IEEE 802.3ca 100G-EPON Task Force Closing Report

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IEEE 802.3 100G-EPON Task Force Project Information

Task Force Organization:

Chair: Curtis Knittle, CableLabs

Vice Chair: Glen Kramer, Broadcom

Chief Editor: Marek Hajduczenia, Charter

Task Force web and reflector information

Reflector information: http://www.ieee802.org/3/ca/3ca_reflector.shtml

Home page: http://www.ieee802.org/3/ca/index.shtml

PAR: http://www.ieee802.org/3/ca/documents/P802_3ca_par_approved.pdf

CSD: https://mentor.ieee.org/802-ec/dcn/15/ec-15-0100-00-ACSD-802-3ca.pdf

Objectives: http://www.ieee802.org/3/ca/documents/P802_3ca_objectives.pdf

Activities This Week

- ~32 people met for 2 days, covering ~19 presentations

-Major items discussed:

-- Downstream wavelengths

-- Receiver sensitivity

-- Transmit power

-- FEC

-- 2x25Gbps versus 1x50Gbps

-Passed seven (7) technical motions

Technical Motions

Adopt the following downstream wavelength plan:S0:
DS0: 1358 +/- 2 nm

DS1: 1342 +/- 2 nm
25G-EPON shall use DS0, and update the draft accordingly

Accept text for Clause142.2 as presented in remein_3ca_1a_0318.pdf and include in the draft

P802.3ca 10G upstream channels associated with 25G/10G ONUs, operating on UW0 or UW1 wavelengths, shall use 10G PHY specified as shown in harstead_3ca_4a_0318

Adopt the FEC codeword format shown in slide 6 of kramer_3ca_1_0318.pdf. Adopt the indicated draft text changes in laubach_3ca_2_0318.pdf and update 142.2.2.3.1 Low Density Parity Check Coding and 142.2.2.3.2 LDPC Encoder as needed. Accept the machine readable format of the parity code matrix in laubach_3ca_3_0318.txt. Update machine readable Omega256 interleaver seed as contained in laubach_3ca_4_0318.txt. This motion modifies motion #6 from meeting in Nov 2017

Technical Motions (continued)

Adopt the following 25G EPON PR30 upstream specifications:

- 25G OLT receiver sensitivity: -25.0 dBm at BER = 1e-2 and ONU Tx ER = 5 dB,
- 25G ONU transmitter: ERmin = 5 dB, (AVP minus TDP)min = 4.0dBm and update the draft.

In order to extend OLT burst receiver dynamic range, move to extend the discovery message shown in umeda_3ca_1b_0318.pdf pages 7 and 8 to support ONUs with different RX_RSSI to be registered in different time slots. Align the table with new bit positions in draft as amended in this meeting

IEEE P802.3ca Task Force instructs the editor to produce draft version D1.0 from current draft version D0.7 by incorporating approved motions and changes as recorded in 802d3ca_D07_approved.pdf

Liaison to ITU

Dear Dr. Effenberger and Dr. Kani,

To support PON Convergence efforts and maintain an open communication channel between ITU-T SG15 Q2 and on-going IEEE P802.3ca Task Force efforts we are providing a status of progress from the March 2018 Rosemont, IL meeting.

The IEEE P802.3ca Task Force has approved the following elements associated with the standards effort:

1. **Wavelength and Power Budget:**
   - Downstream wavelength plan was accepted. Two wavelengths: 1358 +/- 2 nm and 1342 +/- 2 nm. 25G PON will use 1358 +/- 2 nm.
   - 25G PON OLT transmitter launch power: AVPmin = 4.8 dBm and ER min = 8 dB
   - 25G PON ONU receiver sensitivity was accepted: -25.7 dBm at BER= 1e-2 and ER=8 dB
   - Upstream wavelength plan was modified. UW0 1260-1280 nm, UW1 1290-1310 nm, UW2 1320 +/- 2 nm.
   - 25G PON ONU transmitter launch power: (AVP minus TDP) min = 4 dBm, ER min =5 dB
   - 25G PON OLT receiver sensitivity was accepted: -25.0 dBm at BER= 1e-2, ER=5 dB
2. **Forward Error Correction (FEC):** Task Force has agreed to use LDPC in both directions with optional precoding in the downstream.
3. **Task Force Draft 1.0:** The latest draft 1.0, a work in progress, is attached for your review. [Please include boiler plate text on restricted distribution].

Once again, thank you for your interest. We look forward to continued collaboration with the ITU-T Q2/15 team.

Sincerely,

David Law

Chair, IEEE 802.3 Ethernet Working Group

WG Motion – Liaison Response

Move that the IEEE 802.3 Working Group approve IEEE_802d3_to_ITU_SG15_Q2_0318_draft with editorial license granted to the Chair (or his appointed agent) as liaison communications from the IEEE 802.3 Working Group to ITU-T Study Group 15.

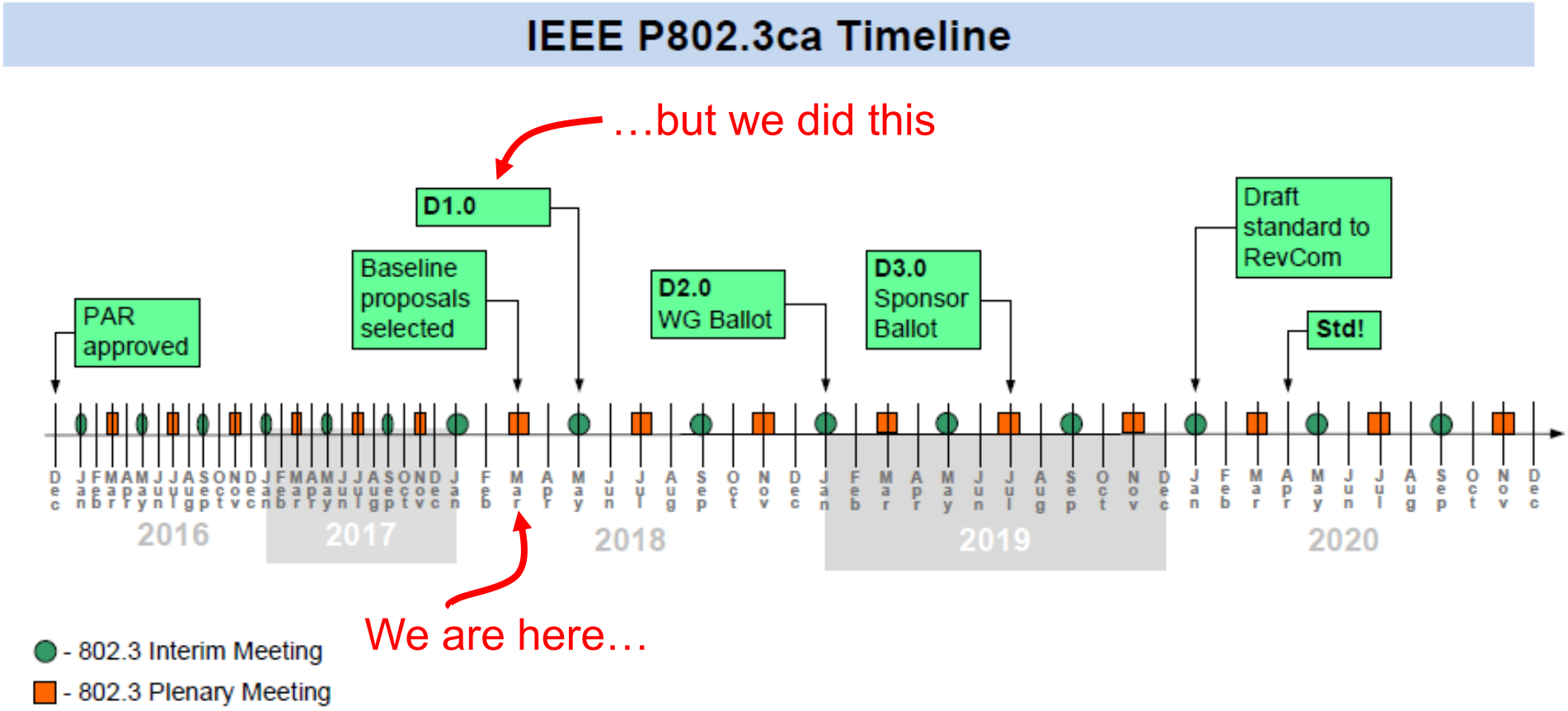
Moved: Curtis Knittle

Second:

Technical (>75%)

Results:

IEEE 802.3ca 100G-EPON Task Force Timeline



Questions?

Thank you!