Considerations on objections to inclusion of 200GbE SMF objectives into IEEE 802.3bs

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50GE_NGOATH_meeting, Atlanta January 2016

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Introduction

- During the 50GE_NGOATH_adhoc conference call on 6 January 2016 the results of an on-line straw poll (completed on Survey Monkey) were presented by Mark Nowell.
- One of the questions was: "*I would support having the following objectives (if adopted) being included into the P802.3bs (400GbE Task Force) since they are variants of the work already being consider by that Task Force (Chicago Rules - pick as many as you like)*"
- There was 65% support for inclusion of the 200 Gb/s Ethernet SMF objectives
- 31% however expressed "*I would not support any objectives being added to the P802.3bs Task Force*"
- This presentation addresses the remarks made on this topic

Considerations on issues 1

- *Providing they are just lane number variations only*
- *Only supports 200G-FR4 and 200G-LR4 which is relaxation of 400 GbE specifications*
- *This would of course being dependent on the amount of reuse from the current 802.3bs content.*

Considerations:

- As expressed in anslow_120915_50GE_NGOATH_adhoc *"200G work that leverages existing .3bs solutions added to .3bs (Logic, C2C, C2M, SMF)".*
- Yes, it is the intent to reuse/leverage (most of) the work from 802.3bs.
- 200G 4x50G budgets are intended to be relaxations of the 400G 8x50G power budgets, as outlined in stassar_120915_50GE_NGOATH_adhoc.
- Even a different wavelength plan (e.g. CWDM instead of DWDM) should not be that difficult as long as there is consensus to do so.

Considerations on issues 2

- *Do we need a logic objective also?*

Considerations:

The proposed objectives of:

- Support a MAC data rate of 200 Gb/s
- Support a BER of better than or equal to 10-13 at the MAC/PLS service interface (or the frame loss ratio equivalent)
- Support full-duplex operation only
- Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current Ethernet standard
- Provide appropriate support for OTN
- Specify optional Energy Efficient Ethernet (EEE) capability

Are effectively Logic objectives

Considerations on issues 3

- *There has already been one major 400GE program slip. Opening up the objectives to modification will impact the program. The risk of a major impact is high.*
- *We cannot delay completion of 400G standard.*

Considerations:

- Yes, there should be only a limited delay of the 400G standard.
- It is the opinion of the 802.3bs editorial team that the potential delay is manageable, so that the impact should be minimal.
- The alternative course of creating a new Task Force to do both 50 and 200G may cause the resources available to the P802.3bs Task Force to reduce, which may impact the schedule anyway.

Considerations on issues 4

- *The bs group is lacking sufficiently succinct objectives and current goals appear shortsighted.*

Considerations:

- I totally disagree with this statement.
- Furthermore, all project documentation for 802.3bs has received the necessary approvals. It is unclear what the commenter is speaking to.

Considerations on issues 5

- *In general I support this, but the wording of the strawpoll is misleading - neither of these has to be done as a variant of the current 400GbE solutions. This is a key point. Need to see consensus on that topic.*

Considerations:

- The justification for adding these objectives to the P802.3bs project is that they would be variants of the current 400GbE solutions and there seems to be a reasonable consensus for that. Those who think that they should be radically different should not vote to add these objectives to the P802.3bs Task Force.
- I hope that this presentation is providing sufficient clarification to this "supporter" of the idea.

Considerations on issues 6

- *I do not see these as variants as others do. There is actually too much that is different. For the PMDs, new loss budgets need to be supported and new wavelength grids may be chosen such as CWDM or even a new grid that is just broad enough to preclude the need for TEC stabilization of wavelength. FEC needs extensive review and decision of what to adopt.*

Considerations:

- The potential choice of a CWDM grid instead of a DWDM grid should not be that complicated provided there is consensus to do so.
- I believe that the choice of FEC for 2km and 10km SMF applications is less complicated than it may appear, because KP4 probably is an unavoidable need for all optical PMDs currently under consideration for 200GbE applications up to 10km **to ensure robust system performance**.

Summary Statements

- It is the opinion of the 802.3bs editorial team that the potential delay is manageable, so that the impact should be minimal.
- If we get the confidence and the support of IEEE802.3 then we can do it.

Q & A

Thank you