Cl **00** *SC* **0** *P* **i** *L* **1** # **11**

Part **Std 802.3**

Piers Dawe Agilent

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

Three bookmarks referring to front matter are at end of bookmark list, not at beginning.

SuggestedRemedy

Reposition

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

This comment will be passed on to the publications editor.

Cl **00** *SC* **0** *P* **i** *L* **29** # **12**

Part **Std 802.3**

Piers Dawe Agilent

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

Frist

SuggestedRemedy

First

Response *Response Status* **C**

ACCEPT.

Cl **01** *SC* **1.1.2.2** *P* **4** *L* **32** # **5**

Part **Std 802.3**

Piers Dawe Agilent

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

Draft has some interfaces (AUI, MMI, XAUI) 'highly recommended', others are just 'recommended'. Not sure if this is a deliberate message or an accident. For established items, it probably doesn't matter whether the standard says 'highly', and a standard should not be nuancing shades of gray.

SuggestedRemedy

For consistency, remove the remaining 'highly's.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **01** *SC* **1.3** *P* **15** *L* **30** # **6**

Part **Std 802.3**

Piers Dawe Agilent

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

Dead link.

SuggestedRemedy

Please make the cross-references from 1.3 to Annex A and 1.2 active.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

This comment will be passed on to the publications editor.

Cl **01** *SC* **1.4.42** *P* **18** *L* **22** # **7**

Part **Std 802.3**

Piers Dawe Agilent

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

Typo

SuggestedRemedy

Please insert space between 'Clauses' and '61' .

Response *Response Status* **C**

ACCEPT.

Cl **30** *SC* **30.11.2.1** *P* **428** *L* **22** # **34**

Part **Std 802.3**

Michael Beck Alcatel Bell n.v.

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

There is no Clause 30 object to count the TC-CRC errors in the PME.
It seems that it has been overlooked, as we do have a coding violations counter in the PME capability.

SuggestedRemedy

Add an object to count the TC-CRC errors in the PME
capability. It should reference the variable TC_crc_error in subclause 61.3.3.8 and the associated "10P/2B TC CRC error register" (6.24.15:0) in subclause 45.2.6.11.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **34** *SC* **34** *P* **1** *L* **1** # **18**

Part **Std 802.3**

Piers Dawe Agilent

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

Page numbers give rise to ambiguity in references: if I say 'page 50 of 802.3', which of the 5? page 50s is that? Page numbers should continue in one sequence through the five parts. If it helps, each part could start at n.100+1 - allowing revisions in one part to not trigger page changes in another.

SuggestedRemedy

Renumber the pages so there are no duplicate numbers. I think it's possible to do this with both the 'printed' numbers and the soft (pdf) numbers.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

This comment will be passed on to the publications editor.

Cl **40** *SC* **40.12** *P* **238** *L* **35** # **29**

Part **Std 802.3**

Piers Dawe Agilent

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

PICS should start on a fresh page

SuggestedRemedy

Force new page.

Response *Response Status* **C**

ACCEPT.

Cl **51** *SC* **51.4** *P* **308** *L* **33** # **15**

Part **Std 802.3**

Piers Dawe Agilent

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

I couldn't find SFI-4 in the references or bibliography

SuggestedRemedy

Add an entry for SFI-4 in Annex A.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot and the full text for the refernce would be greatly appreciated.

Cl **51** *SC* **51.4** *P* **308** *L* **40** # **13**

Part **Std 802.3**

Piers Dawe Agilent

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

Should be a space between number and unit

SuggestedRemedy

Insert space (twice in this table)

Response *Response Status* **C**

ACCEPT.

Cl **51** *SC* **51.4** *P* **308** *L* **40** # **14**

Part **Std 802.3**

Piers Dawe Agilent

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

I think we use b/s for the uncoded rate (e.g. 10 Gb/s) and Bd for the signaling (here called 'baud') rate.

SuggestedRemedy

Unless SFI-4 uses this terminology AND this table is intending to follow it, change Gb/s to GBd (twice in this table).

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **52** *SC* **14.4** *P* **360** *L* **41** # **36**

Part **Std 802.3**

Paul Kolesar

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

The referenced singlemode connector performance specification, IEC 61753-021-2, provides several classes of performance that differ by return loss. Of these classes, performance Class S matches the specifications of clause 52, by specifying a 26 dB return loss requirement. The reference should be made more specific by including a designation of this performance class. Modify the reference as follows:
b) IEC 61753-021-2 -- Fibre optic ... Category C – Controlled environment, performance Class S.

SuggestedRemedy

Response *Response Status* **Z**

WITHDRAWN.

This comment will be resubmitted at Sponsor Ballot.

Cl **52** *SC* **52.9.6.3** *P* **346** *L* **4** # **16**

Part **Std 802.3**

Piers Dawe Agilent

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

There's an error in terminology here that a reader has complained about. While PN is a noise power, PM is a power due to signal and noise and cannot be described as 'noise power'.

SuggestedRemedy

Delete 'noise' from the line ending in 'modulation on'.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **52** *SC* **52.9.9.2** *P* **352** *L* **14** # **17**

Part **Std 802.3**

Piers Dawe Agilent

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

Gratuitous color: this is something we wanted to fix before 802.3ae became a standard but we ran out of time.

SuggestedRemedy

Make the colored items in this figure, black.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

This comment will be passed on to the publications editor.

Cl **53** *SC* **14.3** *P* **400** *L* **22** # **37**

Part **Std 802.3**

Paul Kolesar

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

The resolution to comment #83 on the previous ballot called for modification of the reference to IEC 61753-022-2 to add a specific performance class that is aligned with the specifications for multimode connectors within standard 802.3. This modification was not made where the reference is called out in clause 53. Make the modification as previously agreed. The agreed resolution is reproduced here for reference:

Accept in principle.
Modify the clause 52 and 53 references as follows:
c) IEC 61753-022-2 -- Fibre optic ... Category C – Controlled environment, performance Class M.

This is based on the following email from e-mail from Paul Kolesar:

I've obtained the standard and checked its contents. I believe it meets the expectations of IEEE P802.3ae where referenced in clauses 52.14.4 and 53.14.3, with one possible exception that deserves clarification in the referencing clauses. The exception has to do with the fact that 61753-022-2 specified two performance levels delineated by class designations M and N. Class M meets the 0.75 dB attenuation and 20 dB return loss requirements of 802.3 for multimode connectors, while class N does not. Class N attenuation is 1.25 dB max and has no return loss requirements. Therefore, I believe comment #83 should spawn additional action to insert a designation of Class M into the places where it is called out in clauses 52 and 53 (and any other places). I would suggest modifying the clause 52 and 53 references as follows:
c) IEC 61753-022-2 -- Fibre optic ... Category C – Controlled environment, performance Class M.

SuggestedRemedy

Response *Response Status* **Z**

WITHDRAWN.

This comment will be resubmitted at Sponsor Ballot.

Cl **53** *SC* **14.4** *P* **400** *L* **20** # **38**

Part **Std 802.3**

Paul Kolesar

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

The referenced singlemode connector performance specification, IEC 61753-021-2, provides several classes of performance that differ by return loss. Of these classes, performance Class S matches the specifications of clause 53, by specifying a 26 dB return loss requirement. The reference should be made more specific by including a designation of this performance class. Modify the reference as follows:
b) IEC 61753-021-2 -- Fibre optic ... Category C – Controlled environment, performance Class S.

SuggestedRemedy

Response *Response Status* **Z**

WITHDRAWN.

This comment will be resubmitted at Sponsor Ballot.

Cl **54** *SC* **54.5.4** *P* **336** *L* # **4**

Part **IEEE P802.3REVam<CR>**

Peter Bradshaw Intersil Corpn

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

The conditions for asserting SIGNAL_DETECT = OK depend on the existence of an input signal in excess of a value for 1UI. The intent, as expressed in the 802.3ak Working Group, appeared to me to be as follows:-

If the (as defined) input level exceeds some threshold value, for a time that would occur at least during the time span of an IPG, then SIGNAL_DETECT = OK is to be asserted.

The minimum IPG will always have at least 2 runs of 3 or more 1s or 0s, including at least one run of 4 or more 1s or 0s. Assuming that the input signal (at least when SIGNAL_DETECT is "at risk") will have suffered high frequency attenuation, the first bit of such runs may be expected to fall below the threshold, but the later bits will be the "key" area for threshold detection. Thus there is a 'reasonable' expectation that an IPG will have 7 to 9 "full amplitude" bits in a 20 UI interval. I think it would be preferable to have the SIGNAL_DETECT = OK depend on at least 7 of 20 UI as the time criteria for assertion.

SuggestedRemedy

Replace "at least 1 UI" by "at least 7 UI in any 20 UI interval".

Response *Response Status* **Z**

WITHDRAWN

A different solution is being worked on and will be submitted at Sponsor ballot.

Cl **54** *SC* **54.5.4** *P* **336** *L* # **3**

Part **IEEE P802.3REVam comment #74<CR><CR>**

Peter Bradshaw Intersil Corpn

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

It seems to me that the proposed remedy does NOT reflect the intended operation of the SIGNAL_DETECT function in the 802.3ak standard. Furthermore, I think it has merely moved the "=/- 0.001 mV" delta issue from the 50mV threshold level to the 175mV threshold level.

The intent, as expressed in the 802.3ak Working Group, appeared to me to be as follows:-

If the (as defined) input level exceeds some threshold whose maximum value is 175 mV, for a time that would occur at least during the time span of an IPG, then SIGNAL_DETECT = OK is to be asserted, and SIGNAL_DETECT = FAIL cannot then be asserted for at least 250 usec, regardless of the intervening input level. Once the input level has fallen below some level, whose minimum value is 50 mV, and remained below that level for more than 500 usec, then SIGNAL_DETECT = FAIL is to be asserted.

I agree that the actual text of 802.3ak does not correctly reflect this planned operation. However, I do not think that merely removing the sentence as proposed in the comment restores the intended operation.

I would like to propose two possible remedies, one involving minimal edits, the other more extensive.

SuggestedRemedy

First proposal:
Append to the first paragraph, after "shall assert SIGNAL_DETECT = OK within 100µs after the absolute differential peak-to-peak input voltage on each of the four lanes at the MDI has exceeded 175 mV for at least 1 UI (unit interval)."

the following:

"The PMD may reassert SIGNAL_DETECT = OK within 100 µs after the absolute differential peak-to-peak input voltage on each of the four lanes at the MDI has exceeded 50 mV for at least 1 UI (unit interval).

Replace the first sentence of the second paragraph with

" The PMD shall not assert SIGNAL_DETECT = FAIL until at least 250 usecs after any event causing the assertion or reassertion of SIGNAL_DETECT = OK. "

First Remedy End

Second Remedy

Change the ending of the second paragraph to read as follows:
"shall assert SIGNAL_DETECT = OK within 100 µs after the absolute differential peak-to-peak input voltage on each of the four lanes at the MDI has exceeded an assertion threshold. for at least 1 UI. This assertion threshold shall be greater than 50 mV, and not more than 175 mV. "

Change the beginning of the third paragraph as follows:
"After any such assertion of SIGNAL_DETECT = OK, SIGNAL_DETECT = FAIL shall not be asserted for at least 250 usecs, regardless of the input signal. The PMD shall assert SIGNAL_DETECT = FAIL after the absolute differential peak-to-peak input voltage on each of the four lanes at the MDI has fallen below and remained below a deassertion threshold for 500 usec. This deassertion threshold shall be greater than 50 mV, and not more than 175 mV, and may be
the same as, or different from, the assertion threshold."

Response *Response Status* **Z**

WITHDRAWN

A different solution is being worked on and will be submitted at Sponsor ballot.

Cl **57** *SC* **57.4.2.1** *P* **35,36** *L* **51,10** # **1**

Part **Part 1**

Al Braga UNH-IOL

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

The Local Stable and Evaluating flags state that if the value of 0x3 is received it should be ignored and not change the last received value. This is understood as, the reception of 0x3 will not change the current state of the OAM Discovery process. However the Remote Stable and Evaluating flags state that if an OAMPDU is received from the DUT, the Local Stable and Evaluating flags shall be copied into the Remote Stable and Evaluating flags field.

A device can follow both of the above statements. It can receive the 0x3 value in the last received Local Stable and Evaluating flags and then ignore that value and copy it into the Remote Stable and Evaluating flags. However this is propagating an invalid/reserved value on the link. It does not accurately reflect how the station interpreted the received Local flags (since they were invalid).

Is this desired? Since the last received Local flags weren't valid, shouldn't the device transmit the last valid received Local Stable and Evaluating flags in the Remote Stable and Evaluating flags instead?

SuggestedRemedy

Change the Remote Stable and Evaluating flags to read:

When remote_state_valid is set to TRUE and the last received Local Stable and Local Evaluating values are not set to 0x3, the Remote Stable and Remote Evaluating values shall be a copy of the last received Local Stable and Local Evaluating values from the remote OAM peer.

If the last received Local Stable and Local Evaluating values are set to 0x3 the local OAM device shall set the Remote Stable and Remote Evaluating values to copies of the last received valid Local Stable and Local Evaluating values.

Otherwise, the Remote Stable and Remote Evaluating bits shall be set to 0.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **57** *SC* **57.5.1** *P* **40** *L* **48** # **2**

Part **Part 1**

Al Braga UNH-IOL

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

Letter d) states:
If the length of a TLV is not equal to that defined for the Type, it should be ignored, and the remainder of the frame may be ignored.

If Types have a defined length, then why are there lengths in the first place? Aren't they implied by the type of TLV.

I was under the impression that typical TLV procedure involves all TLVs based on the same type to be of the same format but of varying lengths. Assuming the first TLV of type A is defined to be 4 bytes long. The second TLV defined for type A is 6 bytes long. The first 4 bytes of the second TLV must contain the first TLV. The 2 extra bytes are what distinguishes it as the second defined TLV of type A.

Currently each TLV is locked down to a specific length. Any new TLVs of that same Type must get a new Type value to distinguish itself. If this is the case, there is no use for the length field since each type is registered with a specific length value.

SuggestedRemedy

Change letter d) to read:
The OAM client parses each TLV according to the Length value. Any information beyond what is understood by the OAM client may be ignored. All remaining valid TLVs within the OAMPDU may be accepted.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **58** *SC* **58.6** *P* **70** *L* **1** # **20**

Part **Std 802.3**

Piers Dawe Agilent

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

This subclause starts on a new page for no reason I can see.

SuggestedRemedy

Remove the forced page break. Also 59.2.2, 59.3.1, 59.7.2.

Response *Response Status* **C**

ACCEPT.

Cl **58** *SC* **58.6** *P* **70** *L* **30** # **21**

Part **Std 802.3**

Piers Dawe Agilent

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

Equation numbering has gone wrong. For example, (45-1) should be (58-1).

SuggestedRemedy

Fix.

Response *Response Status* **C**

ACCEPT.

Cl **58** *SC* **58.7.11.2** *P* **85** *L* **52** # **22**

Part **Std 802.3**

Piers Dawe Agilent

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

Equation number reference (.-13) should agree with equation just on next page, marked (.-14).

SuggestedRemedy

Fix.

Response *Response Status* **C**

ACCEPT.

Cl **58** *SC* **58.7.11.2** *P* **87** *L* **34** # **23**

Part **Std 802.3**

Piers Dawe Agilent

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

Too much white space between 'and' and '10GBASE-R/W'.

SuggestedRemedy

Fix.

Response *Response Status* **C**

ACCEPT.

Cl **58** *SC* **58.7.11.4** *P* **88** *L* **9** # **24**

Part **Std 802.3**

Piers Dawe Agilent

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

Shouldn't the quantities f2, SJ1 and SJ2 be in italics as in the table and figure?

SuggestedRemedy

Put them in italics (twice each).

Response *Response Status* **C**

ACCEPT.

Cl **59** *SC* **59.7.1** *P* **112** *L* **7** # **25**

Part **Std 802.3**

Piers Dawe Agilent

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

Stray letter 'T'.

SuggestedRemedy

Remove?

Response *Response Status* **C**

ACCEPT.

Cl **59** *SC* **59.10.3** *P* **124** *L* **31** # **28**

Part **Std 802.3**

Piers Dawe Agilent

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

Table what?

SuggestedRemedy

See older versions of this table.

Response *Response Status* **C**

ACCEPT.

Cl **59** *SC* **59.7.1** *P* **113** *L* **1** # **26**

Part **Std 802.3**

Piers Dawe Agilent

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

Font size.

SuggestedRemedy

Correct font size at end of this sentence.

Response *Response Status* **C**

ACCEPT.

Cl **59** *SC* **59.9.5** *P* **132** *L* **24** # **27**

Part **Std 802.3**

Piers Dawe Agilent

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

If you are going to fix the order of period and inverted comma once in this paragraph, don't leave the other two instances of the same problem!

SuggestedRemedy

Same fix, line 24 after 'Cable', and line 27 after 'assembly'. Similarly (3 times) in 38.11.4.

Response *Response Status* **C**

REJECT.

We appoligise but despite our best eforts we were unable to find the text refernced. Please resubmit this comment at Sponsor Ballot.

Cl **61** *SC* **61.3.2.3** *P* **177** *L* **29** # **32**

Part **Std 802.3**

Michael Beck Alcatel Bell n.v.

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

Greek symbols alpha and beta are typeset in bold type for no reason (PLAIN version only).

SuggestedRemedy

Print alpha and beta in regular weight; same thing in Figure 61-16.

Response *Response Status* **C**

ACCEPT.

Cl **61** *SC* **61.3.3.1** *P* **187** *L* **27** # **35**

Part **Std 802.3**

Michael Beck Alcatel Bell n.v.

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

There is a conflict between the text and the state diagram. As the state diagram takes precedence, the text should be modified.

SuggestedRemedy

Replace the last sentence of this paragraph with the following text:
After the completed End of Frame or Idle codeword, only All Idle or All Idle Out-of-Sync codewords shall be transmitted until TC_link_state becomes TRUE again. After TC_link_state becomes true again, transmission of data can restart when a new fragment is available for transmission over the gamma-interface.

Response *Response Status* **C**

REJECT.

This comment is out of scope as it is on unchanged text. Please resubmit this comment at Sponsor Ballot.

Cl **61A** *SC* **61A.3** *P* **351** *L* **39** # **33**

Part **Std 802.3**

Michael Beck Alcatel Bell n.v.

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

The hexadecimal print-out of the testing program should be printed in a fixed-width font (PLAIN version only).

SuggestedRemedy

Print this block of data in a fixed-width font, as was done in IEEE Std 802.3ah-2004.

Response *Response Status* **C**

ACCEPT.

Cl **65** *SC* **65.2.3.1** *P* **319** *L* **24** # **30**

Part **Std 802.3**

Piers Dawe Agilent

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

Grammar problem after revision - sentence in NOTE doesn't have a verb any more.

SuggestedRemedy

Fix by reference to previous version.

Response *Response Status* **C**

ACCEPT.

Cl **65** *SC* **65.2.3.1** *P* **352** *L* **22** # **31**

Part **Std 802.3**

Piers Dawe Agilent

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

Missing space at end of sentence

SuggestedRemedy

Insert space

Response *Response Status* **C**

ACCEPT.

Cl **A** *SC* **Annex A** *P* **554** *L* **1** # **10**

Part **Std 802.3**

Piers Dawe Agilent

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

Strange bookmarks, two per annex: want just one bookmark per annex

SuggestedRemedy

Something like 'Annex A. Additional reference material'

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

This comment will be passed on to the publications editor.

Cl **A** *SC* **Annex A** *P* **555** *L* **48** # **8**

Part **Std 802.3**

Piers Dawe Agilent

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

Inverted commas round title of a standard?

SuggestedRemedy

Remove?

Response *Response Status* **C**

ACCEPT.

Cl **A** *SC* **Annex A** *P* **555** *L* **6** # **9**

Part **Std 802.3**

Piers Dawe Agilent

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

ANSI X3.230-1994 (FC-PH) appears in 1.3. Should it appear again here?

SuggestedRemedy

Remove? Scrub document for [B20] and correct cross-references to point at the 1.3 entry. Similarly for B13, OFSTP-4. There may be more.

Response *Response Status* **C**

REJECT.

The refernces and the bibliography clauses are not orthoginal and therfore ANSI X3.230-1994 (FC-PH) appears in both.

Cl **A** *SC* **B.4.2** *P* **574** *L* **31** # **19**

Part **Std 802.3**

Piers Dawe Agilent

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

Strange symbol ('thorn') several times in this table.

SuggestedRemedy

Change to the appropriate kind of space.

Response *Response Status* **C**

ACCEPT.