IEEE P802.3 & IEEE P802.1AX

- These two projects are co-contingent to revise IEEE Std 802.3-2005
- IEEE P802.1AX (IEEE 802.3ax) met all recirculation requirements – 100% approval (w/flip) – prior to March plenary
  - Was approved for submittal in March
  - Co-contingent IEEE P802.3 wasn't ready
- IEEE P802.3 (IEEE 802.3ay) has now met all recirculation requirements – no new comments – 97% approval

IEEE P802.3 (IEEE 802.3ay) Revision
Final sponsor recirculation ballot results

- 3rd Sponsor recirculation ballot - closed 8th July 2008

Comments received: 0	3rd Recirculation Draft D2.3			Req %
	#	%	Status	
Abstain	8	8	PASS	< 30
Disapprove with comment	2	-	-	-
Disapprove without comment	0	-	-	-
Approve	89	97	PASS	≥ 75
Ballots returned	99	86	PASS	≥ 75
Voters	115	-	-	-

- 2 Outstanding negatives balloters, Dawe (7) and Nikolich (1)

LOA Status

- But there is an LoA (letters of assurance) issue
  - LoAs are submitted linked to a standard
  - Moving the material to another standard breaks the link.
  - Therefore PatCom advised seeking LoAs from all previous submitters of LoAs on the project or on the base standard after approval of the project.
  - The LOAs must use the current LoA form

LOA Status

- LoAs
  - 4 LoAs submitted against IEEE 802.3ad link agg
  - 8 LoAs sumitted against IEEE 802.3 after link agg
  - Total of 12 to request
- Requests have been sent by the 802.3 Chair
  - Advice of PatCom has been carried out
    - Some challenges who to send request to
  - Some response, awaiting others
- Any outstanding responses will be brought to the attention of PatCom

P802.3 & P802.1AX WG motion

Request that the IEEE 802.3 Working Group Chair request IEEE 802 EC approval to submit IEEE P802.3 (802.3ay) D2.3 and IEEE P802.1AX (802.3ax) D2.1 for September consideration by RevCom and the SASB.

M: W. Diab on behalf of the TF

Technical (≥ 75%)

Y: 92, N: 0, A: 1

Motion passed 17-July-2008 2:06PM

IEEE P802.3 & IEEE P802.1AX to RevCom

The EC grants approval for IEEE P802.3 (IEEE 802.3ay), and IEEE P802.1AX (IEEE 802.3ax) submission to RevCom.

M: D. Law S: T. Jeffree

Y: ??, N: ??, A: ??

Cl **21** *SC* **21.1.2** *P* **2** *L* **42** # 17

Dawe, Piers J G — Individual

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

21. Introduction to 100 Mb/s baseband networks...' This is mendacious because it includes some but not all 100 Mb/s types. It doesn't matter whether there is an introduction to EFM elsewhere or not, the reader is reading this, here. 100BASE-LX10, 100 Mb/s Ethernet on traditional SMF, is part of the core portfolio, and deserves a mention here, more than Backplane Ethernet does in Clause 34. By core portfolio I mean the matrix 100/1000/10G by SMF, MMF, electrical. Whether or not we need a list of all the port types, we do need a list of the places in the document where they are to be found. 'Distinct Identity: ... Easy for document reader to select relevant spec': it's not easy to select if the document pretends it doesn't exist. What I ask for is not an onerous change.

SuggestedRemedy

Add a new paragraph '100BASE-LX10 and 100BASE-BX10 (Clause 58) use a pair of single-mode fibers and one single-mode fiber, respectively.'

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Straw poll in realtion to these PHYs:

Do nothing 6
Add these PHYs 2
Do something else 7

Motion

Change the text to read:

The following portion of this standard specifies a family of Physical Layer implementations. Typically 100BASE-TX (Clauses 24 and 25) uses two pairs of Category 5 balanced cabling as defined by ISO/IEC 11801, 100BASE-FX (Clauses 24 and 26) uses two multimode fibers. There are a number of other PHY types and their associated media.

M: Thompson S: Dawe
Y: 10 N:1 A: 1

Cl **34** *SC* **34.1.2** *P* **2** *L* **43** # 21

Dawe, Piers J G — Individual

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

As we are modifying this introduction to 1000 Mb/s to include Backplane Ethernet, to be even handed we have to point to the other 1000 Mb/s Ethernet types. Whether or not we need a list of all the port types, we do need a list of the places in the document where they are to be found. 'Distinct Identity: ... Easy for document reader to select relevant spec': it's not easy to select if the document pretends it doesn't exist. What I ask for is not an onerous change.

SuggestedRemedy

Insert a new sentence 'For 1000BASE-LX10, 1000BASE-BX10, 1000BASE-CX, 1000BASE-PX10 and 1000BASE-PX20, see Clause 56.'

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

M:Grow S: Noseworthy

The following portion of this standard specifies a family of Physical Layer implementations. 1000BASE-T (Clause 40) uses four pairs of balanced copper cabling. 1000BASE-SX (Clause 36, Clause 37 and Clause 38) uses two multimode fibers. There are a number of other PHY types and their associated media.

Y: 4
N: 0

Cl **70** *SC* **70.3** *P* **385** *L* **37** # 81

Dawe, Piers J G Individual

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

(Updated comment) TD1.1 comment 45 was implemented in reverse, undoing part of what was implemented of D1.0 comment 132. The response to D1.2 comment 53 does not resolve the issue raised by these comments. As we have established previously, we are discussing a requirement on the PCS, and this is not the PCS clause. The PCS is specified in Clause 36. This requirement is explicit in 36.2.5.2.7 with PICS in 36.7.4.3. Clause 70 cannot make requirements on something outside its scope: the sentence in this draft is improper. All Clause 70 can do is inform the reader that another clause has normative requirements that are of interest. The style guide allows 'must' 'to describe unavoidable situations', which is exactly what we have here. But I note that the style guide says 'shall equals is required to.' 71.3 and 72.3 have a similar problem; attempting to do what's already done in 48.2.7 and 49.2.16.

SuggestedRemedy

Change 70.3 to the intention of D1.1: to read 'The reader is advised that 36.2.5.2.7 requires the PCS associated with this PMD to support the AN service interface primitive AN_LINK.indication as defined in 73.9.' Make the similar change in 71.3 and 72.3. Delete 71.10.4.1 and 72.10.4.1 (whole subclauses - the equivalent in Clause 70 has gone since D1.1). Alternatively 'The PCS associated with this PMD must support the AN service interface primitive AN_LINK.indication as defined in 73.9 (See 36.2.5.2.7).', make the similar change in 71.3 and 72.3, delete 71.10.4.1 and 72.10.4.1.

Response *Response Status* **U**

REJECT.

See comment #12.

Cl **70** *SC* **70.3** *P* **385** *L* **37** # 12

Dawe, Piers J G Individual

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

D1.1 comment 45 was implemented in reverse, undoing part of what was implemented of D1.0 comment 132. The response to D1.2 comment 53 does not resolve the issue raised by these comments. As we have established previously, we are discussing a requirement on the PCS, and this is not the PCS clause. The PCS is specified in Clause 36. This requirement is explicit in 36.2.5.2.7 with PICS in 36.7.4.3. Clause 70 cannot make requirements on something outside its scope: the sentence in this draft is improper. All Clause 70 can do is inform the reader that another clause has normative requirements that are of interest. The style guide allows 'must' 'to describe unavoidable situations', which is exactly what we have here. But I note that the style guide says 'shall equals is required to.'

SuggestedRemedy

Change 70.3 to the intention of D1.1: to read 'The reader is advised that 36.2.5.2.7 requires the PCS associated with this PMD to support the AN service interface primitive AN_LINK.indication as defined in 73.9.' Make the similar change in 71.3 and 72.3. Delete 71.10.4.1 and 72.10.4.1 (whole subclauses - the equivalent in Clause 70 has gone since D1.1). Alternatively 'The PCS associated with this PMD must support the AN service interface primitive AN_LINK.indication as defined in 73.9 (See 36.2.5.2.7).', make the similar change in 71.3 and 72.3, delete 71.10.4.1 and 72.10.4.1.

Response *Response Status* **U**

REJECT.

There is no consesus to make this change.

Straw poll:
How many like:
Shall 5
Must 2

Motion:
Change 'shall' to must in 71.3 and 72.3.
M: Dawe S: Frazier
Y: 3
N: 6

Cl **Table** *SC* **table of contents** *P* **7** *L* # 5

Nikolich, Paul Individual

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

Mr. Grow, The table of contents starts at page 7, ends on page 139. 132 pages of TOC. Wow. Their is too much obsolete material in the standard, to the point of rendering it difficult to use--possibly hindering what I believe is 802's top level objective of facilitating interoperable implementations.
Much of the standard covers obsolete technologies that are no longer never were implemented in volume or are not relevant anymore: AUI, 10BASE5, FOIRL, 10BASE2, 10BROAD36 (my personal favorite), 1BASE5, 10BASE-F, 10BASE-FP, 10BASE-FB, 10BASE-FL, System Guidelines, and a lot more that I am not able or qualified to identify.

SuggestedRemedy

The obsolete material should be removed. I know this is not trivial work, nor work that many stakeholders are willing to invest resources in. But it should be done. In order to approve this revision, I would like the WG to explain what, if any plans there are to remove the obsolete material. If there are no such plans--what are the obstacles and why cannot they be overcome? I welcome the opportunity to engage in a dialog with the WG to explore ways to improve the useability of the standard.

Response *Response Status* **W**

ACCEPT IN PRINCIPLE.

While much of this material is old and may not have many implementations it can't simply be deleted as the LOAs would then no longer apply and in some cases these LOAs may be required for newer portions of the standard. In addition this material is only a minor portion of the whole standard.

To use stabilization would require the obsolete material to be moved to a new standard - portions of a standard can't be stabilized - however extracting the material to a new standard would require new LOAs to be obtained.

Based on the above one approach that seems to be available is to consider creating a deprecated volume (section) that contains this material and related changes to the TOC. We will work with editorial staff on this approach. We will also see if a new higher level TOC could be made that is useful.

Cl **36** *SC* **36.1.2** *P* **35** *L* **32** # 20

Dawe, Piers J G — Individual

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

There's no point revising old objectives if we don't get it right. 1000BASE-LX10, 1000BASE-BX10 and 1000BASE-PX10 are rated for 10 km, and 1000BASE-PX20 is rated for 20 km. 1000BASE-PX10 and 1000BASE-PX20 don't usually (but could) preserve full duplex behaviour of underlying PMD channels. There's nothing in the PCS or PMA that enforces these limits.

SuggestedRemedy

Change "5 km" to "10 km", change "5000 m" to " 10 km". Or "multiple kilometers".

Response *Response Status* **U**

REJECT.

Support for a network extent of 5km was indeed the objective for the 1000BASE-X project (IEEE P802.3z) which is what this subclause is recording.

Support for 10km, provided by 1000BASE-LX10, 1000BASE-BX10 and 1000BASE-PX10 and for 20km, provided by 1000BASE-PX20, was added by the subsequent Ethernet in the First Mile (EFM) project (IEEE P802.3ah).

These EFM objectives are covered in subclause 59.1.1 which states 'c) 1000BASE-X up to 10km over SM fiber' and 60.1.1 which states 'b) 1000 Mb/s up to 10 km on one single-mode fiber supporting a fiber split ratio of 1:16.' and 'c) 1000 Mb/s up to 20 km on one single-mode fiber supporting a fiber split ratio of 1:16.'.

Cl **70** *SC* **70.3** *P* **385** *L* **37** # 44

Dawe, Piers J G — Individual

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

As noted before, this sentence in a PMD clause purports to place a requirement on a PCS, which obviously it can't. That requirement is already placed by 36.2.5.2.7. Doing this right does not go against P802.3ap's wish to make this primitive mandatory, only their plan to implement the requirement twice over, badly. This is not settled text; it has been criticised at every ballot.

SuggestedRemedy

Change "shall support" to "must support". Also in 71.3, 72.3. Delete 71.10.4.1 and 72.10.4.1 (the equivalent in Clause 70 has gone since D1.1).

Response *Response Status* **U**

REJECT.

This is restatement of a previous comment. See comment #12 from the initial ballot.

Cl **36** *SC* **36.1.2** *P* **32** *L* **39** # 3

Dawe, Piers J G

Individual

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

As stated in D2.1 comment 20, the recent modifications made to the 5 km network extent objective in 36.1.2 Objectives are not correct. per 36.1.1, the name "1000BASE-X" a is family of 1000 Mb/s Physical Layer implementations (created within whichever project - and they all eventually refer back to this Clause 36 anyway). It is/was not the name of a former project. Old projects have no relevance after their amendments have been rolled up. And the objective was 3 km not 5 (see http://ieee802.org/3/z/public/minutes/CDA0996.txt and I'm not aware that it was changed again). Rewriting history is a problem but telling people that 1000BASE-X is good to only 5 km is flat wrong when the bulk of the market at 1310 nm is 10 km rated, as well as further PMDs in Clause 59 and Clause 60.

SuggestedRemedy

Add a NOTE of explanation (a NOTE being not part of the standard) at the end of 36.1.2:
'NOTE - The 1000BASE-X PCS and PMA do not constrain the network extent. PMDs in Clause 59 and Clause 60 have ranges beyond 5 km.'
or, 'NOTE - The full duplex 1000BASE-X PCS and PMA do not constrain the network extent. PMDs in Clause 59 and Clause 60 have ranges beyond 5 km.'

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Will add the following note:

NOTE - The 1000BASE-X PCS and PMA do not constrain the extent of a full duplex network. PMDs in Clause 59 and Clause 60 have ranges beyond 5 km.