---

*Cl* **00**	*SC* **0**	*P*	*L*	# 246
Ganga, Ilango	Intel

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

Is there any compliance requirements for P802.3bf. I do not see any "shall" statement in any of the Clause specifications.

*SuggestedRemedy*

Include compliance requirements, appropriate shall statements and corresponding PICS to the document.

*Response*	*Response Status*  **W**

ACCEPT IN PRINCIPLE.
Now we do - we will add PICS. See #264 for more details.

---

*Cl* **00**	*SC* **0**	*P*	*L*	# 279
Diab, Wael	Broadcom

*Comment Type*  **ER**	*Comment Status*  **A**	*802.1AS, mass motion*

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*  **W**

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"

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*Cl* **00**	*SC* **0**	*P*	*L*	# 284
Diab, Wael	Broadcom

*Comment Type*  **TR**	*Comment Status*  **A**	*90.3*

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*  **W**

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

---

*Cl* **00**	*SC* **0**	*P* **13**	*L* **1**	# 235
Ganga, Ilango	Intel

*Comment Type*  **ER**	*Comment Status*  **A**	*mass motion*

I see new title format (in bold) at the start of existing Clauses. E.g.
Changes to ANSI/IEEE Std. IEEE 802.3-2008, Clause 30
Changes to ANSI/IEEE Std. IEEE 802.3-2008, Clause 45

Is this a new format adopted/docuemnted in the style manual for IEEE amendments. I do not see this format used in the recently published amendments. Please clarify the new style.

*SuggestedRemedy*

As per comment

*Response*	*Response Status*  **W**

ACCEPT IN PRINCIPLE.
Remove "Changes to ANSI/IEEE Std. IEEE 802.3-2008, Clause 30" on page 13 and "Changes to ANSI/IEEE Std. IEEE 802.3-2008, Clause 45" on page 17

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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* **30** | *SC* **30.12.1** | *P* **13** | *L* **23** | # 237 |
|---|---|---|---|---|

Ganga, Ilango                                    Intel

*Comment Type* **ER**      *Comment Status* **A**                        *30.12*

Add missing Editing instructions for new subclauses 30.12.1 to 30.12.1.6

*SuggestedRemedy*

*Response*                    *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #300

---

| *Cl* **30** | *SC* **30.12.1.3** | *P* **2** | *L* **1** | # 231 |
|---|---|---|---|---|

Frazier, Howard                              Broadcom Corporation

*Comment Type* **TR**      *Comment Status* **A**                *registers 30.12.1.3*

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.

---

| *Cl* **30** | *SC* **30.2.2.1** | *P* **13** | *L* **16** | # 236 |
|---|---|---|---|---|

Ganga, Ilango                                    Intel

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

insert in proper location is an ambiguous instruction. Change Editing instruction as follows:

Insert new managed object oTimeSync in 30.2.2.1 to the list in alphabetical, as follows:

*SuggestedRemedy*

As per comment

*Response*                    *Response Status* **W**

ACCEPT IN PRINCIPLE.
Change to "Insert new managed object oTimeSync (with the following definition) in 30.2.2.1
in alphabetic order:"

---

| *Cl* **30** | *SC* **30.2.5** | *P* **1** | *L* **21** | # 219 |
|---|---|---|---|---|

Frazier, Howard                              Broadcom Corporation

*Comment Type* **TR**      *Comment Status* **A**              *C30, capability table*

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* **30** | *SC* **30.2.5** | *P* **13** | *L* **17** | # 241 |
|---|---|---|---|---|

Ganga, Ilango                                    Intel

*Comment Type* **TR**      *Comment Status* **A**              *C30, capability table*

Editing instructions and changes missing in 30.2.5 Capabilities.

Add oTimeSync to Table 30-1 capabilities

*SuggestedRemedy*

As per comment

*Response*                    *Response Status* **W**

ACCEPT IN PRINCIPLE.
See comment #219 for a new capability Table. See comment #299 and #300 for editing
instructions.

---

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**                    Page 2 of 6
*SC*  **30.2.5**              04/10/2010  19:14:16

*Cl* **45**      *SC*                    *P*          *L*              #  285
Diab, Wael                        Broadcom

*Comment Type*    **TR**       *Comment Status*  **A**                        *PICS*
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**          #  214
Zimmerman, George                 Solarflare Communica

*Comment Type*    **TR**       *Comment Status*  **R**                 *Register size*
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**         #  215
Zimmerman, George                 Solarflare Communica

*Comment Type*    **TR**       *Comment Status*  **R**                 *Register size*
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* **5**      *L* **15**         #  234
Ganga, Ilango                     Intel

*Comment Type*    **ER**       *Comment Status*  **A**              *802.3ba, mass motion*
IEEE Std 802.3ba is already published. Change the Editing instruction as follows:

Change Table 45–3 (As modified by IEEE Std 802.3ba-2010) as follows:

Also change the next Editing instruction as follows:

Insert 45.2.1.100, 45.2.1.101, 45.2.1.102 after 45.2.1.99 (As modified by IEEE Std 802.3ba-
2010)

Make similar changes to Editing instructions as appropriate throughout the document.

*SuggestedRemedy*
As per comment

*Response*              *Response Status*  **W**
ACCEPT.
See also comment #250.

*Cl* **89**      *SC*                    *P*          *L*              #  278
Diab, Wael                        Broadcom

*Comment Type*    **ER**       *Comment Status*  **A**              *Clause 89, mass motion*
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*  **W**
ACCEPT.

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* **89**
*SC*

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*Cl* **90**      *SC* **90.2**                *P* **21**        *L* **25**        # 238
Ganga, Ilango                          Intel

*Comment Type*  **ER**      *Comment Status*  **A**                *TS or TSSI*

In 90.1 and in the Abstract "Time Synchronization Service Interface is referred to as Time Synchronization Service Interface(TSSI), however in 90.2 and later the interface is referred as Time Synchronization (TS) Service Interface, and TS service interface

Use a consistent notation throughout the document.

*SuggestedRemedy*

As per comment

*Response*                *Response Status*   **W**

ACCEPT IN PRINCIPLE.
See comment #253 for specific list of changes.

---

*Cl* **90**      *SC* **90.4.1**              *P* **22**        *L* **1**         # 242
Ganga, Ilango                          Intel

*Comment Type*  **TR**      *Comment Status*  **A**                *90.4, 90.5*

Does the xMII include the interfaces in the recently approved IEEE Std 802.3ba amendment, if so include the following to the interface in this paragraph: "40 Gigabit and 100 Gigabit Media Independent Interface (XLGMII and CGMII, see Clause 81)". Please clarify

If this interface is implied in this xMII definition then also include this in the gRS description in 90.5.

*SuggestedRemedy*

As per comment

*Response*                *Response Status*   **W**

ACCEPT IN PRINCIPLE.
See comment #296.

---

*Cl* **90**      *SC* **90.4.2.3.1**          *P* **24**        *L* **3**         # 243
Ganga, Ilango                          Intel

*Comment Type*  **TR**      *Comment Status*  **A**                *SFD detect*

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.

---

*Cl* **90**      *SC* **90.5**                *P* **24**        *L* **24**        # 244
Ganga, Ilango                          Intel

*Comment Type*  **TR**      *Comment Status*  **A**                *90.5*

Does the definition for gRS include the 40 Gb/s and 100 Gb/s operation specified in Clause 81. If so, clarify or describe the inclusion/exclusion in in 90.5.

*SuggestedRemedy*

As per comment

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

ACCEPT IN PRINCIPLE.
See comment #296 for specific changes to 90.5.

---

*Cl* **90**      *SC* **90.5.2**              *P* **25**        *L* **23**        # 239
Ganga, Ilango                          Intel

*Comment Type*  **ER**      *Comment Status*  **A**                *Figure 90-2*

Figure 90-2: Currently the dotted lines for TS service interface and PLS service interface appear to merge in the figure. Provide enough separation between these two service interfaces or show the service interface at two different levels.

*SuggestedRemedy*

In Figure 90-2, move the dotted line for TS service interface further to the left of PLS service interface.

*Response*                *Response Status*   **W**

ACCEPT.

---

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**

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*Cl* **90**        *SC* **90.6**                    *P* **13**        *L* **30**        # 280
Diab, Wael                              Broadcom

*Comment Type* **ER**        *Comment Status* **A**                    *90.6 & 90.7*

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* **W**

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

---

*Cl* **90**        *SC* **90.7**                    *P* **26**        *L* **4**        # 245
Ganga, Ilango                           Intel

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

Include the MDIO control variable, PMA/PMD control variable bits etc., in table 90-1 in 90.7 (See example tables in PMA/PMD clauses in base standard e.g. see Clause 88).

*SuggestedRemedy*

*Response*                *Response Status* **W**

REJECT.
The TF believes we do not require any control registers - we only need capability indication, which is already covered in C45.

---

*Cl* **90**        *SC* **90.8**                    *P* **14**        *L* **48**        # 227
Frazier, Howard                         Broadcom Corporation

*Comment Type* **TR**        *Comment Status* **A**                    *Open, precision*

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**        # 275
Thompson, Geoff                         GraCaSI

*Comment Type* **TR**        *Comment Status* **R**                    *Open, latency precision*

It may be true that: The method used for the PHY latency measurement and the 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**                  Page 5 of 6
*SC* **90.8**                 04/10/2010  19:14:17

*Cl* **99**       *SC*                      *P* **2**        *L* **2**           # 233

Ganga, Ilango                              Intel

*Comment Type*   **ER**        *Comment Status*  **A**                    ssing acronyms, mass motion

Expand the acronyms in the abstract.  Abstracts may be referenced in various bibliographic
literature and hence expand the acronyms.

Start Frame Delimiter (SFD)
Medium Dependent Interface (MDI)
Physical Layer devices (PHY)

*SuggestedRemedy*

As per comment.

*Response*                    *Response Status*   **W**

ACCEPT.
Implement together with #221

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl*  **99**          Page 6 of 6
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  U/unsatisfied  Z/withdrawn          *SC*             04/10/2010  19:14:17
SORT ORDER:   Clause, Subclause, page, line