:

"PLCA signalling decoded by the PCS, see 148.4.4.2."

Proposed Response Response Status W

CI 188 SC 188.4.3.7 P 76 L 26 # 132

Huber, Thomas

Nokia

Comment Type E Comment Status D EZ

There is no off-page reference C in either figure 188-7 or 188-8, but there are references A, B, and D.

SuggestedRemedy

Change reference D in both figures to C.

Proposed Response Response Status W

CI 188 SC 188.4.3.7 P 76 L 51 # 25

Jones, Peter

Cisco Systems

Comment Type TR Comment Status D New Feature

"188.4.3.9 Jabber diagnostics" discusses how to detect "remote jabber" and how it is exposed via MDIO register 3.2293. but the "PCS Receive state diagram" does not show how/where this is done.

SuggestedRemedy

Define a "remote jabber" counter in "188.4.3.2 Variables" and increment it in the "PCS Receive state diagram".

Proposed Response Response Status W

CI 188 SC 188.4.3.8 P 78 L 5 # 68

Ran, Adele

Cisco

Comment Type TR Comment Status X Scrambler

The self-synchronizing descrambler cannot be a linear feedback shift register, because it needs to implement the inverse operation of the scrambler in 188.4.2.8. Since the scrambler is modeled by a linear feedback shift register, the descrambler has to be a linear feedforward shift register in order to be its inverse.

Figure 188-9 actually shows a linear feedforward (rather than feedback) shift register, except that an arrow to clarify the direction is missing.

SuggestedRemedy

Change "feedback" to "feedforward".

In Figure 188-9, format the line above the "+" on the left side as an arrow (downward), to clarify the flow direction.

Proposed Response Response Status O

CI 188 SC 188.4.5 P 78 L # 152

Baggett, Tim

Microchip

Comment Type T Comment Status X PCS

Relax the need to detect carrier sense during receive-mode collisions by applying change referenced on slide 16 of presentation 2023-05-30 "Beruto Carrier Sensing in Harsh Noise Environments" at https://www.ieee802.org/3/da/public/0523/beruto_3da_20230515_carrier_sense_1p1.pdf

Carrier sense indication is defined in 188.3.3 as "a signal compatible with Differential Manchester Encoding (DME) encoding rules" being detected (P64 L52). Due to the corruption of signals during a collision, this may not always be possible to detect. If the need to detect carrier during a receive-mode collision is mandated then it will prevent signal processing techniques that can provide the immunity in harsh noise environments that is also needed. As shown in the above referenced presentation, this change has only minimal effect on CSMA/CD operation.

SuggestedRemedy

Change:

"The PHY shall assert CRS in the presence of a signal resulting from a collision between two or more other stations."

To:

"The PHY should assert CRS in the presence of a signal resulting from a collision between two or more other stations."

Apply same change to Clause 147.3.5

Proposed Response Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 188

SC 188.4.5

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IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.5 P 79 L 38 # 162

Baggett, Tim Microchip

Comment Type E Comment Status D Primitives

"The PMA couples messages from the PMA service interface specified in 188.4.1 [**PCS Reset function**] onto the 10BASE-T1M physical medium."

The sentence here refers to 188.4.1 "PCS Reset function" which makes no sense. The corresponding Clause 147.4 also refers to its "PCS Reset function" in 147.3.1, but neither make sense. What is the correct reference?

SuggestedRemedy

Change the reference in L38 from "PCS Reset function":
188.4.1
to "service primitives and interfaces":
188.3

Proposed Response Response Status W

CI 188 SC 188.5.2 P 80 L 43 # 163

Baggett, Tim Microchip

Comment Type T Comment Status D PMA

point-to-point is not supported, so we removed driving BI_DA+ and BI_DA- to 0V differential with a 100 Ohm impedance as was done in Clause 147. However, Figure 188-11 still shows this as being an option.

SuggestedRemedy

In the middle of the timing diagram between the first and second transmissions, identified as T1, change:
high-Z or diff. 0V
to:
high-Z

Proposed Response Response Status W

CI 188 SC 188.5.2 P 81 L 7 # 69

Ran, Adeo Cisco

Comment Type T Comment Status X DMW

The minimum and maximum of a parameter are not a value in ppm - the ppm value is relative to the nominal value.

The columns are inconsistent between rows..

SuggestedRemedy

Change "-100 ppm" to "80 - 100 ppm" and "+100 ppm" to "80 + 100 ppm".

Proposed Response Response Status O

CI 188 SC 188.5.3 P 81 L 22 # 70

Ran, Adeo Cisco

Comment Type TR Comment Status X PMA

"In order to meet the specifications of 188.6.5.1, the PMA Receive function must achieve proper synchronization on both the DME stream and the 5B boundary within 800 ns."

1. According to the style guide, the word "must" is deprecated and should not be used when stating mandatory requirements; must is used only to describe unavoidable situations. There is no unavoidable situation here.

2. the PMA receive function can synchronize on the DME stream, but from the information in the PMA specification alone it is unclear how it can find the 5B boundary; the output of the DME decoder is just a bit stream. Finding the 5B boundary requires some knowledge of the PCS transmit function behavior (e.g. Figure 188-4) which is not mentioned here

3. within 800 ns of what? I assume it is the appearance of a valid DME-encoded signal at the input following a SILENCE period?

SuggestedRemedy

Rewrite this sentence:

- As a normative requirement, using "shall" instead of "must", and clarifying where the 800 ns period starts.

- Add some reference to the expected initial 5B symbols and a reference to Figure 188-4.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188	SC 188.5.3	P 81	L 28	# 71
Ran, Adeo		Cisco		
Comment Type	TR	Comment Status	X	PMA
"When the PMA Receive function does not detect activity on the line, it shall convey the symbol 'I' "				
It is not specified what the PMA receive function should do when there is "activity on the line" but it is not valid input; for example, if the signal is not proper DME.				
It is also possible that after DME decoding the output contains 5B symbols other than the ones listed in Table 188-1. It is unclear if the detection of this condition is done by the PMA or by the PCS.				
<i>SuggestedRemedy</i>				
Change the quoted sentence to include cases where the input is not valid DME.				
Consider whether invalid 5B codes should also be mentioned here or elsewhere.				
Proposed Response	Response Status O			

CI 188	SC 188.6.1	P 81	L 38	# 72
Ran, Adeo		Cisco		
Comment Type	TR	Comment Status	X	Editorial
"Direct Power Injection (DPI) and 150 Ω emission tests for noise immunity and emission as per 188.6.1.1 and 188.6.1.2 may be used to establish a baseline for PHY EMC performance"				
"may" suggests this is optional (per the style manual, "may" equals "is permitted to"). It is not even a recommendation ("should"). Is this the intent?				
As it stands, it means that the standards does not have normative EMC specifications or recommendations - there is a set of tests in 188.6.1.1 and 188.6.1.2 but it is optional, and other requirements that applications may have and are beyond the scope.				
This style is appropriate for a white paper, not for a standard.				
My assumption is that the standard sets some minimum requirements; applications can always have additional ones.				
(after reading further I see that there is another subclause about EMC in 188.10.2.2. Should the text in 188.6.1 be merged into the latter?)				
<i>SuggestedRemedy</i>				
Change "may be used to establish a baseline" to "should be the baseline". Consider writing it more strongly with "shall" unless the intent is not to have normative requirements in this standard.				
Alternatively, move the EMC test subclauses into 188.10.2.2.				
Proposed Response	Response Status O			

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

Cl 188 **SC 188.6.1.1** **P 81** **L 48** # **73**

Ran, Adee

Cisco

Comment Type **TR** **Comment Status** **X** **PMA Electrical**

"In a real application, radio frequency (RF) common mode (CM) noise at the PHY is the result of electromagnetic interference coupling to the cabling system"

"In a real application" is redundant.

CM noise can result from multiple reasons; RF EM interference is one of them.

"Additional differential mode (DM) noise at the PHY is generated from the CM noise by mode conversion of all parts of the cabling system and the TCI"

If the cabling system and the TCI convert CM to DM then it is not "additional noise", it's just a different representation of the noise.

Note that with signaling frequency of 125 MHz (and receiver BW much below 1 GHz) it seems that mode conversion would not be a significant issue unless there is a very large intra-pair mismatch (in the order of ~1 m); it may not be a practical issue worth mentioning.

SuggestedRemedy

Change the quoted sentences to
"Radio frequency (RF) electromagnetic interference coupled to the cabling system can result in both common mode (CM) and differential mode (DM) noise at the PHY input".

Consider dropping the DM part.

Proposed Response **Response Status** **O**

Cl 188 **SC 188.6.1.1** **P 81** **L 51** # **74**

Ran, Adee

Cisco

Comment Type **TR** **Comment Status** **X** **Test Modes**

"may be tested" means it is optional.

Similarly in 188.6.1.2.

See reasoning in another comment.

SuggestedRemedy

Rephrase the sentences that include "may" to be recommendations ("should") or normative requirements ("shall").

Proposed Response **Response Status** **O**

Cl 188 **SC 188.6.2** **P 82** **L 22** # **75**

Ran, Adee

Cisco

Comment Type **T** **Comment Status** **X** **Test Modes**

The positive and negative voltage levels are not specified; they are not even required to be driven by the same circuit as the DME generator (rather than for example a special "droop-compensated" driver).

It may be preferable to define the test pattern using logic levels corresponding to the DME levels.

SuggestedRemedy

State that the signal created shall also conform with the peak-to-peak voltage specified in 188.6.4.1.

Consider additional requirements to clarify that output is generated by the same circuit as the DME.

Proposed Response **Response Status** **O**

Cl 188 **SC 188.6.2** **P 82** **L 25** # **114**

Wu, Peter

Marvell

Comment Type **TR** **Comment Status** **D** **Test Modes**

Test Mode 3 does not include 4B/5B encoding , but it is not cleraly stated in the text. It may bring in confusion for the implmenattors.

SuggestedRemedy

Suuggest to add in the clarification. Such as " When test mode 3 is enabled, the PHY shall transmit continually a pseudo-random sequence of positive and negative voltage levels generated by the scrambler defined in 188.4.2.8 and encoded using DME as in 188.5.2., At the test mode, the scrambler generates the random data clocked at 12.5 MHz, and 5B-rate bit stream is sent to the DME encode, the data is not 4B5B encoded".

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

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.6.2 P 82 L 26 # 156

Baggett, Tim Microchip

Comment Type ER Comment Status X Test Modes

The description of test mode 3 is not as clear as it could be, and, being the same as in the existing Clause 147, has caused some questions in the past.

SuggestedRemedy

inserted text

Change:

"When test mode 3 is enabled, the PHY shall transmit continually a pseudo-random sequence of positive and negative voltage levels generated by the scrambler defined in 188.4.2.8 and encoded using DME as in 188.5.2."

To:

"When test mode 3 is enabled, the PHY shall transmit continually a pseudo-random sequence of positive and negative voltage levels generated by the scrambler defined in 188.4.2.8 **at 12.5MBd** and encoded using DME as in 188.5.2. **4B/5B encoding is not applied.**"

Proposed Response Response Status W

CI 188 SC 188.6.2 P 82 L 29 # 76

Ran, Adeo Cisco

Comment Type TR Comment Status X Test Modes

"the transmitter shall output the 'I' symbol" - this symbol is defined by the PCS as 5B "11111".

All other test modes define the signal at the PMA output (which is not necessarily generated by the normal PMA transmit function). If the PMA is to generate this pattern as a test mode, it would be a high-frequency toggling after DME encoding - this is probably not the intent.

To test the requirements of 188.5.2, the PCS should generate the 'I' symbol, and the PMA should behave normally.

Note that this requirement is also written in 188.6.4.5 (in a way that matches the suggested remedy); it may be simpler to just point to that and avoid duplicated requirements.

SuggestedRemedy

Change "the transmitter shall output" to "the PCS transmit function shall output" and clarify that the PMA behaves as in 188.5.2.

Proposed Response Response Status O

CI 188 SC 188.6.3 P 83 L 3 # 77

Ran, Adeo Cisco

Comment Type TR Comment Status X PMA Electrical

"fixtures... can be used"

"can" indicates capability. Many fixtures can be used, but some may not be adequate.

Here it looks like a requirement for specific fixtures (with allowance of "functional equivalent").

SuggestedRemedy

Change "can be" to "shall be" or "is".

Proposed Response Response Status O

CI 188 SC 188.6.4 P 83 L 44 # 153

Baggett, Tim Microchip

Comment Type E Comment Status X PMA Electrical

The first sentence specifies a 50 Ohm resistive differential load connected to the *transmitter output" when a load is not specified. This seems to indicate a test without the TCI, but only access to TC1 or TC2 is specified and not at the base of the tee connected to the transmitter. I believe the intention here is to state that the transmitter must 'see' a 50 Ohm load unless otherwise specified. This may be made more clear by rearranging the sentences of the paragraph.

SuggestedRemedy

Rearrange sentences of the paragraph as follows:

Where a load is not specified, the transmitter shall meet the requirements of this subclause with a 50 Ohm resistive differential load connected to the transmitter output. When both TC1 and TC2 are terminated, the 50 Ohm resistive differential load should be implemented as a 100 termination on each of TC1 and TC2. Transmitter electrical tests are specified with a load tolerance of +/-0.1%. Transmitter electrical specifications shall be measured at both TC1 and TC2.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.6.4.2 P 84 L 3 # 116

Lusted, Kent

Independent

Comment Type T Comment Status D PMA Electrical

The transmitter output droop test text as written suggests to me that total amount of droop from the positive measurement and the negative measurement together must be less than 30%. For example, if the positive droop was measured as 18% and the negative droop was measured as 20%, the total droop of 38% would fail the requirement.

However, i think that the intent is that the positive droop by itself should be less than 30% and the negative droop by itself should be less than 30%. Clarification would be helpful for the reader.

SuggestedRemedy

Change:

"When tested using the test fixture shown in Figure 188–12 with the transmitter in test mode 2, the magnitude of both the positive and negative droop measured with respect to the initial peak value after the zero crossing and the value 800 ns after the initial peak, depicted as Vd in Figure 188–14, shall be less than 30%."

To:

"When tested using the test fixture shown in Figure 188–12 with the transmitter in test mode 2, the magnitude of the positive droop measured with respect to the initial peak value after the zero crossing and the value 800 ns after the initial peak, depicted as Vd in Figure 188–14, shall be less than 30%. The magnitude of the negative droop, when measured the same way, shall be less than 30%."

Proposed Response Response Status W

CI 188 SC 188.6.4.2 P 84 L 10 # 78

Ran, Adee

Cisco

Comment Type TR Comment Status X PMA Electrical

The waveform seems to asymptotically approach some non-zero levels (it is almost flat before the transition). Shouldn't droop from AC coupling cause it to decay to 0 after long enough time?

SuggestedRemedy

Change the figure such that the signal has nonzero slope right before the transitions.

Proposed Response Response Status O

CI 188 SC 188.6.4.3 P 84 L 31 # 79

Ran, Adee

Cisco

Comment Type T Comment Status X PMA Electrical

5 ns jitter out of 80 ns nominal period, symbol to symbol, means up to 16 ns peak-to-peak or 0.2 UI in typical jitter units. This is a very loose requirement that suggests that jitter is not considered important in this type of physical layer. It does not prevent transmitters from having deterministic jitter which would occur in high probabilities.

Allowing high jitter in transmitters may result in reduced noise immunity if the channel bandwidth is limited. Channel specifications in this draft are not clear (e.g. with multiple TCIs), but bad channels can occur unexpectedly e.g. by poor connections.

Limiting jitter would provide better protection from unexpected bad channels.

The suggested remedy maintains the peak-to-peak limit but only at the probability of the maximum BER. The suggested RMS value corresponds to a fully Gaussian distribution. The value could be increased somewhat if it is considered challenging - although it should be quite easy to design transmitters with lower jitter than that.

SuggestedRemedy

Change from

"the maximum jitter at the transmitter side shall be less than 5 ns symbol-to-symbol"

to

"the peak symbol-to-symbol jitter at the transmitter output at a probability of 1-10⁻¹⁰ shall be less than 5 ns. The RMS value of the symbol-to-symbol jitter shall be less than 786 ps".

Proposed Response Response Status O

CI 188 SC 188.6.4.3 P 84 L 32 # 80

Ran, Adee

Cisco

Comment Type TR Comment Status X PMA Electrical

The clock for measuring the jitter should be specified in some way; measuring jitter with respect to the tx_clk itself (without filtering) would not include the jitter of tx_clk, which may be a considerable component. If tx_clk is not available then a clock recovery unit has to be used, and the measured jitter can vary based on its bandwidth.

The suggested clock recovery bandwidth is 1/100 of the signaling rate, assuming that such bandwidth is feasible for receivers. It may be reduced if the CRG finds it too high.

SuggestedRemedy

Specify that the jitter is measured corresponding to a clock generated from either the measured signal or tx_clk, by a clock recovery unit that acts as a 1st-order high-pass jitter filter with a corner frequency of 1.25 MHz.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.6.5 P 86 L 50 # 84

Ran, Adeo Cisco

Comment Type TR Comment Status X PMA Electrical

The text does not specify anything about the behavior during PMA local loopback.

The "shall" statement applies always, not just in local loopback mode.

Is it the intent that the PMA and PCS behave normally, but the collision detection specified in 188.4.5 is disabled? If so, it should be written explicitly.

SuggestedRemedy

Clarify what the effect of PMA local loopback is.

Proposed Response Response Status W

CI 188 SC 188.6.5.2 P 86 L 16 # 81

Ran, Adeo Cisco

Comment Type TR Comment Status X PMA Electrical

"with a Gaussian distribution bandwidth of 40 MHz and magnitude of -101 dBm/Hz"

Gaussian distribution is independent of the bandwidth.

The numbers cannot be exact; I assume they are they represent the minimum stress (if not, the wording can be changed).

SuggestedRemedy

Change to

"with a Gaussian distribution and a spectral density of at least -101 dBm/Hz at a bandwidth of at least 40 MHz"

Proposed Response Response Status O

CI 188 SC 188.6.5.2 P 86 L 20 # 82

Ran, Adeo Cisco

Comment Type ER Comment Status X PMA Electrical

"may be considered" - but is not an option (allowed behavior).

SuggestedRemedy

Change to "is considered".

Proposed Response Response Status O

CI 188 SC 188.6.5.2 P 86 L 36 # 83

Ran, Adeo Cisco

Comment Type TR Comment Status D PMA Electrical

"Resistor matching to 1 part in 1000"

I assume this requirement is placed to make the source mostly common-mode.

This is good, but it should be accompanied by some requirement about the placement of the coupling into the mixing segment. If the two connections are too far apart, the noise can be partly converted to differential.

There is an additional label "< 0.1 m" but it is not attached to anything. The intent is perhaps that both coupling points are less than 0.1 m from the TCI?

SuggestedRemedy

Clarify in the figure, and preferably also in the subclause text, the requirements from the two connection points of the noise source.

Proposed Response Response Status W

CI 188 SC 188.6.5.2 P 86 L 38 # 304

Schreiner, Stephan

Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type E Comment Status X PMA Electrical

The text reads: "The combination of Rs and the two 500 Ohm resistors matches the source impedance of the noise source". This requires some effort to guess the Rs value.

SuggestedRemedy

It would be beneficial to the user to either add an example for Rs for a given source impedance of the generator or add the calculation formula: $R_s = (1050 \text{ Ohm} * R_{Gen}) / (1050 \text{ Ohm} - R_{Gen})$

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

Cl 188 **SC 188.6.6** **P 86** **L 50** # **154**

Baggett, Tim Microchip

Comment Type **E** **Comment Status** **X** *PMA Electrical*

It is unclear from the text in the first sentence which signal is being referred to. Recommend reverting the paragraph back to the form it had in Clause 147.5.6 for clarity.

SuggestedRemedy

Change the paragraph in lines 50-51 as follows:

The PMA and PCS Receive functions shall pass to the MII RX the data decoded from the signal which is normally received during a transmission for the purpose of detecting collisions.

Proposed Response **Response Status** **O**

Cl 188 **SC 188.7** **P 87** **L 7** # **85**

Ran, Adeel Cisco

Comment Type **TR** **Comment Status** **D** *Management*

Is it just the MDIO electrical interface that is optional? In many places in this draft the text suggests that the MDIO registers are optional and alternative management methods can be used.

The PICS MDIO item also suggests that the registers are optional.

SuggestedRemedy

Rephrase to clarify that the registers are optional, or if that is not the intent, apply changes across the draft to clarify that a MDIO registers are required.

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

Cl 188 **SC 188.8** **P 87** **L 19** # **26**

Jones, Peter Cisco Systems

Comment Type **E** **Comment Status** **D** *Editorial*

The second paragraph of this clause starts with:

"The mixing segment shall be a linear topology, with DTE attached to a trunk at a TCI"

"with DTE attached" doesn't make sense.

SuggestedRemedy

replace

"with DTE attached to a trunk at a TCI"

with

"with DTEs attached to a trunk at using TCIs" or similar.

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

Cl 188 **SC 188.8** **P 87** **L 25** # **305**

Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type **T** **Comment Status** **D** *Mixing Segment*

The text reads: "met with TCIs in place with or without attached DTEs". All specifications and limits are given with a DTE or a simulated DTE equivalent attached. Thus, with or without is problematic

SuggestedRemedy

Remove: "with or without attached DTEs"

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

Cl 188 **SC 188.8** **P 87** **L 26** # **264**

Wienckowski, Natalie IVN Solutions LLC

Comment Type **E** **Comment Status** **D** *Editorial*

When determining article and whether a verb is singular or plural, you ignore the text in parenthesis.

SuggestedRemedy

Change: but rather a (set of) interface planes.

To: but rather an (set of) interface plane.

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

Cl 188 **SC 188.8** **P 87** **L 26** # **134**

Huber, Thomas Nokia

Comment Type **E** **Comment Status** **D** *Editorial*

"but rather a (set of) interface planes." is awkward when the parenthetical text is omitted.

SuggestedRemedy

Remove the parentheses, or change to "one or more interface planes"

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

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.8 P 87 L 30 # 306

Schreiner, Stephan

Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type T Comment Status D Mixing Segment

The text reads: "The mixing segment specifications in 188.8 are referenced to these designated points and are to be met without the DTE or other loads attached.". However, all tests are described with DTE or simulated DTEs attached.

SuggestedRemedy

change "without" to "with"

Proposed Response

Response Status W

CI 188 SC 188.8 P 88 L 5 # 86

Ran, Adele

Cisco

Comment Type TR Comment Status D Editorial

The mixing segment and DTE stub in the diagram include pipe-like elements that imply some kind of shield. Is it the intent that the balanced pairs be electrically shielded? or is it just a non-conducting protection?

In addition, the balanced pairs do not appear to be twisted in the figure; is there an expectation that non-twisted pairs can be used? (note that the words "twisted-pair" only appear in 189.6.1.1.1 and 189.6.1.1.3)

SuggestedRemedy

Clarify in this figure and/or elsewhere if the medium is expected to be shielded and/or twisted. If multiple options are considered, please state that explicitly.

Specifically, clarify what the "pipes" in the figure mean.

Proposed Response

Response Status W

CI 188 SC 188.8.1 P 88 L 33 # 87

Ran, Adele

Cisco

Comment Type ER Comment Status X Mixing Segment

Equation 188-3 is not easy to mentally visualize. It would help readers if a plot of the insertion loss limit is provided.

Also applies to other equations, RL in 188-4, mode conversion in 188-5, TCI IL in 188-6, and TCI RL in 188-7; figures would help. Equations like these are typically accompanied with figures in other clauses, and this amendment should follow precedence.

Also, the equation is almost too long for the page width; consider changing "Insertion loss" to "IL" (matching Equation 188-4), removing some parentheses, etc. to make it fit better into the page. Similarly in other equations.

SuggestedRemedy

Edit equations and add figures per comment.

Proposed Response

Response Status O

CI 188 SC 188.8.2 P 89 L 14 # 296

Paul, Michael

Analog Devices

Comment Type E Comment Status X Mixing Segment

Are there unnessecary parenthesis in the equation?

SuggestedRemedy

remove parens around $-20\log \dots$ to $\dots 0.0259f^2$

Proposed Response

Response Status W

CI 188 SC 188.8.2 P 89 L 14 # 317

Schreiner, Stephan

Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type TR Comment Status X Mixing Segment

Channel Return Loss Limit and TCI Return Loss Limit crossing each other at 22.2 MHz and 36.9 MHz. Within this range, the Channel Return Loss Limit is higher than the TCI Return Loss Limit. This can lead to a case, where the TCI specification is met but the channel specification is not met caused by the TCI.

SuggestedRemedy

Change Return Loss Limit in the frequency range from 2.8 MHz $\leq f \leq$ 40 MHz from: $-42.5 - 20 \log_{10}(f) - (0.024/f) + 47.5 \sqrt{f} - 6.39 \sqrt{f} + 0.0259 f^2$ to: $-45.8 - 20 \log_{10}(f) - (4.3/f) + 53 \sqrt{f} - 8 \sqrt{f} + 0.046 f^2$

Proposed Response

Response Status O

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI 188

SC 188.8.2

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CI 188 SC 188.8.3 P 89 L 22 # 311
Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
Comment Type T Comment Status X Mixing Segment
Mode conversion loss of mixing segment does not mention the DTE attachment. If the TCI is integrate into the DTE (cf. p. 90 line 32), the mixing segment would not be closed, if no DTE is attached. Thus, the measurement can not be performed in this case.

SuggestedRemedy

Add the DTE load attachment sentence.

Proposed Response Response Status O

CI 188 SC 188.9 P 89 L 39 # 265
Wienckowski, Natalie IVN Solutions LLC
Comment Type E Comment Status D TCI
There is a run-on sentence that needs a comma to make it readable.

SuggestedRemedy

Add comma between "segment" and "mandates" in the following sentence.
While technically the TCI aligns with the definition of an MDI in 1.4.395, the fact that the TCI has two connections to the medium and plays a role in mixing segment specifications by connecting the upstream and downstream sides of the linear mixing segment mandates it has a unique role beyond what is normally considered in an MDI.

Proposed Response Response Status W

CI 188 SC 188.9 P 90 L 24 # 307
Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
Comment Type T Comment Status D Mixing Segment
The text reads: "the requirements of 188.8 are met with TCIs in place with or without attached DTEs as specified for the particular specification". However, there is no specification without DTEs attached

SuggestedRemedy

Remove: "or without"

Proposed Response Response Status W

CI 188 SC 188.9 P 90 L 30 # 88
Ran, Adeo Cisco
Comment Type TR Comment Status D TCI
Item 1 says "a two-conductor connection to the DTE" - but from figure 188-18, a TCI needs at least 4 conductors (2 for TC1 and 2 for TC2)?

Item 3 suggests that the TCI is integrated with the PMA - in which case there will indeed be 4 conductors.

Is item 1 intended to represent a DTE which includes a termination, and thus has only one TC?

Note that Figure 188-17 shows only two TCIs, not three as suggested by the last sentence in this subclause.

SuggestedRemedy

Please clarify or correct.

Proposed Response Response Status W

CI 188 SC 188.9 P 90 L 36 # 308
Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
Comment Type E Comment Status D TCI
Text reads: "Figure 188-17 shows two configurations examples." and Line 28 to 32 indicating three possible configurations. The figure shows configurations 1) and 2), configuration 3 is missing.

SuggestedRemedy

Insert configuration 3) in Figure 188-17 or change to "Figure 188-17 shows two example configurations"

Proposed Response Response Status W

CI 188 SC 188.9.1.1 P 91 L 1 # 309
Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
Comment Type E Comment Status D Editorial
Sub-clause number is 188.9.1.1, however there is no 188.9.1.2. The following section is 188.9.2

SuggestedRemedy

Change number to: 188.9.1

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.9.2 P 91 L 20 # 310
Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
Comment Type E Comment Status D Editorial
Text reads: " ... Equation (188-7) with the other trunk TC (i.e. ..." However, the "T" in "TC" abbreviates the word trunk.
SuggestedRemedy
Remove: "trunk"
Proposed Response Response Status W

CI 188 SC 188.9.2 P 91 L 26 # 298
Paul, Michael Analog Devices
Comment Type T Comment Status X TCI
Power coupling network for each node is limited by TCI return loss, but not necessarily specified anywhere else - like in clause 189. Ideally we can optimize power coupling networks based on power (current) at each node. However these RL lines are too rigid for this optimization.
SuggestedRemedy
See upcoming presentation mpaul_da_01.... Can we have different TCI RL limits for different unit load levels?
Proposed Response Response Status W

CI 188 SC 188.9.3 P 91 L 35 # 89
Ran, Adeo Cisco
Comment Type TR Comment Status X TCI
The subclause is under TCI specifications, but the requirement is from the DTE. A standalone TCI can probably withstand much higher voltages.
Similarly for 188.8.4; The TCI should have no issue with having an interface shorted or grounded - it's the PMA that should tolerate it.
SuggestedRemedy
Move these specifications to 188.6 PMA electrical specifications. Possibly under 188.6.1 (which would require renaming it).
Proposed Response Response Status O

CI 188 SC 188.9.4 P 92 L 10 # 295
Paul, Michael Analog Devices
Comment Type T Comment Status X TCI
Assuming some systems may have the high rail as 'ground', is there a better way to describe this table?
SuggestedRemedy
Rename the fault voltages Va and Vb where $|V_a - V_b| \leq 60V$
Proposed Response Response Status O

CI 188 SC 188.10.3 P 93 L 31 # 90
Ran, Adeo Cisco
Comment Type TR Comment Status X Environmental
"may connect telephony voltages to a DTE", in standard language, makes it allowed by the standard. It should not be so.
These statements about telephony are legacy and may not be required nowadays. If they are mentioned, these connections should be discouraged, as the voltages listed in this subclause are higher than the normal requirements and can damage components.
Also applies to 189.7.5.
SuggestedRemedy
Change "may" to "might" here and in the next sentence.
Add statements that care should be taken to avoid such connections because they can damage equipment.
Apply similarly in 189.7.5.
Proposed Response Response Status W

CI 188 SC 188.10.3 P 93 L 34 # 2
Nikolich, Paul Self
Comment Type E Comment Status D EZ
The abbreviation "DC" when used to mean "direct current" should be capitalized everywhere in the document. 4 instances are capitalized (see Table 189-5, page 114), 20 instances are not.
SuggestedRemedy
Please change multiple instances of "dc" to "DC" throughout the document
Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.10.3 P 93 L 40 # 268

Brychta, Michal

Analog Devices

Comment Type E Comment Status X Environmental

I have seen in other 802.3 clauses where this requirement was written, (e.g. 14.7.2.4), it was with wording stating "Although equipment is not required to survive such wiring hazards without damage, application of any of the above voltages shall not result in any safety hazard."

My understanding is that the wording "...shall not preclude conformance with 188.10.1 and 188.10.2" here is addressing more specifically the "hazard". The "damage" piece may be missing here.

SuggestedRemedy

Adding appropriate wording to acknowledge that the DTE may get damaged under such condition may add clarity here.

Proposed Response Response Status W

CI 188 SC 188.11 P 93 L 45 # 91

Ran, Adeo

Cisco

Comment Type T Comment Status D Delay

Delay constraints are typically given from the MII to the MDI, in conjunction with "predictable operation of the MAC Control PAUSE operation". See 24.6 for a full explanation and 146.10 for an example in a similar PHY.

The current content of 188.11 does not provide the necessary information for this purpose, at least not in the expected format, and it is unclear if all the details are required.

SuggestedRemedy

Replace the existing content with the necessary information as explained in 24.6 using 146.10 as an example.

The current content may be moved to a separate subclause (with a different name) as additional specifications.

Proposed Response Response Status W

CI 188 SC 188.12.3 P 96 L 13 # 92

Ran, Adeo

Cisco

Comment Type E Comment Status X Editorial

The subclause reference for "MII" seems incorrect.

SuggestedRemedy

Change it to whatever this item refers to.

Proposed Response Response Status O

CI 188 SC 188.12.4.5.2 P 99 L 9 # 135

Huber, Thomas

Nokia

Comment Type T Comment Status X PMA

The comment for PMAE2 suggests that the ability to enable test modes is required whether or not MDIO is implemented, since it describes an MDIO implementation and then says 'similar functionality provided otherwise'. As such, the Status of MDIO:M seems incorrect, since the MDIO condition is defined in 188.12.3 based on clause 45.1

SuggestedRemedy

Change the Status to M (i.e., the ability to enable test modes is required, either via MDIO or via an equivalent mechanism), or remove the "similar functionality provided otherwise" part of the comment, so that the item is in fact conditional on an MDIO per clause 45 being implemented.

Proposed Response Response Status O

CI 188 SC 188.12.4.5.2 P 99 L 44 # 312

Schreiner, Stephan

Rosenberger Hochfrequenztechnik GmbH & Co. KG

Comment Type E Comment Status D PMA

Feature: "AC coupling at TCI" should be "AC coupling to TCI" [cf. 188.6.4 page 83 line 42]

SuggestedRemedy

Change to: "AC coupling to TCI"

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 188 SC 188.12.4.5.2 P 99 L 46 # 313
 Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
 Comment Type T Comment Status X PMA
 PMAE10 might become obsolete because of introduction of TCI.
 SuggestedRemedy
 Delete PMAE10 and insert the termination loads as well as accuracy into Value/Comment of PMAE11
 Proposed Response Response Status O

CI 188 SC 188.12.4.5.2 P 100 L 29 # 136
 Huber, Thomas Nokia
 Comment Type T Comment Status X PMA
 PMAE19 and PMAE20 have the same feature name. 19 is about the ability to enable/disable PMA local loopbacks via MDIO, and is tagged MDIO:O (indicating that the ability to enable/disable PMA loopbacks via MDIO is optional when MDIO is implemented), whereas 20 is about the behavior of the loopback itself and is tagged MDIO:M (indicating that PMA loopbacks are mandatory if an MDIO is implemented). Per 188.6.6, the entire PMA loopback is optional and is invoked via MDIO or equivalent interface. The PICS items are not consistent with the text in 186.6.6
 SuggestedRemedy
 Change PMAE19 to be about the implementation of the loopback itself; this should be identified as *PMAE19 so it can be used as a condition. The status for PMAE19 should be O (without any conditions - it is entirely optional to implement the loopback). Change PMAE20 to be about the MDIO support for PMA loopback. The status should be (PMAE19 * MDIO):M. In other words, if the optional PMA loopback is present, and the optional MDIO interface is present, it is mandatory to provide the MDIO bits to control the PMA loopback.
 Proposed Response Response Status O

CI 188 SC 188.12.4.6 P 101 L 11 # 314
 Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
 Comment Type T Comment Status D Mixing Segment
 Item MXS3, the "Return loss at each PMA port of TCI" is not defined. Additionally, this point is not accessible in all DTE / TCI configurations. (This test point was called TC3 in former version of the document and TC3 was removed intentionally from the document)
 SuggestedRemedy
 Remove Item MXS3
 Proposed Response Response Status W

CI 188 SC 188.12.4.7 P 101 L 25 # 315
 Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
 Comment Type E Comment Status D PICS
 There is a mix between "Feature" and "Value / Comment" at TCI1.
 SuggestedRemedy
 Change Feature to: "TCI insertion loss between TC1 and TC2"; Change Value/Comment to: "In each direction, measured with a reference impedance of 100 Ohm and with DTE loading attached"
 Proposed Response Response Status W

CI 188 SC 188.12.4.7 P 101 L 28 # 316
 Schreiner, Stephan Rosenberger Hochfrequenztechnik GmbH & Co. KG
 Comment Type E Comment Status D PICS
 Items "TCI1" and "TCI2" are identical in the feature description. Think it should be "return loss" instead of "insertion loss in the feature description of item TCI2."
 SuggestedRemedy
 Change: "insertion loss" to "return loss" at item TCI2. Please consider comment to Item "TCI1" of this table for this remedy
 Proposed Response Response Status W

CI 189 SC 1 P 102 L 6 # 300
 Fuller, Paul Marvell
 Comment Type E Comment Status D Editorial
 Change comma to a semi-colon?
 SuggestedRemedy
 After the word "entities", it seems like this should be a semi-colon instead of a standard colon. A dash could also work?
 Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

Cl 189 **SC 2** **P 103** **L 40** # **302**

Fuller, Paul

Marvell

Comment Type **T** **Comment Status** **X** *Mixing Segment*

What is the value of the AC coupling cap?

SuggestedRemedy

Suggest to add value of the AC cap in the text (at least a nominal value) and possibly include a reference to electrical characteristics table. Also, the figure above (189-1) could also include the value of the AC caps.

Proposed Response **Response Status** **O**

Cl 189 **SC 4.5** **P 113** **L 1** # **301**

Fuller, Paul

Marvell

Comment Type **E** **Comment Status** **X** *Editorial*

Naming convention in the table that will be used for other parts of the document. Recommend to have consistent naming for Parameters and Symbols.

SuggestedRemedy

TBackoff signal could become T_Discovery_Backoff. This is a longer Symbol name but helps to describe it is part of Discovery. VDiscovery could be V_Discovery_LowV and VMark could be V_Discovery_HighV.

Proposed Response **Response Status** **O**

Cl 189 **SC 189.1** **P 102** **L 9** # **27**

Jones, Peter

Cisco Systems

Comment Type **ER** **Comment Status** **D** *MPoE*

"189.1 Overview" first paragraph includes
"MPoE can provide a multidrop single pair Ethernet Physical Layer device with an interface"
The capitalization and hyphenation of "single pair Ethernet" is not consistent with other examples in the document, e.g. "Single-Pair Ethernet", "Single Pair Multidrop", "Single Pair Ethernet".

SuggestedRemedy

Decide how " single pair Ethernet" is supposed to be capitalized/hyphenated, and change all instances to be consistent.

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

Cl 189 **SC 189.1** **P 102** **L 16** # **28**

Jones, Peter

Cisco Systems

Comment Type **TR** **Comment Status** **X** *MPSE*

Item c) says "A method for determining the presence of one or more MPDs prior to applying power".

It doesn't mention detecting Type 0 vs Type 1 MPDs

SuggestedRemedy

replace

"A method for determining the presence of one or more MPDs prior to applying power."

with

"A method for determining the presence of one or more MPDs, Type 0 and/or Type 1, prior to applying power"

Proposed Response **Response Status** **O**

Cl 189 **SC 189.1.1** **P 102** **L 32** # **29**

Jones, Peter

Cisco Systems

Comment Type **E** **Comment Status** **X** *TCI*

The last sentence is "Such compatibility may require additional specifications found within this clause (see 189.6.2)."

I don't think it adds anything useful.

SuggestedRemedy

Remove "Such compatibility may require additional specifications found within this clause (see 189.6.2)."

Proposed Response **Response Status** **O**

Cl 189 **SC 189.1.3.3** **P 103** **L 19** # **215**

Jones, Chad

Cisco Systems, Inc.

Comment Type **E** **Comment Status** **D** *EZ*

Why is Figure 189-1 here? It should follow 189.1.2 where it is referenced.

SuggestedRemedy

Move Figure 189-1 to follow 189.1.2

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

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.1.3.3 P 103 L 19 # 137

Huber, Thomas

Nokia

Comment Type E Comment Status D EZ

Figure 189-1 is about the content of clause 189.2, but appears before that clause.

SuggestedRemedy

Change the anchor point for the figure to be below the heading for 189.2

Proposed Response Response Status W

CI 189 SC 189.2 P 103 L 40 # 30

Jones, Peter

Cisco Systems

Comment Type ER Comment Status D EZ

The last sentence of the first para says "The dc loop resistance of the cable..."
DC should be capitalized.

SuggestedRemedy

Replace
"The dc loop resistance of the cable..."
with
"The DC loop resistance of the cable..."
and check for other instances.

Proposed Response Response Status W

CI 189 SC 189.2 P 103 L 44 # 138

Huber, Thomas

Nokia

Comment Type E Comment Status D EZ

Stray space between the m and omega at the end of the sentence

SuggestedRemedy

Delete the extra space.

Proposed Response Response Status W

CI 189 SC 189.3 P 104 L 3 # 93

Ran, Adele

Cisco

Comment Type TR Comment Status X Power

It is unclear what "system type" means and whether MPSE of one system type is compatible with PMD of a different system type. If so, is it a device type rather than a system type?

Also on the 3rd paragraph there is "Type Mixed MPDs" which is not explained.

You have to go to 189.5.1 to figure out what "Type Mixed" is, and also to understand the compatibility considerations, which are not straightforward.

SuggestedRemedy

Find a better term than "system type" that applies to devices rather than systems.

Move the compatibility considerations to 189.3 or provide appropriate cross-references.

Proposed Response Response Status O

CI 189 SC 189.3 P 104 L 9 # 94

Ran, Adele

Cisco

Comment Type E Comment Status D EZ

Per the style manual, a space should separate the value and the unit.

SuggestedRemedy

Change 1W to 1 W (or 1 Watt). Similarly for 2W.
Change elsewhere if necessary.

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.3 P 104 L 16 # 214

Jones, Chad

Cisco Systems, Inc.

Comment Type ER Comment Status X Unit Load

Unit loads again. I've been vocal that I hate that the concept "leaves power on the table", mostly because I know the biggest complaint we will get after approval is "why isn't there more power available?"

I still don't have a good solution to make it easy to keep a unit load concept and optimize the power budget, therefore I propose that we tell the reader that the unit load concept doesn't allocate all the power.

SuggestedRemedy

Add at the end of the section: "The unit load concept will result in a system that will work but one that has power left over that cannot be allocated. Unit loads were introduced to make it easy for the uninitiated to install a network. It is possible to design the network to completely comply with all the other requirements while exceeding the unit load restrictions. This should be done only by experienced installers or under engineering supervision."

Proposed Response Response Status O

CI 189 SC 189.3 P 104 L 21 # 31

Jones, Peter

Cisco Systems

Comment Type TR Comment Status D Editorial

Table 189–1—System power types defines the 30V and 50V system types, but doesn't associate them with the Type 0/Type 1 labels.

SuggestedRemedy

Add "Type 0" and "Type 1" to the 30V and 50V row headers respectively.

Proposed Response Response Status W

CI 189 SC 189.3 P 104 L 26 # 269

Brychta, Michal

Analog Devices

Comment Type T Comment Status D Power

30V Max MPSE: VMPSE min 26V

SuggestedRemedy

I think the intention was this voltage to be <24V, is 21.6V correct value?

Proposed Response Response Status W

CI 189 SC 189.3 P 104 L 26 # 297

Paul, Michael

Analog Devices

Comment Type ER Comment Status D Power

Vpse,min has a typo.

SuggestedRemedy

26 should be 21.6

Proposed Response Response Status W

CI 189 SC 189.4 P 104 L 38 # 32

Jones, Peter

Cisco Systems

Comment Type TR Comment Status X MPSE

Item a) says "To search the mixing segment for at least one available MPD."

I don't think we define "available MPD", and this should probably be "voltage compatible MPD"

SuggestedRemedy

Replace

"To search the mixing segment for at least one available MPD."

with

"To search the mixing segment for at least one voltage compatible MPD."

Proposed Response Response Status O

CI 189 SC 189.4.1 P 104 L 51 # 33

Jones, Peter

Cisco Systems

Comment Type ER Comment Status D Editorial

Grammar

SuggestedRemedy

Replace

"listed in Table 189–1 for the relevant type."

with

"listed in Table 189–1 for its type."

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.4.2 P 105 L 3 # 216

Jones, Chad

Cisco Systems, Inc.

Comment Type E Comment Status D MPSE

"Table 189–2 in conjunction with Figure 189–1 illustrates the MPSE pinout." I see what the table tells me, but what do I get from Figure 189-1? I see nothing helping me identify the pinout. I don't think we need to refer to the figure.

SuggestedRemedy

change text to: "Table 189–2 illustrates the MPSE pinout."

Proposed Response Response Status W

CI 189 SC 189.4.3 P 105 L 29 # 139

Huber, Thomas

Nokia

Comment Type E Comment Status X Power

The wording of the last sentence in the 4th and 5th paragraphs is awkward: "Current is measured as the sum of both higher voltage pins on MP1 and MP2 or both lower voltage pins on MP1 and MP2." The intent is presumably to sum the currents that are measured at those pins.

SuggestedRemedy

Change the text to "Current is measured as the sum of the currents at the higher voltage pins on MP1 and MP2 or the sum of the currents at the lower voltage pins on MP1 and MP2".

Proposed Response Response Status O

CI 189 SC 189.4.3 P 105 L 32 # 178

Maguire, Valerie

Copperopolis; aff'l w/ CME Consulting and Cisco

Comment Type E Comment Status D Power

Extraneous comma between two specifications. Remove redundant text.

SuggestedRemedy

Replace "If the specification calls for the voltage to be above a value, or below a value, both..." with "If the specification calls for the voltage to be above or below a value, both..."

Proposed Response Response Status W

CI 189 SC 189.4.3 P 105 L 34 # 140

Huber, Thomas

Nokia

Comment Type E Comment Status D Power

The last sentence of the 5th paragraph is duplicating the last sentence of the fourth paragraph, and isn't really related to the rest of the 5th paragraph (which is about compliance to voltage specifications).

SuggestedRemedy

Delete the last sentence of the 5th paragraph.

Proposed Response Response Status W

CI 189 SC 189.4.4 P 106 L 4 # 34

Jones, Peter

Cisco Systems

Comment Type ER Comment Status D MPSE

Change "valid MPD" to "voltage-compatible MPD".

SuggestedRemedy

Replace

"MPSE determines the presence of at least one valid MPD."

with

"MPSE determines the presence of at least one voltage compatible MPD."

Proposed Response Response Status W

CI 189 SC 189.4.4 P 106 L 10 # 217

Jones, Chad

Cisco Systems, Inc.

Comment Type E Comment Status X MPSE

"After full operating voltage has been applied, the MPSE removes full operating voltage in response to a command from the management entity that results in mpse_enable being set to disable. For example, the management entity could monitor the link to determine if at least one MPD remains attached, and there have been no changes in the network topology." The second sentence are examples of keeping power, not removing it. Need to invert the logic to make it match the sentiment of the first sentence.

SuggestedRemedy

Change text to: "For example, the management entity could monitor the link to determine if no MPDs remain attached or there have been changes in the network topology."

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.4.4 P 106 L 11 # 165

Baggett, Tim Microchip

Comment Type E Comment Status D Editorial

Last sentence of the paragraph refers to the management entity monitoring the *link* for at least one MPD being attached. I believe "link" as in "link segment" is typically reserved for point-to-point topologies and is not appropriate for multidrop.

SuggestedRemedy

Change:

"...monitor the link to determine..."

To:

"...monitor the mixing segment to determine..."

Proposed Response Response Status W

CI 189 SC 189.4.4.3 P 108 L 3 # 166

Baggett, Tim Microchip

Comment Type E Comment Status D Editorial

The timers in this section need improved references to the appropriate entries in the referenced tables. As presently written, it is not clear which parameters some of the timers refer too.

SuggestedRemedy

Apply subscripts as necessary.

P108 L3: (discovery_backoff_timer)

Change: "See Table 189-3."

To: "See TBackoff in Table 189-3."

L108 L6: (mark_timer)

Change: "See Table 189-3."

To: "See TMark_measure in Table 189-3."

L108 L10: (measure_timer)

Change: "See Table 189-3."

To: "See TDiscover_measure in Table 189-3."

L108 L13: (mpse_inrush_timer)

Change: "See Table 189-5."

To: "See TInrush in Table 189-5."

L108 L16: (tdiscover_high_timer)

Change: "See Table 189-3."

To: "See TDiscovery_high in Table 189-3."

L108 L18: (tdiscover_low_timer)

Change: "See Table 189-3."

To: "See TDiscovery_low in Table 189-3."

L108 L21: (ted_timer)

Change: "See Table 189-5."

To: "See TED in Table 189-5."

L108 L24: (ttpsdo_timer)

Change: "See Table 189-5."

To: "See TTPSDO in Table 189-5."

Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.4.4.4 P 109 L 9 # 213
 Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
 Comment Type E Comment Status D Editorial
 Variables language is verbose. Of course a variable is set per the description. Also, values returned from do_discovery_high obviously represent the current at the time the function is called. The language is a relic of when we used to have do_discovery_high also present the mark voltage. We no longer need to say "during do_discovery_high" in the description, and in the two values.
 SuggestedRemedy
 delete "This variable is set per this description." at lines 10-11.
 delete "during do_discovery_high" at lines 9, 12, and 13-14.
 Proposed Response Response Status W

CI 189 SC 189.4.4.5 P 111 L 11 # 294
 Paul, Michael Analog Devices
 Comment Type T Comment Status X MPSE
 We may need a DO_DISCOVERY6 and DO_MARK6 state if we expand the discovery interpretations
 SuggestedRemedy
 See presentation mpaul_da_02...
 Proposed Response Response Status O

CI 189 SC 189.4.4.5 P 111 L 32 # 218
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status D EZ
 off page marker "A" not attached to the arrowhead.
 SuggestedRemedy
 attach the marker "A" to the arrowhead.
 Proposed Response Response Status W

CI 189 SC 189.4.5 P 112 L 3 # 35
 Jones, Peter Cisco Systems
 Comment Type E Comment Status X MPSE
 The first sentence of "189.4.5 Discovering the presence of an MPD before powering" starts with "The ability for the MPSE to query all attached MPDs".
 I don't think the MPSE queries all attached MPDs since it doesn't get individual responses.
 SuggestedRemedy
 replace
 "The ability for the MPSE to query all attached MPDs"
 with
 "The ability for the MPSE to query any attached MPDs"
 Proposed Response Response Status O

CI 189 SC 189.4.5 P 112 L 12 # 219
 Jones, Chad Cisco Systems, Inc.
 Comment Type E Comment Status X Editorial
 I found this sentence hard to parse: "The MPSE waits TMark_measure between applying the mark event voltage at the entrance of HIGH_MARK before measuring the mark event current IDiscovery in DISCOVERY_HIGH_MARK."
 I'll take a crack at making it better in the remedy.
 SuggestedRemedy
 Change text to: "The MPSE waits TMark_measure between applying the mark event voltage at the entrance of the HIGH_MARK state before measuring the mark event current IDiscovery in the DISCOVERY_HIGH_MARK state."
 Alternately, this paragraph seems to be describing the state diagram with no new information, I could support deleting the paragraph.
 Proposed Response Response Status O

CI 189 SC 189.4.5 P 112 L 19 # 212
 Zimmerman, George CME Consulting/ADI,APLgp,Cisco,Marvell,Onsemi,So
 Comment Type E Comment Status D EZ
 State names shouldn't be hyphenated if it can be avoided.
 SuggestedRemedy
 Editor to invoke suppress hyphenation in lines 18 through 25.
 Proposed Response Response Status W

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CI **189** SC **189.4.5** P **122** L **30** # **291**
 Paul, Michael Analog Devices
 Comment Type **E** Comment Status **X** Editorial
 T_{Discover_backoff} is not in table 189-3.
 SuggestedRemedy
 I believe we are looking for T_{Backoff} here.
 Proposed Response Response Status **O**

CI **189** SC **189.4.6** P **114** L **6** # **220**
 Jones, Chad Cisco Systems, Inc.
 Comment Type **ER** Comment Status **D** Editorial
 Table 189-5 needs the additional information column filled.
 SuggestedRemedy
 Add this additional information for the following items:
 Item 2 see 189.4.7 (remove divider, same info for each type)
 item 4 see 189.4.9
 item 5 see 189.4.9
 item 7,8,9 see 189.4.10.1
 item 11,12 see 189.4.8
 Proposed Response Response Status **W**

CI **189** SC **189.4.6** P **114** L **8** # **183**
 Maguire, Valerie Copperopolis; aff'l w/ CME Consulting and Cisco
 Comment Type **E** Comment Status **D** EZ
 Remove empty table columns.
 SuggestedRemedy
 Delete column "Additional Information" in Table 189-5 and Table 189-10
 Proposed Response Response Status **W**

CI **189** SC **189.4.6** P **114** L **11** # **270**
 Brychta, Michal Analog Devices
 Comment Type **T** Comment Status **X** MPSE
 VMPSE V: Min 26V
 SuggestedRemedy
 I think the intention was this voltage to be <24V, is 21.6V correct value?
 Proposed Response Response Status **O**

CI **189** SC **189.4.6** P **114** L **12** # **141**
 Huber, Thomas Nokia
 Comment Type **E** Comment Status **D** EZ
 In table 189-5, the table cells in the Unit column for Item 1 should be merged, since the unit for both of the subsequent rows is V
 SuggestedRemedy
 Merge the table cells
 Proposed Response Response Status **W**

CI **189** SC **189.4.8** P **114** L **53** # **221**
 Jones, Chad Cisco Systems, Inc.
 Comment Type **T** Comment Status **D** MPSE
 We state that Icut is "PMPSE/VMPSE" in item 11 and never explain this. As a previous comment has pointed the reader here, this is where we explain.
 SuggestedRemedy
 add the text: "The minimum value of Icut is PMPSE/VMPSE to ensure that the PSE delivers the guaranteed power regardless of VMPSE. Icut is required to scale with VMPSE if the MPSE cannot support a minimum of 1A at any VMPSE. There is no maximum ICUT as the minimum ILIM bounds the maximum ICUT."
 Of course, fix the subscript text as required.
 Proposed Response Response Status **W**

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CI 189 SC 189.4.10.1 P 115 L 30 # 222
Jones, Chad Cisco Systems, Inc.
Comment Type ER Comment Status D EZ
"...ERROR_DELAY state in Table 189-4." This should be Figure, not Table.
SuggestedRemedy
Change to: "ERROR_DELAY state in Figure 189-4."
Proposed Response Response Status W

CI 189 SC 189.5 P 115 L 37 # 36
Jones, Peter Cisco Systems
Comment Type E Comment Status X MPD
The last sentence of the first para of "189.5 Multidrop Powered Device (MPD)" says
"An MPD requiring power from the MPI may simultaneously draw power from an alternate
power source."
In this usage, I think the MPD is requesting power, not requiring it.
SuggestedRemedy
Replace
"An MPD requiring power from the MPI "
With
"An MPD requesting power from the MPI "
Proposed Response Response Status O

CI 189 SC 189.5.1 P 115 L 50 # 223
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D EZ
Need to point the reader to figures to help them understand what was just stated.
SuggestedRemedy
Add: "See Figure 189-1 and Figure 189-5." to the end of the paragraph.
Proposed Response Response Status W

CI 189 SC 189.5.2 P 116 L 16 # 95
Ran, Adeo Cisco
Comment Type TR Comment Status X MPD
"MPDs are current sinks. See Figure 189-5"
It is not clear what "current sink" means. By Kirchhoff's current law, a 2-port network (which an
MPD is) has the same current entering and exiting it, so cannot be current sink. Figure 189-5
does not clarify this statement.
SuggestedRemedy

Clarify the sentence. Perhaps "power sink" is intended.
Proposed Response Response Status O

CI 189 SC 189.5.2 P 116 L 22 # 142
Huber, Thomas Nokia
Comment Type E Comment Status D Editorial
The wording of the last sentence in paragraph above the note is awkward: "Current is
measured as the sum of both higher voltage pins on MP1 and MP2 or both lower voltage pins
on MP1 and MP2." The intent is presumably to sum the currents that are measured at those
pins.
SuggestedRemedy
Change the text to "Current is measured as the sum of the currents at the higher voltage pins
on MP1 and MP2 or the sum of the currents at the lower voltage pins on MP1 and MP2".
Proposed Response Response Status W

CI 189 SC 189.5.2 P 116 L 27 # 224
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status X EZ
"The current used by the MPD lowers the current supplied to the output MP feeding the rest of
the MPDs that follow in the mixing segment."
What is the output MP? Do we mean MPx? I'm guessing MPI, but I could be wrong.
SuggestedRemedy
Change to: "... to the output MPI feeding the rest..."
Proposed Response Response Status O

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CI 189 SC 189.5.2 P 116 L 40 # 173
Baggett, Tim Microchip
Comment Type E Comment Status D EZ
MPSD DTE box in Figure 189-5 appears mislabeled. Should be MPD DTE.
SuggestedRemedy
Change the text in the box labeled "MPSD DTE" in figure 189-5 to "MPD DTE"
Proposed Response Response Status W

CI 189 SC 189.5.2 P 116 L 40 # 96
Ran, Adeo Cisco
Comment Type TR Comment Status D EZ
"MPSD" in the figure is not defined. I assume it is "MPD", but if not, some other change needs to be made.
SuggestedRemedy
Change to "MPD".
Proposed Response Response Status W

CI 189 SC 189.5.2 P 116 L 41 # 37
Jones, Peter Cisco Systems
Comment Type ER Comment Status D EZ
Type in Figure 189–5, it says "MPSD" where it should say "MPD".
SuggestedRemedy
Replace
"MPSD"
With
"MPD"
Proposed Response Response Status W

CI 189 SC 189.5.3.2 P 117 L 7 # 167
Baggett, Tim Microchip
Comment Type E Comment Status D Editorial
Some of the constants in this section need improved references to the appropriate entries in the referenced tables. As presently written, it is not clear which parameters some of the constants refer too.
SuggestedRemedy
Apply subscripts as necessary.
P117 L7 (VDiscovery_th)
Change: "Mark discovery threshold voltage (see Table 189–7)"
To: "Mark discovery threshold voltage, VDiscovery_th (see Table 189–7)"
P117 L12 (VReset_th)
Change: "Mark discovery threshold voltage (see Table 189–7)"
To: "Mark discovery threshold voltage, <insert correct Symbol> (see Table 189–7)"
Proposed Response Response Status W

CI 189 SC 189.5.3.2 P 117 L 10 # 174
Baggett, Tim Microchip
Comment Type E Comment Status D EZ
Definition of VReset_MPD_max refers to wrong voltage symbol in Table 189-7
SuggestedRemedy
<x> denotes subscript 'x'
Change: V<Reset_MPD>
To: V<MPD_reset>
See P122 L23
Proposed Response Response Status W

CI 189 SC 189.5.3.2 P 117 L 14 # 168
Baggett, Tim Microchip
Comment Type E Comment Status X MPD
It is not clear to me what the values of Vtype0_th and Vtype1_th should be.
SuggestedRemedy
Please improve the description in L14 for Vtype0_th and L 17 for Vtype1_th
Proposed Response Response Status O

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CI 189 SC 189.5.3.3 P 117 L 42 # 38

Jones, Peter Cisco Systems

Comment Type E Comment Status D EZ

the indentation for the values of 'present_sig' is not quite right

SuggestedRemedy

Fix indentation.

Proposed Response Response Status W

CI 189 SC 189.5.3.3 P 118 L 1 # 169

Baggett, Tim Microchip

Comment Type E Comment Status X State Diagrams

The variable present_mpi_power is missing a description.

SuggestedRemedy

Add a description for the present_mpi_power variable.

Proposed Response Response Status O

CI 189 SC 189.5.3.3 P 118 L 5 # 175

Maguire, Valerie Copperopolis; aff'l w/ CME Consulting and Cisco

Comment Type E Comment Status D EZ

"Transmit Power Signature TPS" is redundant

SuggestedRemedy

Replace "Transmit Power Signature TPS" with "TPS"

Proposed Response Response Status W

CI 189 SC 189.5.3.3 P 118 L 10 # 170

Baggett, Tim Microchip

Comment Type E Comment Status X MPD

The entry for V<MPD> variable includes a reference to Table 189-9. I do not, however, see any connection to an entry in this table, not that their should be. This is simply the measured voltage at the MPD MPI, right?

SuggestedRemedy

Delete the reference to Table 189-9, or include a reference to a specific symbol/parameter within the table.

Proposed Response Response Status O

CI 189 SC 189.5.3.5 P 120 L 52 # 293

Paul, Michael Analog Devices

Comment Type T Comment Status X State Diagrams

We may need a DO_DISCOVERY7 and DO_MARK7 state if we expand the discovery interpretations

SuggestedRemedy

See presentation mpaul_da_02...

Proposed Response Response Status O

CI 189 SC 189.5.3.5 P 121 L 22 # 225

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status X EZ

arrowhead enters into the box for PON_LOAD_ON.

SuggestedRemedy

fix arrowhead to just touch the edge.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.5.4 P 122 L 8 # 226

Jones, Chad

Cisco Systems, Inc.

Comment Type E Comment Status X MPD

Additional information column needs filled out.
Also, what does 2.7V to 19.1V mean in item 9? It seems like not enough additional information. I suggest that is moved to the text and point to the section in the table (after we figure out what else to say).

SuggestedRemedy

Seems all this additional info is "see 189.5.4", which is the section we are in. Therefore, delete the column after relocating the 2.7 to 19.1 V into the text and explaining it. I apologize as I don't know what the solution is, not sure why it was needed in the table. I'm also happy with just deleting that with the column.

Proposed Response Response Status O

CI 189 SC 189.5.4 P 122 L 19 # 97

Ran, Adeo

Cisco

Comment Type E Comment Status D EZ

Some current values are expressed in mA while others are in uA. This is contrary to the style manual (16.3.1: "The same units of measure shall be used throughout each column"). Using mA always would still yield easily readable values.

SuggestedRemedy

Change the rows that use uA units to mA (200 uA ==> 0.2 mA).
Change elsewhere if necessary.

Proposed Response Response Status W

CI 189 SC 189.5.4 P 122 L 30 # 98

Ran, Adeo

Cisco

Comment Type E Comment Status D EZ

Per the style manual, a space should separate the value and the unit.

SuggestedRemedy

Change "2.7V to 19.1V" to "2.7 V to 19.1 V"

Proposed Response Response Status W

CI 189 SC 189.5.4 P 122 L 39 # 227

Jones, Chad

Cisco Systems, Inc.

Comment Type E Comment Status D EZ

Two discovery symbols on this line that don't have the proper subscript: IMPD_discover and IMPD_mark.

SuggestedRemedy

Change them to match Item 4 and 5 in Table 189-7.
{IMPD_discover} and {IMPD_mark}.

Proposed Response Response Status W

CI 189 SC 189.5.4 P 122 L 40 # 228

Jones, Chad

Cisco Systems, Inc.

Comment Type E Comment Status D EZ

"During event 3, Type 0 MPDs respond and Type 1 and Type mixed MPDs do not. During event 4, Type 1 MPDs respond and Type 0 and Type mixed MPDs do not. During event 5, Type mixed MPDs respond and Type 0 and Type 1 MPDs do not."
X respond and Y do not. I don't like the "and" and would prefer it replaced with "while".

SuggestedRemedy

Replace "and" with "while" in 3 spots
"During event 3, Type 0 MPDs respond and Type 1 while Type mixed MPDs do not. During event 4, Type 1 MPDs respond and Type 0 while Type mixed MPDs do not. During event 5, Type mixed MPDs respond while Type 0 and Type 1 MPDs do not."

Proposed Response Response Status W

CI 189 SC 189.5.4 P 123 L 17 # 292

Paul, Michael

Analog Devices

Comment Type T Comment Status X MPD

Potentially add other interpretations of the bits to table 189-8 so that we can use the da power standard for other point-to-point systems (dg)

SuggestedRemedy

See presentation mpaul_da_02...

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.5.5 P 123 L 27 # 229

Jones, Chad Cisco Systems, Inc.

Comment Type E Comment Status D Editorial

Table 189-9 needs the additional information column filled.
Also, the value in item 5 needs the leading 0

SuggestedRemedy

Add text:
Item 3, delete what's there and replace with see 189.5.5.2
Item 5, see 189.5.5.1.
Also item 5, change .01 to 0.01.
Item 8, see 189.5.5.1

Proposed Response Response Status W

CI 189 SC 189.5.5 P 123 L 41 # 99

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

Per the style manual, multiplication should be denoted by the sign ×. An asterisk should not be used.

SuggestedRemedy

Change per comment.
Change elsewhere if necessary.

Proposed Response Response Status W

CI 189 SC 189.5.5 P 123 L 44 # 100

Ran, Adeo Cisco

Comment Type ER Comment Status D EZ

Per the style manual (16.3.2) "the decimal point should be preceded by a zero".
Also, other current values in this table are in mA.

SuggestedRemedy

Change ".01" to "10" and units from "A" to "mA".

Proposed Response Response Status W

CI 189 SC 189.5.5 P 124 L 11 # 230

Jones, Chad Cisco Systems, Inc.

Comment Type TR Comment Status D MPD

Table 189-9, item 10. We put a value of 180uF in there and asked people to evaluate if that's acceptable. I've tried to (and failed so far) reach the original author of the 180uF in 802.3af to confirm my recollection. What I recall is that this is the biggest value that can be designed into a PD without putting inrush control while in the POWER_ON state. This was to ensure a PD didn't force a PSE to exceed the voltage slew rate in the case of a PSE changing from Vportmax to Vportmin or vice versa (for example in a redundant supply configuration during a failover).

As such, this 180uF is the TOTAL capacitance that can be on the mixing segment and needs to be divided by all the MPDs.

Also, the min to max range of AF was 13V. our worst case min to max is 16V, so I think the 180 needs scaled by 13/16. This would yield 9uF per unit load. Since a min to max swing is highly unlikely, I think we can round to 10uF.

SuggestedRemedy

Change the max value of item 10 to "10" and put "per unit load" in the additional information column. We might choose to 189.5.5.4 to explain this better.

Proposed Response Response Status W

CI 189 SC 189.5.5 P 124 L 22 # 245

Potterf, Jason Cisco

Comment Type TR Comment Status X MPD

The MPD current slew rate requires a test procedure to prove that the PD meets the appropriate limits.

SuggestedRemedy

After Table 189-9, insert test from 104.5.7.4 PD ripple and transients. I shall provide a presentation with specific suggested text for the Task Force to consider.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.5.5.1 P 124 L 26 # 172

Baggett, Tim Microchip

Comment Type E Comment Status X MPD

Lines 26, 27, and 35 refer to conditions when the MPD voltage measured at its MDI, V<MPD>, is greater than Vtype0_th. By examination of Figure 189-6 and Figure 189-7 it appears that V<MPD> is compared to V<Discovery_th>.

SuggestedRemedy

Change "Vtype0_th" in lines 26, 27, and 35 to "VDiscovery_th"

Proposed Response Response Status O

CI 189 SC 189.5.5.2 P 124 L 41 # 39

Jones, Peter Cisco Systems

Comment Type E Comment Status X Unit Load

A lot of the text in "189.5.5.2 MPD unit load" is repeating text from '189.3 System type power requirement" where it could use a reference instead.

SuggestedRemedy

Replace

"MPDs consume integer units of load, known as "unit loads".

For Type 0 and Type Mixed MPDs, one unit load represents 1W. For Type 1 MPDs, one unit load represents

2W.

A mixing segment can support up to 16 unit loads. Each MPD is allocated a minimum of 1 unit load and

may consume no more than 16 unit loads. The MPD system type and unit load level should be clearly indicated so users can track loading on a mixing segment.

MPD unit load level shall be an integer indicating the maximum power required by the MPD, where Nunit * PMPD_1U is greater than the MPD's power requirements for the MPD system type."

With

"MPD unit loads are described in 189.3 System type power requirements.

MPD unit load level shall be an integer indicating the maximum power required by the MPD, where Nunit * PMPD_1U is greater than the MPD's power requirements for the MPD system type."

Proposed Response Response Status O

CI 189 SC 189.5.5.2 P 124 L 44 # 101

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

Per the style manual, a space should separate the value and the unit.

SuggestedRemedy

Change 1W to 1 W (or 1 Watt). Similarly for 2W.

Change elsewhere if necessary.

Proposed Response Response Status W

CI 189 SC 189.5.5.2 P 124 L 52 # 102

Ran, Adeo Cisco

Comment Type E Comment Status X EZ

Per the style manual, multiplication should be denoted by the sign ×. An asterisk should not be used.

SuggestedRemedy

Change per comment.

Change elsewhere if necessary.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.5.5.2 P 125 L 3 # 231

Jones, Chad

Cisco Systems, Inc.

Comment Type ER Comment Status D Editorial

We should repeat the unit load text here, to explain it for those that might only read the PD section (cause experience tells us that WILL happen). copied my previous comment: Unit loads again. I've been vocal that I hate that the concept "leaves power on the table", mostly because I know the biggest complaint we will get after approval is "why isn't there more power available?" I still don't have a good solution to make it easy to keep a unit load concept and optimize the power budget, therefore I propose that we tell the reader that the unit load concept doesn't allocate all the power.

SuggestedRemedy

See what we did for 189.3 and copy it here.
Add at the end of the section: "The unit load concept will result in a system that will work but one that has power left over that cannot be allocated. Unit loads were introduced to make it easy for the uninitiated to install a network. It is possible to design the network to completely comply with all the other requirements while exceeding the unit load restrictions. This should be done only by experienced installers or under engineering supervision."

Proposed Response Response Status W

CI 189 SC 189.5.5.3 P 124 L 6 # 176

Maguire, Valerie

Copperopolis; aff'l w/ CME Consulting and Cisco

Comment Type E Comment Status D EZ

"transmit power signature (TPS)" is redundant

SuggestedRemedy

Replace, "transmit power signature (TPS)" with "TPS" in the first sentence of the clause.

Proposed Response Response Status W

CI 189 SC 189.5.5.3 P 125 L 10 # 171

Baggett, Tim

Microchip

Comment Type E Comment Status X MPD

The text attempts to state that the MPD may have its power removed if it does not send a Transmit Power Signature every T<TPSDO> seconds. However it states that power may be removed *within* the limits of T<TPSDO>. This should state that power will be removed after the timer expires without receiving a TPS, not during the timer.

SuggestedRemedy

Change:

"An MPD that does not report TPS may have its power removed within the limits of T<TPSDO> as defined in Table 189-5."

To:

"An MPD that does not report TPS within the limits of T<TPSDO> as defined in Table 189-5 may have its power removed."

Proposed Response Response Status O

CI 189 SC 189.5.5.3 P 125 L 17 # 232

Jones, Chad

Cisco Systems, Inc.

Comment Type E Comment Status D EZ

There is no additional information to add to Table 189-10.

SuggestedRemedy

Delete the additional information column of Table 189-10.

Proposed Response Response Status W

CI 189 SC 189.6.1.1 P 125 L 43 # 246

Potterf, Jason

Cisco

Comment Type T Comment Status X Environmental

The current isolations environments need additional refinement.

SuggestedRemedy

I will provide a presentation for the task force to consider.

Proposed Response Response Status O

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.6.1.1 P 125 L 47 # 40

Jones, Peter Cisco Systems

Comment Type ER Comment Status D EZ

Using "a LAN" or "a LAN or LAN segment" is more complicated than it needs to be. Just say "a mixing segment".

SuggestedRemedy

in MPoE Environment A/B/C, replace
""a LAN" or "a LAN or LAN segment" "
With
"a mixing segment"

Proposed Response Response Status W

CI 189 SC 189.6.1.1.1 P 126 L 15 # 41

Jones, Peter Cisco Systems

Comment Type ER Comment Status D EZ

In "189.6.1.1.1 MPoE Environment A requirements", the text includes "isolation requirements of the MAU or PHY" and "isolation requirement of the MAU/PHY"
T1M doesn't include an MAU.

SuggestedRemedy

in MPoE Environment A/B/C, replace
" the MAU or PHY" or "the MAU/PHY"
With
"the PHY"

Proposed Response Response Status W

CI 189 SC 189.7 P 127 L 17 # 103

Ran, Adeo Cisco

Comment Type E Comment Status X Editorial

The title "Environmental" seems lacking. This subclause covers more than environmental things. Installation and labeling are not what people consider environmental.
Also in 188.10 "Environmental specifications".

SuggestedRemedy

Find the correct heading or restructure this subclause.
Align with 188.10.

Proposed Response Response Status O

CI 189 SC 189.7 P 127 L 17 # 182

Maguire, Valerie Copperopolis; aff'l w/ CME Consulting and Cisco

Comment Type E Comment Status D Editorial

Align clause header with 188.10 "Environmental specifications"

SuggestedRemedy

Replace, "189.7 Environmental" with "189.7 Environmental specifications"

Proposed Response Response Status W

CI 189 SC 189.7.2 P 127 L 34 # 104

Ran, Adeo Cisco

Comment Type E Comment Status D EZ

The list has both dashes and letters.
Letters don't contribute here.

SuggestedRemedy

Delete the letters.

Proposed Response Response Status W

CI 189 SC 189.7.2 P 127 L 41 # 143

Cox, Ian Broadcom

Comment Type E Comment Status X EZ

Installati looks like it should be Installation

SuggestedRemedy

change installatio to installation

Proposed Response Response Status O

CI 189 SC 189.7.2 P 127 L 41 # 233

Jones, Chad Cisco Systems, Inc.

Comment Type ER Comment Status X EZ

incomplete word: installati

SuggestedRemedy

change to installation

Proposed Response Response Status O

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CI 189 SC 189.7.2 P 127 L 42 # 234
Jones, Chad Cisco Systems, Inc.
Comment Type ER Comment Status X EZ
extra and/or missing word(s): "...are not negated during installation on and performance..."
not 100% sure what we are trying to say so I'm gonna guess in my proposed remedy.
SuggestedRemedy
change to: "...are not negated during installation or on performance..."
Proposed Response Response Status O

CI 189 SC 189.7.2 P 127 L 42 # 105
Ran, Adeo Cisco
Comment Type E Comment Status X EZ
"Installati" on the second line and "on" on the third line indicate an interesting clerical error.
The whole paragraph seems to be garbled in comparison to the similar text in the base standard, e.g. in 145.6.2:
"Such electrical safety hazards should be avoided or appropriately protected against for proper network installation and performance. In addition to provisions for proper handling of these conditions in an operational system, special measures should be taken to verify that the intended safety features are not negated during installation of a new network or during modification of an existing network."
SuggestedRemedy
Correct the text to what it should be, with editorial license.
Proposed Response Response Status O

CI 189 SC 189.7.2 P 127 L 44 # 235
Jones, Chad Cisco Systems, Inc.
Comment Type ER Comment Status X EZ
last sentence of this paragraph isn't complete and "systemof" needs a space. "In addition to provisions for proper handling of these conditions in an operational systemof a new network or during modification of an existing network."
again, not 100% sure what we are trying to say, but I'll guess.
SuggestedRemedy
change to: "In addition, provisions should be take for proper handling of these conditions in an operational system of a new network or during modification of an existing network."
Proposed Response Response Status O

CI 189 SC 189.7.2 P 127 L 44 # 144
Cox, Ian Broadcom
Comment Type E Comment Status X EZ
Words joined together systemof
SuggestedRemedy
change systemof to system of
Proposed Response Response Status O

CI 189 SC 189.7.3 P 128 L 1 # 236
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D EZ
"... and electrically secure in a..." "secure" needs to be "secured"
SuggestedRemedy
change to "secured"
Proposed Response Response Status W

CI 189 SC 189.7.3 P 128 L 2 # 237
Jones, Chad Cisco Systems, Inc.
Comment Type E Comment Status D EZ
missing a word: "...should be routed in way to provide..."
SuggestedRemedy
change to "...should be routed in a way to provide..."
Proposed Response Response Status W

IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI 189 SC 189.7.3 P 128 L 6 # 180
Maguire, Valerie Copperopolis; aff'l w/ CME Consulting and Cisco
Comment Type T Comment Status D Environmental
This is a generalization, so it's really not helpful. Automotive application system designers understand their environmental requirements.
SuggestedRemedy
Delete, "Automotive environmental conditions are generally more severe than those found in many commercial and industrial environments."
Proposed Response Response Status W

CI 189 SC 189.7.4 P 128 L 11 # 181
Maguire, Valerie Copperopolis; aff'l w/ CME Consulting and Cisco
Comment Type T Comment Status D Editorial
I think we mean current carrying capacity (i.e., ampacity). Sentence could be more succinct.
SuggestedRemedy
Replace "It is possible that the current carrying capability of a cabling cross-connect may be exceeded by the current capacity of the MPSE. " with "The current capacity of the MPSE may exceed the current carrying capacity of a cabling cross-connect."
Proposed Response Response Status W

CI 189 SC 189.7.8 P 129 L 5 # 107
Ran, Adee Cisco
Comment Type T Comment Status X Editorial
Item a lists quantities as unit names ("in terms of Watts, Amps"). This seems to contrast the style manual: "Unit symbols may not be used to stand for the quantity being measured" (14.4). Also "Amps" is not a proper unit.
SuggestedRemedy
Rephrase this sentence to use the quantities rather than the units.
Proposed Response Response Status O

CI 189 SC 189.7.8 P 129 L 5 # 106
Ran, Adee Cisco
Comment Type E Comment Status X EZ
The items in the list do not seem to have a logical order. For example I would expect item c to be the last one.
This is a lettered list, which seem to indicate the order is important.
SuggestedRemedy
Reorder the list based on importance of the information (Suggestion: using the current letters - b, d, g, f, a, e, c).
Consider making it a dashed list.
Proposed Response Response Status O

CI 189 SC 189.7.8 P 129 L 12 # 108
Ran, Adee Cisco
Comment Type TR Comment Status X Editorial
"Type 0" and "Type 1" seem to apply to MPDs rather than to systems. See 189.5.1.
SuggestedRemedy
Change "System type" to "MPD type".
Proposed Response Response Status O

CI 189 SC 189.8.3 P 131 L 6 # 109
Ran, Adee Cisco
Comment Type E Comment Status X MPSE
I assume a device conforming to clause 189 is either MPSE or MPD, both not both (although I didn't find it not stated anywhere).
The PICS should reflect that. See 21.6.2 for the notation.
SuggestedRemedy
Change the status of items MPSE and MPD to O/1.
Proposed Response Response Status O

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CI **189** SC **189.8.4.1** P **131** L **20** # **110**

Ran, Adeo Cisco

Comment Type **E** Comment Status **X** PICS

The items in 189.8.4.1 appear as mandatory, but they do not apply to MPSEs and MPDs - only to mixing segments (installation). They should be made conditional on a major option (which is currently missing).

SuggestedRemedy

Add a major option for mixing segment and make these items conditional on it. Apply also in 189.8.4.4 where necessary.

Proposed Response Response Status **O**

CI **189** SC **189.8.4.3** P **133** L **17** # **112**

Ran, Adeo Cisco

Comment Type **ER** Comment Status **D** EZ

Typo "wiht"

SuggestedRemedy

change to "with"

Proposed Response Response Status **W**

CI **189** SC **189.8.4.4** P **133** L **29** # **113**

Ran, Adeo Cisco

Comment Type **E** Comment Status **X** PICS

Some items seem to be conditional on Environment A, B, or C.

SuggestedRemedy

Add major options for environment and make these items conditional on the corresponding options.

Proposed Response Response Status **O**

CI **00** SC **Contents** P **14** L **1** # **277**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **D** EZ

Missing header

SuggestedRemedy

Include section header ("Contents")

Proposed Response Response Status **W**

CI **00** SC **Contents** P **14** L **17** # **279**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **D** EZ

5th level subclause numbers and titles are run together. Also 4th level in Clause 45

SuggestedRemedy

Set the tab stops to allow more space for the numbers

Proposed Response Response Status **W**

CI **00** SC **Contents** P **14** L **27** # **278**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **D** EZ

Some subclause numbers and titles are run together

SuggestedRemedy

Fix the formatting

Proposed Response Response Status **W**

CI **00** SC **Contents** P **15** L **47** # **280**

Dawe, Piers Nvidia

Comment Type **E** Comment Status **D** EZ

Page numbers for some clauses are joined to clause title rather than being on the left

SuggestedRemedy

Fix the formatting

Proposed Response Response Status **W**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

CI **00**

SC **Contents**

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IEEE P802.3da D2.0 10 Mbps Multidrop Enhancements

CI J SC J.1 P 133 L 13 # 111

Ran, Adeo Cisco

Comment Type ER Comment Status X Editorial

Removing the subclause references is not a good idea. This Annex is referenced from many places and many readers may not know what PI or MPI are and where the "relevant specific requirements associated with option c" can be found.

SuggestedRemedy

Keep the references to clause 33 and 145, add references to clause 189 as appropriate, with editorial license.

Proposed Response Response Status O

CI 00 SC Keywords P 3 L 5 # 272

Dawe, Piers Nvidia

Comment Type E Comment Status D Editorial

IEEE 802.3cg is not mentioned anywhere in the draft

SuggestedRemedy

Use it or delete it

Proposed Response Response Status W

CI 00 SC Patents P 7 L 9 # 276

Dawe, Piers Nvidia

Comment Type E Comment Status X EZ

A blue URL should be a link

SuggestedRemedy

Make it active. Get the template fixed if that is the issue.

Proposed Response Response Status W

CI 00 SC Photocopies P 6 L 23 # 274

Dawe, Piers Nvidia

Comment Type E Comment Status D EZ

A blue URL should be a link

SuggestedRemedy

Make it active. Get the template fixed if that is the issue.

Proposed Response Response Status W

CI 00 SC Updating P 6 L 39 # 275

Dawe, Piers Nvidia

Comment Type E Comment Status D EZ

The link behind "IEEE Xplore" is <https://ieeexplore.ieee.org/browse/standards/collection/ieee/> which is footnote 3.

The link behind "contact IEEE" is <https://standards.ieee.org/content/ieee-standards/en/about/contact/index.html> which is footnote 2.

SuggestedRemedy

Move the pointer for footnote 3 to immediately follow "IEEE Xplore".

A pointer for footnote 2 could immediately follow "contact IEEE".

Get the template fixed.

Proposed Response Response Status W