Cl **00**   *SC* **0**   *P*   *L*   *#* 327
Thompson, Geoff   GraCaSI

Comment Type **ER**   *Comment Status* **D**

RE: D1.0 Comment #269
The response as it shows up in D2.0 does not satisfactorily addresses my concern
expressed in my D1.0 Comment #269.
The rationale provided says that because this (poor) capitalization convention is used
outside and we have occasion to use such terms then that is the reason we should adopt
such poor conventions within our own standards for all of the terms that we create within
our own standards. We can do better

SuggestedRemedy

Implement my original recommendation as expressed in D1.0 comment #269

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
This comment is a restatement of comment #269 D2.0, which was previously rejected and
has already been re-circulated.
The comment resolution committee has given this comment due consideration during
resolution of D2.0 comments and decided the existing acronym did not raise any concerns
in terms of capitalization. MEC on D2.1 also returned no concerns from IEEE staff editor.

Cl **00**   *SC* **0**   *P*   *L*   *#* 325
Thompson, Geoff   GraCaSI

Comment Type **E**   *Comment Status* **D**

RE: D1.0 Comment #274
The response as it shows up in D2.0 satisfactorily addresses my concern expressed in my
D1.0 Comment #274

SuggestedRemedy

No further action required with respect to this comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **00**   *SC* **0**   *P*   *L*   *#* 324
Thompson, Geoff   GraCaSI

Comment Type **E**   *Comment Status* **D**

RE: D1.0 Comment #273
The response as it shows up in D2.0 satisfactorily addresses my concern expressed in my
D1.0 Comment #273

SuggestedRemedy

No further action required with respect to this comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **00**   *SC* **0**   *P*   *L*   *#* 20284
Diab, Wael   Broadcom

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

Terms such as "outside of scope of IEEE Std 802.3" are often used in reference to the
TimeSync Client. This seems pretty wordy to constantly use, redundant and raises the
question of who's scope it is.

SuggestedRemedy

Either directly in 90.3 or a subsection of 90.3 address the scope of TimeSync Client and
where it is defined directly. Eliminate the out of scope references all together after you do
this in 90.3.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
In 90.3, replace the existing paragraph with the following statement
"Per 90.2, the TimeSync capability provides support for various time synchronization
protocols, including e.g., IEEE Std 1588 or IEEE P802.1AS. The definition of TimeSync
Client, its capabilities and functions is outside the scope of IEEE Std 802.3."

Remove similar statements on page / line
21 / 10
21 / 38
21 / 42

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**

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Cl **00**   *SC* **0**   *P*   *L*   # 322

Thompson, Geoff   GraCaSI

Comment Type **E**   *Comment Status* **D**

RE: D1.0 Comment #270
The response as it shows up in D2.0 satisfactorily addresses my concern expressed in my
D1.0 Comment #270

SuggestedRemedy

No further action required with respect to this comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **00**   *SC* **0**   *P*   *L*   # 318

Marris, Arthur   Cadence

Comment Type **TR**   *Comment Status* **D**

I don't understand why latency registers have been added for WIS, PCS, XAUI and TC.
 * WIS is obsolete.
 * XAUI is arguably obsolete with SFP+ being the 10G module interconnect of choice.
 * TC is too slow to be relevant to 802.1AS.
 * It adds needless complexity calling out the PCS latency separately as the only delay of
interest is the total delay between the MII and MDI. This might as well be reported as a
consolidated value in MMD 1 PMA/PMD.

  Another problem with attempting to include XAUI in this way is that it will make it even
more difficult to deal with SGMII and XFI which are out of scope of 802.3.

  I think the simplest solution is to stick with reporting a consolidated PHY latency in MMD
1 as was done in draft 2.0.

SuggestedRemedy

Please consider reverting the PHY latency register definitions to how they were in draft 2.0.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
Please see comment #208 against D2.0. The comment resolution committee believes that
such replication of registers provides the best possible flexibility for equipment
manufacturers and system designers to accomodate any combination of physical
implementations.

Cl **00**   *SC* **0**   *P*   *L*   # 328

Thompson, Geoff   GraCaSI

Comment Type **TR**   *Comment Status* **D**

RE: D1.0 Comment #275
The response as it shows up in D2.0 does not satisfactorily addresses my concern
expressed in my D1.0 Comment #275.
Clearly the draft has improved in this regard, but i find no max/min requirements within the
standard as there clearly should be. (If there weren't any requirements, then there would be
no need for this standard.) If the issue is that the requirements are only expressed
externally in 802.1AS then that is improper from a layering standpoint and from the
standpoint of layered implementations being fully specified within the layer standard.

SuggestedRemedy

Fully specify the required behavior of the required signalling within this document.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
This comment is a restatement of comment #275 D2.0, which was previously rejected and
has already been re-circulated.
It is not clear what min/max requirements the commenter is precisely looking for. The text
of the standard will not provide a description of the process of selecting min and max
values from the pool of measurement, collecting such measurements or define the number
of measurements which need to be taken. It was also pointed out during the resolution of
comment #275 against D2.0 that in many cases, the min/max values are calculated based
on the hardware model and as such do not have measurement tolerances around them. It
was additionally indicated that min/max values already account for any measurement
tolerances, if they are indeed measured.

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**

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Cl **00**	*SC* **0**	*P*	*L*	# 20279		

Diab, Wael   Broadcom

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

The current terminology for referencing 802.1AS is not correct. Its a hybrid between a draft and a final standard. For a project in process we usually use the designation P802.1AS. Once it is approved it will become IEEE Std 802.1AS-2010 is it were to get approved this year, 2011 if it were to get done next year.

SuggestedRemedy

I would suggest:
- Using the draft terminology for now as we dont know when it will publish so change the references to IEEE P802.1AS
- Add an editor's note towards the beginning of the draft that you will check prior to publication
- Check prior to ratification or when AS publishes to change to the final nomenclature

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Change all reference to "IEEE Std P802.1AS-201X" to "IEEE P802.1AS"
Add an Editorial note prior to 90.1 with the following text "EDITORAL NOTE (to be removed prior to publication): Once IEEE P802.1AS draft is published, update references accordingly"

Cl **00**	*SC* **0**	*P* **14**	*L*	# 315		

Marris, Arthur   Cadence

Comment Type **E** *Comment Status* **D**   *Editing instructions*

Missing editing instructions.

SuggestedRemedy

Insert:
NOTE—The editing instructions contained in this amendment define how to merge the material contained therein into the existing base standard and its amendments to form the comprehensive standard.

The editing instructions are shown in bold italic. Four editing instructions are used: change, delete, insert, and replace. Change is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed by using strikethrough (to remove old material) and underscore (to add new material). Delete removes existing material. Insert adds new material without disturbing the existing material. Insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. Replace is used to make changes in figures or equations by removing the existing figure or equation and replacing it with a new one. Editing instructions, change markings, and this NOTE will not be carried over into future editions because the changes will be incorporated into the base standard.

Also review the preamble to see if there is anything else missing or not compatible with the current style manual.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Current draft was subject to review by the IEEE staff editor as part of the MEC (Mandatory Editorial Coordination) process and no problems were found, in either clarity of the editorial instructions or other aspects of the draft. The Editor is hesitant to introduce changes which would require a repeated MEC.

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**   Page 3 of 8
SC **0**   25/10/2010 08:03:32

Cl **01**   *SC* **1.3**   *P* **15**   *L* **7**   # 326

Thompson, Geoff   GraCaSI

Comment Type **ER**   *Comment Status* **D**

RE: D1.0 Comment #271
The response as it shows up in D2.0 only partially addresses my concern expressed in my D1.0 Comment #271

SuggestedRemedy

Please update the referenced draft version of P802.1AS to D7.5
Add (or move from the front of cl.90) the update upon publication to a footnote to the normative references clause (1.3).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
1. update reference to 802.1AS in 1.3
2. move the editorial note from page 35, line 3 to subclause 1.3

Cl **30**   *SC* **30.12.1.3**   *P* **2**   *L* **1**   # 20231

Frazier, Howard   Broadcom Corporation

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

The Clause 30 attributes for TimeSyncLatency are directly mapped to the values of the PHY transmit latency registers in Clause 45, and explicitly include only the PHY latencies. What if the gRS sublayer TS_SFD_Detect functions involve additional latency? There is no way that a PHY can know how much, if any additional latency is imposed by the gRS sublayer TS_SFD_Detect functions, but it is reasonable to assume that the pervasive management entity has access to this information, and it makes sense to include this additional latency (if any) in the Clause 30 attributes.
In the transmit path, any latency associated with the TS_SFD_Detect_TX function must be subtracted from the PHY delay, while in the receive path, any latency associated with the TS_SFD_Detect_RX function must be added to the PHY delay.

SuggestedRemedy

Add the following sentence to the behavioural definition of aTimeSyncLatencyTXmax:
The value reported in this attribute shall be adjusted to account for any latency associated with the TS_SFD_Detect_TX function by subtracting this latency from the value reported by the PHY.

Also make the corresponding change in 30.12.1.4.

In 30.12.1.5, add the following sentence to the behavioural definition of aTimeSyncLatencyRXmax:
The value reported in this attribute shall be adjusted to account for any latency associated with the TS_SFD_Detect_RX function by adding this latency to the value reported by the PHY.

Also make the corresponding change in 30.12.1.6.

Response   *Response Status* **W**

ACCEPT IN PRINCIPLE.
See 3bf_1009_hajduczenia_4.pdf, 3bf_1009_hajduczenia_5.pdf, and 3bf_1009_hajduczenia_6.pdf for specific changes to Clause 30, 45 and 90.

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 **30**
SC **30.12.1.3**

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Cl **30**   *SC* **30.2.5**   *P* **1**   *L* **21**   # 20219
Frazier, Howard   Broadcom Corporation

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

Subclause 30.2.5 Capabilities is instantiated here for the sake of capturing the change to the containment diagram (Figure 30-3), but I think we also need to add a capabilities table, similar to Table 30-4.

SuggestedRemedy

Insert Table 30-6 TimeSync Capabilities, listing each of the attributes of the oTimeSync managed object class. They should all be defined as "GET" access, and all be made members of a "Support for Time Sync" package.

Response   *Response Status*   **W**
ACCEPT.

Cl **45**   *SC*   *P*   *L*   # 20285
Diab, Wael   Broadcom

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

Do you need any PICs for the newly defined material?

SuggestedRemedy

See Comment

Response   *Response Status*   **W**
ACCEPT IN PRINCIPLE.
No new PICS needed (no shall statements).

Cl **45**   *SC* **2.1.101**   *P* **6**   *L* **3**   # 20214
Zimmerman, George   Solarflare Communica

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

Using 32 bits for the phy latency in nanoseconds seems excessive. No 802.3 PHYs have latency beyond microseconds. Additional latency would be above the PHY layer, in the MAC. 16 bits would allow 65 usec latency.

SuggestedRemedy

Consider reducing latency fields to 16 bits, or justify 32 bits.

Response   *Response Status*   **W**
REJECT.
While it is technically reasonable, this specific register size was included at the request of IEEE 802.1AS TF, during consultations between IEEE P802.3bf and P802.1AS.

Cl **45**   *SC* **2.1.102**   *P* **6**   *L* **24**   # 20215
Zimmerman, George   Solarflare Communica

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

32 bit latency seems excessive for PHYs. see previous comment on TX latency

SuggestedRemedy

Consider 16 bits or justify 32 bits

Response   *Response Status*   **W**
REJECT.
See comment #214.

Cl **45**   *SC* **45.2.1**   *P* **23**   *L* **5**   # 316
Marris, Arthur   Cadence

Comment Type   **E**   *Comment Status*   **D**   *Editing instructions*

Change editing instruction from 'modify' to 'change'

SuggestedRemedy

Change editing instruction from 'modify' to 'change' here and also on pages 24, 26, 28, 30, 32 and anywhere else relevant.

Proposed Response   *Response Status*   **W**
PROPOSED ACCEPT IN PRINCIPLE.
See #315

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 **45**
SC **45.2.1**

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Cl **45**   *SC* **45.2.1.99a**   *P* **23**   *L* **42**   # 319

Anslow, Peter   Ciena

Comment Type **T**   *Comment Status* **D**

in Table 45–65e, Bit 1.1800.0:
"receive path data delay in registers 1.1801 through 1.1804" should be "receive path data
delay in registers 1.1805 through 1.1808"
The equivalent mistake appears in:
Table 45–81a
Table 45–115c
Table 45–114a
Table 45–121a
Table 45–132a

SuggestedRemedy

In the bottom row of Table 45-65e
change "registers 1.1801 through 1.1804" to "registers 1.1805 through 1.1808"
Make an equivalent change in:
Table 45–81a
Table 45–115c
Table 45–114a
Table 45–121a
Table 45–132a

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.
Also change the subclause numbering from 45.2.1.99a, 45.2.1.99b, 45.2.1.99c to
45.2.1.100, 45.2.1.101, 45.2.1.102, respectively. There is the same issue for:
45.2.1.99a
45.2.1.99b
45.2.1.99c
45.2.2.19a
45.2.2.19b
45.2.2.19c
45.2.3.39a
45.2.3.39b
45.2.3.39c
45.2.4.9a
45.2.4.9b
45.2.4.9c
45.2.5.9a
45.2.5.9b
45.2.5.9c
45.2.6.13a
Since we are adding subclauses at the end of the given subclauses in 802.3 base text,
there is no need to use the a/b/c letters at the end of the subclause numbers.
45.2.6.13b
45.2.6.13c

Cl **89**   *SC*   *P*   *L*   # 20278

Diab, Wael   Broadcom

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

Clause 89 is being defined in P802.3bg and is not being touched in P802.3bf. If P802.3bf
were to be complete after P802.3bg (similar to what happening with az and ba for
instance), then the statement there would conflict with the material in P802.3bg. Since you
are not touching this clause, please delete the pages

SuggestedRemedy

Please delete Clause 89 from this draft (pages 7 and 8)

Response   *Response Status* **C**

ACCEPT.

Cl **90**   *SC* **90.4.1.1**   *P* **36**   *L* **12**   # 323

Thompson, Geoff   GraCaSI

Comment Type **E**   *Comment Status* **D**

RE: D1.0 Comment #272
The response as it shows up in D2.0 satisfactorily addresses my concern expressed in my
D1.0 Comment #272

SuggestedRemedy

No further action required with respect to this comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **90**   *SC* **90.4.2.3.1**   *P* **24**   *L* **3**   # 20243

Ganga, Ilango   Intel

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

As per semantics of the primitives TS_RX.indication(SFD) and TX_TX.indication (SFD), the
SFD parameter can take either of the following two values: DETECTED or undefined.

What is the reason for the parameter to take a value of undefined. Undefined could also
mean it could send DETECTED! So define the vlaue when the SFD is not detected. One
possibility is the parameter could take a value of "NOT DETECTED"

SuggestedRemedy

As per comment

Response   *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #230 for specific changes.

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 **90.4.2.3.1**

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Cl **90**   *SC* **90.6**   *P* **13**   *L* **30**   # 20280
Diab, Wael   Broadcom

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

I believe the intent of this section is to point the reader to Clause 30 for management. The current structure suggests that this is providing some sort of definition for the objects and classes, furthermore the references are one more place that could go out of sync with C30 for maintenance (the information is redundant).

Same is true for 90.7

SuggestedRemedy

Suggest combining 90.6 and 90.7 into one section called "Overview of Managment Features". Provide some infromative text on what things are defined in the clauses like managed objects, registers and classes without reproducing the entire lists (a good example is all the registers listed in C45) and simply point to C30 and C45.

Response   *Response Status* **C**

ACCEPT IN PRINCIPLE.
Merge 90.6 and 90.7, keeping references in both merged blocks of text.

Cl **90**   *SC* **90.6**   *P* **39**   *L* **29**   # 321
Giannakopoulos, Dimitrios   Applied Micro

Comment Type   **E**   *Comment Status* **D**

Managment should be Management

SuggestedRemedy

Replace Managment with Management

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **90**   *SC* **90.6**   *P* **39**   *L* **44**   # 320
Giannakopoulos, Dimitrios   Applied Micro

Comment Type   **T**   *Comment Status* **D**

Text "value of the series of transmit path data delay registers" is in description of receive path.

SuggestedRemedy

Replace "value of the series of transmit path data delay registers" with "value of the series of receive path data delay registers"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.
Scrub the draft for any potential locations of the same problem.

Cl **90**   *SC* **90.8**   *P* **14**   *L* **48**   # 20227
Frazier, Howard   Broadcom Corporation

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

The PHY latency is reported with nanosecond granularity (per 45.2.1.101 and 45.2.1.102), but there are no bounds on either the precision or the accuracy of the measurement. It is hard to see how the project objective ("...provide an accurate indication of the transmission and reception initiation times of
all packets...") can be met without such bounds.

SuggestedRemedy

Replace the last sentence of 90.8 with the following:
The PHY latency measurements shall be accurate to within one nanosecond.

Response   *Response Status* **U**

ACCEPT IN PRINCIPLE.
See comment #264.

Cl **90**   *SC* **90.8**   *P* **26**   *L* **23**   # 20275
Thompson, Geoff   GraCaSI

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

It may be true that: The method used for the PHY latency measurement and the the process of selecting the minimum and maximum PHY latency values are outside the scope of this specification.
It is NOT true that the tolerances on those values are not in scope. Without required and standardized tolerances on measured vs. actual values, there can be no assurance of multi-vendor interoperability.

SuggestedRemedy

Establish and document the required accuracy on maximum and minimum latency measurements that is needed to support the higher level interaction functions in 802.1AS and include them in this sub clause.
(Since you seem to be gathering a max and min count for each as your data, you might be better off to define latency in count units rather than ns and then define the tolerances on the clock driving the counter.)

Response   *Response Status* **W**

REJECT.
The way the measured values are specified is using the max/min range, which already accounts for all necessary measurement tolerances.

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 **90.8**

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Cl **93**	*SC* **93.4.3.1.1**	*P* **37**	*L* **28**	# 317

Marris, Arthur   Cadence

Comment Type **TR**   *Comment Status* **D**

This is a pile on to comment 243 against draft 2.0. Also see the agreed resolution to comment 31 against draft 0.21 which was never implemented:
http://www.ieee802.org/3/bf/comments/Files/D0.21/3bf_1003_comments_final.pdf

"The SFD parameter can take only one possible value, DETECTED." does not make sense.

SuggestedRemedy

Change to:
"The SFD parameter takes the value of either DETECTED or NOT DETECTED."

make the same change in 90.4.3.2.1

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
Please note that comment #243 was AIP in D2.0. Additionally, see the resolution to comment #230 against D2.0.
We need to settle on one definition here once and for all, and it was the understanding of the comment resolution committee that the primitive is only generated when the SFD is detected. Otherwise, nothing is generated. In that case, we do not need to generate the primitive to indicate the lack of SFD.

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 **93**   Page 8 of 8
SC **93.4.3.1.1**   25/10/2010 08:03:32