

# IEEE P802.3cm 400G over MMF Task Force Agenda & General Information

Robert Lingle Jr, OFS

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

IEEE 802.3 Interim, January 17-18, 2019

Long Beach, CA USA

# Agenda

- Welcome / Introductions
- Approval of Agenda
- Approve Previous Task Force Minutes
- IEEE 802 Participation & Patent Policy
- Task Force Information & Private Area
- Attendance
- Ground Rules
- The Role of the Chair
- IEEE Structure, Bylaws and Rules, IEEE 802.3 Standards Process
- Ad Hoc Report
- Goals for the Week, Big Ticket Items
- Schedule
- Future Meetings
- Editorial report and comment agenda
- Draft D1.1 Comment Resolution
- Presentations
- Discussion, Straw Polls, Motions
- Closing Business

# Task Force Decorum



- Photography or recording by permission only (2016 SASB Op Manual 5.3.3.2)
- Cell phone ringers off
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (5.3.3.3)
- Wear your badges at all times in meeting areas
  - Help the hotel security staff improve the general security of the meeting rooms
  - **PCs HAVE BEEN STOLEN** at previous meetings
  - **DO NOT** assume that meeting areas are secure
- Please observe proper decorum in meetings

# Approve Previous Task Force Minutes

- Move to approve:
- Previously posted meeting minutes from Bangkok Plenary IEEE P802.3cm Task Force meeting:
  - [http://www.ieee802.org/3/cm/public/November18/unapproved\\_meeting\\_minutes\\_3cm\\_01\\_1118.pdf](http://www.ieee802.org/3/cm/public/November18/unapproved_meeting_minutes_3cm_01_1118.pdf)

# 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)**

# IEEE 802.3cm 400G over MMF Task Force Information

- Robert Lingle Jr, Chair
- Home Page - <http://www.ieee802.org/3/cm/index.html>
- Reflector Information –  
<http://www.ieee802.org/3/cm/reflector.html>
- Editors
  - Jonathan Ingham, FIT – Editor
  - (Jonathan King, Finisar – On leave)
- Recording Secretary
  - Mabud Choudhury, OFS

# IEEE 802.3cm 400G over MMF Task Force Private area

- Private Area -  
<http://www.ieee802.org/3/cm/private/index.html>
- Username: (provided at meeting)
- Password: (provided at meeting)

# Attendance

- Tutorial Material on attendance tool
  - [http://ieee802.org/3/minutes/attendance\\_procedures.pdf](http://ieee802.org/3/minutes/attendance_procedures.pdf)
- Access details
  - URL: <http://imat.ieee.org/>
  - Use your IMAT login (must be on meeting SSID – no VPN)
  - Interim Session password: (provided at meeting)
- Attendance books
  - Please ALSO use the attendance book
  - Keeps track of attendance in room
  - Used to support requests to verify attendance by chair if IMAT not used.

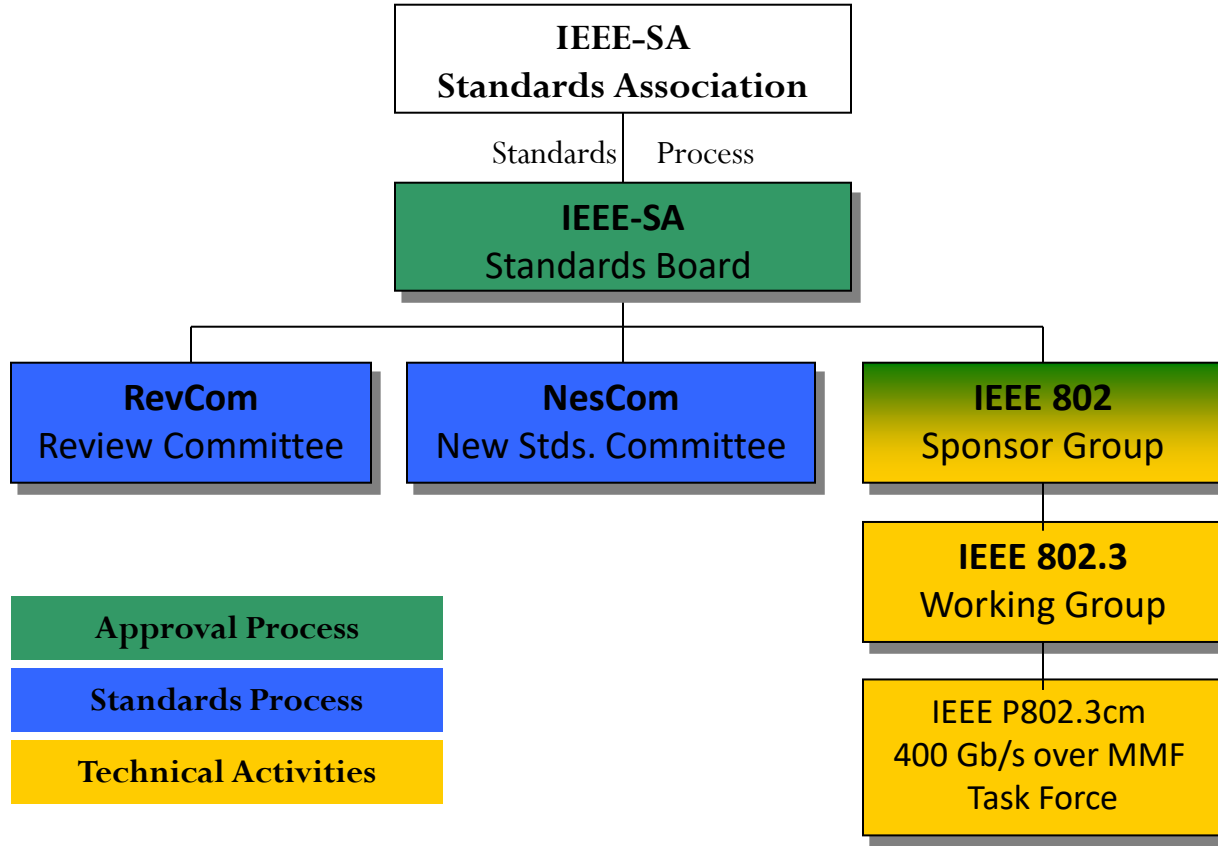
# Ground Rules

- **Based upon IEEE 802.3 Rules**
  - **Foundation based upon Robert's Rules of Order**
  - **Anyone in the room may speak**
  - **Anyone in the room may vote**
- **RESPECT... give it, get it**
- **NO product pitches**
- **NO corporate pitches**
- **NO prices!!!**
  - **This includes costs, ASPs, etc. no matter what the currency**
- **NO restrictive notices**

# The Role of the Chair

- Per the IEEE 802.3 Ethernet WG Operations Manual ([http://www.ieee802.org/3/rules/P802\\_3\\_rules.pdf](http://www.ieee802.org/3/rules/P802_3_rules.pdf))
  - The operation of the TF has to be balanced between democratic procedures that reflect the desires of the TF members and the TF Chair's responsibility to produce a draft standard, recommended practice, or guideline in a reasonable amount of time for review and approval by the WG. Robert's Rules of Order shall be used in combination with these operating rules to achieve this balance.
  - The full responsibilities of the chair are specified in 3.4.3 Task Force Chair's Responsibilities.
- Reminder - individual standards activities within the WG are, at the discretion of the WG, carried out by Task Forces (TF) operating under, and reporting to, the WG.

# IEEE Structure

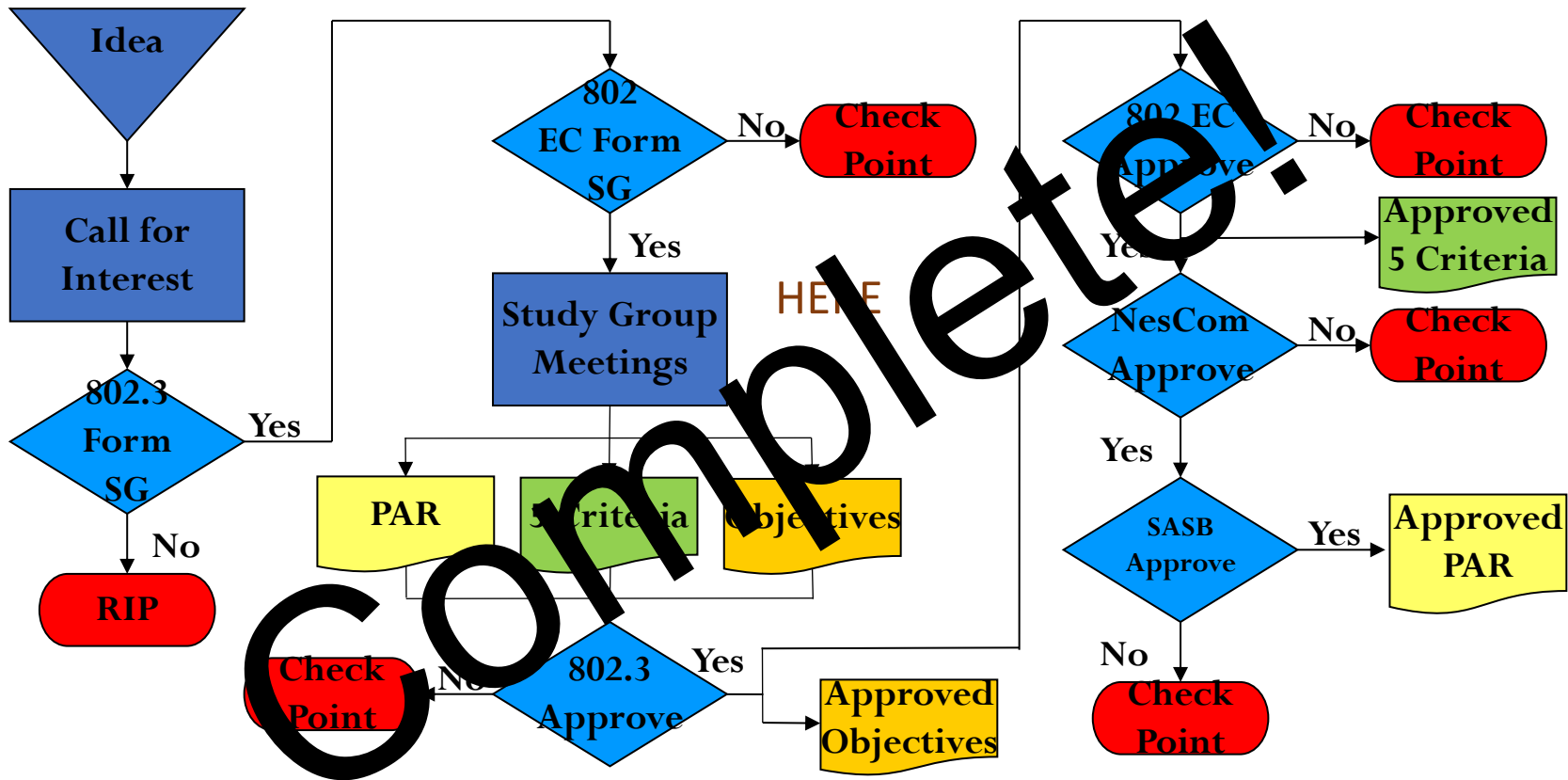


# Important Bylaws, Rules, & References

- **IEEE-SA Operations Manual**  
<http://standards.ieee.org/sa/sa-om.pdf>
- **IEEE-SA Standards Board Bylaws**  
<http://standards.ieee.org/guides/bylaws/sb-bylaws.pdf>
- **IEEE-SA Standards Board Operations Manual**  
<http://standards.ieee.org/guides/opman/sb-om.pdf>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures**  
<http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual**  
[http://ieee802.org/PNP/approved/IEEE\\_802\\_OM\\_v19.pdf](http://ieee802.org/PNP/approved/IEEE_802_OM_v19.pdf)
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**  
<http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf>
- **IEEE 802.3 Working Group Operating Rules**  
[http://ieee802.org/3/rules/P802\\_3\\_rules.pdf](http://ieee802.org/3/rules/P802_3_rules.pdf)
- **“Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy”**  
<http://standards.ieee.org/develop/policies/antitrust.pdf>

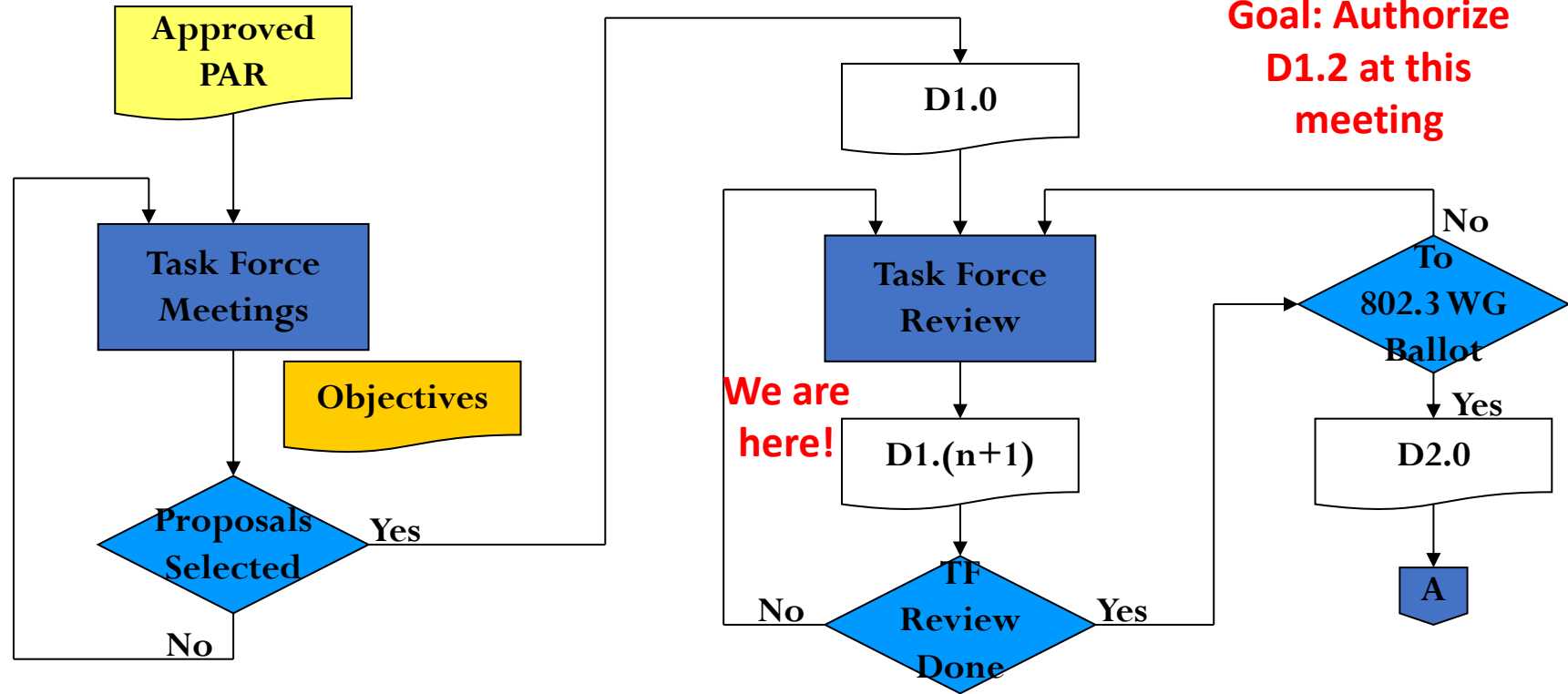


# Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase

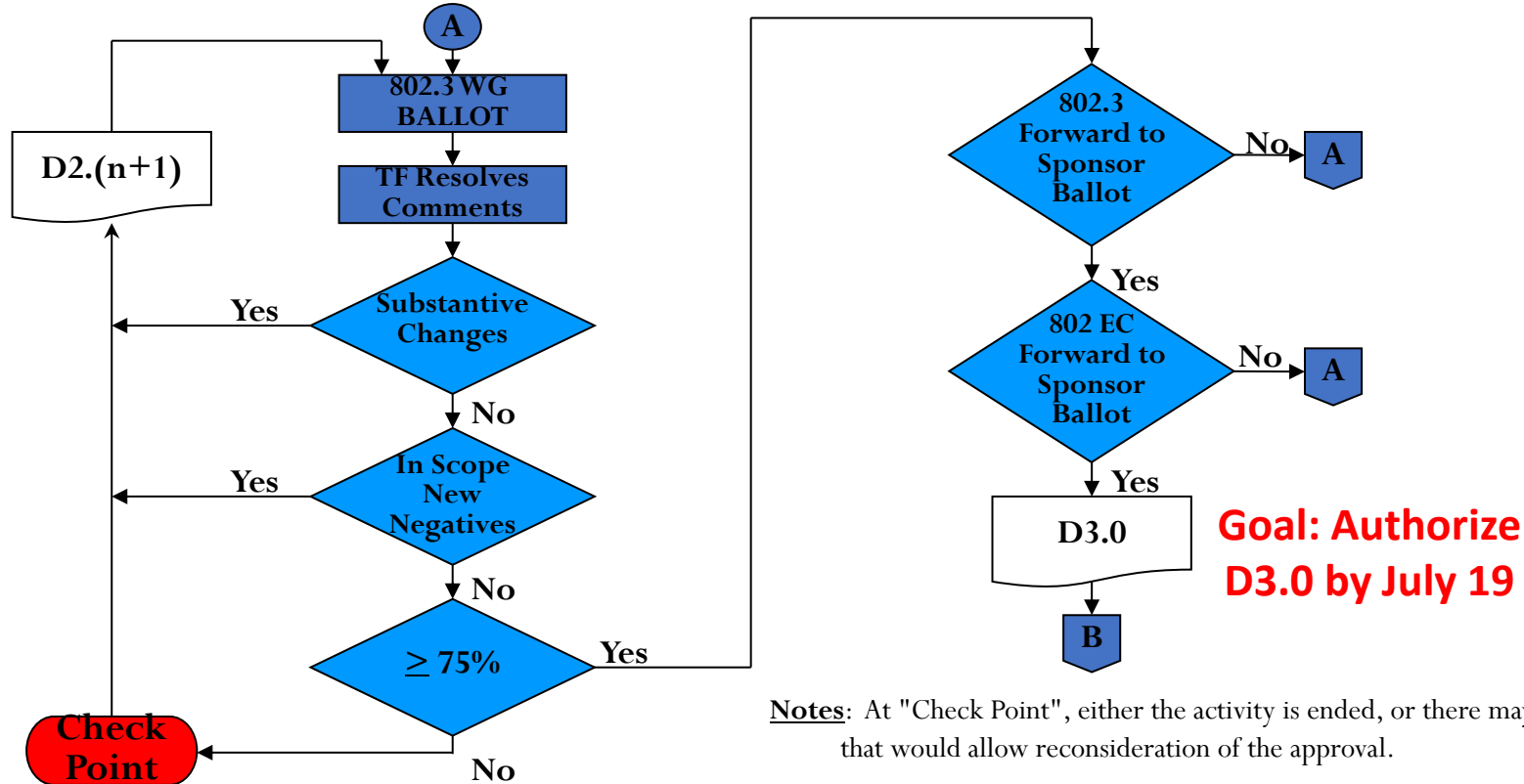


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase



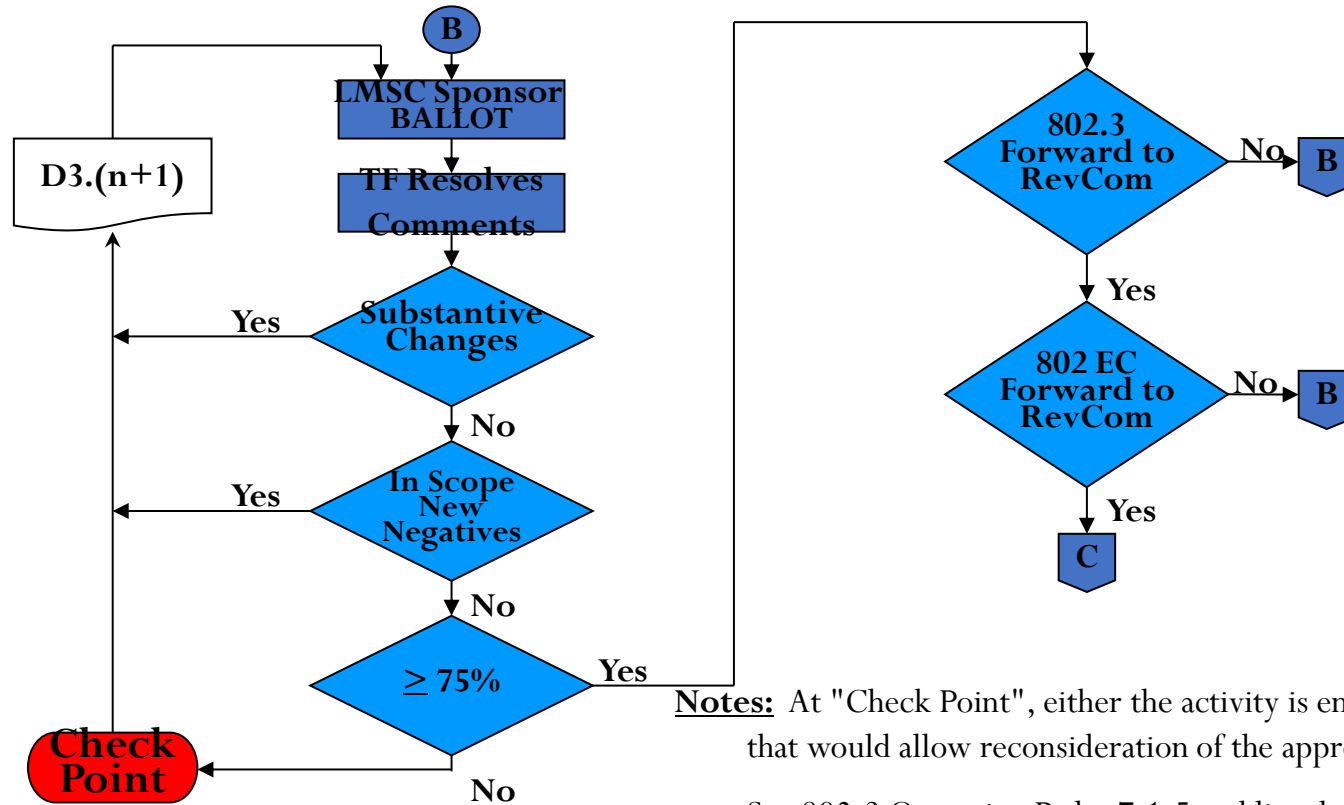
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operating Rules 7.1.4 and listed references for complete description

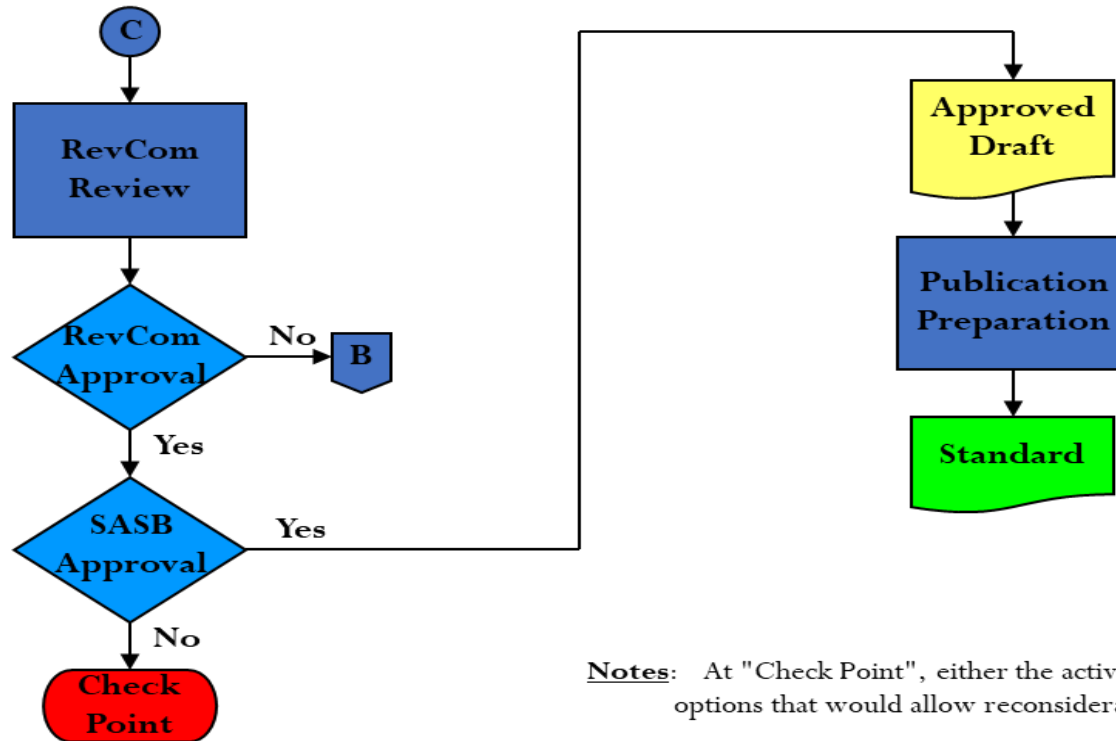
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operating Rules 7.1.5 and listed references for complete description

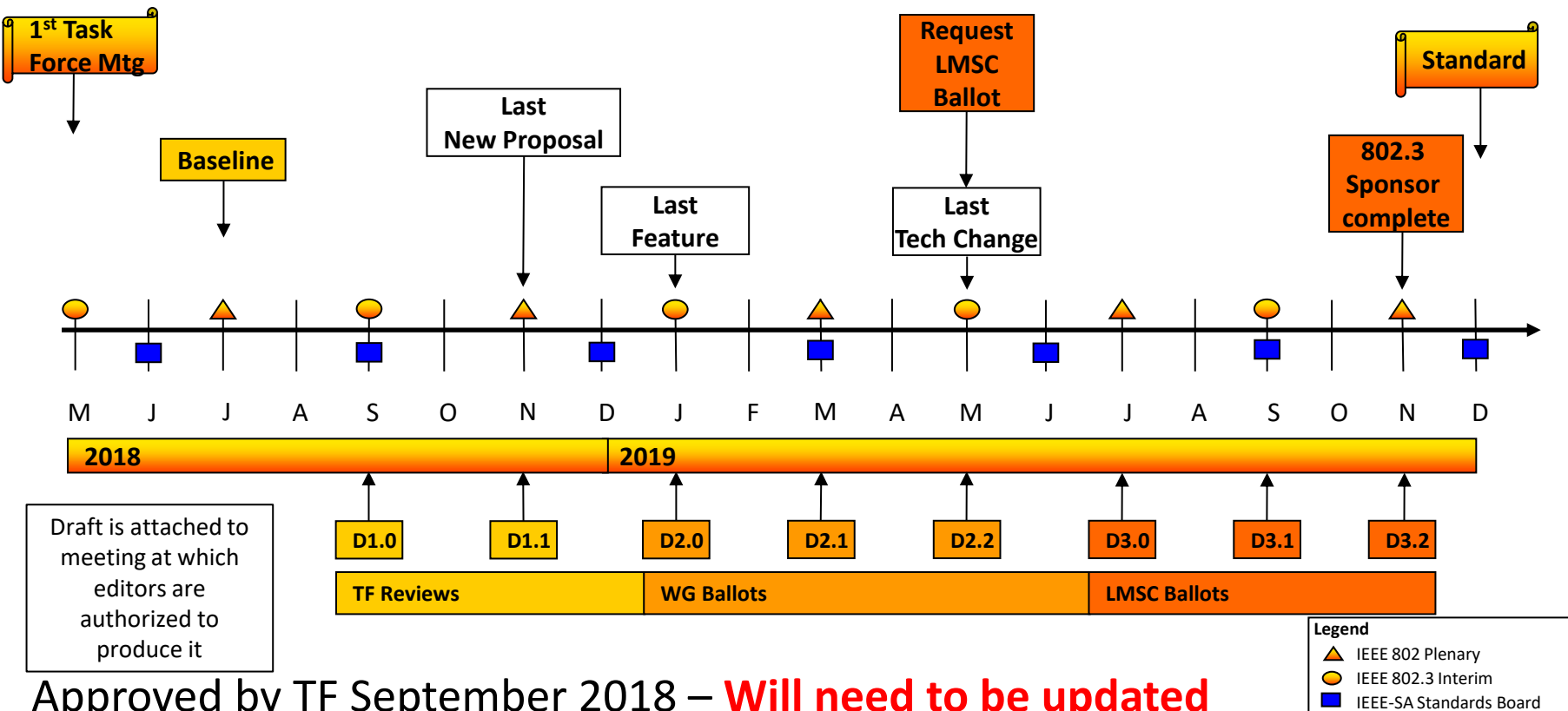
# Overview of IEEE 802.3 Standards Process (5/5) – Final Approvals / Standard Release



**Goal: Complete not later than December 2019**

Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

# IEEE P802.3cm Task Force Adopted Timeline



Draft is attached to meeting at which editors are authorized to produce it

Approved by TF September 2018 – **Will need to be updated**

# Our PAR and Objectives

[http://www.ieee802.org/3/cm/P802\\_3cm\\_PAR\\_140518.pdf](http://www.ieee802.org/3/cm/P802_3cm_PAR_140518.pdf)

Approved PAR for the “400G over MMF Task Force”

- Full title: Standard for Ethernet Amendment Physical Layer and Management Parameters for 400 Gb/s over Multimode Fiber

[http://www.ieee802.org/3/cm/Adopted\\_Objectives\\_NGMMF\\_01\\_08mar18.pdf](http://www.ieee802.org/3/cm/Adopted_Objectives_NGMMF_01_08mar18.pdf)

Specific objectives approved by WG

- Define a physical layer specification that supports 400 Gb/s operation over 8 pairs of MMF with lengths up to at least 100m ***Baseline adopted by TF in May Interim in Pittsburgh***
- Define a physical layer specification that supports 400 Gb/s operation over 4 pairs of MMF with lengths up to at least 100m ***Baseline adopted by TF in July Plenary in San Diego***

# Ad Hoc Report

- <http://www.ieee802.org/3/cm/public/adhoc/index.shtml>
- December 7, 2019: 18 attendees
  - Editors' Update on Draft 1.1. Discussion on Big Ticket items: RMS spectral width for 900 – 918 nm, reducing Tx transition time, modal noise measurements with 25G VCSELs (with feedback on experimental set-up)
- January 10, 2019: 19 attendees
  - Editors' Update on Draft 1.1. Consensus building and discussion for updated contribution on changing RMS spectral width for 900 – 918 nm. Discussion on TDECQ filter bandwidth value. Options for updated TF timeline.



# Goals for today

- Do the work necessary to authorize editors to generate D1.2

## Big Ticket Items

- Draft D1.1
  - Comment resolution, discussion, next steps
    - Modal noise (MN) penalty
    - Mode Partition Noise (MPN) penalty
    - RMS spectral width for 910nm wavelength

# Schedule

All times and order listed are subject to change.

Thursday 1pm -- International I - 2nd floor --> please check online schedule for updates!				
Time	Presenter	Affiliation	Title	File Name
1:00 PM	Robert Lingle, Jr	OFS	Agenda & General Information	<a href="#">agenda_3cm_01_0119.pdf</a>
1:30 PM	Jonathan Ingham	FIT	Editorial report and comment agenda	<a href="#">ingham_3cm_01_0119.pdf</a>
1:45 PM	Comment Resolution			
3:00 PM	Coffee Break			
3:20 PM	Comment Resolution			
	Straw polls & motions			
6:00 PM	Break for the Day			
Friday 9:00 am -- International I - 2nd floor --> please check online schedule for updates!				
Time	Presenter	Affiliation	Title	File Name
9:00 AM	Comment Resolution			
	Straw polls & motions			
Noon	Adjourn			

Thursday, January 17, 1:00 pm-6:00 pm, P802.3cm meeting room: International I – 2nd Floor

Friday, January 18, 08:00 am-12:00 pm, P802.3cm meeting room: International I - 2nd Floor

Check room assignments at <http://schedule.802world.com/schedule2/schedule/show>

# Future Meetings

- See: <http://www.ieee802.org/3/interims/index.html>
- **March 2019**
  - Week of March 11, 2019
  - Fairmont Hotel Vancouver
  - Vancouver, BC Canada
- **May 2019**
  - Week of May 20, 2019
  - Sheraton Salt Lake City Hotel
  - Salt Lake City, UT, USA
- **July 2019**
  - Week of July 15, 2019
  - Austria Congress Centre
  - Vienna, Austria

# Thank You!