25 Gb/s Editorial Considerations

IEEE 802.3 25 Gb/s Ethernet Study Group

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Introduction

- Propose a tentative structure for the new amendment.
- Review hierarchical architectures.
- Identify topics to address to move forward.

New Clauses/Annexes

Clause	Changes	
Х	Introduction to 25 Gb/s networks	
X+1	25G RS + XXVMII	
X+2	25G PCS ***	
X+3	25G FEC	
X+4	25G PMA	
X+5	25GBASE-CR PMD (copper cable) ***	
X+6	25GBASE-KR PMD (backplane)	
X+7	25GBASE-SR PMD (MMF optical)	
Annex (X+4)A	XXVAUI chip-to-chip	
Annex (X+4)B	XXVAUI chip-to-module	
Annex (X+5)A	25GBASE-CR TP parameters and channel characteristics	
Annex (X+5)B	25GBASE-CR cable/host use cases ***	
	*** indicates Clauses/Annexes that need significant work	

Amended Clauses/Annexes

Clause	Changes	Changes
	Front matter	Project information
1	Introduction	New def., abbr., etc.
4	MAC	Add 25G support.
30	Management	New objects.
45	MDIO	New registers/fields.
69	Introduction to backplanes	Add 25G support.
73	AN for backplane and cable assembly	Add 25G support, no FEC, alt. host.
74	BASE-R FEC	Add 25G support, if req'd.
78	EEE	Add 25G support
90	Time Sync	Add 25G support
AN31B	MAC Pause operation	Add 25G support
AN93A	Specs. for Electrical Channels (COM)	Add 25GBASE-CR4/KR4 references.

Backplane 25GBASE-KR



Cable 25GBASE-CR



Optical 25GBASE-SR





Big Ticket Items to Resolve

- As evidenced by the ad hoc summary slides presented at the interim there are two areas that need to be addressed in order for work to proceed.
 - See: <u>http://www.ieee802.org/3/25GSG/public/Sept14/brown_25GE_02_0914c.pdf</u>
- PCS/AM/FEC selection
 - Based on CL49 or CL82?
 - Using AMs? If so, what form?
 - How to map into CL91 transcoder?
 - CL91 RS-FEC only? CL74 FEC also?
- Copper host/cable/FEC combinations
 - Channel budget allocations? How many? No-FEC mode viable?
 - How to manage host/cable/FEC combinations?

Asymmetric?

Consensus topics?

- PCS/FEC architecture.
- Cable/host budgetary permutations and considerations.
- Cable/host management considerations.
- Other topics?