

Clause 143 proposed draft material

Marek Hajduczenia (Charter)
Glen Kramer (Broadcom Ltd.)
Duane Remein (Huawei)

Background

100G-EPON

- ❑ In March of 2017 material was submitted but never presented for Clause 143 of the draft
- ❑ Lots has happened since then
- ❑ The presentation provides an outline of proposed material to REPLACE Clause 143 in the draft 0.5.

Files accompanying this presentation

□ Ancillary submissions for this presentation include:

– remein_3ca_3_1117.pdf

Full Text/Figures/Tables for Clause 143
(also in ms word format)

– remein_3ca_4_1117.pdf

Figures (also in FrameMaker format to simplify
the Editors work)

143. Multi-Point Reconciliation Sublayer (MPRS) for 100G-EPON

- ❑ 143.1 Overview
- ❑ 143.2 Summary of major concepts
 - ❑ 143.2.1 Concept of a logical link and LLID
 - ❑ 143.2.1.1 Physical Layer ID
 - ❑ 143.2.1.2 Management Link ID
 - ❑ 143.2.1.3 User Link ID
 - ❑ 143.2.1.4 Group Link ID
 - ❑ 143.2.2 25 Gb/s, 50 Gb/s, and 100 Gb/s operation over P2MP media
 - ❑ 143.2.2.1 MPRS channels
 - ❑ 143.2.2.2 Binding of multiple MACs to multiple PCS instances
 - ❑ 143.2.3 Transmission and reception over multiple MPRS channels
 - ❑ 143.2.3.1 Transmission Unit
 - ❑ 143.2.3.2 Transmission Envelopes
 - ❑ 143.2.3.3 Envelope Headers
 - ❑ 143.2.3.4 Interpacket gap adjustment
 - ❑ 143.2.4 Dynamic channel bonding
 - ❑ 143.2.4.1 LLID transmission over multiple MPRS channels
 - ❑ 143.2.4.2 Channel skew remediation mechanism
 - ❑ 143.2.4.3 ENV_TX and ENV_RX buffers
 - ❑ 143.2.4.4 Envelope Position Alignment Marker

143. Multi-Point Reconciliation Sublayer (MPRS) for 100G-EPON

- ❑ 143.3 100G-EPON MPRS Requirements
 - ❑ 143.3.1 MPRS and MPCP clock synchronization
 - ❑ 143.3.2 Delay variability constraints
- ❑ 143.4 MPRS Functional Specifications
 - ❑ 143.4.1 MPRS Interfaces
 - ❑ 143.4.1.1 PLS service primitives
 - ❑ 143.4.1.1.1 Mapping of PLS_DATA[ch].request primitive
 - ❑ 143.4.1.1.2 Mapping of PLS_SIGNAL[ch].indication primitive
 - ❑ 143.4.1.1.3 Mapping of PLS_DATA[ch].indication primitive
 - ❑ 143.4.1.1.4 Mapping of PLS_DATA_VALID[ch].indication primitive
 - ❑ 143.4.1.1.5 Mapping of PLS_CARRIER[ch]. indication primitive
 - ❑ 143.4.1.2 MPRS Control Primitives
 - ❑ 143.4.1.2.1 MPRS_CTRL[ch].request(link_id, epam, env_length) primitive
 - ❑ 143.4.1.2.2 MPRS_CTRL[ch].indication(cw_left) primitive
 - ❑ 143.4.1.3 25GMII interfaces
 - ❑ 143.4.2 Envelope Header format

143. Multi-Point Reconciliation Sublayer (MPRS) for 100G-EPON

- ❑ 143.4.3 Transmit functional specifications
 - ❑ 143.4.3.1 Conventions
 - ❑ 143.4.3.2 Constants
 - ❑ 143.4.3.3 Variables
 - ❑ 143.4.3.4 Functions
 - ❑ 143.4.3.5 State Diagrams
 - ❑ 143.4.3.5.1 Input Process
 - ❑ 143.4.3.5.2 Transmit Process
- ❑ 143.4.4 Receive functional specifications
 - ❑ 143.4.4.1 Conventions
 - ❑ 143.4.4.2 Constants
 - ❑ 143.4.4.3 Variables
 - ❑ 143.4.4.4 Functions
 - ❑ 143.4.4.5 State Diagrams
 - ❑ 143.4.4.5.1 Receive Process
 - ❑ 143.4.4.5.2 Output Process

143. Multi-Point Reconciliation Sublayer (MPRS) for 100G-EPON

- ❑ 143.5 Channels with asymmetric rates
- ❑ 143.5.1 Mapping of 25GMII and XGMII primitives at the OLT
- ❑ 143.5.2 Mapping of 25GMII and XGMII primitives at the ONU
- ❑ 143.5.3 MPRS channel operation at 10 Gb/s
 - ❑ 143.5.3.1 Changes to Input Process
 - ❑ 143.5.3.2 Changes to Transmit Process
 - ❑ 143.5.3.3 Changes to Receive Process
 - ❑ 143.5.3.4 Changes to Output Process

Thank You

Replace the contents of Clause 143 in the draft with that shown in remein_3ca_3_1117.pdf (include the definition of MPRS channel in Clause 1.4 Definitions).

Moved:

Seconded:

For: _____

Against: _____

Abstain: _____

Technical ($\geq 75\%$)

Motion Passes/Fails