

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 45 SC 45.2.1.6 P 24 L 53 # 25
 Ran, Adee Intel
 Comment Type **TR** Comment Status **D** CL45/22
 The value "0 1 1 1 0 0" is taken by 10GBASE-PR-D4 (as of the published 802.3bj).
SuggestedRemedy
 Choose an available encoding for 100BASE-T1.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT IN PRINCIPLE.
 Necessary change will be done in the next revision of the P802.3bw draft.

Cl 45 SC 45.2.1.2001 P 26 L 34 # 26
 Ran, Adee Intel
 Comment Type **TR** Comment Status **D** CL45/22
 "0 0 1 x" and "0 0 0 1" are not defined.
SuggestedRemedy
 Add them as "reserved".
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.1 P 24 L 24 # 67
 Ran, Adee Intel
 Comment Type **ER** Comment Status **D** CL45/22
 This is the control register, not the status register.
 It is not clear what has changed in this register. The second "reserved" line was removed, but it does not appear in strikeout. Why was this change made?
SuggestedRemedy
 If not change is made, remove the editing instruction (and this subclause).
 Otherwise, show the change appropriately, and change "status" to "control" in the title.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

Cl 00 SC 0 P 10 L 1 # 130
 Grow, Robert RMG Consulting
 Comment Type **TR** Comment Status **D** CL45/22
 PDF page 24 - This draft includes management in clause 45 registers. This is the only PHY at speeds of 100 Mb/s or 1000 Mb/s to do so. All previous PHYs use clause 22 registers. Mixing management between the two different register spaces is a bad idea. It also specifies use of the MII as specified in Clause 22. The MII includes the management interface (22.1.1,c), a requirement to report rate of operation via that management interface (22.1.3), a requirement to implement the basic register set (22.2.4, para. 3), etc.
 The Clause 22 MII specifications also include text (often requirements) that need to be reviewed as part of this project (as well as for 1000BASE-T1 and GEPOF) needs to review Clause 22 for any text that would contradict the specifications of P802.3bw. To move management to Clause 45 for this PHY would require opening Clause 22 and making significant edits. (1000BASE-T1 and GEPOF will have to do the same for both Clause 22 and Clause 35.)

It is important that all three projects review the tradeoffs for management and be consistent in editing legacy clauses. There is a strong case for all three projects taking a similar technical approach to use of these legacy interfaces not carefully examined probably since 1000BASE-T.
SuggestedRemedy
 All register definitions need to be written for Clause 22. Text still needs to be examined since it is likely the extended register set will need to be used, and current text assumes only gigabit PHYs will use the extended register set.

Proposed Response Response Status **W**
 PROPOSED REJECT.
 The Clause 22 MDIO interface has limited extensibility since all the registers have been allocated. Also, the Clause 45 electrical interface is more compatible with current (and expected future technologies). That is why Clause 45 was created and new technologies should continue to use Clause 45 rather than Clause 22.

Cl 45 SC 45.2.1.1 P 24 L 35 # 142
 Booth, Brad Microsoft
 Comment Type **TR** Comment Status **D** CL45/22
 Missing information. x1xx = Reserved was removed but draft doesn't show what was added.
SuggestedRemedy
 Add correct information and register bit definition.
 Proposed Response Response Status **W**
 PROPOSED ACCEPT.

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 45 SC 45.2.1.6 P 24 L 52 # 143
Booth, Brad Microsoft

Comment Type TR Comment Status D CL45/22

This edit only shows a small portion of the table and doesn't give reference to its placement relative to the other ports.

Also missing the bit definition.

SuggestedRemedy

Show the full listing so one can visually understand its placement relative to the other port names.

Add the register bit definition.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Cl 45 SC 45.2.1.10 P 26 L 14 # 144
Booth, Brad Microsoft

Comment Type TR Comment Status D CL45/22

Missing register bit definition.

SuggestedRemedy

Add register bit definition:
When read as a one, bit 1.11.11 indicates that the PMA/PMD is able to operate as a 100BASE-T1 PMA/PMD type. When read as a zero, bit 1.11.11 indicates that the PMA/PMD is not able to operate as a 100BASE-T1 PMA/PMD type.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.10 P 26 L 3 # 201
Remein, Duane Huawei Technologies

Comment Type ER Comment Status D CL45/22

There is not current row for bit 1.11.11.

"Insert the following rows into Table 45-13 in place of the reserved row for bit 1.11.11"

SuggestedRemedy

Change editing instruction to read:

"Change the identified reserved row in Table 45-13 as follows:"

In Table 45-13 show:

1.11.15:121 | Reserved | Ignore on read | RO {with 1 in strike-out}

1.11.11 | 100BASE-T1 ability | 1 = PMA/PMD is able to perform 100BASE-T1

0 = PMA/PMD is not able to perform 100BASE-T1 | RO (in underline)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Similar comment in 554, see the proposed change for this text there.

Cl 45 SC 45.2.1.2001 P 26 L 17 # 202
Remein, Duane Huawei Technologies

Comment Type ER Comment Status D CL45/22

Para 45.2.1.2001 - 45.2.1.2003.1 and accompanying tables are incorrectly numbered. should have the number of the last para in the std with alpha appended. For example

45.2.1.2001 => 45.2.1.106a

Table 45-2001 => Table 45-78a

SuggestedRemedy

Renumber remaining para correctly.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Need to coordinate with 802.3 Chief Editor (Steve Carlson to follow up)

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

CI 45 SC 45.2.1.2001.1 P 26 L 40 # 203
 Remein, Duane Huawei Technologies
 Comment Type ER Comment Status D CL45/22
 All Level 5 headers in CI 45 should include the register bit designations in parens.
 For example 45.2.1.2001.1 should read:
 45.2.1.2001.1 100BASE-T1 MASTER-SLAVE manual config enable(1.2100.15)
 SuggestedRemedy
 Add register desig. to all CI 45 L5 headers
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.1 P 24 L 24 # 212
 Remein, Duane Huawei Technologies
 Comment Type T Comment Status D
 No proposed change illustrated. Missing assignments for values 01xx
 SuggestedRemedy
 remove section
 Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 See response to comment 67.

CI 45 SC 45.2.1.2001 P 26 L 32 # 215
 Remein, Duane Huawei Technologies
 Comment Type T Comment Status D CL45/22
 enumeration for 1.2100.3:0. Is this bit 0, 1, 2 & 3 or 3, 2, 1 & 0?
 SuggestedRemedy
 Add key above enumeration
 Proposed Response Response Status W
 PROPOSED ACCEPT.

CI 45 SC 45.2.1.2002 P 27 L 1 # 216
 Remein, Duane Huawei Technologies
 Comment Type T Comment Status D CL45/22
 Ln 20 states that "This bit is identical to bit 1.1.2, when operating mode is set to 100BASE-T1." However there appears to be no difference in the definition of this bit, applicable only to 100BASE-T1 PMA/PMDs and bit 1.1.2 which is applicable to 100BASE-T1 PMA/PMDs and all others.
 Which makes me question the need for a bit duplicating a minor function of and existing bit.
 SuggestedRemedy
 Strike this bit.
 Proposed Response Response Status W
 PROPOSED REJECT.

We anticipate that other status register bits will be shortly added to this register.

CI 45 SC 45.2.1.6 P 24 L 53 # 247
 Remein, Duane Huawei Technologies
 Comment Type TR Comment Status D CL45/22
 In Table 45-7 the value 0 1 1 1 0 0 is already used for 10GBASE-PR-D4
 SuggestedRemedy
 Coordinate with WG Secretary and other TF editors to avoid overlap is selection of an appropriate value and change accordingly.

Proposed Response Response Status W
 PROPOSED ACCEPT IN PRINCIPLE.
 Need to coordinate with 802.3 Chief Editor (Steve Carlson to follow up)

CI 45 SC 45.2.1.2002 P 27 L 10 # 250
 Remein, Duane Huawei Technologies
 Comment Type TR Comment Status D CL45/22
 Table 45-2002 must assign ALL bits in the register not just those your have a particular interest in.
 Same problem exists in Table 45-2003
 SuggestedRemedy
 Add definition for all reserved bits.
 Proposed Response Response Status W
 PROPOSED ACCEPT.

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

CI 96 SC 96.7 P 72 L 22 # 261
 Thompson, Geoff GraCaSI

Comment Type ER Comment Status D

Minor grammar and technical wording changes needed.

SuggestedRemedy

Change text to read: The 100BASE-T1 PHY is designed to operate over a one-pair balanced cabling system. The single pair UTP cable supports an effective data rate of 100 Mb/s in each direction simultaneously. The link segment for a 100BASE-T1 PHY system i

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

The comment is not complete. The commenter needs to resubmit this.

CI 45 SC Table 45-2003 P 26 L 28 # 367
 Lusted, Kent Intel

Comment Type E Comment Status D CL45/22

Table 45-2003 lists the bit definitions for normal operation plus test modes 1-7. However, Table 96-4 only defines normal operation and test modes 1-5.

SuggestedRemedy

Change Table 45-2003 entries for test modes 6-7 to align with Table 96-4

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 45 SC 45.2.1.10 P 26 L 6 # 386
 Hajduczenia, Marek Bright House Network

Comment Type ER Comment Status D CL45/22

Changes to Table 45-13 show a row for registers 1.11.15:11, with 11 in strikethrough and 12 in underline and then show extra row with new content you propose, all content underlined as newly inserted.

SuggestedRemedy

Per comment

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 45 SC 45.2.1 P 24 L 12 # 389
 Hajduczenia, Marek Bright House Network

Comment Type T Comment Status D CL45/22

Is there any specific reason why we need to chop register space into pieces for just three registers? Why not place them at 1.1810 through 1813 or if some separation is required, start from 1.1820 though 1823.

SuggestedRemedy

Change register assignment to 1.1810 through 1813 or if some separation is required, start from 1.1820 though 1823.

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Need to coordinate with 802.3 Chief Editor (Steve Carlson to follow up)

CI 45 SC 45.2.1.2001 P 26 L 32 # 391
 Hajduczenia, Marek Bright House Network

Comment Type T Comment Status D CL45/22

Missing description for bits 1.2100.3:0

SuggestedRemedy

Please add a subclause with description of bits 1.2100.3:0

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 45 SC 45.2.1.7.4 P 25 L 1 # 401
 Hajduczenia, Marek Bright House Network

Comment Type E Comment Status D CL45/22

Editing instructions in 45.2.1.7.4 and 45.2.1.7.5 do not indicate where the new content is inserted - at the end of the table, beginning of the table, somewhere in between existing items?

SuggestedRemedy

Clarify the editorial instructions in both subclauses.

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 45 SC 45.2.1.2001 P 26 L 17 # 402
 Hajduczenia, Marek Bright House Network

Comment Type E Comment Status D CL45/22

45.2.1.2001 is not really a correct number. Looking at the recent drafts, I believe the correct number is 45.2.1.107 onwards - no other project is adding at this time anything to the end of 45.2.1.xxx.

SuggestedRemedy

Fix numbers for subclauses 45.2.1.2001, 45.2.1.2002, 45.2.1.2003

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Need to coordinate with 802.3 Chief Editor (Steve Carlson to follow up)

Cl 45 SC 45.2.1.2001.1 P 26 L 42 # 403
 Hajduczenia, Marek Bright House Network

Comment Type E Comment Status D CL45/22

Seems that two sentences were merged together: "Bit 1.2100.15 is set to one in order to indicate MASTER-SLAVE config value bit 1.2100.14 is used to determine if the PMA/PMD operates as MASTER or SLAVE" - split them accordingly to make two sentences.

SuggestedRemedy

Per comment

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Change
 "to indicate"
 to
 "to indicate that"

Cl 45.2. SC Table 45-4 P 24 L 34 # 517
 Wienckowski, Natalie General Motors

Comment Type E Comment Status D CL45/22

Should 100 Mb/s be added to this table? The x1xx = Reserved row was removed, but a new row was not added.

SuggestedRemedy

Add row:

0100 = 100 Mb/s

Proposed Response Response Status W

PROPOSED REJECT.

Table 45-4 will be deleted. There is no need to add.

Cl 45.2. SC P 26 L 42 # 518
 Wienckowski, Natalie General Motors

Comment Type E Comment Status D CL45/22

run-on sentence

SuggestedRemedy

Replace: indicate MASTER-SLAVE config value bit 1.2100.14 is used

With: indicate MASTER-SLAVE config value. Bit 1.2100.14 is used

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

See the response to comment #403

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 45 SC 45.2.1.7.4 P 11 L 6 # 543
 Anslow, Pete Ciena

Comment Type E Comment Status D CL45/22

The editing instruction "Insert the following row into Table 45-9:" needs to say where the insertion should be made.
 The entry in the "Description location" column should be a cross-reference

Same issues for 45.2.1.7.5

SuggestedRemedy

Change the editing instruction to:
 "Insert the following row above the row for 10GBASE-KR in Table 45-9 (unchanged rows not shown):"

In 45.2.1.7.5, change the editing instruction to:
 "Insert the following row above the row for 10GBASE-KR in Table 45-10 (unchanged rows not shown):"

In both cases make the entry in the "Description location" column a cross-reference.

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.2001.1 P 12 L 40 # 545
 Anslow, Pete Ciena

Comment Type E Comment Status D CL45/22

Headings in 45.2.1 that describe the functions of bits (level 5 headings) end with the bit designation in brackets.
 The name in the heading should match the name given in the table as much as possible.

SuggestedRemedy

Add "(1.2100.15)" at the end of the heading for 45.2.1.2001.1 if retained.
 Change the title of 45.2.1.2001.2 to:
 "100BASE-T1 MASTER/SLAVE config value (1.2100.14)"

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.2002 P 13 L 10 # 546
 Anslow, Pete Ciena

Comment Type E Comment Status D CL45/22

Table 45-2002 defines bit 1.2101.2, but ignores all of the other bits in the register. Same issue in Table 45-2003.

Also, footnotes a and b should be a single footnote:
 "RO = Read only, LL = Latching low"

SuggestedRemedy

Define the remaining bits in Tables 45-2002 and 45-2003 as "Reserved for future use".
 Make footnotes a and b a single footnote:
 "RO = Read only, LL = Latching low"

Proposed Response Response Status W
 PROPOSED ACCEPT.

Cl 45 SC 45.2.1.2002.2 P 13 L 23 # 547
 Anslow, Pete Ciena

Comment Type E Comment Status D CL45/22

Registers are defined using level 4 headings, bits are defined using level 5 as here. The implication of this heading numbering is that register 1.2102 is part of register 2010.

SuggestedRemedy

Change the heading number to 45.2.1.2003
 For some reason the next level 5 heading is already 45.2.1.2003.1 which it shouldn't be as it should not have forced numbering.

Proposed Response Response Status W
 PROPOSED ACCEPT.

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 45 SC 45.2.1.6 P 10 L 44 # 566
 Anslow, Pete Ciena

Comment Type T Comment Status D CL45/22

The proposed change made to Table 45-7 re-uses bit combinations that have already been allocated by IEEE Std 802.3bk-2013:

- 0 1 1 1 1 1 = 10/1GBASE-PRX-U4
- 0 1 1 1 1 0 = 10GBASE-PR-U4
- 0 1 1 1 0 1 = 10/1GBASE-PRX-D4
- 0 1 1 1 0 0 = 10GBASE-PR-D4

The editing instruction "Change Table 45-7 as follows:" would require the whole table to be shown, not just one row.

The proposed change does not show the existing text in this row of the table.

SuggestedRemedy

Start with the row for bits 1.7.5:0 in the revision project draft and show changes with respect to that.

Either show the whole of Table 45-7 or modify the editing instruction as per another comment regarding Table 45-4.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.2001 P 12 L 33 # 567
 Anslow, Pete Ciena

Comment Type T Comment Status D CL45/22

In Table 45-2001, bit 1.2100.15:

" 1 = Enable MASTER-SLAVE manual configuration

0 = Reserved for future use"

doesn't do anything. As defined, the only allowed value is 1.

45.2.1.2001.1 is consistent with this as it says what happens if this bit is set to 1, but does not say what happens if it is zero.

If the intention is to use this bit for some extra feature in the future, then this can be done by simply marking the bit as Reserved for future use. Existing implementations will return "0" for this bit, so 0 can be assigned to the current behaviour in the future and "1" assigned to the new behaviour.

Same issue for bits 1.2100.3:0 0000 is the only valid response and that is the default anyway.

Also, "0 0 0 x = Reserved for future use" should be "0 0 1 x = Reserved for future use" and "0 0 0 1 = Reserved for future use" is also needed.

Also, footnotes a and b should be a single footnote:

"RO = Read only, R/W = Read/Write"

SuggestedRemedy

Either expand the definitions of bits 1.2100.15 and 1.2100.3:0 to include more than one possibility or mark these bits as "Reserved for future use"

Fix the other issues if choosing the first option.

Proposed Response Response Status W

PROPOSED REJECT.

The "manual configuration" bit is necessary to have a setting of '1' for manual, '0' for automatic. Accepting the proposal would invert the meaning of this bit, which would make it different from all previous implementations of Master-Slave manual configuration control bits.

Similarly, we are anticipating future modes of operation to be added to the bottom four bits soon, and would like to make clear that the "0000" combination is reserved for 100BASE-T1.

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 45 SC 45.2.1.2002.1 P 13 L 20 # 568
 Anslow, Pete Ciena

Comment Type T Comment Status D CL45/22

This says: "This bit is identical to bit 1.1.2, when operating mode is set to 100BASE-T1."
 Firstly, it is unclear what the "operating mode" means. Does it mean if bits 1.7.5:0 are set to the value chosen for 100BASE-T1?
 Secondly, if this bit is identical to bit 1.1.2, what is the point of defining it?

SuggestedRemedy

For this definition to be useful, the bit needs to do something other than being identical to bit 1.1.2. Either say what this is or remove the register.
 In the former case, also clarify what "operating mode" means

Proposed Response Response Status W

PROPOSED REJECT.

We anticipate that other status register bits will be shortly added to this register.

Cl 45 SC 45.2.1.2001.2 P 12 L 48 # 569
 Anslow, Pete Ciena

Comment Type T Comment Status D CL45/22

It is customary to add a PICS item to match each subclause containing "shall". This applies to 45.2.1.2001.2 and 45.2.1.2002.1

SuggestedRemedy

Add PICS items corresponding to the requirements of 45.2.1.2001.2 and 45.2.1.2002.1

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.2001.1 P 12 L 41 # 583
 Wu, Peter Marvell

Comment Type TR Comment Status D CL45/22

The name and description indicate this is a configuration bit, but the R/W column indicates RO (read only).

SuggestedRemedy

change RO to R/W.

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 96 SC 96.6 P 57 L 41 # 585
 Wu, Peter Marvell

Comment Type TR Comment Status D CL45/22

This section incorrectly references Clause 22 as the MDIO type.

SuggestedRemedy

change text "specified in 22.2.4" to "specified in Clause 45"
 line 51 add a reference to 45.2.1.2001 100BASE-T1 PMA/PMD control register (Register 1.19002100)
 delete sections 96.6.3 MDC (management data clock) and 96.6.4 MDIO (management data input/output)

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Will be addressed in Clause 96.6.2

Cl 45 SC 45.2.1.2001.2 P 12 L 45 # 610
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status D CL45/22

Section title "100BASE-T1 MASTER/SLAVE Operation" is inconsistent with Table 45-2001.

SuggestedRemedy

Change the section title as follows:
 100BASE-T1 MASTER-SLAVE config value

Proposed Response Response Status W

PROPOSED ACCEPT.

Cl 45 SC 45.2.1.2001.2 P 12 L 47 # 611
 Hidaka, Yasuo Fujitsu Laboratories of

Comment Type E Comment Status D CL45/22

The text is inconsistent with Table 45-2001.

SuggestedRemedy

Replace "manual config bit" with "manual config enable bit".

Proposed Response Response Status W

PROPOSED ACCEPT.

IEEE P802.3bw D1.2 100BASE-T1 Initial Working Group ballot comments

Cl 96 SC 96.5.2 P 49 L 3 # 638
Hidaka, Yasuo Fujitsu Laboratories of

Comment Type T Comment Status D CL45/22

This is not the section to define the control register.

SuggestedRemedy

Move the definition of 3-bit control register Table 96-4 to clause 45,
and add a reference to the register at line 3.

Proposed Response Response Status W

PROPOSED REJECT.

Table 96-4 includes the definition of the test modes as explained in 96.5.2 and therefore, it
is necessary to have it.