Cl **78** *SC* **78** *P* **58** *L* **1** # r02-4

Zimmerman, George Aquantia, and CommS

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

Page numbering jumps back from 59 at the end of Clause 45 to 58 at the top of clause 78

SuggestedRemedy

Fix page numbering in book.

Response *Response Status* **C**

ACCEPT.

Cl **97** *SC* **97.1.2** *P* **61** *L* **42** # r02-5

RAN, ADEE Intel Corporation

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

Acknowledging this is an unchanged portion of the draft.

The paragraph (item b) includes "optional" twice. The second time is in the phrase "to support applications requiring optional physical reach"

It seems that this should be "extended physical reach".

SuggestedRemedy

Change "optional" to "extended".

Response *Response Status* **C**

ACCEPT.

Cl **97** *SC* **97.1.2.1** *P* **63** *L* **20** # r02-1

Zimmerman, George Aquantia, and CommS

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

The commenter realizes this may be out of scope. Text: "RS-FEC encoder. The RS encoder". The second instance should be "RS-FEC encoder" (RS is the abbreviation for something else). There are 9 instances of RS encoder in the draft and 3 instances of RS-FEC encoder. Also, there are two instances of RS decoding in the draft, although for the most part it is referred to correctly as the RS-FEC decoder.

SuggestedRemedy

Change 9 instances of "RS encoder" to "RS-FEC encoder" (P, change 2 instances of "RS decoding" to "RS-FEC decoding"

Response *Response Status* **C**

ACCEPT.

Cl **97** *SC* **97.3.6.4** *P* **96** *L* **19** # r02-2

Zimmerman, George Aquantia, and CommS

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

"PHY frame loss ratio." Unlike MAC frames which, when in error might be deleted, errored PHY frames are not lost, they are in error. In this instance, the text says PHY frames, so the definition of "frame loss ratio", which is specific to MAC frames is incorrect. Additionally, just because someone defined a new term for an old thing doesn't mean it needs to be propagated everywhere. ALL other BASE-T or BASE-T1 PHYs, approved, incorporated in 802.3-2015 or in draft, use "frame error ratio" or "bit error ratio" (for those before 1000BASE-T), which can be translated to "frame error ratio". "frame loss ratio" is ONLY used by clauses added by 802.3bj (where it was defined) of IEEE Std 802.3 (92, 93, 94, and 95), it is only used 5 times. The rest of 802.3-2015 uses "frame error ratio" (13 times, in 3 clauses). One of the uses is in Annex 58A which describes Frame-based testing, and how to translate bit error ratio used in all the older clauses (a hundred times) to frame error ratio.

SuggestedRemedy

Change "PHY frame loss ratio" back to "PHY frame error ratio" in 97.3.6.4; consider globally reverting the change from frame error ratio to frame loss ratio to avoid confusion with previous BASE-T PHYs.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "PHY frame loss ratio" back to "PHY frame error ratio" in 97.3.6.4. The other instances are OK as they are right now.

Cl **97** *SC* **97.3.7.1** *P* **98** *L* **24** # r02-7

Chini, Ahmad Broadcom Corporation

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

PCS Transmit Receive state diagram should be

PCS Receive state diagram

SuggestedRemedy

delete the word "Transmit"

Response *Response Status* **C**

ACCEPT.

Cl **97** *SC* **97.3.7.3** *P* **100** *L* **51** # r02-3

Zimmerman, George Aquantia, and CommS

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

"81B-RS encoder" is this the 81B encoder or the RS encoder, or something else? I think the 81B encoder is meant. "81B-RS encoder" is only mentioned once in the text and once in the PICS, and I think it is a byproduct of the edit done here.

SuggestedRemedy

Change to "81B encoder" (and change PICS PCO3 on page 161 line 13

Response *Response Status* **C**

ACCEPT.

Cl **97** *SC* **97.4.4.2** *P* **129** *L* **33** # r02-8

Chini, Ahmad Broadcom Corporation

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

Text does not match state diagram 97-26

SuggestedRemedy

change minwait_timer defintion as shown below.
A timer used to determine the minimum amount of time the PHY Control stays in the SILENT,
TRAINING, SEND IDLE2 and SEND DATA states. The timer shall expire 975 is +/- 50 is after
being started.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

change minwait_timer defintion as follows:

A timer used to determine the minimum amount of time the PHY Control stays in the SILENT, TRAINING, SEND IDLE2, and SEND DATA states. The timer shall expire 975 us +/- 50 us after being started.

Use proper symbol for microsecond.

Cl **97** *SC* **97.4.5** *P* **131** *L* **1** # r02-9

Chini, Ahmad Broadcom Corporation

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

Figure 97-27 does not look right. The PHY will drop back to SEND_T as soon as it stays in data mode and minwait_timer is expired

SuggestedRemedy

comapre with D2.0 and change per meeting decision

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change the name of the state from COUNTDOWN to LINK_UP

Change in current COUNTDOWN state
"tx_mode <= SEND_T
PMA_state <= 01"
to
"link_status <= OK"

Cl **97** *SC* **97.5.4.1** *P* **142** *L* **50** # r02-6

RAN, ADEE Intel Corporation

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

*** Comment submitted with the file 88825400003-ran_3bp_01_0316.pdf attached ***

Following comment r01-15: most of the response to that comment is satisfactory.
Some parts are still broken:

1. Receiver performance should be specified with a fully compliant transmitter. 97.5.3.1 is just a part of the Tx specification.

2. Operation over type B is an option for the PHY. It should be stated clearly as an option, and included in the PICS properly.

Detailed presentation attached.

SuggestedRemedy

Apply changes detailed in slides 6 and 7 of ran_3bp_01_0316 with editorial license for creating PICS items.

Response *Response Status* **C**

ACCEPT.

Cl **97** *SC* **97.6.2.5** *P* **147** *L* **6** # r02-10

Chini, Ahmad Broadcom Corporation

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

*** Comment submitted with the file 88835800003-chini_3bp_02_0316_.pdf attached ***

Current draft adopts only the screened cable specification of TIA-1005-A which defines both unshielded and screened cabling for industrial applications

SuggestedRemedy

Consider adoting unshileded cables as well per TIA-1005-A clause 12.1.2.2.2. The suggested text for addition is attached in chini_3bp_02_0316_.pdf

Response *Response Status* **C**

REJECT.

This comment is not against a changed portion of the draft, a portion of the draft affected by changes, or a portion of the draft that is the subject of unresolved comments associated with "Disapprove" votes. It is out of the scope of the recirculation ballot.

There is no statement of preclusion of unshielded twisted pair as Type B link segments. A type B link segment must meet the transmission and coupling parameters of 97.6.2.

Cl **97** *SC* **97.6.4.4** *P* **149** *L* **1** # r02-11

Chini, Ahmad Broadcom Corporation

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

*** Comment submitted with the file 88836200003-chini_3bp_01_0316.pdf attached ***

Comments received the last few cycles on alien cross talk limits defined for type B, brought to our attention that there has not been any presentation from PHY vendors on 1000BASE-T1 PHY requirement. Analysis chini_3bp_01_0316.pdf attached, suggests the limit lines may be adjusted as proposed and will provide significant extra noise margin for BER.

SuggestedRemedy

Page 149 line 1, Replace
Equation (97-26)
With
Equation (97-22)

Page 149 line 30, Replace
Equation (97-28)
With
Equation (97-24) - 6 dB

Response *Response Status* **C**

REJECT.

This comment is not against a changed portion of the draft, a portion of the draft affected by changes, or a portion of the draft that is the subject of unresolved comments associated with "Disapprove" votes. It is out of the scope of the recirculation ballot.

Type A link segment up to at least 15 m are specified to support operation over automotive temperature and electromagnetic conditions. Longer lengths may be supported in less restrictive electromagnetic environments.

There have been no presentations given considering the impact of the transmit PSDes (reference: 88836200003-chini_3bp_01_0316.pdf) in industrial cabling environments (see: TIA-1005-A), which include coupling attenuation specifications as in IEEE P802.3bp, D3.2, 97.6.2.5.

Adoption of type B link segment approval received unanimous approval from those in the room with one abstention.
See minutes July 2014 Task Force meeting, San Diego, CA
http://www.ieee802.org/3/bp/public/jul14/minutesu_3bp_01_0714.pdf

Motion #2
Move that the IEEE P802.3bp Task Force adopt proposal in diminico_3bp_01b_0714.pdf slides 7-13 as 97.4.4.2 Link transmission parameters for link segment type B and give editorial license to implement.
Moved by: Chris DiMinico
Seconded by: Bob Wagner

All in Room Y: 64 N: 0 A: 1
802.3 voters only Y: 33 N: 0 A: 0
Technical 75% required
Result: Motion passes