



802.5t/D2.1B OPEN Comment Report

802.5/98/07-23r1

OPEN Comment ANF-01

Section 1.0 Line 354 Severity Q Type TECH Status OPEN

Highlight To Committe Commenter Agrees? Editing Complete

Concern: "Provide static impedance capability defined in 8."

What is this and where is it defined?

Solution: This is copied straight from 1.8.2.2 & 1.8.3.2, so I guess it's actually a maintenance item?

Response: 1. Maintenance item on the Amd1 document subclauses 1.8.2.2 & 1.8.3.2.

2. Tue 7Jul - Andy Fierman to provides words by 9Jul98 for 1.9 and give them to KTWilson.

OPEN Comment DWW-03

Section 9.1 Line 715 Severity DIS Type TECH Status MODIFIED

Highlight To Committe Commenter Agrees? Editing Complete

Concern: In the case where replacement frames are generated there is no repeat path during lobe test - general frames are not repeated, lobe test frames may be repeated or responded to by the port. Given the history of token ring, the phrase 'repeat path' implies that all frames will be repeated which is misleading and potentially confusing.

Solution: It would be better if 'repeat path' was in quotes when describing lobe test. Even then, the term is misleading and confusing, a better term may be 'lobe test path'

Response: I like the term as follows.

Change line 715 as follows.

From: "1. If FPRPTO=0, then the C-Port shall provide a PMAC repeat path as follows."

To: "1. If FPRPTO=0, then the C-Port shall provide a PMAC Lobe Media Test repeat mechanism as follows."

OPEN Comment DWW-02

Section 9.1 Line 1085 Severity DIS Type TECH Status MODIFIED

Highlight To Committe Commenter Agrees? Editing Complete

Concern: Section 14 provides values for AP_MASK which allow for Gigabit. As 9.1 is describing trade up with respect to "higher media rates" rather than 100 Mbit/s, the description of trade up could provide an outline of how trade up will work when Gigabit happens. Maybe this description is not needed in the standard, but I would like to see some evidence that the issue has been thought through and we will not need to have an even bigger bodge for Gigabit.

Solution: Explain to me how trade up will work when Gigabit TR happens

Response: Clause 14 to remove gigabit definitions.

802.5v needs to evaluate changing the Port and Station Operation Tables to eliminate the misuse of bit-masks.

OPEN Comment SJH-34

Section 9.3 Line 372 Severity A/C Type TECH Status OPEN

Highlight To Committe Commenter Agrees? Editing Complete

Concern: No assured delivery for HSTR trade-up protocol.

At the moment all registration response frames are sent using an assured delivery mechanism. This is not true of HSTR tradeup response frames. Losing this one response frame will cause at least the station to fail, and probably the port as well, depending on whether the station retries at 100Mbit/s quickly enough.

Solution: It is tricky to implement an assured delivery mechanism because of the speed change involved. I can think of two ways of implementing this:
1) Transmit a block of paced frames before changing speed - in the same way as Remove Alert
2) Go into a wait state and delay the speed change. During the wait state, a transition similar to 1025 (pg 9.3-21) can provide responses for any request frames received as the station retries.

Response: Discussion required.
Thinking about this: NAJ, KTW, SJH, KR and IMJ - answer by 9JUL98.

Vote 07-25 asks the mechanism to be added.

OPEN Comment DWW-04

Section 9.3 Line 1108 Severity DIS Type TECH Status MODIFIED

Highlight To Committe Commenter Agrees? Editing Complete

Concern: Note references are against draft 2 as this comment is outstanding. ref 1108 page 9.3-17, 1109 on 9.3-18, 1110 on 9.3-19 and throughout state tables. The modification which have been made are incorrect as there is not always a general repeat path available. The use of FPRPT=1 in the case of the MAC lobe test path is misleading - it was better when the state tables distinguished between these cases. The description of FPRPT does not discuss what happens when a MAC lobe test path is used. It should either describe this, or FPRPT should not be used in the state tables in this case.

Solution: Preferably modify the state tables so that FPRPT is not set in actions when the MAC lobe test path is being used. Alternatively, modify the description of FPRPT to describe what happens (ie nothing) when the MAC lobe test path is in use and add "& FPRPTO=1" to the condition in ref 1213 on page 9.3-25

Response: 1. Update the description of FPRPT on page 9 to include definition of the impact of FPRPTO=0 upon FPRPT.
2. Adding "& FPRPTO=1" ato REF 1213 is incorrect and is not made.

OPEN Comment BBT-16

Section 9.8 Line 161 Severity DIS Type TECH Status REJECTED

Highlight To Committe Commenter Agrees? Editing Complete

Concern: lines 161 to 180
Here we define actions between layers located between the MII and the wire. All the actions between MII and wire is detailed described in 802.3u and TP-PMD standards. I think we should describe our standard only at the MII.

Solution:

Response: Leave standard as is because all the work has already been done and leaving this stuff in does no harm.

In addition, the solution implicit in your concern requires a lot of work to recast the standard in terms of the MII.

OPEN Comment ANF-08

Section 9.8 **Line** 238 **Severity** DIS **Type** TECH **Status** OPEN

Highlight To Committe **Commenter Agrees?** **Editing Complete**

Concern: In view of the cable length and impedance matching issues raised and the comments received from participants in this discussion - particularly with respect to the experiences of a number of implementors regarding the extended operating distance achieved over STP cabling in a 100 ohm impedance environment - the measurement environment for receive return loss as specified in TP-PMD should be relaxed so that the return loss limits for both UTP and STP can be met using a single impedance.

Solution: Add new paragraph:

9.8.1.12 Replacement of 9.2.2 "Differential input impedance"

The differential input impedance of the UTP and STP Active Input Interface shall be such that the following return loss characteristics are satisfied for each of the specified line impedances.

Greater than 16 dB from 2MHz to 30 MHz.
Greater than $(16 - 20 \log(f/30\text{MHz}))$ dB from 30MHz to 60MHz
Greater than 10 dB from 60MHz to 80MHz

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. The impedance environments shall be nominally resistive, with a magnitude of phase angle less than 3 degrees over the specified frequency range.

Response: Discussion to be continued after conference call to IBM.

OPEN Comment ANF-07

Section 9.8 **Line** 238 **Severity** DIS **Type** TECH **Status** OPEN

Highlight To Committe **Commenter Agrees?** **Editing Complete**

Concern: In view of the cable length and impedance matching issues raised and the comments received from participants in this discussion - particularly with respect to the experiences of a number of implementors regarding the extended operating distance achieved over STP cabling in a 100 ohm impedance environment - the measurement environment for transmit return loss as specified in TP-PMD should be relaxed so that the return loss limits for both UTP and STP can be met using a single impedance.

Solution: Add new paragraph:

9.8.1.11 Replacement of 9.1.5 "Return loss"

The UTP and STP Active Output Interface shall be implemented such that the following return loss characteristics are satisfied for each of the specified line impedances.

Greater than 16 dB from 2MHz to 30 MHz.
Greater than $(16 - 20 \log(f/30\text{MHz}))$ dB from 30MHz to 60MHz
Greater than 10 dB from 60MHz to 80MHz

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. The impedance environments shall be nominally resistive, with a magnitude of phase angle less than 3 degrees over the specified frequency range.

Response:

OPEN Comment BBT-03

Section 9.8 Line 259 Severity DIS Type TECH Status REJECTED

Highlight To Committe Commenter Agrees? Editing Complete

Concern: In the TR standard is the polarity of the connector interface not defined, and a compliant implementation can have both. Autonegotiation requires a defined polarity.

Solution: Most of the PHY's can correct polarity errors automatically. It might require enabling of the function.

Put in a comment about this issue, so implementors know the problem.

Response: Of all the Phy chips that do Auto-polarity detection and / or correction, *very* few do this for 100BASE-TX.

It would appear that this function is only required for correct LINK INTEGRITY operation at 10BASE-T using Normal Link Pulses (NLP).

802.3u says (28.1.4.1):

"NOTE: Auto-Negotiation does not support the transmission of the NLP sequence. The 10BASE-T PMA provides this function if it is connected to the MDI. In the case where an Auto-Negotiation able device without a 10BASE-T PMA is connected to a 10BASE-T device without Auto-Negotiation, the NLP sequence is not transmitted because the Auto-Negotiation function has no 10BASE-T PMA to enable that can transmit the NLP sequence."

This implies that Auto-negotiation at 100BASE-TX is *not* polarity sensitive. Since we do not operate with any form of a 10BASE-T Phy, there is no requirement for us to either implement or be concerned about polarity detection or correction.

This is not currently an issue since Auto-negotiation is not yet defined. Any necessary notes and cautions will be added to Annex Z when Auto-negotiation is defined.

This item has been opened as a maintenance item against 802.5t.

OPEN Comment BBT-11

Section 14.2 Line 100 Severity DIS Type TECH Status MODIFIED

Highlight To Committe Commenter Agrees? Editing Complete

Concern: We originally defined the IFG to be 12 Bytes at the MII. The definition of IFG in clause 14 is on the wire. 24 idle symbols require 26 IDLE nibbles at the MII (IFG equal to 13 bytes).

Solution: Change the number of IDLE symbols to 22, and note that this requires 24 Nibbles at the MII.

Response: New words:

"For TXI Access Protocol operation, the IFG shall be transmitted on the wire as a minimum of 24 /I/ symbols. Note that if an MII device is being employed, then a minimum of 26 symbols are required at the MII interface to satisfy the IFG requirement, as the first two symbols on the interface are converted into the End-of-Sequence Delimiter, /T/R/, by the MII device."

OPEN Comment MJH-01

Section A.0 **Line** 1 **Severity** DIS **Type** TECH **Status** MODIFIED

Highlight To Committe **Commenter Agrees?** **Editing Complete**

Concern: Following Station Policy Flags should be added to Annex A :-
FSANO, FSASO, FSLMTO

Solution: Do it!

Response: Neil has completely rewritten Annex A, after discovering that it was very broken
in Amd 1 and would be very difficult to update for 100 Mbit/s

Detailed review required!



OPEN Comment Summary

Total OPEN Comments:: 11