Cl **00** *SC* **0** *P* *L* # 18

Thompson, Geoffrey Nortel Networks

Comment Type **GR** *Comment Status* **R**

This is a general disapprove for the methodology of the project and the many detailed manifestations of that methodology that show up throughout the text. This project seeks to incorporate specifications that were developed in other groups (802.1 and the IETF) that were supposed to track our underlying hardware specifications and produce the management software specifications for that management.
All of this would be perfectly reasonable if (1) they had appropriate input from us at the front end and kept in line with that guidance and (2) they had been willing to maintain responsibility for management standards on an ongoing basis.
Neither has proved to be the case. It now turns out that the IETF did not utilize the device lists and identifications that we provided but, rather went off on their own. 802.1 initiated a project to do 802.3 management (the roots of this project) without participation from 802.3. Now we are being asked (for the sake of expediency and compatibility with legacy implementations) to accept this work as the normative reference foundation for our standard AND to take over the maintenance of what they did outside of our process.
In full recognition of the difficulty of getting management standards skillfully written and adequately reviewed in 802.3, this all seems like a terribly bad idea. It is effectively bypassing the 802.3 balloting/review process for a major chunk of this important process and then telling us that we can't fix it.
Further, recent input from Bert Wijnen has indicated that this course of trying to maintain backward compatibility is a bad idea. As I understand the rules for management standards in this area, once you establish a MIB it can never be be "changed", only amended or fully replaced. This seems like an inappropriate constraint to place on these 802.3 projects considering.

SuggestedRemedy

That the draft be modified so that the external reference material that is specific to the 802.3 implementations (as opposed to the protocol itself) from either 802.1 or any RFC be pulled into the body of this draft and that the resulting draft be returned to review at the Working Group level.
(This might well be accompanied by not deprecating the 802.3 portion of 802.1AX for some length of time in order to support the extended redevelopment and review of this document. I would suggest that 802.3 take over the editorial pen of that document in the meantime in order of not hold 802.3 projects hostage to this important project in the meantime.)

Response *Response Status* **W**

REJECT.

The IEEE P802.3.1 project is already working on incorporating, updating and maintaining the RFC that are referenced in IEEE P802.3bc. Replicating this activity in IEEE P802.3bc would be outside the scope of the PAR. Once the IEEE P802.3.1 project is complete the references in IEEE 802.3 can be updated as a maintenance activity.

These external references define not only the values found in the MIBs, but in this case also the values sent in the TLVs. It is for this reason that backward compatibility is important as the only way to change the values sent in the TLVs would be to deprecate the current ones and define new ones.

Cl **00** *SC* **0** *P* *L* # 1

Messina, Don

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

This draft meets all editorial requirements.

SuggestedRemedy

Response *Response Status* **W**

ACCEPT.

Cl **00** *SC* **0** *P* **0** *L* # 7

Grow, Robert Intel Corporation

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

IETF documents are inconsistently referenced, sometimes as IETF RFC and other times as only RFC.

SuggestedRemedy

Search for RFC and preface with IETF if not currently included.

Response *Response Status* **W**

ACCEPT.

Cl **01** *SC* **1.1** *P* *L* # 20

Dawe, Piers

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

This new Clause 79, which is not like the other contents of 802.3, needs a mention somewhere in 1.1 Overview. This could be a sentence at the end of 1.1.1 Scope, or a new brief 1.1.n.

SuggestedRemedy

But I'm not the best person to write it.

Response *Response Status* **C**

REJECT.

The BRC does not agree that a change to the overview is required as there is adequate introduction provided in subclause 79.1.

Cl **30** *SC* **30.1** *P* **14** *L* **12** # 17

Maguire, Valerie — The Siemon Company

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

Recommended comma usage for lists

SuggestedRemedy

add a comma after "subscriber access networks"

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.12.1.1.1** *P* **17** *L* **11** # 10

Law, David — 3Com

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

The use of the label maxFrameSize, while local to this attribute, to represent if the Maximum Frame Size TLV is enabled of not could be misleading as maxFrameSize is used elsewhere in IEEE Std 802.3 to mean something else.

SuggestedRemedy

Change 'maxFrameSize' to read 'frameSizeMaximum'.

Response *Response Status* **C**

REJECT.

The variable maxFrameSize no longer appears Clause 4.

Cl **30** *SC* **30.12.1.1.1** *P* **17** *L* **6** # 11

Law, David — 3Com

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

The APPROPRIATE SYNTAX defintion of the attribute aLldpXdot3PortConfigTLVsTxEnable is not correct as it does not fully define the syntax, that is if this is a sequence of intergers, counters or booleans. As an transmit enable it should be a boolean.

SuggestedRemedy

Change the syntax to be BIT STRING.

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.12.2.1.4** *P* **18** *L* **8** # 6

Grow, Robert — Intel Corporation

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

While reviewing WG final recirculation ballot comments, I find Mr. Thopmson"s late comment worthy of consideration at Sponsor ballot. Consider update of MAUtype references to Annex 30A.

SuggestedRemedy

If change is considered appropriate, I do not believe Mr. Thompson's comment provided sufficient changes. Search on appropriate string for other places in the document to update MAUtype reference to Annex 30A

Proposed Response *Response Status* **Z**

REJECT.

This comment was WITHDRAWN by the commenter.

The comment submitted by Mr. Thompson during the final recircualtion ballot reads: 'The reference for the numerical value of MauType is not appropriate for our standard in that an obsolete reference is used. All the worse, that reference is actually derived from date in the 802.3 standard. (I have not examined the rest of the draft but I assume that this is a problem throughout the draft.) Use of an external reference for identification of something that we provide a reference to in our own standard will be endlessly confusing.' and the Suggested Remedy you submitted reads 'Replace the external reference with a reference to the equivalent defining value within 802.3. Those values would be currently found in Annex 30B on pages 733-735.'.

In summary the comment is saying the draft shouldn't be referencing the dot3MauType enumeration from IETF RFC 4836 in the aLldpXdot3LocPortOperMauType attribute - but instead use an internal reference to the TypeValue enumeration from annex 30B.2.

Despite the best intentions in the past the enumerations in IETF RFC 4836 (though it reference to IANA-MAU-MIB) and annex 30B.2 do not match. In fact in some cases the same value has a different meaning - as an example the value (14) means 100BASE-T4 for IETF RFC 4836 but 10BASE-T for Annex 30B.2.

Since the aLldpXdot3LocPortOperMauType attribute reflects the contents of the TLV, to move away from the dot3MauType enumeration from IETF RFC 4836 would mean that the meanings of the values sent in the TLV would have to change from what they are today which would require a new TLV.

Cl **79** *SC* **79.1** *P* **22** *L* **19** # 22

Dawe, Piers

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

If in answer to a previous comment of mine, by "LLDP is a MAC Client protocol", you mean 802.3 carries it between MAC clients like any other frame, then you should say:

SuggestedRemedy

"1. Nothing in 802.3 intentionally acts on or manipulates these frames, and
2. The IEEE 802.3 LLDP frame format is compliant to Clause 3. Media Access Control (MAC) frame and packet specifications."

Response *Response Status* **C**

REJECT.

By stating that LLDP is a MAC Client protocol we have already stated what is requested in suggested remedy.

Cl **79** *SC* **79.1.1** *P* **22** *L* **25** # 21

Dawe, Piers

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

"The combination of Figure 79-1 and
""NOTE-The illustration shows the simplest form of an IEEE 802.3 LLDP frame; i.e., where the frame has no IEEE Std 802.1Q tag header, or IEEE Std 802.1AE security tag, or any other form of encapsulation applied to it.""
is ambiguous: normative text and figure shows that LLDP frame is a basic frame, this not-part-of-the-standard NOTE says it might be an encapsulated frame. Should decide and make clear which."

SuggestedRemedy

Remove Figure 79-1, and refer to Figure 3-1 and say that the LLDPDU goes in the MAC CLIENT DATA (or, better, MAC Client Data!) field.

Response *Response Status* **C**

REJECT.

This figure is similar to other similar figures in IEEE 802.3 such as Figure 57-9 'OAMPDU frame structure' which shows from the Destination MAC address field thru the FCS field.

Cl **79** *SC* **79.1.1.1** *P* **23** *L* **50** # 16

Thaler, Patricia Broadcom

Comment Type **GR** *Comment Status* **A**

802.1AB also allows the use of any group or individual MAC address (802.1ab-rev, D6.0 7.1 page 21 line 4) in addition to the addresses in Table 7-1). IEEE 802.3 should not prohibit this. We may need to use this capability in a future virtual bridging standard.

SuggestedRemedy

Don't prohibit using a destination address other than the group address. Just reference 7.1 of 802.1AB for the addresses that may be used.

Response *Response Status* **C**

ACCEPT.

Cl **79** *SC* **79.2** *P* **24** *L* **31** # 15

Thaler, Patricia Broadcom

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

This requires support of the deprecated TLV if any 802.3 TLVs are supported. There should be no requirement to support a deprecated TLV. Receiving a TLV you don't support hurts nothing.

SuggestedRemedy

After "all IEEE 802.3 Organizationally Specific TLVs" insert "that are not deprecated"

Response *Response Status* **C**

REJECT.

After discussion at a joint IEEE P802.3bc/IEEE P802.3at/IEEE P802.3az meeting in April it was agreed that the IEEE P802.3bc should faithfully transfer the requirements from IEEE Std 802.1AB to IEEE Std 802.3 and then IEEE P802.3at should perform changes that it requires, for example removing the requirement that if one TLV is supported all TLVs are supported.

The requirement to support a deprecated TLV will therefore be removed by IEEE P802.3at removing the requirement if one TLV is supported all TLVs are supported

Cl **79** *SC* **79.3.1** *P* **25** *L* **30** # 12

Thaler, Patricia Broadcom

Comment Type **GR** *Comment Status* **R**

This TLV seems rather out of date. There are 3 types of auto-negotiation in 802.3 and auto-negotiation support status fails to indicate which one is supported. This is rather out of date as the RFC 4836 ifMauAutoNegCapAdvertisedBits don't include 10GBASE-T nor any of the backplane PHYs all of which are covered by auto negotiation. These PHYs are also not covered for operational MAU type since they aren't in RFC 4836.

SuggestedRemedy

This TLV should probably be deprecated at some point and replaced with one that indicates which type of auto-neg is supported and either has a larger advertised capability field with enough bits for all capabilities or where the capability bits are specific to the autonegotiation type so they fit in the 16 bit field.

Response *Response Status* **W**

REJECT.

While deprecating and replacing this TLV as suggested is beyond the scope of this project, it would be a reasonable thing to do in the future.

See also comment #13.

Cl **79** *SC* **79.3.1.3** *P* **26** *L* **16** # 13

Thaler, Patricia Broadcom

Comment Type **GR** *Comment Status* **A**

RFC 4836 doesn't cover the newer PHY types including backplane and 10GBASE-T and it is unlikely to be revised since the MIBs are moving to 802.3.

SuggestedRemedy

Add replace "subsequent revisions" with a reference to the IEEE 802.3 MIB standard that is under development.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

IETF RFC 4836 references the IANA-MAU-MIB for the dot3MauType enumeration and the process to add a new enumerations is described as follows:

'It is intended that each new MAU type, Media Availability state, Auto Negotiation capability and/or Jack type defined by the IEEE 802.3 working group and approved for publication in a revision of IEEE Std 802.3 will be added to this MIB module, provided that it is suitable for being managed by the base objects in the MAU-MIB. An Expert Review, as defined in RFC 2434 [RFC2434], is REQUIRED for such additions.' RFC 2434 describes an 'Expert Review' as 'approval by a Designated Expert is required'.

As it will still be some time before the IEEE 802.3.1 Ethernet MIB standard is published, and based on the current draft of IEEE 802.3.1, the IANA-MAU-MIB is still referenced for the definition of the dot3MauType enumeration, the correct approach would seem to be to update IANA-MAU-MIB for the new PHY types based on the process above.

The IEEE 802.3 maintenance Task Force will generate a letter to IANA, which will require IEEE 802.3 Working Group approval, to request the addition of the currently missing PHYs to the IANA-MAU-MIB.

Cl **79** *SC* **79.3.4** *P* **28** *L* **29** # 14

Thaler, Patricia Broadcom

Comment Type **GR** *Comment Status* **A**

It isn't clear why maximum frame size should be an 802.3 specific item. There are other MACs that support a variety of frame sizes so this could be appropriate as an 802.1 organizationally specific TLV or even a regular TLV. Note that there may be cases where a MAC supports a larger maximum frame size than the port above the MAC so knowing only the MACs answer on max frame isn't terribly useful.

SuggestedRemedy

At least put in a note that reminds the reader that MAC and PHY support for a given frame size doesn't mean that the upper layers support that size.

Response *Response Status* **C**

ACCEPT.

The note suggested will be added.

Cl **79** *SC* **79.3.4** *P* **28** *L* **47** # 9

Alexander, Thomas VeriWave

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

The maximum frame size should be defined by reference to the appropriate normative clauses of the existing 802.3 standard, and not explicitly in this subclause. In any case the TLV implies that the maximum frame size is always PHY-independent, whereas Clause 4 defines the maximum frame size in a PHY-dependent manner. (Even though eventually all the PHYs wind up with the same maximum frame size ...)

SuggestedRemedy

Change items a), b) and c) in 79.3.4.1 to indicate that the maximum frame size field shall be set according to subclause 4.4.2 (specifically, Table 4-2).

Response *Response Status* **C**

REJECT.

This is a definition of what value is placed in the maximum frame size field of this TLV, not a definition maximum frame size.

Cl **79** *SC* **79.3.4.1** *P* **28** *L* # 19

Ganesan, Venkatasubramaniyan HCL

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

Should not the standard provide a way to inform a non-standard configuration e.g Jumbo frame? Ie., standard way to disagree?

SuggestedRemedy

79.3.4.1
d)The maximum Frame size filed shall be set based on the MTU configured

Response *Response Status* **C**

REJECT.

The IEEE 802.3 standard only supports frames sizes defined in the IEEE 802.3 standard.

Cl **79** *SC* **79.5.8** *P* **34** *L* **9** # 8

Alexander, Thomas VeriWave

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

The numbers given for items FST2, FST3 and FST4 in the "Maximum Frame Size TLV" PICS entry seem to constitute explicit normative specifications on the frame sizes of Ethernet frames. PICS entries should not contain normative specifications, but instead reference normative text in the body of the standard.
In addition "1518 for the basic frames" is poor grammar.

SuggestedRemedy

Collapse FST2, FST3 and FST4 into a single PICS entry that has the following attributes:
Feature: 'maximum frame size field'
Subclause: 79.3.4.1
Value/Comment: 'Set according to the maximum frame size field values defined for basic frames, Q-tagged frames, or envelope frames'
At the very least, change "1518 for the basic frames" to "1518 for basic frames" in FST2.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The PICS entries do not contain shall statements so do not constitute normative specification. The IEEE 802.3 style for PICS entries generally uses a PICS item for each shall.

The text '1518 for the basic frames' will be changed to read '1518 for basic frames'.

Cl **99** *SC* **99** *P* **13** *L* **1** # 3

Law, David 3Com

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

Title and editing instructions missing.

SuggestedRemedy

Add the following text:
Draft Amendment of:
Information technology-
Telecommunications and information exchange between systems-
Local and metropolitan area networks-Specific requirements-
Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications
Amendment:
Ethernet Organizationally Specific Type, Length, Values (TLVs)
[This amendment is part of IEEE Std 802.3(TM)-2008]
NOTE- This amendment is described with reference to IEEE 802.3-2008. The editing instructions define how to merge the material contained here into the base document set to form the new comprehensive standard as created by the addition of IEEE Std 802.3bc-200X. When the source of the base text is other than IEEE Std 802.3-2008, the source is indicated in the change instruction.
Editing instructions are shown in bold italic. Four editing instructions are used: change, delete, insert, and replace. Change is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed either by using [strikethrough]strikethrough[/strikethrough] (to remove old material) and [underscore]underscore[/underscore] (to add new material). Delete removes existing material. Insert adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. Replace is used to make changes in existing text, subclauses, tables, or figures by removing existing material and replacing it with new material. Editing instructions, change markings, and this NOTE will not be carried over into future editions because the changes will be incorporated into the base standard.

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* **99** *P* **4** *L* **11** # 2

Law, David 3Com

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

Add the following list of amendments to frontmatter.

SuggestedRemedy

IEEE Std 802.3av(TM)-200X
This amendment includes changes to IEEE Std 802.3-2008 and adds Clause 75 through Clause 77 and Annex 75A through Annex 76A. This amendment adds new Physical Layers for 10 Gb/s operation on point-to-multipoint passive optical networks.
IEEE Std 802.3-2008/Cor 1(TM)-200X
This corrigendum corrects the PAUSE reaction delay value specified for some PHY types.

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* **99** *P* **4** *L* **14** # 4

Grow, Robert Intel Corporation

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

Need list of approved amendments, including this one, and it would be nice to be able to review the descriptions.

SuggestedRemedy

Not knowing the publication editor plan, I would expect IEEE Std 802.,3at-20xx, IEEE Std 802.3av-20xx, IEEE Std 802.3bc-20xx could all be included.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE by #21.

Cl **99** *SC* **99** *P* **5** *L* **22** # 5

Grow, Robert
Intel Corporation

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

PICS tables? When this was originally written, IEEE was experimenting with DRM that inhibited printing out of PICS tables--something I think that no longer challenges us. We are still though publishing PICS tables on the web but are not doing so consistently, nor keeping them updated. While not critical to this project, it is certainly relevant to P802.3at, since we still publish the PICS tables for 802.3af-2004 and don't seem to have updated for the Corrigenda nor do I know of any plan to update for clause 33 changes made by P802.3at. It is quite possible that other PICS tables are now also obsolete.

SuggestedRemedy

1. Delete "PICS tables" as we are no longer keeping updated.
2. Though out of scope for this project, please respond with plan to rectify the situation and delete the obsolete PICS tables. After searching IEEE Std 802.3-2008 for "download" I come up with three download sites we are using (that could be consolidated). Since P802.3.1 will be adding significantly to download material, I would recommend assigning cleaning up the downloads mess to the maintenance TF. The three sites I'm aware of are:
http://standards.ieee.org/reading/ieee/std/downloads/index.html
http://standards.ieee.org/downloads/802
http://www.ieee802.org/3/publication/index.html (not referenced in Std 802.3)
3. Though also out of scope for this project, please respond with commitment to update front matter master, and apply update to other active projects.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

Mention of 'PICS tables' in 'Downloads' will be removed. In respect to a plan to rectify the multiple download sites, this is being addressed in the IEEE P802.3.1 project.