Cl **00**   *SC* **0**   *P* **0**   *L* **0**   # **53**

Hugh Barrass   Cisco

Comment Type **GR**   *Comment Status* **X**

It is not clear whether the overall structure of this draft is intended
to reflect the intended structure of the finished product. In any case,
here are some general comments:

It can be assumed that there will be (at least) one new clause that we
can call the "TimeSync Clause."

Changes to Clause 30 and 45 must be made directly to those clause and do
not need to be summarized in the TimeSync Clause.

It is useful to describe the generic changes to all of the RS clauses
within the TimeSync clause, however, the changes to the individual RS
clauses (22, 35, 46, 81) must be made in the respective clauses. The
specific definitions can reference the generic definition if necessary,
but certain aspects will be unique for each clause.

Similarly, it is very useful to list the supported PHYs and the
requirements for each PHY in the TimeSync clause, but specific optional
requirements that change or restrict PHY behavior must be placed in the
appropriate clause (and reflected in the appropriate PICS).

Cross-clause requirements and also "change clauses" (e.g. Clause 66)
have been included in the past but have caused numerous problems and
should be considered as "historical mistakes, not to be repeated."

If operation is intended over XGMII (for 10Gb/s) then consideration
should be made regarding the effect of extension sublayers interposed
between two XMGIIs (i.e. should timestamping be performed only at the
first XGMII or could it be performed at the "embedded XGMII?"

SuggestedRemedy

Restructure the document with change instructions for clauses 30, 45,
22, 35, 46 and 81 - plus specific PHY clauses as the TF decides.

Proposed Response   *Response Status* **O**

Cl **00**   *SC* **0**   *P* **19**   *L* **29**   # **35**

Garner, Geoffrey   Samsung

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

It appears that the subclauses 99.7, 99.8, 99.9, 99.9.1, 99.9.2, and 99.10 and its
subclauses should be numbered 90.7, 90.8, 90.9, 90.9.1, 90.9.2, and 99.10 (and similarly
for the subclauses of 99.10).

SuggestedRemedy

Change 99.7, 99.8, 99.9, 99.9.1, 99.9.2, 99.10, and subclauses of 99.10 to 90.7, 90.8,
90.9, 90.9.1, 90.9.2, 90.10, and similarly for subclauses of 90.10, respectively. In addition,
Figure 99-2 and a reference to it should be renumbered 90-2, and the reference should be
changed to 90-2. The reference occurs on p.18, line 34.

Proposed Response   *Response Status* **O**

Cl **00**   *SC* **0**   *P* **19**   *L* **31**   # **37**

Garner, Geoffrey   Samsung

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

Text needs to be supplied, as indicated in the respective editor's notes, for subclauses
99.7, 99.8, 99.9, 99.9.1, 99.9.2 (note that another comment indicates that the "99" should
be "90"). The PICS Proforma of 99.10 needs to be filled in.

Presumably, this will include the parmameters that will represent the difference in time
between the reference plane (i.e., the boundary between a port of a time-aware system
and the network media, see 3.14 of P802.1AS D6.7) and where the timestamp is actually
taken (i.e., the timestamp measurement plane, see 3.22 of P802.1AS). There are two
such parameters, one for ingress and one for egress. In previous discussions, these
paramters have been referred to as ingress and egress latencies; it has been indicated that
they are management objects, and it also has been indicated that they could be data sheet
parameters. In any case, they need to be described in the appropriate subclause(s). The
editor's note in subclause 99.9 seems to refer to them.

SuggestedRemedy

Supply the material indicated in the comment above (i.e., the material indicated in the
editor's notes (and include the objects that represent the difference in time between the
reference plane and timestamp measurement plane, on both ingress and egress)).

Proposed Response   *Response Status* **O**

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   *Cl* **00**   *SC* **0**   Page 1 of 6   27/02/2010 11:21:31

Cl **90**   *SC* **90.1**   *P* **15**   *L* **1**   # 39

Ouellette, Michel   Huawei

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

     The optical support...

SuggestedRemedy

     replace "optical" with "optional"

Proposed Response   *Response Status*   **O**

Cl **90**   *SC* **90.1**   *P* **15**   *L* **14**   # 29

Marris, Arthur   Cadence

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

     I think it inappropriate to have a list of PHYs in the Clause. It is unnecessary and will soon be out-of-date.

SuggestedRemedy

     Delete the text 'Specifically, the optional TimeSync capability may be supported by the PHYs identified in 90.4.'

     Delete 90.4

Proposed Response   *Response Status*   **O**

Cl **90**   *SC* **90.1**   *P* **15**   *L* **7**   # 28

Marris, Arthur   Cadence

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

     optical?

SuggestedRemedy

     Change 'The optical' to 'Optional'

Proposed Response   *Response Status*   **O**

Cl **90**   *SC* **90.1**   *P* **15**   *L* **7**   # 50

Anslow, Peter   Nortel Networks

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

     This says "The optical support for the...", but many of the interfaces addressed are not optical. Should this be "optional" rather than "optical"?

SuggestedRemedy

     Change "optical" to "optional"

Proposed Response   *Response Status*   **O**

Cl **90**   *SC* **90.1**   *P* **15**   *L* **9**   # 40

Ouellette, Michel   Huawei

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

     Figure 90.6 cannot be found

SuggestedRemedy

     Is Figure 90.1 the proper reference?

Proposed Response   *Response Status*   **O**

Cl **90**   *SC* **90.1**   *P* **15**   *L* **9**   # 36

Garner, Geoffrey   Samsung

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

     There is a reference to "Figure 90.6". It appears this should be a reference to Figure 90-1 (at least, it is Figure 90-1 that shows the gRS and Time Synchronization (TimeSync) Client referred to in the sentence).

SuggestedRemedy

     Change "Figure 90.6" to "Figure 90-1".

Proposed Response   *Response Status*   **O**

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

Cl **90**
SC **90.1**

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Cl **90** *SC* **90.2** *P* **15** *L* **21** # 41
Ouellette, Michel   Huawei

Comment Type **E** *Comment Status* **X**
... of certain packets...

SuggestedRemedy
the proposed architecture provides initiation times of "all" packets? This is what the current architecture does.

We need to be consistent as this can be confusing for the reader and designer.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5** *P* **16** *L* **10** # 47
Ouellette, Michel   Huawei

Comment Type **T** *Comment Status* **X**
it is not clear from the figure and text if there is any correlation between the TSSI indications and the frames that arrive/depart to the MAC client.

Can it be assumed that the TSSI indication are correlated (or happen simultaneously) with the MA_DATA.request and MA_DATA.indication primitives? If not, then the TSSI indications might not be sufficient to meet the requirements of 802.1AS.

SuggestedRemedy
Discuss if there are situations (eg., errored frame) where there could be a TS_RX.indication event but the data is not sent to the MAC client eg., MA_DATA.request. Such situation might pose some problems to external timestamping process as there is no 1 to 1 mapping of the indication and frame being transmitted to the upper layers.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **15** *L* **44** # 42
Ouellette, Michel   Huawei

Comment Type **E** *Comment Status* **X**
... outside of scope...

SuggestedRemedy
replace "outside of scope" with "outside the scope"

same comment on line 48.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **16** *L* **3** # 43
Ouellette, Michel   Huawei

Comment Type **E** *Comment Status* **X**
... is not defined anywhere in ....

SuggestedRemedy
suggest to remove the work "anywhere" from the sentence

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.1** *P* **16** *L* **9** # 27
Marris, Arthur   Cadence

Comment Type **E** *Comment Status* **X**
Spelling 'prohibts'

SuggestedRemedy
prohibits

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.2.1** *P* **17** *L* **6** # 30
Marris, Arthur   Cadence

Comment Type **T** *Comment Status* **X**
Change "to be notified on event of transmission and/or reception of a new Ethernet frame" to

"to be notified when an Ethernet frame crosses the xMII interface"

SuggestedRemedy
as above

Proposed Response *Response Status* **O**

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

Cl **90**
SC **90.5.2.1**

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Cl **90** *SC* **90.5.2.1** *P* **17** *L* **7** # 44

Ouellette, Michel   Huawei

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

 ... service promitives...

SuggestedRemedy

 replace "promitives" with "primitives"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.2.1** *P* **17** *L* **7** # 51

Anslow, Peter   Nortel Networks

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

 typo - "promitives"

SuggestedRemedy

 Change "promitives" to ""primitives"

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3.1.1** *P* **17** *L* **32** # 31

Marris, Arthur   Cadence

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

 ONE or undefined do not seem like appropriate values for SFD.

SuggestedRemedy

 Change to one of the following:
 "TRUE or FALSE"
 "PRESENT or NOT PRESENT"
 "DETECTED or NOT DETECTED"

 make similar change in 90.5.3.2.1

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3.1.1** *P* **17** *L* **35** # 45

Ouellette, Michel   Huawei

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

 the "TS_SFD_Detect_TX" is used in the sentence but only explained and shown in a later section.

SuggestedRemedy

 Suggest to remove the "TS_SFD_Detect_TX function" from the sentence, as it is explained in the a later section.

 The text could look like the last paragraph of 90.5.3.1.1

 "The SFD parameter can take any of the following two values: ONE or undefined. When asserted (SFD = ONE), the TimeSync Client is notified that a valid SFD was detected by the gRS sublayer. Otherwise, the value of SFD parameter is undefined".

 Then in Section 90.6 the TS_SFD_Detect_TX is explained and depicted in the appropriate figure.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.5.3.2.1** *P* **18** *L* **5** # 46

Ouellette, Michel   Huawei

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

 the "TS_SFD_Detect_RX" is used in the sentence but only explained and shown in a later section.

SuggestedRemedy

 Suggest to remove the "TS_SFD_Detect_RX function" from the sentence, as it is explained in the a later section.

 The text could look like this:

 "The SFD parameter can take any of the following two values: ONE or undefined. When asserted (SFD = ONE), the TimeSync Client is notified that a valid SFD was detected by the gRS sublayer. Otherwise, the value of SFD parameter is undefined".

Proposed Response *Response Status* **O**

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

Cl **90**
SC **90.5.3.2.1**

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Cl **90** *SC* **90.6** *P* **18** *L* **22** # 32

Marris, Arthur Cadence

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

Delete "as identified in 90.4,"

SuggestedRemedy

as above

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.6** *P* **19** *L* **26** # 52

Anslow, Peter Nortel Networks

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

The numbering of this clause jumps from clause 90 to clause 99 on page 19. (due to an incorrect format in the caption of Figure 99-2 at the top of page 19?)

SuggestedRemedy

Change the numbering of Figure 99-2 and subclauses 99-7 through 99.10.3 to clause 90.

Proposed Response *Response Status* **O**

Cl **90** *SC* **90.6.2** *P* **18** *L* **53** # 34

Garner, Geoffrey Samsung

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

It appears that the reference to transmit signals should be to receive signals.

SuggestedRemedy

Change "transmit" to "receive", i.e., change "... sequence is detected on the transmit signals." to "... sequence is detected on receive signals."

Proposed Response *Response Status* **O**

Cl **90** *SC* **99.7** *P* **19** *L* **30** # 48

Anslow, Peter Nortel Networks

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

This is an amendment to 802.3-2008, which will presumably in a later draft include changes to clauses 30 and clause 45.
At some point in the not too distant future, the amendment will then be incorporated into a revision of 802.3. At this point, having subclauses - "Summary of changes to Clause 30" and "Summary of changes to Clause 45" will be difficult to understand. Therefore it would be better to have something like "Summary of TimeSync features in Clause 30" and "Summary of TimeSync features in Clause 45"

SuggestedRemedy

Change the subclause titles to:
"Summary of TimeSync features in Clause 30" and "Summary of TimeSync features in Clause 45"

Proposed Response *Response Status* **O**

Cl **99** *SC* *P* **1** *L* **31** # 38

Ouellette, Michel Huawei

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

... initiation times of certain packets...

SuggestedRemedy

although the PAR states "certain packets", the proposal in D.021 is for "all packets"

In addition, the abstract on pg 2, line 2 states "initiation times of all packets".

We need to be clear and consistent. Is it "certain" or "all".

If "certain", should we provide explanation as to which frame are being timestamped and which frames are not?

Proposed Response *Response Status* **O**

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

Cl **99**
SC

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Cl **99**   *SC*   *P* **4**   *L* **52**   # 49

Anslow, Peter   Nortel Networks

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

This says "This amendment add changes required to provides an accurate indication of ..."
which is not a properly formed sentence - add should be adds and provides should be
provide.

SuggestedRemedy

Change ""This amendment add changes required to provides an accurate..." to
"This amendment adds changes required to provide an accurate..."

Proposed Response   *Response Status*   **O**

Cl **99**   *SC* **99.8**   *P* **19**   *L* **38**   # 33

Marris, Arthur   Cadence

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

Need to add Clause 45 to the 802.3bf draft as a matter of priority as this is probably the
most important part of the standard

SuggestedRemedy

Add following registers to Clause 45

1.1800 and 1.1801
PHY transmit latency upper and lower
(ie 32 bit register containing PHY transmit latency in nanoseconds)

1.1802 and 1.1803
PHY receive latency upper and lower
(ie 32 bit register containing PHY transmit latency in nanoseconds)

In Clause 90 add subclause
90.x MDIO function mapping
The optional MDIO capability described in Clause 45 defines two variables that provide
status information about the PHY. If MDIO is implemented, it shall map MDIO status
variables to PHY status variables as shown in Table 90–x.

Add appropriate table

Proposed Response   *Response Status*   **O**

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

Cl **99**
SC **99.8**

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