IEEE P802.3cm 400 Gb/s over Multimode Fiber Task Force Ad Hoc Web/Teleconference Minutes
June 21, 2018

Group Name: IEEE P802.3cm 400 Gb/s over Multimode Fiber Task Force Ad Hoc
Date/Location: Thursday, June 21, 2018. Web/Teleconference
Chair: Robert Lingle, Jr., Chair NGMMF SG
Recording Secretary: Mabud Choudhury

Meeting Participants:

	Name	Employer	Affiliation
1	Bruce Chow	Corning Inc	Corning Inc
2	Dale Murray	LightCounting	LightCounting
3	David Piehler	Dell EMC	Dell EMC
4	Gary Nicholl	Cisco	Cisco
5	George Zimmerman	CME Consulting	CommScope
6	Jeffery Maki	Juniper Networks	Juniper Networks
7	John Abbott	Corning Inc	Corning Inc
8	John Kamino	OFS	OFS
9	John Petrilla	Foxconn Interconnect Technology	Foxconn Interconnect Technology
10	Jonathan Ingham	Foxconn Interconnect Technology	Foxconn Interconnect Technology
11	Jonathan King	Finisar	Finisar
12	Jose Castro	Panduit	Panduit
13	Kenneth Jackson	Sumitomo	Sumitomo
14	Mabud Choudhury	OFS	OFS
15	Mark Nowell	Cisco	Cisco
16	Mike Dudek	Cavium	Cavium
17	Paul Kolesar	CommScope	CommScope
18	Pete Pondillo	Corning Inc	Corning Inc
19	Phong Pham	US Conec	US Conec
20	Piers Dawe	Mellanox	Mellanox
21	Rakesh Sambaraju	Nexans	Nexans
22	Ramana Murty	Broadcom	Broadcom
23	Rick Pimpinella	Panduit	Panduit
24	Robert Lingle	OFS	OFS
25	Steffen Koehler	Finsar	Finisar
26	Steve Swanson	Corning Inc	Corning Inc
27	Sunny Xu	CommScope	CommScope
28	Tom Palkert	Macom	Macom

28 attendees participated in the June 21, 2018 web call. If you participated in the meeting but are not

listed or if you attended and company employer/affiliation is incorrect, please email Mabud Choudhury, mchoudhury@ofsoptics.com with a correction.

Call to order/Meeting Start Time: 1:04 pm Eastern Daylight Time/EDT (UTC -4)
Chair's remarks:

- Reminder for participants to record their attendance along with employer/affiliation to Mabud Choudhury at mchoudhury@ofsoptics.com
- Reviewed Agenda, Slide 3 of: http://www.ieee802.org/3/cm/public/adhoc/lingle_3cm_adhoc_01_062118.pdf

Approval of agenda: Agenda was approved.

- Participation in IEEE 802 Meetings and Guidelines for IEEE-SA Meetings, including Patent Policy, reviewed (Slides 4 & 5 of link above). No one indicated being unfamiliar with these policy slides.
- Reviewed deadlines for requesting agenda time and submitting presentations (Slide 6 of above link):
    - Request time by midnight Thursday, June 28th, 2018 (AoE)
    - Submit presentation by midnight Thursday, July 5th, 2018 (AoE)
- Reviewed key adopted objectives and status of baselines:
    - Adopted a baseline in Pittsburgh to define a physical layer specification that supports 400 Gb/s operation over 8 pairs of MMF with lengths up to at least 100m
    - Need to adopt a baseline in July to define a physical layer specification that supports 400 Gb/s operation over 4 pairs of MMF with lengths up to at least 100m
- Chair's goal is to advance D1.0 at the November Bangkok plenary
- Encourage consensus building for 400G-SR4.2 baseline proposal.

Technical Topics:

1. Baseline proposal for a 400 Gb/s optical PMD supporting four MMF pairs, Jonathan Ingham:

- http://www.ieee802.org/3/cm/public/adhoc/ingham_3cm_adhoc_01a_062118.pdf
- Baseline proposal:
    - For "400GBASE-SR4.2" based on FEC-supported 26.5625 GBd PAM4 modulation
    - Transmit and receive characteristics are based on Clause 138 (D3.3) facilitating easy standardization using established metrics, notably TDECQ and SECQ
    - OM3 and OM4 performance in the proposed wavelength ranges is field proven and formal guidance is expected from TIA and IEC
    - Bi-directional approach allows breakout to multi-vendor 100G Bi-Di transceiver
    - Bi-directional WDM transmission with required operating range of 0.5 m to 70m OM3, 0.5 m to 100 m OM4 and 0.5 m to 150 m OM5
    - Wavelength ranges of 847 to 863 nm and 900 to 916 nm
- Discussion:
    - Adding to supporter list
    - About eye safety. Jose Castro working with Richard Johnson on this topic
    - About widening wavelength range
    - TDECQ filter bandwidth as a function of wavelength range
- Action Item:

- Jonathan King offered a relatively simple (spreadsheet based) analysis of TDECQ filter bandwidth as a function of wavelength range for next week's ad hoc meeting.

Meeting closed: 2:34 pm Eastern Daylight Time/EDT (UTC -4).

Next Meeting: Thursday, June 28, 2018, 1 pm – 2:30 pm Eastern Standard Time (US), 400G over MMF TF Ad Hoc Web/Teleconference