Combined tracks comment resolution

IEEE P802.3ba, Quebec City, May 2009

Comment resolution

- The comments on the following slides will be resolved in a session of the whole Task Force on Monday 4 May
  - See agenda_01_0509 for schedule

- The order in which the comments are reviewed and the schedule are subject to change

- Comments bracketed together with [] cover a common topic

General

- 480 All Tx's transmitting, All Rx's receiving
- 451 S-parameter naming => dambrosia_01_0509
- 447 Channel parameter figs/graphs consistency => dambrosia_02_0509
- 448 Update equations for consistency => dambrosia_02_0509
- [648, 487] Single definition of service interface referenced by other clauses
  - 648 => ganga_03_0509
- 76 10GBASE-CR10 MTTFPA => gustlin_04_0509
- 508 References to definitions in Tables (85, 86, 87, 88, 83A, 83B)
- [314, 319, 320, 321 BASE-KR/CR], 566 64B/66B PCS, 567 FEC on naming
- [775, 52, 636], [564, 416], 69, 478 on AN_LINK.indication
- [71, 565], [559], [783] Auto-negotiation
  - 71 => dawe_04_0509
- 551 Multiple PMA MMDs
- 585 Clause 83 should be an equation
- [264, 265] Tables 85-5, 86-7 consistency
- [613, 420, 67] Compliance boards for Clause 83B
  - 420 => ghiasi_03_0509
- 581 Reference to FC-PI4, SFF8431 (add in 85, 86?)

Architecture figures

- Change 40GBASE-R PCS and 100GBASE-R PCS to 64B/66B PCS
  - 577 All 802.3ba architecture figures
  - 560 Figure 69-1
  - 575 Figure 80-1

- FEC layer optional and conditional
  - 531 Figures 80-1, 81-1, 82-1, 83-1
  - 109 Figure 81-1
  - 110 Figure 82-1
  - 112 Figure 83-1

- 530 MII depiction in Figure 73-1

Delay and Skew

- 275 Delay one end of link and one way through medium all clauses
  - [55, 81] Delay one direction through medium
  - 54 Column for ns
- [157, 160] Delay through medium no more than
- 108 Table 80-2 show time for pause_quanta
- [156, 159] Point to Table 80-2 for pause_quanta definition
- 528 Increase delay for MAC/RS/MAC C
- [777, 54] Delays for clause 85
- [53, 73, 68] Delay for PMD, AN and medium
- 635 Table 80-2 remove informative
- 382 Delete delay section in all clauses except 80
- [643, 263] Modify Annex 31B Pause

- 429 Tables 80-3, 80-4 (skew) remove informative
- [379, 388] Delete skew section in all clauses except 80

Delay resolution Clause 80

Black text – Instructions and Draft 2.0 text

Red text – changes in Proposed Response to comment #275

Blue text – further proposed changes

In clause 80.3 change the last but one sentence to "Table 80-2 contains the values of maximum sublayer delay (sum of transmit and receive delays at one end of the link) in bit times as specified in 1.4 and pause_quanta as specified in 31B.2. If a PHY contains an Auto-Negotiation sublayer, the delay of the Auto-Negotiation sublayer is included within the delay of the PMD and medium.“

Change the title of Table 80-2 to "Sublayer delay constraints“and change the values to be consistent with the values below.

Add a column to Table 80-2 for Maximum (ns).

In Table 80-2 change "Includes delay associated with" to "Includes delay of one direction through" in three places. Add footnotes to Table 80-2 "Note that for 40GBASE-R, 1 pause_quantum is equal to 12.8 ns and for 100GBASE-R, 1 pause_quantum is equal to 5.12 ns. (see 31B.2 for the definition of pause_quanta.)“ and "Should there be a discrepancy between this table and the delay requirements of the relevant sublayer clause, the sublayer clause prevails“

Delay resolution Clauses 81, 82 and 83

In Clause 81.1.4 change the sentence starting in line 41 to "The maximum cumulative MAC Control, MAC and RS delay (sum of transmit and receive delays at one end of the link) shall meet the values specified in Table 81-1." Change the title of Table 81-1 to "Delay constraints". In Table 81-1 change 40 Gb/s MAC, RS, and MAC Control delay to 20 pause_quanta, or 10240 BT and the 100 Gb/s MAC, RS, and MAC Control delay to 48 pause_quanta, or 24576 BT. Add a column to Table 83-1 for Maximum (ns).

In Clause 82.5 change the last two sentences to "The maximum delay contributed by the 40GBASE-R PCS (sum of transmit and receive delays at one end of the link) shall be no more than 11264 BT (22 pause_quanta or 281.6 ns). The maximum delay contributed by the 100GBASE-R PCS (sum of transmit and receive delays at one end of the link) shall be no more than 35328 BT (69 pause_quanta or 353.28 ns)." At end of paragraph, add "See 80.3."

In Clause 83.5.4 change the clause title to "Delay constraints". Change the sentence starting on line 34 to "The maximum cumulative delay contributed by up to four PMA stages in a PHY (sum of transmit and receive delays at one end of the link) shall meet the values specified in Table 83-1." At end of paragraph, add "See 80.3." Change the title of Table 83-1 to "Delay constraints". Add a column to Table 83-1 for Maximum (ns).

Delay resolution Clauses 84 and 85

In Clause 84.4 change the last three sentences to "A description of overall system delay constraints and the definitions for bit-times and pause_quanta can be found in 69.3 and Table 80-2. The sum of the transmit and the receive delays at one end of the link contributed by the 40GBASE-KR4 PMD, AN and the medium in one direction shall be no more than 2048 bit times (4 pause_quanta or 51.2 ns). It is assumed that the one way delay through the medium is no more than 320 bit times (8 ns).“

In Clause 85.4 change the last three sentences to "A description of overall system delay constraints and the definitions for bit-times and pause_quanta can be found in 80.3 and Table 80-2. The sum of the transmit and the receive delays at one end of the link contributed by the 40GBASE-CR4 PMD, AN and the medium in one direction shall be no more than 6144 bit times (12 pause_quanta or 153.6 ns). It is assumed that the one way delay through the medium is no more than 2072 bit times (51.8 ns).

The sum of the transmit and the receive delays at one end of the link contributed by the 100GBASE-CR10 PMD, AN and the medium in one direction shall be no more than 14848 bit times (29 pause_quanta or 148.48 ns). It is assumed that the one way delay through the medium is no more than 5180 bit times (51.8 ns)."

Delay resolution Clauses 86, 87 and 88

In Clause 86.2.1 change the first two sentences to "The sum of the transmit and receive delays at one end of the link contributed by the 40GBASE-SR4 PMD including 2 m of fiber in one direction shall be no more than 1024 bit-times (2 pause_quanta or 25.6 ns). The sum of the transmit and receive delays at one end of the link contributed by the 100GBASE-SR10 PMD including 2 m of fiber in one direction shall be no more than 2048 bit-times (4 pause_quanta or 20.48 ns). See 80.3.“ In 86.2 title, change "skew" to "Skew"

In Clause 87.3.1 change the sentence starting on line 6 to "The sum of the transmit and receive delays at one end of the link contributed by the 40GBASE-LR4 PMD including 2 m of fiber in one direction shall be no more than 1024 bit-times (2 pause_quanta or 25.6 ns). See 80.3.“ Change "skew" to "Skew", in four places on this page.

In Clause 88.3.1 change the sentence starting on line 6 to "The sum of the transmit and receive delays at one end of the link contributed by the 100GBASE-LR4 or 100GBASE-ER4 PMD including 2 m of fiber in one direction shall be no more than 2048 bit-times (4 pause_quanta or 20.48 ns). See 80.3." Change "skew" to "Skew", in two places on this page.