100 Mbit/s Dedicated Token Ring
802.5t/Draft 2.2: Full Comment Report

Comment EDTR-45

Section 2.2 **Line** 68 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Figure 2.2-1 is missing PM_CONTROL.request

Solution: Add arrow (PM_CONTROL.request) from PMAC/SMAC to PMC.

Response: Done.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment RJK-01

Section 2.2 **Line** 69 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: PS_CONTROL.request primitive should pass through the reconciliation sublayer of Figure 2.2-1

However, the PM_STATUS.indication is only used for phantom detect indication which is not an MII accessed function and so this does not need to pass through reconciliation.

Solution:

Response: Agreed. Reconciliation sublayer has been expanded to include the PS_CONTROL.request primitive, but exclude the PM_CONTROL.request. MII has been changed to parallel the reconciliation sublayer. Added arrowheads where necessary to show entry and exit from the reconciliation sublayer.

Added PM_CONTROL.request between the SMAC/PMAC and the PMC sublayers (INSERT primitive).

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment EDTR-46

Section 2.2 **Line** 71 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Figure 2.2-2 does not require PM_STATUS.indication.

Solution: Remove arrow and text.

Response: Done.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment RJK-02

Section 2.2 **Line** 71 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☑ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: PS_CONTROL.request primitive should pass through the reconciliation sublayer (See RJK-01)

Solution:

Response: Agreed. Reconciliation sublayer has been expanded to include the PS_CONTROL.request primitive, but exclude the PM_CONTROL.request. MII has been changed to parallel the reconciliation sublayer. Added arrowheads where necessary to show entry and exit from the reconciliation sublayer.

Removed the PM_STATUS.indication between PMAC/SMAC and the PMC since this signal is not used for fibre.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-01

Section 9.1 **Line** 320 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Property 'D' should be on a line on its own. Word strikes again.

Solution: Fix it.

Response: Corrected input document.

Comment SJH-01

Section 9.1 **Line** 320 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: No new line before property "D".

Solution: Add one.

Response: Corrected input document.ss.

Comment SJH-02

Section 9.1 **Line** 348 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Bullet mark in place of a reference between "and" and "for".

Solution: Add reference 9.1.1.6

Response: Corrected input document.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-03

Section 9.1 **Line** 348 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Bad reference in "…media rates and * for the High…"

Solution: Fix it

Response: Corrected input document.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-04

Section 9.1 **Line** 349 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: The parenthetical expression "(e.g., Line Error and the frame's E-bit is equal to 0, etc.)" adds no additional information, and is confusing.

Solution: Delete expression.

Response: Accepted since it was only an example and is, as Neil points out, confusing.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-03

Section 9.1 **Line** 438 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: This statement is untrue for the C-Port. Frames are not ignored when JS=PHMRTU: a REG_REQ frame can cause assured delivery to fire (1149) or result in a return to PREG (1148, 1151).

Solution: Correct description, such as:
"All frames are ignored during Station High Media Rate Trade-up State (JS=SHMRTU). The C-Port High Media Rate Trade-up State (JS=PHMRTU) responds only to REG_REQ frames and performs no protocol checking."

Possibly omit the second sentence.

Response: I replaced line 438 with the following (solution modified).

All frames are ignored during the Station's High Media Rate Trade-up State (JS=SHMRTU). The C-Port's High Media Rate Trade-up State (JS=PHMRTU) acts on REG_REQ frames only.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-04

Section 9.1 **Line** 543 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Incorrect description of registration. The phrase "and also equal to the Station's requested AP_REQ subvector value" is wrong. The station may have an AP_REQ of 0006 while the AP_RSP may be 0002. This will result in a TXI registration at the current media rate.

Solution: Omit the words "and also equal to the Station's requested AP_REQ subvector value".

Response: Accepted since REF 3106 on page 9.2-19 does not check value of the Station's AP_RSP subvector value.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-05

Section 9.1 **Line** 745 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: "less-than" should not be hyphenated.

Solution: Remove it.

Response: I remove the hyphenation from "less than" throught out the document for consistency. Lines 715 and 745 have been corrected.

Comment NAJ-02

Section 9.1 **Line** 1133 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Typo here. FPHMRTUO=0 should read FPHMRTUO=1

Solution: Change =0 to =1

Response: Accepted.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-06

Section 9.1 **Line** 1150 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Ambiguous title wording. Suggests that both TXI Access protocol and HMR use Remove Alert.

Solution: Change "and" to "at".

Response: Accepted.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-07

Section 9.1 **Line** 1167 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: This sentence is confusing TPPLD with TPPD. The word "presence" is incorrect. TPPLD is looking for "loss".

Solution: Change to "(failure to detect the expected Phantom loss, or the reception of the LMT…"

Response: Agreed as per REF 1130 on page 9.3-24.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-08

Section 9.1 **Line** 1169 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Timer TPPD is missing from the Remove Alert reasons.

Solution: Add:
"The C-Port detects the expiration of its timer TPPD (failure to detect the expected Phantom presence in the appropriate time)."

Response: Accepted since this describes REF 1147 on page 9.3-24.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-08

Section 9.1 **Line** 1173 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Bullet point a) is only true if the Station or C-Port is in the Join Complete state.

Solution: Change a) to read:

a) If the Station or C-Port is in the Join Complete state, the operational flag (FSOP or FPOP) is set to 0 to prevent transmission of higher layer frames.

Response: Accepted.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-07

Section 9.1 **Line** 1174 **Severity** A/C **Type** TECH **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: The description of the actions performed when the Remove Alert function is executed is missing a bullet point about phantom.

Solution: Add a new bullet b) (and renumber subsequent bullets)

b) In the Station, if phantom is asserted in the Join Complete state then de-assert phantom.

Response: Added item b) as follows.

b) In the Station, if phantom is asserted, then de-assert phantom.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-09

Section 9.2 **Line** 41 **Severity** Q **Type** ED **Status** ANSWERED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Should this diagram indicate "Remove Alert Received" on one of its transition lines? Or is this implicit in one of "Link Inoperative / Disconnect / Protocol Error"?

Similarly, the C-Port figure on page 9.3.3.

Solution: Add it if required.

Response: This condition has been added to exits from the JS=SLT (REF 3001 page 9.2-21), JS=SDAC (REF 3186 page 9.2-21) and JS=SJC (REF 3171 on page 9.2-21) states.

Also, two other errors were detected when reviewing figure 9.2-1.

A. "If Phantom Drive active, Remove Station" is incorrect when exiting JS=SLT. I have removed this statement.

B. "If Phantom Drive active, Remove Station" is incorrect when exiting JS=SDAC. I have removed this statement.

Item not opened against 9.3-1 but included in change.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-05

Section 9.2 **Line** 93 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Word strikes again. "Counter, Station Remove Alert" should be on a new line.

Solution: Fix it.

Response: Corrected input document.

Comment SJH-10

Section 9.2 **Line** 312 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: "…alert MAC frame transmitted…" should read "…alert MAC frames transmitted…"

Solution: Add the "s".

Response: Accepted.

Comment SJH-11

Section 9.2 **Line** 400 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Transition 3122 (9.2-26) incorrectly uses the option flag FSHMRTUO to determine whether to request tradeup or just TXI. It should, of course, be using the FSHMRTUA flag.

Solution: Fix this typo.

Response: Corrected 3122 as per concern (FSHMRTUO should have been FSHMRTUA).

Comment IMJ-01

Section 9.2 **Line** 400 **Severity** DIS **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: REF 3122, page 9.2-26
Wrong flag used to select AP_REQ subvector value, when the REG_REQ frame is repeated (TSREQ=E). The AP_REQ value, must be the same as the previous transmitted (see ref. 3182 page 9.2-18).

Solution: ACTIONS field: change FSHMRTUO to FSHMRTUA.

Response: Corrected 3122 as per solution (FSHMRTUO should have been FSHMRTUA).

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-06

Section 9.2 **Line** 400 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Table 9.2-1 has had its width increased. It is now exactly wide enough to hide the change bars with the table border.

Solution: Reduce table width.

Response: Done.

Comment NAJ-10

Section 9.2 **Line** 407 **Severity** DIS **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Ref 3418, Page 9.2-32

TS=STXD is the wrong condition for this transition.

Solution: Should be "TS=STXN"
Looks like a cut'n'paste error to me :-)

Response: Corrected this since FSTAS is set to 1 in the TS=STXN state.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-09

Section 9.2 **Line** 407 **Severity** DIS **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Ref 3417, Page 9.2-32

TS=STXD is the wrong condition for this transition.

Solution: Should be "TS=STXN"
Looks like a cut'n'paste error to me :-)

Response: Corrected this since FSTAS is set to 1 in the TS=STXN state.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment EDTR-47

Section 9.2 **Line** 439 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: INSERT is not defined for 100 Mbit/s.

Solution: Change definition of INSERT to include reference to a new section 9.8.1.1.7 (PM_CONTROL.request definition).

[See EDTR-48 for new section]

Response: Changed definition of INSERT on page 9.2-47 as follows.

"Request the PHY to physically connect the Station to the network [PM_CONTROL.request(Insert_station) in 5.1.4.2 for 4 Mbit/s or 16 Mbit/s, and 9.8.1.1.7 for 100 Mbit/s]."

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment IMJ-04

Section 9.3 **Line** 376 **Severity** A/C **Type** ED **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: REF 1094, page 9.3-23.
Option flag FPRPTO used at Lower Media Rate.

Solution: Remove "& FPRPTO=1" from the EVENT field.

Response: This transition should never fire at 100 Mbit/s.
Add "FPMR<2" to the conditions, and delete "FPRPTO=1"
Change the Clause 14 definition of FPRPTO so FPRPTO is always set to 1 at 4 and 16 Mbit/s. See new comment EDTR-44.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment SJH-12

Section 9.3 **Line** 376 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Transitions 1156 and 1153 (page 9.3-16) test flag FSJC. This is a station flag and as such is not testable by the C-Port join machine.

Solution: Change to FPJC.

Response: Obvious typo, corrected REFs 1156 and 1153 on page 9.3-16.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment IMJ-02

Section 9.3 **Line** 376 **Severity** Q **Type** TECH **Status** ANSWERED

Highlight To Committe ☑ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: REF 1108, page 9.3-15
The hardware repeat path is enabled in the PREG state. At High Media Rate the repeat path is only used by the Station doing lobe test.

Solution: Enable repeat path after reception of the FR_LMTN frame, and disable repeat path after reception of the FR_INS_REQ frame. (Published as 08-07).

Response: Draft 2.2 specifies that a hardware repeat path is enabled during PREG. This is an artifact of the DTR protocol used at 4/16 Mbit/s, which during PREG does not know if the final access protocol will be TXI or TKP and therefore must repeat all frames (to support the TKP lobe test). Ivar's concern is that at 100 Mbit/s, we do know that the access protocol will be TXI, so the hardware repeat path need not be used. Also, if TKP were defined for 100 Mbit/s, it would use the new lobe media test, which does not require a hardware repeat path to be enabled until after the first LMTN frame. Ivar's proposal details the changes that would be necessary to remove the hardware repeat path during PREG. They are major, and would require detailed technical review.

For a degree of implementation complexity (the ability to enable/disable the repeat path during PREG), the state tables in draft 2.2 correctly support 100 Mbit/s TXI C-Ports.

So, the question boils down to whether this implementation complexity outweighs the changes that would be required to not support the repeat path during PREG.

Comment NAJ-11

Section 9.3 **Line** 376 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Table 9.3-1 has had its width increased. It is now exactly wide enough to hide the change bars with the table border.

Solution: Reduce width.

Response: Done.

Comment IMJ-03

Section 9.3 **Line** 376 **Severity** DIS **Type** TECH **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: REF 1105, page 9.3-18.
Option flag FPRPTO used at Lower Media Rate.

Solution: Remove "& FPRPTO=1" from the EVENT field.

Response: This transition should never fire at 100 Mbit/s.
Add "FPMR<2" to the conditions, together with a comment "<< 4 and 16 Mbit/s only >>", and delete "FPRPTO=1"
Change the Clause 14 definition of FPRPTO so FPRPTO is always set to 1 at 4 and 16 Mbit/s. See new comment EDTR-44.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-12

Section 9.3 **Line** 382 **Severity** DIS **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Ref 1614, Page 9.3-29

TS=PTXD is the wrong condition for this transition.

Solution: Should be "TS=PTXN"
Looks like a cut'n'paste error to me :-)

Response: Corrected this since FPTAS is set to 1 in the TS=PTXN state.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment NAJ-13

Section 9.3 **Line** 382 **Severity** DIS **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Ref 1617, Page 9.3-29

TS=PTXD is the wrong condition for this transition.

Solution: Should be "TS=PTXN".
Looks like a cut'n'paste error to me :-)

Response: Corrected this since FPTAS is set to 1 in the TS=PTXN state.

Resolution identified in paper "08-10 Draft 2.2 Change Summary Document.doc".

Comment KR-01

Section 9.7 **Line** 80 **Severity** A/C **Type** ED **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Figure 9.7-2 does not match Figure 2.2-1

Solution: Change Figure 9.7-2 as follows:
In the PMC:
1. Add the "Transmit/Receive Switching (C-Port Only)" box used in 2.2-1
2. Change the current box with the "Phantom Generation" and "Phantom Detect" to the "Phantom Functions" box used in 2.2-1
3. Change to "Auto-Negotiation" box to the one used in 2.2-1
In the PSC box:
1. Remove the arrow pointing to the "Delimiter Generator" box
2. Add the word "Optional" to the "Hardware Repeat Path" box.

Response: See response to RJK-03.

Comment RJK-03

Section 9.7 **Line** 80 **Severity** A/C **Type** TECH **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: PS_CONTROL.request primitive should pass through the reconciliation sublayer (See RJK-01)

Solution:

Response: This comment updates Fig 9.7-2. RJK-01 requests that the same change be made to Fig 2.2-1. KR-01 also requests that Fig 9.7-2 be updated to reflect the current state of Fig 2.2-1.

Therefore it was agreed that the best thing to do here is to copy the diagram used for Fig 2.2-1, edit it to remove the clause references and to render it C-Port specific, and then use this new diagram for Figure 9.7-2. (see also KR-01).

Figure 2.2-1 has been updated in response to comment RJK-01. This has been copied and edited as required.

Figure 9.7-2 now accurately reflects the information presented in Figure 2.2-1.

This resolves RJK-03 and KR-01.

Comment KR-02

Section 9.8 **Line** 5 **Severity** A/C **Type** ED **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Statement "which is still to be defined" is not required since that is what section 9.8.2 says.
Also I don't think this is the location to make such a comment since what we are trying to do is to make sure that the reader knows 1000Mbit/s operation is defined in section 9.8.2.

Solution: remove the words

Response: Changed sentence to say:

"Section 9.8.2 is reserved for the description of operation at 1000Mbit/s."

Comment NAJ-14

Section 9.8 **Line** 33 **Severity** A/C **Type** ED **Status** WITHDRAWN

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☐

Concern: Lines 32 and 35 were deleted, but text within the figure still says "ISO MODEL COMPARISON". My question remains, what ISO model?

Solution: Change title to "802.3/802.5 Layer Comparison".

Response: Sorry about this folkadots, but if you look *really* closely at the old figure 9.8-1, you'll see it has a line through it.

In my response to NAJ-49 in La Jolla I said:

"This diagram is so confusing now that we have changed Figs. 2.2-1, 2.2-2 etc., & Fig. 9.7-2 to show how the MII, PSC & Repeat paths fit together that I have just deleted the whole of Fig 9.8-1 and all text / references associated with it.

So there."

Comment KR-03

Section 9.8 **Line** 35 **Severity** A/C **Type** ED **Status** WITHDRAWN

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: You should not have a figure without a title below it

Solution: Was the attemp to come up with a better name for this figure? If so may I suggest "Layer Comparison Between [802.3u] and 100Mbit/s Token Ring". Otherwise the deleted name should be undeleted.

Response: See response to NAJ-14.

Comment EDTR-50

Section 9.8 **Line** 45 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Title is wrong

Solution: Change title to "100 Mbit/s Service Primitives (Common)"

Response: Done.

Comment EDTR-51

Section 9.8 **Line** 47 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: We can clarify the words, to include PMAC and SMAC.

Solution: Change "and the MAC" to be ", the MAC and the PMAC/SMAC."

Response: Done.

Comment NAJ-15

Section 9.8 **Line** 127 **Severity** A/C **Type** ED **Status** WITHDRAWN

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☐

Concern: Real nit-picking...

Why the large empty space on this page?

Solution: Fight word for control over page layout…

Response: Most frightfully sorry old fruitbat but this is Adobes fault again.

I took the page break that's causing this out in the D2.2 release of the Word source. I did an 'accept all' on it and then printed out and proof read it.

No large empty space.

Is Adobe claustrophobic or what?

Omigawd! There's a truly dreadful pun in there!

Comment RJK-04

Section 9.8 **Line** 127 **Severity** A/C **Type** ED **Status** WITHDRAWN

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Page break not required here.

Solution:

Response: See response to NAJ-15.

Comment EDTR-48

Section 9.8 **Line** 176 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: 9.8.1.1 does not describe PM_CONTROL.request.

Solution: Add a new section 9.8.1.1.7 to describe PM_CONTROL.request at 100 Mbit/s.

Response: New words:

"9.8.1.1.7 PM_CONTROL.request
This is an optional primitive to be used by the SMAC to request certain actions of the PMC.
PM_CONTROL.request [Insert_station (5.9),
Remove_station (5.9)..]
When Generated: The SMAC generates a PM_CONTROL.request for each action request.
Effect of Receipt: The PHY performs the appropriate action
"

Comment RDL-01

Section 9.8 **Line** 193 **Severity** A/C **Type** ED **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: There is a reference to a subclause in another document, and the title indicates that that other subclause will be changed. NOT TRUE. The other document won't be changed by this standard. The accurate statement is that 802.5t will not follow that original subclause. This wording needs to indicate that. Also, the referenced document is often not explicitly stated. Please do so for every instance.

See also, lines 219, 222, 227, 232, 237 243, 246, 249, 265, 280, 282, 288, 293, 297, 300 and 304.

Solution: Change line 193 to words like "Deviation from [802.3u] 22.2.2.1 TX_CLK (transmit clock)

Change lines 219 to words like "Deviation from [TP-PMD] 7.2.3.1.1, 'line state patterns'" - similarly for 222, 227, 232, 243, 246, 280, 282, 293, 297, 300 and 304.
Change lines 249, 265 and 288, to words like "Replaces specification in [TP-PMD] 11.2, Crossover Function"

Response: Words changed to say "Exception to [TP-PMD] … "

Comment BBT-01

Section 9.8 **Line** 243 **Severity** DIS **Type** TECH **Status** ACCEPTED

Highlight To Committe ☑ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Comment covers lines 243 to 248 and 282 to 287.
The increase in allowed amplitude range for the transmitter can have influence on the cable length.

The change in accuracy requirements from draft. 2.1b is:

For both UTP and STP: The requirements has changed from -/+0.4 db to -/+ 0.7 dB.

In a segment can the transmitter at one end transmit with the lowest amplitude and the transmitter at the other end with the maximum amplitude. If the system is operating on a worstcase channel (class D) is the performance basically cross talk limited. The difference in transmit amplitude will reduce the system margin by decreasing the signal to Xtalk ration at the station with the highest transmit amplitude. The -/+0.4 dB (0.8 dB total) tolerance has already been considered in the system specification but the -/+ 0.7dB (total 1.4 db) tolerance increases the Xtalk with 0.6 dB. How these 0.6 dB can be translated into a cable length reduction is difficult to estimate due to the frequency dependent insertion loss of the cable, but I can give a VERY VERY simplified example where I assume that all the energy is located a discrete frequencies.

Freq	Cat.5 loss	Reduction of cable length
16M	8.2dB/100m	7.2m
31M	11.8dB/100m	5.0m
62M	17.1dB/100m	3.5m

Reduced requirements to transmitter amplitude will also reduce the receivers ability to equalize the cable, and thereby increase the jitter. In the end this can also be translated into a reduction of the cable length.

The objective for allowing a wider range of transmit amplitudes is to allow simple single impedance implementations. This objective can be meet by only changing the returnloss requirements. This change is therefore not required.

Solution: Remove 9.8.1.3.11 and 9.8.1.3.12

Response: The intention of the changes to this clause between Draft 2.1b and Draft 2.2 was to permit 3 particular physical layer twisted pair implementations.

1) designs using impedance matching transformers to achieve operation over UTP and STP cabling.

2) designs using a single intermediate impedance match to achieve operation over UTP and STP cabling.

3) 100Mbit/s, 100 Ohm only compliant designs that may be connected to STP cabling.

The above DIS comments point out that the way this was defined in Draft 2.2 was incorrect and that, as a result, the standard had departed from the original intentions expressed in my comments ANF-07 and ANF-08 (as presented at the La Jolla Plenary).

In arriving at a resolution of these comments, I have made a number of changes to 9.8.

A) Remove paragraphs 9.8.1.3.11, 9.8.1.3.12, 9.8.1.3.16 & 9.8.1.3.21

This resolves BBT-01.

B.1) Change 9.8.1.3.13 to say;

9.8.1.3.13 Exception to [TP-PMD] 9.1.5 "Return loss"

The impedance environment for the measurement of the UTP AOI return loss shall be 100+/-1 Ohms; the environment for the STP AOI return loss shall be 150+/-1.5 Ohms. A single measurement at each impedance shall be sufficient to demonstrate compliance. The impedance environment shall be nominally resistive.

B.2) Change 9.8.1.3.14 to say;

9.8.1.3.14 Exception to [TP-PMD] 9.2.2 "Differential input impedance"

The impedance environment for the measurement of the UTP Active Input Interface return loss shall be 100+/-1 Ohms; the environment for the STP Active Input Interface return loss shall be 150+/-1.5 Ohms. A single measurement at each impedance shall be sufficient to demonstrate compliance. The impedance environment shall be nominally resistive.

Together, changes B.1 & B.2 resolve BBT-02.

C) Add a new paragraph to say;

9.8.1.3.11 Exception to [TP-PMD] 9, "Media signal interface"

In addition to [TP-PMD] 9, “Media signal interface”, note that the direct connection of 100Mbit/s, 100 Ohm compliant transmitters and receivers through the UTP-MIC to Category 5 120 Ohm or 150 Ohm cabling as specified in IS 11801 and/or EIA/TIA 568A is allowed by this standard subject to the following conditions.

When measured in an impedance environment of 150+/-1.5 Ohms, the AOI return loss and Active Input Interface differential input impedance shall conform to the following limits:

Greater than 11 dB from 2MHz to 30 MH
Greater than (11 - 6.67 log(f/30MHz)) dB from 30MHz to 60MH
Greater than 9 dB from 60MHz to 80MH

The STP transmit levels as defined in [TP-PMD] 9.1.1.2 STP "Differential output voltage", [TP-PMD] 9.1.10, "Characteristics of Active Output Interface" and as referenced in [TP-PMD] Annex J, Table 3 shall not apply.

A connection meeting these conditions easily supports the recommended 100 meter cabling limits specified within those cabling standards. However, such connections may not support the full attenuation limits for Class D cabling as specified in IS 11801. For such interconnections look for manufacturer's guidance on maximum drive distances supported.

This permits the third case of 100Mbps/100R only implementations.

Note that as a consequence of these changes the paragraphs referred to above will renumbered.

Comment BBT-02

Section 9.8 **Line** 249 **Severity** DIS **Type** TECH **Status** MODIFIED

Highlight To Committe ☑ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Comment covers lines 249 to 279
The objective for this change to draft 2.1b were to allow simple single impedance designs. I don't thing this change is required to meet this objective.

I had made some thinking about the return loss issue. An my opinion is that specifying the return loss at impedance's other than the nominal values is wrong (maybe even rubbish), and is not required in any of the standards we are referring to. I know that 802.3 10BaseT explicitly require the returnloss to be measured at 85 to 115 Ohm. We don't make any reference to this standard (and I still think it is wrong, and a misunderstanding)

If we only define Return loss at the nominal impedance is a simple impedance design possible and the original objective can be meet with the words in rev. 2.1b.

In the following I will try to explain why I feel that measurements at the nominal impedance only is OK.

what is the correct reference impedance to use for the return loss measurements.
So far we have taken the assumption that we should meet the return loss specification for all impedance's in the ranges 85 to 115 Ohm and 135 to 165 Ohm. I don't think that this is absolutely true (but I am not an expert in wording) and I can't find anything in the standards that explicitly states that the return loss has to be measured at anything else than the nominal impedance's (100 Ohm and 150 Ohm). (Well Not quite true I can find something in the 10BaseT standard).

I think that the impedance ranges is only a specification for the cables.

In ISO/IEC 11801:1995 are returnloss requirements for the cabling and cabling components as well as the cabling system specified.

The interconnect hardware has a return loss specification. The return loss for interconnect hardware is only measured at the nominal impedance.

The cables has an impedance tolerance and a structural return loss requirement. The structural return loss is measured at the nominal impedance level with the far end of the cable terminated by the nominal impedance

The cable plant (class D channel) has a requirement for structural return loss. This return loss is also measured at the nominal impedance levels.

I looks quite odd to me if we specify the port/station return loss across the complete cable impedance range. Here we get to my point: If we have a system where all components are specified at some reference impedance, can the return loss and transmission characteristics for the complete system be estimated, therefore specifying the return loss at the impedance extremes do not give any useful information at all.

If we take the assumption that the returnloss is specified only at the nominal impedance then do things look quite good for a dual impedance design. see the attached file.

Solution: Keep the words from rev 2.1b.

And since there is confusion about how return loss is measured we could make the following changes

9.8.1.3.13 Change to 9.1.5 "Return loss"
The impedance environment for .. (lines 260-263 from draft 2.2)

and 9.8.1.3.14 Change to 9.2.2 "differential input impedance"
The impedance environment for .. (lines 276-279 from draft 2.2)

Another way to do this is basically to accept that my opinion about return loss is correct, and therefore make no changes to the standard (rev 2.1b) and maybe at a later point add an informative annex to clear out any doubt about the issue.

Response: See response to BBT-01.

Comment RDL-02

Section 9.8 **Line** 262 **Severity** A/C **Type** ED **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: The word "impedance" is written twice in a row.

Solution: Delete the duplicate entry on the adjacent line.

Response: The text containing these errors has been changed anyway. See responses to BBT-01 & BBT-02.

Comment RDL-03

Section 9.8 **Line** 278 **Severity** A/C **Type** ED **Status** MODIFIED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: The word "impedance" is written twice in a row.

Solution: Delete the duplicate entry on the adjacent line.

Response: The text containing these errors has been changed anyway. See responses to BBT-01 & BBT-02.

Comment NAJ-16

Section 11.0 **Line** 0 **Severity** A/C **Type** TECH **Status** MODIFIED

Highlight To Committe ☑ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: Clause 11 contains the DTR MIB. RFC1231 contains the Classic MIB. Neither contain gigabit information.

Solution: Clause 11, RFC1231 and gigabit should be combined into one new MIB, and published as either an RFC, an IETF document, a new 802.5 clause or a new 802.5 standard.

Response: 1000Mbit/s enumerated types will be added to clause 11, with appropriate words to say that the values are placeholders only.

The merge of the MIBs will become a maintenance item.

Comment EDTR-44

Section 14.5 **Line** 337 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: FPRPTO should be defined at 4 and 16 as weel as at 100 Mbit/s. This comment is a response to IMJ-03 and IMJ-04.

Solution: Add new text:

"At 4 or 16 Mbit/s, FPRPTO shall be set to 1 indicated that a hardware repeat path is available."

Response: Waiting for Ivar approval.

Comment EDTR-49

Section Z.0 **Line** 0 **Severity** A/C **Type** TECH **Status** ACCEPTED

Highlight To Committe ☐ **Commenter Agrees?** ☑ **Editing Complet** ☑

Concern: 802.3 may change the assigned selector value.

Solution: Add a warning to implementors that this may happen.

Response: New words added to paragraph Z1.1, line 17 to say:

"Note: the current value of this 5 bit word is a dummy value which is being used as a placeholder until a final value has been assigned. The editor will substitute the assigned value when it becomes available."

100 Mbit/s Dedicated Token Ring
802.5t/Draft 2.2: Comment Index

100 Mbit/s Dedicated Token Ring
802.5t/Draft 2.2: Comment Summary

	ED	TECH
A/C	22	20
DIS	0	8
Q	1	1

Total A/C Comments:	42
Total DIS Comments:	8
Total Q Comments:	2
Total Comments:	52

	Total	To Be Closed
OPEN	0	0
ACCEPTED	36	0
MODIFIED	10	0
REJECTED	0	0
ANSWERED	2	0
WITHDRAWN	4	0

Comment IDs by Type. Bold IDs require closure.

A/C Comment IDs: EDTR-45 RJK-01 EDTR-46 RJK-02 NAJ-01 SJH-01 SJH-02 NAJ-03 NAJ-04 SJH-03 SJH-04 SJH-05 NAJ-02 SJH-06 SJH-07 SJH-08 NAJ-08 NAJ-07 NAJ-05 SJH-10 SJH-11 NAJ-06 EDTR-47 IMJ-04 SJH-12 NAJ-11 KR-01 RJK-03 KR-02 NAJ-14 KR-03 EDTR-50 EDTR-51 NAJ-15 RJK-04 EDTR-48 RDL-01 RDL-02 RDL-03 NAJ-16 EDTR-44 EDTR-49

DIS Comment IDs IMJ-01 NAJ-10 NAJ-09 IMJ-03 NAJ-12 NAJ-13 BBT-01 BBT-02

Q Comment IDs: SJH-09 IMJ-02