

Next Generation 100GbE SMF Ad Hoc report

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SMF Ad Hoc

- Formed by Next Gen 100G optical Ethernet chair on 2 February 2012
- Has held two 1 hour teleconferences
 - 14 Feb 2012
 - 28 Feb 2012
- Three presentations reviewed:
 - SMF Ad Hoc way forward Pete Anslow
 - Relative cost Dan Dove
 - Reference Block Diagrams Chris Cole
- Meeting minutes and presentations can be found at:
 - <http://www.ieee802.org/3/100GNGOPTX/public/smfadhoc/index.html>

Progress

- Set of reference block diagrams in [cole_01a_0212_smf_mmf.pdf](#) reviewed and refined.
- Relative cost analysis principles set out in [dove_01a_0212_smf.pdf](#)
 - Updated guidelines on relative cost from Dan Dove and David Law awaited
- Way forward for SMF objective discussed.
 - See next two slides extracted from [anslow_01_0212_smf.pdf](#)

Issues to be resolved (from anslow_01_0212_smf.pdf)

- Parallel fiber
 - Broad market potential – assuming this solution gives a significant reduction in cost, how much of a barrier to deployment is parallel SMF?
 - Economic feasibility – is the cost relative to a mature 100GBASE-LR4 low enough to justify splitting this market in to two parts?
 - Technical feasibility – a parallel fiber solution over 1km is clearly technically feasible at some cost. When will multiple suppliers be able deliver the technology to achieve a parallel solution at a significantly lower cost than a mature 100GBASE-LR4?

- PAM-8/16
 - Technical feasibility –
 - optical measurements of 34 GBd PAM-8
 - optical measurements of 25.8 GBd PAM-16
 - penalties due to dispersion, reflections etc.
 - Economic feasibility – is the cost relative to a mature 100GBASE-LR4 low enough to justify splitting this market in to two parts?

Way forward (from anslow_01_0212_smf.pdf)

- Assume a straw man 1km SMF objective
- Look for at least one technical solution that is able to satisfy all 5 criteria at the same time
- Concentrate on the weakest 5C responses for each solution
- Having reached consensus on at least one solution, revisit proposed objective to see if it is still appropriate, has BMP etc.
- Bring in presentations to Study Group meeting aimed at adopting objective and adding suitable text to 5C responses

Thanks!