Cl **00**　　*SC* **0**　　　　　　*P* **0**　　*L* **0**　　# r02-66

Thompson, Geoffrey　　　　　Independent Consultant

Comment Type **GR**　　*Comment Status* **D**　　　　*PLCA_Scope*

One of my responsibilities as a balloter is to ensure that the scope of the draft is within the scope of the work authorized by the PAR. An affirmative vote indicates your agreement that the scope of the draft does not exceed the work authorized by the PAR. I cannot, in good conscience, affirm that for reasons previously stated, therefore my vote is DISAPPROVE. It is my belief that, in spite of the converging nature of the scope of commentable text on the draft that this comment is within the scope of this ballot.

SuggestedRemedy

Since the time for modifying the PAR to change the scope of this project is long past, the only choices at this point would be to (1) disapprove the project or (2) remove clause 148 and related text elsewhere in the project.

Proposed Response　　*Response Status* **W**

PROPOSED REJECT.
The CRG disagrees with the commenter.
This comment is a restatement of previous comments from the same commenter, particularly R01-220 and R01-227, and restates the commenters opinion without additional technical information. The commenter has a previously existing disapprove vote.

Response to R01-227 is:
REJECT.
The CRG disagrees with the commenter, and believes the draft is within the PAR scope.
A key responsibility of the ballot pool is to evaluate whether the scope of the draft is within the scope of the PAR, and an affirmative vote indicates your agreement that the work does not exceed the scope of the PAR. The ballot pool has voted in the affirmative.
This comment is essentially a restatement of the arguments in previously rejected comments i-27 and i-270, and are not associated with a new disapprove vote.
The majority of the CRG believes that the functions are appropriately placed in the architecture of IEEE Std. 802.3 and ISO layering model.

Cl **01**　　*SC* **1.3**　　　　　*P* **29**　　*L* **23**　　# r02-2

Anslow, Peter　　　　　Ciena

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

The reference "ISO 4892:1982, Plastics--Methods of exposure to laboratory light" has been removed from the draft, but references to this document are still present in 146.9.2.1 and 147.10.2.1

SuggestedRemedy

Restore the entry for ISO 4892

Proposed Response　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **30**　　*SC* **30.3.1**　　　　*P* **38**　　*L* **41**　　# r02-26

Kabra, Lokesh　　　　　Synopsys, Inc.

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

Incorrect reference to sub-clause number for "aSingleCollisionFrame" in 802.3-2018

SuggestedRemedy

Replace "30.3.1.3" with "30.3.1.1.3"

Proposed Response　　*Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Accomodated by r02-3
Response to r02-3 is:
ACCEPT IN PRINCIPLE.
(fixes typo in "Change")
Insert the level 4 heading: "30.3.1.1 MAC entity attributes"
Change the heading for 30.3.1.3 aSingleCollisionFrames to be level 5: 30.3.1.1.3 aSingleCollisionFrames

---

Cl **30**　　*SC* **30.3.1**　　　　*P* **38**　　*L* **50**　　# r02-27

Kabra, Lokesh　　　　　Synopsys, Inc.

Comment Type **G**　　*Comment Status* **D**　　　　*Management*

The newly added sentence is not accurate for MAC entity; Since we claim that PLCA does not impact the MAC entity (or MAC function including CSMA/CD), MAC should be counting collisions transparently independent of normal RS or PLCA RS. With PLCA active, probability of collisions are reduced by means of extending CRS and allowing transmit opportunity slots. But collisions can still occur if some other node in the mixing segment does not follow the PLCA rules or are incorrectly configured. Hence counting this "singleCollision" event is still valid and useful to have.

SuggestedRemedy

Delete the new sentence added in D3.2

Proposed Response　　*Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Discuss with comments r02-15 and r02-56
Accomodated by comment r02-56.
Response to comment r02-56 is:
ACCEPT.
Delete editing instructions related to the "The contents of this attribute are undefined for MAC entities using a Physical Layer with PLCA enabled.;" so that the intended change is to revert back to no change to this subclause and text.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **30**
SC **30.3.1**

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Cl **30**	*SC* **30.3.1.1**	*P* **38**	*L* **40**	# r02-3

Anslow, Peter   Ciena

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

The headings in the draft:
30.3.1 MAC entity managed object class
30.3.1.3 aSingleCollisionFrames

Should be:
30.3.1 MAC entity managed object class
30.3.1.1 MAC entity attributes
30.3.1.1.3 aSingleCollisionFrames

SuggestedRemedy

Insert the level 4 heading: "30.3.1.1 MAC entity attributes"
Chane the heading for 30.3.1.3 aSingleCollisionFrames to be level 5: 30.3.1.1.3 aSingleCollisionFrames

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
(fixes typo in "Change")

Insert the level 4 heading: "30.3.1.1 MAC entity attributes"
Change the heading for 30.3.1.3 aSingleCollisionFrames to be level 5: 30.3.1.1.3 aSingleCollisionFrames

Cl **30**	*SC* **30.3.1.3**	*P* **38**	*L* **42**	# r02-4

Anslow, Peter   Ciena

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

The editing instruction should reference the subclause number rather than the title.
As noted in another comment this should be 30.3.1.1.3.
Also, refer to the "BEHAVIOUR DEFINED AS" section

SuggestedRemedy

Change the editing instruction to:
"Change the "BEHAVIOUR DEFINED AS" section of 30.3.1.1.3 as shown:

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **30**	*SC* **30.3.1.3**	*P* **38**	*L* **49**	# r02-5

Anslow, Peter   Ciena

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

"5.2.4.2" is an external cross-reference

SuggestedRemedy

Apply character tag External to "5.2.4.2"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **30**	*SC* **30.3.1.3**	*P* **38**	*L* **50**	# r02-15

Zimmerman, George   ADI, APL Group, Aquantia, BMW, Cisco, Commscop

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

"The contents of this attribute are undefined for MAC entities using a Physical Layer with PLCA enabled" - the definition of the counter is identical, regardless of whether PLCA is enabled. This counter counts single collisions at the MAC. The situation is not analogous to use with a full duplex MAC. Reporting of the PHY asserting a corruption on the media to PLCA should occur in a PLCA clause 30 object if needed in clause 30.

SuggestedRemedy

Delete 30.3.1.3 from the draft, including editing instruction. Insert new attribute after 30.16.1.1.7 as follows: "PLCA managed object class 30.16.1.1.8 aPLCACorruptedTxCount<CR>ATTRIBUTE<CR>APPROPRIATE SYNTAX<CR> Generalized nonresetable counter. This counter has a maximum increment rate of 13 000 counts per second.<CR>BEHAVIOUR DEFINED AS<CR>A count of times the PLCA RS receives an asserted COL from the MII.;" In Add new row after aPLCATransmitOpportunityCounter: "aPLCACorruptedTxCount | ATTRIBUTE | GET | X"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Discuss with comment r02-56 and r02-27

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **30**
SC **30.3.1.3**

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Cl **30**	*SC* **30.3.1.3**	*P* **39**	*L* **50**	# r02-56

Kim, Yongbum   NIO

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

The added text "The contents of this attribute are undefined for MAC entities using a Physical Layer with PLCA enabled." does not make sense. CL148 PLCA RS claims to be RS and does not perform MAC function. It further claims to work with half-duplex MAC without modification. This aSingleCollisionFrames counter is very relevant to half-duplex MAC and not relevant to fuill-duplex MAC.   But this added text makes this counter irrelevant to the half-duplex MAC and CL148 PLCA. This change makes little sense.
a) this counter is relevant to half-duplex MAC
b) this counter will register relevent and meaningful event -- because PLCA does not eliminate collisions (if, PLCA always guarantees collision-free operation, then it should say so and show how, and
c) layer violation -- it makes little sense that optional behavior in the physical layer(s) somehow changes the relevancy of the upper layer statistics.

SuggestedRemedy

Delete editing instructions related to the "The contents of this attribute are undefined for MAC entities using a Physical Layer with PLCA enabled.;" so that the intended change is to revert back to no change to this subclause and text.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.
Discuss with comments r02-15 and r02-27

Cl **30**	*SC* **30.16.1**	*P* **42**	*L* **8**	# r02-28

Kabra, Lokesh   Synopsys, Inc.

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

Section 30.16.1 describes both oPLCA managed object class attributes and device actions.

SuggestedRemedy

Add "and actions" to the end of the sentence.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **30**	*SC* **30.16.1.1.1**	*P* **42**	*L* **24**	# r02-29

Kabra, Lokesh   Synopsys, Inc.

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

As per r01-127, agreement that the term "MII RS" is not a valid term.

SuggestedRemedy

Delete the term "RS MII".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
On P42 L24, delete "MII"

Cl **30**	*SC* **30.16.1.1.5**	*P* **43**	*L* **15**	# r02-35

Law, David   Hewlett Packard Enterprise

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

It seems odd to hide a statement that the default for the to_timer is 24 in the management subclause.

SuggestedRemedy

Suggest that:

[1] The text 'The default value is 24.' be deleted from subclause 30.16.1.1.5.
[2] The text 'The default value is specified in 30.16.1.1.7.' be changed to read 'The default value is 24.' in subclause 148.4.5.4 'Timers' (page 242, line 52).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **104**	*SC* **104.1.3**	*P* **94**	*L* **22**	# r02-6

Anslow, Peter   Ciena

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

"Replace 104-3" should be "Replace Figure 104-3"

SuggestedRemedy

Change "Replace 104-3" to: "Replace Figure 104-3"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **104**
SC **104.1.3**

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Cl **104**　　　*SC* **104.4.3.3**　　　　*P* **97**　　　　*L* **16**　　　　# r02-7

Anslow, Peter　　　　　　　　　　Ciena

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

The title of Table 104-2 in the base standard is "PSE power_available matrix".
Consequently " matrix" should not be in underline font.

SuggestedRemedy

Remove the underline from " matrix"

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **104**　　　*SC* **104.4.3.3**　　　　*P* **97**　　　　*L* **25**　　　　# r02-8

Anslow, Peter　　　　　　　　　　Ciena

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

In Table 104-2a there are two occurrences of "Classes 0-9".
The IEEE style manual includes:
"Ranges should repeat the unit (e.g., 115 V to 125 V). Dashes should never be used because they can be misconstrued as subtraction signs."

SuggestedRemedy

In Table 104-2a change "Classes 0-9" to "Classes 0 to 9" in two places

Proposed Response　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **104**　　　*SC* **104.4.3.5**　　　　*P* **97**　　　　*L* **51**　　　　# r02-64

Stewart, Heath　　　　　　　　　　Analog Devices Inc.

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

*** Comment submitted with the file 101686300003-stewart_0819_01.pdf attached ***

VOLT_POWER_INFO register was increased to 32 bits in order to accommodate higher power. Split this register into two 16 bit registers- VOLT_INFO and POWER_INFO. Add command - Read_POWER_INFO [0x77] and Rename command- Read_VOLT_POWER_INFO [0xBB] as Read_VOLT_INFO [0xBB]

SuggestedRemedy

Perform the following text changes:
-On P97, L51: Replace text: "VOLT_POWER_INFO_register: PSEs that support cable resistance measurement also return the VOLT_POWER_INFO register. Refer to Table 104-10 for a description of contents." With "VOLT_INFO_register: PSEs that support cable resistance measurement also return the VOLT_INFO register. Refer to Table 104-10 for a description of contents."
-On P98, L1: Add text: "POWER_INFO_register: PSEs that support cable resistance measurement also return the POWER_INFO register. Refer to Table 104-11 for a description of contents."
-On P101, L14: Replace text: "VOLT_POWER_INFO_register: PDs that support cable resistance measurement also return the VOLT_POWER_INFO register. Refer to Table 104-10 for a description of contents." With "VOLT_INFO_register: PDs that support cable resistance measurement also return the VOLT_INFO register. Refer to Table 104-10 for a description of contents."
-On P101, L18: Add text: "POWER_INFO_register: PDs that support cable resistance measurement also return the POWER_INFO register. Refer to Table 104-11 for a description of contents."
-On P103, L52: Replace text: "PSEs and PDs that implement cable resistance measurement support the VOLT_POWER_INFO and POWER_ASSIGN registers (see Table 104-10 and Table 104-11)." With "PSEs and PDs that implement cable resistance measurement support the VOLT_INFO, POWER_INFO and POWER_ASSIGN registers (see Table 104-10,Table 104-11 and Table 104-12)"
-On P108, L16: Replace text: "VReport_PD is the voltage at PD's PI during the presence pulse as reported in b[7:0] of VOLT_POWER_INFO in Table 104-10" With "VReport_PD is the voltage at PD's PI during the presence pulse as reported in b[7:0] of VOLT_INFO in Table 104-10"
-On P108, L38: Replace text: "via the PD Requested Power, PPD_req, field of the VOLT_POWER_INFO Register b[19:8]" With "via the PD Requested Power, PPD_req, field of the POWER_INFO Register b[11:0]."
-On P108, L49: Replace text: "PPD_req is the PD Requested Power as reported in b[19:8] of VOLT_POWER_INFO in Table 104-10" With "PPD_req is the PD Requested Power as reported in b[11:0] of POWER_INFO in Table 104-11"
-On P109, L11: Modify Figure 104-13 to rename the VOLT_POWER_INFO [0xBB] read command and to add the POWER_INFO [0x77] read command. Replace the figure with figure shown on slide 6 of attached presentation- "stewart_0819_01.pdf"
-On P111, L25: Replace text: "104.7.2.6 Read_VOLT_POWER_INFO command [0xBB] All PSEs and PDs that support cable resistance measurement shall support the 8-bit

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

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SC **104.4.3.5**　　　　8/8/2019 3:18:36 PM

Read_VOLT_POWER_INFO command. After receiving a Read_VOLT_POWER_INFO command, the PD shall respond with a 32-bit VOLT_POWER_INFO read payload followed by an 8-bit CRC8 field as specified in 104.7.2.5. A flowchart for operation of the address and the Read_VOLT_POWER_INFO command is shown in Figure 104-13. Table 104-10 illustrates the contents of the VOLT_POWER_INFO register" With "104.7.2.6 Read_VOLT_INFO command [0xBB] All PSEs and PDs that support cable resistance measurement shall support the 8-bit Read_VOLT_INFO command. After receiving a Read_VOLT_INFO command, the PD shall respond with a 16-bit VOLT_INFO read payload followed by an 8-bit CRC8 field as specified in 104.7.2.5. A flowchart for operation of the address and the Read_VOLT_INFO command is shown in Figure 104-13. Table 104-10 illustrates the contents of the VOLT_INFO register"

-On P111, L34: Change the title of Table 104-10 from "Table 104-10 VOLT_POWER_INFO Register Table" to "Table 104-10 VOLT_INFO Register Table"

-On P111, L34: Replace existing Table 104-10 with Table 104-10 shown on slide 7 of attached presentation- "stewart_0819_01.pdf"

-On P111, L50: Add text: "104.7.2.7 Read_POWER_INFO command [0x77] All PSEs and PDs that support cable resistance measurement shall support the 8-bit Read_POWER_INFO command. After receiving a Read_POWER_INFO command, the PD shall respond with a 16-bit POWER_INFO read payload followed by an 8-bit CRC8 field as specified in 104.7.2.5. A flowchart for operation of the address and the Read_POWER_INFO command is shown in Figure 104-13. Table 104-11 illustrates the contents of the POWER_INFO register."

-On P111, L50: Add "Table 104-11 POWER_INFO Register Table" after new paragraph added on L50. The Table 104-11 is as shown on slide 8 of attached presentation- "stewart_0819_01.pdf"

-On P112, L4: Replace text: "After transmitting a Write_POWER_ASSIGN command, the PSE shall transmit a 32-bit POWER_ASSIGN write payload followed by an 8-bit CRC8" With "After transmitting a Write_POWER_ASSIGN command, the PSE shall transmit a 16-bit POWER_ASSIGN write payload followed by an 8-bit CRC8"

-On P112, L10: Modify Table 104-12 POWER_ASSIGN Register Table as shown on slide 9 of attached presentation- "stewart_0819_01.pdf"

-On P112, L25: Replace text: "After receiving a Read_POWER_ASSIGN command, the PD shall respond with a 32-bit POWER_ASSIGN read payload followed by an 8-bit CRC8 field as specified in 104.7.2.5. A flowchart for operation of the address and the Read_POWER_ASSIGN command is shown in Figure 104-13. Table 104-11 illustrates the contents of the POWER_ASSIGN register." With "After receiving a Read_POWER_ASSIGN command, the PD shall respond with a 16- bit POWER_ASSIGN read payload followed by an 8-bit CRC8 field as specified in 104.7.2.5. A flowchart for operation of the address and the Read_POWER_ASSIGN command is shown in Figure 104-13. Table 104-12 illustrates the contents of the POWER_ASSIGN register."

-On P115, L9: Modify item PSE37 to change the Value/ Comment field from "Return VOLT_POWER_INFO and POWER_ASSIGN registers" to "Return VOLT_INFO, POWER_INFO and POWER_ASSIGN registers"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT IN PRINCIPLE.
TFTD.
Task force to hear presentation.
(Editor recommends ACCEPT)

| *Cl* **104** | *SC* **104.4.6** | *P* **99** | *L* **27** | # r02-9 |

Anslow, Peter   Ciena

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

In the Additional information cell for Item 7 of Table 104-4, "104.4.6.4" is an external cross-reference.

SuggestedRemedy

Apply character tag External to "104.4.6.4"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

| *Cl* **104** | *SC* **104.4.6** | *P* **99** | *L* **31** | # r02-62 |

Stewart, Heath   Analog Devices Inc.

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

SCCP transaction times need to be modified to account for longer signaling times. Increase the TClass (max) timer to 1300ms

SuggestedRemedy

Change the edit to Table 104-4 (P99 L31) to change item 8- Classification time Max value from "800" to "1300". Edit the classification time limits as follows:
{
{{8} {Classification time} {TClass} {ms} {-} {366} {Classes 0 to 9} {All} {See 104.4.5}}
{{} {} {} {} {1300} {Classes 10 to 15} {} {}}
}

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

| *Cl* **104** | *SC* **104.5.1a** | *P* **100** | *L* **34** | # r02-10 |

Anslow, Peter   Ciena

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

Repeated "Table" in "Table Table 104-4a"

SuggestedRemedy

Delete the first "Table"

Proposed Response   *Response Status* **W**
PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **104**
SC **104.5.1a**

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Cl **104**	*SC* **104.5.6**	*P* **102**	*L* **47**	#	r02-63

Stewart, Heath   Analog Devices Inc.

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

SCCP transaction times need to be modified to account for longer signaling times.
Increase the TSCCP_Watchdog timer to be from 1000ms to1300ms

SuggestedRemedy

Change the edit to Table 104-7 (P102 L47) to add an edit to item 15- SCCP watchdog
timeout. Edit the watchdog timeout limits as follows:
{
{{15} {SCCP watchdog timeout} {TSCCP_watchdog} {ms} {150} {200} {Type A,B,C, and D}
{See 104.5.5}}
{{} {} {} {} {1000} {1300} {Type E} {}}
}

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **104**	*SC* **104.9.4.3**	*P* **115**	*L* **29**	#	r02-65

Stewart, Heath   Analog Devices Inc.

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

Add PICS for CRM related SCCP commands

SuggestedRemedy

On P115, L29 insert rows for new items SCCP29, SCCP30, SCCP31, SCCP32, SCCP33,
SCCP34, SCCP35, SCCP36 after last item SCCP28 as shown below:
"
{
{{SCCP29} {8-bit Read VOLT_INFO command} {104.7.2.6} {Supported by all PDs that
implement CRM} {CRM:M} {Yes [] N/A []} }
{{SCCP30} {Reception of Read VOLT_INFO function command} {104.7.2.6} {PD shall
respond with a 16-bit VOLT_INFO read payload followed by an 8-bit CRC8 field} {CRM:M}
{Yes [] N/A []} }
{{SCCP31} {8-bit Read POWER_INFO command} {104.7.2.7} {Supported by all PDs that
implement CRM} {CRM:M} {Yes [] N/A []} }
{{SCCP32} {Reception of Read POWER_INFO function command} {104.7.2.7} {PD shall
respond with a 16-bit POWER_INFO read payload followed by an 8-bit CRC8 field}
{CRM:M} {Yes [] N/A []} }
{{SCCP33} {8-bit Write POWER_ASSIGN command} {104.7.2.8} {Supported by all PDs
that implement CRM} {CRM:M} {Yes [] N/A []} }
{{SCCP34} {Reception of Write POWER_ASSIGN function command} {104.7.2.8} {PSE
shall transmit a 16-bit POWER_ASSIGN write payload followed by an 8-bit CRC8 field}
{CRM:M} {Yes [] N/A []} }
{{SCCP35} {8-bit Read POWER_ASSIGN command} {104.7.2.9} {Supported by all PDs
that implment CRM} {CRM:M} {Yes [] N/A []} }
{{SCCP36} {Reception of Read POWER_ASSIGN function command} {104.7.2.9} {PD
shall respond with a 16-bit POWER_ASSIGN read payload followed by an 8-bit CRC8
field} {CRM:M} {Yes [] N/A []} }
}
"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

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SC **104.9.4.3**

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Cl **146**	*SC* **146.3.3.1**	*P* **133**	*L* **30**	*#* r02-21

McCarthy, Mick   Analog Devices Inc.

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

Figure 146-5 PCS Transmit state diagram uses undefined functions in certain states:
- SSD VECTOR calls RND_ESD; should be RND_SSD4
- ESD VECTOR calls RND_ESD; should be RND_ESD4

Some of the changes regarding delimiter randomization were not transcribed correctly into the draft standard. These changes are recorded in http://www.ieee802.org/3/cg/public/May2019/i-284%20Delimiter%20Randomization.txt, which includes the following:

In state SSD VECTOR replace tx_disparity <= 2, tx_symb_triplet <= SSD4 by {tx_symb_triplet, tx_disparity} <= RND_SSD4(Syn-1[4]).
In state ESD VECTOR replace tx_disparity <= 2, tx_symb_triplet <= ESD4 by {tx_symb_triplet, tx_disparity} <= RND_ESD4(Syn-1[4]).

SuggestedRemedy

Change Figure 146-5 PCS Transmit state diagram as follows:

- In state SSD VECTOR replace RND_ESD with RND_SSD4
- In state ESD VECTOR replace RND_ESD with RND_ESD4

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **146**	*SC* **146.3.4.1.1**	*P* **140**	*L* **1**	*#* r02-22

McCarthy, Mick   Analog Devices Inc.

Comment Type **E**   *Comment Status* **D**   *State Diagrams*

The description of the receiving variable does not agree with how the receiving variable is generated by the PCS Receive state diagram (Figure 146-9 and Figure 146-10).
The receiving variable is not set to TRUE only when 'the PCS is in Data mode'.

SuggestedRemedy

Change the definition of the receiving variable to be as follows:

  Generated by PCS Receive function; if set to TRUE, it indicates that the PCS Receive function is not in an idle mode.
   Values: TRUE or FALSE

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
Comment is out of scope of the recirculation, on unchanged, descriptive text.

CRG disagrees with the commenter. While the text does not define "Data mode", but nor does it define "idle modes", and receiving is not only set FALSE during idle or low power idle, but also when the link fails or is waiting for the scrambler to sync, so the proposed remedy is not precise either. The variable "receiving" is generated by the PCS Receive function and used by the Receive watchdog state diagram to determine whether the link status is OK and either code-groups indicating delimiters, commas, or data are being received.

If a change were to be made, a more correct change would be:
Change "it indicates that the PCS is in Data mode"
to "it indicates that the PCS Receive state diagram is not in the WAIT_SCRAMBLER, LINK_FAILED, IDLE, or LOW_POWER_IDLE states."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **146**
SC **146.3.4.1.1**

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Cl **146**	*SC* **146.3.4.1.3**	*P* **142**	*L* **17**	# r02-23

McCarthy, Mick   Analog Devices Inc.

Comment Type **E**   *Comment Status* **D**   *State Diagrams*

The description of rcv_max_timer does not agree with how the timer is used in the state diagrams.
rcv_max_timer is not used in the 'PHY Receive state diagram', which presumably is intended to refer to the PCS Receive state diagram, and it does not determine the time spent in the DATA state.

SuggestedRemedy

Change the definition of the rcv_max_timer to be as follows:

 A timer used to determine the maximum amount of time the Receive watchdog state diagram stays in the RECEIVE state. The timer shall expire 4 ms +/- 100 us after being started. The condition rcv_max_timer_done becomes true upon timer expiration.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Note - Comment is out of scope of the recirculation, on unchanged, descriptive text.

At P142 L17, change "PHY Receive state diagram stays in DATA state."
to "Receive watchdog state diagram stays in the RECEIVE state."

Cl **146**	*SC* **146.4.4.3**	*P* **153**	*L* **24**	# r02-17

Graber, Steffen   Pepperl+Fuchs AG

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

Arc from TRAINING state to SILENT state for condition "maxtraining_timer_done + (mintraining_timer_done * (!slave_clock_locked) * (config = SLAVE))" is missing (the condition is there, but the arc itself is missing). This is only editorial and no technical change, as this arc got accidently missed from D3.1 to D3.2.

SuggestedRemedy

Add the required arc from TRAINING state to SILENT state for condition "maxtraining_timer_done + (mintraining_timer_done * (!slave_clock_locked) * (config = SLAVE))".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **146**	*SC* **146.5.5.1**	*P* **163**	*L* **18**	# r02-11

Anslow, Peter   Ciena

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

Comment r01-48 was ACCEPT with suggested remedy:
"Delete "1x"
make the minus sign an en-dash"
The second part has been done, but the first part has not.
The number should just be 10^-6 as per 10^-9 on the line above

SuggestedRemedy

Delete "1 x "

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **146**	*SC* **146.7.1.3**	*P* **1169**	*L* **30**	# r02-16

Schicketanz, Dieter   University of Applied Science Reutlingen

Comment Type **E**   *Comment Status* **D**   *Link Segment*

in line 30 there is a reference to equation (80-1) in green. The reference could not be found in the document.
In former drafts 'n' was written NVP without explaining it.

SuggestedRemedy

It is recomended to fix this editorially by changing line 30
from:
ment length of 1589 m given in Table 146B-1 using Equation (80-1) with an 'n' of 0.6
to:
ment length of 1589 m given in Table 146B-1 using a nominal velocity of propagation of 0.6.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The CRG disagrees with the commenter.
Equation 80-1 is in green and not in the draft because it is an external cross reference to the equation for propagation time in nanoseconds per meter of medium. This is the way other clauses in 802.3 (since clause 80) have specified delay of the medium.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **146**   Page 8 of 21
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **146.7.1.3**   8/8/2019 3:18:36 PM
SORT ORDER: Clause, Subclause, page, line

Cl **146**	*SC* **146.8.1**	*P* **171**	*L* **46**	# r02-25

Maguire, Valerie   The Siemon Company

Comment Type **T**   *Comment Status* **D**   *Big Ticket Item MDI*

The commenter wishes to emphasize that a speedy path to publication of the P802.3cg amendment is best for industry adoption of single-pair Ethernet. The commenter is concerned that going from 2 MDI connectors to 0 MDI connectors to 1 MDI connector (or back to 2 MDI connectors) at this stage in the SA ballot cycle raises uncertainty about the stability of the single-pair Ethernet amendment. The commenter is also concerned that re-introduction of MDI connector information will delay publication through the generation of new negative votes. There is significant justification not to make further changes, including:

1. There is no precedent to identify an MDI interface for any single-pair Ethernet project. The market will determine the interface.

2. The success of single-pair applications today is not based on plug-and-play at the MDI. Virtually all of the MDI connections are screw terminals and that has not hindered adoption. The single-pair connector is a channel deployment differentiator, not an MDI feature.

3. A preference for the IEC 63171-1 connector or the IEC C 63171-1-6 connector or any other connector to be used in all "E" environments has never been made in a peer reviewed manner. Neither experts at TIA and ISO/IEC nor within the IEEE 802.3 community have not made such a determination based on an agreed-upon set of desired features and functionality. More problematic, the U.S., China, Mexico, and several other countries didn't even select either the -1 or the -6 connector as the preferred connector in E1/E2 environments.

4. Adding guidance out of alignment with TIA and ISO/IEC recommendations at a historically poorly attended interim meeting with limited PHY vendor representation puts P802.3cg at great risk of recommending the wrong connector. The commenter does not want a repeat of past history, as with the MT-RJ interface.

5. Neither the -1 connector nor the -6 connector is a good choice for multidrop implementations.

SuggestedRemedy

Do not add information related to specific IEC 63171 MDI interfaces into the amendment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
To discuss with comment r02-14

Cl **146**	*SC* **146.8.1**	*P* **179**	*L* **1**	# r02-14

Diminico, Christopher   Panduit Corp.

Comment Type **TR**   *Comment Status* **D**   *Big Ticket Item MDI*

*** Comment submitted with the file 101659700003-diminico_3cg_01_0819.pdf attached ***

The continued success of BASE-T technology is largely predicated on leveraging the cost-effectiveness and plug-and-play simplicity ensured by compatibility at the MDI. We need to be forward thinking in developing a compatible user interface for BASE-T1. The MDI is to specify mechanical compatibility and electrical specifications not EMC conformance.

SuggestedRemedy

146.8.1 MDI connectors -Page 179, Line 1 add text; Connectors meeting the mechanical requirements of IEC 63171-1 may be used as the mechanical interface to the balanced cabling. The plug connector is used on the balanced cabling and the MDI jack connector on the PHY.

Re-instate IEC 63171-1 plug and jack figures from D3.1. with text below.
Editorial license to revise figure numbers as needed.
The IEC 63171-1 plug and jack are depicted (for informational use only) in Figure 146-29 and Figure 146-30 respectively, and the mating interface is depicted in Figure 146-31.
The assignment of PMA signals to connector contacts for PHYs are given in Table 146-8.

147.9.1 MDI connectors -Page 227, Line 1 add text; Connectors meeting the mechanical requirements of IEC 63171-1 may be used as the mechanical interface to the balanced cabling. The plug connector is used on the balanced cabling and the MDI jack connector on the PHY.

Re-instate IEC 63171-1 plug and jack figures from D3.1. with text below. Editorial license to revise figure numbers as needed.

The IEC 63171-1 plug and jack are depicted (for informational use only) in Figure 147-21 and Figure 147-22 respectively and the mating interface is depicted in Figure 147-23. The assignment of PMA signals to connector contacts for PHYs are given in Table 147-3. These connectors should support link segment DCR characteristics for 1.02 mm (18 AWG) to 0.40 mm (26 AWG) in Table 146B-1.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Task force to discuss with presentation, and with comment r02-25.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **146**
SC **146.8.1**

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Consensus of the SA ballot pool has been to have the referneces deleted. Straw polls at the July 2019 meeting indicated to delete the connector references, and that this was not the preferred choice.

Cl **146**　　*SC* **146.11.4.2.2**　　　　*P* **181**　　*L* **43**　　# r02-18

Graber, Steffen　　　　　　　　Pepperl+Fuchs AG

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

Output voltage tolerance in 146.5.4.1 has been changed in D3.2, needs to be reflected in PICS.

SuggestedRemedy

Change "2.4 V +/- 5%" to "2.4 V + 5%/- 15%" and change "1.0 V +/- 5%" to "1.0 V + 5%/- 15%"

Proposed Response　　　　*Response Status* **W**

PROPOSED ACCEPT.

Cl **147**　　*SC* **147.1**　　　　*P* **186**　　*L* **22**　　# r02-55

Brandt, David　　　　　　　　Rockwell Automation

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

PLCA is not an option in a Clause 147 PHY, but of Clause 148.

SuggestedRemedy

Change from:
10BASE-T1S PHYs optionally support PHY Level Collision Avoidance (PLCA), described in Clause 148.

To:
10BASE-T1S PHYs support optional Clause 148 PHY Level Collision Avoidance (PLCA).

Proposed Response　　　　*Response Status* **W**

PROPOSED REJECT.
Comment is out of scope of the recirculation on unchanged text.
CRG disagrees with the commenter. While it would be correct to say Clause 147 supports optional Clause 148 PLCA, "Clause 147" is not the same thing as a "10BASE-T1S PHY", which implements the specifications of clause 147. Clause 148 is optionally supported by a "10BASE-T1S PHY", which may or may not implement clause 148, as the statement says.

Cl **147**　　*SC* **147.3.3.7**　　　　*P* **202**　　*L* **44**　　# r02-20

Beruto, Piergiorgio　　　　　　　　Canova Tech S.r.l.

Comment Type **E**　　*Comment Status* **D**　　　　　　　　*State Diagrams*

The relative order of execution of the IF and precnt increment statements within the PRE state in Figure 147-7 may be misinterpreted.

SuggestedRemedy

[1] In figure 147-7, in the PRE state, remove the IF statement and its embodied instructions.
[2] In figure 147-7, in the PRE state, change the condition of the recirculating arc from "RSCD * (precnt != 9)" to "RSCD * (precnt != 4)"
[3] In figure 147-7, in the PRE state, delete the transition to the "A" connector
[4] In figure 147-7, add a new state "SCRAMBLER" containing the following statements: "
precnt <= precnt + 1
DECODE(RXn-3)
"
[5] In figure 147-7, add a transition between the PRE state and the SCRAMBLER state with the following condition: "RSCD * (precnt = 4)"
[6] In figure 147-7, in the SCRAMBLER state, add a recirculating arc with the following condition: "RSCD * (precnt = 9)"
[7] In figure 147-7, add a transition between the SCRAMBLER state and the "A" connector with the following condition: "RSCD * (precnt = 9)"

Proposed Response　　　　*Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
In Figure 147-7, in the PRE state, change:
"precnt <= precnt + 1
IF precnt > 3 THEN
DECODE(RXn-3)
END"

to:
"IF precnt > 3 THEN
precnt <= precnt + 1
DECODE(RXn-3)
ELSE
precnt <= precnt + 1
END"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general　　　　*Cl* **147**　　Page 10 of 21
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn　　*SC* **147.3.3.7**　　8/8/2019 3:18:36 PM
SORT ORDER: Clause, Subclause, page, line

Cl **147**   *SC* **147.3.7**   *P* **205**   *L* **10**   # r02-57

Kim, Yongbum   NIO

Comment Type **TR**   *Comment Status* **D**   *State Diagrams*

HB function has been justified to be entirely related to auto-negotiation, and the deleted text "Otherwise all the HB functions shall be disabled" has been appropriate.   The deletion (changed text) should be reversed and kept.

SuggestedRemedy

Reverse the change, i.e. undo deleted text.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
CRG Disagrees with the commenter.
The reason that the statement was deleted was because it is a "duplicate shall" on the functionality described in the state diagram, and is unnecessary. The functionality described is captured in the state diagram by the open arcs into the "INACTIVE" state in both the Heartbeat transmit and Heartbeat receive state diagram.

Cl **147**   *SC* **147.5.5.1**   *P* **216**   *L* **51**   # r02-12

Anslow, Peter   Ciena

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

"7.8 x 10^-7" has been changed to "1 x 10^-7".
However, the number should just be 10^-7 as per 10^-10 on the line above

SuggestedRemedy

Delete "1 x "

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **147**   *SC* **147.8**   *P* **219**   *L* **2**   # r02-58

Kim, Yongbum   NIO

Comment Type **TR**   *Comment Status* **D**   *Mixing Segment*

[Related to unresolved disapprove comment]
Shared medium with 10 cm stubs (at least 8 and 25 meters in reach) references 147.7, which specifies a single link (with no stubs) up to 15 meters.   So this specification basically says 40% longer reach with at least 8 x 10 cm unterminated stubs must meet the same transmission medium characteristics of a single terminated link.   And this requirement is stated without any guidance on how one could met them.   In an installation where one stub is added, the specificatoin states that any to any stub must meet the same requirement -- requiring the number of measurement of 1 + .. + (n-1).
The comment response (unsatified) states that there are methods that could be used WITHOUT stating what method could be used.   If one exists, it should be stated and without which the standard is incomplete.
As an example, think coax (10BASE5) has very specific rules and methods on how each tap must be constructed (i.e. formal specifcation for the MDI) and how the medium must be marked so that reflections from the tap could be minimized (reduce chance of false collection deteect from all worst case reflections adding up at any particular point).   Thin coax (10BASE2) also as formal MDI specification and coax segment installation requirments.   These are examples of how standard includes details to assure interoperability and ease of installation.   This clause on mixing segment characteristics states to meet a set of requirements (SHALL statements), but WITHOUT any details on how one could construct, preferrably incrementally, network segments that are assured to meet the requirements.   This cluase just refers to simpler, shorter, terminated link segment and say do the same.   Interoperability requirement only.   No details that provide confidence one could be constructed in interoperable fashion.   This mixing segment characteristics clause is grossly incomplete.

SuggestedRemedy

Specify how mixing segment characteristics could be met via specificatoin, methodology, or other means.   Proposed change is that -- complete the draft.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The proposed change in the comment does not contain sufficient detail so that the CRG can understand the specific changes that
satisfy the commenter.

The draft does not specify the physical length, gauge, twist pitch, loss per meter, or similar parameters on the medium, consistent with practice in IEEE Std 802.3. The main specifications related to reach are insertion loss (and, for full-duplex echo cancelled transmission, not relevant here, delay).   Analysis and measurements have been presented to the Task Force validating that mixing segments with the described 10 cm stubs, 8 nodes, and 25 meters in reach can be constructed which meet the insertion loss specified for mixing segments. See, e.g.,
http://www.ieee802.org/3/cg/public/Sept2017/kaindl_matheus_3cg_01c_09_2017.pdf
, and
http://www.ieee802.org/3/cg/public/Jan2018/Caliskan_3cg_01a_0118.pdf

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **147**
SC **147.8**

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Cl **147**	*SC* **147.12.3**	*P* **226**	*L* **11**	#	r02-54

Brandt, David   Rockwell Automation

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

None of the PICS are conditioned on the conditional PICS Item *PLCA.

SuggestedRemedy

Remove the "147.12.3 Major capabilities/options" row for Item *PLCA.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **147**	*SC* **147.12.3**	*P* **226**	*L* **26**	#	r02-53

Brandt, David   Rockwell Automation

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

As shown in Figure 147-1, the MEDIUM is outside of the PHYSICAL layer. The PICS for "147.12.4.7 Point-to-point link Segment characteristics" and "147.12.4.8 Mixing Segment characteristics" do not directly apply to the physical layer.

As a correct example, "146.11.3 Major capabilities/options" creates an Item "*INS" that is further used to qualify "146.11.4.4 Link Segment characteristics". INS indicates the PICS apply to "installation practice and cabling specifications". Clause 147 should have similar qualifications.

SuggestedRemedy

Append the following row to the end of the table "147.12.3 Major capabilities/options": *INS; Installation / cabling; 147.7, 147.8; Items marked with INS include installation practices and cabling specifications not applicable to a PHY manufacturer.; O; Yes [ ] No [ ]

Replace for all rows (Items PPLS1-5) of "147.12.4.7 Point-to-point link Segment characteristics" the Status of "M" with the Status of "INS:M"

Replace for all rows (Items MXS1-3) of "147.12.4.8 Mixing Segment characteristics" the Status of "M" with the Status of "INS:M"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**	*SC* **148**	*P* **250**	*L* **1**	#	r02-34

Beruto, Piergiorgio   Canova Tech S.r.l.

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

The PLCA Data State Diagram should be put into a dedicated subclause, as for the state Diagram in the rest of the draft.

SuggestedRemedy

Place Figure 148-4 into its own subclause "State Diagrams" 148.4.6.7.
Do the same for Figure 148-3 on page 244.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **148**
SC **148**

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Cl **148**	*SC* **148**	*P* **250**	*L* 17	# r02-52

Beruto, Piergiorgio   Canova Tech S.r.l.

Comment Type **T**   *Comment Status* **D**   *State Diagrams*

When the PLCA Data State Diagram is done sending data via the MII (that is, it leaves the TRANSMIT/FLUSH states), the CRS signal may still be asserted by the PHY because of its own latency.
In this case, the PLCA Data State Diagram enters the RECEIVE state, even if there is no real data to receive.
From a functional perspective, this is not an issue, but it is confusing and may create difficulties during system validation.

SuggestedRemedy

In Figure 148-4 to the following:
[1] add a new state box called "WAIT_CRS" with the following content: "
IF CRS THEN
  CARRIER_STATUS <= CARRIER_ON
ELSE
  CARRIER_STATUS <= CARRIER_OFF
END

TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
TX_EN <= FALSE
"

[2] Move the input "C" connector so that it points to the newly added WAIT_CRS state instead of the IDLE state.
[3] Add a transition from the WAIT_CRS state to the IDLE state with the following condition: "
  (!CRS) + (tx_cmd != NONE)
"

[4] Add a recirculating arc to the WAIT_CRS state with "ELSE" as a condition

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The CRG disagrees with the commenter. The IDLE state is not left because of the CRS signal, but because of the RX_DV signal being asserted resulting in 'receiving' being TRUE. See 148.4.5.2.
Besides, the 10BASE-T1S PHY does not loop back transmitted frames.

Cl **148**	*SC* **148**	*P* **250**	*L* 38	# r02-33

Beruto, Piergiorgio   Canova Tech S.r.l.

Comment Type **T**   *Comment Status* **D**   *State Diagrams*

When the PLCA Data State Diagram is in the HOLD state, the PLCA Control State Diagram may indicate to send a BEACON. At that point, the BEACON is not sent as it should be because TXD is forced to 0000 in the Data State Diagram.
This is a regression caused by the resolution of comment i-373 on D3.0.
The intention of comment i-373 was to align with the IEEE State Diagram rules and guidelines without actually changing the behavior of the functionality.
The suggested remedy to this comment is to restore D3.0 behavior keeping current representation, thus fulfilling i-373 original intention.

SuggestedRemedy

In Figure 148-4, in the HOLD state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
IF plca_txer THEN
  TX_ER <= TRUE
  TXD <= 0000
ELSE
  TX_ER <= ENCODE_TXER(tx_cmd)
  TXD <= ENCODE_TXD(tx_cmd)
END
"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

[1] In Figure 148-4, in the HOLD state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

[2] In Figure 148-4, in the ABORT state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **148**
SC **148**

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[3] In Figure 148-4, in both the COLLIDE and DELAY_PENDING states add the following: "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

Cl **148**	*SC* **148.1**	*P* **234**	*L* **9**	# r02-30

Kabra, Lokesh   Synopsys, Inc.

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

As per r01-127, agreement that the RS should be referenced as "Reconciliation Sublayer" (with capital letter)

SuggestedRemedy

Replace "reconciliation sublayer" with "Reconciliation Sublayer"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**	*SC* **148.2**	*P* **235**	*L* **1**	# r02-60

Kim, Yongbum   NIO

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

This added sentence adds little value and addresses existing unsat concern incompletely. "If the node with ID = 0 fails, the network is still operational with the same performance level of a CSMA/CD network without PLCA." The set of unsatisfied concerns (from 802.3WG ballot and on SA ballot cycles) are:
 a) how node_id=0 is chosen, handling when node_id=0 fails, b) does not exist at all, c) multiple node_id=0 node exists, etc .. all the chosen central controller complexities that are handled in IEEE 802.4 token bus or other similar systems.   Simply stating node_id=0 failure = still operational sound more like marketing and provides little overall benefit to the system in regard to fault handling, completeness of specification, etc.

SuggestedRemedy

Delete this new sentence added in D3.2 in its entirety.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The CRG disagrees with the commenter.
The sentence was not added relative to a concern from this commenter.
The referenced sentence was added in response to "Must be satisfied" comment r01-223 (from a different commenter) and resulted in the commenter indicating satisfaction.
Consensus of the CRG is that the sentence provides a useful description of what to expect from operation of a network comprising a mixture of nodes with PLCA enabled and nodes without PLCA.

Comment r01-223 was: "Overview does not even give a hint as to what sort of recovery procedure there is if Node ID = 0 fails or disappears."
Response to comment r01-223 was:
"ACCEPT IN PRINCIPLE.
<Explanatory note - not to be incorporated in the draft>
When Node ID = 0 fails or disappears the network behaves like a non-PLCA enabled CSMA/CD network. Such behavior has been intentionally defined in the PLCA Control State Diagram. However, there is one missing corner case where the mentioned state diagram could get stuck if the Node with ID = 0 fails immediately after PLCA has been enabled, before the first BEACON is transmitted.
<end explanatory note>
(changes to draft follow):
[1] At page 234, append the following sentence to the end of the new last paragraph for 148.2 added by comment r01-222:
"If the node with ID = 0 fails, the network is still operational with the same performance level of a CSMA/CD network without PLCA."
[2] In Figure 148-3 in the transition from NEXT_TX_OPPORTUNITY to the B connector, replace the condition "(local_nodeID = 0) * (curID >= plca_node_count)" with "(local_nodeID = 0) * (curID >= plca_node_count) + curID = 255".
[3] In Figure 148-4 in the global transition to the NORMAL state, change the condition "plca_reset + (!plca_en)" to "plca_reset + (!plca_en) + (!plca_status)".
[4] In Figure 148-4 in the transition from the NORMAL state to the IDLE state replace

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

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"plca_en" with "plca_en * (!plca_reset) * plca_status"
[5] In Figure 148-4 in the TRANSMIT state box replace "
IF COL THEN
SIGNAL_STATUS <= SIGNAL_ERROR
ELSE"
with "
IF COL THEN
SIGNAL_STATUS <= SIGNAL_ERROR
a <= 0
ELSE
"
[6] At page 249, line 3 append the following:
"
plca_status
see 148.4.7.2
"

| *Cl* **148** | *SC* **148.2** | *P* **235** | *L* **11** | # r02-59 |

Kim, Yongbum   NIO

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

This added paragraph is adds little value to the draft and frankly appears more like marketing statement than Ethernet specification. Mixed PLCA+CSMA/CD and CSMA/CD operation. configuration, etc are not specified, so this paragraph does not serve any material purpose (except, perhaps as marketing statement).
"PLCA-enabled nodes may be used in the same CSMA/CD collision domain as non-PLCA enabled nodes.
As the percentage of non-PLCA enabled nodes increases, performance advantages also decrease. If the node
with ID = 0 fails, the network is still operational with the same performance level of a CSMA/CD network
without PLCA."

SuggestedRemedy

Delete this new paragraph added in D3.2 in its entirety.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The CRG disagrees with the commenter.
The paragraph was not added relative to a concern from this commenter.
The referenced paragraph was added in response to "Must be satisfied" comment r01-222 (from a different commenter) and resulted in the commenter indicating satisfaction.
Consensus of the CRG is that the sentence provides a useful description of what to expect from operation of a network comprising a mixture of nodes with PLCA enabled and nodes without PLCA.

Comment r01-222 is:
"Overview does not even give a hint as to what happens in a mixed network or the impact of such on network performance."
Response to comment r01-222 was:
Add new sixth (final) paragraph to 148.2, "PLCA-enabled nodes may be used in the same CSMA/CD collision domain as non-PLCA enabled nodes. As the percentage of non-PLCA enabled nodes increases, performance advantages also decrease."

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **148**   Page 15 of 21
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **148.2**   8/8/2019 3:18:36 PM
SORT ORDER: Clause, Subclause, page, line

Cl **148**	*SC* **148.4**	*P* **250**	*L* **42**	# r02-24

Koczwara, Wojciech   Rockwell Automation

Comment Type **T**   *Comment Status* **D**   *State Diagrams*

There is an ambiguity in Figure 148-4, when leaving the HOLD state:
1. HOLD can exit either to ABORT or COLLIDE when (a == delay_line_length * plca_txer * recv_timer_not_done *MCD * !commited * !receiving)
2. HOLD can exit either to TRANSMIT or COLLIDE when (a == delay_line_length * MCD * committed *!receiving * recv_timer_not_done).
Additionally, reaction to plca_txer should be a priority in the HOLD state.

SuggestedRemedy

1. Change the transition condition from HOLD state to A: from [recv_timer_done + receiving + (a >= delay_line_length)], to [!plca_txer * (recv_timer_done + receiving + (a >= delay_line_length))]

2. Change the transition condition from HOLD state to B: from [MCD * committed * (!receiving) * recv_timer_not_done], to [!plca_txer * MCD * committed * (!receiving) * recv_timer_not_done * (a < delay_line_length)]

3. Change the transition condition from HOLD state to ABORT state: from [recv_timer_not_done * MCD * (!commited) * plca_txer * (!receiving)], to [plca_txer * MCD]

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**	*SC* **148.4.1**	*P* **236**	*L* **5**	# r02-61

Kim, Yongbum   NIO

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

This new statement is factually not correct. "This subclause specifies services provided by the PLCA RS as an extension to the RS specified in Clause 22."   PLCA RS optionally *REPLACES* Clause 22 RS.   The previous sentence "This subclause specifies services provided by the PLCA RS as an extension to the MII specified in Clause 22." may not be desirable but more correcct than the new sentence in D3.2.

SuggestedRemedy

Suggest replacing the referred sentence with the following one.
"This subclause specifies services provided by the PLCA RS and replaces RS specified in Clause 22."

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
Comment is arguably out of scope with respect to the recirculation. While this introductory sentence and subclause was changed, it was touched in a way that made a change to a single term, not to the larger sentence the commenter is commenting on.

CRG disagrees with the commenter. The referenced subclause (148.4.1) does not replace the Clause 22 RS, but defines how the extensions, e.g., in the various primitive descriptions, fit with the Clause 22 definitions by making extensive references to where the specifications of the Clause 22 RS apply unchanged.

Cl **148**	*SC* **148.4.5.1**	*P* **240**	*L* **10**	# r02-36

Law, David   Hewlett Packard Enterprise

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

Suggest that 'After syncing is done, the ...' is changed to read 'After synchronisation is complete, the ...'.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The comment is out of scope of the recirculation on text unchanged from the previous draft. Additionally, the CRG disagrees with the commenter. while the wording is editorially cleaner, it does not change the meaning in a way to remove any ambiguity.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **148**
SC **148.4.5.1**

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Cl **148**	*SC* **148.4.5.1**	*P* **240**	*L* **15**	#	r02-37

Law, David   Hewlett Packard Enterprise

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

Shouldn't RXlat be RX$_{lat}$ based on delta RX$_{lat}$ above?

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
On P240 L15 Change RXlat so that lat is in subscript.

Cl **148**	*SC* **148.4.5.1**	*P* **240**	*L* **25**	#	r02-38

Law, David   Hewlett Packard Enterprise

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

Suggest that '... node owns now a transmit opportunity ...' should read '... node now owns a transmit opportunity ...'.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change "owns now" to "now owns" on P240 L25
Note that the comment is out of scope of the recirculation on text unchanged from the previous draft, but is a nonsubstantive editorial change which improves clarity.

Cl **148**	*SC* **148.4.5.1**	*P* **240**	*L* **27**	#	r02-39

Law, David   Hewlett Packard Enterprise

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

Suggest that '... node owns now a transmit opportunity ...' should read '... node now owns a transmit opportunity ...'.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Change "owns now" to "now owns" on P240 L27
Note that the comment is out of scope of the recirculation on text unchanged from the previous draft, but is a nonsubstantive editorial change which improves clarity.

Cl **148**	*SC* **148.4.5.1**	*P* **240**	*L* **34**	#	r02-40

Law, David   Hewlett Packard Enterprise

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

Suggest that 'In EARLY_RECEIVE state, PLCA is waiting ...' should be changed to read 'In EARLY_RECEIVE state, the PLCA Control state diagram is waiting ...' since this subclause is describing the PLCA Control state diagram, and the EARLY_RECEIVE state is a state of that state diagram, not of the PLCA as a whole.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

On P240 L34 change "PLCA is waiting" to "the PLCA Control state diagram is waiting".

Note that the comment is out of scope of the recirculation on text unchanged from the previous draft, but nonsubstantively corrects an ambiguity which could be misinterpreted to mean both the PLCA Control and the PLCA Data state diagrams which improves clarity.

Cl **148**	*SC* **148.4.5.1**	*P* **240**	*L* **36**	#	r02-41

Law, David   Hewlett Packard Enterprise

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

Suggest that 'RECEIVE state is then kept until ...' should be changed to read 'The PLCA Control state diagram then remains in the RECEIVE state until ...'.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The comment is out of scope of the recirculation on text unchanged from the previous draft. Additionally, the CRG disagrees with the commenter. while the wording is editorially cleaner, it does not change the meaning in a way to remove any ambiguity.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **148**
SC **148.4.5.1**

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Cl **148**   *SC* **148.4.5.1**   *P* **240**   *L* **41**   # r02-42

Law, David   Hewlett Packard Enterprise

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

Suggest that '... might be out of sync.' be changed to read '... might be out of synchronisation.'.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The comment is out of scope of the recirculation on text unchanged from the previous draft. Additionally, the CRG disagrees with the commenter. while the wording is editorially cleaner, it does not change the meaning in a way to remove any ambiguity.

Cl **148**   *SC* **148.4.5.1**   *P* **240**   *L* **45**   # r02-43

Law, David   Hewlett Packard Enterprise

Comment Type **E**   *Comment Status* **D**   *OOS Editorial*

Suggest that '... might be out of sync, ...' be changed to read '... might be out of synchronisation, ...'.

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
The comment is out of scope of the recirculation on text unchanged from the previous draft. Additionally, the CRG disagrees with the commenter. while the wording is editorially cleaner, it does not change the meaning in a way to remove any ambiguity.

Cl **148**   *SC* **148.4.5.1**   *P* **245**   *L* **51**   # r02-1

Huszak, Gergely   Kone

Comment Type **T**   *Comment Status* **D**   *State Diagrams*

Condition on NEXT_TX_OPPORTUNITY->RESYNC assumes a certain operator precedence and associativity that is not spelled out, creating ambiguity

SuggestedRemedy

Change "(local_nodeID = 0) * (curID >= plca_node_count) + (curID = 255)" to "((local_nodeID = 0) * (curID >= plca_node_count)) + (curID = 255)"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**   *SC* **148.4.5.2**   *P* **241**   *L* **14**   # r02-13

Maguire, Valerie   The Siemon Company

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

This is an action. See Table 30-11

SuggestedRemedy

Replace, "aPLCAReset" with "acPLCAReset" in two locations in line 14.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**   *SC* **148.4.5.2**   *P* **241**   *L* **14**   # r02-31

Kabra, Lokesh   Synopsys, Inc.

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

Incorrect reference to managed object

SuggestedRemedy

Replace "aPLCAReset" with "acPLCAReset"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Accomodated by comment r02-13.
Response to comment r02-13 is:
ACCEPT.

Suggested Remedy of r02-13 is:
Replace, "aPLCAReset" with "acPLCAReset" in two locations in line 14.

Cl **148**   *SC* **148.4.5.2**   *P* **241**   *L* **20**   # r02-32

Kabra, Lokesh   Synopsys, Inc.

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

Incorrect reference to managed object; plca_en is controlled by acPLCAAdminControl as per definition in 30.16.1.2.1

SuggestedRemedy

Replace "aPLCAAdminState" with "acPLCAAdminControl"

Proposed Response   *Response Status* **W**

PROPOSED REJECT.
Comment is out of scope of the recirculation on unchanged text.
CRG disagrees with the commenter.
While acPLCAAdminControl changes the state of the variable, aPLCAAdminState reflects the state of the plca_en at all times, without requiring an action.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **148**   Page 18 of 21
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **148.4.5.2**   8/8/2019 3:18:36 PM
SORT ORDER: Clause, Subclause, page, line

Cl **148**	*SC* **148.4.5.4**	*P* **245**	*L* **50**	# r02-19

Graber, Steffen   Pepperl+Fuchs AG

Comment Type **E**   *Comment Status* **D**   *State Diagrams*

Brackets in exit condition of NEXT_TX_OPPORTUNITY state are missing.

SuggestedRemedy

Change "(local_nodeID = 0) * (curID >= plca_node_count) + (curID = 255)" to
"((local_nodeID = 0) * (curID >= plca_node_count)) + (curID = 255)".

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Accomodated by comment r02-1
Response to comment r02-1 is:
ACCEPT.

Suggested Remedy to r02-1 is:
Change "(local_nodeID = 0) * (curID >= plca_node_count) + (curID = 255)" to
"((local_nodeID = 0) * (curID >= plca_node_count)) + (curID = 255)"

Cl **148**	*SC* **148.4.5.4**	*P* **245**	*L* **51**	# r02-44

Law, David   Hewlett Packard Enterprise

Comment Type **T**   *Comment Status* **D**   *State Diagrams*

Since the precedence of operators isn't defined in 21.5, or locally in Clause 148, it isn't clear if the equation (local_nodeID = 0) * (curID => plca_node_count) + (curID = 255) means perform the AND then the OR, or as I believe is intended, perform the OR then the AND.

SuggestedRemedy

Suggest that '(local_nodeID = 0) * (curID => plca_node_count) + (curID = 255)' be changed to read '(local_nodeID = 0) * ((curID => plca_node_count) + (curID = 255))'.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Accomodated by comment r02-1
Response to comment r02-1 is:
ACCEPT.

Suggested Remedy to r02-1 is:
Change "(local_nodeID = 0) * (curID >= plca_node_count) + (curID = 255)" to
"((local_nodeID = 0) * (curID >= plca_node_count)) + (curID = 255)"

Cl **148**	*SC* **148.4.6.1**	*P* **246**	*L* **25**	# r02-45

Law, David   Hewlett Packard Enterprise

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

We don't normally use inverted commas around variable names, states or variable values in Clause 148. Suggest that the inverted commas be removed in the few instances where they are used.

SuggestedRemedy

Subclause 148.4.6.1, page 246, line 25
Suggest that '... the "committed" variable ...' be changed to read '... the committed variable ...'.

Subclause 148.4.7.1, page 252, line 9
Suggest that '... enters "INACTIVE" state ...' be changed to read '... enters the INACTIVE state ...'.

Subclause 148.4.7.1, page 252, line 10
Suggest that '... plca_status as "FAIL".' be changed to read '... plca_status as FAIL.'.

Subclause 148.4.7.1, page 252, line 12
Suggest that '... plca_status as "OK".' be changed to read '... plca_status as OK.'.

Subclause 148.4.7.1, page 252, line 14
Suggest that 'From "ACTIVE" state ...' be changed to read 'From the ACTIVE state ...'.

Subclause 148.4.7.1, page 252, line 15
Suggest that '... enters "HYSTERESIS" state ...' be changed to read '... enters the HYSTERESIS state ...'.
Suggest that '... as "OK" and ...' be changed to read '... as OK and ...'.

Subclause 148.4.7.1, page 252, line 17
Suggest that '... to "ACTIVE" state ...' be changed to read '... to the ACTIVE state ...'.

Subclause 148.4.7.1, page 252, line 19
Suggest that '... to "INACTIVE" state, reporting plca_status as "FAIL"' be changed to '... to the INACTIVE state, reporting plca_status as FAIL.' (note also the addition of this missing full stop to the end of this sentence).

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **148**   Page 19 of 21
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **148.4.6.1**   8/8/2019 3:18:36 PM
SORT ORDER: Clause, Subclause, page, line

Cl **148**   *SC* **148.4.6.2**   *P* **247**   *L* **7**   # r02-46

Law, David   Hewlett Packard Enterprise

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

The subclause title seems to have become detached from the subclause number, separated by an editor's note box.

SuggestedRemedy

Delete the text 'PLCA Data variables' from before the editor's note box and change the '148.4.6.2' to read '148.4.6.2 Variables'.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**   *SC* **148.4.6.3**   *P* **248**   *L* **16**   # r02-47

Law, David   Hewlett Packard Enterprise

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

Missing cross reference.

SuggestedRemedy

Change 'Otherwise it returns the value of the plca_txer variable, defined in .' to read 'Otherwise it returns the value of the plca_txer variable, defined in 148.4.6.2.'.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**   *SC* **148.4.6.6**   *P* **249**   *L* **4**   # r02-67

Beruto, Piergiorgio

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

The delay_line_length constant should count nibbles instead of bits, according to the way it is used in the State Diagrams.

SuggestedRemedy

Change "This constant is implementation dependent and specifies the maximum length of the PLCA RS variable delay line depicted in Figure 148-2.
Value: up to 396 bit times."
to
"This constant is implementation dependent and specifies the maximum number of nibbles that the PLCA RS variable delay line can hold.
Value: up to 99"

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**   *SC* **148.4.6.6**   *P* **250**   *L* **38**   # r02-48

Law, David   Hewlett Packard Enterprise

Comment Type **TR**   *Comment Status* **D**   *State Diagrams*

Under heavy load, it appears that node 0 ceases transmission of BEACONs. After the completion of a transmission, the node 0 PLCA Data state diagram enters the IDLE state once the looped back CRS ends. At the same time, the node 0 PLCA Control state diagram enters the WAIT_TO state. After an IPG, the plca_txen for node 0 is then asserted and as a result the node 0 PLCA Data state diagram entering the HOLD.

The problem seems to be that when the node 0 PLCA Control state diagram enters the SEND_BEACON state, and tx_cmd is set to BEACON, the PLCA Data state diagram doesn't send a BEACON. This is because TX_ER is mapped to plca_txer and TXD is set to 0000 in the HOLD state. As a result, the curID counters in the other stations don't get set to zero, and therefore these stations don't get their transmit opportunities.

SuggestedRemedy

Change the Figure 148-4 PLCA Data state diagram to send a BEACON while in the HOLD state when tx_cmd is set to BEACON.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Accommodated by proposed resolution of comment #33.

Proposed resolution of comment #33 is:
PROPOSED ACCEPT IN PRINCIPLE.

[1] In Figure 148-4, in the HOLD state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

[2] In Figure 148-4, in the ABORT state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

[3] In Figure 148-4, in both the COLLIDE and DELAY_PENDING states add the following: "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **148**
SC **148.4.6.6**

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Cl **148**   *SC* **148.4.6.6**   *P* **250**   *L* **41**   # r02-49

Law, David   Hewlett Packard Enterprise

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

IEEE Std 802.3-2018 Table 22-1 'Permissible encodings of TXD<3:0>, TX_EN, and TX_ER' defines TX_EN = 0, TX_ER = 1 and TXD = 0000 as Reserved. This however will be the encoding presented on the MII if the Figure 148-4 'PLCA Data state diagram' enters the HOLD or ABORT states and plca_txer is asserted.

SuggestedRemedy

Change the actions in the HOLD or ABORT states to issue a defined encoding on the MII when plca_txer is asserted.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.
Accommodated by resolution of comment #33.

Proposed resolution of comment #33 is:
ACCEPT IN PRINCIPLE.

[1] In Figure 148-4, in the HOLD state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

[2] In Figure 148-4, in the ABORT state, replace "
TX_ER <= plca_txer
TXD <= 0000
"
with "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

[3] In Figure 148-4, in both the COLLIDE and DELAY_PENDING states add the following: "
TX_ER <= ENCODE_TXER(tx_cmd)
TXD <= ENCODE_TXD(tx_cmd)
"

Cl **148**   *SC* **148.4.6.6**   *P* **250**   *L* **48**   # r02-50

Law, David   Hewlett Packard Enterprise

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

The arrow seems to have become detached from the connection to a state on another page labelled 'B'.

SuggestedRemedy

Reconnect the arrow with the connection labelled 'B'.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

Cl **148**   *SC* **148.4.6.6**   *P* **251**   *L* **32**   # r02-51

Law, David   Hewlett Packard Enterprise

Comment Type **T**   *Comment Status* **D**   *State Diagrams*

The subscript notation n-a used in relation to plca_txd$_{n-a}$ doesn't seem to be defined.

SuggestedRemedy

Suggest that the text "The 'n-a' subscript indicates the plca_txd conveyed 'a' mii_clock_timer expirations before the most recent one." be added to the end of the plca_txd<3:0> variable definition in subclause 148.4.6.2.

Proposed Response   *Response Status* **W**

PROPOSED ACCEPT.

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

Cl **148**
SC **148.4.6.6**

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