Clause 48 Update

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Clause 48

- Physical Coding Sublayer (PCS) and Physical Medium Attachment (PMA) sublayer, type 10GBASE-X
  - 4 Lane 8B/10B Serial PCS and PMA
- Supports LAN WDM PMD & XAUI
- Transmit, Receive, Synchronization, Deskew processes
- PCS and PMD Service Interfaces

Structure

- 802.3-1998 Clause 36 used as template
  - 1000BASE-X 8B/10B PCS and PMA
- Overview
- PCS - Functions, State Diagrams
- PMA - Abstract Service Model
- Compatibility Considerations
- Delay Constraints
- Environmental Specifications
- PICS Proforma

Status

- Overview - 90%

- PCS - 60% (state diagrams, functions)

- PMA - 90%

- Compatibility Considerations - 100%

- Delay Constraints - 75% (new)

- Environmental Specifications - 100%

- PICS Proforma - 10% (template only)

Assumptions

- No direct connection between Tx & Rx
- No Auto-Negotiation
- RS performs packet sequence checking

Major Issues

- Initialization protocol
  - Ties to Remote Fault and/or Break Link
- Remote Fault & Break Link transport
- Signal Detect transport
  - How to pass SD from medium to PCS
    - LSS is a candidate

Minor Issues

- Skip insertion rules
  - Do not allow insertion until 1 column following EOP

- Wording about retimers in 4.1.6

- XGMII characters forwarded by PCS
  - What if non-idle code-groups are received?

- Skew budget tweaking (Table 48-4)

Summary

- Fairly straightforward clause
- Very similar to Clause 36
- No "show-stoppers" anticipated