

# IEEE P802.3cm 400G over MMF Task Force Ad Hoc Telecon

Robert Lingle, Jr., Chair

IEEE P802.3cm 400 Gb/s over MMF Task Force

Employer & Affiliation: OFS

January 10, 2019

# WebEx & Call-in Information

Join meeting in my WebEx Personal Room

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# Agenda

- Please record attendance with employer & affiliation to Mabud Choudhury at [mchoudhury@ofsoptics.com](mailto:mchoudhury@ofsoptics.com)
- Approve agenda
- IEEE 802 Participation, review patent slides
- Approve prior ad hoc call unapproved meeting minutes
- Today's topics:
  - Editor's update – Jonathan Ingham
  - Discussion of Big Ticket items for advancing to WG ballot
  - RMS Spectral Width – Murty
  - Option for discussion of submitted comments
  - Options for updating timeline - Choudhury
  - Long Beach January Interim goals and schedule
- Deadlines for Requesting Agenda Time and Submitting Presentations
- Any walk-on items

# Participation in IEEE 802 Meetings

Participation in any IEEE 802 meeting (Sponsor, Sponsor subgroup, Working Group, Working Group subgroup, etc.) is on an individual basis

- Participants in the IEEE standards development individual process shall act based on their qualifications and experience. ([https://standards.ieee.org/develop/policies/bylaws/sb\\_bylaws.pdf](https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf) section 5.2.1)
- IEEE 802 Working Group membership is by individual; “Working Group members shall participate in the consensus process in a manner consistent with their professional expert opinion as individuals, and not as organizational representatives”. (subclause 4.2.1 “Establishment”, of the IEEE 802 LMSC Working Group Policies and Procedures)
- Participants have an obligation to act and vote as an individual and not under the direction of any other individual or group. A Participant’s obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders.
- Participants shall not direct the actions or votes of any other member of an IEEE 802 Working Group or retaliate against any other member for their actions or votes within IEEE 802 Working Group meetings, see [https://standards.ieee.org/develop/policies/bylaws/sb\\_bylaws.pdf](https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf) section 5.2.1.3 and the IEEE 802 LMSC Working Group Policies and Procedures, subclause 3.4.1 “Chair”, list item x.

By participating in IEEE 802 meetings, you accept these requirements. If you do not agree to these policies then you shall not participate.

(Latest revision of IEEE 802 LMSC Working Group Policies and Procedures: <http://www.ieee802.org/devdocs.shtml>)

# Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

**Early identification of holders of potential  
Essential Patent Claims is encouraged**

# Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- **Speak up now and respond to this Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

# Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don't discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - Technical considerations remain the primary focus
  - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don't discuss the status or substance of ongoing or threatened litigation.
  - Don't be silent if inappropriate topics are discussed ... do formally object.

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For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at <http://standards.ieee.org/develop/policies/antitrust.pdf>

# Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- ***IEEE-SA Standards Board Bylaws***  
(<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>)
- ***IEEE-SA Standards Board Operations Manual***  
(<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>)

Material about the patent policy is available at  
<http://standards.ieee.org/about/sasb/patcom/materials.html>

If you have questions, contact the IEEE-SA Standards Board Patent Committee  
Administrator at [patcom@ieee.org](mailto:patcom@ieee.org)

# Approve Previous TF Ad Hoc Meeting Minutes

- Approve Unapproved Minutes for December 7<sup>th</sup>, 2018 ad hoc meetings:
  - [http://www.ieee802.org/3/cm/public/adhoc/unapproved\\_minutes\\_3cm\\_adhoc\\_01\\_120718.pdf](http://www.ieee802.org/3/cm/public/adhoc/unapproved_minutes_3cm_adhoc_01_120718.pdf)

# Editor's Update

- Draft 1.1 was open for review from November 30<sup>th</sup>, 2018 through midnight AoE on New Years' Eve December 31<sup>st</sup>, 2018
- You may access D1.1 at the following links:
  - Posted: <http://www.ieee802.org/3/cm/private/index.html>
    - Private Area Username and Password (provided during meeting)
  - Clean version: [http://www.ieee802.org/3/cm/private/8023cm\\_D1p1.pdf](http://www.ieee802.org/3/cm/private/8023cm_D1p1.pdf)
  - Compare version: [http://www.ieee802.org/3/cm/private/8023cm\\_D1p1-compare.pdf](http://www.ieee802.org/3/cm/private/8023cm_D1p1-compare.pdf)
- 27 comments on D1.1 from 4 commenters:
  - By Clause: [http://www.ieee802.org/3/cm/comments/P802d3cm\\_D1p1\\_comments\\_received\\_by\\_clause.pdf](http://www.ieee802.org/3/cm/comments/P802d3cm_D1p1_comments_received_by_clause.pdf)
  - By ID: [http://www.ieee802.org/3/cm/comments/P802d3cm\\_D1p1\\_comments\\_received\\_by\\_ID.pdf](http://www.ieee802.org/3/cm/comments/P802d3cm_D1p1_comments_received_by_ID.pdf)
  - Thanks to John Abbott, Piers Dawe, Ramana Murty and Steve Swanson for submitting comments
- Editorial team will provide proposed responses to comments not later than midnight today
- Comments will be resolved at Long Beach Interim TF meeting, January 17-18, 2019

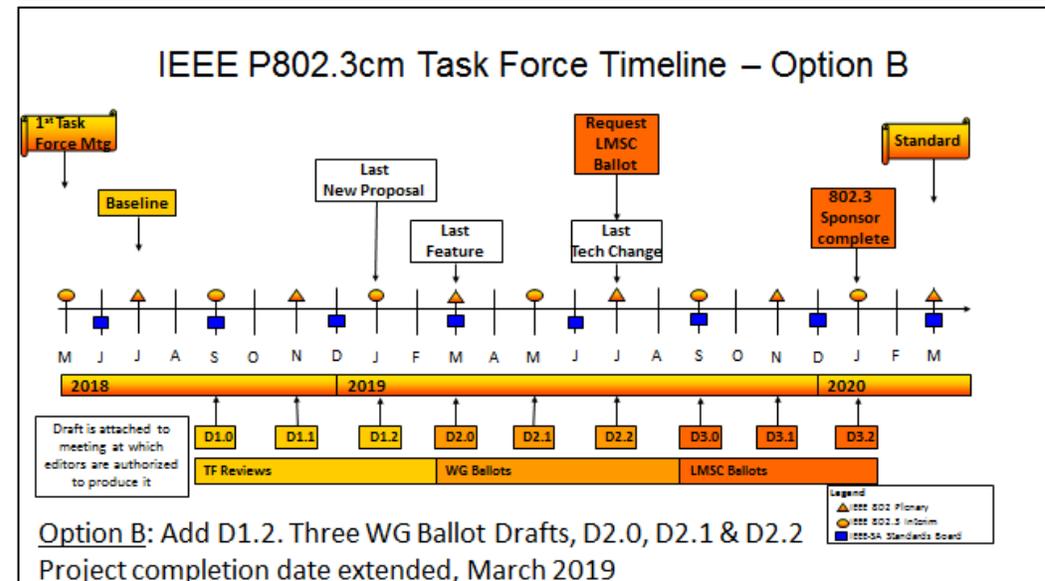
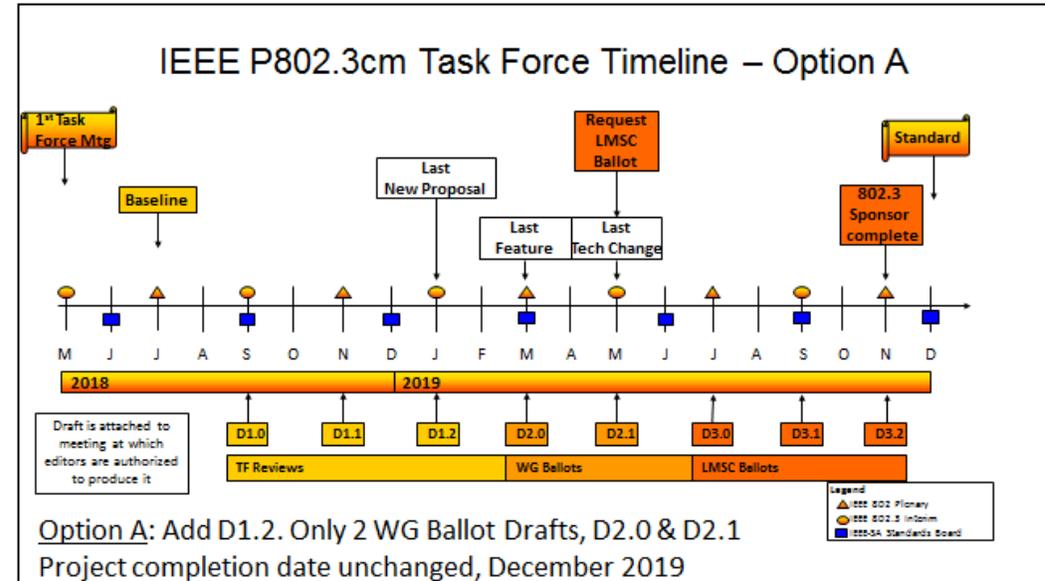
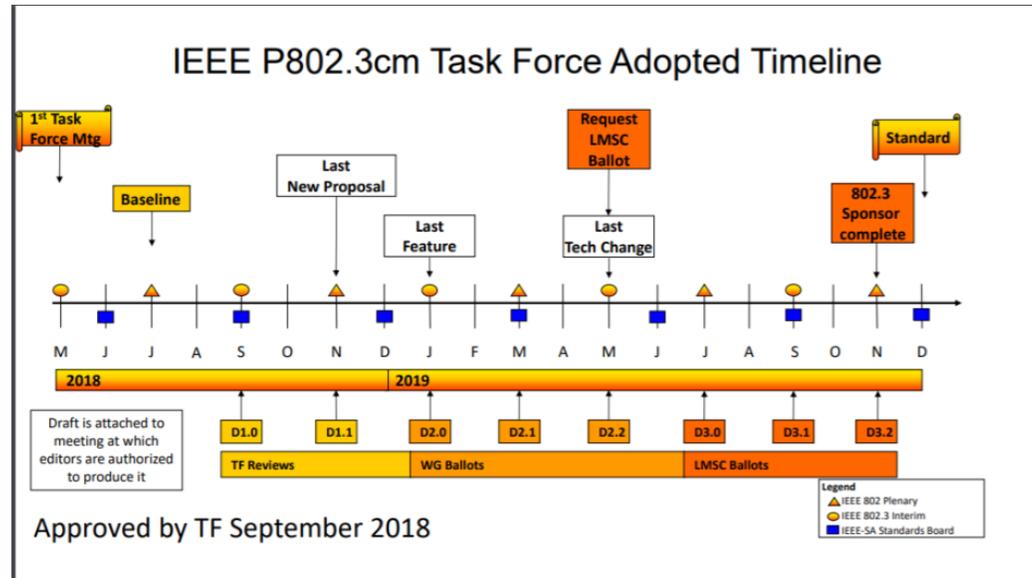
# Discussion of Big Ticket items for advancing to WG ballot

- Modal noise (MN) penalty – Comment questioning MN & MPN penalty allocation. Castro *et al.* presented measurements aiming to quantify modal noise with 25 Gbaud VCSELs, which generated interest. There were questions about translating noise variance to penalties for NRZ vs. PAM4. Questions were raised about impact of air gap in connector offsets in Dec. 7 ad hoc.
- Tx transition time – comment #43 against clause (now) 150 to change the max Tx transition time from 34 to 30 ps received some support in a straw poll when the proposal was modified to change from 34 to 32 ps
  - [http://iee802.org/3/cm/comments/P802p3cm\\_D1p0\\_comments\\_final\\_by\\_ID.pdf](http://iee802.org/3/cm/comments/P802p3cm_D1p0_comments_final_by_ID.pdf)
- Changing RMS spectral width for 910nm wavelength from 0.60 to 0.65 nm. Comment was submitted against D1.1. Updated contributions

# Contributions

- RMS Spectral Width – Ramana Murty
  - [http://www.ieee802.org/3/cm/public/adhoc/murty\\_3cm\\_adhoc\\_01\\_010919.pdf](http://www.ieee802.org/3/cm/public/adhoc/murty_3cm_adhoc_01_010919.pdf)

# Possible updates to timeline



# Long Beach January Interim

- Primary focus:
  - The focus of the IEEE P802.3cm Task Force meeting at Long Beach, CA Interim shall be **comment resolution against D1.1**
- Motion to formally modify the timeline
  
- TF Meeting dates:
  - **Thursday January 17<sup>th</sup>, 2019, 13h00 - 18h00 and Friday, January 18<sup>th</sup>, 2019, 08h00 - 12h00**
  - <http://ieee802.org/3/interims/jan19/schedule.html>

# Deadline for Requesting Agenda Time and Submitting Presentations for Long Beach TF Meeting

- Previously published deadlines
  - The presenter shall request time by **FRIDAY, JANUARY 4<sup>th</sup>, 2019** ([AoE](#)). Requests shall be submitted by sending an email to the Chair, [rlingle@ofsoptics.com](mailto:rlingle@ofsoptics.com) . Chair will consider late requests.
  - The presenter shall submit a PDF, soft-copy version of the presentation, by e-mailing it to the Chair, [rlingle@ofsoptics.com](mailto:rlingle@ofsoptics.com) . This shall be done by **FRIDAY, JANUARY 11<sup>th</sup>, 2019** ([AoE](#)) for publication to the IEEE 802.3 400 Gb/s over Multimode Fiber Task Force web site. Chair will consider late submissions.
- Updated deadline
  - No contribution time was requested for the Long Beach Interim.
  - To expedite resolution of Big Ticket Items, time is still available in the schedule for contributions directly related to resolution of specific comments against D1.1. Please send such contributions not later than **5pm Pacific US time MONDAY, JANUARY 14<sup>th</sup>, 2019**. The submission should refer to a comment # in the title.
- Procedure for Presenters: <http://www.ieee802.org/3/cm/public/presentproc.html>

# Walk-On Items