

Proposed examples for informative Annex to P802.3ct

Peter Stassar, Huawei

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Introduction

- During the meeting on 16 November
https://www.ieee802.org/3/ct/public/20_11/stassar_3ct_01a_201116.pdf it was presented with proposals to address comments # i-42 and # i-65
- It was also proposed to create a new informative Annex 154A, with title “Examples of black links compliant to Table 154-10”
- This presentation contains some examples which are proposed to form the base material for this new draft Annex.

Example 1: OSNR @ BL output between 19.5 and 35 dB

40 channels

- Tx output power -5 dBm per channel
- Black link (BL) output power / Rx input power -15 dBm per channel
- Effective loss BL 10 dB
- Assuming loss optical multiplexer (40:1) and optical demultiplexer (1:40) each 6 dB
- 80 km distance inside BL. Assumption loss cabled fiber 20 dB @ 0.25 dB/km
- Total passive loss BL 32 dB
- Need optical amplifier to reduce loss from 32 dB to 10 dB

Example 2a: OSNR @ BL output more than 35 dB, 40 channels

- Tx output power -8 dBm per channel
- BL output power / Rx input power -27 dBm per channel
- Effective loss BL 19 dB
- Assuming loss optical multiplexer (40:1) and optical demultiplexer (1:40) each 6 dB
- Available for fiber section between mux and demux: 7 dB
- Assumption loss cabled fiber 0.25 dB/km
- Achievable distance 28 km

Example 2b: OSNR @ BL output more than 35 dB, 16 channels

- Tx output power -8 dBm per channel
- BL output power / Rx input power -27 dBm per channel
- Effective loss BL 19 dB
- Assuming loss optical multiplexer (16:1) and optical demultiplexer (1:16) each 4 dB
- Available for fiber section between mux and demux: 11 dB
- Assumption loss cabled fiber 0.25 dB/km
- Achievable distance 44 km

Example 2c: OSNR @ BL output more than 35 dB, 4 channels

- Tx output power -8 dBm per channel
- BL output power / Rx input power -27 dBm per channel
- Effective loss BL 19 dB
- Assuming loss optical multiplexer (4:1) and optical demultiplexer (1:4) each 2 dB
- Available for fiber section between mux and demux: 15 dB
- Assumption loss cabled fiber 0.25 dB/km
- Achievable distance 60 km

Example 2d: OSNR @ BL output more than 35 dB, 1 channel

- Tx output power -8 dBm per channel
- BL output power / Rx input power -27 dBm per channel
- Effective loss BL 19 dB
- No loss for optical multiplexer demultiplexer
- Available for fiber section between mux and demux: 19 dB
- Assumption loss cabled fiber 0.25 dB/km
- Achievable distance 76 km

Furthermore

Develop text, with editorial license, around these examples.

Thanks!