Updated ACT/GMSLE Draft Text Proposal

Contribution to 802.3dm Task Force

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Introduction

- This presentation describes updates to the ACT/GMSLE text presented in the May 1st interim teleconference:

- The May 1st presentation unified the ACT and GMSLE proposals into a single proposal and this presentation captures additional consensus building since then
- The detailed text can be found in the accompanying document jonsson_etal_3dm_01_05_12_25_text.pdf

This presentation expands on the unified ACT/GMSLE text proposal from May 1st

Scrambler and Descrambler Polynomials

What:

- Previous presentations assumed that the 33-bit scrambler polynomials would be selected based on Master/Slave role. The new text uses different polynomials for the low data rate and high data rate directions

Why:

- It simplifies the design and reduces probability of interoperability problems to have the polynomials depend on the low vs high data rate

Where:

- The updates are reflected in Clauses 200.4.4

Updated 100M Training Frame

What:

- The 100M training frame format has been changed to make it more similar to data mode framing

Why:

- It simplifies the design and reduces probability of interoperability problems to have the same frame format for training and data mode

Where:

- The updates are reflected in Clauses 200.5.2.2.2, 200.5.2.3, and 200.5.5

Updated Transmit Power Levels

What:

- The new transmit power levels were chosen as part of unifying the ACT and GMSLE proposals

Why:

- The proposals for ACT and GMSLE needed to be unified in new transmit levels that balance optimum performance and good spectral properties

Where:

- The updates are reflected in Clauses 200.8.2.4 and 200.9.2.4

New Insertion and Return Loss Requirements

What:

- The IL and RL requirements for ACT/GMSLE have been added

Why:

- After numerus attempts, the Task Force has not been able to agree on common IL and RL requirements, so the authors have agreed to adopt a reasonable compromise IL and RL limits

Where:

- The updates are reflected in Clauses 200.11.1.1, 200.11.1.2, 200.12.1.1, and 200.12.1.3

OAM for 100M

What:

- Description of the 100M OAM bits, as being identical to the high data rate OAM

Why:

- Previous text proposal had reserved bits for 100M OAM, but the detailed description was missing

Where:

- The updates are reflected in Clause 200.5.9

Key Open Items in the Draft Text Proposal

- Clarify PAM2 bit mapping
- Link synchronization
- Link delay requirements
- Detailed updates to state transition diagrams
- Update register definitions (Clause 45)
- Informative Annex about PCB, etc.

Summary

- This presentation reflects updates to the unified ACT and GMSLE proposal
- The updated draft text proposal is made in the hope that it may help build consensus within the 802.3dm Task Force

Comments and Collaborators Wanted

Thank You