Cl **00** *SC* **0** *P* *L* # 16

Grow, Robert Intel

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

Make corresponding changes to the front matter as accepted for P802.3bc.

SuggestedRemedy

See comment.

Response *Response Status* **C**

ACCEPT.

Will make consistant with IEEE P802.3bc

Cl **00** *SC* **0** *P* **1** *L* **0** # 21

Ganga, Ilango Intel

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

Change Draft Amendment to Draft Corrigendum in header (master pages)

SuggestedRemedy

In master pages throughout the document: Change "Draft Amendment to IEEE Std 802.3-2008" to "Draft Corrigendum to IEEE Std 802.3-2008"

Response *Response Status* **C**

ACCEPT.

Cl **00** *SC* **00** *P* **00** *L* **00** # 6

Thompson, Geoff GraCaSI

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

The title line on the e-mail announcement is too long for most mail systems to show the entire line in the mail summary display. Thus it will be difficult for those processing the ballots to distinguish the ballots from the comments (i.e. distinguish the last word in a too log string)

SuggestedRemedy

Replace email subject line in subsequent messages with a more concise string

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

The WG and TF Chairs appreciate the concern from the commenter and will look for a more concise title next time

Cl **31** *SC* **31b.3.7** *P* **11** *L* **30** # 17

D'Ambrosia, John Force10 Networks

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

The following line is unclear

At operating speeds of 10 Gb/s, a station with a 10GBASE-T PHY or a 10GBASE-KR with FEC PHY shall not begin to transmit a (new) frame more than seventy-four pause_quantum bit times

FEC for 10GBASE-KR is optional. It is thought that the true intent of the clause addresses when FEC is enabled for a 10GBASE-R PHY.

SuggestedRemedy

change wording to

At operating speeds of 10 Gb/s, a station with a 10GBASE-T PHY or a 10GBASE-KR PHY with FEC enabled shall not begin to transmit a (new) frame more than seventy-four pause_quantum bit times

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE #35

Cl **31B** *SC* **31B.3.7** *P* **11** *L* **1** # 1

Mark Gustlin Cisco

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

With the changes being made to this subclause on the pause quanta, it seems that a change also needs to be made to the PICS in the same clause.

SuggestedRemedy

SuggestedRemedy:Update PICS table 31B.4.6 PAUSE command MAC timing considerations to include the new (FEC) pause quanta.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE #35

Cl **31B** *SC* **31B.3.7** *P* **11** *L* **26** # 5

Thompson, Geoff GraCaSI

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

The text as shown in the draft is not true comparison text and thus does not provide balloters with an easy comparison of the modifications to the existing text.

SuggestedRemedy

Replace lines 26 through 36 with true comparison text (example provided in ballot submission)

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

The base text can be provided to the commenters on request

Cl **31B** *SC* **31B.3.7** *P* **11** *L* **30** # 34

Ganga, Ilango Intel

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

The updated text for PAUSE reaction timing delay for 10GBASE-T is specified as 74 pause quanta.

The reaction timing delay caculations include delay for MACCTL/MAC/RS (16 PQ), XGXS/XAUI (8 PQ) and 10GBASE-T PHY (50 PQ), hence total of 74 PQ.

However in future, stations may use serial interface connections instead of XGXS/XAUI connections. Hence if the updated delay calculations include a serial interface implementation then we do not have to revisit this number in future revisions of 802.3.

Here is the rationale based on delay numbers in Table 44-2:
The reaction timing delay caculations include delay for MACCTL/MAC/RS (16 PQ), 10GBASE-R PCS (7 PQ + 7 PQ, two times), Serial R PMA and PMD (2 PQ + 2 PQ, two times - R Cu serial PMA and PMD delay is 2 PQ) and 10GBASE-T PHY (50 PQ), hence total of 84 PQ.

SuggestedRemedy

31B.3.7 Change sentence in line 30 from "seventy-four" to eighty-four" as follows:

At operating speeds of 10 Gb/s, a station with a 10GBASE-T PHY shall not begin to transmit a (new) frame more than eighty-four pause_quantum bit times after the reception of a valid PAUSE frame that contains a non-zero value of pause_time, as measured at the MDI.

Response *Response Status* **U**

REJECT.

The port type being described is not an IEEE 802.3-2008 Ethernet standard port-type and hence outside the scope of the Cor.

Cl **31B** *SC* **31B.3.7** *P* **11** *L* **30** # 35

Ganga, Ilango Intel

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

Sixty pause quantum delay from MDI should also be able to cover 10GBASE-KR PHYs with and without FEC. Why is 74 pause quantum needed for 10GBASE-KR with FEC.

Here is the rationale for 10GBASE-KR delay (in pause quanta):
MACTL/MAC/RS/: 16
XGXS/XAUI: 8
R PCS: 7
FEC: 12
KR PMA/PMD(including backplane medium) 2
Total delay: 45

It is clear from Clause 72 (see requirements in 72.1), Clause 74 and Clause 69 that the 10GBASE-KR PMD and FEC will be combined only with R-PCS and it will not be combined with WIS sublayer to form a complete KR PHY. Further FEC is specified to interface with a R PCS sublayer only. Hence WIS delay should not be included while calculating the pause reaction time delay for stations using KR PHYs.

SuggestedRemedy

Keep 60 pause quantum for all PHY types except 10GBASE-T.

31B.3.7 Change sentence in line 30 as follows:

At operating speeds of 10 Gb/s, a station with a 10GBASE-T PHY shall not begin to transmit a (new) frame more than seventy-four pause_quantum bit times after the reception of a valid PAUSE frame that contains a non-zero value of pause_time, as measured at the MDI.

If my previous comment to change 10GBASE-T delay to "eighty-four" is accepted then change as follows:

At operating speeds of 10 Gb/s, a station with a 10GBASE-T PHY shall not begin to transmit a (new) frame more than eighty-four pause_quantum bit times after the reception of a valid PAUSE frame that contains a non-zero value of pause_time, as measured at the MDI.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

At operating speeds of 10 Gb/s, a station with a 10GBASE-T PHY shall not begin to transmit a (new) frame more than seventy-four pause_quantum bit times after the reception of a valid PAUSE frame that contains a non-zero value of pause_time, as measured at the MDI.

Cl **31B** *SC* **31B.3.7** *P* **11** *L* **30** # 4

Thompson, Geoff GraCaSI

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

(Also line 26) Unfortunately, this change not only changes the PAUSE quanta for the two PHYs, it also changes the scope of Annex 31B by deleting the text "and above". If there were existing text in the 40/100 Draft to cover "and above" in this annex, then I would have no issue with this approach. Such does not appear to be the case. It appears that the 40/100 project has chosen to NOT include it PAUSE quanta parameters in a place that does not align to the rest of the standard without even as much as acknowledgement in 31B that it is doing so. This extension the scope of this corrigendum beyond the simple fix that is required is unfortunate and will cause delay.

SuggestedRemedy

Any one of the below would be acceptable to me
(1) restore the term "and above" (This would place the burden of dealing with this text into P802.3ab, where it belongs)
(2) Add a note at line 36 that says something like: [Note: (To be removed when P802.3ba text is inserted into this Annex) For speeds above 10 Gb/s, new text and parameters will be provided by project P802.3ba.]

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Several comments have been entered against P802.3ba to consider modifications to Annex 31B independent of this project.

Cl **31B** *SC* **31B.3.7** *P* **729** *L* **30** # 15

Dawe, Piers Avago Technologies

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

Restricting 10GBASE-ER PHY to 60 PQ is a bit pointless when a 10 km medium will take about 975 PQ and a 40 km medium, much more (if the link were shorter, a cheaper 10GBASE-LR would be used). People may want to use high-tech variants of 10GBASE-ER with more PHY delay.

SuggestedRemedy

At least allow 10GBASE-ER 74 PQ.

Response *Response Status* **C**

REJECT.

Beyond the scope of the project, a Cor is a correction of a technical error and not an enhancement to functionality

Cl **31B** *SC* **31B.3.7** *P* **729** *L* **31** # 2

Glen Kramer Teknovus

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

"seventy-four pause_quantum bit times" is confusing. Is it 74 bit times or 74 pause_quanta? Adding "bit times" here is redundant, since pause_quanta is already defined as "512 bit times of the particular implementation"

SuggestedRemedy

On line 18, replace "more than pause_quantum bit times" with " more than one pause_quantum"
On line 23, replace "more than two pause_quantum bit times" with "more than two pause_quanta"
On line 31, replace "more than seventy-four pause_quantum bit times" with "more than seventy-four pause_quanta"
On line 33, replace "more than sixty pause_quantum bit times" with "more than sixty pause_quanta"

Response *Response Status* **C**

REJECT.

Current text is consistent with sections that precede it which are not being modified. If the commenter wishes he may submit a maintenance request to address the issue in a general fashion

Cl **31B** *SC* **31B.3.7** *P* **729** *L* **31** # 14

Dawe, Piers Avago Technologies

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

Confused units. Either pause_quantum (plural pause_quanta) is a unit of time, which I think is how recent amendments use it, or it's a number, which is how the PICS for 31B uses it. There is no such thing as a "pause_quantum bit time".

SuggestedRemedy

This should say "74 pause_quanta" or "74 x pause_quantum bit times" (with multiplication sign). Also at lines 23 and 18. It would be better to have "bit-time"s, better still to abandon these hokey and confusing units and use ns.

Response *Response Status* **C**

REJECT.

Overtaken By Events (OBE) #2

Cl **31B** *SC* **31B.3.7** *P* **729** *L* **31** # 3

Glen Kramer Teknovus

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

How should definition of pause_quanta be interpreted for links with asymmetric line rate? If a station receives PAUSE at 10Gb/s, but it transmits at 1Gb/s, is pause_quanta value 51.2 ns or 512 ns?

SuggestedRemedy

In 31B.2, modify definition of pause_quanta as follows:
"The pause_time is measured in units of pause_quanta, equal to 512 bit times of the particular implementation (See 4.4). In case of data links with asymmetric line rates, bit times refer to a link direction that is being paused."

Response *Response Status* **C**

REJECT.

Beyond the scope of the Cor as IEEE 802.3-2008 does not contain asymmetric 10Gb/s links. A draft amendment that adds this asymmetric capability is the appropriate place to address this issue.

Cl **31B** *SC* **31B.3.7** *P* **729** *L* **32** # 18

Yong Kim Broadcom

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

Perhaps not a fair comment, since the problem is also in the striken previous text. The "after the reception of a valid PAUSE frame.." is not sufficiently clear. For the 100 Mb/s case, it clearly states end of the frame at the MDI is the conformance measurement point. For 1000 Mb/s, and the previous 10G text, a reader is expected to assume that the measurement point is the end of the frame (last non-idle symbol). But each speed has clarily delinated requirements in a paragraph, so it should be made clear that "the reception" means "end of the PAUSE frame" for 10G.

SuggestedRemedy

Ideally the paragraph not up for comment that starts on line 13 should add a sentence that defines the reference timing of "the reception". So please consider doing so. Otherwise, please define the "the reception" reference timing for the 10G. Suggest changing the last sentence to "...value of pause_time, measured from the end of the last non-idle received symbol as measured at the MDI"

Response *Response Status* **C**

REJECT.

As commenter notes, previous paragraph is not within the scope of this Cor. Current text is consistent with the rest of the section. If the commenter wishes he may submit a maintenance request to address the issue in a general fashion

Cl **31B** *SC* **31B.3.7** *P* **729** *L* **33** # 11

Dawe, Piers — Avago Technologies

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

Style

SuggestedRemedy

Change "seventy-four" to "74", change "sixty" to "60".

Response *Response Status* **C**

ACCEPT.

Change is to reflect IEEE style manual not the value of the number

Cl **31B** *SC* **31B.4.6** *P* **11** *L* **40** # 36

Ganga, Ilango — Intel

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

Update PICS in 31B.4 to be consistent with the changes to 31B.3.7

Also "MIId" missing from Major capabilities/options in 31B.4.3 (See 31B.4.6 TIM5)

SuggestedRemedy

Change 31B.4.3 last row of table as follows:
*MIIc At operating speeds (strikethrough: above 100 Mb/s) of 1000 Mb/s

31B.4.3 Insert the following two rows to the end of table:
{Item} *MIId {Feature} At operating speeds of 10 Gb/s with PHY types other than 10GBASE-T {Subclause} 31B.3.7 {Status} Optional

{Item} *MIIe {Feature} At operating speeds of 10 Gb/s with PHY types of 10GBASE-T {Subclause} 31B.3.7 {Status} Optional

Change 31B.4.6, TIM5 as follows:

TIM5: Measurement point for station at 10 Gb/s (strikethrough: "or greater") with PHY types other than 10GBASE-T.

Insert TIM6 as follows:
{Item} TIM6 {Feature} Measurement point for station at 10Gb/s with PHY types of 10GBASE-T. {Subclause} 31B.3.7. {Value/Comment} Delay at MDI <= 74 (or 84) x pause_quantum) bits. {Status} MIIe:M. Support: N/A[] Y/N

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

There is no need to change the major options as it is not broken. Change 31B.4.6, TIM5 as follows:

TIM5: Measurement point for station at 10 Gb/s (strikethrough: "or greater") with PHY types other than 10GBASE-T.

Insert TIM6 as follows:
{Item} TIM6 {Feature} Measurement point for station at 10Gb/s with PHY types of 10GBASE-T. {Subclause} 31B.3.7. {Value/Comment} Delay at MDI <= 74 bits. {Status} MIIe:M. Support: N/A[] Y/N

Cl **31B** *SC* **31B.4.6** *P* **751** *L* # 13

Dawe, Piers Avago Technologies

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

Please revise the PICS to match the text

SuggestedRemedy

Per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

OBE #36

Cl **99** *SC* *P* **1** *L* **2** # 20

Ganga, Ilango Intel

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

Change Amendment to Corrigendum on line 2

Per 2009 IEEE Style manual 4.2.2 Draft Amendment to base standard and Draft Corigendum to base standard are two different draft designations. Hence change amendment to corrigendum.

SuggestedRemedy

Change "(Amendment of IEEE Std 802.3-2008)" to "(Draft Corrigendum to IEEE Std 802.3-2008)"

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **1** *L* **20** # 22

Ganga, Ilango Intel

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

Delete "Amendment:" on line 20.

Also change line 28 to remove amendment

SuggestedRemedy

On line 20: Delete "Amendment:"

On line 28: Change to "This is a draft Corrigendum to IEEE Std 802.3-2008".

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

On line 20: Delete "Amendment:"

On line 28: Change to "This is a Corrigendum to IEEE Std 802.3-2008". Delete second sentence.

Cl **99** *SC* *P* **1** *L* **31** # 23

Ganga, Ilango Intel

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

Delete "preview"

SuggestedRemedy

Delete "preview" at the end of sentence.

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **1** *L* **5** # 19

Ganga, Ilango Intel

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

Missing "Cor 1" and "-2008" in draft title.

SuggestedRemedy

Change draft title from "IEEE P802.3™D1.1" to "IEEE P802.3-2008™/Cor 1/D1.1

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

IEEE P802.3-2008™/Cor 1/D1.2

Also add the digit 1 to the title for the Cor number

Cl **99** *SC* *P* **2** *L* **1** # 33

Ganga, Ilango Intel

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

Please be explicit in the asbstract as to which PHY type(s) has been affected by this corrigendum. Also this is a corrigendum and not a draft amendment.

Rephrase Abstract as suggested.

SuggestedRemedy

Rephrase as follows:
Abstract: This draft is a Corrigendum to IEEE Std 802.3–2008 and provides updates to PAUSE reaction timing as it relates to 10G port types. The PAUSE reaction timing delay for 10GBASE-T port type has been updated by this corrigendum.

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

This Corrigendum to IEEE Std 802.3-2008 that corrects the PAUSE reaction timing delay for the 10GBASE-T port type.

Cl **99** *SC* *P* **3** *L* **13** # 24

Ganga, Ilango Intel

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

Change "IEEE Std 802.3bb-200X" to "IEEE Std 802.3-2008/Cor 1 - 200x" and delete at the end of the paragraph. Rephrase as suggested.

SuggestedRemedy

Rephrase paragraph in text box as follows:

This introduction is not part of IEEE Std 802.3-2008/Cor 1 - 200x, IEEE Standard for Information technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements, Part 3: CSMA/CD Access Method and Physical Layer Specifications, Corrigendum 1

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Change "IEEE Std 802.3bb-200X" to "IEEE Std 802.3-2008/Cor 1 - 200x"

Also replace the word Amendment to Corrigendum 1

Cl **99** *SC* *P* **3** *L* **20** # 25

Ganga, Ilango Intel

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

Change IEEE 802.3an-2006 to IEEE Std 802.3an-2006

SuggestedRemedy

Change IEEE 802.3an-2006 to IEEE Std 802.3an-2006

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

FM is updated by WG Chair

Cl **99** *SC* *P* **3** *L* **37** # 26

Ganga, Ilango Intel

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

Change IEEE Std 802.3-200X to IEEE Std 802.3-2008 in four instances as suggested.

SuggestedRemedy

On line 37: Change "IEEE Std 802.3-200X" to "IEEE Std 802.3-2008"

On line 42: Change "IEEE Std 802.3-200X" to "IEEE Std 802.3-2008"

Similarly make changes to two instances on page 4, line 18 and line 23.

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **3** *L* **39** # 27

Ganga, Ilango Intel

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

Change "At the date of IEEE Std 802.3xx-200X publication" as suggested

SuggestedRemedy

On line 39 Rephrase as follows: At the date of IEEE Std 802.3-2008/Cor 1 - 200x publication,

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **4** *L* **13** # 29

Ganga, Ilango Intel

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

Change Clause 69 through 74 to Clause 69 through Clause 74
Similarly on other places as suggested

SuggestedRemedy

On line 13, change "Clause 69 through 74" to "Clause 69 through Clause 74"

On line 23, change "Clauses 75 through 77" to "Clauses 75 through Clause 77"

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will suggest change to WG Chair

Cl **99** *SC* *P* **4** *L* **5** # 10

Anslow, Peter Nortel Networks

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

There is a spurious "." at the beginning of ".Section Four"

SuggestedRemedy

change ".Section Four" to "Section Four"

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **4** *L* **5** # 28

Ganga, Ilango Intel

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

Delete "period" at the begining of the sentence.

SuggestedRemedy

One line 5, delete a "period" at the begining of the sentence.

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **5** *L* **26** # 30

Ganga, Ilango Intel

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

Fix the broken URL link as suggested.

SuggestedRemedy

Change URL link as follows:
http://standards.ieee.org/reading/ieee/interp/index.html

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* *P* **6** *L* **16** # 32

Ganga, Ilango Intel

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

Update the participants list with members of WG ballot pool for 802.3bb.

SuggestedRemedy

As per comment

Response *Response Status* **C**

ACCEPT IN PRINCIPLE.

Will be done at publication. Add note that says [To be done at publication].

To for both WG and SASB lists

Cl **99** *SC* *P* **6** *L* **3** # 31

Ganga, Ilango Intel

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

Change "802.3xx" to "IEEE P802.3bb"

SuggestedRemedy

Change "802.3xx" to "IEEE P802.3bb"

Response *Response Status* **C**

ACCEPT.

Cl **99** *SC* **99** *P* **4** *L* **5** # 12

Dawe, Piers Avago Technologies

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

.Section

SuggestedRemedy

Section (remove the dot). There may be other discrepancies between versions of the front matter. Also, as with other amendments etc., please change "subscriber access physical layers" to "subscriber access and other physical layers".

Response *Response Status* **C**

ACCEPT.