TP2 con-call comment resolution
- actions from Austin -

May 26 – June 9 (3 calls)

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Attendees

some more regular than others…

- John Abbott
- Ernie Bergmann
- David Cunningham
- Piers Dawe
- Mike Dudek
- John Ewen
- John George
- Joe Gwinn
- John Jaeger
- Paul Kolesar
- Tom Lindsay
- Gaurav Maholtra
- Jan Peeters Weem
- Petar Pepeljugoski
- Petre Popescu
- Norm Swenson
- Vivek Telang
- Andre Van Schyndel
- Others?

Dispersion vs. λ Comment 166

Comment:

The center wavelength range of the laser in table 68-3 is 1260-1355nm. A calculation has been done to determine the impact on failure rate as the laser wavelength is shifted from 1300 to 1355nm. A similar calculation was done by TIA during the development of the OM3 product (see Pepeljugoski et al., JLT vol.21 No.5 May 2003 p.1273 figure 17); in that case the failure rate increased by 0.3% as the wavelength shifted 5nm off of 850nm. Calculations based on the Gen67YY Monte Carlo set indicate that shifting from 1300 to 1355nm increases the failure rate between .75% (PIE-D=5) and 1.5% (PIE-D=4) depending on PIE-D required. Hence the target length will need to be reduced slightly.

Comment 166 resolution

- Comment sent to TP2
  - Tx should bear burden of its own design
- Analysis by Ewen and Abbott show 0.07 dB increased stress from fiber at 1355 nm
- Effect is small, majority on call support stress increase on all Tx's
  - Assume 1355 nm
  - Not worth complexity to make test dependent on Tx λ
- Proposed response
  - Accept in principle
  - Choose or create stressors that are 0.07 dB greater than TP3 stressors (TBD), enter into TWDP code

Peak launch power Comments 217, 390

- Comment 217
  - Receiver inputs are likely to have a peak input power limit in order to ensure linearity. With the possibility of using transmitters with significantly peaked output we should limit the peak Tx output power and also specify the peak input power that the receiver can operate with.
- Comment 390
  - There are 2 concerns for max optical power - laser safety and Rx overload. Laser safety is covered already. However, Rx overload control should be specified as a peak optical power as it is typically peak power that causes overload distortion that can increase Rx implementation penalties. The current overshoot masks, OMA and average power are too indirect as ways to control this. Assuming symmetry, peak power could be 3.5 dBm, 3 dB above the max average power of 0.5 dBm.The proposed spec gives the same value as determined by the current limits for max OMA and and max avg power (ER=8 dB) but with no overshoot. This value matches the proposed limit for TP3 peak power (comment 397).

Comments 217,390 resolution

- General agreement that a peak power metric is required
- Proposed response
  - Accept in principle
  - Limit peak Tx power to 2 mW (subject to further study)
  - Options
    - Add a new line to Table 68-3: Peak launch power max, +3 dBm
    - Rename line 15 in Table 68-3: Peak launch power max, +3 dBm
  - A new test method is not required. Add a note to the spec: “The peak optical power can be determined as the maximum value from the waveform capture for the TWDP test.”
- Does TP3 need a spec/test?
  - Comments 217, 397

Other TP2 spec req'd? Comment 279

- Comment
  - As Intel have shown, there might be transmitter defects that are not caught by our suite of eye mask, TWDP, SNR and random jitter. This is another comment that will have to stay open 'just in case'.
- Proposed response
  - Reject. No specific problem or remedy is given in the comment. The commenter is encouraged to resubmit the comment if and when a specific problem is identified and associated remedy is developed.

Code copyright release Comment 290

- Comment
  - Need to find out if we will need a copyright release statement for the code and whether we want to put it on the web (by itself). See 40.6.1.2.4 for precedent.
- Proposed response
  - Not within scope of TP2
  - Pass back to editor(s)

OMA, TWDP, mask

- Comments assigned
  - OMA – 251
    - Definition/accuracy
  - TWDP - 174, 278, 393
    - Stressors and limits, scaling, EQ length
  - Mask - 173, 276, 392
    - Coordinates must follow waveform and TWDP work
- Status
  - This set of comments was not resolved on TP2 calls. An update will be presented in London that will explain objectives, status, and plans for resolution