

Proposed Work Plan:
IEEE 802.3 10 Mb/s Pt-to-Pt Single Pair
Ethernet Enhancements SG

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Project Divisions

- As in CFI, work has 2 aspects:
 - Near-term Enhancements to Existing PHYs for TSN
 - Longer-term next-generation point-to-point enhancements
- United by common applications/interest groups
- Each has potentially unique scope for a project
- Each has unique CSD answers on feasibility

What we need to accomplish

- PAR forms items:
 - Scope, stakeholders, and need for project
 - Rest are fairly straightforward
- CSD responses:
 - Tech feasibility, Economic feasibility, Broad market potential
 - Rest are fairly straightforward
- Objectives:
 - These are completely different for the two projects

Work item 1: Straw-man PAR, CSD for Near-term

- Drafts this meeting for discussion
 - Should identify things that need shoring up
- Refine next meeting, and consider schedule on when to pre-submit
- Will need presentations to support:
 - Technical Feasibility – have we missed anything?
 - Supporting Broad Market potential
 - Will likely want a separate straw poll for the near-term (MACMERGE) project to fill out CSDs

Work item 2: Objectives for near-term

- Is this as simple as:
 - Enable use of Clause 146 and Clause 147 point-to-point 10 Mb/s PHYs with Clause 99
- What about half-duplex 10BASE-T1S?
- Or do we have to list out relevant IEEE P802.3br objectives (<https://www.ieee802.org/3/br/8023-DMLT-SG-1309-Winkel-Objectives-v2.3.pdf>):
 1. Preserve the IEEE 802.3 Ethernet frame format at the MAC.
 2. Preserve minimum and maximum MAC frame size of the current IEEE 802.3 standard.
 3. Use the Clause 4/Annex 4A MAC without alteration.
 4. Require no changes to PHYs.
 5. Support full duplex operation only.
 6. Preserve MAC/PLS service interface.
 7. Do not degrade Mean Time to False Packet Acceptance (MTTFPA) at the MAC Service Interface.

Work item 3: Use of long-reach SPE

- Update/explore where point-to-point SPE is going
 - Similar to ‘use cases’ in 802.3da work
- Should inform:
 - Need for TSN
 - This can support Broad Market Potential for near-term
 - Needs and goals for long-term SPE
 - Help clarify objectives for long-term next-gen SPE

Work item 4: PAR, CSD, Objectives for long-term

- Should follow from use discussion (and come after, IMO)
 - Should tell us where ‘broad market’ is
 - Distinct identity matters!
 - There are existing SPEs at higher rates
 - There are existing long-reach simple solutions
 - Both need to be considered
 - Technical feasibility work to go along with reach & rate
 - Do not need or want to be proposing solutions, just feasibility

Thoughts?

- (Discussion goes here)