---

*Cl* **00**  *SC* **0**  *P*  *L*  # 504
Wienckowski, Natalie                  General Motors

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

Is there supposed to be a period after heach item in a Description in a table?  Some tables always use a period (Table 45–163e) , some mix and match (Table 45–163f), some never use a period (Table 45–163c).

*SuggestedRemedy*

Be consistent in the use of periods througout the Tables in the document.

*Proposed Response*  *Response Status* **O**

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*Cl* **30**  *SC* **30**  *P* **23**  *L* **1**  # 332
Hajduczenia, Marek                  Bright House Network

*Comment Type* **TR**  *Comment Status* **D**                  *Clause 30*

Missing content in Clause 30

*SuggestedRemedy*

use hajduczenia_3bp_01_0515.pdf

*Proposed Response*  *Response Status* **O**

---

*Cl* **30**  *SC* **30**  *P* **23**  *L* **10**  # 353
Lo, William                  Marvell Semiconducto

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

Management variables missing

*SuggestedRemedy*

I'm not an expert on this, but someone who is needs to add any that are relevant to 1000BASE-T1.

*Proposed Response*  *Response Status* **O**

---

*Cl* **34**  *SC* **34.1.5a**  *P* **25**  *L* **49**  # 446
Wienckowski, Natalie                  General Motors

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

Incorrect grammar.

*SuggestedRemedy*

Replace: The use of Clause 98 Auto-Negotiation is optional for 1000BASE-T1 PHY.

With:  The use of Clause 98 Auto-Negotiation is optional for a 1000BASE-T1 PHY.

*Proposed Response*  *Response Status* **O**

---

*Cl* **35**  *SC* **35.1.1**  *P* **27**  *L* **21**  # 354
Lo, William                  Marvell Semiconducto

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

1000BASE-T1 uses Clause 45 framing and register space

*SuggestedRemedy*

Add following sentence after item d)
1000BASE-T1 uses management interface as specified in Clause 45.

*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COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **35**
*SC* **35.1.1**

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5/9/2015  10:25:19 AM

*Cl* **4.2.5**      *SC* **97.4.2.5.9**            *P* **93**          *L* **7**          # 342

Rojansky, Amiel                                    Cadence

*Comment Type* **T**        *Comment Status* **D**                    *discussion needed*

"Upon entering the SEND_DATA state, PHY Control stops the maxwait_timer, starts the minwait_timer and enables frame transmission to the link partner by asserting tx_mode=SEND_N."

This statement contradicts the state machine in Figure 97–22—PHY Control state diagram on page 97. According to the state machine the maxwait_timer is not stopped on state SEND DATA.

*SuggestedRemedy*

Add to Figure 97–22—PHY Control state diagram on page 97, in state SEND DATA: "stop maxwait_timer"

OR

Remove the text:
"stops the maxwait_timer"
from the statement in section 97.4.2.5.9 on page 93 line 7.
The second option of the Remedy is valid if the original intention is that the LINK_MONITOR state machinge will go from LINK_UP to LINK_DOWN every time that the PCS_status or loc_rcvr_status are NOT_OK

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2**              *P* **29**          *L* **32**          # 536

Tu, Mike                                          Broadcom

*Comment Type* **TR**        *Comment Status* **D**                *c with 802.3bw needed, #536*

MDIO registers for 1000BASE-T1 should be compatible and consolidated with 100BASE-T1 registers.

*SuggestedRemedy*

1. Add 1000BASE-T1 to register 1.7, 1.11, 1.18.
2. Redefine register 1.2304 and 3.2304.

See tu_3bp_01_0515.pdf for details.

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130a**         *P* **29**          *L* **39**          # 555

McClellan, Brett                                   Marvell

*Comment Type* **T**        *Comment Status* **D**                    *#536*

need to define a bit for Transmit Disable

*SuggestedRemedy*

add new row:
"1.2304.10 Transmit Disable 1 = Transmit Disable 0 = Normal operation R/W"
on page 30 line 21 add new paragraph
"45.2.1.130a.3 BASE-T1 PMD transmit disable (1.2304.10)
When bit 1.2304.10 is set to a one, the PMD shall disable output on the transmit path.
When bit 1.2304.10 is set to a zero, the PMD shall enable output on the transmit path."

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130a**         *P* **29**          *L* **40**          # 401

Regev, Alon                                        Ixia

*Comment Type* **T**        *Comment Status* **D**                    *#536*

"Master/Slave" should be "MASTER-SLAVE"

*SuggestedRemedy*

change "Master/Slave" to "MASTER-SLAVE" in all locations in the draft.

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130a**         *P* **29**          *L* **40**          # 496

Wienckowski, Natalie                               General Motors

*Comment Type* **T**        *Comment Status* **D**                    *#536*

Table 45–98a:

Use 802.3bw registers when possible.

*SuggestedRemedy*

Instead of 1.2304.3:0 for PHY Type use 1.7.5:0, 111100

Instead of 1.2304.4 for Master/Slave use 1.2100.14

*Proposed Response*        *Response Status* **O**

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general      *Cl* **45**                Page 2 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn      *SC* **45.2.1.130a**        5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **45**        *SC* **45.2.1.130a.1**            *P* **29**        *L* **50**            # 492

Wienckowski, Natalie                     General Motors

*Comment Type* **T**        *Comment Status* **D**                    *#536*

Also 5.2.2.50a.1 on Page 34, line 30

The following Section names are the same except for the appended register number.  It is not clear which is the PMA/PMD and which is the PCS by the titles.
45.2.1.130a.1 BASE-T1 Reset (1.2304.15)
45.2.2.50a.1 BASE-T1 Reset (3.2304.15)

*SuggestedRemedy*

Replace:  45.2.1.130a.1 BASE-T1 Reset (1.2304.15)

With:  45.2.1.130a.1 BASE-T1 PMA/PMD Reset (1.2304.15)

AND

Replace:  45.2.2.50a.1 BASE-T1 Reset (3.2304.15)

With:  45.2.2.50a.1 BASE-T1 PCS Reset (3.2304.15)

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130c**            *P* **32**        *L* **11**            # 447

Wienckowski, Natalie                     General Motors

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

Table 45–98c

Incorrect capitalization.

Ability is capitalized in one spot out of four in the table.

*SuggestedRemedy*

Replace:  0 = EEE Ability not advertised to link partner

With:  0 = EEE ability not advertised to link partner

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130c**            *P* **32**        *L* **7**            # 355

Lo, William                     Marvell Semiconducto

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

Missing bits 3:2 in table 45-98c

*SuggestedRemedy*

Add 1.2306.3:2    Reserved    Set to 0s      R/W

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130c.2**            *P* **32**        *L* **20**            # 405

Regev, Alon                     Ixia

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

"OAM capability.When" is lacking a space after the period

*SuggestedRemedy*

change "OAM capability.When"
to "OAM capability. When"

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.1.130c.2**            *P* **32**        *L* **25**            # 448

Wienckowski, Natalie                     General Motors

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

Missing space after period.

*SuggestedRemedy*

Replace:  ... advertising OAM capability.When set...

With:  ...advertising OAM capability. When set...

*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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **45**
*SC* **45.2.1.130c.2**

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5/9/2015 10:25:20 AM

*Cl* **45**        *SC* **45.2.2**              *P* **34**        *L* **5**        # 356
Lo, William                              Marvell Semiconducto

*Comment Type*  **ER**        *Comment Status*  **D**
    Typo on registers in table 45-119

*SuggestedRemedy*
    3.3212 should be 3.2312
    3.3217 should be 3.2317

*Proposed Response*        *Response Status*  **O**

---

*Cl* **45**        *SC* **45.2.2.50a**          *P* **34**        *L* **15**        # 450
Wienckowski, Natalie                      General Motors

*Comment Type*  **E**        *Comment Status*  **D**                        *#536*
    This specifically a PCS register.

*SuggestedRemedy*
    Replace:  The assignment of bits in the BASE-T1 control register is shown in Table
    45–163a.

    With:  The assignment of bits in the BASE-T1 PCS control register is shown in Table
    45–163a.

*Proposed Response*        *Response Status*  **O**

---

*Cl* **45**        *SC* **45.2.2.50a**          *P* **34**        *L* **16**        # 449
Wienckowski, Natalie                      General Motors

*Comment Type*  **E**        *Comment Status*  **D**                        *#536*
    There is only one PCS control register.

*SuggestedRemedy*
    Replace:  ...each bit of the PCS control 1 register should...

    With:  ...each bit of the PCS control register should...

*Proposed Response*        *Response Status*  **O**

---

*Cl* **45**        *SC* **45.2.2.50a**          *P* **34**        *L* **19**        # 451
Wienckowski, Natalie                      General Motors

*Comment Type*  **E**        *Comment Status*  **D**                        *#536*
    Missing PCS in Table 45-163a name.

*SuggestedRemedy*
    Replace:  Table 45–163a—BASE-T1 Control Register

    With:  Table 45–163a—BASE-T1 PCS Control Register

*Proposed Response*        *Response Status*  **O**

---

*Cl* **45**        *SC* **45.2.2.50a**          *P* **34**        *L* **23**        # 452
Wienckowski, Natalie                      General Motors

*Comment Type*  **E**        *Comment Status*  **D**                        *#536*
    Copy/paste error.  This is a PCS register, not a PMA/PMD register.

*SuggestedRemedy*
    Replace:  1 = PMA/PMD reset

    With:  1 = PCS reset

*Proposed Response*        *Response Status*  **O**

---

*Cl* **45**        *SC* **45.2.2.50a**          *P* **34**        *L* **25**        # 497
Wienckowski, Natalie                      General Motors

*Comment Type*  **T**        *Comment Status*  **D**                        *#536*
    Use already defined bit to define loopback.  Consistent with 100BASE-T1 and other
    existing protocols.

*SuggestedRemedy*
    Instead of defining 3.2304.14 to enable loopback, use 3.0.14.

*Proposed Response*        *Response Status*  **O**

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general         *Cl*  **45**                    Page 4 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn      *SC*  **45.2.2.50a**              5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **45**        *SC* **45.2.2.50a.1**            *P* **34**        *L* **32**        # 493

Wienckowski, Natalie                     General Motors

*Comment Type* **E**        *Comment Status* **D**                    *#536*

Copy paste error througout the paragraph.  1.2304.15 should have been replaced with 3.2304.15 throughout the paragraph.

*SuggestedRemedy*

Replace: 3 instances of 1.2304.15

With: 3.2304.15 in this paragraph.

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.2.50a.2**            *P* **34**        *L* **42**        # 351

Rojansky, Amiel                          Cadence

*Comment Type* **E**        *Comment Status* **D**                    *#536*

"45.2.2.50a.2 BASE-T1 Low power (3.2304.14)
The PCS shall be placed in a loopback mode of operation when bit 3.2304.14 is set to a one."

It is a typo. It should be loop back mode and not low power mode, as defined in  Table 45–163a.

*SuggestedRemedy*

Fix 45.2.2.50a.2 on page 34 line 42 to:

"45.2.2.50a.2 BASE-T1 Loopback (3.2304.14"

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.2.50a.2**            *P* **34**        *L* **42**        # 357

Lo, William                              Marvell Semiconducto

*Comment Type* **ER**        *Comment Status* **D**                    *#536*

Title mislabelled

*SuggestedRemedy*

Change "Low power" to "Loopback"

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.2.50a.2**            *P* **34**        *L* **43**        # 494

Wienckowski, Natalie                     General Motors

*Comment Type* **E**        *Comment Status* **D**                    *#536*

Copy paste error in title

*SuggestedRemedy*

Replace:  BASE-T1 Low power (3.2304.14)

With:  BASE-T1 Loopback (3.2304.14)

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.2.50b**            *P* **34**        *L* **51**        # 495

Wienckowski, Natalie                     General Motors

*Comment Type* **E**        *Comment Status* **D**                    *#536*

Incomplete register name.

AND

Inconsistent capitalization of "status".

*SuggestedRemedy*

Correct the register name and be consistent in capitalizing "status" throughout the paragraph.

Replace:  The assignment of bits in the BASE-T1 Status 1 register is shown in Table 45–163b. All the bits in the PCS status 1 register are read only; a write to the PCS status 1 register shall have no effect.

With:  The assignment of bits in the BASE-T1 PCS Status 1 register is shown in Table 45–163b. All the bits in the PCS Status 1 register are read only; a write to the PCS Status 1 register shall have no effect.

OR With:  With:  The assignment of bits in the BASE-T1 PCS status 1 register is shown in Table 45–163b. All the bits in the PCS status 1 register are read only; a write to the PCS status 1 register shall have no effect.

*Proposed Response*        *Response Status* **O**

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general        *Cl* **45**        Page 5 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn        *SC* **45.2.2.50b**        5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **45**        *SC* **45.2.2.50b**         *P* **35**         *L* **8**          # 498
Wienckowski, Natalie                    General Motors

*Comment Type*  **T**        *Comment Status*  **D**
Copy/paste error

*SuggestedRemedy*
In Rx LPI received row

Replace:  1 = Tx PCS has received LPI

With:  1 = Rx PCS has received LPI

*Proposed Response*        *Response Status*  **O**


*Cl* **45**        *SC* **45.2.2.50b.5**         *P* **35**         *L* **48**          # 358
Lo, William                    Marvell Semiconducto

*Comment Type*  **TR**        *Comment Status*  **D**
Incorrect register references

*SuggestedRemedy*
Change 3.1.7 to 3.2305.7  (2 instances)

*Proposed Response*        *Response Status*  **O**


*Cl* **45**        *SC* **45.2.2.50c.1**         *P* **36**         *L* **35**          # 499
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**        *Comment Status*  **D**
Missing period at the end of the sentence.

*SuggestedRemedy*
Add the missing period after "defined in 97.3.7.1".

*Proposed Response*        *Response Status*  **O**


*Cl* **45**        *SC* **45.2.2.50c.2**         *P* **36**         *L* **39**          # 500
Wienckowski, Natalie                    General Motors

*Comment Type*  **TR**        *Comment Status*  **D**
The bit reports both a one and a zero when "BER of > 4 x 10-4"

*SuggestedRemedy*
Replace:  When read as a one, bit 3.2306.9 PCS receiver is detecting a BER of > 4 x 10-4.
When read as a zero, bit 3.32.1 indicates that the receiver is detecting a BER of > 4 x 10-4.

With:  When read as a one, bit 3.2306.9 PCS receiver is detecting a BER of > 4 x 10-4.
When read as a zero, bit 3.32.1 indicates that the receiver is detecting a BER of < 4 x 10-4.

I think I changed the correct > to a <.

*Proposed Response*        *Response Status*  **O**


*Cl* **45**        *SC* **45.2.2.50d**         *P* **37**         *L* **21**          # 544
McClellan, Brett                    Marvell

*Comment Type*  **E**        *Comment Status*  **D**        *discussion needed*
change 'atomically' to 'automatically'  also on line 28

*SuggestedRemedy*
change 'atomically' to 'automatically'  also on line 28 and page 39 line 25

*Proposed Response*        *Response Status*  **O**


*Cl* **45**        *SC* **45.2.2.50d**         *P* **37**         *L* **47**          # 501
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**        *Comment Status*  **D**
Incorrect wording.

Correct also in Table 45-163f, page 30, line 34.

*SuggestedRemedy*
Replace:  01 = LPI refresh insufficient for maintain PHY SNR.

With:  01 = LPI refresh insufficient to maintain PHY SNR.

*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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl*  **45**
*SC*  **45.2.2.50d**

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5/9/2015  10:25:20 AM

*Cl* **45**      *SC* **45.2.2.50d.7**       *P* **38**      *L* **37**      # 502
Wienckowski, Natalie                 General Motors

*Comment Type* **E**      *Comment Status* **D**
Confusing wording.

*SuggestedRemedy*
Change:  This bit is set by the PHY to for the link partner to loopback.

To:  ?  I'm not sure what this sentence is trying to say so I can't suggest a wording.  Maybe just remove the "to".

*Proposed Response*      *Response Status* **O**

---

*Cl* **45**      *SC* **45.2.2.50d.7**       *P* **38**      *L* **38**      # 359
Lo, William                 Marvell Semiconducto

*Comment Type* **E**      *Comment Status* **D**
Rephrase sentence to make more clear.

*SuggestedRemedy*
Delete " in 3.2308.3".

*Proposed Response*      *Response Status* **O**

---

*Cl* **45**      *SC* **45.2.2.50f**       *P* **39**      *L* **23**      # 503
Wienckowski, Natalie                 General Motors

*Comment Type* **E**      *Comment Status* **D**
Incorrect subject/verb agreement.  There is only one register that is being read.

*SuggestedRemedy*
Replace: This bit shall self clear when registers 3.2317 is read.

With:  This bit shall self clear when register 3.2317 is read.

*Proposed Response*      *Response Status* **O**

---

*Cl* **45**      *SC* **45.2.7.14a.1**       *P* **41**      *L* **26**      # 360
Lo, William                 Marvell Semiconducto

*Comment Type* **E**      *Comment Status* **D**                 #360
Change should to shall

*SuggestedRemedy*
Change should to shall

*Proposed Response*      *Response Status* **O**

---

*Cl* **45**      *SC* **45.2.7.14a.1**       *P* **41**      *L* **26**      # 505
Wienckowski, Natalie                 General Motors

*Comment Type* **TR**      *Comment Status* **D**                 #360
Incorrect usage of "should".

*SuggestedRemedy*
Replace:  All other register bits should be ignored.

With:  All other register bits shall be ignored.

This is not an option, it is required.

*Proposed Response*      *Response Status* **O**

---

*Cl* **45**      *SC* **45.2.7.14a.2**       *P* **41**      *L* **34**      # 506
Wienckowski, Natalie                 General Motors

*Comment Type* **ER**      *Comment Status* **D**
Missing conjunction. Also, Master/Slave is a single bit, not multiple bits.

*SuggestedRemedy*
Replace:  ...then PHY type bits 1.2304.3:0 Master/Slave bits 1.2304.4 shall...

With:  ...then PHY type bits 1.2304.3:0 and Master/Slave bit 1.2304.4 shall...

*Proposed Response*      *Response Status* **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **45**          Page 7 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **45.2.7.14a.2**          5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

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| *Cl* **45** | *SC* **45.2.7.14a.2** | *P* **41** | *L* **36** | # 507 |
|---|---|---|---|---|

Wienckowski, Natalie                    General Motors

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

Incorrect subject/verb agreement.

*SuggestedRemedy*

Replace:  ...then bits 1.2304.3:0 and 1.2304.4 determines the link configuration...

With: ...then bits 1.2304.3:0 and 1.2304.4 determine the link configuration...

*Proposed Response*          *Response Status* **O**

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| *Cl* **45** | *SC* **45.2.7.14b** | *P* **42** | *L* **21** | # 361 |
|---|---|---|---|---|

Lo, William                    Marvell Semiconducto

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

Incorrect latch state

*SuggestedRemedy*

Bit 2 should be RO, LL

*Proposed Response*          *Response Status* **O**

---

| *Cl* **45** | *SC* **45.2.7.14b** | *P* **42** | *L* **21** | # 556 |
|---|---|---|---|---|

McClellan, Brett                    Marvell

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

change link status from LH to LL

*SuggestedRemedy*

change LH to LL

*Proposed Response*          *Response Status* **O**

---

| *Cl* **45** | *SC* **45.2.7.14b.6** | *P* **43** | *L* **21** | # 509 |
|---|---|---|---|---|

Wienckowski, Natalie                    General Motors

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

Wording improvement

*SuggestedRemedy*

Replace:  This bit shall be reset to zero if the link partner is not Auto-Negotiation able.

With:  This bit shall be reset to zero if the link partner is not capable of Auto-Negotiation.

*Proposed Response*          *Response Status* **O**

---

| *Cl* **45** | *SC* **45.2.7.14c** | *P* **43** | *L* **40** | # 362 |
|---|---|---|---|---|

Lo, William                    Marvell Semiconducto

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

7.515 and 7.516 is always used

*SuggestedRemedy*

Delete "if user," from the sentence

*Proposed Response*          *Response Status* **O**

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| *Cl* **45** | *SC* **45.2.7.14d** | *P* **44** | *L* **15** | # 363 |
|---|---|---|---|---|

Lo, William                    Marvell Semiconducto

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

Missing BASE-T1 from Table 45-211d heading
Same issue in Table 45-211f (page 45)

*SuggestedRemedy*

Change heading to
BASE-T1 AN LP Base Page ability register bit definitions (page 44, line 15)

BASE-T1 AN LP NEXT PAGE ability register bit definitions (page 45, line 1)

*Proposed Response*          *Response Status* **O**

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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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **45**
*SC* **45.2.7.14d**

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*Cl* **45**        *SC* **45.2.7.14e**              *P* **44**        *L* **1**          # 510
Wienckowski, Natalie                        General Motors

*Comment Type* **ER**        *Comment Status* **D**
Table 45-211c is out of place and very confusing as it is in the middle of another register description.

*SuggestedRemedy*
Move Table 45-211c to page 43 at the end of section 45.2.7.14c.

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.7.14e**              *P* **44**        *L* **15**          # 511
Wienckowski, Natalie                        General Motors

*Comment Type* **ER**        *Comment Status* **D**
Table 45-211d is out of place and very confusing as it is in the middle of another register description.

*SuggestedRemedy*
Move Table 45-211d to page 43 at the end of section 45.2.7.14d.

*Proposed Response*        *Response Status* **O**

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*Cl* **45**        *SC* **45.2.7.14e**              *P* **44**        *L* **29**          # 512
Wienckowski, Natalie                        General Motors

*Comment Type* **E**        *Comment Status* **D**
There is an extraneous "register".

*SuggestedRemedy*
Replace:  Therefore registers 7.521 and 7.522 register should be

With:  Therefore registers 7.521 and 7.522 should be

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **45.2.7.14f**              *P* **45**        *L* **21**          # 364
Lo, William                        Marvell Semiconducto

*Comment Type* **E**        *Comment Status* **D**
No concept of extended next pages.  All pages are extended now.

*SuggestedRemedy*
Delete the word "Extended"

*Proposed Response*        *Response Status* **O**

---

*Cl* **45**        *SC* **V**              *P* **42**        *L* **39**          # 508
Wienckowski, Natalie                        General Motors

*Comment Type* **E**        *Comment Status* **D**
There is more than one Auto-Negotiation registers.

*SuggestedRemedy*
Replace:  ...contents of the Auto-Negotiation register 7.514 to 7.516 and 7.517 to 7.519 are valid.

With:  ...contents of the Auto-Negotiation registers 7.514 to 7.516 and 7.517 to 7.519 are valid.

*Proposed Response*        *Response Status* **O**

---

*Cl* **78**        *SC* **78.1.3.3.1**              *P* **46**        *L* **7**          # 365
Lo, William                        Marvell Semiconducto

*Comment Type* **E**        *Comment Status* **D**
Deleted 1000BASE-T by accident

*SuggestedRemedy*
Should be
1000BASE-T, 1000BASE-T1

*Proposed Response*        *Response Status* **O**

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **78**          Page 9 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **78.1.3.3.1**          5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **78**      *SC* **78.1.3.3.1**         *P* **48**      *L* **8**         #  557
McClellan, Brett                    Marvell

*Comment Type* **T**         *Comment Status* **D**                    *#343*
Table 78-4, only case 1 applies to 1000BASE-T1.

*SuggestedRemedy*
delete the "Case-2" row and delete the word "Case-1"

*Proposed Response*      *Response Status* **O**


*Cl* **78**      *SC* **Table 78-2**         *P* **47**      *L* **21**        #  444
Graba, Jim                     Broadcom Corporation

*Comment Type* **TR**        *Comment Status* **D**
Min and Max for Tr, Tq, and Ts are equal. When the clock frequency offset is at at its
maximum or minimum deviation the Min and Max Tr, Tq, and Ts won't be equal at the MDI.
After rounding to the stated precision this only affects Tq because it has 4 significant digits.

```
 Parameters: unrounded
 Dev   Tr    Tq    Ts
-100: 1.4399 84.9515 3.5996
  0: 1.4400 84.9600 3.6000
 100: 1.4401 84.9685 3.6004

 Parameters: rounded to original precision
 Dev   Tr  Tq  Ts
-100: 1.44 84.95 3.60
  0: 1.44 84.96 3.60
 100: 1.44 84.97 3.60
```

*SuggestedRemedy*
Change Tq Min from 84.96 us to 84.95 us and Tq Max from 84.96 us to 84.97 us.

*Proposed Response*      *Response Status* **O**


*Cl* **78**      *SC* **Table 78–4**        *P* **48**      *L* **8**         #  343
Rojansky, Amiel                    Cadence

*Comment Type* **T**         *Comment Status* **D**                    *#343*
It is not clear, what is the difference between Case-1 and Case-2.

*SuggestedRemedy*
Remove the partition of Case-1 and Case2 from the 1000BASE-T1 line in Table 78–4 on
page 48. Use only 10.8 usec, since it is the worst case, and the MAC Tx  cannot be aware
to the two different cases.

*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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl*  **78**                    Page 10 of 49
*SC* **Table 78–4**              5/9/2015  10:25:20 AM

*Cl* **97**        *SC* **97.1**                    *P* **49**        *L* **16**        # 513
Wienckowski, Natalie                    General Motors

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

Use a single name for the cabling, single balanced twisted-pair, as used in 96 (802.3bw).

Copper should not be used in the name as much of the cable that is used for Ethernet is a copper alloy, not pure copper.

*SuggestedRemedy*

Replace: All instances of "single pair of balanced copper cabling" as defined below (if a different term is used, that is shown next to the location.

pg 1, line 27
pg 2, line 2
pg 4, line 38
pg 21, line 32
pg 25, line 28
pg 49, line 16
pg 51, line 4
pg 51, line 8, Replace:  unshielded balanced copper cabling
pg 51, line 10
pg 51, line 42
pg 51, line 49
pg 54, line 48
pg 106, line 16
pg 106, line 17
pg 106, line 19
pg 106, line 24, Replace:  unshielded balanced copper cabling
pg 106, line 26, Replace:  balanced copper cabling
pg 106, line 46
pg 110, line 24

With:  single balanced twisted-pair.

*Proposed Response*        *Response Status*    **O**

---

*Cl* **97**        *SC* **97.1**                    *P* **53**        *L* **5**        # 434
Regev, Alon                    Ixia

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

In Figure 97-2, the tx_lpi_active signal needs to go to both the PMA TRANSMIT and the PMA RECEIVE blocks (to match figure 97-16).  Currently it only connects to the PMA RECEIVE block

*SuggestedRemedy*

In Figure 97-2, add a a dashed arrow from the current tx_lpi_active vertical line to the PMA TRANSMIT block (with the arrowhead on the PMA TRANSMIT side).

*Proposed Response*        *Response Status*    **O**

---

*Cl* **97**        *SC* **97.1.2**                    *P* **51**        *L* **17**        # 515
Wienckowski, Natalie                    General Motors

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

Poor wording

*SuggestedRemedy*

Replace: GMII TX_D, TX_EN, and TX_ER are encoded together in using 81B encoding where 10 cycles of ...

With:  GMII TX_D, TX_EN, and TX_ER are encoded together using 81B encoding where 10 cycles of ...

*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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**
*SC* **97.1.2**

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*Cl* **97**  *SC* **97.1.2**  *P* **51**  *L* **19**  # 534
Tu, Mike  Broadcom

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

Original text: "...1000BASE-T1 PHY adds a 396 bit Reed Solomon Forward Error Correction (RS FEC) code to each group..."

The 396 bits added are the FEC parity check bits, not the entire FEC code.

*SuggestedRemedy*

Change from
"...1000BASE-T1 PHY adds a 396 bit Reed Solomon Forward Error Correction (RS FEC) code to each group..."

to

"...1000BASE-T1 PHY applies Reed Solomon Forward Error Correction (RS FEC) coding with 396 parity bits to each group...

*Proposed Response*  *Response Status* **O**

---

*Cl* **97**  *SC* **97.1.2**  *P* **51**  *L* **31**  # 516
Wienckowski, Natalie  General Motors

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

There is a "The" capitalized in the middle of a sentence.

*SuggestedRemedy*

Replace:  ... used, The MASTER-SLAVE relationship between ...

With:  ... used, the MASTER-SLAVE relationship between ...

*Proposed Response*  *Response Status* **O**

---

*Cl* **97**  *SC* **97.1.2**  *P* **51**  *L* **37**  # 366
Lo, William  Marvell Semiconducto

*Comment Type* **ER**  *Comment Status* **D**  #366

Reference to EEE advertising incorrect.

*SuggestedRemedy*

Change reference to 78.3 to 97.4.2.5.5

*Proposed Response*  *Response Status* **O**

---

*Cl* **97**  *SC* **97.1.2**  *P* **51**  *L* **37**  # 537
Tu, Mike  Broadcom

*Comment Type* **TR**  *Comment Status* **D**  #366

The EEE capability exchange is now done during the InfoField Exchange. Need to change the reference.

*SuggestedRemedy*

Change line 37 from

"EEE capability as described in 78.3."

to

"EEE capability as described in 97.4.2.5.5."

*Proposed Response*  *Response Status* **O**

---

*Cl* **97**  *SC* **97.1.2**  *P* **51**  *L* **39**  # 367
Lo, William  Marvell Semiconducto

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

Need some description of OAM in the intro.

*SuggestedRemedy*

Insert following paragraph after the paragraph on EEE.

The 1000BASE-T1 PHY may optionally support Operations, Administration, and Maintenance (OAM) on the PCS level and advertise the capability as described in 97.4.2.5.5. OAM is useful for monitoring link operation by exchanging PHY link health status and messages. The OAM information is exchanged in-band between two PHYs without using any of the normal data bandwidth.  OAM is specified in 97.7.

*Proposed Response*  *Response Status* **O**

---

*Cl* **97**  *SC* **97.1.2**  *P* **51**  *L* **41**  # 368
Lo, William  Marvell Semiconducto

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

MBd should be MBaud/s

*SuggestedRemedy*

See above.
Also in page 52 line 27

*Proposed Response*  *Response Status* **O**

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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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**
*SC* **97.1.2**

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5/9/2015 10:25:20 AM

*Cl* **97**    *SC* **97.1.2.1**    *P* **52**    *L* **13**    # 535
Tu, Mike    Broadcom

*Comment Type* **T**    *Comment Status* **D**
    Indicate the "frame: means "RS FEC" frame.

*SuggestedRemedy*
    Change line 13 from

    "...PAM3 symbols are synchronized to frame boundaries."

    to

    "...PAM3 symbols are synchronized to RS FEC frame boundaries.

*Proposed Response*    *Response Status* **O**


*Cl* **97**    *SC* **97.1.2.1**    *P* **52**    *L* **19**    # 538
Tu, Mike    Broadcom

*Comment Type* **TR**    *Comment Status* **D**
    In Training mode the PCS should be sending PAM2 training sequences. Clarify to avoid
    confusion.

*SuggestedRemedy*
    Change line 19 and 20 from

    "In Training Mode (see 97.4.2.5), the PCS transmits and receives data sequences to
    synchronize the RS FEC blocks, ..."

    to

    "In Training Mode (see 97.4.2.5), the PCS transmits and receives PAM2 training
    sequences to align with the RS FEC frame, ..."

*Proposed Response*    *Response Status* **O**


*Cl* **97**    *SC* **97.1.2.1**    *P* **52**    *L* **6**    # 533
Tu, Mike    Broadcom

*Comment Type* **E**    *Comment Status* **D**
    Change "FEC data" to "FEC parity bits"

*SuggestedRemedy*
    Change line 6 from

    "The RS encoder adds 396 bits of FEC data and the 4050 bits..."

    to

    "The RS encoder adds 396 parity bits at the end and the 4050 output bits..."

*Proposed Response*    *Response Status* **O**


*Cl* **97**    *SC* **97.1.2.1**    *P* **53**    *L* **4**    # 517
Wienckowski, Natalie    General Motors

*Comment Type* **E**    *Comment Status* **D**
    Poor wording

*SuggestedRemedy*
    Replace: Each set of forty-five 81B blocks along with 9 bits of OAM data (see 97.7)
    processed by a Reed Solomon FEC encoder (RS FEC).

    Replace: Each set of forty-five 81B blocks along with 9 bits of OAM data (see 97.7) is
    processed by a Reed Solomon FEC encoder (RS FEC).

*Proposed Response*    *Response Status* **O**


*Cl* **97**    *SC* **97.1.2.3**    *P* **52**    *L* **41**    # 545
McClellan, Brett    Marvell

*Comment Type* **E**    *Comment Status* **D**
    the PMD doesn't 'specify'

*SuggestedRemedy*
    change "The PMD also"
    to " Clause 97.5"

*Proposed Response*    *Response Status* **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general    *Cl* **97**    Page 13 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected    RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn    *SC* **97.1.2.3**    5/9/2015 10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.1.2.4**            *P* **54**        *L* **27**            # 369
Lo, William                                Marvell Semiconducto

*Comment Type*  **TR**        *Comment Status*  **D**
    OAM also affects EEE

*SuggestedRemedy*
    Add the following text at the end of the paragraph on line 27.

    The OAM SNR settings may temporarily force the PHY to exit LPI mode and send idles
    when LPI refresh is insufficient for maintain PHY SNR.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.1.3**            *P* **54**        *L* **47**            # 402
Regev, Alon                                Ixia

*Comment Type*  **T**        *Comment Status*  **D**
    The use of "code-group" in clause 97 does not match the definition in subclause 1.4.142.

    Also, the terms "code-group" and "symbol" are used interchangeably in the draft .

    For reference, here is the definition from 1.4.142:
    code-group: For IEEE 802.3, a set of encoded symbols representing encoded data or
    control information.  For 100BASE-T4, a set of six ternary symbols that, when representing
    data, conveys an octet. For 100BASE-TX and 100BASE-FX, a set of five code-bits that,
    when representing data, conveys a nibble. For 100BASE-T2, a pair of PAM5×5 symbols
    that, when representing data, conveys a nibble. For 1000BASE-X, a set of ten bits that,
    when representing data, conveys an octet. For 1000BASE-T, a vector of four 8B1Q4 coded
    quinary symbols that, when representing data, conveys an octet. (See IEEE Std 802.3,
    Clause 23, Clause 24, Clause 32, Clause 36, and Clause 40.)

    For reference, here is the definition of "symbol" in 1.4.380:
    symbol: Within IEEE 802.3, the smallest unit of data transmission on the medium.
    Symbols are unique to the coding system employed. For example, 100BASE-T4 uses
    ternary symbols; 10BASE-T uses Manchester symbols; 100BASE-X uses binary symbols
    or code-bits; 100BASE-T2 and 1000BASE-T uses quinary symbols. For 1000BASE-X
    PMDs operating at 1.25 GBd, a symbol corresponds to a code-bit after the 8B/10B
    encoding operation i.e. has the duration of 0.8 ns. For 10GBASE-R PMDs operating at
    10.3125 GBd, a symbol corresponds to a code-bit after the 64B/66B encoding operation
    i.e. has the duration of approximately 0.097 ns

*SuggestedRemedy*
    In clause 97, change all instances of "code-group" to "symbol".

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.1.3**            *P* **54**        *L* **51**            # 518
Wienckowski, Natalie                        General Motors

*Comment Type*  **E**        *Comment Status*  **D**
    In numbered list a) - g)some items end in a period and some do not.

*SuggestedRemedy*
    Make list consistent.

    EITHER:  Add periods at the end of b)& c)

    OR:  Remove periods from the end of a), d), e), f), & g).

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.1.3**            *P* **54**        *L* **52**            # 352
Rojansky, Amiel                            Cadence

*Comment Type*  **E**        *Comment Status*  **D**
    Typo:
    "97.1.3 Signaling
    ...
    b) Algorithmic mapping from PAM3 symbols to TXD<7:0> in the receive path"

*SuggestedRemedy*
    Modify 97.1.3 page 54 line 52:
    "b) Algorithmic mapping from PAM3 symbols to RXD<7:0> in the receive path"

*Proposed Response*        *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general                    *Cl* **97**                    Page 14 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn                    *SC* **97.1.3**                    5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **97**     *SC* **97.1.3**        *P* **55**      *L* **2**      # 341

Rojansky, Amiel                Cadence

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

"f) Ability to signal the status of the local receiver to the remote PHY to indicate that the local receiver"

There is no way to signal loc_rcvr_status to the link partner, during data mode, after training has completed.

*SuggestedRemedy*

- Remove the statement from the standard
OR
- Clarify if there is an indirect way to do it.

*Proposed Response*        *Response Status*  **O**

---

*Cl* **97**     *SC* **97.1.3**        *P* **55**      *L* **4**      # 546

McClellan, Brett               Marvell

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

typo

*SuggestedRemedy*

change "transmit in entering"
to "transmit is entering"

*Proposed Response*        *Response Status*  **O**

---

*Cl* **97**     *SC* **97.1.3**        *P* **55**      *L* **5**      # 430

Regev, Alon                Ixia

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

"normal" is used for multiple meenings

*SuggestedRemedy*

On page 55, line 5,
Change "normal" to normal power"

On page 55, line 7 and line 9,
Change "normal mode" to "normal data mode" (two instances)

On Page 70, line 19,
Change "normal mode" to "normal power mode"

*Proposed Response*        *Response Status*  **O**

---

*Cl* **97**     *SC* **97.1.3**        *P* **55**      *L* **7**      # 519

Wienckowski, Natalie          General Motors

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

Use a ";" in the sentence to distinguish between clauses and list.

*SuggestedRemedy*

Replace:  The PHY may operate in three basic modes, normal mode, training mode, or an optional LPI mode.

With:  The PHY may operate in three basic modes; normal mode, training mode, or an optional LPI mode.

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**     *SC* **97.10.2.1**      *P* **133**     *L* **22**     # 479

Wienckowski, Natalie          General Motors

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

Missing period at end of sentence list.

*SuggestedRemedy*

Add period after:  e) chemical loads: ISO 167540-5 and ISO 20653

*Proposed Response*        *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general      *Cl* **97**      Page 15 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn      *SC* **97.10.2.1**      5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.10.2.2**           *P* **133**      *L* **39**        # 480
Wienckowski, Natalie                   General Motors

*Comment Type*   **E**        *Comment Status*   **D**
   Missing period at end of sentence list.

*SuggestedRemedy*
   Add period after:  d) Electrical Disturbances: IEC 62215-3 and ISO 7637-2/3

*Proposed Response*        *Response Status*   **O**


*Cl* **97**      *SC* **97.12.1**             *P* **134**      *L* **14**        # 481
Wienckowski, Natalie                   General Motors

*Comment Type*   **ER**       *Comment Status*   **D**
   Incorrect verb tense.

*SuggestedRemedy*
   Replace:  The supplier of a protocol implementation that is claimed to conform to Clause 97

   With:  The supplier of a protocol implementation that is claiming to conform to Clause 97


*Proposed Response*        *Response Status*   **O**


*Cl* **97**      *SC* **97.2.1.1**            *P* **56**       *L* **8**         # 453
Wienckowski, Natalie                   General Motors

*Comment Type*   **E**        *Comment Status*   **D**                         #370
   The reference to 98.4.2 is not a link and is highlighted in red.

*SuggestedRemedy*
   Remove red highlight and fix link.

*Proposed Response*        *Response Status*   **O**


*Cl* **97**      *SC* **97.2.1.1**            *P* **56**       *L* **8**         # 370
Lo, William                            Marvell Semiconducto

*Comment Type*   **E**        *Comment Status*   **D**                         #370
   Red highlight 98.4.2 is correct.

*SuggestedRemedy*
   Remove red highlight

*Proposed Response*        *Response Status*   **O**


*Cl* **97**      *SC* **97.2.1.1.2**          *P* **56**       *L* **24**        # 454
Wienckowski, Natalie                   General Motors

*Comment Type*   **E**        *Comment Status*   **D**
   There is no link for the Clause 98 reference.

*SuggestedRemedy*
   Fix link for Clause 98 reference.

*Proposed Response*        *Response Status*   **O**


*Cl* **97**      *SC* **97.2.1.2.2**          *P* **56**       *L* **51**        # 455
Wienckowski, Natalie                   General Motors

*Comment Type*   **T**        *Comment Status*   **D**
   Incorrect reference.  Figure 97-21 is for CRC16, Figure 97-23 is Link Monitor state diagram.

*SuggestedRemedy*
   Replace:  Figure 97-21

   With:  Figure 97-23

*Proposed Response*        *Response Status*   **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general        *Cl*  **97**            Page 16 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn       *SC*  **97.2.1.2.2**      5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **97**     *SC* **97.2.2**       *P* **57**      *L* **18**      # 432
Regev, Alon            Ixia

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

PMA_RESET.indication is not used and should be removed.

On a side note, In section 97.2.2.9, the format of the PMA_RESET.indication is different than other primitives in 97.2.2. Other primitives have a description of the primitive at the top (i.e. 97.2.2.x) level and a subclause titled "Semantics of the primitive" underneath. In section 97.2.2.9, the semantics are defined at the top level. If it is decided to keep PMA_RESET.indication, the format of 97.2.2.9 should be fixed.

*SuggestedRemedy*

On page 57, line 18,
Delete the line "PMA_RESET.indication()"

On page 58, in Figure 97-3, delete the arrow labeled "PMA_RESET.indication"

On page 62, delete clause 97.2.2.9 and all subclauses of 97.2.2.9.

*Proposed Response*      *Response Status* **O**

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*Cl* **97**     *SC* **97.2.2**       *P* **58**      *L* **27**      # 437
Regev, Alon            Ixia

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

PMA_PCSSTATUS.request(pcs_status) should be PMA_PCSSTATUS.request

*SuggestedRemedy*

In Figure 97-3,
change "PMA_PCSSTATUS.request(pcs_status)"
to "PMA_PCSSTATUS.request"

*Proposed Response*      *Response Status* **O**

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*Cl* **97**     *SC* **97.2.2.2**       *P* **58**      *L* **52**      # 431
Regev, Alon            Ixia

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

"Master" should be "MASTER" and "Slave" should be "SLAVE" when used to convey the value of "config".

*SuggestedRemedy*

In the following locations, change "Master" to "MASTER"
Page 29, Line 40
Page 58, Line 52
Page 92, Line 4
Table 98-3 (all instances)

In the folloiwng locations change "Slave" to "SLAVE"
Page 29, Line 41
Page 58, Line 52
Page 92, Line 4
Table 98-3 (all instances)

*Proposed Response*      *Response Status* **O**

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*Cl* **97**     *SC* **97.2.2.5**       *P* **66**      *L* **47**      # 457
Wienckowski, Natalie        General Motors

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

Awkward wording.

*SuggestedRemedy*

Replace: Bit 0 to 3 of pointer points to next octet that is a control symbol.
Bit 4 of pointer indicates whether the next control symbol is the final control symbol of the block:

With: Bit 0 to 3 of the pointer points to the next octet that is a control symbol. Bit 4 of the pointer indicates whether or not the next control symbol is the final control symbol of the block:

*Proposed Response*      *Response Status* **O**

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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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**
*SC* **97.2.2.5**

Page 17 of 49
5/9/2015 10:25:20 AM

*Cl* **97**　　　*SC* **97.3**　　　　　　　*P* **63**　　　*L* **26**　　　# 547
McClellan, Brett　　　　　　　　Marvell

*Comment Type* **E**　　　*Comment Status* **D**
　　delete editor's note, all of the text is now approved

*SuggestedRemedy*
　　delete editor's note

*Proposed Response*　　　*Response Status* **O**

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*Cl* **97**　　　*SC* **97.3.2**　　　　　　*P* **64**　　　*L* **11**　　　# 433
Regev, Alon　　　　　　　　Ixia

*Comment Type* **T**　　　*Comment Status* **D**
　　Figure 97-4: tx_lpi_active is missing & both tx_lpi_active & rx_lpi_active should be dashed
　　(optional) lines

*SuggestedRemedy*
　　In Figure 97-4:

　　Add a dashed arrow labeled "tx_lpi_active" from the bottom of the PCS TRANSMIT block
　　to the bottom of the figure (with the arrowhead at the bottom of the figure).

　　Chagne the lines labeled rx_lpi_active from solid to dashed lines.

*Proposed Response*　　　*Response Status* **O**

---

*Cl* **97**　　　*SC* **97.3.2**　　　　　　*P* **64**　　　*L* **19**　　　# 541
Tu, Mike　　　　　　　　Broadcom

*Comment Type* **TR**　　　*Comment Status* **D**　　　*discussion needed*
　　"rem_rcvr_status" is undefined in data mode

*SuggestedRemedy*
　　Define "loc_data_ready" and "rem_data_ready" variables. Change "rem_rcvr_status" to
　　"rem_rcvr_status/rem_data_ready" when appropriate. See "wang_3bp_01_0515.pdf" for
　　further details.

*Proposed Response*　　　*Response Status* **O**

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*Cl* **97**　　　*SC* **97.3.2.2**　　　　　*P* **65**　　　*L* **14**　　　# 442
Regev, Alon　　　　　　　　Ixia

*Comment Type* **E**　　　*Comment Status* **D**
　　"45 81B" looks too much like "4581B".

*SuggestedRemedy*
　　On page 65, line14; page 70, line 38; and page 71, line 46:
　　Change "45 81B" to "forty-five 81B"

*Proposed Response*　　　*Response Status* **O**

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*Cl* **97**　　　*SC* **97.3.2.2.1**　　　　*P* **65**　　　*L* **29**　　　# 456
Wienckowski, Natalie　　　　　　General Motors

*Comment Type* **TR**　　　*Comment Status* **D**　　　　　　　*#456*
　　There is italic text in this section that wasn't listed in Steve's TBD email.

　　The PAM2 PMA training frame synchronization allows establishment of RS frame and 81B
　　boundaries by the PCS Synchronization process.

*SuggestedRemedy*
　　Remove italics from PAM2 based on later usage of PAM2 in section 97.3.2.3, page 74, line
　　13.

*Proposed Response*　　　*Response Status* **O**

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*Cl* **97**　　　*SC* **97.3.2.2.1**　　　　*P* **97**　　　*L* **29**　　　# 548
McClellan, Brett　　　　　　　　Marvell

*Comment Type* **E**　　　*Comment Status* **D**　　　　　　　*#456*
　　remove italics on 'PAM2'

*SuggestedRemedy*
　　remove italics on 'PAM2'

*Proposed Response*　　　*Response Status* **O**

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general　　　　　*Cl* **97**　　　Page 18 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected　　　RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn　　　*SC* **97.3.2.2.1**　　　5/9/2015  10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**     *SC* **97.3.2.2.11**          *P* **70**          *L* **34**          # 346

Rojansky, Amiel                          Cadence

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

"Where the GMII and PMA sublayer data rates are not synchronized to that ratio, the transmit process needs to insert idles, or delete idles to adapt between the rates."

The transmit process needs also to insert LPI_IDLE, or delete LPI_IDLE to adapt between the rates.

*SuggestedRemedy*

In subclause 97.3.2.2.9 LP_IDLE on page 70 line 22, add:

"Where the GMII and PMA sublayer data rates are not synchronized, the transmit process needs to insert LPI_IDLEs, or delete LPI_IDLEs to adapt between the rates."

*Proposed Response*          *Response Status*   **O**


*Cl* **97**     *SC* **97.3.2.2.12**          *P* **71**          *L* **47**          # 558

McClellan, Brett                          Marvell

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

"Figure 97–9 shows the bit mapping between PCS and FEC."
This reference is misleading because Figure 97-9 does not show the complete mapping including OAM and RS parity which is shown in Figure 97-7.

*SuggestedRemedy*

Change "97-9 to 97-7" and delete figure 97-9 on page 72.

*Proposed Response*          *Response Status*   **O**


*Cl* **97**     *SC* **97.3.2.2.13**          *P* **72**          *L* **1**          # 461

Wienckowski, Natalie                          General Motors

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

Placement of Figures is poor throughout the document. In this case, the table is immediately after "This implements the scrambler polynomial:" and before the equation it is referencing.

This happens many times in the document including:

Table 97-2,

*SuggestedRemedy*

The statement should not be broken up with a Figure. Move the start of Section 97.3.2.2.13 to be after Figure 97-9.

*Proposed Response*          *Response Status*   **O**


*Cl* **97**     *SC* **97.3.2.2.16**          *P* **73**          *L* **47**          # 410

Regev, Alon                          Ixia

*Comment Type*   **T**          *Comment Status*   **D**          *#410*

In LPI mode, wake can also be started due to link partner sending OAM message with SNR<1:0> set to 01.

*SuggestedRemedy*

Replace "The quiet-refresh cycle is repeated until Assert Low Power Idle isn't detected at the GMII. This indicates that the local system is requesting a transition back to the normal operational mode."

With "The quiet-refresh cycle is repeated until Assert Low Power Idle isn't detected at the GMII (indicating that the local system is requesting a transition back to the normal operational mode) or until an OAM message is received from the link partner with SNR<1:0> set to 01 (indicating that the link parter is requesting wake from LPI mode as LPI refresh is insufficient to maintain the link partner's SNR)."

*Proposed Response*          *Response Status*   **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**          Page 19 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.3.2.2.16**          5/9/2015 10:25:20 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**     *SC* **97.3.2.2.16**     *P* **73**     *L* **47**     # 371
Lo, William                          Marvell Semiconducto

*Comment Type* **TR**     *Comment Status* **D**                          #410
Need to account for OAM effect on LPI

*SuggestedRemedy*
Change:
The quiet-refresh cycle is repeated until Assert Low Power Idle is not detected at the GMII.
To:
The quiet-refresh cycle is repeated until Assert Low Power Idle is not detected at the GMII
or when the OAM SNR settings temporarily force the PHY to exit LPI mode.

*Proposed Response*     *Response Status* **O**


*Cl* **97**     *SC* **97.3.2.2.16**     *P* **73**     *L* **52**     # 559
McClellan, Brett                     Marvell

*Comment Type* **T**     *Comment Status* **D**
akward sentence and only 10.8us applies

*SuggestedRemedy*
change "Due to the wake signal constrained to occur at the beginning of every second RS
frame boundary the PHY wake time may range from 3.6 µs to 10.8 µs"
to:
The wake signal is constrained to occur at the beginning of every second RS frame
boundary, therefore the PHY wake time can require up to 10.8 µs.

*Proposed Response*     *Response Status* **O**


*Cl* **97**     *SC* **97.3.2.2.5**     *P* **67**     *L* **38**     # 458
Wienckowski, Natalie                 General Motors

*Comment Type* **E**     *Comment Status* **D**
Keep paragraph/sentence text together.  Don't break it up with a 37 line Figure.

*SuggestedRemedy*
Move partial sentence under Figure 97-6 to be before the figure, with the start of the
paragraph/sentence.

*Proposed Response*     *Response Status* **O**


*Cl* **97**     *SC* **97.3.2.2.5**     *P* **69**     *L* **3**     # 459
Wienckowski, Natalie                 General Motors

*Comment Type* **E**     *Comment Status* **D**
Inconsistent use of periods.

*SuggestedRemedy*
Either put a period at the end of each statement, or remove the periods from the ones that
have them.

N = number of GMII octets encoded into block
octets numbered n = 0, 1, 2, …, N-1. octet 0 is the first one presented on GMII.
TC[n] = 0 if octet n is data octet on GMII, 1 if octet n is control octet on GMII
TC[-1] = 1 by definition
TD[n][0:7] = GMII octet n TXD[0:7] if TC[n] = 0
TD[n][5:7] = 010 – IPG, 101 – LPI, 001 – TX Error if TC[n] = 1. TD[n][0:4] is undefined.
B[0:8N] is the 8N+1 block. Bit 0 transmitted first.
OR(n) = Bitwise OR of TC[n:N-1]
NEXT(n)[0:3] = bit position of lowest bit in TC[n:N-1] that is a 1. Bit 3 is MSB.
NEXT(n)[4] = 0 if Bitwise SUM of TC[n:N-1] = 1, else 1

*Proposed Response*     *Response Status* **O**


*Cl* **97**     *SC* **97.3.2.2.6**     *P* **69**     *L* **33**     # 400
Regev, Alon                          Ixia

*Comment Type* **T**     *Comment Status* **D**                          #400
"convey and idle signal" has a typo ("and" instead of "an") and inaccurate (as you need to
send a "Normal Inter-Frame" control code; not an "idle signal").

*SuggestedRemedy*
Change "convey and Idle symbol" to "convey a Normal Inter-Frame control code"

*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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**                          Page 20 of 49
*SC* **97.3.2.2.6**                    5/9/2015  10:25:20 AM

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*Cl* **97**     *SC* **97.3.2.2.6**       *P* **69**       *L* **33**       # 460

Wienckowski, Natalie            General Motors

*Comment Type*   **E**       *Comment Status*   **D**              *#400*

     typo, and instead of an

*SuggestedRemedy*

     Replace:  PCS will convey and Idle symbol in the 80B81B block code.

     With: PCS will convey an Idle symbol in the 80B81B block code.

*Proposed Response*        *Response Status*   **O**

---

*Cl* **97**     *SC* **97.3.2.2.7**       *P* **70**       *L* **6**       # 350

Rojansky, Amiel            Cadence

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

     "A block is invalid if any of the following conditions exists:

     b) Any control character contains a value not in Table 97–1."

     This statement has no meaning since Table 97–1 last entry is:
     "other Reserved" which covers all the non-valid codes.

*SuggestedRemedy*

     Remove the last entry of "other Reserved" from Table 97–1 on page 69 line 48.

*Proposed Response*        *Response Status*   **O**

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*Cl* **97**     *SC* **97.3.2.2.8**       *P* **70**       *L* **13**       # 348

Rojansky, Amiel            Cadence

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

     "Idle characters may be added or deleted by the PCS to adapt between clock rates."

     We need to ensure that Idles shall not be added within a data frame.

*SuggestedRemedy*

     I recommend to modify:
     "Idle characters may be duplicated or deleted by the PCS to adapt between clock rates."
     (using the term duplicated instead of added)

     OR add:
     "Idle characters shall not be added within a data frame."

*Proposed Response*        *Response Status*   **O**

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*Cl* **97**     *SC* **97.3.2.2.9**       *P* **70**       *L* **22**       # 436

Regev, Alon            Ixia

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

     The PCS may need the ability to add or delete LP_IDLE characters to adopt between clock
     rates similarly to the way this is done for IDLE.

*SuggestedRemedy*

     In between the paragrath ending on line 21 and the paragraph starting on line 23, add the
     following paragraph:
     "LP_IDLE lecharacters may be repeated or deleted by the PCS to adapt between clock
     rates."

*Proposed Response*        *Response Status*   **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**          Page 21 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn      *SC* **97.3.2.2.9**        5/9/2015 10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.3.2.2.9**              *P* **70**          *L* **22**          *#* 347
Rojansky, Amiel                          Cadence

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

The 1000Base-T1 standard (and in particular section 97.3.2.2.9 LP_IDLE) does not handle a case of GTX_CLK halt by the MAC as described in caluse 35.2.2.6.

It is not clear if the 1000Base-T1 standard supports this option of gtx_clk halting

*SuggestedRemedy*

In subclause 97.3.2.2.9 LP_IDLE on page 70 line 22, add:

"When the MAC halts the gtx_clk during a transmission as defined in 35.2.2.6, the transmit process needs to insert LPI_IDLEs"

OR

If GTX_CLK halting is not allowed by 1000Base-T1, clarify it explicitly.

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.4**♂              *P* **76**          *L* **5**          *#* 411
Regev, Alon                              Ixia

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

In Figure 97-11, make it clear that the LFSR scramblers shown in Figure 97-9 refer to the transmit on the MASTER or SLAVE PHY (as the recieve uses the opposite equations)

*SuggestedRemedy*

Change "Side-stream scrambler employed by the MASTER PHY"
to "Side-stream scrambler employed by the MASTER PHY Transmit"

Change "Side-stream scrambler employed by the SLAVE PHY"
to "Side-stream scrambler employed by the SLAVE PHY Transmit"

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.4.1**              *P* **76**          *L* **32**          *#* 553
McClellan, Brett                          Marvell

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

typo "1InfoField"

*SuggestedRemedy*

change "1InfoField"
to "InfoField"

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.5.2**              *P* **78**          *L* **23**          *#* 462
Wienckowski, Natalie                      General Motors

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

There is an extraneous "and".

*SuggestedRemedy*

Replace:  During the quiet period the transmitter shall put zeros on to the MDI. During the quiet period the transmitter and may be turned off to save power.

With:  During the quiet period the transmitter shall put zeros on to the MDI. During the quiet period the transmitter may be turned off to save power.

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.5.3**              *P* **78**          *L* **33**          *#* 406
Regev, Alon                              Ixia

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

In the sentence "The OAM symbol and its associated parity symbols are XOR'ed with the scrambler stream at the same relative position to the RS boundaries as they occupy during normal mode." it is not clear if "parity" refers to the parity built built into the OAM symbol (it has 8 data bits and 1 parity bit) or the Reed Solomon parity.

*SuggestedRemedy*

Change "The OAM symbol and its associated parity symbols are XOR'ed with the scrambler stream at the same relative position to the RS boundaries as they occupy during normal mode."

To "The OAM symbols and the RS parity symbols are XOR'ed with the scrambler stream at the same relative position to the RS boundaries as they occupy during normal mode."

*Proposed Response*        *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general      *Cl* **97**        Page 22 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn      *SC* **97.3.5.3**   5/9/2015 10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.3.6.2.1**          *P* **79**      *L* **26**        # 372
Lo, William                              Marvell Semiconducto

*Comment Type*   **TR**      *Comment Status*  **D**                          #372
    Remove TBD for RFER_CNT_LIMIT and RFRX_CNT_LIMIT

*SuggestedRemedy*
    RFER_CNT_LIMIT change TBD to Integer value of 16
    RFRX_CNT_LIMIT change TBD to Integer value of 88

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.3.6.2.1** ♂        *P*          *L*          # 412
Regev, Alon                              Ixia

*Comment Type*   **T**       *Comment Status*  **D**                          #372
    RFER_CNT_LIMIT & RFRX_CNT_LIMIT have type of "TBD" and have no value.

*SuggestedRemedy*
    Change "TYPE: TBD" to "TYPE: integer" for both RFER_CNT_LIMIT & RFRX_CNT_LIMIT.
    Add "VALUE: TBD" for both RFER_CNT_LIMIT & RFRX_CNT_LIMIT (there are other
    comments that actually provide the value).

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.3.6.2.2**          *P* **80**      *L* **24**        # 463
Wienckowski, Natalie                      General Motors

*Comment Type*   **TR**      *Comment Status*  **D**          *discussion needed*
    Incorrect Figure reference.  Figure 97-14 is the PCS Transmit state diagram.

*SuggestedRemedy*
    Change:  The format for this vector is shown in Figure 97–14.

    To:  The format for this vector is shown in Figure 97–5.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.3.6.2.2**          *P* **80**      *L* **31**        # 560
McClellan, Brett                          Marvell

*Comment Type*   **T**       *Comment Status*  **D**
    clarify ambiguous text, With the current text the next frame could be set to both TRUE and
    FALSE in some cases.

*SuggestedRemedy*
    change: "This variable is set FALSE at next wake frame if non- LP_IDLE is detected on
    GMII in any block.
    This variable is set TRUE on next RS frame if LP_IDLE detected on GMII in the last 80/81
    block."
    to: "This variable is set to FALSE at reset.
    This variable is set from TRUE to FALSE at next wake frame if non-LP_IDLE is detected
    on GMII in any block.
    This variable is set from FALSE to TRUE on next RS frame if LP_IDLE detected on GMII in
    the final 80/81 block of the current RS frame."

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.3.6.2.3**          *P* **81**      *L* **3**         # 413
Regev, Alon                              Ixia

*Comment Type*   **T**       *Comment Status*  **D**
    As there are no timers used int he state machine, change "State diagram timers follow the
    conventions described in 14.2.3.2." to "None"

*SuggestedRemedy*
    change "State diagram timers follow the conventions described in 14.2.3.2." to "None"

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.3.6.3**           *P* **81**      *L* **50**        # 414
Regev, Alon                              Ixia

*Comment Type*   **T**       *Comment Status*  **D**
    The message "TX_FRAME" is defined in this section, but it not used anywhere in the state
    machines.

*SuggestedRemedy*
    Delete the text
    "TX_FRAME     A signal sent to PCS Transmit indicating that a full Reed Solomon frame
    has been transmitted."

*Proposed Response*        *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**          Page 23 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.3.6.3**          5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

IEEE P802.3bp D1.4 1000BASE-T1 PHY 5th Task Force review comments

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*Cl* **97**        *SC* **97.3.6.4**              *P* **85**          *L* **34**          # 415

Regev, Alon                              Ixia

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

Several mistakes in Figure 97-15:

1. wake_detected is not defined in the draft but it is used in the state machine.

2. transition to RECEIVE_LPI happens without RX_AGGREGATE (we only know that a valid transition to LPI was requested once we receive a full RS frame, do the RS correction, do the 81B decode, and validate that we have 10 LP_IDLE)

3. transition from RECEIVE_WAKE to RECEIVE_DATA uses (TX_AGGREGATE) - should be RX_AGGREGATE.  Also, rx_wake_frame_complete should not be used here.  There is always exactly 1 wake RS frame containing 10 IDLEs - there is nothing to detect other than this (and this is what was detected by wake_detected)

4. LPIBLOCK_R should be LPBLOCK_R (to match definition).

5. DECODE should not be used for IBLOCK_R and LPBLOCK_R as these are already in the non-encoded 100 bit GMII format.

*SuggestedRemedy*

Change the definition of RX_AGGREGATE (page 81, line 39) from
"A signal sent to PCS Receive indicating that 9 aligned 9-bit Reed Solomon symbols are aggregated in rx_coded<80:0>."
To
"A signal sent to PCS Receive indicating that 9 aligned 9-bit Reed Solomon symbols are aggregated in rx_coded<80:0>.  This signal is asserted even when the receive is in low power idle mode at the time when the nine 9-bit RS symbols would be aggregated in rx_coded<80:0> if the receieve was operating in non-lpi mode."

Delete the definition of rx_wake_frame_complete (page 80, line 19)

Replace Figure 97-15 with the figure from regev_3bp_01_0515

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.6.4**              *P* **85**          *L* **44**          # 571

McClellan, Brett                          Marvell

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

typo TX_AGGREGATE should be RX_AGGRAGATE

*SuggestedRemedy*

change "TX_AGGREGATE "
to "RX_AGGRAGATE"

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.7.1**              *P* **83**          *L* **31**          # 373

Lo, William                              Marvell Semiconducto

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

Register references does not reflect D1.4 Clause 45

*SuggestedRemedy*

PCS_status change 3.32.12 to 3.2306.10, 3.1.2 to 3.2305.2, 3.8.10 to 3.2305.7
block_lock change 3.32.0 to 3.2306.8, 3.33.15 to 3.2306.6
hi_rfer change 3.32.1 to 3.2306.9, 3.33.14 to 3.2306.7
Rx LPI indication change 3.1.8 to 3.2305.8, 3.1.10 to 3.2305.10
Tx LPI indication change 3.1.9 to 3.2305.9, 3.1.11 to 3.2305.9

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.3.7.2**              *P* **83**          *L* **44**          # 374

Lo, William                              Marvell Semiconducto

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

Register references does not reflect D1.4 Clause 45

*SuggestedRemedy*

RF_ER_count change 3.33.13:8 to 3.2305.5:0, 3.33 to 3.2305

*Proposed Response*        *Response Status*  **O**

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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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**
*SC* **97.3.7.2**

Page 24 of 49
5/9/2015 10:25:21 AM

*Cl* **97**        *SC* **97.3.7.3**              *P* **83**        *L* **51**           # 375
Lo, William                                  Marvell Semiconducto

*Comment Type*  **TR**        *Comment Status*  **D**
   Register references does not reflect D1.4 Clause 45

*SuggestedRemedy*
   Change 3.0.14 to 3.2304.14

*Proposed Response*          *Response Status*  **O**

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*Cl* **97**        *SC* **97.4.2.1**              *P* **87**        *L* **9**            # 416
Regev, Alon                                  Ixia

*Comment Type*  **T**        *Comment Status*  **D**
   Draft states "Power on (see 98.5.1)", but the definition in 98.5.1 is for the "device that
   contains the Auto-Negotiation state diagrams".  As auto-negotiation is optional, this
   definition does not work for the case when auto-negotiation is not used.

   As the PCS section has similar wording, it should be updated as well.

*SuggestedRemedy*
   On page 87, line 9:
   Change "Power on (see 98.5.1)"
   To "Power for the device containing the PMA has reacehd the operating region"

   On page 64, line 32:
   Change "Power on."
   To "Power for the device containing the PMA has reacehd the operating region."

*Proposed Response*          *Response Status*  **O**

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*Cl* **97**        *SC* **97.4.2.2**              *P* **87**        *L* **17**           # 464
Wienckowski, Natalie                         General Motors

*Comment Type*  **E**        *Comment Status*  **D**
   Incorrect grammar.

*SuggestedRemedy*
   Replace:  The PMA Transmit function comprises a transmitter to generate a 3 level
   modulated signals on the single ...

   With:  The PMA Transmit function comprises a transmitter to generate a 3 level modulated
   signal on the single ..

   OR With:  The PMA Transmit function comprises a transmitter to generate 3 level
   modulated signals on the single ...

*Proposed Response*          *Response Status*  **O**

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*Cl* **97**        *SC* **97.4.2.2**              *P* **87**        *L* **29**           # 562
McClellan, Brett                             Marvell

*Comment Type*  **T**        *Comment Status*  **D**
   No register bits are defined for PMA Transmit fault. Delete this paragraph

*SuggestedRemedy*
   Delete this paragraph

*Proposed Response*          *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general            *Cl* **97**        Page 25 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn         *SC* **97.4.2.2**    5/9/2015 10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.4.2.3**          *P* **87**      *L* **33**          *#* 417
Regev, Alon                              Ixia

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

The subclause "97.4.2.3 PMA transmit disable function" contains a subclause "97.4.2.3.2 PMA MDIO function mapping" that maps status/control other than transmit disable, so it really doesn't belong under "transmit".

Furthermore, I would argue that transmit disable isn't its own function - it really is a control of the transmit functtion.

This same convention is followed in Clause 55 (10GBASE-T), but I don't think we should repeat mistakes made there.

*SuggestedRemedy*

Move and rename Subclause "97.4.2.3.1 Global PMA transmit disable function" to be a subcluase of "97.4.2.2 PMA Transmit function" and rename it's title to "97.4.2.2.1 Global PMA transmit disable".

Move subclause "97.4.2.3.2 PMA MDIO function mapping" to "97.4.2.9 PMA MDIO function mapping".

Deletee section 97.4.2.3 PMA transmit disalbe function".

*Proposed Response*         *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.3.1**        *P* **87**      *L* **35**          *#* 561
McClellan, Brett                         Marvell

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

We don't need the term 'Global'. There is only one channel.

*SuggestedRemedy*

Delete 'Global' and 'Global_', also on page 88 line 9,

*Proposed Response*         *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.3.2**        *P* **88**      *L* **3**           *#* 563
McClellan, Brett                         Marvell

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

register addresses in table 97-5 and 97-6 need to be updated

*SuggestedRemedy*

change to
97-5
MDIO control variable PMA register name Register/bit numberPMA control variable
Reset BASE-T1 PMA Control Register 1.2304.15 PMA_reset
Transmit disable BASE-T1 PMA Control Register 1.2304.10 PMA_transmit_disable
97-6
MDIO status variable PMA register name Register/bit numberPMA status variable
Receive fault 1000BASE-T1 PMA Status Register 2 1.8.10 PMA_receive_fault

*Proposed Response*         *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.4**          *P* **88**      *L* **45**          *#* 549
McClellan, Brett                         Marvell

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

fix reference

*SuggestedRemedy*

change: 45.2.1.7.5 to: 45.2.1.130.6

*Proposed Response*         *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.5**          *P* **89**      *L* **8**           *#* 418
Regev, Alon                              Ixia

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

I believe that the reference to Figure 97-20 actually means to refer to Figure 97-19.

I also believe that Figure 97-20 is redundant (it does not provide any more information than exists in Figure 97-17 and will have no references (once we correct the reference to Figure 97-19).

*SuggestedRemedy*

On Page 89, Line 8, Change "Figure 97-18" to "Figure 97-17".

On Page 89, line 35, delete Figure 97-18.

*Proposed Response*         *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**              Page 26 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.4.2.5**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.4.2.5**           *P* **89**        *L* **8**          # 564
McClellan, Brett                          Marvell

*Comment Type*   **T**        *Comment Status*   **X**
256 repetitions may be excessive, this takes 1 millisecond.

*SuggestedRemedy*
Consider changing 256 to 64.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.5.1**          *P* **89**        *L* **43**         # 419
Regev, Alon                               Ixia

*Comment Type*   **T**        *Comment Status*   **X**
Sentence "Reserved<bit location> represents any unused values and shall be set to zero
and ignored by the link partner" is not clear.

Change to "Reserved<bit location> represents any unused values and shall be set to zero
on transmit and ignored when received by the link partner."

*SuggestedRemedy*
Change "Reserved<bit location> represents any unused values and shall be set to zero
and ignored by the link partner"

To "Reserved<bit location> represents any unused values and shall be set to zero on
transmit and ignored when received by the link partner."

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.5.5**          *P* **91**        *L* **18**         # 550
McClellan, Brett                          Marvell

*Comment Type*   **E**        *Comment Status*   **X**
akward sentence

*SuggestedRemedy*
change "The remaining 7-bit Oct10<7:1> shall be user configurable register."
to "The remaining 7-bit Oct10<7:1> is a user configurable register."

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.5.5**          *P* **91**        *L* **3**          # 465
Wienckowski, Natalie                      General Motors

*Comment Type*   **E**        *Comment Status*   **X**
This sentence is confusing.  Change punctuation to make it clearer.  Also could add the
word then if preferred.

*SuggestedRemedy*
Replace:  When PMA_state<7:6>=00, [0ct8<7:0>, 0ct9<7:0>, 0ct10<7:0>] contains the two
PHY capability bits (Cap), the user configurable register bits, and the 15-bit data mode
scrambler seed (Seed).

With:  When PMA_state<7:6>=00; [0ct8<7:0>, 0ct9<7:0>, 0ct10<7:0>] contains the two
PHY capability bits (Cap), the user configurable register bits, and the 15-bit data mode
scrambler seed (Seed).

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.5.5**          *P* **91**        *L* **4**          # 565
McClellan, Brett                          Marvell

*Comment Type*   **T**        *Comment Status*   **X**
"(Cap)" is not used anywhere else.
delete "(Cap)"

*SuggestedRemedy*
delete "(Cap)"

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.4.2.5.6**          *P* **91**        *L* **25**         # 420
Regev, Alon                               Ixia

*Comment Type*   **T**        *Comment Status*   **X**
The switch from PAM2 to PAM3 should only occur at an RS frame boundary (not at an
arbitrary partial frame in the middle of an RS frame).  Otherwise, the PCS receive will not
be able to interpret the initial frame (as some of the partial frames will be missing).

*SuggestedRemedy*
After page 91, line 25, add the following sentence:
"DataSwPFC24 must be an integer multiple of 15 so that the switch from PAM2 to PAM3
occurs on an RS frame boundary."

*Proposed Response*        *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**          Page 27 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.4.2.5.6**     5/9/2015 10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.4.2.5.9**              *P* **92**         *L* **13**          # 551
McClellan, Brett                        Marvell

*Comment Type*  **E**        *Comment Status*  **X**
clean up text

*SuggestedRemedy*
change "When the Auto-Negotiation process asserts link_control=ENABLE or when the
PHY Link Synchronization process asserts link_control=ENABLE, PHY Control enters the
INIT_MAXWAIT_TIMER state. Upon entering the INIT_MAXWAIT_TIMER state, the
maxwait_timer is started.
PHY Control then transition to the SILENT state. Upon entering this state the
minwait_timer is started and the PHY transmits zeros (tx_mode=SEND_Z)."
to
"When the Auto-Negotiation or PHY Link Synchronization process asserts
link_control=ENABLE, PHY Control enters the INIT_MAXWAIT_TIMER state and the
maxwait_timer is started. PHY Control then transitions to the SILENT state where the
minwait_timer is started and the PHY transmits zeros (tx_mode=SEND_Z)."

*Proposed Response*          *Response Status*  **O**


*Cl* **97**        *SC* **97.4.2.5.9**              *P* **92**         *L* **20**          # 422
Regev, Alon                             Ixia

*Comment Type*  **T**        *Comment Status*  **X**
"In MASTER mode PHY Control immediately transitions to the TRAINING state."  Is not
correct.  The transition to the TRAINING state occurs only after minwait_timer is done.

*SuggestedRemedy*
Change "In MASTER mode PHY Control immediately transitions to the TRAINING state."

To "In MASTER mode PHY Control transitions to the TRAINING state immediately after
the minwait_timer expires."

*Proposed Response*          *Response Status*  **O**


*Cl* **97**        *SC* **97.4.2.5.9**              *P* **92**         *L* **22**          # 552
McClellan, Brett                        Marvell

*Comment Type*  **E**        *Comment Status*  **X**
clean up text

*SuggestedRemedy*
change: "Upon entering the TRAINING state, the minwait_timer is started and the PHY
Control forces transmission into the training mode by asserting tx_mode=SEND_T, which
includes the transmission of InfoFields."
to "Upon entering the TRAINING state, the minwait_timer is started and the PHY Control
asserts tx_mode=SEND_T sending PAM2, which includes the transmission of InfoFields."

*Proposed Response*          *Response Status*  **O**


*Cl* **97**        *SC* **97.4.2.5.9**              *P* **92**         *L* **49**          # 424
Regev, Alon                             Ixia

*Comment Type*  **T**        *Comment Status*  **X**
set_data_sw_pfc is referered to here, but this is not referenced anywhere else in the draft
(so it is not needed).

Also, a guideline should be given as to the minimum value of DataSwPFC24.

*SuggestedRemedy*
Change
"Upon entering the COUNTDOWN state, PHY Control sets PMA_state = 01,
set_data_sw_pfc = 1 and DataSwPFC24 to the value of the partial frame count when the
transmitter will switch from PAM2 to PAM3."

To
"Upon entering the COUNTDOWN state, PHY Control sets PMA_state = 01 and
DataSwPFC24 to the value of the partial frame count when the transmitter will switch from
PAM2 to PAM3.  DataSwPFC24 shall be set to a value that is at least PFC24 + 150 (such
that at least 10 InfoFields containing DataSwPFC24 will be sent to the link partner)."

At the end of the paragraph ending on Page 91, line 25, add the following sentence:
"DataSwPFC24 shall be set to a value that is at least 150 higher than the value of PFC24
when the PHY Control function enters the COUNTDOWN state (such that at least 10
InfoFields containing DataSwPFC24 will be sent to the link partner)."

*Proposed Response*          *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**              Page 28 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.4.2.5.9**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**  *SC* **97.4.2.5.9**  *P* **92**  *L* **9**  # 421
Regev, Alon    Ixia

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

Clarifying that if Auto-Negotiation is not used, the PHY control is in the DISABLE_TRANSMITTER state only why the PHY Link Synchronization is running.

*SuggestedRemedy*

Change "If the Auto-Negotiation function is not used, PHY Control is in the DISABLE_TRANSMITTER state and the transmitters are controlled by the PHY Link Synchronization state machine."

To "If the Auto-Negotiation function is not used, during PHY Link Synchronization PHY Control is in the DISABLE_TRANSMITTER state and the transmitters are controlled by the PHY Link Synchronization state machine."

*Proposed Response*  *Response Status* **O**

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*Cl* **97**  *SC* **97.4.2.5.9**  *P* **93**  *L* **11**  # 425
Regev, Alon    Ixia

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

The PHY Control state diagram is in Figure 97-22, not 97-23

*SuggestedRemedy*

change "Figure 97-23" to "Figure 97-22"

*Proposed Response*  *Response Status* **O**

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*Cl* **97**  *SC* **97.4.2.5.9**  *P* **93**  *L* **7**  # 566
McClellan, Brett    Marvell

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

text is incorrect, does not match the state diagram
delete: "stops the maxwait_timer,"

*SuggestedRemedy*

delete: "stops the maxwait_timer,"

*Proposed Response*  *Response Status* **O**

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*Cl* **97**  *SC* **97.4.2.5.9**  *P* **93**  *L* **7**  # 554
McClellan, Brett    Marvell

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

remove text "stops the maxwait timer,"
it does not match the state machine

*SuggestedRemedy*

remove text "stops the maxwait timer,"

*Proposed Response*  *Response Status* **O**

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*Cl* **97**  *SC* **97.4.2.5.9 Startup sequ**  *P* **92**  *L* **49**  # 349
Rojansky, Amiel    Cadence

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

"Upon entering the COUNTDOWN state, PHY Control sets PMA_state = 01, set_data_sw_pfc = 1 and DataSwPFC24 to the value of the partial frame count when the transmitter will switch from PAM2 to PAM3."

The variable set_data_sw_pfc is not defined elsewhere in the standard.

*SuggestedRemedy*

Remove
set_data_sw_pfc = 1
from the text.

*Proposed Response*  *Response Status* **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general  *Cl* **97**  Page 29 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected  RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn  *SC* **97.4.2.5.9 Startup**  5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.4.2.7**            *P* **94**        *L* **4**        # 435

Regev, Alon                              Ixia

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

If refresh is not detected reliably, the reresh monitor should restart synchronization or auto-negotiation, rather than forcing a retrain.

*SuggestedRemedy*

Change "The receiver shall force a retrain if Refresh is unreliably detected within a moving window of 50 Q/R cycles (4.32 ms)."

To
"If Refresh is not reliably detected within a moving window of 50 Q/R cycles (4.32 ms), the refresh monitor should cause the PHY to restart auto-negotiation (if auto-negotiation is enabled) or synchronization (if auto-negotiation is disabled)."

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.4.2.7**            *P* **94**        *L* **4**        # 567

McClellan, Brett                          Marvell

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

This statement lacks a description of the mechanism that causes the retrain.

*SuggestedRemedy*

change "The receiver shall force a retrain"
to "The receiver shall force a retrain by setting link_status= NOT_OK"

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.4.2.8**            *P* **94**        *L* **10**        # 426

Regev, Alon                              Ixia

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

The sentence "The received clock signal should be stable and ready for use when training has been completed (loc_rcvr_status=OK)" seems to imply a couple of incorrect things:
1. that loc_rvcr_status=OK indicates that training has been completed (actually loc_rcvr_status=OK is an input to the PHY Control state machine and it becomes OK earlier than training being completed).
2. that the received clock only needs to be stable by the time that training has been completed (actually, on the SLAVE PHY, the clock needs to be stable before setting timing_lock_OK=1 in the middle of the TRAINING state in the PHY Control state machine).

*SuggestedRemedy*

Change "The received clock signal should be stable and ready for use when training has been completed (loc_rcvr_status=OK)"

To "The received clock signal should be stable and ready for use before loc_rcvr_status can be set to OK and before timing_lock_OK is set to 1 on the a PHY with config set to SLAVE."

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.4.4.1**            *P* **95**        *L* **45**        # 376

Lo, William                              Marvell Semiconducto

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

watchdog timers never defined.

*SuggestedRemedy*

Add the following text in the PMA_watchdog_status definition
During normal operation NOT_OK is defined when:
 PAM3 symbol 0 consecutively seen on the line for longer than 2us +/-0.1us
 PAM3 symbol +1 consecutively seen on the line for longer than 3.9us +/-0.1us
 PAM3 symbol -1 consecutively seen on the line for longer than 3.9us +/-0.1us
During Low Power Idle operation NOT_OK is defined when:
 PAM3 symbol not toggling on the line for longer than 90us +/-0.1us

*Proposed Response*        *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general                    *Cl* **97**        Page 30 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn                    *SC* **97.4.4.1**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **97**      *SC* **97.4.4.2**           *P* **96**      *L* **19**          # 466
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**      *Comment Status*  **X**
Incorrect cross reference format.

*SuggestedRemedy*
The reference to 14.2.3.2 should be green since it is not in this document.

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**      *SC* **97.4.4.2**           *P* **96**      *L* **24**          # 427
Regev, Alon                         Ixia

*Comment Type*  **T**      *Comment Status*  **X**
The sentence "The maxwait_timer is tested by the Link Monitor to force link_status to be set to FAIL if the timer expires and loc_rcvr_status, PCS_state or PMA_watchdog_status is NOT_OK" does not match the condition in the state machine.

*SuggestedRemedy*
Change "The maxwait_timer is tested by the Link Monitor to force link_status to be set to FAIL if the timer expires and loc_rcvr_status, PCS_state or PMA_watchdog_status is NOT_OK"

To "The maxwait_timer is tested by the Link Monitor to force link_status to be set to FAIL if PMA_watchdog_status is NOT_OK, or if the timer expires and loc_rcvr_status is NOT_OK, or if the timer expires and PCS_status is NOT_OK."

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**      *SC* **97.4.5.1**           *P* **97**      *L* **14**          # 542
Tu, Mike                            Broadcom

*Comment Type*  **TR**      *Comment Status*  **X**
When link partner PHY drops back to SILENT state for retrain, the local receiver must drop back to SILENT state quickly as well. However based on D1.4, this is not guaranteed.

*SuggestedRemedy*
In Figure 97-22, change the three branch conditions out of COUNTDOWN, SEND_IDLE1, and SEND_IDLE2 back to the silent state

from "loc_rcvr_status=NOT_OK"

to "loc_rcvr_state=NOT_OK + PMA_watchdog_status= NOT_OK"

See wang_3bp_01_0515.pdf for more details.

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**      *SC* **97.4.5.1**           *P* **97**      *L* **25**          # 568
McClellan, Brett                       Marvell

*Comment Type*  **T**      *Comment Status*  **X**
According to the text transitions from TRAINING to COUNTDOWN and COUNTDOWN to SEND IDLE1 are also conditioned on completing transmission of a repetition of 256 Infofield messages. The transition conditions in the state machine should reflect this.

*SuggestedRemedy*
change "loc_rcvr_status = OK * rem_rcvr_status = OK * minwait_timer_done"
to "loc_rcvr_status = OK * rem_rcvr_status = OK * minwait_timer_done * infofield_complete"
change "loc_countdown _done"
to "loc_countdown _done * infofield_complete"
add definition in 97.4.4.1
"infofield_complete
Variable indicating that a complete set of Infofield messages has been sent.
Values:
FALSE: complete set of Infofield messages has not been sent.
TRUE: Complete set of Infofield messages has been sent."

*Proposed Response*        *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**         Page 31 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.4.5.1**      5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **97**        *SC* **97.4.5.1**              *P* **97**        *L* **31**          # 423

Regev, Alon                          Ixia

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

The conditions "loc_countdown_done" and "rem_countdown_done" are not defined.

*SuggestedRemedy*

In section 97.4.4.1, add the following definitions (in the correct location in alphabetical order":

"loc_countdown_done     This variable is set to FALSE when the PHY Control state machine is in the DISABLE_TRANSMITTER state and is set to TRUE after transmitting the last bit of the DataSwPFC24-1 partial flame (such that this will be TRUE before the first bit of the DataSwPFC24 partial frame is transmitted)."

"rem_countdown_done
    This variable is set to FALSE when the PHY Control state machine is in the DISABLDE TRANSMITTER state or SILENT state and is set to TRUE once the receiver has transitioned from PAM2 to PAM3 mode and has received a valid RS frame containing all IDLEs."

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.4.5.1**              *P* **97**        *L* **41**          # 543

Tu, Mike                            Broadcom

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

In Figure 97-22, when entering SEND_DATA state, the transition decision is purely based on local receiver and PCS status. Once in SEND_DATA mode the local PHY will set link_status<=OK and MAC will start sending data out.

However at this time the link partner receiver may still not be ready, for example due to noise events. Under this condition the data packets sent to the link partner will be lost.

*SuggestedRemedy*

In Figure 97-22, change the condition from "SEND_IDLE2" to "SEND_DATA"

from
"loc_rcvr_status = OK * PCS_status = OK * minwait_timer_done"

to
"loc_data_ready = OK * rem_data_ready = OK * minwait_timer_done"

See "wang_3bp_01_0515.pdf" for further details

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.4.5.1**              *P* **97**        *L* **47**          # 569

McClellan, Brett                      Marvell

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

It is possible for one device to enter the SEND DATA state but the other device to return to the SILENT state. There is no path from SEND DATA to SILENT, so the devices must wait for the link_fail_inhibit_timer to expire and then return to autoneg or SEND_S.  If a path is added from SEND DATA to SILENT then the two devices may attempt to retrain with the remaining time of the link_fail_inhibit_timer.

*SuggestedRemedy*

add path from SEND DATA to SILENT with condition "loc_rcvr_status = NOT_OK + PCS_status = NOT_OK"

*Proposed Response*        *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general                    *Cl*  **97**                        Page 32 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn                    *SC*  **97.4.5.1**                    5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.4.5.1**         *P* **98**      *L* **13**      # 570
McClellan, Brett                        Marvell

*Comment Type*  **T**      *Comment Status*  **X**
It is not clear whether the conditions for transition from LINK_DOWN to LINK_UP are
satisfied only while in the SEND DATA state or in the transition from SEND IDLE2 to SEND
DATA. Link up should only occur after PHY control is in the SEND DATA state for the
minwait timer duration.

*SuggestedRemedy*
change "minwait_timer_done * PCS_status = OK * loc_rcvr_status=OK"
to "minwait_timer_done * PCS_status = OK * loc_rcvr_status=OK * tx_mode = SEND_N"

*Proposed Response*         *Response Status*  **O**

---

*Cl* **97**      *SC* **97.4.5.2**         *P* **98**      *L* **14**      # 540
Tu, Mike                              Broadcom

*Comment Type*  **TR**      *Comment Status*  **X**
In the LINK Monitor state diagram, "link_status" may get set to OK while still in PAM2
training mode.

*SuggestedRemedy*
See "wang_3bp_01_0515.pdf".

*Proposed Response*         *Response Status*  **O**

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*Cl* **97**      *SC* **97.5**         *P* **98**      *L* **30**      # 572
McClellan, Brett                        Marvell

*Comment Type*  **T**      *Comment Status*  **X**
This section mainly specifies electrical requirements of the PMA. Consider renaming this
section PMA electrical specifications as was done in Clause 55

*SuggestedRemedy*
Change "Physical Medium Dependent (PMD) sublayer"
to "PMA electrical specifications"

*Proposed Response*         *Response Status*  **O**

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*Cl* **97**      *SC* **97.5.1**         *P* **98**      *L* **38**      # 377
Lo, William                          Marvell Semiconducto

*Comment Type*  **ER**      *Comment Status*  **X**
Reference to 97.5.2.2 incorrect

*SuggestedRemedy*
Change to 97.5.1.2

*Proposed Response*         *Response Status*  **O**

---

*Cl* **97**      *SC* **97.5.1**         *P* **98**      *L* **38**      # 428
Regev, Alon                          Ixia

*Comment Type*  **TR**      *Comment Status*  **X**
97.5.2.2  should be 97.5.1.2 and should be a link

*SuggestedRemedy*
change "97.5.2.2" to "97.5.1.2" and make it a link

*Proposed Response*         *Response Status*  **O**

---

*Cl* **97**      *SC* **97.5.1**         *P* **98**      *L* **38**      # 333
Chini, Ahmad                          Broadcom

*Comment Type*  **ER**      *Comment Status*  **X**
subclause number 97.5.2.2 needs to be changed to 97.5.1.2

*SuggestedRemedy*
replace 97.5.2.2 with 97.5.1.2

*Proposed Response*         *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**          Page 33 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.5.1**          5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.5.1**                    *P* **98**        *L* **38**        # 520
Wienckowski, Natalie                    General Motors

*Comment Type*  **ER**        *Comment Status*  **X**
Incorrect reference section.

*SuggestedRemedy*
Replace:  and 97.5.2.2 shall be used to establish a baseline for PHY EMC performance.

With:  and 97.5.1.2 shall be used to establish a baseline for PHY EMC performance.

And remove red highlight on the reference.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.5.2**                    *P* **99**        *L* **33**        # 521
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**        *Comment Status*  **X**
Subject should be pluaral.

*SuggestedRemedy*
Replace:  When in this mode, 1000BASE-T1 PHY shall provide

With:  When in this mode, 1000BASE-T1 PHYs shall provide

Alternatively, add "the" in front of "PHY".

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.5.2**                    *P* **99**        *L* **37**        # 522
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**        *Comment Status*  **X**
Subject should be pluaral.

Also on page 99, line 43.

*SuggestedRemedy*
Replace:  1000BASE-T1 PHY shall transmit

With:  1000BASE-T1 PHYs shall transmit

Alternatively, add "the" in front of "PHY".

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.5.3**                    *P* **103**        *L* **16**        # 429
Regev, Alon                    Ixia

*Comment Type*  **T**        *Comment Status*  **X**
Get rid of the question mark in "97.4.2.2 (?)"

*SuggestedRemedy*
Change "97.4.2.2 (?)" to "97.4.2.2"

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.5.3**                    *P* **103**        *L* **16**        # 334
Chini, Ahmad                    Broadcom

*Comment Type*  **ER**        *Comment Status*  **X**
the reference number is correct, need to remove (?)

*SuggestedRemedy*
remove (?)

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.5.3**                    *P* **103**        *L* **17**        # 378
Lo, William                    Marvell Semiconducto

*Comment Type*  **ER**        *Comment Status*  **X**
Correct items in red.

*SuggestedRemedy*
Remove (?) after reference to 97.4.2.2.  Remove the red highlight.
100 (TBD) should be 100 Ohm.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.5.3**                    *P* **103**        *L* **18**        # 438
Regev, Alon                    Ixia

*Comment Type*  **TR**        *Comment Status*  **X**
Change "100 (TBD)" to "100 ohm"

*SuggestedRemedy*
Change "100 (TBD)" to "100 ohm"

*Proposed Response*        *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general                    *Cl* **97**        Page 34 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn                    *SC* **97.5.3**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.5.3**              *P* **103**        *L* **18**           # 340
Chini, Ahmad                         Broadcom

*Comment Type*   **TR**        *Comment Status*  **X**
Need to replace (TBD) with Ohm sign (Omega)

*SuggestedRemedy*
Replace (TBD) with Ohm sign (Omega)

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.5.3.2**            *P* **103**        *L* **32**           # 439
Regev, Alon                          Ixia

*Comment Type*   **T**        *Comment Status*  **X**
The sentence "The captured block of signal shall be at least 40 us long with 10 times the
transmit symbols rate (7.5 Gs/s)." is not clear for two reasons:
1. it is not clear that "10 times the transmit symbols rate" refers to the sampling rate used.
2. the 7.5 Gs/s may be interpreted to refer to the "symbol rate" rather than to "10 times the
transmit symbol rate"

*SuggestedRemedy*
Change "The captured block of signal shall be at least 40 us long with 10 times the
transmit symbols rate (7.5 Gs/s)."

To "The captured block of signal shall be at least 40 us long sampled with at least with 10
times the transmit symbols rate (i.e sampled at a minimum rate of 7.5 Gs/s, which is 10
times the transmit symbol rate of 750 Ms/s)."

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.5.3.3**            *P* **104**        *L* **45**           # 440
Regev, Alon                          Ixia

*Comment Type*   **T**        *Comment Status*  **X**
It is not clear if the sentence "Transmitter timing jitter is measured by capturing
TX_TCLK125 waveform for both MASTER and SLAVE while in test mode 1 using
transmitter test fixture 3 shown in Figure 97–25." means that you need to test the PHY
under test in both MASTER and SLAVE mode or if you need to capture the clock on both
the PHY under test and the link partner.

*SuggestedRemedy*
Change "Transmitter timing jitter is measured by capturing TX_TCLK125 waveform for both
MASTER and SLAVE while in test mode 1 using transmitter test fixture 3 shown in Figure
97–25."

To "Transmitter timing jitter is measured by capturing TX_TCLK125 waveform in both
MASTER and SLAVE configs while in test mode 1 using transmitter test fixture 3 shown in
Figure 97–25."

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.5.5.1**            *P* **106**        *L* **7**            # 523
Wienckowski, Natalie                 General Motors

*Comment Type*   **TR**        *Comment Status*  **X**
This section needs to be added.

*SuggestedRemedy*
Replace:  Editorial Note (to be removed prior to publication): This is the location where
following main areas of Tx specifications will be covered,
i.e., (i) electrical specifications of the transmitter, (ii) transmitter mask (expected to be
discussed at the November plenary); and (iii) EMC
requirements, which are closely associated with the Tx mask.

With:  Appropriate text.

*Proposed Response*        *Response Status*  **O**

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**              Page 35 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn     *SC* **97.5.5.1**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **97**  *SC* **97.5.5.1.1**  *P* **106**  *L* **6**  # 336

Chini, Ahmad  Broadcom

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

Missing subclauses 97.5.5.1.1 and 97.5.5.1.2

*SuggestedRemedy*

Add subclauses 97.5.5.1.1 and 97.5.5.1.2 from chini_3bp_2a_0315.pdf

*Proposed Response*  *Response Status*  **O**

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*Cl* **97**  *SC* **97.5.5.2**  *P* **106**  *L* **11**  # 524

Wienckowski, Natalie  General Motors

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

This section needs to be added.

*SuggestedRemedy*

Replace:  Editorial Note (to be removed prior to publication): This is the location where following main areas of Rx specifications will be covered,
i.e., (i) impulse noise rejection requirements; and (ii) electrical specifications of the receiver.

With:  Appropriate text

*Proposed Response*  *Response Status*  **O**

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*Cl* **97**  *SC* **97.5.5.2.1**  *P* **106**  *L* **10**  # 337

Chini, Ahmad  Broadcom

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

Missing subclause 97.5.5.2.1

*SuggestedRemedy*

Add subclause 97.5.5.2.1 from chini_3bp_2a_0315.pdf

*Proposed Response*  *Response Status*  **O**

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*Cl* **97**  *SC* **97.5.6.1**  *P* **106**  *L* **30**  # 441

Regev, Alon  Ixia

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

There should be an empty line (or space aproximately the size of an empty line) before heading 97.5.6.1.

*SuggestedRemedy*

Add empty space before heading 97.5.6.1 as per the template.

*Proposed Response*  *Response Status*  **O**

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*Cl* **97**  *SC* **97.5.6.1.1**  *P* **106**  *L* **46**  # 514

Wienckowski, Natalie  General Motors

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

Remove extraneous "a".

*SuggestedRemedy*

Replace:  the a single pair of balanced copper cabling

Also on page 110, line 24

With:  the single balanced twisted-pair (name of cable changed as described in Comment #166)

*Proposed Response*  *Response Status*  **O**

---

*Cl* **97**  *SC* **97.6.1.1**  *P* **117**  *L* **39**  # 403

Regev, Alon  Ixia

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

The sentence "This value is continuously asserted to enable transmission of 255 PN sequence." is unclear as "255 PN sequence" is not defined.

*SuggestedRemedy*

Change "This value is continuously asserted to enable transmission of 255 PN sequence."

To "This value is continuously asserted to enable transmission of the PN sequence as defined in 96.1.

*Proposed Response*  *Response Status*  **O**

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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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl*  **97**
*SC*  **97.6.1.1**

Page 36 of 49
5/9/2015  10:25:21 AM

*Cl* **97**        *SC* **97.6.1.1**              *P* **117**        *L* **6**            # 525
Wienckowski, Natalie                    General Motors

*Comment Type*   **E**        *Comment Status*  **X**
Non-parallel construction.

*SuggestedRemedy*
Replace:  specifies whether the PHY operates as a MASTER PHY or as a SLAVE.

With:  specifies whether the PHY operates as a MASTER or as a SLAVE.

OR With:  specifies whether the PHY operates as a MASTER PHY or as a SLAVE PHY.

*Proposed Response*         *Response Status*  **O**

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*Cl* **97**        *SC* **97.7**              *P* **118**        *L* **48**            # 443
Regev, Alon                    Ixia

*Comment Type*   **T**        *Comment Status*  **X**
The sentence "The 1000BASE-T1 RS frame has a 9-bit reserved field as described in 97.3.2.2.12" is inaccurate due to 3 reasons:
1. the field is not marked as a "reserverd" field.  It is labeled as an "OAM9" field.
2. Section 97.3.2.2.12 doesn't actually describe the field.  It references it.
3. It doesn't specify in which mode this is used.

Also, use of OAM during LPI refresh is not described.

*SuggestedRemedy*
Change "The 1000BASE-T1 RS frame has a 9-bit reserved field as described in 97.3.2.2.12"

To "OAM frame data  is contained in the  9-bit OAM9 field described in 97.3.2.2.4 for normal power data mode and described in 97.3.5.3 for low power mode."

*Proposed Response*         *Response Status*  **O**

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*Cl* **97**        *SC* **97.7.1**              *P* **119**        *L* **3**            # 526
Wienckowski, Natalie                    General Motors

*Comment Type*   **E**        *Comment Status*  **X**
Missing period at end of sentence.

*SuggestedRemedy*
Add period to the end of:  OAM frame – A frame consisting of 12 octets of data with 12 parity bits

*Proposed Response*         *Response Status*  **O**

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*Cl* **97**        *SC* **97.7.1**              *P* **119**        *L* **5**            # 527
Wienckowski, Natalie                    General Motors

*Comment Type*   **E**        *Comment Status*  **X**
Subject and verb don't agree.

*SuggestedRemedy*
Replace:  12 OAM symbols makes up an

With:  12 OAM symbols make up an

*Proposed Response*         *Response Status*  **O**

---

*Cl* **97**        *SC* **97.7.1**              *P* **119**        *L* **8**            # 407
Regev, Alon                    Ixia

*Comment Type*   **T**        *Comment Status*  **X**
Change "97.3.2.2.12" to "97.3.2.2.4" as 97.3.2.2.12 doesn't actually describe the field.  It references it.

The field is not called "reserved".  It is labeled "OAM".

*SuggestedRemedy*
Change "97.3.2.2.12" to "97.3.2.2.4"

Change "reserved" to "OAM"

*Proposed Response*         *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general        *Cl* **97**        Page 37 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn        *SC* **97.7.1**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **97**    *SC* **97.7.2.2.3**    *P* **120**    *L* **33**    # 528

Wienckowski, Natalie    General Motors

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

Awkward wording.

Correct also in 97.7.4.1: page 125, line 24; page 126, line 29; and page 128, line 13.

*SuggestedRemedy*

Replace:  01 – LPI refresh insufficient for maintain PHY SNR.

With:  01 – LPI refresh insufficient to maintain PHY SNR.

*Proposed Response*    *Response Status* **O**

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*Cl* **97**    *SC* **97.7.2.2.5**    *P* **120**    *L* **50**    # 529

Wienckowski, Natalie    General Motors

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

Need to change previously to previous or to previously sent.

*SuggestedRemedy*

Replace:  The toggle bit in the current OAM message is set to the opposite value of the toggle bit in the previously OAM message only if link partner acknowledge the OAM message is received.

With:  The toggle bit in the current OAM message is set to the opposite value of the toggle bit in the previous OAM message only if link partner acknowledge the OAM message is received.

*Proposed Response*    *Response Status* **O**

---

*Cl* **97**    *SC* **97.7.2.2.5**    *P* **120**    *L* **53**    # 530

Wienckowski, Natalie    General Motors

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

Incorrect grammar.

*SuggestedRemedy*

Replace:  multiple OAM frame.

With:  multiple OAM frames.

*Proposed Response*    *Response Status* **O**

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*Cl* **97**    *SC* **97.7.2.2.6**    *P* **121**    *L* **5**    # 531

Wienckowski, Natalie    General Motors

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

Incorrect verb tense

*SuggestedRemedy*

Replace:  Ack is set by the PHY to let the link partner know that the OAM message sent by the link partner is successfully

With:  Ack is set by the PHY to let the link partner know that the OAM message sent by the link partner was successfully

*Proposed Response*    *Response Status* **O**

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*Cl* **97**    *SC* **97.7.2.3**    *P* **122**    *L* **21**    # 532

Wienckowski, Natalie    General Motors

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

poor grammar

*SuggestedRemedy*

Replace:  The fields shall retain their value and not updated when a rejected OAM frame is received.

With:  The fields shall retain their value and not be updated when a rejected OAM frame is received.

*Proposed Response*    *Response Status* **O**

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*Cl* **97**    *SC* **97.7.2.4**    *P* **122**    *L* **26**    # 408

Regev, Alon    Ixia

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

Reference to 97.7.2.2.1 is wrong.  It should should be to 97.7.2.2.3

*SuggestedRemedy*

Change "97.7.2.2.1" to "97.7.2.2.3"

*Proposed Response*    *Response Status* **O**

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general    *Cl* **97**    Page 38 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected    RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn    *SC* **97.7.2.4**    5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.7.2.4**              *P* **122**        *L* 29        # 467
Wienckowski, Natalie                  General Motors

*Comment Type*  **ER**      *Comment Status*  **X**
Awkward wording.

*SuggestedRemedy*
Replace:  If EEE is implemented there may be a case where a PHY's receiver can no longer keep good SNR based on quiet/refresh cycles. Instead of dropping link, the PHY can attempt to recover by forcing the link partner to exit LPI in its egress direction so that the PHY can receive normal activity to recover.

With: If EEE is implemented, there may be a case where a PHY's receiver can no longer maintain good SNR based on quiet/refresh cycles. Instead of dropping link, the PHY can attempt to recover link by forcing the link partner to exit LPI in its egress direction so that the PHY can use normal activity to recover.

*Proposed Response*          *Response Status*  **O**


*Cl* **97**      *SC* **97.7.2.4**              *P* **122**        *L* 35        # 379
Lo, William                          Marvell Semiconducto

*Comment Type*  **TR**      *Comment Status*  **X**
Rules for entering and exiting LPI via OAM is TBD.
It can be better defined with modification in another section.

*SuggestedRemedy*
Delete "The rules of exiting and entering LPI are discussed in TBD. "
Add the following conditions to tx_lpi_active definition.  New text as follows in page 80 line 30.
tx_lpi_active
This variable is set FALSE at next wake frame if either non-LP_IDLE is detected on GMII in any block or if the PHY receives SNR<1:0> set to 01 by its link partner or if the PHY transmits SNR<1:0> set to 01 to its link partner according to Clause 97.7.2.4.
This variable is set TRUE on next RS frame if both LP_IDLE detected on GMII in the last 80/81 block and the PHY does not receive SNR<1:0> set to 01 by its link partner and the PHY does not transmit SNR<1:0> set to 01 to its link partner according to Clause 97.7.2.4.

*Proposed Response*          *Response Status*  **O**


*Cl* **97**      *SC* **97.7.2.4**              *P* **122**        *L* 36        # 409
Regev, Alon                          Ixia

*Comment Type*  **TR**      *Comment Status*  **X**
Change "TBD" to "97.3.2.2.16 and 97.3.5"

*SuggestedRemedy*
Change "TBD" to "97.3.2.2.16 and 97.3.5"

*Proposed Response*          *Response Status*  **O**


*Cl* **97**      *SC* **97.7.2.6**              *P* **122**        *L* 52        # 468
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**       *Comment Status*  **X**
Plural noun with singular pronoun representing it.

*SuggestedRemedy*
Replace:  pass OAM messages and verify its delivery.

With:  pass OAM messages and verify their delivery.

*Proposed Response*          *Response Status*  **O**


*Cl* **97**      *SC* **97.7.2.6**              *P* **123**        *L* 49        # 469
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**       *Comment Status*  **X**
An should be used before a noun starting with a vowel.

*SuggestedRemedy*
Replace:  that a OAM message

With:  that an OAM message

*Proposed Response*          *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general               *Cl* **97**            Page 39 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **97.7.2.6**       5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**      *SC* **97.7.4.1**              *P* **126**      *L* **36**          # 470
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**        *Comment Status*  **X**
   poor grammar

*SuggestedRemedy*
   Replace:  The toggle bit value associated with the eight octet OAM message transmit by
   the PHY.

   With:  The toggle bit value associated with the eight octet OAM message transmitted by
   the PHY.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.7.4.1**              *P* **127**      *L* **23**          # 380
Lo, William                       Marvell Semiconducto

*Comment Type*  **E**        *Comment Status*  **X**
   Line needs to be indented

*SuggestedRemedy*
   See above

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.7.4.1**              *P* **127**      *L* **3**           # 471
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**        *Comment Status*  **X**
   Missing period at end of sentence.

*SuggestedRemedy*
   Add period to end of:  Acknowledge from link partner in response to PHY's OAM message

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.7.4.1**              *P* **128**      *L* **17**          # 472
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**        *Comment Status*  **X**
   Awkward wording.

*SuggestedRemedy*
   Replace:  The how this status is generated and the threshold for the status is
   implementation dependent.

   With:  How this status is generated and the threshold for the status is implementation
   dependent.

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.7.4.1**              *P* **128**      *L* **20**          # 473
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**        *Comment Status*  **X**
   poor grammar - a befor a noun means one, not many

*SuggestedRemedy*
   Replace:  This variable is set to true whenever the transmit data stream reaches the start
   of a Reed Solomon frames

   With:  This variable is set to true whenever the transmit data stream reaches the start of a
   Reed Solomon frame

*Proposed Response*        *Response Status*  **O**


*Cl* **97**      *SC* **97.7.4.2**              *P* **128**      *L* **50**          # 474
Wienckowski, Natalie                  General Motors

*Comment Type*  **E**        *Comment Status*  **X**
   missing period

*SuggestedRemedy*
   Add period after:  OAM frame receive symbol count

*Proposed Response*        *Response Status*  **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl*  **97**                Page 40 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn     *SC*  **97.7.4.2**          5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.7.4.3**              *P* **129**      *L* **9**            # 475
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**        *Comment Status*  **X**
  missing period

*SuggestedRemedy*
  Add period after:  This function outputs a 16 bit CRC value using 10 octet input as defined
  in 97.7.2.2.10

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.7.4.4**              *P* **130**      *L* **4**            # 381
Lo, William                        Marvell Semiconducto

*Comment Type*  **E**        *Comment Status*  **X**
  "Reset" should be lower case "reset"

*SuggestedRemedy*
  Applies to both figures 97-42 and 97-43

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.8.1**              *P* **131**      *L* **38**            # 404
Regev, Alon                        Ixia

*Comment Type*  **E**        *Comment Status*  **X**
  Sections 97.8.1, 97.8.2, and 97.8.2.2 are empty

*SuggestedRemedy*
  Delete 97.8.1, 97.8.2, and 97.8.2.2
  Renumber 97.8.2.1 to 97.8.1.
  Renumber 97.8.2.3 to 97.8.2

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.8.1**              *P* **31**      *L* **38**            # 338
Chini, Ahmad                        Broadcom

*Comment Type*  **TR**        *Comment Status*  **X**
  Missing subclauses 97.8.1 and 97.8.2

*SuggestedRemedy*
  Add subclauses 97.8.1 and 97.8.2 from chini_3bp_2a_0315.pdf

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.8.2.1**              *P* **131**      *L* **42**            # 476
Wienckowski, Natalie                    General Motors

*Comment Type*  **E**        *Comment Status*  **X**
  Add commas around explanatory clause to improve readability.

*SuggestedRemedy*
  Replace:  The differential impedance at the MDI for each transmit/receive channel shall be
  such that any reflection due to differential signals incident upon the MDI from a balanced
  cabling having a nominal differential characteristic impedance of 100 Ohm is attenuated,
  relative to the incident signal per Equation (97–29).

  With:  Replace:  The differential impedance, at the MDI for each transmit/receive channel
  shall be such that any reflection due to differential signals incident upon the MDI from a
  balanced cabling having a nominal differential characteristic impedance of 100 Ohm, is
  attenuated, relative to the incident signal per Equation (97–29).

*Proposed Response*        *Response Status*  **O**


*Cl* **97**        *SC* **97.8.2.3**              *P* **132**      *L* **16**            # 477
Wienckowski, Natalie                    General Motors

*Comment Type*  **T**        *Comment Status*  **X**
  - 50V is not a positive voltage

*SuggestedRemedy*
  Replace:  positive voltages of up ±50 V

  With:  positive voltages of up to 50 V

  OR With:  voltages of up/down to ±50 V

*Proposed Response*        *Response Status*  **O**

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **97**        Page 41 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn      *SC* **97.8.2.3**      5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **97**        *SC* **97.8.2.3**        *P* **132**        *L* **18**        # 335
Chini, Ahmad                              Broadcom

*Comment Type*  **ER**        *Comment Status*  **X**
    No other value was suggested by Task Force, need to remove "(or TBD)"

*SuggestedRemedy*
    remove (or TBD)

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **97.9.1**        *P* **132**        *L* **44**        # 478
Wienckowski, Natalie                      General Motors

*Comment Type*  **TR**        *Comment Status*  **X**
    Missing content!

*SuggestedRemedy*
    Replace:  Editorial Note (to be removed prior to publication): Register descriptions to be
    added once we decide how to tackle autoneg registers in Clause 45.

    With: correct register definitions

*Proposed Response*        *Response Status*  **O**

---

*Cl* **97**        *SC* **97.9.1**        *P* **132**        *L* **44**        # 382
Lo, William                               Marvell Semiconducto

*Comment Type*  **E**        *Comment Status*  **X**
    Editorial note can be removed.
    All registers autoneg registerst are in clause 45 as of D1.4.

*SuggestedRemedy*
    Remove editorial note.

*Proposed Response*        *Response Status*  **O**

---

*Cl* **97**        *SC* **Figure 97-12**        *P* **84**        *L* **15**        # 344
Rojansky, Amiel                           Cadence

*Comment Type*  **T**        *Comment Status*  **X**
    The PCS Transmit state machine transition from SEND_IDLES to SEND_DATA, might
    occur while a MAC frame is beting transmitted on the GMII by the MAC Tx.
    This will cause a transmission of a corrupted MAC frame. Only the frame tail is transmitted,
    since the the frame head is cut-off, while the state machine is in SEND_IDLES.
    As a result the MAC Rx of the link partner might report a CRC error on this  frame.
    This is not a clean way to discard MAC frames. A clean way is to discard the entire MAC
    frame. I think it is also not a legal Ethernet behaviour.

*SuggestedRemedy*
    "And" the transition of the PCS Transmit state machine from SEND_IDLES to
    SEND_DATA, with a condition that tx_raw<99:0> is all IDLES or consists of any
    combination of a start of a new frame.

    Note that since the minimum IPG is 12 IDLE cycles on the GMII, the condition should not
    cause a transmisstion of a tx_raw<99:0> that holds a combination of End of frame, Idle
    and a start of a new frame.

*Proposed Response*        *Response Status*  **O**

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*Cl* **97**        *SC* **Figure 97–14**        *P* **84**        *L* **35**        # 345
Rojansky, Amiel                           Cadence

*Comment Type*  **T**        *Comment Status*  **X**
    The dashed box of the PCS Transmit state diagram, related to EEE, does not handle the
    transmission of the quit refresh cycle correctly. It actually contradics other sections of the
    standard.

    The correct behavior is to encode LPBLOCK_T, for exactly one RS frame, and then
    encode tx_raw<99:0>=0 blocks (for refresh), or IBLOCK_T (in a case of wake).

*SuggestedRemedy*
    Add a new state called SEND_REFRESH to Figure 97–14—PCS Transmit state diagram.

    The state machine will transition to the SEND_REFRESH state from state SEND_LPI, after
    a transmission of an entire RS frame. It may also go to  SEND_WAKE as today.
    From SEND_REFRESH it will go to SEND_WAKE when TX_AGGREGATE *
    tx_data_mode * !tx_lpi_active.

*Proposed Response*        *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general        *Cl*  **97**        Page 42 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn        *SC*  **Figure 97–14**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

| *Cl* **98** | *SC* **2.1.1.1** | *P* **141** | *L* **51** | *#* 539 |
|---|---|---|---|---|

joseph, cordaro                           broadcom

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

There is an inconsistency in Clause 98 for the definition of the end of the DME page. Some sort of end of page is required after the CRC for proper differential detection. Section 98.1.1.1 says that the end of the DME page is a Manchester violation [T6] (page 141 line 51) and page 142 lines 9-10 show the Manchester violation delimiter as three consecutive symbols. However, Section 982.1.13 DME page Delimiters on page 144 line 45 says, "The page end is followed by a dummy zero." Figure 98-7 on page 145 shows the end delimiter as a dummy zero.

*SuggestedRemedy*

Change 98.2.1.1.1 Page 141 line 50 from
"A DME page carries a 48-bit Auto-Negotiation page. It consists of 158 evenly spaced transition positions that contain a starting sync header, the 48-bit page, 16-bit CRC, and an ending Manchester Violation delimiter."
To:"A DME page carries a 48-bit Auto-Negotiation page. It consists of 156 evenly spaced transition positions that contain a starting sync header, the 48-bit page, 16-bit CRC, and an ending dummy zero."

Change 98.2.1.1.1 page 142 line 8 from
"The final 3 positions contain the ending Manchester violation delimiter, which marks the end of the page. The ending Manchester violation contains a transition at position 155 and no transitions at the remaining positions. Position 158 contains a transition from active to quiet."
To:
"The final 2 positions contain a dummy zero for proper differential detection of the last bit of the CRC. The dummy zero contains a transition at position 154 and no transition at 155. Position 156 contains a transition from active to quiet"

Change page 142 line 12 from:
"The starting sync header and ending Manchester violation delimiter are the only places where three or more intervals occur between transitions. This allows the receiver to obtain page synchronization."
To:
"The starting sync header is the only place where three or more intervals occur between transitions. This allows the receiver to obtain page synchronization"

*Proposed Response*       *Response Status* **O**

| *Cl* **98** | *SC* **98.2** | *P* **140** | *L* **41** | *#* 383 |
|---|---|---|---|---|

Lo, William                           Marvell Semiconducto

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

Bullets should be a, b, c, d not a, a, a, a

*SuggestedRemedy*

See above

*Proposed Response*       *Response Status* **O**

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general                                    *Cl* **98**              Page 43 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn                    *SC* **98.2**          5/9/2015 10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **98**        *SC* **98.2.1.1.1**              *P* **141**        *L* **51**        # 574
McClellan, Brett                        Marvell

*Comment Type*    **T**        *Comment Status*    **X**
the end delimiter is no longer a Manchester violation

*SuggestedRemedy*
change "and an ending Manchester violation delimiter."
to "and an end delimiter."
also page 142 line 8
change "The final 3 transition positions contain the ending Manchester violation delimiter,
which marks the end of the page. The ending Manchester violation contains a transition at
position 155 and no transitions at the
remaining positions. Position 158 contains a transition from active to quiet.
The starting sync header and ending Manchester violation delimiter are the only places
where three or more intervals occur between transitions. This allows the receiver to obtain
page synchronization."
to "The final 2 transition positions contain the ending delimiter, which marks the end of the
page. The ending delimiter contains a transition at position 155 and no transitions at the
remaining positions. Position 157 contains a transition from active to quiet."
page 155 line 38
change "detect_mv_end
Status indicating that the receiver has detected a Manchester Violation end delimiter.
Values:
FALSE: set to false after any Receive State Diagram state transition (default).
TRUE: Manchester violation end delimiter has been detected."
to "detect_mv_end
Status indicating that the receiver has detected the end delimiter.
Values:
FALSE: set to false after any Receive State Diagram state transition (default).
TRUE: end delimiter has been detected."
change "mv_end_delimiter; Auto-Negotiation causes the transmission of the Manchester
violation end delimiter on the MDI."
to "mv_end_delimiter; Auto-Negotiation causes the transmission of the end delimiter on the
MDI."
page 159 line 35
change "transmit_mv_end_done
Status indicating that the transmission of the Manchester violation end delimiter has been
completed.
Values:
FALSE: transmission of the Manchester violation end delimiter is in progress.
TRUE: transmission of the Manchester violation end delimiter has been completed."
to "transmit_mv_end_done
Status indicating that the transmission of the end delimiter has completed.
Values:
FALSE: transmission of the end delimiter is in progress.
TRUE: transmission of the end delimiter has completed."

*Proposed Response*          *Response Status*  **O**


*Cl* **98**        *SC* **98.2.1.1.1**              *P* **142**        *L* **39**        # 573
McClellan, Brett                        Marvell

*Comment Type*    **T**        *Comment Status*    **X**
Oct4 through Oct10 should be changed to 48 data bits

*SuggestedRemedy*
change "Oct4 through Oct10"
to "D0 to D47"

*Proposed Response*          *Response Status*  **O**


*Cl* **98**        *SC* **98.2.1.1.1**              *P* **143**        *L* **5**        # 384
Lo, William                        Marvell Semiconducto

*Comment Type*    **TR**        *Comment Status*    **X**
Pseudo Random generator shows one of 2 possible polynominals without defining how to
choose which one.  No need to specify a particular polynominal since the code_sel variable
(page 155 line 11) specifies general property.

*SuggestedRemedy*
Keep randomization as a requirement but let the way randomization is done be
implementation specific. Hence:
- Delete figure 98-4
- Change page 142 line 46 from:
The polarity at position 0 is determined the pseudo-random generator as shown in Figure
98–4.
To: The polarity at position 0 is randomly determined in an implementation specific manner.
- Delete page 143 line 12. "The counter shall increment once per DME page."

*Proposed Response*          *Response Status*  **O**


*Cl* **98**        *SC* **98.2.1.1.2**              *P* **144**        *L* **32**        # 575
McClellan, Brett                        Marvell

*Comment Type*    **T**        *Comment Status*    **X**
T5  should be (4619 4620 4621)+60 assuming end delimiter is 2xT1 = 60ns

*SuggestedRemedy*
change " 4619 4620 4621"
to "4679 4680 4681 "

*Proposed Response*          *Response Status*  **O**

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general            *Cl* **98**            Page 44 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn        *SC* **98.2.1.1.2**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **98**      *SC* **98.2.1.1.2**           *P* **144**        *L* **33**           # 385
Lo, William                              Marvell Semiconducto

*Comment Type*   **TR**        *Comment Status*   **X**
   T6 timing no longer exists

*SuggestedRemedy*
   Delete T6 row from table 98-1

*Proposed Response*          *Response Status*   **O**


*Cl* **98**      *SC* **98.2.1.1.3**           *P* **144**        *L* **38**           # 482
Wienckowski, Natalie                     General Motors

*Comment Type*   **E**        *Comment Status*   **X**
   Incorrect Editor's note, refers to section 105.2.1.1.3.

*SuggestedRemedy*
   Remove note or change to correct section, 98.2.1.1.3.

*Proposed Response*          *Response Status*   **O**


*Cl* **98**      *SC* **98.2.1.1.3**           *P* **144**        *L* **40**           # 386
Lo, William                              Marvell Semiconducto

*Comment Type*   **T**        *Comment Status*   **X**
   T1 is technically more accurate

*SuggestedRemedy*
   Change 26 x T3 to 26 x T1

*Proposed Response*          *Response Status*   **O**


*Cl* **98**      *SC* **98.2.1.1.4**           *P* **145**        *L* **8**            # 339
Chini, Ahmad                             Broadcom

*Comment Type*   **TR**        *Comment Status*   **X**
   Missing subclause 97.2.1.1.4

*SuggestedRemedy*
   Add subclause 98.2.1.1.4 from chini_3bp_2a_0315.pdf

*Proposed Response*          *Response Status*   **O**


*Cl* **98**      *SC* **98.2.1.2**            *P* **145**        *L* **36**           # 387
Lo, William                              Marvell Semiconducto

*Comment Type*   **TR**        *Comment Status*   **X**
   Reference to 28.2.1.2 incorrect

*SuggestedRemedy*
   Change 28.2.1.2 to
   98.2.1.2.7, 98.2.1.2.8, and 98.2.1.2.9 respectively

*Proposed Response*          *Response Status*   **O**


*Cl* **98**      *SC* **98.2.1.2.6**          *P* **147**        *L* **26**           # 388
Lo, William                              Marvell Semiconducto

*Comment Type*   **E**        *Comment Status*   **X**
   Highlighted yellow references are correct

*SuggestedRemedy*
   Unhighlight yellow sections

*Proposed Response*          *Response Status*   **O**


*Cl* **98**      *SC* **98.2.1.2.6**          *P* **147**        *L* **27**           # 483
Wienckowski, Natalie                     General Motors

*Comment Type*   **E**        *Comment Status*   **X**
   There is yellow highlighting on references to clauses outside this document.

*SuggestedRemedy*
   Change yellow highlighted referecnes to green text to match the rest of the document.

*Proposed Response*          *Response Status*   **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general     *Cl* **98**          Page 45 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn     *SC* **98.2.1.2.6**     5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **98**        *SC* **98.2.1.2.8**        *P* **147**        *L* **51**        # 484
Wienckowski, Natalie                                General Motors

*Comment Type* **E**        *Comment Status* **X**
poor grammar

*SuggestedRemedy*
Replace:  reception of at least one DME pages with

With:  reception of at least one DME page with

*Proposed Response*        *Response Status* **O**


*Cl* **98**        *SC* **98.2.1.2.8**        *P* **148**        *L* **1**        # 389
Lo, William                                Marvell Semiconducto

*Comment Type* **TR**        *Comment Status* **X**
Register reference is incorrect

*SuggestedRemedy*
7.522, 7.523, 7.524 should be change to 7.523, 7.524, 7.525

*Proposed Response*        *Response Status* **O**


*Cl* **98**        *SC* **98.2.4.2**        *P* **149**        *L* **33**        # 390
Lo, William                                Marvell Semiconducto

*Comment Type* **ER**        *Comment Status* **X**
Incorrect reference

*SuggestedRemedy*
98B.3 should be 98B.4

*Proposed Response*        *Response Status* **O**


*Cl* **98**        *SC* **98.2.4.3**        *P* **150**        *L* **5**        # 485
Wienckowski, Natalie                                General Motors

*Comment Type* **E**        *Comment Status* **X**
poor wording

*SuggestedRemedy*
Replace:  message code, which contain predefined 11-bit codes, and unformatted code contains 32 bit codes.

With:  message code, which contains predefined 11-bit codes, and unformatted code which contains 32 bit codes.

*Proposed Response*        *Response Status* **O**


*Cl* **98**        *SC* **98.2.4.3.1**        *P* **150**        *L* **22**        # 391
Lo, William                                Marvell Semiconducto

*Comment Type* **TR**        *Comment Status* **X**
References shown are not precise and order is incorrect.

*SuggestedRemedy*
Change 28.2.3.4, 28.2.1.2.5, and 28.2.1.2.6
To 98.2.1.2.9, 98.2.1.2.8, 28.2.3.4.5, 28.2.3.4.6, and 28.2.3.4.7

*Proposed Response*        *Response Status* **O**


*Cl* **98**        *SC* **98.3**        *P* **152**        *L* **14**        # 392
Lo, William                                Marvell Semiconducto

*Comment Type* **TR**        *Comment Status* **X**
Register reference is incorrect for BASE-T1 AN LP NEXT PAGE

*SuggestedRemedy*
7.524.15:0, 7.523.15:0, 7.522.15:0 should be changed to
7.525.15:0, 7.524.15:0, 7.523.15:0

*Proposed Response*        *Response Status* **O**

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general        *Cl* **98**        Page 46 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn        *SC* **98.3**        5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

*Cl* **98**        *SC* **98.5.1**              *P* **154**      *L* **2**        # 486
Wi-enckowski, Natalie                        General Motors

*Comment Type*   **E**        *Comment Status*   **X**
poor grammar

*SuggestedRemedy*
Replace:  Indicates that at least one link codewords with good CRC16 was received.

With:  Indicates that at least one link codeword with good CRC16 was received.

*Proposed Response*          *Response Status*   **O**


*Cl* **98**        *SC* **98.5.1**              *P* **155**      *L* **43**       # 393
Lo, William                                  Marvell Semiconducto

*Comment Type*   **TR**       *Comment Status*   **X**
Changed start delimiteer to Golay.  Text needs to follow.

*SuggestedRemedy*
Replace detect_mv_start definition as follows:
detect_mv_start
Status indicating that the receiver has detected a starting sync header as defined in Clause
98.2.1.1.1.
Values:
FALSE: set to false after any Receive State Diagram state transition (default).
TRUE: Starting sync header  has been detected.

*Proposed Response*          *Response Status*   **O**


*Cl* **98**        *SC* **98.5.1**              *P* **155**      *L* **44**       # 487
Wienckowski, Natalie                         General Motors

*Comment Type*   **E**        *Comment Status*   **X**
missing period

*SuggestedRemedy*
Add period after:  Status indicating that the receiver has detected a Manchester Violation
start delimiter

*Proposed Response*          *Response Status*   **O**


*Cl* **98**        *SC* **98.5.1**              *P* **155**      *L* **50**       # 488
Wienckowski, Natalie                         General Motors

*Comment Type*   **E**        *Comment Status*   **X**
missing period

Also see page 158, lines12&13 and 18&19

Also see page 159, lines 26&27 and lines 32&33
*SuggestedRemedy*
Add period after:  Status indicating that the receiver has detected a transition

*Proposed Response*          *Response Status*   **O**


*Cl* **98**        *SC* **98.5.1**              *P* **157**      *L* **6**        # 394
Lo, William                                  Marvell Semiconducto

*Comment Type*   **TR**       *Comment Status*   **X**
Incorrect reference

*SuggestedRemedy*
Change 45.2.7.8 to 45.2.7.14e

*Proposed Response*          *Response Status*   **O**


TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **98**        Page 47 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **98.5.1**      5/9/2015  10:25:21 AM
SORT ORDER: Clause, Subclause, page, line

| | | | |
|---|---|---|---|
| *Cl* **98** | *SC* **98.5.1** | *P* **158** | *L* **38** | # 489 |

Wienckowski, Natalie      General Motors

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

Inconsistent format

*SuggestedRemedy*

Replace: disable; transmission of Auto-Negotiation signals is disabled
    idle; Auto-Negotiation maintains the current signal level on the MDI.
    mv_end_delimiter; Auto-Negotiation causes the transmission of the Manchester violation end delimiter on the MDI.
     mv_start_delimiter; Auto-Negotiation causes the transmission of the Manchester violation start delimiter on the MDI.
      transition; Auto-Negotiation causes a transition in the level on the MDI.

With:  disable: transmission of Auto-Negotiation signals is disabled.
    idle: Auto-Negotiation maintains the current signal level on the MDI.
    mv_end_delimiter: Auto-Negotiation causes the transmission of the Manchester violation end delimiter on the MDI.
    mv_start_delimiter: Auto-Negotiation causes the transmission of the Manchester violation start delimiter on the MDI.
     transition: Auto-Negotiation causes a transition in the level on the MDI.

*Proposed Response*      *Response Status* **O**

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| | | | |
|---|---|---|---|
| *Cl* **98** | *SC* **98.5.1** | *P* **158** | *L* **4** | # 395 |

Lo, William      Marvell Semiconducto

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

Incorrect bit references

*SuggestedRemedy*

Change 1.0.11 to 1.2304.11

*Proposed Response*      *Response Status* **O**

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| | | | |
|---|---|---|---|
| *Cl* **98** | *SC* **98.5.1** | *P* **158** | *L* **42** | # 396 |

Lo, William      Marvell Semiconducto

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

Changed start delimiteer to Golay.  Text needs to follow.

*SuggestedRemedy*

Under TD_AUTONEG change mv_start_delimiter definition as follows:
mv_start_delimiter; Auto-Negotiation causes the transmission of the starting sync header as defined in Clause 98.2.1.1.1 on the MDI.

*Proposed Response*      *Response Status* **O**

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| | | | |
|---|---|---|---|
| *Cl* **98** | *SC* **98.5.1** | *P* **159** | *L* **42** | # 397 |

Lo, William      Marvell Semiconducto

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

Changed start delimiteer to Golay.  Text needs to follow.

*SuggestedRemedy*

Replace transmit_mv_start_done definition as follows:
Status indicating that the transmission of the starting sync header as defined in Clause 98.2.1.1.1 has been completed.
Values :
FALSE: transmission of the starting sync header is in progress.
TRUE: transmission of the starting sync header has been completed.

*Proposed Response*      *Response Status* **O**

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| | | | |
|---|---|---|---|
| *Cl* **98** | *SC* **98.5.3** | *P* **161** | *L* **27** | # 398 |

Lo, William      Marvell Semiconducto

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

remaining_ack_cnt - replace TBDs

*SuggestedRemedy*

Remove the 2 (TBDs).  Values there are ok as is.
Remove "(default)" in line 32

*Proposed Response*      *Response Status* **O**

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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  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **98**
*SC* **98.5.3**

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5/9/2015  10:25:22 AM

*Cl* **98**        *SC* **98.6**                    *P* **165**            *L* **30**            # 399

Lo, William                                    Marvell Semiconducto

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

    Missing electrical specs

*SuggestedRemedy*

    Delete section 98.6 completely.
    Add section 98.2.1.1.4 as proposed by chini_3bp_2a_0315.pdf

*Proposed Response*          *Response Status*  **O**

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*Cl* **98**        *SC* **98.7.1**                  *P* **165**            *L* **41**            # 491

Wienckowski, Natalie                           General Motors

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

    poor wording

*SuggestedRemedy*

    Replace:  The supplier of a protocol implementation that is claimed to conform to Clause
    98,

    With:  The supplier of a protocol implementation that is claiming to conform to Clause 98,

*Proposed Response*          *Response Status*  **O**

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*Cl* **98.5.**     *SC* **98.5.3**                  *P* **161**            *L* **33**            # 490

Wienckowski, Natalie                           General Motors

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

    Semicolons are used after value names instead of colons.

    Also see lines 44 & 52

*SuggestedRemedy*

    Change semiconlons to colons.

*Proposed Response*          *Response Status*  **O**

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*Cl* **99**        *SC*                             *P* **4**              *L* **37**            # 445

Wienckowski, Natalie                           General Motors

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

    incorrect grammar

    You cannot use "a" and then a plural noun, e.g. a specifications.

*SuggestedRemedy*

    Replace:  This amendment adds a point-to-point 1 Gb/s Physical Layer (PHY)
    specifications and management...

    With:  This amendment adds point-to-point 1 Gb/s Physical Layer (PHY) specifications and
    management

*Proposed Response*          *Response Status*  **O**

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl*  **99**                    Page 49 of 49
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC*                           5/9/2015  10:25:22 AM
SORT ORDER: Clause, Subclause, page, line