

Updated considerations on 8x50G PAM4 for 2km duplex SMF

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Introduction

- ❑ At its interim meeting in Pittsburgh the BS task force adopted a baseline for 8x50G PAM4 on 10km duplex SMF
- ❑ This presentation provides considerations to support the same configuration 8x50G PAM4 for 2km duplex SMF with a relaxed specification

Preferred approach for 2km duplex SMF

- ❑ At the Pittsburgh meeting, May 2015, the 8x50G PAM-4 WDM 10km specs in cole_3bs_01a_0515 were adopted for the 10km SMF reach (http://www.ieee802.org/3/bs/public/15_05/motions_3bs_01_0515.pdf#page=10)
- ❑ Having 8x50G PAM4 selected for 10km, it makes a lot of sense to specify a lower cost 2km solution using 8x50G PAM4 as well.
- ❑ As demonstrated by the broad level of support from various organization types in cole_3bs_01a_0515, 400Gbs/ Ethernet early adopters want standards based 2km & 10km solutions, enabling interoperable interfaces supporting predictable build-out of 400Gb/s networks
- ❑ This solution will have a lot of optical margin, extremely necessary to enable highest yield manufacturing and lowest cost.

Preferred approach for 2km duplex SMF, continued

- In this way we can leverage strong synergy between 2km and 10km PMDs enabling fast time to market for the early adopters.
- The proposal is based on (re-)using mature 25G/28G technology and making an incremental step by doubling the bit rate, while maintaining the baud rate.
- By doing this we can be sure that BS will be able to complete a solid specification within the necessary timelines, without the risk that when implementations become available the specifications would appear to not support high yield manufacturing

Broad level of support for 8x50G PAM4 for 2km

End Users

- Ralf-Peter Braun, Deutsche Telekom
- Martin Carroll, Verizon
- Derek Cassidy, British Telecom & ICRG
- Lu Huang, China Mobile
- Junjie Li, China Telecom
- Ichiro Ogura, PETRA
- Sam Sambasivan, ATT
- Shikui Shen, China Unicom
- Masahito Tomizawa, NTT
- Guangquann Wang, China Unicom
- Haiyi Zhang, CAICT (CATR)
- Glenn Wellbrock, Verizon
- Wenyu Zhao, CAICT(CATR)

System OEMs

- Peter Anslow, Ciena
- Marc Bohn, Coriant
- Ayla Chang, Huawei
- Scott Kipp, Brocade
- Andy Moorwood, Ericsson
- David Ofelt, Juniper
- Petar Pepeljugin, IBM
- Ted Sprague, Infinera
- Tsutomu Tajima, NEC
- Steve Trowbridge, ALU
- Xinyuan Wang, Huawei
- Chengbin Wu, ZTE
- Yu Xu, Huawei

Test Equipment OEMs

- Thananya Baldwin, Ixia
- Paul Brooks, JDSU T&M
- Greg Lecheminant, Keysight
- Edward Nakamoto, Spirent
- Sergio Prestipino, Exfo
- Pavel Zivny, Tektronix

Suppliers

- John Abbott, Corning
- Dan Dove, DNS
- Mark Gustlin, Xilinx
- Eric Hall, Aurion
- Jonathan Ingham, Avago
- Jonathan King, Finisar
- Robert Lingle, Jr., OFS
- Alan McCurdy, OFS
- Vasudevan Parthasarathy, Broadcom
- Rick Pimpinella, Panduit

Q & A

Thank you