Cl **FM** *SC* **FM** *P* **1** *L* **10** # 253

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Remove this symbol

SuggestedRemedy

Change "#6" to "6"

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **1** *L* **29** # 291

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

typo - 802.3ds should be 802.3cs

SuggestedRemedy

Change 802.3ds to 802.3cs

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **1** *L* **35** # 292

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

copyright date should be 2021, not 2017

SuggestedRemedy

change 2017 to 2021

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **1** *L* **35** # 254

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

2017?

SuggestedRemedy

2021?

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **1** *L* **35** # 329

Grow, Robert RMG Consulting

Comment Type **ER** *Comment Status* **X**

The copyright year is wrong. This draft was produced in 2021, this apparently is not updated with the FrameMaker copyright variable.

SuggestedRemedy

When creating next draft update copyright year to 2022 or to take date from updated FrameMaker variable. Assure that the next draft has the correct 2022 copyright year here, on page 2, and in footers for all clauses.

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **1** *L* **35** # 424

Huber, Tom Nokia

Comment Type **E** *Comment Status* **X**

Copyright date should be 2021

SuggestedRemedy

Change 2017 to 2021.

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **3** *L* **1** # 299

Marris, Arthur Cadence Design Systems

Comment Type **ER** *Comment Status* **X**

Tidy up wording of the abstract

SuggestedRemedy

Change: "This amendment to IEEE Std 802.3-202x modifies Clause 90 and adds Annex 90A to enhance support for time synchronization protocols to provide optional sub-nanosecond reporting of the transmit and receive path delays, selection of timing reference point, and dynamic reporting of path delay variation."
To: "This amendment to IEEE Std 802.3-202x modifies Clause 90 and adds Annex 90A to enhance support for time synchronization protocols by providing options for sub-nanosecond reporting of the transmit and receive path delays, for selection of the timing reference point, and for dynamic reporting of path delay variation."

Also use this identical text to describe IEEE Std 802.3cx-202x on page 13 line 28

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **5** *L* **38** # 255

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Don't hide URLs

SuggestedRemedy

Write out the URLs for the "IEEE SA myProject system" and the "Contact Us form" in clear text, ask staff to fix the master frontmatter template. Similarly for "IEEE Xplore" (at least the first time), "IEEE SA Website", "IEEE SA Patent Policy", and any more.

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **13** *L* **16** # 256

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Physical Layer (PHY)

SuggestedRemedy

Physical Layer

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **14** *L* **0** # 273

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **X**

The header in the ToC file needs to be updated

SuggestedRemedy

Change: Draft Amendment to IEEE Std 802.3-2018
To: Draft Amendment to IEEE Std 802.3-202x

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **14** *L* **0** # 277

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

Table of contents has a header that says this is a Draft Amendment to IEEE Std 802.3-2018

SuggestedRemedy

Change header to amendment to IEEE Std 802.3-202x

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **17** *L* **7** # 257

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Amendment:

SuggestedRemedy

As on page13: Amendment 6:

Proposed Response *Response Status* **O**

Cl **FM** *SC* **FM** *P* **17** *L* **10** # 293

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

Title should be in title case with words capitalized

SuggestedRemedy

Change "service interface and management parameters to support improvded Precision Time Protocol (PTP) timestamping accuracy" to "Service Interface and Management Parameters to Support Improved Precision Time Protocol (PTP) Timestamping Accuracy"

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **0** *L* **0** # 327

Grow, Robert RMG Consulting

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

The ballot package for D2.1 is invalid (as was the ballot package for D2.0). The approved documents were not posted to the TF home web page as promised in the response to initial WG ballot comment #223. One has to assume that the draft CSD and PAR links included in the ballot announcment were approved by the EC (CSD) and SASB (PAR) without modification.

SuggestedRemedy

Post the approved PAR, CSD, and Objectives. Recirculate with approved documents pointed to in the ballot package, and or linked on the TF home page.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **1** *L* **1** # 410

D'Ambrosia, John Futurewei, US Subsidiary off Huawei

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

This is a pile-on to comment #224. There is no way to judge this draft as there is no metric in the noted ITU-T Recommendation G.8273.2 that the draft can be judged against. The response to comment #224 states - "The goal of P802.3cx TF is to improve timestamping accuracy to allow satisfaction of ITU G.8273.2 performance targets." THis statement is clearly incorrect, as there are no performance targets to be measured against. Furthermore, it states that no changes to the draft are needed. Until a clear objective is detemined that can be quantifiable, this statement is incorrect. Once a quantifiable objective is determined, then the draft can be evaluated for changes.

SuggestedRemedy

Establish an objective which is a metric that is quantiable and can be evaluated. Once this is done the entire draft needs to be re-evaluated to ensure that a new goal has been met.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **1** *L* **1** # 411

D'Ambrosia, John Futurewei, US Subsidiary off Huawei

Comment Type **ER** *Comment Status* **X**

The PAR noted in the Ballot announcement is not the final approved PAR. It is only the PAR that was submitted to the 802 EC for consideration. The final approved PAR should be noted to allow judgement of the draft.

SuggestedRemedy

Post the PAR that was approved by the IEEE SA Standards Board for this project and use in future ballots.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **1** *L* **1** # 412

D'Ambrosia, John Futurewei, US Subsidiary off Huawei

Comment Type **ER** *Comment Status* **X**

The CSD noted in the Ballot announcement is the CSD that was submitted to 802 EC for consideration and approval, but it is not the final format of the CSD.

SuggestedRemedy

The 802 EC approved CSD document is https://mentor.ieee.org/802-ec/dcn/19/ec-19-0220-00-ACSD-p802-3cx.pdf. Please update webpage and use in future ballots.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **3** *L* **3** # 303

Tse, Richard Microchip Technology

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

This is for text that exists in the Abstract.

The "timing reference point" is not selected by 802.3cx. It is the "data delay measurement point" which is selected by 802.3cx.

NOTE: The only use of the term "timing reference point" in 802.3 is in NOTE 1 of subclause 90.7, where its meaning is equivalent to IEEE 1588's "reference plane", which is the location in the PHY where the timestamp is meant to be captured (i.e., the MDI).

SuggestedRemedy

Replace "timing reference point" with "data delay measurement point" in the Abstract.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **13** *L* **28** # 346

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Same comment as given for Abstract

SuggestedRemedy

Replace "modifies Clause 90 and adds Annex 90A to enhance support for time synchronization protocols to provide optional sub-nanosecond reporting of the transmit and receive path delays, selection of timing reference point, and dynamic reporting of path delay variation."
with
"modifies Clause 30, Clause 45, Clause 90 and adds Annex 90A to improve accuracy of time synchronization by providing optional sub-nanosecond reporting of the transmit and receive path delays, selection of timing reference point, and dynamic reporting of path delay variation."

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **13** *L* **30** # 304

Tse, Richard Microchip Technology

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

This is for text that exists in the Introduction.

The "timing reference point" is not selected by 802.3cx. It is the "data delay measurement point" which is selected by 802.3cx.

NOTE: The only use of the term "timing reference point" in 802.3 is in NOTE 1 of subclause 90.7, where its meaning is equivalent to IEEE 1588's "reference plane", which is the location in the PHY where the timestamp is meant to be captured (i.e., the MDI).

SuggestedRemedy

Replace "timing reference point" with "data delay measurement point" in the Introduction.

Proposed Response *Response Status* **O**

Cl **00** *SC* **0** *P* **23** *L* # 275

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **X**

Delete empty pages

SuggestedRemedy

Delete pages 23, 48, and 66.

Proposed Response *Response Status* **O**

Cl **30** *SC* **30** *P* **18** *L* **0** # 274

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **X**

The header in the Clause 30 file needs to be updated

SuggestedRemedy

Change: Draft Amendment to IEEE Std 802.3-2018
To: Draft Amendment to IEEE Std 802.3-202x

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.1** *P* **18** *L* **21** # 348

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Missing "and" in the list

SuggestedRemedy

Replace "1800.1," with "1800.1, and " in lines 21-26

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.2** *P* **18** *L* **44** # 347

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Typo error; 1800.1 instead of 1800.0 with reference to "TimeSync receive path data delay" in the list

SuggestedRemedy

Replace "1800.1," with "1800.0, and " in lines 44-50

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.2** *P* **18** *L* **44** # 305

Tse, Richard Microchip Technology

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

For PMA/PMD, the register should be 1.1800.0 instead of 1.1800.1.

The same error exists for WIS, PCS, PHY XS, DTE XS, and TC in the following rows.

SuggestedRemedy

Change register from 1.1800.1 to 1.1800.0 for PMA/PMD.

Make similar corrections for WIS, PCS, PHY XS, DTE XS, andTC in the following rows.

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.2** *P* **18** *L* **44** # 413

He, Xiang Huawei Technologies

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

The register 1.1800.1 should be 1.1800.0, similar typo for line 45-51

SuggestedRemedy

Replace the 1.1800.1, 2.1800.1 3.1800.1, 4.1800.1, 5.1800.1, 6.1800.1 in line 44 - 49 with 1.1800.0, 2.1800.0, 3.1800.0, 4.1800.0, 5.1800.0 and 6.1800.0.

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.3** *P* **19** *L* **11** # 349

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"sum of the values of the registers" can create confusion since the two register sets (set 1 = values in ns, set 2 = sub-ns) are to be added and not the 3 registers listed below.

SuggestedRemedy

Replace "registers" with "register sets"

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.4** *P* **19** *L* **34** # 350

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"sum of the values of the registers" can create confusion since the two register sets (set 1 = values in ns, set 2 = sub-ns) are to be added and not the 3 registers listed below.

SuggestedRemedy

Replace "registers" with "register sets"

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.5** *P* **20** *L* **3** # 351

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"sum of the values of the registers" can create confusion since the two register sets (set 1 = values in ns, set 2 = sub-ns) are to be added and not the 3 registers listed below.

SuggestedRemedy

Replace "registers" with "register sets"

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.6** *P* **20** *L* **26** # 352

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"sum of the values of the registers" can create confusion since the two register sets (set 1 = values in ns, set 2 = sub-ns) are to be added and not the 3 registers listed below.

SuggestedRemedy

Replace "registers" with "register sets"

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.7** *P* **20** *L* **38** # 353

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

This is no longer valid/applicable since 1800.15, 1800.14 bits in all MMDs are now reserved in draft 2.1.

SuggestedRemedy

Delete 30.13.1.7

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.7** *P* **20** *L* **44** # 294

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

"Capable of operating according to IEEE Std 802.3-2018 Clause 90 TimeSync model" the differences between the models are not defined here, and, moreover, referencing the model to 802.3-2018 not only removes the specification from this document, but removes any ability for future maintenance should it be needed. According to the behaviour, the difference appears to be whether the new options (sub-nsec accuracy) is enabled. This shoudl be the description.

SuggestedRemedy

Change "according to IEEE Std 802.3-2018 Clause 90 TimeSync model", to "according to IEEE Std 802.3 Clause 90 TimeSync without sub-ns-resolution data delay."
Change "according to IEEE Std 802.3 Clause 90 TimeSync model" to "according to IEEE Std 802.3 Clause 90 TimeSync with sub-ns-resolution data delay."
Consider change names of APPROPRIATE SYNTAX to better reflect the function.

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.7** *P* **20** *L* **44** # 272

Wienckowski, Natalie General Motors

Comment Type **ER** *Comment Status* **X**

Comment #221 on D2.0 said to remove references to IEEE Std 802.3-2018. This was done in Clause 45, but was missed in Clause 30.

SuggestedRemedy

Change: 8023bf Capable of operating according to IEEE Std 802.3-2018, Clause 90 TimeSync model
8023cx Capable of operating according to IEEE Std 802.3, Clause 90 TimeSync model
To: 8023bf Not capable of sub-ns-resolution
8023cx Capable of sub-ns-resolution

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.7** *P* **21** *L* **1** # 295

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

Bits x.1800.15 and x.1800.14 (x = 1, 2, 3, 4, 5, and 6) are reserved bits. I believe bits .2 and .3 are intended.

SuggestedRemedy

Change x.1800.15 and x.1800.14 to x.1800.3 and x.1800.2 (x = 1, 2, 3, 4, 5, 6) on lines 1 and 4.

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.7** *P* **21** *L* **1** # 306

Tse, Richard Microchip Technology

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

The register bits X.1800.15 and X.1800.14 were removed in this draft. The 802.3bf and 802.3cx modes in subclause 30.13.1.7 now need to be based on other registers.

SuggestedRemedy

The 802.3bf and 802.3cx modes could be based on the following registers:
-all the fine resolution path data delay ability registers in the PMA/PMD, WIS, PCS, PHY XS, DTE XS, and TC
-first symbol after SFD data delay measurement point ability registers in the PCS and DTE XS
-multilane support register in the PCS
-TX/RX_NUM_UNIT_CHANGE support register in the PCS

Then:
-802.3bf TimeSync model is supported if the OR of the registers listed above is equal to FALSE.
-802.3cx TimeSync model is supported if the OR of the registers listed above is equal to TRUE.

Proposed Response *Response Status* **O**

Cl **30** *SC* **30.13.1.7** *P* **22** *L* **26** # 354

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

last row in Table 30-6 redundant if above comment is accepted

SuggestedRemedy

Delete last row of Table 30-6

Proposed Response *Response Status* **O**

Cl **45** *SC* **45** *P* **0** *L* **0** # 328

Grow, Robert RMG Consulting

Comment Type **E** *Comment Status* **X**

Having had time to review, my D2.0 comments #201 through #207 are satisfied.

SuggestedRemedy

Remove #201 through #207 from the next unsatisfied comment report.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1** *P* **24** *L* **16** # 355

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Title of registers can be made consistent

SuggestedRemedy

Modify the existing lines in Table 45-3 as follows
1.1801 through 1.1804 TimeSync PMA/PMD transmit path data delay in ns 45.2.1.176
1.1805 through 1.1808 TimeSync PMA/PMD receive path data delay in ns 45.2.1.177
1.1809 through 1.1810 TimeSync PMA/PMD transmit path data delay in fractional ns 45.2.1.176
1.1811 through 1.1812 TimeSync PMA/PMD receive path data delay in fractional ns 45.2.1.177

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.175** *P* **24** *L* **25** # 425

Huber, Tom Nokia

Comment Type **E** *Comment Status* **X**

Missing an editorial instruction regarding this clause

SuggestedRemedy

Add an editing instruction: Change the text of subclause 45.2.1.175 as shown

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.175** *P* **24** *L* **28** # 356

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

typo error in paragraph;

SuggestedRemedy

Replace "transmit data delay" with "transmit path data delay";
Replace "receive data delay" with "receive path data delay";

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.175** *P* **24** *L* **29** # 296

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

"(in ns-resolution registers 1.1801 through 1.1804 and, separately, in sub-ns-resolution registers…" makes it appear that the name of the registers is "ns-resolution" and "sub-ns-resolution" when, in fact, that isn't the name. this needs to be reworded more clearly. Note - this same text shows up twice in this subclause and then later in 45.2.2.20, 45.2.4.28, 45.2.5.28, and 45.2.6.14. The text in the tables is a bit clearer, so perhaps it is just the hyphenation and the statement that the values are "in registers" would clarify...

SuggestedRemedy

Suggest, change "(in ns-resolution registers 1.1801 through 1.1804 and, separately, in sub-ns-resolution registers 1.1809" to "(in ns resolution in registers 1.1801 through 1.1804 and, separately, in sub-ns resolution in registers 1.1809"… and similar in the other sections.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.175** *P* **24** *L* **43** # 258

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

In the text "with sub-ns-resolution in", sub-ns-resolution is not a compound adjective, but a compound adjective and a noun.

SuggestedRemedy

Remove the second hyphen: "with sub-ns resolution". Similarly at lines 45, 48, 50, 45.2.2.20 and 45.2.3.67

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.175** *P* **25** *L* **5** # 314

Tse, Richard Microchip Technology

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

The PMA/PMD fine resolution Tx/Rx path data delay capability register bit names were appended with the word "ability" in the last WG ballot comment resolution. The normal resolution PMA/PMD Tx/Rx path data delay capability register bit names should likewise be appended with the word "ability" to make them consistent.

SuggestedRemedy

Change "TimeSync transmit path data delay" to "TimeSync transmit path data delay ability".

Change "TimeSync receive path data delay" to "TimeSync receive path data delay ability"

Also make this change for WIS, PCS, PHY XS, DTE XS, and TC.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.176** *P* **25** *L* **26** # 357

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution transmit path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.176** *P* **25** *L* **33** # 259

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Style guide: use the same name for something, every time. "the integer nanoseconds portion of the maximum PMA/PMD transmit path data delay, in units of ns" uses two names

SuggestedRemedy

Change "units of ns" to "units of nanoseconds" or "units of 1 ns", several times. "units of 2^-16 ns" can stay as it is.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.176** *P* **25** *L* **35** # 330

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

Currently says "the register", but mentions two register; Also, the style of text is different from the style earlier in the paragraph.

SuggestedRemedy

Propose to replace with:
- (Registers 1.1800.1 and 1.1800.3, see Table 45-139)

Same comment for other text in 45.2.1.176 and in sub-clauses 45.2.1.177, 45.2.2.21, 45.2.2.22, 45.2.3.68, 45.2.3.69, 45.2.4.29, 45.2.4.30, 45.2.5.29, 45.2.5.30, 45.2.6.15, 45.2.6.16.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.176** *P* **26** *L* **8** # 358

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-140 as follows
1.1801.15:0 Maximum PMA/PMD transmit path data delay in ns, lower PMA_PMD_delay_ns_TX_max[15:0]
1.1802.15:0 Maximum PMA/PMD transmit path data delay in ns, upper PMA_PMD_delay_ns_TX_max[31:0]
1.1803.15:0 Minimum PMA/PMD transmit path data delay in ns, lower PMA_PMD_delay_ns_TX_min[15:0]
1.1804.15:0 Minimum PMA/PMD transmit path data delay in ns, upper PMA_PMD_delay_ns_TX_min[31:0]
1.1809.15:0 Maximum PMA/PMD transmit path data delay in sub-ns PMA_PMD_delay_sub-ns_TX_max[15:0]
1.1810.15:0 Minimum PMA/PMD transmit path data delay in sub-ns PMA_PMD_delay_sub-ns_TX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.177** *P* **26** *L* **35** # 359

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution receive path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.1.177** *P* **27** *L* **11** # 360

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-141 as follows
1.1805.15:0 Maximum PMA/PMD receive path data delay in ns, lower PMA_PMD_delay_ns_RX_max[15:0]
1.1806.15:0 Maximum PMA/PMD receive path data delay in ns, upper PMA_PMD_delay_ns_RX_max[31:0]
1.1807.15:0 Minimum PMA/PMD receive path data delay in ns, lower PMA_PMD_delay_ns_RX_min[15:0]
1.1808.15:0 Minimum PMA/PMD receive path data delay in ns, upper PMA_PMD_delay_ns_RX_min[31:0]
1.1811.15:0 Maximum PMA/PMD receive path data delay in sub-ns PMA_PMD_delay_sub-ns_RX_max[15:0]
1.1812.15:0 Minimum PMA/PMD receive path data delay in sub-ns PMA_PMD_delay_sub-ns_RX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2** *P* **27** *L* **39** # 361

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Title of registers can be made consistent

SuggestedRemedy

Modify the existing lines in Table 45-213 as follows
2.1801 through 2.1804 TimeSync WIS transmit path data delay in ns 45.2.2.21
2.1805 through 2.1808 TimeSync WIS receive path data delay in ns 45.2.2.22
2.1809 through 2.1810 TimeSync WIS transmit path data delay in fractional ns 45.2.2.21
2.1811 through 2.1812 TimeSync WIS receive path data delay in fractional ns 45.2.2.22

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2.20** *P* **27** *L* **53** # 310

Tse, Richard Microchip Technology

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

"PMA/PMD" should be "WIS"

SuggestedRemedy

Change

"The TimeSync WIS capability register (see Table45–230) indicates the capability of the PMA/PMD to…"

to

"The TimeSync WIS capability register (see Table45–230) indicates the capability of the WIS to…"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2.20** *P* **27** *L* **54** # 362

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

typo error in paragraph

SuggestedRemedy

Replace "transmit data delay" with "transmit path data delay";
Replace "receive data delay" with "receive path data delay";

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2.21** *P* **28** *L* **43** # 363

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution transmit path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2.21** *P* **29** *L* **20** # 364

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-231 as follows
2.1801.15:0 Maximum WIS transmit path data delay in ns, lower WIS_delay_ns_TX_max[15:0]
2.1802.15:0 Maximum WIS transmit path data delay in ns, upper WIS_delay_ns_TX_max[31:0]
2.1803.15:0 Minimum WIS transmit path data delay in ns, lower WIS_delay_ns_TX_min[15:0]
2.1804.15:0 Minimum WIS transmit path data delay in ns, upper WIS_delay_ns_TX_min[31:0]
2.1809.15:0 Maximum WIS transmit path data delay in sub-ns WIS_delay_sub-ns_TX_max[15:0]
2.1810.15:0 Minimum WIS transmit path data delay in sub-ns WIS_delay_sub-ns_TX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2.22** *P* **29** *L* **44** # 365

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution receive path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.2.22** *P* **30** *L* **20** # 366

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-232 as follows
2.1805.15:0 Maximum WIS receive path data delay in ns, lower WIS_delay_ns_RX_max[15:0]
2.1806.15:0 Maximum WIS receive path data delay in ns, upper WIS_delay_ns_RX_max[31:0]
2.1807.15:0 Minimum WIS receive path data delay in ns, lower WIS_delay_ns_RX_min[15:0]
2.1808.15:0 Minimum WIS receive path data delay in ns, upper WIS_delay_ns_RX_min[31:0]
2.1811.15:0 Maximum WIS receive path data delay in sub-ns WIS_delay_sub-ns_RX_max[15:0]
2.1812.15:0 Minimum WIS receive path data delay in sub-ns WIS_delay_sub-ns_RX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3** *P* **30** *L* **44** # 367

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Title of registers can be made consistent

SuggestedRemedy

Modify the existing lines in Table 45-233 as follows
3.1801 through 3.1804 TimeSync PCS transmit path data delay in ns 45.2.3.68
3.1805 through 3.1808 TimeSync PCS receive path data delay in ns 45.2.3.69
3.1809 through 3.1810 TimeSync PCS transmit path data delay in fractional ns 45.2.3.68
3.1811 through 3.1812 TimeSync PCS receive path data delay in fractional ns 45.2.3.69
3.1813 TimeSync PCS configuration 45.2.3.69a

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67** *P* **31** *L* **29** # 331

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

Currently says "support the report of" in two places.

SuggestedRemedy

Propose to change to:
- "support the reporting of".

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67** *P* **31** *L* **29** # 368

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Syntax to be corrected

SuggestedRemedy

Replace the "the report of" with "the reporting of" in both the sentences (line 29, 31)

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.1** *P* **32** *L* **8** # 414

He, Xiang Huawei Technologies

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

The sentence "When read as a one, bit 3.1800.13 indicates that the PCS supports the use of the beginning of the SFD as the
data delay measurement point to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values" has the implication that the measurement point is only used to calculate the dynamic delay by TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE. But the fact is the static data delay (e.g., the reported maximum/minimum data delay) and the multi-PCS lane dynamic data delay are also reported based on the same measurement point.

Propose to make this sentence to cover both static and dynamic delay measurement.

If this comment is accepted, do the similar change for the second paragraph of 45.2.3.67.1, and the first and second paragraphs of 45.2.3.67.2, 45.2.5.28.1 and 45.2.5.28.2.

SuggestedRemedy

Change the sentence

"When read as a one, bit 3.1800.13 indicates that the PCS supports the use of the beginning of the SFD as the data delay measurement point to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values."

to

"When read as a one, bit 3.1800.13 indicates that the PCS supports the use of the beginning of the SFD as the data delay measurement point to calculate the PCS transmit path data delay."

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.1** *P* **32** *L* **15** # 415

He, Xiang Huawei Technologies

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

The sentence "This bit is only valid when the TX/RX_NUM_UNIT_CHANGE support bit in this register (3.1800.10) is set to 'PCS supports TX/RX_NUM_UNIT_CHANGE indication capability'." implies that the measurement point is only valid when the TX/RX_NUM_UNIT_CHANGE is valid. However, the static data delay (e.g., the reported maximum/minimum data delay) and the multi-PCS lane dynamic data delay are also reported based on the measurement point (3.1800.13). For implementations not supporting the TX/RX_NUM_UNIT_CHANGE indication capability, the measurement point could still be valid, which is used for the measurement of other delays.

Propose to delete this sentence.

If this comment is accepted, do the similar change for the third paragraph of 45.2.3.67.2.

SuggestedRemedy

Delete the sentence on page 32, line 15-16.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.1** *P* **32** *L* **15** # 369

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Why cant this capability independantly exist for implementations in which XX_NUM_UNIT_CHANGE capability is not present? Implementations can still get better accurate timestamping with this capability than the default. Moreover, in some cases/modes like 1000BASE-X, dynamic data path delay may not exist at all in PCS layer.

SuggestedRemedy

Delete 3rd paragraph

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.1** *P* **32** *L* **18** # 417

He, Xiang Huawei Technologies

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

The sentence "When both registers 3.1800.12 and 3.1800.13 are zero, the location of the data delay measurement point is the beginning of the SFD" describes the case that both of registers are zero. For other cases where either of 3.1800.12 or 3.1800.13 is not zero, it's better to add one sentence saying the measurement point is decided by the value of the register 3.1813.13.

If the proposal is accepted, do the similar change for the fourth paragraph of 45.2.3.67.2, and the third paragraph of 45.2.5.28.1 and 45.2.5.28.2.

SuggestedRemedy

Add one sentence at the end,

"For other cases, the location of the data delay measurement point is the value of the register 3.1813.13."

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.1** *P* **32** *L* **18** # 416

He, Xiang Huawei Technologies

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

The sentence "When both registers 3.1800.12 and 3.1800.13 are zero, the location of the data delay measurement point is the beginning of the SFD" can be contradictory with the configuration of register 3.1813.13, where,
0 = PCS is configured to use the data delay measurement point at the beginning of the SFD
1 = PCS is configured to use the data delay measurement point at the beginning of the first symbol after the SFD

For example, if both 3.1800.12 and 3.1800.13 are zero, meaning the measurement point is the benning of the SFD; 3.1813.13 could be set to 1 (the first symbole after the SFD). To avod this, a new sentence can be added that reads "and the value of the register 3.1813.13 is ignored."

If the proposal is accepted, do the similar change for the fourth paragraph of 45.2.3.67.2, and the third paragraph of 45.2.5.28.1 and 45.2.5.28.2.

SuggestedRemedy

Change the sentence

"When both registers 3.1800.12 and 3.1800.13 are zero, the location of the data delay measurement point is the beginning of the SFD."

to

"When both registers 3.1800.12 and 3.1800.13 are zero, the location of the data delay measurement point is the beginning of the SFD, and the value of the register 3.1813.13 is ignored."

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.2** *P* **32** *L* **31** # 370

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Same argument as previous comment above

SuggestedRemedy

Delete 3rd paragraph

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.3** *P* **32** *L* **39** # 371

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

missing "the"

SuggestedRemedy

Replace "supports measurement of" with "supports the measurement of"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.3** *P* **32** *L* **41** # 372

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

missing "the"

SuggestedRemedy

Replace "not support measurement of" with "not support the measurement of"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.4** *P* **32** *L* **45** # 260

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Don't use a delimiter within a name. Registers often apply to both Tx and Rx and we don't usually (ever?) spell it out, because that's normal.

SuggestedRemedy

Delete "TX/RX_" in this name, throughout the document

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.8** *P* **33** *L* **28** # 307

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

"(3.1805 and 3.1808)." should be "(3.1805 through 3.1808)."

SuggestedRemedy

change as indicated in comment

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.67.8** *P* **33** *L* **31** # 308

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

"(3.1805 and 3.1808)." should be "(3.1805 through 3.1808)."

SuggestedRemedy

change as indicated in comment

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.68** *P* **33** *L* **43** # 373

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution transmit path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.68** *P* **34** *L* **19** # 374

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-294 as follows
3.1801.15:0 Maximum PCS transmit path data delay in ns, lower PCS_delay_ns_TX_max[15:0]
3.1802.15:0 Maximum PCS transmit path data delay in ns, upper PCS_delay_ns_TX_max[31:0]
3.1803.15:0 Minimum PCS transmit path data delay in ns, lower PCS_delay_ns_TX_min[15:0]
3.1804.15:0 Minimum PCS transmit path data delay in ns, upper PCS_delay_ns_TX_min[31:0]
3.1809.15:0 Maximum PCS transmit path data delay in sub-ns PCS_delay_sub-ns_TX_max[15:0]
3.1810.15:0 Minimum PCS transmit path data delay in sub-ns PCS_delay_sub-ns_TX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69** *P* **34** *L* **42** # 375

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution receive path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69** *P* **35** *L* **19** # 376

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-232 as follows
3.1805.15:0 Maximum PCS receive path data delay in ns, lower PCS_delay_ns_RX_max[15:0]
3.1806.15:0 Maximum PCS receive path data delay in ns, upper PCS_delay_ns_RX_max[31:0]
3.1807.15:0 Minimum PCS receive path data delay in ns, lower PCS_delay_ns_RX_min[15:0]
3.1808.15:0 Minimum PCS receive path data delay in ns, upper PCS_delay_ns_RX_min[31:0]
3.1811.15:0 Maximum PCS receive path data delay in sub-ns PCS_delay_sub-ns_RX_max[15:0]
3.1812.15:0 Minimum PCS receive path data delay in sub-ns PCS_delay_sub-ns_RX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a** *P* **34** *L* **30** # 276

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **ER** *Comment Status* **X**

Editing instruction, "Insert a new subclause 45.2.3.69a and renumber existing subclauses as needed." - suggests that renumbering is needed. If the insert is done correctly (69a, etc) no renumbering is ever needed in the amendment, and the 'and renumber' is unneeded. The editing instruction suggests there is something I'm missing here that needs renumbering - either state it or drop the statement.

SuggestedRemedy

Delete "and renumber existing subclauses as needed" or specify what needs to be renumbered.

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a** *P* **35** *L* **43** # 332

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

Currently it reads like a status register when it is actually a control register.

SuggestedRemedy

Propose to change (in two places) to:
- "Configures the PCS to use ..."

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a** *P* **36** *L* **8** # 333

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

Missing closing single quote. There is an opening quote preceding "PCS does not support", but the closing quote is missing.

SuggestedRemedy

Propose to add the closing single quote at the end of the sentence:
- 'PCS does not support TX/RX_NUM_UNIT_CHANGE indication capability'.

Same comment for DTE XS in 45.2.5.31.1

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a** *P* **36** *L* **8** # 334

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

Extraneous "be". Also, use of "they" is strange.

SuggestedRemedy

Propose to change to:
- "Writes to this bit are also ignored if there is an attempt to set the bit ..."

Same comment for DTE XS in 45.2.5.31.1

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a** *P* **36** *L* **10** # 335

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

The last sentence of the final paragraph seems unrelated to the discussion earlier in the paragraph. Move the Note to a new paragraph. Also, simplify the note to avoid repeating the definition of DDMP.

SuggestedRemedy

Propose to move the sentence "Note that the use of ..." into a new paragraph and add a link to 90.5 such that it reads:
- "Note that configuration of the data delay measurement point needs to be consistent in both the gRS (see 90.5) and the PCS."

Same comment for DTE XS in 45.2.5.31.1

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a.1** *P* **35** *L* **52** # 418

He, Xiang Huawei Technologies

Comment Type **ER** *Comment Status* **X**

Propose to delete "used in the calculation of the optional TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values, passed from the PCS across the xMII to the gRS" that describes the use of the measurement point, which has been defined in 45.2.3.67.1 and 45.2.3.67.2. Seems to be unnecessary.

If the proposal is accepted, do similar changes for the first paragraph of 45.2.5.31.1.

SuggestedRemedy

Change

"Bit 3.1813.13 is used to set the data delay measurement point used in the calculation of the optional TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values, passed from the PCS across the xMII to the gRS."

to

"Bit 3.1813.13 is used to set the data delay measurement point."

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a.1** *P* **36** *L* **1** # 419

He, Xiang Huawei Technologies

Comment Type **ER** *Comment Status* **X**

"When this bit is set to 0 the beginning of the SFD is used as the data delay measurement point to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values."

Propose to delete "to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values" as this is repeating what has already been said in 45.2.3.67.1.

If the proposal is accepted, do similar changes for the second paragraph of 45.2.5.31.1.

SuggestedRemedy

Change

"When this bit is set to 0 the beginning of the SFD is used as the data delay measurement point to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values."

to

"When this bit is set to 0 the beginning of the SFD is used as the data delay measurement point."

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.3.69a.1** *P* **36** *L* **4** # 420

He, Xiang Huawei Technologies

Comment Type **ER** *Comment Status* **X**

"When set to 1 the first symbol after the SFD is used as the data delay measurement point to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values."

Propose to delete "to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values" as this is repeating what has already been said in 45.2.3.67.2.

If the proposal is accepted, do similar changes for the third paragraph of 45.2.5.31.1.

SuggestedRemedy

Change

"When set to 1 the first symbol after the SFD is used as the data delay measurement point to calculate the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE values."

to

"When set to 1 the first symbol after the SFD is used as the data delay measurement point."

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.3.69a.1** P **36** L **7** # 421

He, Xiang Huawei Technologies

Comment Type **ER** *Comment Status* **X**

"Writes to this bit are ignored if the TX/RX_NUM_UNIT_CHANGE support bit in register (3.1800) is set to 'PCS does not support TX/RX_NUM_UNIT_CHANGE indication capability. Writes to this bit are also be ignored if they attempt to set the bit to a value that the equivalent capability bits in register (3.1800) indicate is not supported."

The second sentence can cover the first sentence. proposed to delete one. A single quote mark is also missing in the first sentence.

If the proposal is accepted, do similar changes for the fourth paragraph of 45.2.5.31.1.

SuggestedRemedy

Change

"Writes to this bit are ignored if the TX/RX_NUM_UNIT_CHANGE support bit in register (3.1800) is set to 'PCS does not support TX/RX_NUM_UNIT_CHANGE indication capability. Writes to this bit are also be ignored if they attempt to set the bit to a value that the equivalent capability bits in register (3.1800) indicate is not supported."

to

"Writes to this bit are ignored if they attempt to set the bit to a value that the equivalent capability bits in register (3.1800) indicate is not supported."

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.3.69a.1** P **36** L **8** # 278

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

There seems to be an unclosed single quote: "is set to 'PCS does not support…" does not seem to close.

SuggestedRemedy

Delete the single quote or identify where it closes

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.3.69a.1** P **36** L **8** # 309

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

Ending quoatation mark is missing from this statement:

Writes to this bit are ignored if the TX/RX_NUM_UNIT_CHANGE support bit in register (3.1800) is set to 'PCS does not support TX/RX_NUM_UNIT_CHANGE indication capability.

SuggestedRemedy

Add closing quotation mark at end of sentence, after "capability"

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.4** P **36** L **24** # 377

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Title of registers can be made consistent

SuggestedRemedy

Modify the existing lines in Table 45-314 as follows

4.1801 through 4.1804 45.2.4.29	TimeSync PHY XS transmit path data delay in ns
4.1805 through 4.1808 45.2.4.30	TimeSync PHY XS receive path data delay in ns
4.1809 through 4.1810 45.2.4.29	TimeSync PHY XS transmit path data delay in fractional ns
4.1811 through 4.1812 45.2.4.30	TimeSync PHY XS receive path data delay in fractional ns

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.4.28** *P* **36** *L* **35** # 311

Tse, Richard Microchip Technology

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

"PMA/PMD" should be "PHY XS"

SuggestedRemedy

Change

"The TimeSync PHY XS capability register (see Table45–336) indicates the capability of the PMA/PMD to…"

to

"The TimeSync PHY XS capability register (see Table45–336) indicates the capability of the PHY XS to…"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.4.28** *P* **36** *L* **36** # 378

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

typo error in paragraph;

SuggestedRemedy

Replace "transmit data delay" with "transmit path data delay";
Replace "receive data delay" with "receive path data delay";

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.4.29** *P* **37** *L* **29** # 379

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution transmit path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.4.29** *P* **38** *L* **6** # 380

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-337 as follows
4.1801.15:0 Maximum PHY XS transmit path data delay in ns, lower PHY_XS_delay_ns_TX_max[15:0]
4.1802.15:0 Maximum PHY XS transmit path data delay in ns, upper PHY_XS_delay_ns_TX_max[31:0]
4.1803.15:0 Minimum PHY XS transmit path data delay in ns, lower PHY_XS_delay_ns_TX_min[15:0]
4.1804.15:0 Minimum PHY XS transmit path data delay in ns, upper PHY_XS_delay_ns_TX_min[31:0]
4.1809.15:0 Maximum PHY XS transmit path data delay in sub-ns PHY_XS_delay_sub-ns_TX_max[15:0]
4.1810.15:0 Minimum PHY XS transmit path data delay in sub-ns PHY_XS_delay_sub-ns_TX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.4.30** *P* **38** *L* **32** # 381

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution receive path data delay"

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.4.30** P **39** L **11** # 382

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-338 as follows
4.1805.15:0 Maximum PHY XS receive path delay in ns, lower PHY_XS_delay_ns_RX_max[15:0]
4.1806.15:0 Maximum PHY XS receive path delay in ns, upper PHY_XS_delay_ns_RX_max[31:0]
4.1807.15:0 Minimum PHY XS receive path delay in ns, lower PHY_XS_delay_ns_RX_min[15:0]
4.1808.15:0 Minimum PHY XS receive path delay in ns, upper PHY_XS_delay_ns_RX_min[31:0]
4.1811.15:0 Maximum PHY XS receive path delay in sub-ns PHY_XS_delay_sub-ns_RX_max[15:0]
4.1812.15:0 Minimum PHY XS receive path delay in sub-ns PHY_XS_delay_sub-ns_RX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.5** P **39** L **39** # 383

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Title of registers can be made consistent

SuggestedRemedy

Modify the existing lines in Table 45-339 as follows
5.1801 through 5.1804 TimeSync DTE XS transmit path data delay in ns 45.2.5.29
5.1805 through 5.1808 TimeSync DTE XS receive path data delay in ns 45.2.5.30
5.1809 through 5.1810 TimeSync DTE XS transmit path data delay in fractional ns 45.2.5.29
5.1811 through 5.1812 TimeSync DTE XS receive path data delay in fractional ns 45.2.5.30
5.1813 TimeSync DTE XS configuration 45.2.5.31

Proposed Response *Response Status* **O**

Cl **45** SC **45.2.5.28** P **39** L **52** # 384

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

typo error in paragraph;

SuggestedRemedy

Replace "transmit data delay" with "transmit path data delay";
Replace "receive data delay" with "receive path data delay";

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.5.28** *P* **40** *L* **51** # 312

Tse, Richard Microchip Technology

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

DTE XS subclause needs change:
1. "PMA/PMD" should be "DTE XS"
2. DTE XS has more than just Tx and Rx data delay capability registers so its description in 45.2.5.28 must describe this appropriately.
3. Only 2 of its capability register bits are described in subclauses. The rest are described in the introductory statement.

I suggest that the DTE XS subclause follow the structure of the PCS capability register (subclause 45.2.3.67) and add additional subclauses to describe all of its capability register bits.

SuggestedRemedy

Change

"The TimeSync DTE XS capability register (see Table45–361) indicates the capability of the PMA/PMD to report the transmit data delay (in ns-resolution registers 5.1801 through 5.1804 and, separately, in sub-ns-resolution registers 5.1809 and 5.1810) and receive data delay (in ns-resolution registers 5.1805 through 5.1808 and, separately, in sub-ns-resolution registers 5.1811 and 5.1812)."

to

"This register is used to indicate the capability of the DTE XS to provide transmit and receive path data delay information in support of a TimeSync client. The assignment of bits in the TimeSync DTE XS capability register is shown in Table 45–361."

Then, add additional subclauses (45.2.5.28.3 to 45.2.5.28.6) to describe the DTE XS' Tx/Rx path data delay and fine resolution path data delay capability register bits. To do this, copy the contents from 45.2.3.67.5 to 45.2.3.67.8 and change the register numbers to match those of the DTE XS and change "PCS" to "DTE XS".

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.5.29** *P* **41** *L* **27** # 385

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution transmit path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.5.29** *P* **42** *L* **8** # 386

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-362 as follows
5.1801.15:0 Maximum DTE XS transmit path data delay in ns, lower DTE_XS_delay_ns_TX_max[15:0]
5.1802.15:0 Maximum DTE XS transmit path data delay in ns, upper DTE_XS_delay_ns_TX_max[31:0]
5.1803.15:0 Minimum DTE XS transmit path data delay in ns, lower DTE_XS_delay_ns_TX_min[15:0]
5.1804.15:0 Minimum DTE XS transmit path data delay in ns, upper DTE_XS_delay_ns_TX_min[31:0]
5.1809.15:0 Maximum DTE XS transmit path data delay in sub-ns DTE_XS_delay_sub-ns_TX_max[15:0]
5.1810.15:0 Minimum DTE XS transmit path data delay in sub-ns DTE_XS_delay_sub-ns_TX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.5.30** *P* **42** *L* **35** # 387

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution receive path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.5.30** *P* **43** *L* **11** # 388

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-363 as follows
5.1805.15:0 Maximum DTE XS receive path delay in ns, lower DTE_XS_delay_ns_RX_max[15:0]
5.1806.15:0 Maximum DTE XS receive path delay in ns, upper DTE_XS_delay_ns_RX_max[31:0]
5.1807.15:0 Minimum DTE XS receive path delay in ns, lower DTE_XS_delay_ns_RX_min[15:0]
5.1808.15:0 Minimum DTE XS receive path delay in ns, upper DTE_XS_delay_ns_RX_min[31:0]
5.1811.15:0 Maximum DTE XS receive path delay in sub-ns DTE_XS_delay_sub-ns_RX_max[15:0]
5.1812.15:0 Minimum DTE XS receive path delay in sub-ns DTE_XS_delay_sub-ns_RX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6** *P* **44** *L* **25** # 389

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Title of registers can be made consistent

SuggestedRemedy

Modify the existing lines in Table 45-364 as follows

6.1801 through 6.1804	TimeSync TC transmit path data delay in ns	45.2.6.15
6.1805 through 6.1808	TimeSync TC receive path data delay in ns	45.2.6.16
6.1809 through 6.1810	TimeSync TC transmit path data delay in fractional ns	45.2.6.15
6.1811 through 6.1812	TimeSync TC receive path data delay in fractional ns	45.2.6.16

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6.14** *P* **44** *L* **36** # 313

Tse, Richard Microchip Technology

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

"PMA/PMD" should be "TC"

SuggestedRemedy

Change

"The TimeSync TC capability register (see Table45–375) indicates the capability of the PMA/PMD to…"

to

"The TimeSync TC capability register (see Table45–375) indicates the capability of the TC to…"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6.14** *P* **44** *L* **37** # 390

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

typo error in paragraph;

SuggestedRemedy

Replace "transmit data delay" with "transmit path data delay";
Replace "receive data delay" with "receive path data delay";

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6.15** *P* **45** *L* **30** # 391

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution transmit path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6.15** *P* **46** *L* **8** # 392

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-376 as follows
6.1801.15:0 Maximum TC transmit path data delay in ns, lower TC_delay_ns_TX_max[15:0]
6.1802.15:0 Maximum TC transmit path data delay in ns, upper TC_delay_ns_TX_max[31:0]
6.1803.15:0 Minimum TC transmit path data delay in ns, lower TC_delay_ns_TX_min[15:0]
6.1804.15:0 Minimum TC transmit path data delay in ns, upper TC_delay_ns_TX_min[31:0]
6.1809.15:0 Maximum TC transmit path data delay in sub-ns TC_delay_sub-ns_TX_max[15:0]
6.1810.15:0 Minimum TC transmit path data delay in sub-ns TC_delay_sub-ns_TX_min[15:0]

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6.16** *P* **46** *L* **32** # 393

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Inclusion of "Fine resolution path delay registers" redundant as they are part of TimeSync path delay register set

SuggestedRemedy

Delete "and fine resolution receive path data delay"

Proposed Response *Response Status* **O**

Cl **45** *SC* **45.2.6.16** *P* **47** *L* **7** # 394

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Names be made more consistent

SuggestedRemedy

Modify the existing lines in Table 45-377 as follows
6.1805.15:0 Maximum TC receive path data delay in ns, lower TC_delay_ns_RX_max[15:0]
6.1806.15:0 Maximum TC receive path data delay in ns, upper TC_delay_ns_RX_max[31:0]
6.1807.15:0 Minimum TC receive path data delay in ns, lower TC_delay_ns_RX_min[15:0]
6.1808.15:0 Minimum TC receive path data delay in ns, upper TC_delay_ns_RX_min[31:0]
6.1811.15:0 Maximum TC receive path data delay in sub-ns TC_delay_sub-ns_RX_max[15:0]
6.1812.15:0 Minimum TC receive path data delay in sub-ns TC_delay_sub-ns_RX_min[15:0]

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.** *P* **61** *L* **37** # 290

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

usually a "see" goes to a cross reference. NOTE 4 is not an active cross reference. Where is NOTE 4? Is it the one on page 62? If it is, since it is part of this same subclause, and not referenced elsewhere, the separation just makes it harder to find. why not move it up to where it is relevant as part of the description?

SuggestedRemedy

Suggest that NOTE 4 be moved up to the point where it is referenced, and simply added as text. (not a Note…)

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.1** *P* **49** *L* **11** # 395

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Redundant "the"

SuggestedRemedy

Replace "for the full-duplex mode" with "for full-duplex mode"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.1** *P* **49** *L* **14** # 279

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **ER** *Comment Status* **X**

The text being edited is not the same as 802.3dc D3.0. The edit appears unnecessary. "are all compatible with the <UL> generic Reconciliation Sublayer (gRS) <UL> <SO> sublayer <SO> defined in 90.5" whereas 802.3dc D3.0 reads "are all compatible with the gRS sublayer defined in 90.5" - note that I have submitted a comment on 802.3dc D3.0 to insert "generic Reconciliation Sublayer" and fix this sentence, as it appears to be the first instance of gRS in IEEE Std 802.3 outside of the list of acronyms & abbreviations

SuggestedRemedy

Align text with latest draft of 802.3dc

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.1** *P* **51** *L* **11** # 396

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Not all 10 Mb/s nodes have MII defined (e.g 10BASE-5, 10BASE-T). Hence revert back to original text.

SuggestedRemedy

Replace "NOTE 1—In this figure, the xMII is used as a generic term for the Media Independent Interfaces for implementations of 10 Mb/s and above. For example: for 10Mb/s and 100Mb/s implementations"
with
"NOTE 1—In this figure, the xMII is used as a generic term for the Media Independent Interfaces for implementations of 10BASE-T1L, 10BASE-T1S, and 100 Mb/s and above. For example: for 100 Mb/s implementations"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.2** *P* **49** *L* **22** # 280

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

IEEE Std 802.1AS is B42 in 802.3dc D3.0, not B41, and IEEE 1588 is B44, not B43

SuggestedRemedy

Reverse changes in 90.2 of bibliographic refenrece numbers of 802.1AS and IEEE Std 1588 so they align with the latest draft of 802.3dc. Similarly change edits to Annex A (page 65) so reference numbers align with 802.3dc

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.1.1** *P* **51** *L* **1** # 302

Tse, Richard Microchip Technology

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

In FIgure 90-1, TX/RX_NUM_UNIT_CHANGE signals should terminate at the gRS. The values from these signals are now propagated to the TimeSync Client via the PDDPD parameters in the TS_TX/RX.indication primitives.

SuggestedRemedy

Update Figure 90-1 so TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE start at the PHY and end at the gRS.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.1.1** *P* **51** *L* **43** # 281

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

The change to the NOTE says that the MII is the interface for implmeentations of 10 Mb/s and above. This is technically incorrect with most of the 10 Mb/s implementations, and is OUTSIDE THE SCOPE OF THE PAR - which is "Define optional enhancements to Ethernet support for time synchronization protocols to provide improved timestamp accuracy in support of ITU-T Recommendation G.8273.2 'Class C' and 'Class D' system time error performance requirements." as it is unrelated to the timestamp accuracy.
The language in 802.3dc D3.0 was written to specifically call out the newer 802.3cg PHYs which use MII, unlike the legacy 10 Mb/s PHYs, e.g., clause 14, which use MAU. (while MII can be used, it isn't what 802.3 specifies for these PHYs). The second sentence, beginning 'For example' language is just an example and does not need modification, and the change creates unnecessary confusion.

SuggestedRemedy

Delete the proposed changes to NOTE 1 of Figure 90-1, reverting to the language in 802.3dc D3.0.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.1.2** *P* **51** *L* **53** # 282

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

The word "capture" is inserted, and should be underlined.

SuggestedRemedy

Underline capture as an insert.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.1.2** *P* **52** *L* **8** # 283

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

The word "may" is formally "is permitted to" in IEEE-SA standards, and is generally used for options or text speaking to requirements. This is descriptive text, and the word "can" is more appropriate for the description of things that the TimeSync Client can do with the information.

SuggestedRemedy

Replace usages of "may" with "can" in lines 8 through 18 of page 52, relating to the timesync client

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.1.2** *P* **52** *L* **11** # 397

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

improper sentence

SuggestedRemedy

Replace "to calculate the accuracy of the calculated egress time at the MDI"
with
"to improve the accuracy of the calculated egress time at the MDI"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.1.2** *P* **52** *L* **16** # 398

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

improper sentence

SuggestedRemedy

Replace "to calculate the accuracy of the calculated ingress time at the MDI"
with
"to improve the accuracy of the calculated ingress time at the MDI"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.2** *P* **52** *L* **25** # 284

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

"model used in this / the service specification" - the sentence speaks to only THIS specific service specification - the original language is more appropriate. Additionally, this kind of change is unnecessary and unrelated to the purpose of the project - arguably out of scope.

SuggestedRemedy

revert change from "this" to "the".

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1** *P* **52** *L* **34** # 426

Huber, Tom Nokia

Comment Type **E** *Comment Status* **X**

Missing an editorial instruction regarding this subclause and 90.4.3.1.2.

SuggestedRemedy

Add an editing instruction: Change 90.4.3.1 and subclauses as shown. Delete the editing instruction for 90.4.3.1.1.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1** *P* **52** *L* **37** # 336

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

For data delay measurement point (DDMP), the use of the term "point" could be interpretation as a "point in the datapath" of an implementation.

SuggestedRemedy

Propose to change to:
- data delay measurement symbol (DDMS)

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1** *P* **52** *L* **38** # 285

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **E** *Comment Status* **X**

"sub-layer" should be "sublayer", but actually is redundant (since gRS stands for generic Reconciliation Sublayer) - but was used in the original text..

SuggestedRemedy

change "sub-layer" to "sublayer" or simply delete "sub-layer".

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1.1** *P* **53** *L* **2** # 286

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

"The use of the beginning of the SFD, or the beginning of the first symbol after the SFD, as the measurement point requires consistent configuration of both the gRS and the PCS (see 45.2.3.69a) for correct operation." - this seems like a VERY IMPORTANT technical point , but is buried in the middle of a discussion of semantics. It needs to be put somewhere more prominent. Suggest some description of these functions in 90.2 is warranted. Same text is also in 90.4.3.2.1 on P 54, so copying rather than moving the text seems appropriate.

SuggestedRemedy

Copy the quoted sentence and put it as a new paragraph at the end of 90.2 Overview. Editor / Task Force to consider other important description of changes and options that need to be highlighted for the reader to understand how TSSI has changed.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1.1** *P* **53** *L* **5** # 337

Nicholl, Shawn Xilinx

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

This sub-clause needs text to handle MAC Merge sublayer case. Also, cross-references for SFD, SMD-E, and SMD-S can be consolidated here to simplify sub-clause 90.5.1.

SuggestedRemedy

Propose to preface the second paragraph with "When the MAC Merge sublayer is not instantiated," and add SFD cross-reference such that it reads as follows:

"When the MAC Merge sublayer is not instantiated, the data delay measurement point (DDMP) parameter can take one of two possible values, SFD and FIRST_SYMBOL. The value SFD indicates that the TS_TX.indication primitive was issued as the result of the beginning of Start Frame Delimiter (SFD, see 3.1.1 and 3.2.2) being transferred across the transmit path of the xMII. The value FIRST_SYMBOL ..."

Propose to add a new paragraph after the existing text "for correct operation" (i.e. between the second and third paragraphs):

"When the MAC Merge sublayer is instantiated, the data delay measurement point (DDMP) parameter can take one of two possible values, SMD and FIRST_SYMBOL. The value SMD indicates that the TS_TX.indication primitive was issued as the result of the beginning of an Start mPacket Delimiter for an express packet or preemptable packet start (SMD-E or SMD-S, see 99.3.3) being transferred across the transmit path of the xMII. The value FIRST_SYMBOL indicates that the TS_TX.indication primitive was issued as the result of the beginning of the first symbol after an SMD-E or SMD-S being transferred across the transmit path of the xMII. The use of the beginning of the SMD, or the beginning of the first symbol after the SMD, as the measurement point requires consistent configuration of both the gRS and the PCS (see 45.2.3.69a) for correct operation."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1.1** *P* **53** *L* **11** # 338

Nicholl, Shawn Xilinx

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

The MM parameter is solely relevant when the MAC Merge sublayer is instantiated. When MAC Merge sublayer is not instantiated, MM parameter is not needed. The last sentence of the paragraph seems to conflate the existance of MM parameter with other conditions.

SuggestedRemedy

Propose to change to:
- "The MM parameter is not provided when the MAC Merge sublayer is not instantiated."

Same comment for RX in 90.4.3.2.1

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.1.1** *P* **53** *L* **21** # 399

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

last sentence of third paragraph is a repeat of the last sentence of first paragraph and hence is redundant

SuggestedRemedy

Delete last sentence of third paragraph

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.2** *P* **53** *L* **35** # 427

Huber, Tom Nokia

Comment Type **E** *Comment Status* **X**

Missing an editorial instruction regarding this subclause, and also missing one for 90.4.3.2.2

SuggestedRemedy

Add an editing instruction: Change 90.4.3.2 and subclauses as shown, and add new subclause 90.4.3.2.3. Delete the editing instructions for subclauses 90.4.3.2.1 and 90.4.3.2.3..

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.2.1** *P* **54** *L* **3** # 300

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

This sentence should be deleted as it is immediately followed by an almost identical, but better, sentence.

“The use of the beginning of an SFD, or the beginning of the first symbol after an SFD as the measurement point has to be configured consistently in both the gRS and all associated PHY registers for correct operation.”

SuggestedRemedy

remove the sentence identified in the comment

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.2.1** *P* **54** *L* **20** # 315

Tse, Richard Microchip Technology

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

For the Rx datapath, PDDPD gives a dynamic delay that already took place. So, "experiences" should be changed to "experienced".

SuggestedRemedy

Change

"...the beginning of the first symbol after the SFD (see 45.2.3.69a), of the packet that generated the primitive, experiences in the PCS within the PHY."

to

"...the beginning of the first symbol after the SFD (see 45.2.3.69a), of the packet that generated the primitive, experienced in the PCS within the PHY."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.4.3.2.1** *P* **54** *L* **24** # 400

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

last sentence of third paragraph is a repeat of the last sentence of first paragraph and hence is redundant

SuggestedRemedy

Delete last sentence of third paragraph

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5** *P* **55** *L* **6** # 401

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

improper sentence

SuggestedRemedy

Replace "are defined to enable the PHY to provide the gRS dynamic data information to forward to the TimeSync Client to support the calculation of high accuracy data delay values"
with
"output from the PHY to the gRS. These signals provides the dynamic data path delay information to be forwarded to the TimeSync Client for enabling the calculation of highly accurate data path delay values"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **50** *L* **22** # 287

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

"When the MAC Merge sublayer is instantiated and when the beginning of the SFD is selected" - this reads like an "or" case, because it is "when a and when b" like 2 separate instances, but is written with an "and". Since the other case listed is "when the MAC Merge sublayer is not instantiated or when the beginning of the first symbol after the SFD is selected" - the opposite to that case would be "when the MAC Merge sublayer is instantiated and the beginning of the SFD is selected". So, I suggest the second "when" is superflous and confusing. Same text occurs in 90.5.2

SuggestedRemedy

change "and when the beginning of the SFD" to "and the beginning of the SFP" on line 22 and on line 43 (90.5.2)

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **55** *L* **13** # 339

Nicholl, Shawn Xilinx

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

This comment assumes that implementations not supporting the MAC Merge sublayer have two allowable locations for the data delay measurement point (DDMP). Similarly, this comment assumes that implementations supporting the MAC Merge sublayer also have two allowable locations for the data delay measurement point (DDMP). If either of these assumptions is not true, then that needs to be clearly stated in the draft.

Assuming both assumptions are true, then details related to the DDMP should be re-located to sub-clause 90.4.3.1.1 (see separate comment) and redundant information can be removed from sub-clause 90.5.1.

SuggestedRemedy

Propose to update sub-clause 90.5.1 to include only the following text:

The TS_DDMP_Detect_TX function observes the xMII transmit signals.

The TS_DDMP_Detect_TX function detects the occurrence of the data delay measurement point in compliance with the specifications of the given type of the instantiated xMII. The service primitive across the TSSI, i.e., TS_TX.indication, shall be generated only when the data delay measurement point is detected on the transmit signals of the xMII.

When the MAC Merge sublayer is instantiated, the value of MM shall indicate whether an SMD-E (MM=EMAC) or an SMD-S (MM=PMAC) was detected.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **55** *L* **27** # 402

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"SFD" is no longer a parameter of TX_TS.indication

SuggestedRemedy

Replace "SFD=DETECTED" with "DDMP=SFD"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **55** *L* **27** # 316

Tse, Richard Microchip Technology

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

"SFD=DETECTED" is no longer valid

SuggestedRemedy

Change "SFD=DETECTED" to "DDMP=SFD"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.2** *P* **55** *L* **34** # 340

Nicholl, Shawn Xilinx

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

This comment assumes that implementations not supporting the MAC Merge sublayer have two allowable locations for the data delay measurement point (DDMP). Similarly, this comment assumes that implementations supporting the MAC Merge sublayer also have two allowable locations for the data delay measurement point (DDMP). If either of these assumptions is not true, then that needs to be clearly stated in the draft.

Assuming both assumptions are true, then details related to the DDMP should be re-located to sub-clause 90.4.3.1.1 (see separate comment) and redundant information can be removed from sub-clause 90.5.2.

SuggestedRemedy

Propose to update sub-clause 90.5.2 to include only the following text:

The TS_DDMP_Detect_RX function observes the xMII receive signals.

The TS_DDMP_Detect_RX function detects the occurrence of the data delay measurement point in compliance with the specifications of the given type of the instantiated xMII. The service primitive across the TSSI, i.e., TS_RX.indication, shall be generated only when the data delay measurement point is detected on the receive signals of the xMII.

When the MAC Merge sublayer is instantiated, the value of MM shall indicate whether an SMD-E (MM=EMAC) or an SMD-S (MM=PMAC) was detected.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.2** *P* **55** *L* **48** # 317

Tse, Richard Microchip Technology

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

"SFD=DETECTED" is no longer valid

SuggestedRemedy

Change "SFD=DETECTED" to "DDMP=SFD"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.2** *P* **55** *L* **48** # 403

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"SFD" is no longer a parameter of RX_TS.indication

SuggestedRemedy

Replace "SFD=DETECTED" with "DDMP=SFD"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.2** *P* **57** *L* **1** # 301

Tse, Richard Microchip Technology

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

In Figure 90-2, the TX_NUM_UNIT_CHANGE and RX_NUM_UNIT_CHANGE signals should be present only on the right side of the gRS as they are terminated by the gRS. On the left side of the gRS, these signals should no longer be present since their function is now performed by the PDDPD parameter in the TS_TX.indication and TS_RX.indication primitives.

SuggestedRemedy

Update Figure 90-2 as described in the comment

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3** *P* **57** *L* **32** # 288

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

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

This is more of a question - but is potentially important. The text as written defines a relationship between TX_CLK and TXD. TX_CLK is an XGMII (and higher rate) xMII signal generated by the RS. Gigabit Ethernet uses GTX_CLK, also generated by the RS. MII (100 Mb/s) uses TX_CLK sourced from the PHY (see 22.2.2.1).
While everything seems correct for XGMII and above, mention of GTX_CLK for gigabit needs to be added as appropriate, and specific consideration needs to be taken to ensure that the timing works for MII where the PHY sources the TX_CLK.

SuggestedRemedy

Suggest adding "(GTX_CLK for GMII)" after TX_CLK on line 38 and in Figure 90-3.
Also, consider whether there are any ramifications of the differences inherent in MII from the higher speed phys due to clock sourcing.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3** *P* **57** *L* **35** # 404

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Improper sentences

SuggestedRemedy

Replace "that provides dynamic transmit path data delay values to support the calculation of high accuracy transmit path data delay values by the TimeSync client. They are defined as logical signals intended for use with an intra-chip interface, physical instantiation of these signal is not defined."
with
"providing dynamic transmit path data delay values to support the calculation of highly accurate transmit path data delay values by the TimeSync client. Even though they are specified as logical signals intended for use with an intra-chip interface, physical instantiation of these signals are not defined."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3** *P* **57** *L* **37** # 318

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

sentence format could be improved

SuggestedRemedy

Change

"They are defined as logical signals intended for use with an intra-chip interface, physical instantiation of these signal is not defined."

to

"They are defined as logical signals intended for use with an intra-chip interface. A physical instantiation of these signals is not defined."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3** *P* **57** *L* **44** # 321

Tse, Richard Microchip Technology

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

Per the spirit of https://www.ieee802.org/3/cx/public/nov21int/proposed_res_for_comments_135_177_137_181.pdf, recommendations about alignmennt marker, codeword marker, and/or idle insertion/removal should not be part of this subclause.

SuggestedRemedy

Remove this sentence:

"To avoid dynamic transmit path data delay that cannot be reported to the TimeSync client, it is recommended to avoid alignment marker insertion, codeword marker insertion, and/or idle rate adaptation insertion/removal in any PHY sublayer other than the PCS."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.4** *P* **58** *L* **17** # 405

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Improper sentences

SuggestedRemedy

Replace "that provides dynamic receive path data delay values to support the calculation of high accuracy receive path data delay values by the TimeSync client. They are defined as logical signals intended for use with an intra-chip interface, physical instantiation of these signal is not defined."
with
"providing dynamic receive path data delay values to support the calculation of highly accurate receive path data delay values by the TimeSync client. Even though they are specified as logical signals intended for use with an intra-chip interface, physical instantiation of these signals are not defined."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.4** *P* **58** *L* **19** # 319

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

sentence format could be improved

SuggestedRemedy

Change

"They are defined as logical signals intended for use with an intra-chip interface, physical instantiation of these signal is not defined."

to

"They are defined as logical signals intended for use with an intra-chip interface. A physical instantiation of these signals is not defined."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.4** *P* **58** *L* **26** # 320

Tse, Richard Microchip Technology

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

Per the spirit of https://www.ieee802.org/3/cx/public/nov21int/proposed_res_for_comments_135_177_137_181.pdf, recommendations about alignmennt marker, codeword marker, and/or idle insertion/removal should not be part of this subclause.

SuggestedRemedy

Remove this sentence:

"To avoid dynamic receive path data delay that cannot be reported to the TimeSync client, it is recommended to avoid alignment marker removal, codeword marker removal, and/or Idle rate adaptation insertion/removal in any PHY sublayer other than the PCS."

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.6** *P* **58** *L* **52** # 406

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

3.1813 is not a capability register but a configuration register

SuggestedRemedy

Remove 3.1813 from the list

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.6** *P* **58** *L* **53** # 269

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **X**

Usually when "respectively" is used, there are two lists of equal length. In this case, there are 7 items in the first list and 2 in the second. I believe each reference in the second list applies to 2 items in the first list.

SuggestedRemedy

I'm not sure how to rewrite this as I don't know which register is defined in 30.13.1.1 and which is defined in 30.13.1.2. There is no way to determine this from the spec.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.6** *P* **59** *L* **1** # 270

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **X**

Usually when "respectively" is used, there are two lists of equal length. In this case, there are 18 (?) items in the first list and 2 in the second. I believe the range in the first list refers to the first reference and then the two registers separated by a comma reference to the second reference.

SuggestedRemedy

Change: 1.1801 through 1.1804, 1.1809, 1.1810, 2.1801 through 2.1804, 2.1809, 2.1810, 3.1801 through 3.1804, 3.1809, 3.1810, 4.1801 through 4.1804, 4.1809, 4.1810, 5.1801 through 5.1804, 5.1809, 5.1810, and 6.1801 through 6.1804, 6.1809, 6.1810, as defined in 30.13.1.3 and 30.13.1.4, respectively
To: 1.1801 through 1.1804, 2.1801 through 2.1804, 3.1801 through 3.1804, 4.1801 through 4.1804, 5.1801 through 5.1804, and 6.1801 through 6.1804, as defined in 30.13.1.3 and
1.1809, 1.1810, 2.1809, 2.1810, 3.1809, 3.1810, 4.1809, 4.1810, 5.1809, 5.1810, 6.1809, 6.1810, as defined 30.13.1.4

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.6** *P* **59** *L* **7** # 271

Wienckowski, Natalie General Motors

Comment Type **E** *Comment Status* **X**

Usually when "respectively" is used, there are two lists of equal length. In this case, there are 18 (?) items in the first list and 2 in the second. I believe the range in the first list refers to the first reference and then the two registers separated by a comma reference to the second reference.

SuggestedRemedy

Change: 1.1805 through 1.1808, 1.1811, 1.1812, 2.1805 through
2.1808, 2.1811, 2.1812, 3.1805 through 3.1808, 3.1811, 3.1812, 4.1805 through 4.1808, 4.1811,
4.1812, 5.1805 through 5.1808, 5.1811, 5.1812, and 6.1805 through 6.1808, 6.1811, 6.1812, as
defined in 30.13.1.5 and 30.13.1.6, respectively
To: 1.1805 through 1.1808, 2.1805 through
2.1808, 3.1805 through 3.1808, 4.1805 through
4.1808, 5.1805 through 5.1808, and 6.1805 through 6.1808, as defined in 30.13.1.5 and
1.1811, 1.1812, 2.1811, 2.1812, 3.1811, 3.1812, 4.1811, 4.1812, 5.1811, 5.1812, 6.1811, and 6.1812, as defined in 30.13.1.6

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.6** *P* **59** *L* **24** # 289

Zimmerman, George CME Consulting/ADI, APL Gp, Cisco, CommScope,

Comment Type **ER** *Comment Status* **X**

There are inserts in table 90-1 that are not shown. (e.g., 1.1809 through 1.1810 isn't in 802.3dc d3.0)

SuggestedRemedy

Compare table 90-1 to latest draft of 802.3dc and underline inserts as appropriate.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **60** *L* **31** # 341

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

It would be best to consolidate details of the DDMP within 90.4.3.1.1, rather than duplicate details in 90.7.

SuggestedRemedy

Propose to change the first paragraph to simply:

The TimeSync capability requires measurement of data delay in the transmit and receive paths, as shown in Figure 90-5.

The transmit path data delay is measured from the data delay measurement point (DDMP, see 90.4.3.1.1).

Furthermore, propose to move the entire "NOTE -- It is recommended that the beginning of the first symbol after the SFD ..." into sub-clause 90.4.3.1.1. Editors discretion whether to update the NOTE text to also include discussion of SMD (i.e. not just SFD).

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **60** *L* **45** # 428

Huber, Tom Nokia

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

The added text about multilane interfaces, "multi-PCS lane distribution", is somewhat awkward. Since distribution of the PCS already implies that there are multiple lanes, it is not really necessary to say 'multi-PCS lane distribution' throughout the paragraph, and perhaps more clear to introduce the concept as 'distribution of the PCS signal to multiple lanes'.

SuggestedRemedy

Revise the paragraph to read as follows:
If a PHY includes an FEC function or distributes the PCS signal to multiple lanes, the transmit and receive path data delays may show significant variation dependnig upon the position of the data delay measurement point within the FEC block and in the PCS lane distribution sequence. However, since the variation due to this effect in the transmit path is expected to be compensated by the inverse variation in the receive path, it is recommended that the transmit and receive path data delays be reported as if the data delay measurement point is at the start of the FEC block and/or PCS lane distribution sequence. For PHYs with both FEC and distribution to multiple PCS lanes, the start of the FEC block is guaranteed to coninside with the start of a PCS lane distribution sequence.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **60** *L* **45** # 251

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

"multi-PCS lane distribution" doesn't work: we aren't discussing multiple PCSs. "multi-PCS" and "multi-FEC" aren't defined kinds of PCS and FEC. "multi-PCS-lane distribution" is clumsy. As "multi-physics" is a thing, "multi-physical" in 90A.2 is a problem.
We don't need to say "a multi-lane FEC and/or PCS lane distribution function" because there would be no distribution function if there weren't multiple lanes. It turns out that there is no need for "multi-PCS-lane distribution" or "multi-FEC-lane distribution", or "multi-lane PCS lane distribution" or "multi-lane FEC lane distribution".
Also, functions -> function.

SuggestedRemedy

Change "an FEC and/or multi-PCS lane distribution functions" to "an FEC and/or PCS lane distribution function". Change "in the multi-PCS lane distribution sequence" to "in the PCS lane distribution sequence" (or "in the PCS or FEC lane distribution sequence"?). Change "multi-PCS-lane distribution" to "PCS lane distribution" and similarly (including for FEC) throughout the document.
In 90A.2, change "multi-physical coding sublayer (PCS) lane distribution/merging" to "PCS lane distribution/merging".

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **61** *L* **2** # 322

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

"PTP" should be removed

SuggestedRemedy

delete the word "PTP

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **61** *L* **2** # 250

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Here and in the next paragraph there are "the PTP data delay measurement point". This is the first time that "PTP" has appeared except for document title or abstract, where it doesn't matter so much that "Presision Time Protocol" is not defined (and 90.3 implies that it's out of scope). 93 other times we have simply "data delay measurement point".

SuggestedRemedy

Delete "PTP" twice

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **61** *L* **11** # 323

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

"PTP" should be removed

SuggestedRemedy

delete the word "PTP

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **62** *L* **39** # 422

He, Xiang Huawei Technologies

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

NOTE 4 proposes to report the transmit delay on the last-departing lane, but the last paragraph on page 61 line 34-36 proposes to report the mid-point between the first-departing lane and the last-departing lane. Seems inconsistent.

SuggestedRemedy

Clarify the consistency between NOTE 4 and the description on page 61, line 34-36.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.7** *P* **62** *L* **41** # 423

He, Xiang Huawei Technologies

Comment Type **E** *Comment Status* **X**

NOTE 5 has been covered by line 32-33 on page 61.

SuggestedRemedy

Propose to delete NOTE 5

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.8.3** *P* **64** *L* **16** # 342

Nicholl, Shawn Xilinx

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

This comment assumes that implementations not supporting the MAC Merge sublayer have two allowable locations for the data delay measurement point (DDMP). Similarly, this comment assumes that implementations supporting the MAC Merge sublayer also have two allowable locations for the data delay measurement point (DDMP). If either of these assumptions is not true, then that needs to be clearly stated in the draft.

SuggestedRemedy

Propose following changes in the table:

For Item TS_TX, change the Status cell to "M"
For Item TS_RX, change the Status cell to "M"
For Item TS_T2, delete the row
For Item TS_R2, delete the row

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A** *P* **67** *L* **9** # 261

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Gratuitous capitals

SuggestedRemedy

Change "Timestamping Accuracy Considerations" to "Timestamping accuracy considerations", "High Accuracy Timestamping Introduction" to "High accuracy timestamping introduction" and so on. Including Table 90A-1.

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.1** *P* **67** *L* **16** # 297

Marris, Arthur Cadence Design Systems

Comment Type **E** *Comment Status* **X**

Having "Client" capitalized looks wrong in this context

SuggestedRemedy

Consider changing "Client" to "client"

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.2** *P* **67** *L* **23** # 298

Marris, Arthur Cadence Design Systems

Comment Type **ER** *Comment Status* **X**

"Timestamp reference" is repeated twice and makes no sense

SuggestedRemedy

Delete "Timestamp reference,Timestamp reference"

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.2** *P* **67** *L* **24** # 326

Tse, Richard Microchip Technology

Comment Type **E** *Comment Status* **X**

The “Timestamp reference” and “Timestamp reference, first symbol after the SFD” registers have new names and these need to be updated in this sentence.

SuggestedRemedy

Change “Timestamp reference” to “SFD data delay measurement point ability”.
Change “Timestamp reference, first symbol after the SFD” to “First symbol after SFD data delay measurement point ability”.

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.2** *P* **67** *L* **24** # 407

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Duplicate terms

SuggestedRemedy

Delete one of the repeated "Timestamp Reference"

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.2** *P* **67** *L* **26** # 408

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Comma missing

SuggestedRemedy

Add comma as indicated below
"subclauses 45.2.1 to 45.2.6), could lead"

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.2** *P* **67** *L* **34** # 343

Nicholl, Shawn Xilinx

Comment Type **E** *Comment Status* **X**

It would be best to reference DDMP definition in 90.4.3.1.1, rather than reference to 90.7.

SuggestedRemedy

Propose to change the third paragraph to:

Timestamping accuracy can also be impaired when two TimeSync Clients do not use the same data delay measurement point. As specified in 90.4.3.1.1, this standard ...

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.2** *P* **67** *L* **36** # 409

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Confusing sentence indicating 3 data delay measurment points

SuggestedRemedy

Replace "start of frame delimiter, the SFD, and" with
"start of frame delimiter (SFD), and"

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.3** *P* **68** *L* **14** # 262

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Column headings and footnotes take more space than they should

SuggestedRemedy

Make the table full width, optimise the column widths. Frame has a menu item to do this.

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.3** *P* **68** *L* **38** # 263

Dawe, Piers Nvidia

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

"TimeSync message" not defined

SuggestedRemedy

If this has a different name, use it. If not, explain what you mean by "a TimeSync message".

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.3** *P* **68** *L* **40** # 264

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Footnotes d and e imply that 10GBASE-R is like 1000BASE-X, and 10GBASE-X is like 1000BASE-T, which looks like a mistake, and if it isn't, is confusing.

SuggestedRemedy

Use separate notes for 1000M and 10G

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.3** *P* **68** *L* **50** # 265

Dawe, Piers Nvidia

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

"byte time": no such thing in the base document, although a couple of clauses use "octet time"

SuggestedRemedy

Use the proper terminology. Maybe you mean 8 BT (bit times).

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.4** *P* **69** *L* **8** # 429

Huber, Tom Nokia

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

Simillar to the comment on 90.7, "Multi-PCS Lane Functions" and "multi-PCS lane distribution" are somewhat awkward.

SuggestedRemedy

Change the title to "Considerations for PCS with multiple lanes" or "Considerations for multi-lane PCS".
Change the text of the first paragraph to read as follows:
The general concept used to accommodate the delay variation of a PCS that distributes the signal to multiple lanes is explained in 90A.7. This concept takes advantage of the fact that the sum of the intrinsic delay variation of the distribution operation and the intrinsic delay variation of the merging operation is a predetermined constant for the given multilane PCS function.

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.4** *P* **69** *L* **31** # 430

Huber, Tom Nokia

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

The last paragraph indicates that the consideration with respect to distribution to/merging from multiple PCS lanes is consistent with that for multiple FEC lanes - but there is no discussion of multiple FEC lanes anywhere in the annex (or in the main body - 90.7 mentions FEC, but nothing about distribution to multiple lanes).

SuggestedRemedy

Delete the last paragraph.

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.5.1** *P* **69** *L* **54** # 324

Tse, Richard Microchip Technology

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

PDDPD parameter should be included in the examples

SuggestedRemedy

1. Change subclause header to "Example use of TX_NUM_UNIT_CHANGE and PDDPD"
2. Modify text for step b to the following
"Scenario with alignment marker, codeword marker, or Idle insertion/removal in which the PDDPD parameter, which mirrors the corresponding value of TX_NUM_UNIT_CHANGE, is used to account for the Tx PCS path data delay variation, allowing the Tx PCS path data delay to be modeled as a constant:"
3. Change "TX_NUM_UNIT_CHANGE" to "PDDPD" in all subsequent steps of this example

Proposed Response *Response Status* **O**

Cl **90A** *SC* **90A.5.1** *P* **70** *L* **13** # 266

Dawe, Piers Nvidia

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

"positive when data is inserted ahead": I think you mean when alignment marker, codeword marker, or idle(s) are inserted. These are NOT data (see Clause 4). That's the reason that this document is talking about "path data delay" rather than just "path delay".

SuggestedRemedy

If there is a generic term for these non-data inserts, it could be used. If not, one could be invented, or for the few times it would be used, just write out "alignment marker, codeword marker, or Idle". Similarly in 90A.5.2 b iii

Proposed Response *Response Status* **O**

Cl **90A** SC **90A.5.2** P **70** L **22** # 325

Tse, Richard Microchip Technology

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

PDDPD parameter should be included in the examples

SuggestedRemedy

1. Change subclause header to "Example use of RX_NUM_UNIT_CHANGE and PDDPD"
2. Modify text for step b to the following
"Scenario with alignment marker, codeword marker, or Idle insertion/removal in which the PDDPD parameter, which mirrors the corresponding value of RX_NUM_UNIT_CHANGE, is used to account for the Rx PCS path data delay variation, allowing the Rx PCS path data delay to be modeled as a constant:"
3. Change "RX_NUM_UNIT_CHANGE" to "PDDPD" in all subsequent steps of this example

Proposed Response *Response Status* **O**

Cl **90A** SC **90A.6** P **71** L **34** # 267

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

negate the need

SuggestedRemedy

avoid the need? reduce the need? avoid?

Proposed Response *Response Status* **O**

Cl **90A** SC **90A.7** P **73** L **10** # 268

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

Font far too small

SuggestedRemedy

Fix. Also change any grey text to black.

Proposed Response *Response Status* **O**

Cl **A** SC **A** P **65** L **10** # 252

Dawe, Piers Nvidia

Comment Type **E** *Comment Status* **X**

If these are informative references, and outside the scope of 802.3 as 90.3 implies, why are the references dated? Obviously, reference to 1588-2008 should be changed, but do we need to exclude future revisions? The introduction to 1.4, Definitions, says "For undated references, the latest edition of the referenced document (including any amendments or corrigenda) applies", but there is no introduction to Annex A, Bibliography

SuggestedRemedy

Delete "-2020" and "-2019"

Proposed Response *Response Status* **O**

Cl **Abstrac** SC **Abstract** P **3** L **2** # 344

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

Sentence construct does not look correct

SuggestedRemedy

Replace "modifies Clause 90 and adds Annex 90A to enhance support for time synchronization protocols to provide optional sub-nanosecond reporting of the transmit and receive path delays, selection of timing reference point, and dynamic reporting of path delay variation."
with
"modifies Clause 30, Clause 45, Clause 90 and adds Annex 90A to improve accuracy of time synchronization by providing optional sub-nanosecond reporting of the transmit and receive path delays, selection of timing reference point, and dynamic reporting of path delay variation."

Proposed Response *Response Status* **O**

Cl **Keywor** SC **Keywords** P **3** L **6** # 345

Kabra, Lokesh Synopsys Inc

Comment Type **E** *Comment Status* **X**

"improved timestamp accuracy" term not found anywhere else in this document

SuggestedRemedy

Delete "improved timestamp accuracy"

Proposed Response *Response Status* **O**