Channel Model Ad Hoc:
Agenda and General Information

Channel Model Ad Hoc Teleconference

2005 October 12

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If you are present on today's call, please send me an e-mail indicating your attendance.

Schedule of Events

Teleconference:

- Wednesday, October 12 (3PM EDT)
- Wednesday, November 2 (3PM EDT)

Deadline for requests for presentation time.

- Wednesday, November 9 (midnight EST)

IEEE802.3ap taskforce Interim meeting Vancouver, BC

- Sunday November 13-Monday November 14

IEEE802.3 Plenary Meeting Vancouver, BC
Sunday November 13-Friday November 18
IEEE802.3ap will meet Tuesday - Thursday

Meeting Agenda

Old business

- Comment 105, report on progress
- Resolve Comment 128, see mellitz_c1_1005 and moore_c1_1005
- Resolve comment 300, will skip if Joe Abler is absent

New business

- Discuss comments to Annex 69A, Interference tolerance test:
  - Comments 259, 262, and 578 having to do with CDR stress in DUT
  - Comments 259 and 299 having to do with “compliant Transmitter” amplitude characteristics

Comment 105

Cl **69A** *SC* **69A.3.3.5** *P* **59** *L* **11** # 105

Comment Type **TR**

ICR spec is largely guesswork. We should tie the spec to the Receiver Interference Tolerance test. I will present on this at the September meeting.

SuggestedRemedy

Will provide text ind diagrams if needed as part of presentaiton.

Proposed Response

Comment Status **X**

Response Status **O**

Comment 128

Cl **69** *SC* **69.3.3.5.4** *P* **59** *L* **18** # 128

John, D'Ambrosia

Comment Type **TR**

use of calculated ICR increases ambiguity of informative channel model results. See dambrosia_01_005 for reference.

SuggestedRemedy

Use log fit of calculated ICR to compare against equation 69-20

See dambrosia_01_0705 for reference.

See dambrosia contribution for September Interim

Proposed Response

Comment Status **X**

Response Status **O**

Comment 300

Cl **69** *SC* **69.3.3.5.4** *P* **59** *L* **23** # 300

Abler, Joe

Comment Type **T**

ICR for KX and KX4 is specified to 2x the fundamental frequency, whereas the spec for KR doesn't even extend to 1x it's fundamental. This doesn't make much sense given the impact of crosstalk at higher operating ranges.

SuggestedRemedy

Extend the range for KR ICR to 6000MHz. This would have all 3 specs consistently set relative to their IL f2 parameter. Alternatively, set all 3 specs to their relative fundamental frequency (625MHz for KX, 1.5625GHz for KX4, 5.15625GHz for KR).

Proposed Response

Comment Status **X**

Response Status **O**

channel_icr

Comment 259

Cl **69A** *SC* **69A.1** *P* **64** *L* **5** 259

Comment Type **TR**

I am not sure that the term '"'compliant transmitter'"' is precise. What the test is looking for, I assume, is a '"'worst-case'"' compliant transmitter that pushes the boundaries of the all of the specifications that we have specified and can control.

1. The transmitter output amplitude should be constrained to 800 mVp-p, as higher output voltages may yield optimistic results

2. The transmit jitter should be pushed to the worst-case values (or a reasonable approximation thereof, such as an '"'equivalent'"' amount of sinusoidal jitter). A '"'clean'"' jitter transmitter may yield optimistic results.

3. The range and resolution of the transmit equalizer should be a close to the worst-case values allowed by the standard as possible.

Unless the transmitter is specified in this way, it is possible for a supplier to claim compliance to the specification after meeting the requirements with a '"'best-case'"' transmitter yet interoperability is not guaranteed when that device is connected to a '"'worstcase'"' transmitter.

SuggestedRemedy

Define a complete set of specification for the compliant transmitter. This will naturally be a function of the port type being tested.

Proposed Response

Comment Status **X**

Response Status **O**

Healey,

Comment 262

Cl **69A** *SC* **69A.1** *P* **64** *L* **5** 262

Brink, Robert Agere Systems

Comment Type **TR**

This testing should be done at the maximum ppm offset excursions required by the standard (+/- 100ppm)

SuggestedRemedy

Specify that the testing be done at the maximum ppm offset excursions required by the standard (+/- 100ppm).

Proposed Response

Comment Status **X**

Response Status **O**

Comment 578

Cl **69A** *SC* **69A.1** *P* **63** *L* **40** # 578

Ghiasi, Ali Broadcom

Comment Type **TR**

Interference tolerance test does not stress the CDR to frequency sensitivity.

SuggestedRemedy

propose to add Sinusoidal Jitter (SJ) through the BERT to the channel with the following mask parameters

40 KHz - 5 UI

400 KHz - 0.5 UI

4 MHz - 0.1 UI

Proposed Response

Comment Status **X**

Response Status **O**

Comment 299

Cl **69A** *SC* **69A.1** *P* **64** *L* **5** # 299

Abler, Joe IBM

Comment Type **ER**

'"The compliant transmitter can be any transmitter which is fully compliant..."' This statement can easily be interpreted to mean that the test must pass with any and all transmitters meeting the spec, which implies the user must make a determination on what the worst case transmitter setup would be. That's not the intent of the test, and in fact it's expected that a vendor would select a best case transmitter setup for the test.

SuggestedRemedy

Add additional sentences along the lines of: Only a single compliant transmitter configuration must be tested, demonstration to all possible transmitter configurations defined by the specification is not required. It is expected that vendors will generally select a transmitter performing at the '"upper end"' of the specification range (higher performing) for use in the test.

Proposed Response

Comment Status **X**

Response Status **O**