

Preliminary

## IEEEP802d3d1\_D2\_1 Management Information Base (MIB) definitions for Ethernet comments

Preliminary

CI 00 SC P L # 34  
Anslow, Peter Ciena

Comment Type E Comment Status X

"the 'system' group defined in MIB-II IETF RFC 1213." would read better as "the 'system' group defined in IETF RFC 1213 (MIB-II)."

SuggestedRemedy

change "in MIB-II IETF RFC 1213." to "in IETF RFC 1213 (MIB-II)."

Proposed Response Response Status O

CI 00 SC P L # 107  
Lynskey, Eric Broadcom

Comment Type T Comment Status X

If we choose to update this in the future for 10GEAPON, it will be easier to not explicitly specify the broadcast LLID, since it uses a different LLID.

SuggestedRemedy

Replace instances of "broadcast LLID (with a value of 0xffff)" with "broadcast LLID."

Proposed Response Response Status O

CI 00 SC P L # 104  
Lynskey, Eric Broadcom

Comment Type T Comment Status X

There is a shall statement associated with this object. The equation used to determine sync time is incorrect. The dot3MpcpSyncTime object has units of TQ (16 ns), but the equation does not take into account any rounding that may occur. It is not clear if the remainder of (sync lock time ns) / 16 should be rounded up or down.

SuggestedRemedy

For all equations of this nature, make it clear that the value should be rounded up to the nearest TQ. In fact, this object isn't really applicable for the ONU. The ONU is told the sync time of the OLT already in units of TQ. It does not know the actual sync lock time of the OLT.

Proposed Response Response Status O

CI 00 SC 0 P L # 35  
Anslow, Peter Ciena

Comment Type E Comment Status X

The draft is inconsistent in the name used for the Ethernet-like MIB module.

A search of the draft gives:

Ethernet-like 117 instances

Ether-like 6 instances

Etherlike 11 instances

SuggestedRemedy

Since the title of clause 11 is Ethernet-like interface MIB module, change all instances of Ether-like and Etherlike to Ethernet-like unless this will alter the function of the compileable text.

Proposed Response Response Status O

CI 00 SC 0 P L # 36  
Anslow, Peter Ciena

Comment Type E Comment Status X

There are still some instances of "bps" rather than b/s

SuggestedRemedy

Page 105 lines 13, 14 change "100Mbps" to "100 Mb/s" (2 instances)

Page 246 line 19 change "64 Kbps" to "64 kb/s"

Page 267 lines 13, 18 change "Kbps" to "kb/s" if this won't change the MIB function (2 instances)

Page 269 line 6 change "Kbps" to "kb/s" if this won't change the MIB function

Page 290, line 23 change "Kbps" to "kb/s" (2 instances)

Page 292 lines 9 to 12:

change "data rates 192-2304 Kbps" to "data rates from 192 kb/s to 2304 kb/s"

change "rates 2320-3840 Kbps" to "rates from 2320 kb/s to 3840 kb/s"

change "and 768-5696 Kbps" to "and from 768 kb/s to 5696 kb/s"

Page 292 line 53 change "Kbps" to "kb/s" if this won't change the MIB function

Page 292 line 58 change "(n x 64)Kbps" to "(n x 64)kb/s"

Page 293 line 21 change "Kbps" to "kb/s" if this won't change the MIB function

Page 293 line 26 change "(n x 64)Kbps" to "(n x 64)kb/s"

Page 296 line 43 change "Kbps" to "kb/s" (2 instances)

Page 298 lines 13, 26 change "Kbps" to "kb/s" if this won't change the MIB function (2 instances)

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 00

SC 0

Page 1 of 18

7/7/2010 3:26:58 PM

CI 00 SC 0 P L # 37  
Anslow, Peter Ciena

Change "OPTIONAL" to "optional" on:  
Page 248 line 6

Comment Type T Comment Status X Proposed Response Response Status O

There are still some instances of capitalised IETF keywords in the draft:  
REQUIRED, SHALL, SHOULD, RECOMMENDED, MAY, and OPTIONAL

SuggestedRemedy

Change "REQUIRED" to "required" on:  
Page 213 line 48  
Page 248 line 8

On page 251 line 42, change "The implementation of the EtherLike-MIBdefined in Clause 10 and MAU-MIB defined in Clause 13 modules is REQUIRED for EFMCu interfaces." to "An agent implementing the objects defined in this clause shall also implement the objects required by the Ethernet-like interface MIB module defined in Clause 10 and the objects required by the MAU MIB module defined in Clause 13.

On Page 338 line 30 change "It is REQUIRED that an agent implementing the interface-MAU related objects in the MAU-MIB will also fully comply with ..." to "An agent implementing the interface-MAU related objects in the MAU-MIB shall also fully comply with ..."

Change "SHALL" to "shall" on:  
Page 246 lines 18, 19 (2 instances)  
Page 247 line 55  
Page 250 lines 19, 20 (3 instances)  
Page 252 lines 7, 8 (2 instances)

Change "SHOULD" to "should" on:  
Page 212 line 65  
Page 326 lines 48, 53 (2 instances)  
Page 328 lines 36, 40 (2 instances)  
Page 342 line 15

Change "RECOMMENDED" to "recommended" on:  
Page 249 line 56

Change "MAY" to "may" on:  
Page 162 line 19  
Page 248 line 6  
Page 249 line 51  
Page 251 lines 16, 34 (2 instances)  
Page 345 line 50  
Page 346 line 17  
Page 350 line 55  
Page 351 line 22

CI 00 SC 0 P1 L41 # 89  
Dawe, Piers IPtronics

Comment Type ER Comment Status X

This draft of 802.3.1 has virtually no material to set the context or explain what it is about. No explanation of MIBs or SNMP, although there are a few references to IETF documents.

The introductory material for individual clauses ranges from two lines to 8 pages. It is extremely unbalanced and very lacking for "mainstream" Ethernet port types.  
 5. Ethernet logical link discovery protocol (LLDP) extension MIB module has only two lines to set the context and explain what LLDP extension is about.  
 6. Ethernet operations, administration, and maintenance (OAM) MIB module has a page and a half.  
 7. Ethernet repeater device MIB module has half a page, which don't say what a repeater or repeater device is or how it works, but do provide references.  
 8. Ethernet data terminal equipment (DTE) power via medium dependent interface (MDI) MIB module has a couple of paragraphs, doesn't have a reference to PoE.  
 9. Ethernet passive optical networks (EPON) MIB module has 8 pages! Including a complete general-purpose teach-in for 1G-EPON.  
 10. Ethernet-like interface MIB module has just two paragraphs,  
 "This clause defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it defines objects for managing Ethernet-like interfaces.  
 Instances of these object types represent attributes of an interface to an Ethernet-like communications medium." No scope, no references, no background, architecture or meaningful introduction. Compare Clause 9.  
 11. Ethernet in the first mile copper (EFMCu) interfaces MIB module has 1/3 page.  
 12. Ethernet wide area network (WAN) interface sublayer (WIS) MIB module has 1/3 page.  
 13. Ethernet medium attachment units (MAUs) MIB module has 1/3 page, containing a little useful history, but no primer on MAUs, CSMA/CD, 802.3 port types, network topology, ...

#### SuggestedRemedy

Originally I intended to abstain on this draft standard because I did not know what it was about. Now, I am voting against, because the draft fails to give the reader a reasonable chance to learn what it is about, what the scope and purpose of the overall document is, and of the individual clauses. The whole document needs an introduction, not just a description of document rearrangements. Clauses 10 and 13 need introductions. The balance between different clauses should be improved.

Proposed Response Response Status O

CI 01 SC 1 P13 L35 # 38  
Anslow, Peter Ciena

Comment Type E Comment Status X

This says "and IETF RFCs 2108, 3621, 3635, 3637, 4836, 4837, 4878, 5066.", but the IEEE style manual uses the full title for each instance

#### SuggestedRemedy

change to "and IETF RFC 2108, IETF RFC 3621, IETF RFC 3635, IETF RFC 3637, IETF RFC 4836, IETF RFC 4837, IETF RFC 4878, IETF RFC 5066."

Proposed Response Response Status O

CI 01 SC 1.1 P13 L36 # 87  
Dawe, Piers IPtronics

Comment Type ER Comment Status X

Supporting Dan Romascanu's comment "I could not figure out the logic of the order of the inclusion of the MIB modules."

#### SuggestedRemedy

Whether you change the order or not, add text somewhere in Clause 1 (it could be a new "1.5 Organization of this standard" to tell the reader what's going on and where to find things.

Proposed Response Response Status O

CI 01 SC 1.1 P13 L46 # 108  
Thompson, Geoff GraCaSI

Comment Type ER Comment Status X

The scope statement doesn't line up with the statement in the preceding paragraph. Specifically, the previous paragraph says the standard "supersedes ...802.1AB-2009 Annex F" but the scope doesn't reflect that.

#### SuggestedRemedy

Not precisely sure, but I think the correct corrective text would show up in the 2nd sentence as "as well as extensions [specified in 802.1AB] resulting from recent amendments to IEEE Std 802.3."

(or is it the case that this doesn't supersede 802.1AB, but rather that was done by 802.3at? It's all so confusing. I've lost track.)

Proposed Response Response Status O

CI 01 SC 1.1 P13 L46 # 99  
Dawe, Piers IPtronics

Comment Type TR Comment Status X

Text says "This standard contains the Management Information Base (MIB) module specifications for IEEE Std 802.3, also known as Ethernet." That means all of 802.3, including all recent amendments (the entry in 2. Normative references is undated). Also it says "...as well as extensions resulting from recent amendments to IEEE Std 802.3." Yet response to e.g. D2.0 comments 190 and 297 say e.g. "updates resulting from 802.3at, 802.3av, 802.3az, 802.3ba will be considered in a future amendment to 802.3.1".

#### SuggestedRemedy

Delete "as well as extensions resulting from recent amendments to IEEE Std 802.3." Insert "This standard addresses the published 802.3-2008 [and 802.3xx if any amendments since 802.3-2008 are indeed included]. It does not address 802.3at, 802.3av, 802.3az, or 802.3ba."

Date the reference to 802.3 in Clause 2. It would be as well to list what's in and what's out there also.

Proposed Response Response Status O

CI 01 SC 1.2 P13 L54 # 109  
Thompson, Geoff GraCaSI

Comment Type E Comment Status X

Paragraph needs minor editorial rework. Just easier to show you my proposed text

#### SuggestedRemedy

The purpose of this standard is to publish the SMlv2 and GDMO MIB module specifications in a single document that is separate from IEEE Std 802.3. The "program" portions of this standard is to be published in a machine-readable format. Future amendments and revisions to IEEE Std 802.3.1 will be performed to update the MIB specifications as required to track future amendments and revisions to IEEE Std 802.3.

Proposed Response Response Status O

CI 01 SC 1.3 P14 L11 # 39  
Anslow, Peter Ciena

Comment Type E Comment Status X

"IETF STD 58, IETF RFC 2578, IETF STD 58, IETF RFC 2579 and IETF STD 58, IETF RFC 2580" is rather confusing since it looks like a lsi of standards where "IETF STD 58" is referenced three time as well as the RFCs.

#### SuggestedRemedy

The "IETF is only needed once per reference so change to "IETF STD 58, RFC 2578, IETF STD 58, RFC 2579 and IETF STD 58, RFC 2580".

To make this more understandable, also consider changing in section 2 (Normative references)to match. For example change "IETF RFC 2578," to "IETF STD 58, RFC 2578,"

Proposed Response Response Status O

CI 01 SC 1.4 P14 L22 # 40  
Anslow, Peter Ciena

Comment Type E Comment Status X

"RFC3410" should be "RFC 3410" similarly elsewhere in the draft.

#### SuggestedRemedy

change "RFC3410" to "RFC 3410" using a non-breaking space (ctrl space)  
Similarly on:  
page 42, line 42  
page 152, line 38  
page 311, line 19

Proposed Response Response Status O

CI 01 SC 1.5 P14 L52 # 41  
Anslow, Peter Ciena

Comment Type E Comment Status X

The reference to RFC 2580 is inconsistent with those in subclause 1.3

#### SuggestedRemedy

Change to "IETF STD 58, RFC 2580"  
Same issue on:  
Page 17, line 32  
Page 24, line 65  
Page 338, line 8

Proposed Response Response Status O

CI 02 SC 2 P16 L41 # 95  
Dawe, Piers IPtronics

Comment Type T Comment Status X

ITU-T Recommendation G.975, 2000—Optical fibre submarine cable systems—Forward error correction for submarine systems.  
has nothing to do with Ethernet MIBs (FEC can be present or absent, and turned on or off, but the choice of code is not managed). And per 9.1.2.7, it's only a "similar" FEC code.  
The MAC is not a layer, it's a sublayer.

#### SuggestedRemedy

Delete the reference. In 9.1.2.7, delete  
"The optional FEC code used in EPON is the RS(239,255,8), similar to the FEC code defined in ITU-T G.975, improving the link BER from 10<sup>-4</sup> to 10<sup>-12</sup>, which is the target BER at the MAC layer."  
In the previous paragraph, insert after "available link budget" "by improving the link BER from 10<sup>-4</sup> to 10<sup>-12</sup> (the target BER at the MAC)".  
9.1.2 contains other irrelevant material that should also be pruned.

Proposed Response Response Status O

CI 03 SC 3 P17 L1 # 47  
Anslow, Peter Ciena

Comment Type E Comment Status X

The IEEE style manual has the words being defined as all lower case and in bold font with a colon separating the word(s) from the definition.

#### SuggestedRemedy

change all definitions to have the word(s) being defined as all lower case and in bold font with a colon separating the word(s) from the definition.

Proposed Response Response Status O

CI 03 SC 3 P17 L5 # 110  
Thompson, Geoff GraCaSI

Comment Type E Comment Status X

Since a glossary is not definitive and often offers multiple choices for meanings of a term, the action "should be referenced" is overreach. Change to a more flexible action

#### SuggestedRemedy

Change "should be referenced" to "should be consulted"

Proposed Response Response Status O

CI 03 SC 3.10 P17 L48 # 114  
Thompson, Geoff GraCaSI

Comment Type ER Comment Status X

The term "CV" does not appear in the abbreviations section

#### SuggestedRemedy

Add "CV" to abbreviations or expand the term in the definition.

Proposed Response Response Status O

CI 03 SC 3.17 P18 L18 # 115  
Thompson, Geoff GraCaSI

Comment Type TR Comment Status X

This def'n is also badly out of date and needs to be updated in parallel with the update to the definition of Chassis.

#### SuggestedRemedy

Strawman proposal:  
3.17 System interconnect segment - An internal segment allowing interconnection of ports belonging to different physical entities into the same logical manageable repeater, bridge or networked system. Examples of implementation might be backplane busses in modular hubs, or chaining cables in stacks of bridges/switches. It is not uncommon for such segments to be a proprietary implementation.

Proposed Response Response Status O

CI 03 SC 3.17 P18 L20 # 12  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status X

"fo" s/b "for"

#### SuggestedRemedy

per comment.

Proposed Response Response Status O

CI 03 SC 3.2 P17 L11 # 13  
 Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

The definition for Chassis is rather limiting. Switches, routers, and servers come in chassis too.

SuggestedRemedy

Preface the definition with: "Within the context of the repeater management MIB module defined in Clause 7:"

Proposed Response Response Status O

CI 03 SC 3.2 P17 L11 # 111  
 Thompson, Geoff GraCaSI

Comment Type TR Comment Status X

The definition of "Chassis" is badly out of date. It needs to be expanded so that we can use it to reflect current product technology. Repeaters have gone away (though I have no particular objection to keeping them as a portion of the definition). Chassis are used these days for containing systems that contain multiple instances of 802.3 interfaces (MACs and their associated PHYs) that are configured as bridges/switches and/or various flavors of servers.

SuggestedRemedy

Suggested strawman:  
 3.2 Chassis - An enclosure for one managed repeater, bridge or networked system, part of a managed repeater, bridge or networked system, or several instances thereof.  
 It typically contains an integral power supply and a variable number of available module slots.

Proposed Response Response Status O

CI 03 SC 3.3 P17 L15 # 112  
 Thompson, Geoff GraCaSI

Comment Type TR Comment Status X

The definition of "Group" needs to be updated along with the definition of Chassis as outlined in a previous comment.

SuggestedRemedy

Proposed Response Response Status O

CI 03 SC 3.5 P17 L25 # 113  
 Thompson, Geoff GraCaSI

Comment Type E Comment Status X

The definition for loss of codegroup delineation sounds a little too specific. It should probably be redefined so that it actually IS "loss of codegroup delineation" in the general case instead of just for the 64/66 case.

SuggestedRemedy

Proposed Response Response Status O

CI 03 SC 3.6 P17 L31 # 79  
 Dawe, Piers IPtronics

Comment Type E Comment Status X

I am satisfied with the response to my comment 132 on D2.0 (response adds a definition and reference for "managed object", now at 3.6).  
 But entries in definitions and abbreviations lists don't take capitals just because they are at the beginning of the entry (see "agent" above)

SuggestedRemedy

Change "Managed object" to "managed object", make similar changes as appropriate to other entries.

Proposed Response Response Status O

CI 04 SC 4 P19 L55 # 14  
 Frazier, Howard Broadcom Corporation

Comment Type T Comment Status X

MPCPDU is missing from the list of abbreviations

SuggestedRemedy

Add  
 MPCPDU - multi-point control protocol data unit  
 to the list of abbreviations.

Proposed Response Response Status O

**Cl 04**    **SC 4**    **P19**    **L63**    # **101**  
 Lynskey, Eric    Broadcom

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

Is the OMP acronym correct?

**SuggestedRemedy**  
 Change to optical multipoint.

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

**Cl 05**    **SC 5.2**    **P21**    **L41**    # **116**  
 Thompson, Geoff    GraCaSI

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

The following text is not true: "Support of the version 2 MIB module is a requirement for conformance to the required ... capabilities in IEEE Std 802.3." since it does not specify which "required capabilities". That means it must be required for all the capabilities of IEEE Std 802.3. Perhaps you mean the case where management "Capabilities" are actually called out as being required. Since management is optional, some word tweaking is required.  
 (This is an argument against pubs editors "fixing" capitalization. It takes a reserved word (i.e. "Capability" in the defined sense within management and makes it indistinguishable from the generic sense of the word.)

**SuggestedRemedy**  
 Change to "Support of the version 2 MIB module is a requirement for conformance to the required ... management Capabilities in IEEE Std 802.3."

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

**Cl 05**    **SC 5.4**    **P25**    **L13**    # **15**  
 Frazier, Howard    Broadcom Corporation

**Comment Type**    **ER**    **Comment Status**    **X**

Need to add a copyright permission statement for the ASCII version of the MIB module, similar to the one that the IEEE 802.1 WG uses.

**SuggestedRemedy**  
 Add a footnote to the end of line 13 "...URL:" that reads:  
 "Copyright release for MIB modules: Users of this standard may freely reproduce the MIB module contained in this subclause so that it can be used for its intended purpose."

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

**Cl 06**    **SC 6.2**    **P41**    **L28**    # **96**  
 Dawe, Piers    IPtronics

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

6.1 says "The IEEE 802.3ah Ethernet in the First Mile (EFM) Task Force added management capabilities to Ethernet-like interfaces to provide...". 6.2 says "Ethernet OAM is composed of a core set of functions and a set of optional functional groups. The mandatory functions include". Clause 30 has an OAM package that is "conditional". I don't believe that Ethernet OAM should be described as "mandatory"; there are many port types that don't require it.

**SuggestedRemedy**  
 Change "mandatory" to "core" (if that's the term used wherever this is defined). Refer to wherever this grouping is defined: is it in 30 or 57?

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

**Cl 06**    **SC 6.3**    **P42**    **L42**    # **17**  
 Frazier, Howard    Broadcom Corporation

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

Missing space in "RFC2863".  
 How did this sneak through?

**SuggestedRemedy**  
 Insert space: RFC 2863  
 Do another GSR.

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

**Cl 06**    **SC 6.3**    **P42**    **L43**    # **91**  
 Dawe, Piers    IPtronics

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

Draft says "Ethernet-like interfaces defined in Clause 10". Clause 10 doesn't define Ethernet-like interfaces, or Ethernet interfaces, it defines a MIB module.

**SuggestedRemedy**  
 Change to "... interface MIB module defined in Clause 10".

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

Preliminary

## IEEEP802d3d1\_D2\_1 Management Information Base (MIB) definitions for Ethernet comments

Preliminary

CI 06 SC 6.3.2 P42 L62 # 18  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Avoid use of double negative. When we changed this sentence to insert "OAM", it became even harder to parse.

## SuggestedRemedy

All IEEE Std 802.3 OAM managed objects are reflected in this MIB module.

Proposed Response Response Status O

CI 06 SC 6.6 P46 L22 # 16  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Need to add a copyright permission statement for the ASCII version of the MIB module, similar to the one that the IEEE 802.1 WG uses.

## SuggestedRemedy

Add a footnote to the end of line 22 "...URL:" that reads:  
"Copyright release for MIB modules: Users of this standard may freely reproduce the MIB module contained in this subclause so that it can be used for its intended purpose."

Proposed Response Response Status O

CI 07 SC 7 P83 L # 92  
Dawe, Piers IPtronics

Comment Type T Comment Status X

The majority of the MIB clauses have a table "Mapping between IEEE 802.3 managed objects and ... objects" or similar but 7 and 8 don't.

## SuggestedRemedy

Would it help if they did?

Proposed Response Response Status O

CI 07 SC 7.1.1 P83 L26 # 21  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status X

decapitalize "Repeater".  
Later in the sentence, there is an extra space in "repeater- like".

## SuggestedRemedy

"These repeater MIB..."  
"repeater-like"

Proposed Response Response Status O

CI 07 SC 7.1.1 P83 L36 # 22  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status X

"The IEEE document" s/b "IEEE Std 802.3".

## SuggestedRemedy

per comment.

Proposed Response Response Status O

CI 07 SC 7.1.2 P83 L49 # 23  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status X

Decapitalize "ONLY".

## SuggestedRemedy

"only"

Proposed Response Response Status O

CI 07 SC 7.1.3 P84 L13 # 24  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

The ham-handed editor must have messed up the implementation of a comment from D2.0, because we have some funny subclause numbering going on.

*SuggestedRemedy*

Delete heading 7.1.3 Relationship to Other MIBs, and promote the next three headings by one level each, so that you have:  
7.1.3 Relationship to MIB-II

...

7.1.3.1 Relationship to the system group

...

7.1.3.2 Relationship to the interfaces group

Proposed Response Response Status O

CI 07 SC 7.1.3.1.2 P84 L46 # 25  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status X

The statement "...but does not process incoming data based on any packet-related information (such as checksum or addresses)." does not seem to be entirely true, though it may have been true in the distant past. There are objects in this module that track MAC addresses, and FCS errors.

*SuggestedRemedy*

Change the paragraph to read:  
This is consistent with the physical-layer nature of a repeater. A repeater-unit is a bitwise store-and-forward device. A repeater port has no MAC address, no MAC implementation, and does not pass packets up to higher-level protocol entities for processing.

Proposed Response Response Status O

CI 07 SC 7.3 P116 L23 # 20  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status X

Integer abuse!  
The syntax "Integer32" should be used instead of "INTEGER" in SMIv2 for a signed integer with this range.

*SuggestedRemedy*

Replace "INTEGER" with "Integer32" here and also on line 33.

Proposed Response Response Status O

CI 07 SC 7.3 P84 L1 # 19  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Need to add a copyright permission statement for the ASCII version of the MIB module, similar to the one that the IEEE 802.1 WG uses

*SuggestedRemedy*

Add a footnote to the end of line 1 "...URL:" that reads:  
"Copyright release for MIB modules: Users of this standard may freely reproduce the MIB module contained in this subclause so that it can be used for its intended purpose."

Proposed Response Response Status O

CI 08 SC 8.1 P131 L8 # 80  
Dawe, Piers IPtronic

Comment Type E Comment Status X

What does "protocols in the Internet community" mean?

#### Suggested Remedy

As for D2.0 comment 164 on 7.1 (now 6.1): change "network management protocols in the Internet community" to SNMP" here, and in 10.1, 11.1, 13.1.  
For consistency, in 9.1 change "This clause defines a portion of the Management Information Base (MIB) for use with network management protocols in TCP/IP based Internets. In particular, it defines objects for managing interfaces that conform to the 1 Gb/s Ethernet Passive Optical Networks (1G-EPON) standard as defined in IEEE Std 802.3, providing extended capabilities to the Ethernet-like interfaces." to "This clause defines a MIB module for use with SNMP to manage 1G-EPON interfaces for Ethernet Passive Optical Networks (see IEEE Std 802.3).  
Shouldn't there be similar wording in 7, 8 and 12?

Proposed Response Response Status O

CI 08 SC 8.4 P132 L21 # 28  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Use of the word "even" in two places in this sentence adds no value.

#### Suggested Remedy

Reword the sentence as follows: "It is thus important to control GET and/or NOTIFY access to these objects and possibly to encrypt their values when sending them over the network via SNMP."

Proposed Response Response Status O

CI 08 SC 8.5 P132 L25 # 27  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

The subclause heading for the MIB module definitions is inconsistent across clauses.

#### Suggested Remedy

Use a consistent subclause heading, such as "MIB module definitions".

Proposed Response Response Status O

CI 08 SC 8.5 P132 L33 # 26  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Need to add a copyright permission statement for the ASCII version of the MIB module, similar to the one that the IEEE 802.1 WG uses

#### Suggested Remedy

Add a footnote to the end of line 33 "...URL:" that reads:  
"Copyright release for MIB modules: Users of this standard may freely reproduce the MIB module contained in this subclause so that it can be used for its intended purpose."

Proposed Response Response Status O

CI 09 SC P L # 105  
Lynskey, Eric Broadcom

Comment Type TR Comment Status X

Many statistics listed here are applicable only for the OLT or ONU. It doesn't seem right to say that a statistic is applicable for all virtual OLT interfaces and that each one "should" return a value of 0. If it isn't applicable, let's say so. Also, we should be very clear, as in "shall" about what these statistics return. If the stat doesn't apply, why give a recommendation on the value?

#### Suggested Remedy

Scrub the document for all statistics and verify they are correct.

Proposed Response Response Status O

CI 09 SC 9.1.1 P149 L17 # 85  
Dawe, Piers IPtronic

Comment Type E Comment Status X

9.1.1 contains nothing but an editor's note, would be empty on publication.

#### Suggested Remedy

Remove the heading.

Proposed Response Response Status O

CI 09 SC 9.1.2.1 P146 L14 # 29  
 Frazier, Howard Broadcom Corporation  
 Comment Type E Comment Status X  
 Missing spaces.  
 SuggestedRemedy  
 b) definition...  
 c) PMA...  
 Proposed Response Response Status O

CI 09 SC 9.1.2.3 P146 L54 # 30  
 Frazier, Howard Broadcom Corporation  
 Comment Type ER Comment Status X  
 Grammar could be improved, and while the transmission is broadcast at the physical layer, it is usually unicast at the link layer.  
 SuggestedRemedy  
 In the downstream direction, the transmission channel is always available to the OLT, thus Time Division Multiplexing (TDM) is used. Transmissions from the OLT arrive at all of the connected ONUs and the individual ONUs filter data from the OLT's transmission based on the...  
 Proposed Response Response Status O

CI 09 SC 9.1.2.3 P146 L60 # 31  
 Frazier, Howard Broadcom Corporation  
 Comment Type ER Comment Status X  
 Grammar could be improved.  
 SuggestedRemedy  
 In the upstream direction, the physical channel is shared among a number of connected and registered ONUs using Time Division Multiple Access (TDMA).  
 Proposed Response Response Status O

CI 09 SC 9.1.2.4 P147 L39 # 32  
 Frazier, Howard Broadcom Corporation  
 Comment Type ER Comment Status X  
 This subclause has some qualitative tutorial information that can be safely omitted, and the grammar could be improved.  
 SuggestedRemedy  
 The EPON PMD specifications are based on a wavelength plan similar to that used by ITU-T G.983.1. The OLT and ONU optical parameters were derived in part from earlier 1000 Mb/s Ethernet PMD specifications, with the addition of WDM capabilities, and burst mode operation for ONU transmitters and the OLT receiver.  
 The upstream burst mode operation capability corresponds directly to the TDMA operation in the upstream direction, where queued data is burst from individual ONUs at full data rate for the duration of the allocated transmission period. Once completed, the ONU goes silent and another ONU starts transmitting its data.  
 Proposed Response Response Status O

CI 09 SC 9.1.2.6 P149 L14 # 33  
 Frazier, Howard Broadcom Corporation  
 Comment Type E Comment Status X  
 "uplink" looks like a new term, whereas "upstream" was defined earlier in the clause.  
 SuggestedRemedy  
 Replace "uplink" with "upstream".  
 Proposed Response Response Status O

CI 09 SC 9.1.3 P151 L43 # 86  
 Dawe, Piers IPtronics  
 Comment Type ER Comment Status X  
 Management Architecture should be "Management architecture". There are many other spurious capitals, although I notice Clause 6 has been cleaned up. I've made this an ER because there are so many (look at the contents).  
 SuggestedRemedy  
 Please fix this and other similar examples throughout the document.  
 Proposed Response Response Status O

Preliminary

## IEEEP802d3d1\_D2\_1 Management Information Base (MIB) definitions for Ethernet comments

Preliminary

**Cl 09**    **SC 9.1.3**    **P152**    **L29**    # **83**  
Dawe, Piers    IPtronics

**Comment Type E**    **Comment Status X**  
Diagram keys "FEC = Forward Error Correction" and "PHY = PHYSICAL LAYER DEVICE" but I don't see items called FEC or PHY.

**SuggestedRemedy**  
Use them or remove them.

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

**Cl 09**    **SC 9.1.3**    **P152**    **L37**    # **78**  
Dawe, Piers    IPtronics

**Comment Type E**    **Comment Status X**  
Clause 9 uses "ether-Like", "Ether-like", "Ether- like" and "Etherlike", while the document generally (including Clause 9) uses "Ethernet-like" and no other clause uses the first three forms.  
Clause 10 uses "Etherlike" once in the ASCII "IEEE8023-EtherLike-MIB DEFINITIONS ::= BEGIN"  
11.2 uses "EtherLike five times.  
12.3 uses "EtherLike-MIB" once, in the ASCII.  
13.5 uses "EtherLike-MIB" once, in the ASCII

**SuggestedRemedy**  
Change all to "Ethernet-like" or "Ethernet" or "802.3" (depending what you mean) if not addressed by other comments.

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

**Cl 09**    **SC 9.1.3**    **P152**    **L5**    # **82**  
Dawe, Piers    IPtronics

**Comment Type E**    **Comment Status X**  
Diagram contains SHOUTY ALL-CAPITALS, unlike many figures in this document. As this is to be a new standard, not part of 802.3, we can take this opportunity to make more consistent and better figures.

**SuggestedRemedy**  
Please change "HIGHER LAYERS" to "Higher layers" and so on.

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

**Cl 09**    **SC 9.2**    **P153**    **L44**    # **1**  
Frazier, Howard    Broadcom Corporation

**Comment Type E**    **Comment Status X**  
decapitalize Module.

**SuggestedRemedy**  
...MIB module...

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

**Cl 09**    **SC 9.2**    **P155**    **L37**    # **48**  
Anslow, Peter    Ciena

**Comment Type E**    **Comment Status X**  
In Table 9-3 the superscript "a" is on a different line from "BRCT\_MAC\_Address"

**SuggestedRemedy**  
Make the Value column wider so they are both on the same line.

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

**Cl 09**    **SC 9.2**    **P155**    **L37**    # **2**  
Frazier, Howard    Broadcom Corporation

**Comment Type E**    **Comment Status X**  
addition of the superscript "a" pointing to the Table 9-3 table footnote has made the 7th row, second column cell contents too wide to fit.

**SuggestedRemedy**  
resize column to selected cells contents.

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

CI 09 SC 9.2 P156 L19 # 49  
 Anslow, Peter Ciena  
 Comment Type E Comment Status X  
 In Table 9-4 the superscript "a" for footnote a appears part way through "ONU1\_MAC\_Address"  
 Also, the footnotes use different font sizes  
 SuggestedRemedy  
 Move the "a" to the end of "ONU1\_MAC\_Address"  
 Change the footnotes to 9 pt font. Do the same for Tables 9-2, 9-3, 9-5, 9-6, 9-7 and 9-8  
 Proposed Response Response Status O

CI 09 SC 9.2 P156 L19 # 3  
 Frazier, Howard Broadcom Corporation  
 Comment Type E Comment Status X  
 Table footnote a) is embedded in the value ONU1\_MAC\_Address.  
 SuggestedRemedy  
 Move it to the end of the value ONU1\_MAC\_Address.  
 Proposed Response Response Status O

CI 09 SC 9.3.1 P155 L63 # 102  
 Lynskey, Eric Broadcom  
 Comment Type E Comment Status X  
 Ether-like??? EPON is a well defined and highly deployed Ethernet interface, as defined as one of the many clauses of 802.3.  
 SuggestedRemedy  
 Replace the usage of Ether-like throughout the document with something more fitting.  
 Proposed Response Response Status O

CI 09 SC 9.3.1 P155 L64 # 90  
 Dawe, Piers IPtronics  
 Comment Type T Comment Status X  
 What does "EPON interface is a kind of Ether-like interface." mean?  
 SuggestedRemedy  
 Delete the sentence.  
 Proposed Response Response Status O

CI 09 SC 9.3.1 P155 L65 # 50  
 Anslow, Peter Ciena  
 Comment Type E Comment Status X  
 The text  
 "Therefore, if this module is implemented, the Interfaces MIB module defined in IETF RFC 2863 and the Ethernet-like Interfaces MIB module defined in Clause 10 shall also be implemented.  
 Implementing this module therefore shall require implementation of the Interfaces MIB module defined in IETF RFC 2863 and the Ethernet-like Interfaces MIB module defined in Clause 10."  
 gives the same information twice.  
 SuggestedRemedy  
 Delete one of these sentences.  
 Proposed Response Response Status O

CI 09 SC 9.3.1 P156 L40 # 4  
 Frazier, Howard Broadcom Corporation  
 Comment Type TR Comment Status X  
 Extraneous requirement was already stated in the immediately preceeding sentence.  
 SuggestedRemedy  
 Delete the redundant sentence:  
 "Implementing this module therefore shall require implementation of the Interfaces MIB module defined in IETF RFC 2863 and the Ethernet-like Interfaces MIB module defined in Clause 10."  
 Proposed Response Response Status O

**Cl 09**    **SC 9.3.3**    **P162**    **L1**    # **51**  
 Anslow, Peter    Ciena

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

This subclause uses the name EFM OAM MIB for the MIB defined in clause 6. However, the title of Clause 6 is the Ethernet OAM MIB module.

**SuggestedRemedy**  
 Change both instances of "EFM OAM" (one in the title of 9.3.3) to "Ethernet OAM"

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

**Cl 09**    **SC 9.3.3**    **P162**    **L19**    # **52**  
 Anslow, Peter    Ciena

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

9.3.3 and 9.3.4 use the name EFM EPON MIB for the MIB defined in clause 9. However, the title of Clause 9 is the EPON MIB module.

**SuggestedRemedy**  
 In 9.3.3 and 9.3.4 change "EFM EPON MIB module" to "EPON MIB module"

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

**Cl 09**    **SC 9.6**    **P170**    **L11**    # **106**  
 Lynskey, Eric    Broadcom

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

There is no 802.3 requirement that the sync time be the same for all LLIDs. In fact, 802.3 allows separate sync times for each LLID. The individual sync time is provided in the REGISTER message from the OLT to the ONU.

**SuggestedRemedy**  
 Change to "This object is applicable for an OLT and with distinct values for all virtual interfaces, and for an ONU."

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

**Cl 09**    **SC 9.6**    **P172**    **L1**    # **103**  
 Lynskey, Eric    Broadcom

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

There is a shall associated with this object and it says that it is applicable for the ONU. There is no requirement in 802.3 that an ONU maintains a RTT value. The RTT is only relevant for OLT usage in scheduling.

**SuggestedRemedy**  
 Reword to say that the object is applicable only for an OLT.

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

**Cl 10**    **SC 10.1**    **P209**    **L12**    # **88**  
 Dawe, Piers    IPtronics

**Comment Type**    **ER**    **Comment Status**    **X**

What is this paragraph doing here?  
 "Ethernet technology, as defined by the 802.3 Working Group of the IEEE, continues to evolve, with scalable increases in speed, new types of cabling and interfaces, and new features. This evolution may require changes in the managed objects in order to reflect this new functionality. This document, as with other documents issued by this working group, reflects a certain stage in the evolution of Ethernet technology. In the future, this document might be revised, or new documents might be issued, in order to reflect the evolution of Ethernet technology."

**SuggestedRemedy**  
 A discussion of the stability of "this document" should be in Clause 1.  
 The same goes for the similar paragraph in 13.1.

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

Cl 10 SC 10.1 P219 L9 # 97  
Dawe, Piers IPtronics

Comment Type TR Comment Status X

The draft uses the phrase "Ethernet-like interfaces" a lot but doesn't define it. To me, an "Ethernet-like interface" must be like an Ethernet interface, but is not ACTUALLY an Ethernet interface (or maybe not necessarily so), or it would not be called "like". Yet from reading on in Clause 10 I suspect that genuine 802.3 interfaces are meant (as opposed to other interfaces described by other organisations).

*SuggestedRemedy*

Make this very clear. Either say in Clause 1 and/or 10 what you mean, and add to the definitions, or change to "Ethernet interfaces" or "802.3 interfaces" if that's what you mean.

Proposed Response Response Status O

Cl 10 SC 10.2 P209 L40 # 6  
Frazier, Howard Broadcom Corporation

Comment Type E Comment Status X

extraneous period (full stop) after Std.  
Also on line 41.  
Actually, there are numerous instances in this clause.

*SuggestedRemedy*

Scrub for "IEEE Std. 802.3" and replace with "IEEE Std 802.3".

Proposed Response Response Status O

Cl 10 SC 10.2.2.1 P210 L17 # 93  
Dawe, Piers IPtronics

Comment Type T Comment Status X

Draft says "Ordinarily, there are no sublayers for an Ethernet-like interface." If an Ethernet-like interface is like an Ethernet port - oh yes there are - PCS, PMA and so on are ubiquitous.

*SuggestedRemedy*

Perhaps you mean that ordinarily the MIB modules are not divided by sublayer?

Proposed Response Response Status O

Cl 10 SC 10.2.2.10 P213 L41 # 84  
Dawe, Piers IPtronics

Comment Type E Comment Status X

"The following table provides"

*SuggestedRemedy*

Reference the table properly, by number.

Proposed Response Response Status O

Cl 10 SC 10.2.2.8 P212 L65 # 7  
Frazier, Howard Broadcom Corporation

Comment Type T Comment Status X

Decapitalize "should".

*SuggestedRemedy*

"should" is appropriate in this instance.

Proposed Response Response Status O

Cl 10 SC 10.3 P216 L54 # 5  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Use of the word "even" in two places in this sentence adds no value.

*SuggestedRemedy*

Reword the sentence as follows: "It is thus important to control GET and/or NOTIFY access to these objects and possibly to encrypt their values when sending them over the network via SNMP."

Proposed Response Response Status O

**Cl 11**      **SC 11.1**                      **P245**              **L10**              # **42**  
 Anslow, Peter                      Ciena

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

The references to G.991.2 and G.993.1 should be according to IEEE style

**SuggestedRemedy**  
 Change "[G.991.2]" to (see ITU-T G.991.2)  
 Change "[G.993.1]" to (see ITU-T G.993.1)

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

**Cl 11**      **SC 11.1**                      **P245**              **L25**              # **94**  
 Dawe, Piers                      IPtronics

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

Why is this paragraph here:  
 "Managed objects for the Operations, Administration and Maintenance (OAM) and Ethernet over Passive Optical Networks (EPON) clauses of IEEE Std 802.3 are defined in Clause 6 and Clause 9, respectively of this document."  
 Is it assumed that somehow the reader knows that EFM Copper ports must or are likely to use Ethernet OAM, and other ports not? If so, where is this stated?  
 Why would an EFM Copper port have anything to do with the EPON MIB?

**SuggestedRemedy**  
 Delete the paragraph.  
 Add a table in Clause 1 relating MIB modules to their applicability, e.g. by port type and otherwise.

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

**Cl 11**      **SC 11.2**                      **P245**              **L45**              # **43**  
 Anslow, Peter                      Ciena

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

This says "other MIB modules described in the relevant RFCs.", but some of these MIB modules are now clauses of this document.

**SuggestedRemedy**  
 Change "other MIB modules described in the relevant RFCs." to "other MIB modules described in other clauses of this standard or the relevant RFCs."

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

**Cl 11**      **SC 11.2.4**                      **P251**              **L40**              # **44**  
 Anslow, Peter                      Ciena

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

space missing in "EtherLike-MIBdefined"

**SuggestedRemedy**  
 add space before "defined"

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

**Cl 11**      **SC 11.4**                      **P255**              **L18**              # **8**  
 Frazier, Howard                      Broadcom Corporation

**Comment Type**    **ER**              **Comment Status**    **X**

Use of the word "even" in this sentence adds no value.

**SuggestedRemedy**  
 Reword the sentence as follows: "It is thus important to control GET and/or NOTIFY access to these objects and possibly to encrypt their values when sending them over the network via SNMP."

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

**Cl 12**      **SC 12.1.2**                      **P312**              **L4**              # **45**  
 Anslow, Peter                      Ciena

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

space missing in "agentimplementing"

**SuggestedRemedy**  
 Insert space before "implementing"

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

Cl 12 SC 12.2 P318 L65 # 9  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

Use of the word "even" in two places in this sentence adds no value.

**Suggested Remedy**

Reword the sentence as follows: "It is thus important to control GET and/or NOTIFY access to these objects and possibly to encrypt their values when sending them over the network via SNMP."

Proposed Response Response Status O

Cl 13 SC 13.1 P359 L9 # 98  
Dawe, Piers IPtronics

Comment Type TR Comment Status X

What is this clause for? As we use "MAU type" for all 802.3 port types, does this clause apply to all Ethernet ports? Does 10 apply to some and 13 to others? Or what?

**Suggested Remedy**

Please explain.

Proposed Response Response Status O

Cl 13 SC 13.5 P356 L60 # 10  
Frazier, Howard Broadcom Corporation

Comment Type TR Comment Status X

Integer abuse!  
The syntax Integer32 (imported from SMIv2) should be used instead of INTEGER, but this is tricky. There is a range on this signed integer.

**Suggested Remedy**

Change "INTEGER" to "Integer32 (-127..127).  
Also on p 357 I 10  
Also on P 357 I 26  
Also on P 357 I 42

Must also change the IfMauEntry sequence on p 349. Here, replace "INTEGER" with "Integer32" in four places, on lines 55 through 59.

Proposed Response Response Status O

Cl 13 SC 13.5 P357 L2 # 11  
Frazier, Howard Broadcom Corporation

Comment Type ER Comment Status X

The minus sign in "-12.7 dB" appears to be a non-ASCII character in the MIB module. Since it is in the description, compilers may not catch it, but it could cause readability problems.

**Suggested Remedy**

Use an ASCII minus sign (or dash?) instead of the special symbol.

Proposed Response Response Status O

Cl 13 SC 13.5 P366 L21 # 46  
Anslow, Peter Ciena

Comment Type T Comment Status X

This says "Note that compliance with this compliance statement requires compliance with the ifCompliance3 MODULE-COMPLIANCE statement of the IF-MIB (RFC 2863) and the dot3Compliance2 MODULE-COMPLIANCE statement of the EtherLike-MIB (RFC3635)." but the Ethernet-like MIB is now in Clause 10 of 802.3.1

**Suggested Remedy**

Change "and the dot3Compliance2 MODULE-COMPLIANCE statement of the EtherLike-MIB (RFC3635)." to "and the dot3Compliance2 MODULE-COMPLIANCE statement of the Ethernet-Like MIB in Clause 10 of IEEE 802.3.1."

Likewise for Page 365 line 49 "(RFC 2108)"

Also consider whether other references to RFCs 2108, 3621, 3635, 3637, 4836, 4837, 4878, 5066 in the draft should remain because they are historical references or should be changed to point to the relevant clause in 802.3.1

Proposed Response Response Status O

CI **99** SC **99** P**2** L # **100**  
 Dawe, Piers IPtronics

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

Abstract says "This standard contains the Management Information Base (MIB) module specifications for IEEE Std 802.3, also known as Ethernet." That means all of 802.3, including all recent amendments (the entry in 2. Normative references is undated). Also it says "...as well as extensions resulting from recent amendments to IEEE Std 802.3." Yet response to e.g. D2.0 comments 190 and 297 say e.g. "updates resulting from 802.3at, 802.3av, 802.3az, 802.3ba will be considered in a future amendment to 802.3.1".

#### SuggestedRemedy

Delete "as well as extensions resulting from recent amendments to IEEE Std 802.3." Insert "This standard addresses the published 802.3-2008 [and 802.3xx if any amendments since 802.3-2008 are indeed included]. It does not address 802.3at, 802.3av, 802.3az, or 802.3ba."

Proposed Response Response Status **O**

CI **99** SC **99** P**3** L # **81**  
 Dawe, Piers IPtronics

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

There should be an introduction, presumably between the headings "Introduction" and "Notice to users", "giving the history of the standard, a description of its purpose, and, if the standard is a revision, an explanation of the principal changes from the previous edition. The introduction should also explain the document structure for multipart standards, or for documents within a family of standards (see 9.3 of the 2007 IEEE Style Manual for more details)." as it said in D2.1.

#### SuggestedRemedy

Please insert the introduction.

Proposed Response Response Status **O**

CI **A** SC **A** P**370** L**20** # **53**  
 Anslow, Peter Ciena

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

IETF RFC 3410 appears in both the normative references and the bibliography

#### SuggestedRemedy

Remove [B22] RFC 3410 from the bibliography

Proposed Response Response Status **O**

CI **C** SC **C.2** P**470** L**36** # **54**  
 Anslow, Peter Ciena

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

This now says "Four-pair Category 3 as specified in Clause 23" which is somewhat cryptic.

#### SuggestedRemedy

Change all 10 instances in this subclause of "Category x" to "Category x cable"

Proposed Response Response Status **O**