

## Unsatisfied Comments

## IEEE P802.3cx D2.0 ITSA Task Force Initial Working Group ballot comments

CI 90 SC 90.4.4.1.2 P49 L11 # 179

Slavick, Jeff Broadcom

Comment Type TR Comment Status R

AM insertion, CWM insertion and Idle/insert delete are the typical reasons for a change in delay but not the only one.

*SuggestedRemedy*

Change the second sentence from:

TX\_num\_unit\_change indicates the change in the Tx PHY's path data delay due to AM insertion, CWM insertion, and/or Idle rate adaptation insertion/removal for the corresponding Tx xMII word.

To:

TX\_num\_unit\_change indicates the change in the Tx PHY's transmit path data delay for the corresponding Tx xMII word, possible reasons for the adjustment are AM insertion, CWM insertion, and/or Idle rate adaptation insertion/removal.

Response Response Status U

REJECT.

The intent is to report data delay only due to AM insertion, CWM insertion, and/or Idle rate adaptation insertion/removal at this time. Any future functions causing data delay variation would require an update to TimeSync.

CI 90 SC 90.5.1 P50 L35 # 167

Slavick, Jeff Broadcom

Comment Type TR Comment Status R

The service primitive interface supplies the communication path between sub-layers. It does not need to include programming of how the INDICATION is generated, that is done based upon the detect\_function which causes the event to occur. So there is no need to modify 90.4.3.1.1 and 90.4.3.2.1. To provide support of selecting when INDICATION occurs, either coincident with the SFD or the FIRST\_CHAR after the SFD, you just need to manipulate when the detect cause the INDICATION event to occur. So only 90.5.1 and 90.5.2 need to be adjusted to provide text for when the DETECT will cause INDICATION to occur to allow for both options. Note the detect\_function monitors only for Start of Frame Delimiter and then delays (or doesn't) the INDICATION based upon the MDIO config field.

*SuggestedRemedy*

Revert 90.4.3.1.1 and 90.4.3.2.1 to be same as 802.3dc (existing CI90 definition).

Update all references of TS\_MTP\_Detetct\* back to TS\_SDF\_Detect\*

Update the following two sub-clauses to be as follows

90.5.1 TS\_SFD\_Detect\_TX function

The TS\_SFD\_Detect\_TX function observes the xMII transmit signals.

There are two possible points in the message where TS\_SFD\_Detect\_TX will cause TS\_TX.indication to be generated. The selection of which location is used, the beginning of the Start of Frame Delimiter (SFD, see 3.1.1 and 3.2.2, SMD-E and SMD-S, see 99.3.3) or the beginning of the first symbol after the SFD, is based upon the setting of Message Timestamp Point (MTP) (see 45.2.4.68a).

When the MAC Merge sublayer is not instantiated the TS\_SFD\_Detect\_TX function detects the occurrence of the SFD in compliance with the specifications of the given type of instantiated xMII. For each SFD that is detected on the transmit signals of the xMII the TS\_TX.indication service primitive shall be generated (SFD=DETECTED) across the TSSI at the configured MTP.

When the MAC Merge sublayer is instantiated the TS\_SFD\_Detect\_TX function detects the occurrence of the SMD-E and SMD-S in compliance with the specifications of the given type of instantiated xMII. For each SMD-E that is detected on the transmit signals of the xMII the TS\_TX.indication service primitive shall be generated (SFD=DETECTED, MM=EMAC) across the TSSI at the configured MTP.

For each SMD-S that is detected on the transmit signals of the xMII the TS\_TX.indication service primitive shall be generated (SFD=DETECTED, MM=PMAC) across the TSSI at the configured MTP.

90.5.2 TS\_SFD\_Detect\_RX function

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general

COMMENT STATUS: D/dispatched A/accepted R/rejected RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn

SORT ORDER: Clause, Subclause, page, line

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2/17/2022 12:24:16 PM

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The TS\_SFD\_Detect\_RX function observes the xMII receive signals.

There are two possible points in the message where TS\_SFD\_Detect\_RX will cause TS\_RX.indication to be generated. The selection of which location is used, the beginning of the Start of Frame Delimiter (SFD, see 3.1.1 and 3.2.2, SMD-E and SMD-S, see 99.3.3) or the beginning of the first symbol after the SFD, is based upon the setting of Message Timestamp Point (MTP) (see 45.2.4.68a).

When the MAC Merge sublayer is not instantiated the TS\_SFD\_Detect\_RX function detects the occurrence of the SFD in compliance with the specifications of the given type of instantiated xMII. For each SFD that is detected on the receive signals of the xMII the TS\_RX.indication service primitive shall be generated (SFD=DETECTED) across the TSSI at the configured MTP.

When the MAC Merge sublayer is instantiated the TS\_SFD\_Detect\_RX function detects the occurrence of the SMD-E and SMD-S in compliance with the specifications of the given type of instantiated xMII. For each SMD-E that is detected on the receive signals of the xMII the TS\_RX.indication service primitive shall be generated (SFD=DETECTED, MM=EMAC) across the TSSI at the configured MTP. For each SMD-S that is detected on the receive signals of the xMII the TS\_RX.indication service primitive shall be generated (SFD=DETECTED, MM=PMAC) across the TSSI at the configured MTP.

*Response*                      *Response Status*   **U**

REJECT.

It is true that the DETECT function in 90.5.1 and 90.5.2 will convey to the TX/RX.indication primitive when the MTP event occurs. However, the following is not true: "Note the detect\_function monitors only for Start of Frame Delimiter and then delays (or doesn't) the INDICATION based upon the MDIO config field". The gRS cannot do this adjustment from the SFD because the delay to the symbol-after-SFD isn't always a constant number. The DETECT function needs to detect the symbol after SFD.

The validity of the Mac Merge parameter depends on the selected MTP. It is only valid if the beginning of the SFD is selected as the MTP. The only way to convey this is to include the MTPS parameter along with the MM parameter in the TX/RX.indication primitive.

No changes to the draft needed.

*Cl* **90**      *SC* **90.7**                      *P* **53**                      *L* **32**                      # **170**

Slavick, Jeff                                      Broadcom

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

Why not provide a method to inform the remote end on which point you're timestamping?

*SuggestedRemedy*

Add a method (via LLDP?) to pass the state of the Message TimeStamp Point (3.1813.13) to the far end so it can tell how if any compensation in time should be made to it's calculation of the delay.

*Response*                                      *Response Status*   **U**

REJECT.

This is a new feature and was not brought to the consideration at the TF review stage.

*Cl* **90**      *SC* **90.7**                      *P* **55**                      *L* **21**                      # **175**

Slavick, Jeff                                      Broadcom

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

A PCS layer that is separated from the RS by an XS should be discouraged from doing any sort of rate compensation or shifting of the AM/CWM locations.

*SuggestedRemedy*

Add another note talking about how a PCS separated by an XS from the RS needs to not modify the AM/CWM locations or do any rate compensation to minimize any time accuracy error.

*Response*                                      *Response Status*   **U**

REJECT.

No specific text was proposed.

## Unsatisfied Comments

## IEEE P802.3cx D2.0 ITSA Task Force Initial Working Group ballot comments

CI **90A** SC **90A** P **62** L **39** # **235**

Ran, Adee Cisco

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

Table footnote g applies to 1G, 2.5G, and 5G, which do not have any FEC function, and to 200G and 400G where the FEC is part of the PCS functions. The footnote does not make sense for these rates.

*SuggestedRemedy*

Clarify the footnote text or delete it.

Response Response Status **U**

ACCEPT IN PRINCIPLE.

See comment #144 for 1G FEC.

In note "g", remove the statement "and not to the PCS function".

2.5G and 5G use LDPC(1723,2048) FEC. See subclause 126.1.3.1 of 802.3-2018. 200G and 400G FEC performs the lane distribution. There is no error in the notes or in the table on this matter.

No changes to draft needed.