Cl 00　　**SC 0**　　　　**P 1**　　**L 18**　　# r02-15
Donahue, Curtis

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

When the words "twisted" and "pair" and used together in the draft text all instances have a "-" between them, such as "twisted-pair", however the draft title "Physical Layer Specifications and Management Parameters for 100 Mb/s Operation over a Single Balanced Twisted Pair Cable (100BASE-T1)" do not. All instances should be consistent. This also happens in the P802.3bp draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Suggest change "Twisted Pair" to "Twisted-Pair".

Additionally,
page 2, line 3: Change from "twisted pair" to "twisted-pair".
page 17, line 11: Change from "Twisted Pair" to "Twisted-Pair".

Proposed Response　　*Response Status* **O**

Cl 00　　**SC 0**　　　　**P 13**　　**L**　　# r02-74
RAN, ADEE　　　　　　　Intel Corporation

Comment Type **G**　　*Comment Status* **X**

Two pages in the "compare" document are numbered 13. All my comments use the PDF page numbers rather than the numbers appearing on the pages.

SuggestedRemedy

I assume that this will be correct in the published standard.

Proposed Response　　*Response Status* **O**

Cl 01　　**SC 1.3**　　　　**P 18**　　**L**　　# r02-16
Donahue, Curtis

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

No space in "Part1".

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Part1" to "Part 1".

Proposed Response　　*Response Status* **O**

Cl 01　　**SC 1.3**　　　　**P 18**　　**L 50**　　# r02-17
Donahue, Curtis

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

"(There are many parts to this. I did not list all parts and dates.)" should not be in the draft text.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Remove "(There are many parts to this. I did not list all parts and dates.)" and add part #'s and dates for ISO 11452 reference if necessary.

Proposed Response　　*Response Status* **O**

Cl 01　　**SC 1.4.150**　　**P 20**　　**L 31**　　# r02-63
RAN, ADEE　　　　　　　Intel Corporation

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

Acknowledging that this text is not changed from previous drafts, therefore not "required".

The inserted text is longer than the corresponding existing descriptions, and is confusing. In 96.3.3.1 a code group is simply a "pair of ternary symbols".

Also, the cross references to clause 96 and 96.3 don't work.

SuggestedRemedy

Change inserted text to
"For 100BASE-T1, a pair of ternary symbols that, when representing data, conveys three bits, as defined in 96.3".

Fix cross references (throughout the document).

Proposed Response　　*Response Status* **O**

Cl 01　　**SC 1.4.193**　　**P 20**　　**L 8**　　# r02-4
Chini, Ahmad

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

Text crosses (strike throughs) show up in the CLEAN version of the doc.

SuggestedRemedy

See comment.

Proposed Response　　*Response Status* **O**

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

Cl **01**
SC **1.4.193**

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Cl **01**   *SC* **1.4.221a**   *P* **22**   *L* **30**   # r02-66
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. According to the definition of "FORCE mode", this is not a mode, it is a procedure. "mode" suggest that there is another mode of operation, except forcing one side to be master and the other to slave. But for 100BASE-T1 this the only way to configure M/S.

Programming two devices so that they interoperate (such as assigning M/S roles) is in general a _management_ function. If this management overrides some other method then it may be colloquially called "force mode", but we have never used this term in the standard and it does not seem necessary to define it now.

SuggestedRemedy

Delete this definition from 1.4; in 96.2, change "FORCE mode" to "management control"; in 96.4.4, change "FORCE mode is used" to "management control is used", and delete "Using force mode," in the second sentence; in 96.4.5, change "FORCE mode" to "Management control".

Proposed Response   *Response Status* **O**

Cl **01**   *SC* **1.4.394**   *P* **22**   *L* **5**   # r02-64
RAN, ADEE   Intel Corporation

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

Description for 100BASE-T1 is not equivalent to 1000BASE-T, the resulting text is confusing.

SuggestedRemedy

Change to "In 100BASE-T1, the time interval for transmission of one ternary symbol, equal to 15 ns".

Proposed Response   *Response Status* **O**

Cl **01**   *SC* **1.4.87a**   *P* **22**   *L* **25**   # r02-65
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. This overline seems to be a notation for a recurring decimal. I have not seen this used before (at least within 802.3), it does not appear in the style guide, and is not a universally accepted notation (see Wikipedia for "repeating decimal".

SuggestedRemedy

Either change 33.333 to 100/3 and 66.666 to 200/3 everywhere, or explicitly define the overline notation (possibly in 1.2.6?) and then use 33.3(overline) and 66.6(overline) everywhere.

Proposed Response   *Response Status* **O**

Cl **01**   *SC* **1.5**   *P* **21**   *L* **46**   # r02-18
Donahue, Curtis

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

PSAACRF is defined as "power sum alien attenuation to crosstalk ratio far end" but the title of 96.7.1.6 is "Power sum alien attenuation to crosstalk ratio far-end (PSAACRF)". Also, in 1.5 PSANEXT is defined as "power sum alien near-end crosstalk".

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change the definition of PSAACRF in 1.5 to "power sum alien attenuation to crosstalk ratio far-end".

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.131.2**   *P* **26**   *L* **49**   # r02-20
Donahue, Curtis

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

"MASTER/SLAVE" is not consistent nomenclature with rest of draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change title "BASE-T1 MASTER/SLAVE config value (1.2100.14)" to "BASE-T1 MASTER-SLAVE config value (1.2100.14)".

Proposed Response   *Response Status* **O**

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

Cl **45**
SC **45.2.1.131.2**

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Cl **45**   *SC* **45.2.1.131.2**   *P* **27**   *L* **51**   # r02-67
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft.
The condition "MASTER-SLAVE manual config enable bit is set to one" is always true by
the preceding subclause, so is redundant.

SuggestedRemedy

Delete "if MASTER-SLAVE manual config enable bit 1.2100.15 is set to one".

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.131.3**   *P* **28**   *L* **4**   # r02-68
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. "Future
modes of operation may use additional settings of these four bits" - this goes without
saying, and is not used in other subclauses (as the standard doesn't predict the future).
Will probably be deleted in maintenance if it stays this way.

SuggestedRemedy

Delete "Future modes of operation may use additional settings of these four bits."

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.132**   *P* **28**   *L* **16**   # r02-69
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. Reserved
values are conventionally described as simply "Reserved". Compare to table 45-57. The
extra wording will probably be deleted in maintenance if it stays this way.

SuggestedRemedy

Change all occurrences of "Reserved for future use, operations not defined yet" to
"Reserved".

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.6**   *P* **24**   *L* **38**   # r02-1
Wienckowski, Natalie   General Motors Comp

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

The text refers to Table 45-4; however, the table it refers to is 45-7, which is the correct
table in Clause 45.

SuggestedRemedy

Replace: Replace indicated line in the 1.7.5:0 row of Table 45-4 with five new lines...

With: Replace indicated line in the 1.7.5:0 row of Table 45-7 with five new lines...

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.6**   *P* **24**   *L* **38**   # r02-19
Donahue, Curtis

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

Reference to "Table 45-4" should be "Table 45-7"

SuggestedRemedy

Change "Table 45-4" to "Table 45-7"

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.1.6**   *P* **24**   *L* **38**   # r02-5
Chini, Ahmad

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

Table number is not correct.

SuggestedRemedy

Change "Table 45-4" to "Table 45-7".

Proposed Response   *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **45**   Page 3 of 16
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **45.2.1.6**   8/16/2015 10:59:41 PM
SORT ORDER: Clause, Subclause, page, line

Cl **45**   *SC* **45.2.3.1.2**   *P* **27**   *L* **41**   # r02-23

Donahue, Curtis

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

The first sentence of 45.2.3.1.2 does not include "100BASE-T1", should it?

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Modify the paragraph in 45.2.3.1.2 as necessary.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.3.1.2**   *P* **27**   *L* **41**   # r02-22

Donahue, Curtis

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

Text in 45.2.3.1.2 was modified to accommodate 100BASE-T1 but the "shalls" in that paragraph were not modified to reflect this update.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Modify RM13, RM14, RM15, RM16 as necessary to include 100BASE-T1.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.3.1.2**   *P* **27**   *L* **45**   # r02-6

Chini, Ahmad

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

Wrong reference.

SuggestedRemedy

Change 96.3.4 to 96.3.5.

Proposed Response   *Response Status* **O**

Cl **45**   *SC* **45.2.3.1.2**   *P* **27**   *L* **45**   # r02-21

Donahue, Curtis

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

Cross reference "96.3.4" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "96.3.4" to "96.3.5"

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.1**   *P* **30**   *L* **43**   # r02-24

Donahue, Curtis

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

Cross reference "Figure 96-2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Figure 96-2" to "Figure 96-3"

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.1**   *P* **30**   *L* **43**   # r02-7

Chini, Ahmad

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

Wrong Figure number.

SuggestedRemedy

Change "Figure 96-2" to "Figure 96-3"

Proposed Response   *Response Status* **O**

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

Cl **96**
SC **96.1**

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Cl **96** *SC* **96.1** *P* **30** *L* **9** # r02-2
Anslow, Peter Ciena Corporation

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

The newly inserted "Clause 45" should be a cross-reference. Same issue in the first line of 96.6.3

SuggestedRemedy

Change "Clause 45" to be a cross-reference in 96.1 and 96.6.3

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.1** *P* **31** *L* **10** # r02-70
RAN, ADEE Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. "It is suitable for a variety of applications" looks like marketing text, which does not belong in a standard. It does not appear in similar clauses.

SuggestedRemedy

Delete "It is suitable for a variety of applications".

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.1.1** *P* **31** *L* **50** # r02-25
Donahue, Curtis

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

Cross reference "Figure 96-2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Figure 96-2" to "Figure 96-15"

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.1.1** *P* **31** *L* **50** # r02-8
Chini, Ahmad

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

Wrong Figure number.

SuggestedRemedy

Change "Figure 96-2" to "Figure 96-15"

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.1.1** *P* **34** *L* **41** # r02-71
RAN, ADEE Intel Corporation

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

The text starting from "In contrast" until the end of this paragraph is not required for describing the architecture of 100GBASE-T1, has no normative meaning and does not help readability. The part about Clause 40 is not "in contrast" since it is a different speed (should we also mention 10GBASE-T?). This text is only weakly relevant and informative at best.

SuggestedRemedy

Replace the text from "In contrast" up to the end of the paragraph, to "This PHY uses ternary signaling and interfaces to the Clause 22 MII".
Add a NOTE (informative text) after the paragraph: "The 100BASE-TX PHY, specified in Clause 25, also interfaces to a Clause 22 MII, but operates over two pairs of balanced twisted-pair cabling".

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.1.1** *P* **34** *L* **46** # r02-72
RAN, ADEE Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. This text is badly phrased: the "significant changes in the PCS" are unrelated to the PMA.

SuggestedRemedy

change ", but with significant changes to the PCS, as specified in 96.3" to "The PCS (specified in 96.3) is different from the PCS defined in Clause 40".

Proposed Response *Response Status* **O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general   *Cl* **96**   Page 5 of 16
COMMENT STATUS: D/dispatched A/accepted R/rejected   RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn   *SC* **96.1.1**   8/16/2015 10:59:42 PM
SORT ORDER: Clause, Subclause, page, line

Cl **96**   *SC* **96.1.1**   *P* **35**   *L* **4**   # r02-73
RAN, ADEE   Intel Corporation

Comment Type **G**   *Comment Status* **X**
   Acknowledging that this comment is not against changes from the previous draft.
   Objectives are not part of the standard, and "Adopt" is not the feature. Echo cancellation is
   not mentioned anywhere else, and PAM3 does not "help minimize the bandwidth" and
   definitely does not reduce EMI, compared to its usage in 100BASE-TX. Altogether, this text
   does not seem to be required in the standard.

SuggestedRemedy
   Change "achieving the objectives" to "operation over a single balanced twisted-pair".
   Change item a) to "Full-duplex communication" and item b) to "3-level pulse amplitude
   modulation (PAM3). Alternatively, delete the text in lines 4-9.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.11.4.1**   *P* **82**   *L* **10**   # r02-56
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
   PCT13 is a duplicate of PCT11.

   Note: page#, subclause#, and line# are in reference to "clean" draft version
SuggestedRemedy
   Remove PCT13, renumber PICS items as necessary.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.11.4.1**   *P* **82**   *L* **3**   # r02-10
Chini, Ahmad

Comment Type **T**   *Comment Status* **X**
   Duplicate entries for PCT11 and PCT13.

SuggestedRemedy
   Remove the row for PCT11 (because PCT11 is the same as PCT13).

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.11.4.1**   *P* **82**   *L* **7**   # r02-11
Chini, Ahmad

Comment Type **T**   *Comment Status* **X**
   No need for PCT12, because it is covered in PCT14.

SuggestedRemedy
   Remove the row for PCT12 (because PCT12 is covered in PCT14).

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.11.4.5**   *P* **87**   *L* **8**   # r02-13
Chini, Ahmad

Comment Type **E**   *Comment Status* **X**
   Apply consistent format.

SuggestedRemedy
   Change "5.4 volts" to "5.4 V".

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.11.4.5**   *P* **88**   *L* **23**   # r02-14
Chini, Ahmad

Comment Type **E**   *Comment Status* **X**
   For "96.5.7" is not pdf active link.

SuggestedRemedy
   See comment.

Proposed Response   *Response Status* **O**

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

Cl **96**
SC **96.11.4.5**

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Cl **96**　　　*SC* **96.2**　　　　　　　*P* **33**　　　*L* **12**　　　# r02-26
Donahue, Curtis

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

Cross reference "96.4.4" is incorrectly marked in green text. Green text signifies a subclause cross reference that is not included in the present draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version.

SuggestedRemedy

Change "96.4.4" from green text to normal black text formatting.

Proposed Response　　　*Response Status*　**O**

Cl **96**　　　*SC* **96.2**　　　　　　　*P* **36**　　　*L* **15**　　　# r02-75
RAN, ADEE　　　　　　　　　　　Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. The clarifications and differences are related to 40.2, so are not "general". Also, They Should Not Be Capitalized.

SuggestedRemedy

Change "General Clarifications and Differences" to "Differences from the 40.2 service interface".

Proposed Response　　　*Response Status*　**O**

Cl **96**　　　*SC* **96.2.1**　　　　　　　*P* **36**　　　*L* **23**　　　# r02-80
RAN, ADEE　　　　　　　　　　　Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft.

The "symbol vectors" used throughout this clause are actually scalars (single lane), while "symbol pairs" are actually vectors. There are also vectors that refer to bits.

Using these "vectors" is an unnecessary and confusing complication for a single-lane PHY. Changing all "symbol vectors" to "symbols" would improve readability.

SuggestedRemedy

Change "symbol vectors" to "symbols" in 96.2.1.
Change tx_symb_vector to tx_symb and rx_symb_vector to rx_symb throughout.
Change "A vector of ternary symbols" or (A vector of one ternary symbol" to "A ternary symbol" in 96.2.4.1, 96.2.5.1, 96.3.4.1.1.
Change "sequences of vectors" to "sequences of symbols" and "a vector of zeros" to "a zero symbol" in 96.3.3.2.
Change "A vector of two ternary symbols" to "A ternary symbol pair" and "A sequence of ternary vectors" to "A sequence of ternary symbol pairs" in all variable definitions in 96.3.3.2.1.
Delete "VECTOR" from all state names in figure 96-7 (PCS transmit state diagram).
Change "vector" to "pair" in 96.3.3.3.9.

Proposed Response　　　*Response Status*　**O**

Cl **96**　　　*SC* **96.2.1**　　　　　　　*P* **36**　　　*L* **24**　　　# r02-76
RAN, ADEE　　　　　　　　　　　Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. It would be better to explicitly state which service interface "the service interface" refers to.

SuggestedRemedy

Change "the service interface" to "the PMA service interface".

Proposed Response　　　*Response Status*　**O**

TYPE: TR/technical required ER/editorial required GR/general required T/technical E/editorial G/general　　　　　*Cl* **96**　　　Page 7 of 16
COMMENT STATUS: D/dispatched A/accepted R/rejected　　RESPONSE STATUS: O/open W/written C/closed U/unsatisfied Z/withdrawn　　　*SC* **96.2.1**　　　8/16/2015 10:59:42 PM
SORT ORDER: Clause, Subclause, page, line

Cl **96** *SC* **96.2.3** *P* **40** *L* **15** # r02-77
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. Introduction of this primitive is not clear, and does not describe the primitive like other similar subclauses (e.g. 96.2.2).

SuggestedRemedy

Change the text to "This primitive is generated by the PMA to indicate the type of signaling required from the PCS, based on the link status."

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.3.1** *P* **40** *L* **26** # r02-78
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. For parameters that take one of the listed possible values, "of the form" is unneeded and confusing (and arguably wrong). This occurs several times, and is not even consistent.

SuggestedRemedy

Delete "of the form" in 96.2.3.1, 96.2.6.1, 96.2.7.1, 96.2.8.1, 96.2.10.1.

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.3.3** *P* **35** *L* **49** # r02-27
Donahue, Curtis

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

Cross reference "96.3.2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "96.3.2" to "96.3.3"

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.3.3** *P* **40** *L* **40** # r02-79
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft. This primitive is related to the "Data Transmission Enabling" function, not the Transmit function.

SuggestedRemedy

Change "Transmit" to "Data Transmission Enabling".

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.4** *P* **36** *L* **44** # r02-58
Donahue, Curtis

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

Cross reference "Figure 96-7" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Figure 96-7" to "96-6a and Figure 96-6b"

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.4** *P* **6** *L* **36** # r02-57
Donahue, Curtis

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

Cross reference "96.3.2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "96.3.2" to "96.3.3"

Proposed Response *Response Status* **O**

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

Cl **96**
SC **96.2.4**

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Cl **96** *SC* **96.2.4.1** *P* **41** *L* **53** # r02-81
RAN, ADEE   Intel Corporation

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

This comment results from the deletion of the definition of SYMB_1D (1.4.392a).

The parameter of this primitive is a single ternary symbol (a term defined in 1.4.398). There is no need to use the (now undefined) term SYMB_1D, call it a vector of length 1, and refer to its elements with an index [BI_DA] that is never used elsewhere.

Comment also applies to 96.2.5.1.

SuggestedRemedy

In 96.2.4.1, replace the text starting from "The tx_symb_vector" up to the end of this subclause to:
"The tx_symb parameter is a ternary symbol".

In 96.2.5.1, replace the text starting from "The rx_symb_vector" up to the end of this subclause to:
"The rx_symb parameter is a ternary symbol".

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.5.1** *P* **36** *L* **39** # r02-28
Donahue, Curtis

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

Change the beginning of the paragraph from "During reception the" to "During reception, the". This would be consistent with the first paragraph of 96.2.4.1.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

See comment.

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.2.9.1** *P* **43** *L* **23** # r02-83
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft.

This subclause and the next one refer to 96.4.1, which just refers further to 40.4.2.1. Save the reader's time by removing this indirection and placing the reference directly here. 96.4.1 may be removed.

SuggestedRemedy

Change the text in 96.2.9.1 to
"This primitive is generated under the conditions described in 40.4.2.1.

Change the text in 96.2.9.2 to
"The effect of receipt of this primitive is specified in 40.4.2.1".

Optionally, also delete subclause 96.4.1.

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.3** *P* **44** *L* **3** # r02-84
RAN, ADEE   Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft.

The PCS Data Transmission Enable function, also a part of the PCS, is missing.

SuggestedRemedy

Insert "the PCS Data Transmission Enable, " between "PCS Reset" and "PCS Transmit".

Also, add a comma between "Transmit" and the final "and".

Proposed Response *Response Status* **O**

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

Cl **96**
SC **96.3**

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Cl **96**   *SC* **96.3.3.1.2**   *P* **48**   *L* **46**   # r02-85
RAN, ADEE   Intel Corporation

Comment Type **E**   *Comment Status* **X**
Acknowledging that this comment is not against changes from the previous draft.

The IPG doesn't "help" anything.

SuggestedRemedy
Change "helps to flush" to "enables flushing"

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2**   *P* **44**   *L* **21**   # r02-29
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Change "State Diagram" to "state diagram". This would be consistent with the rest of the draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
See comment.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2**   *P* **44**   *L* **25**   # r02-30
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Change "{-1, 0, or 1}" to "{-1, 0, or +1}". This would be consistent with the rest of the draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
See comment.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2**   *P* **44**   *L* **38**   # r02-61
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Multiple definitions of ESD1 and ESD2.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
Modify to: "Therefore, at the end of a frame, tx_error is examined to determine whether ESD3 or ERR_ESD3 are to be transmitted following two consecutive special pairs (0, 0) for ESD1 and ESD2, as shown in Figure 96-7."

to

"Therefore, at the end of a frame, tx_error is examined to determine whether ESD3 or ERR_ESD3 are to be transmitted following ESD1 and ESD2, as shown in Figure 96-7."

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2**   *P* **50**   *L* **28**   # r02-86
RAN, ADEE   Intel Corporation

Comment Type **ER**   *Comment Status* **X**
Acknowledging that this comment is not against changes from the previous draft.

The sentence starting with "In the normal mode of operation" and ending with "the parameter tx_enable" is unclear and badly phrased.

What does "when between streams of data" mean? (tx_enable has the value false?)

A simple reference to the rules would be easier to understand.

SuggestedRemedy
Change this sentence to:

"In the normal mode of operation, the PCS Transmit generates sequences of vectors using the encoding rules defined for SEND_N in 96.3.3.3.7 and 96.3.3.3.8, according to the value of tx_enable.".

Proposed Response   *Response Status* **O**

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

Cl **96**
SC **96.3.3.2**

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Cl **96**   *SC* **96.3.3.2**   *P* **50**   *L* **33**   # r02-87
RAN, ADEE   Intel Corporation

Comment Type **TR**   *Comment Status* **X**
Acknowledging that this comment is not against changes from the previous draft.

PAM3 modulation occurs at all times, not just "until tx_enable is re-asserted".

The modulation is part of the PMA function and should not be stated for the PCS.

SuggestedRemedy
Delete "and these ternary symbols are converted to an analog signal using a PAM3 modulation scheme".

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2.1**   *P* **15**   *L* **45**   # r02-59
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Cross reference "96.3.2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
Change "96.3.2" to "96.3"

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2.1**   *P* **45**   *L* **15**   # r02-60
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Cross reference "96.3.2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
Change "96.3.2" to "96.3.3"

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2.1**   *P* **45**   *L* **18**   # r02-62
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Definition does not specify a subclause for ERR_ESD3.

SuggestedRemedy
Add subclause refeerence into definition.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2.3**   *P* **46**   *L* **45**   # r02-31
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Formatting and spacing of timer definitions are not consistent.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
Fix formatting for text in timer definition in 96.3.3.2.3.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.3.3.2.3**   *P* **47**   *L* **38**   # r02-32
Donahue, Curtis

Comment Type **E**   *Comment Status* **X**
Missing arrow tip where exit conditions for SSD3 VECTOR and TRANSMIT DATA merge. Add arrow tip to be consistent with other instances within the draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Proposed Response   *Response Status* **O**

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

Cl **96**
SC **96.3.3.2.3**

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Cl **96** *SC* **96.3.3.3** *P* **48** *L* **31** # r02-33

Donahue, Curtis

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

Line at bottom of the figure does not extend to the edge where other lines start/stop.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Extend line to allign with the other lines in figure.

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.3.3.3.6** *P* **49** *L* **39** # r02-34

Donahue, Curtis

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

Several instances of numbers less than 11 are typed as the number as opposed to spelling the number out. Such as:
"9" is used instead of "nine" in 96.3.3.3.6, pg 49, line 36
"6" is used instead of "six" in 96.3.3.3.6, pg 49, line 39
"3" is used instead of "three" in 96.4.3, pg 60, line 26
etc.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Follow IEEE style guide and type the word of the number if it is less than 11, fix all instances throught draft.

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.3.4.1** *P* **60** *L* **27** # r02-82

RAN, ADEE Intel Corporation

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

Acknowledging that this comment is not against changes from the previous draft.

The text in this paragraph does not add any requirement beyond what the state diagram contains. It seems like an observation that is merely informative. It should therefore be a NOTE.

In addition, the number 4 should be spelled out in the text.

SuggestedRemedy

Make this paragraph a NOTE.

Change the numeric "4" to "four" twice in this paragraph.

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.3.4.1.1** *P* **55** *L* **10** # r02-37

Donahue, Curtis

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

"Data phase" is not used anywhere else in the draft.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Data phase" to "Data mode".

Proposed Response *Response Status* **O**

Cl **96** *SC* **96.3.4.1.1** *P* **55** *L* **18** # r02-36

Donahue, Curtis

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

The subscript 'n' of several variables (Rx_n, RA_n, RB_n, Scr_n, $x0_n$, etc.) is not italicized in several locations throughout, however Tx_n has an italicized 'n'.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Fix all instances of the subscript 'n' to italicized, making the font consistent throughout the draft.

Proposed Response *Response Status* **O**

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

Cl **96**
SC **96.3.4.1.1**

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Cl **96**　　*SC* **96.3.4.1.1**　　　　*P* **55**　　　*L* **33**　　# r02-35
Donahue, Curtis

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

SYMB_1D does not have a definition next to it but a few lines above it SYMB_2D does.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Suggest that the definition of SYMB_1D be added for consistency or remove the definition of SYMB_2D on line 26 (already defined in 96.3.3.2.1)..

Proposed Response　　　*Response Status* **O**

Cl **96**　　*SC* **96.3.4.1.3**　　　　*P* **55**　　　*L* **52**　　# r02-38
Donahue, Curtis

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

Several equations, definitions, and state diagram text that use operators or symbols do not have consistent spacing around the surrounding numbers. Such as "1.08 ms +/-54 us".

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Fix all such instances to have a space before and after the operator/symbol.

Proposed Response　　　*Response Status* **O**

Cl **96**　　*SC* **96.3.4.5**　　　　*P* **57**　　　*L* **23**　　# r02-39
Donahue, Curtis

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

The use of "should" in this sentence leaves the result ambiguous. Either the "false carrier error" is indicated on the MII after conversion or its not.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Either make this a testable requirement and change "should" to a "shall", or make it a requirement that does not need to be tested by changing "should" to "will".

Proposed Response　　　*Response Status* **O**

Cl **96**　　*SC* **96.4**　　　　*P* **58**　　　*L* **29**　　# r02-40
Donahue, Curtis

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

Cross reference "96.2.2" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "96.2.2" to "96.2.1"

Proposed Response　　　*Response Status* **O**

Cl **96**　　*SC* **96.4.3**　　　　*P* **60**　　　*L* **27**　　# r02-41
Donahue, Curtis

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

"and" is missing.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Receivers, Abilities, Sub-Functions" to "Receivers, Abilities, and Sub-Functions".

Proposed Response　　　*Response Status* **O**

Cl **96**　　*SC* **96.4.4**　　　　*P* **61**　　　*L* **19**　　# r02-43
Donahue, Curtis

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

"Master" and "Slave" need to be completely capitalized.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "Master" to "MASTER" and "Slave" to "SLAVE".

Proposed Response　　　*Response Status* **O**

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

Cl **96**
SC **96.4.4**

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Cl **96**　　　*SC* **96.4.6**　　　　　*P* **61**　　　　*L* **40**　　　# r02-42
Donahue, Curtis

Comment Type **E**　　　*Comment Status* **X**
　Change "variable" to "variables".

　Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
　See comment.

Proposed Response　　　*Response Status* **O**

Cl **96**　　　*SC* **96.4.7.1**　　　*P* **62**　　　*L* **16**　　　# r02-44
Donahue, Curtis

Comment Type **E**　　　*Comment Status* **X**
　Change "Start maxwait_timer" to "start maxwait_timer".

　Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
　See comment.

Proposed Response　　　*Response Status* **O**

Cl **96**　　　*SC* **96.4.7.1**　　　*P* **63**　　　*L* **5**　　　# r02-45
Donahue, Curtis

Comment Type **E**　　　*Comment Status* **X**
　In Figure 96-19 the line connecting the exit of LINK UP to the entrance of LINK DOWN is missing an arrow tip.

　Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
　Add arrow tip to the line at the top of LINK DOWN.

Proposed Response　　　*Response Status* **O**

Cl **96**　　　*SC* **96.4.7.1**　　　*P* **64**　　　*L* **12**　　　# r02-46
Donahue, Curtis

Comment Type **E**　　　*Comment Status* **X**
　Change "PCS transmit function" to "PCS Transmit function".

　Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
　See comment.

Proposed Response　　　*Response Status* **O**

Cl **96**　　　*SC* **96.4.7.1**　　　*P* **64**　　　*L* **19**　　　# r02-47
Donahue, Curtis

Comment Type **E**　　　*Comment Status* **X**
　"tx_enable" is defined in 96.4.7.1, but it is defined earlier in 96.3.3.2.1 with a different definition. Additionally it is not used in the PHY Control diagrams.

　Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
　Remove tx_enable and its definition from 96.4.7.1.

Proposed Response　　　*Response Status* **O**

Cl **96**　　　*SC* **96.5.1.1**　　　*P* **64**　　　*L* **53**　　　# r02-48
Donahue, Curtis

Comment Type **E**　　　*Comment Status* **X**
　Since RF means "radio frequency", "radio frequency CM RF noise" seems redundant".

　Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy
　Suggest changing to "RF CM noise" since that is what it says in line 49.

Proposed Response　　　*Response Status* **O**

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

Cl **96**
SC **96.5.1.1**

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Cl **96**   *SC* **96.5.2**   *P* **65**   *L* **12**   # r02-3

Chini, Ahmad

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

PICS is missing for Test modes.

SuggestedRemedy

Add a PICS for this statement:"The test modes described in this subclause shall be
provided to allow testing of the transmitter waveform,
transmitter distortion, transmitter jitter, and transmitter droop.

Proposed Response   *Response Status*   **O**

Cl **96**   *SC* **96.5.2**   *P* **65**   *L* **14**   # r02-49

Donahue, Curtis

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

Change "2102.15:13" to "1.2102.15:13".

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

See comment.

Proposed Response   *Response Status*   **O**

Cl **96**   *SC* **96.5.2**   *P* **66**   *L* **14**   # r02-9

Chini, Ahmad

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

Wrong reference.

SuggestedRemedy

"the scrambling function described in 96.3.3.3." should be read "the scrambling function
described in 96.3.3.3.1."

Proposed Response   *Response Status*   **O**

Cl **96**   *SC* **96.5.2**   *P* **66**   *L* **15**   # r02-50

Donahue, Curtis

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

Cross reference "96.3.3.3" is incorrect.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "96.3.3.3" to "96.3.3.3.1"

Proposed Response   *Response Status*   **O**

Cl **96**   *SC* **96.5.3**   *P* **66**   *L* **27**   # r02-51

Donahue, Curtis

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

"Transmitter Under Test" is left aligned while other figures have the same text center
aligned.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Either change the text in Figure 96-20 to center aligned or change text in Figure 96-21 and
Figure 96-22 to left aligned.

Proposed Response   *Response Status*   **O**

Cl **96**   *SC* **96.5.3**   *P* **67**   *L* **45**   # r02-12

Chini, Ahmad

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

Apply consistent format.

SuggestedRemedy

Change "5.4 volts" to "5.4 V".

Proposed Response   *Response Status*   **O**

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

Cl **96**
SC **96.5.3**

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Cl **96**   *SC* **96.5.3**   *P* **67**   *L* **45**   # r02-52

Donahue, Curtis

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

This is the only instance of "volts" being used in the draft but there are other locations where "V" is used.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Suggest changing "5.4 volts" to "5.4 V".

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.5.4.4**   *P* **70**   *L* **48**   # r02-53

Donahue, Curtis

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

Missing ":" between "be" and "resolution" and "and" before "RMS detector".

SuggestedRemedy

Change "be resolution bandwidth = 10 kHz, video bandwidth = 30 kHz, sweep time > 60 s, RMS detector." to "be: resolution bandwidth = 10 kHz, video bandwidth = 30 kHz, sweep time > 60 s, and RMS detector.".

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.5.5**   *P* **72**   *L* **3**   # r02-54

Donahue, Curtis

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

Change "PMA Receive Function" to "PMA Receive function".

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

See comment.

Proposed Response   *Response Status* **O**

Cl **96**   *SC* **96.7.1**   *P* **74**   *L* **54**   # r02-55

Donahue, Curtis

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

The last paragraph of 96.7.1 lists the the transmission parameters definied in the children subclauses but does not list PSANEXT or PSAACRF.

Note: page#, subclause#, and line# are in reference to "clean" draft version

SuggestedRemedy

Change "The transmission parameters of the link segment include insertion loss, return loss, mode conversion loss, and characteristic impedance." to "The transmission parameters of the link segment include insertion loss, return loss, mode conversion loss, characteristic impedance, power sum alien near-end crosstalk, and power sum alien attenuation to crosstalk ratio far-end.".

Proposed Response   *Response Status* **O**

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

Cl **96**
SC **96.7.1**

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