Open Electrical Items in P802.3dj as of Sept 2023

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Intro/Background

- This contribution is a non-exhaustive list of open electrical items related to P802.3dj electrical interfaces and electrical PHYs

- The list of each topic is roughly prioritized (top to bottom)

Cross Topic

- COM modeling and analysis:
  - New analysis on COM 4.1 w/ RXFFE.
    - Work item list
    - Method of optimization for RXFFE: force or MMSE-like?
    - Floating tap FFE
    - What's next for MLSE?
  - Noise handling, including Eta_0 and/or extra noise term
  - Package parameters and values for Class A (M. Li) and Class B (L. Ben-Artsi)
  - Die model parameter values
- Test fixtures HCB/MCB
- Electrical Link training: concept, pattern, format, interfaces (CR/KR and/or AUI), etc.
- AN73

AUI

- Additional C2M and C2C channels for consideration by the TF
  - Need module to host direction (NEXT from module perspective)
- BER allocation between C2M and C2C
  - Specification and measurement method: BER, CER, FLR, FEC symbol error rate, etc.
- Channel analysis with COM 4.1 RXFFE to select channel list
  - Look at impact of Class A and Class B packages on channels
  - Ref EQ parameters and values
- C2M recommended channel IL
- C2C recommended channel IL

CR

- Channel analysis with COM 4.1 using RXFFE. Supporting symmetric budget
- CR symmetric host and cable budget allocation
- CR asymmetric use cases as well as host and cable budget allocation
- MDIs

KR

- Formalize two package approaches: Class A and Class B
- Package parameters and values for Class A (M. Li) and Class B (L. Ben-Artsi)
  - T-line models
  - PTH
- Channel analysis with COM 4.1 using RXFFE
- Specification of DUT and channel test methods