

# Agenda and General Information

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

Robert Lingle Jr, Chair  
OFS

Waikoloa, HI, USA, November 13, 2019  
IEEE802 Plenary

# Welcome and introductions

---

- Welcome
- Introductions
  - Name, Employer, Affiliation

# Task force decorum



- An officer is permitted to make an audio or slideshow recording of this meeting exclusively for the purpose of generating minutes which shall not be copied or distributed. **IEEE 802.3 meetings do not use this option.** Recording of the proceedings by any other participant or observer, in part or in whole, via any means, is prohibited. (December 2018 IEEE-SA Standards Board Ops Manual 5.3.3.2)
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2018 IEEE-SA Standards Board Ops Manual 5.3.3.3)
- Cell phone ringers off
- 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

# Agenda

---

- Welcome and Introductions
- Approve Agenda
- Approve September 2019 Minutes
- Goals for this meeting
- Reflector and Web
- Private Area
- Ground Rules
- Attendance
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- P802.3cm Objectives and Schedule
- Plan for this meeting
- Comment resolution
- Motions and Closing Business
- Future Meetings

# Approve agenda

---

- Any modifications, additions or deletions?
- Move to approve the Agenda for Waikoloa Plenary TF meeting, Slide 4 of [http://www.ieee802.org/3/cm/public/November19/agenda\\_3cm\\_01\\_1119.pdf](http://www.ieee802.org/3/cm/public/November19/agenda_3cm_01_1119.pdf)
- Moved by:                   2nd:
- Motion by voice vote (Procedural > 50%)

# Approve September 9<sup>th</sup>, 2019 Minutes

---

- Any modifications, additions, deletions or corrections?
- Move to approve meeting minutes, previously posted, for September 9<sup>th</sup>, 2019 IEEE P802.3cm Task Force meeting during Indianapolis Interim:  
[http://www.ieee802.org/3/cm/public/September19/unapproved\\_meeting\\_minutes\\_3cm\\_01\\_0919.pdf](http://www.ieee802.org/3/cm/public/September19/unapproved_meeting_minutes_3cm_01_0919.pdf)
- Moved by:           2nd:
- Motion by voice vote (Procedural > 50%)

# Goals for the meeting

---

- Comment Resolution on D3.1 comment
- Re-affirm the CSD responses in <https://mentor.ieee.org/802-ec/dcn/18/ec-18-0078-00-ACSD-802-3cm.pdf>
- Prepare for request to proceed to RevCom submittal of D3.1

# Reflector and web

---

- To subscribe to the 400 Gb/s over Multimode Fiber Task Force reflector, send an email to:

[ListServ@ieee.org](mailto:ListServ@ieee.org)

with the following in the body of the message (do not include “<>”):

*subscribe* **STDS-802-3-NGMMF** *<yourfirstname>* *<yourlastname>*  
*end*

- Send 400 Gb/s over Multimode Fiber Task Force reflector messages to:

[STDS-802-2-NGMMF@listserv.ieee.org](mailto:STDS-802-2-NGMMF@listserv.ieee.org)

- Task Force web page URL:

<http://www.ieee802.org/3/cm/>



# Task force private area

---

- URL: <http://www.ieee802.org/3/cm/private/>
  - Username: <<xxxxxxx>> (provided at meeting)
  - Password: <<xxxxxxx>> (provided at meeting)
- Write it down...
- Note - The draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

# Ground rules

---

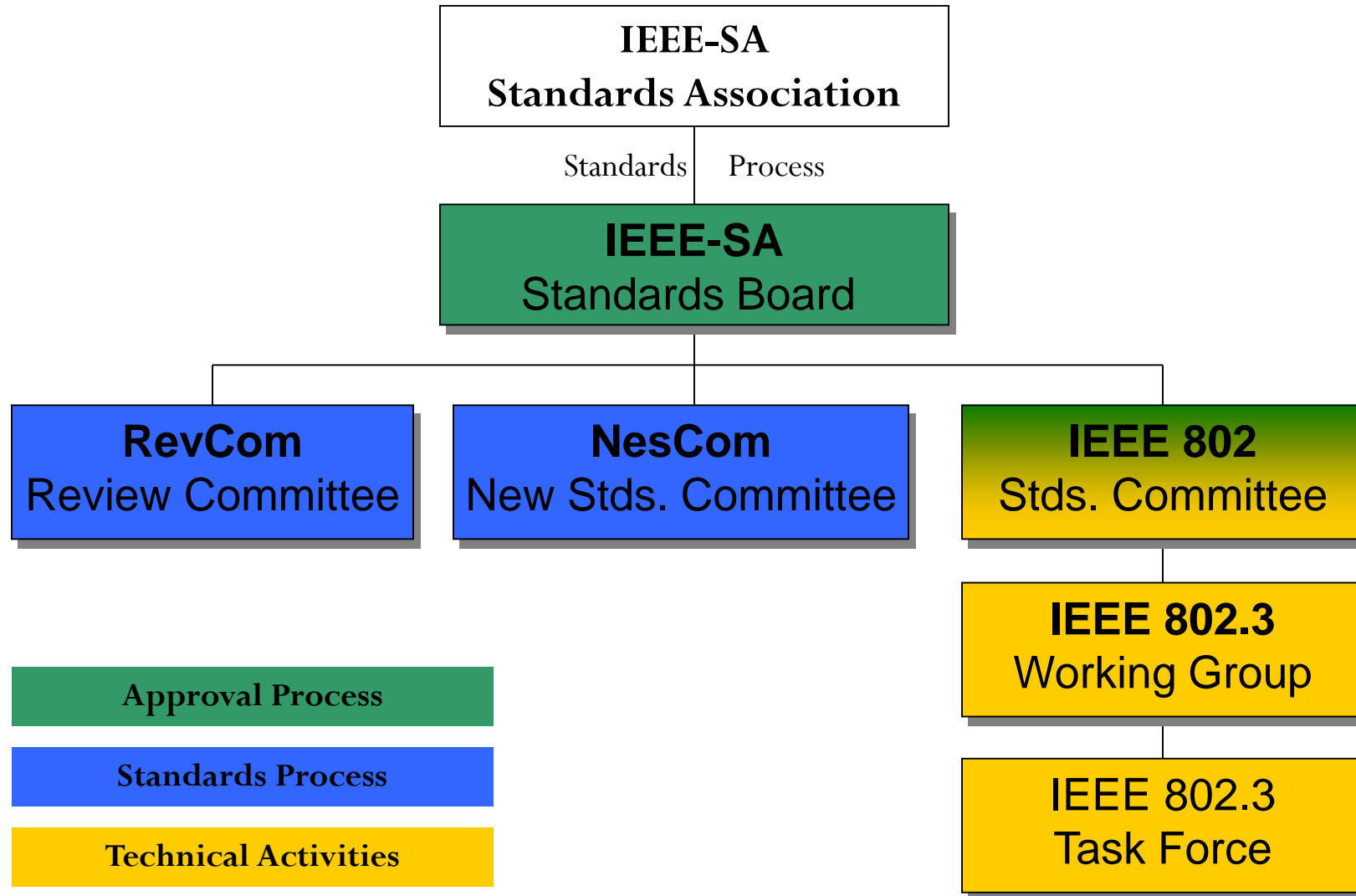
- Based upon IEEE 802.3 Rules
  - Foundation based upon Robert's Rules of Order
  - Anyone in the room may speak
  - Anyone in the room may vote
- **RESPECT**... give it, get it
- NO product pitches
- NO corporate pitches
- NO prices!!!
  - This includes costs, ASPs, etc. no matter what the currency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

# 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/>
- Attendance book
  - Please **ALSO** use the attendance book
  - Keeps track of attendance in room for meeting minutes
  - Used to support requests to verify attendance by chair if IMAT not used

# IEEE structure



# Important bylaws and rules

---

- **IEEE-SA Operations Manual**  
[http://standards.ieee.org/develop/policies/sa\\_opman/](http://standards.ieee.org/develop/policies/sa_opman/)
- **IEEE-SA Standards Board Bylaws**  
<http://standards.ieee.org/develop/policies/bylaws/>
- **IEEE-SA Standards Board Operations Manual**  
<http://standards.ieee.org/develop/policies/opman/>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures**  
<https://ieee.app.box.com/v/PandP-LMSC>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual**  
<http://www.ieee802.org/devdocs.shtml>
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**  
<http://www.ieee802.org/devdocs.shtml>
- **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)

# **Patent Policy: 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**

# Patent Policy: Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA (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

# 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)**



# 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.

-----  
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>

# IEEE SA Copyright Policy

---

**By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.**

- Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.
- Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.
- For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.

# IEEE SA Copyright Policy

---

- The IEEE SA Copyright Policy is described in the IEEE SA Standards Board Bylaws and IEEE SA Standards Board Operations Manual
  - IEEE SA Copyright Policy, see
    - Clause 7 of the IEEE SA Standards Board Bylaws  
<https://standards.ieee.org/about/policies/bylaws/sect6-7.html#7>
    - Clause 6.1 of the IEEE SA Standards Board Operations Manual  
<https://standards.ieee.org/about/policies/opman/sect6.html>
- IEEE SA Copyright Permission
  - <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/permissionltrs.zip>
- IEEE SA Copyright FAQs
  - <http://standards.ieee.org/faqs/copyrights.html/>
- IEEE SA Best Practices for IEEE Standards Development
  - [http://standards.ieee.org/develop/policies/best\\_practices\\_for\\_ieee\\_standards\\_development\\_051215.pdf](http://standards.ieee.org/develop/policies/best_practices_for_ieee_standards_development_051215.pdf)
- Distribution of Draft Standards (see 6.1.3 of the SASB Operations Manual)
  - <https://standards.ieee.org/about/policies/opman/sect6.html>

# Participant behaviour in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

---

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - [IEEE Code of Ethics](#)
  - [IEEE Code of Conduct](#)
- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*
- The most recent versions of these Codes are available at <http://www.ieee.org/about/corporate/governance>

# Participants in the IEEE-SA “*individual process*” shall act independently of others, including employers

---

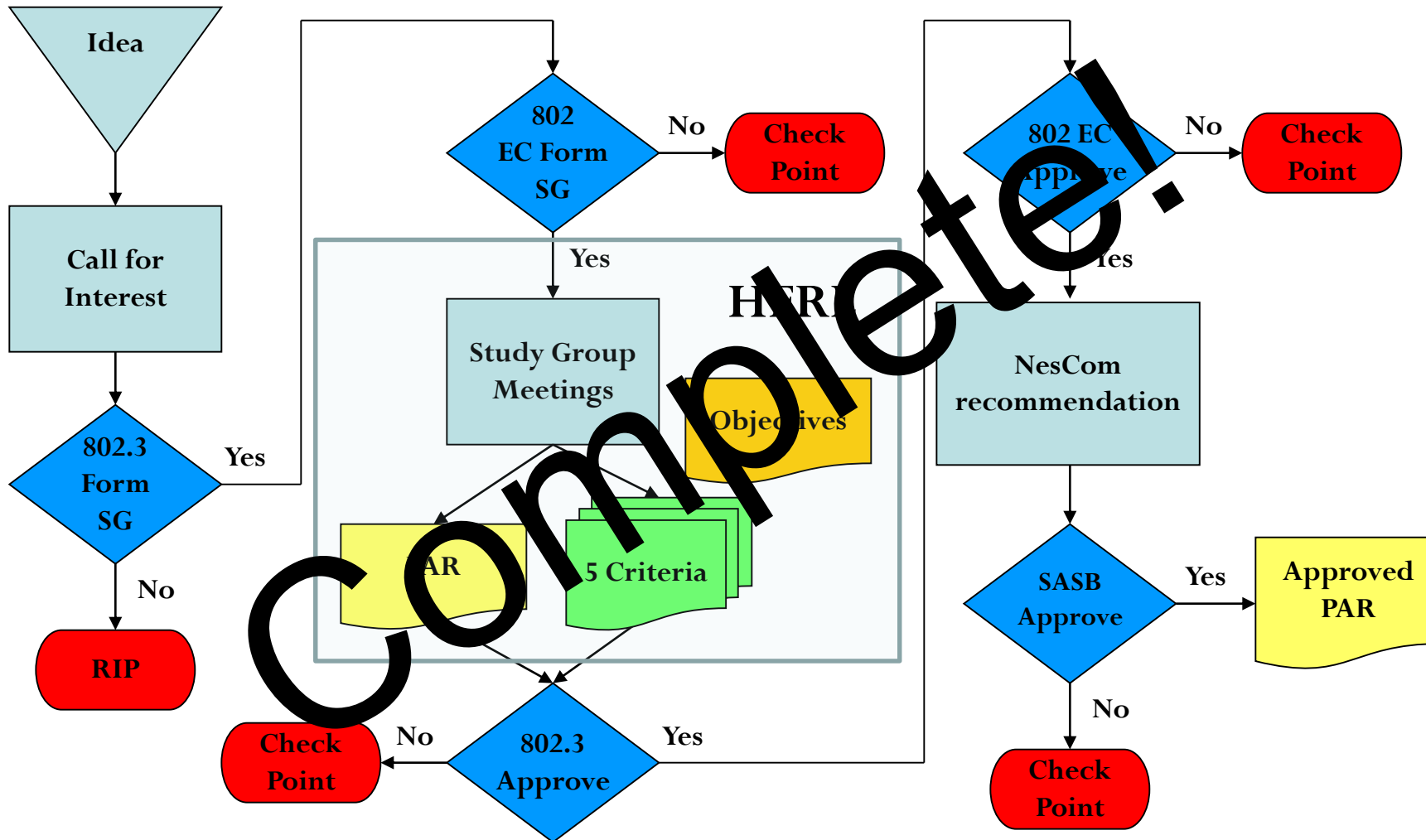
- The [IEEE-SA Standards Board Bylaws](#) require that “*participants in the IEEE standards development individual process shall act based on their qualifications and experience*”
- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- By participating in standards activities using the “*individual process*”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

# IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

---

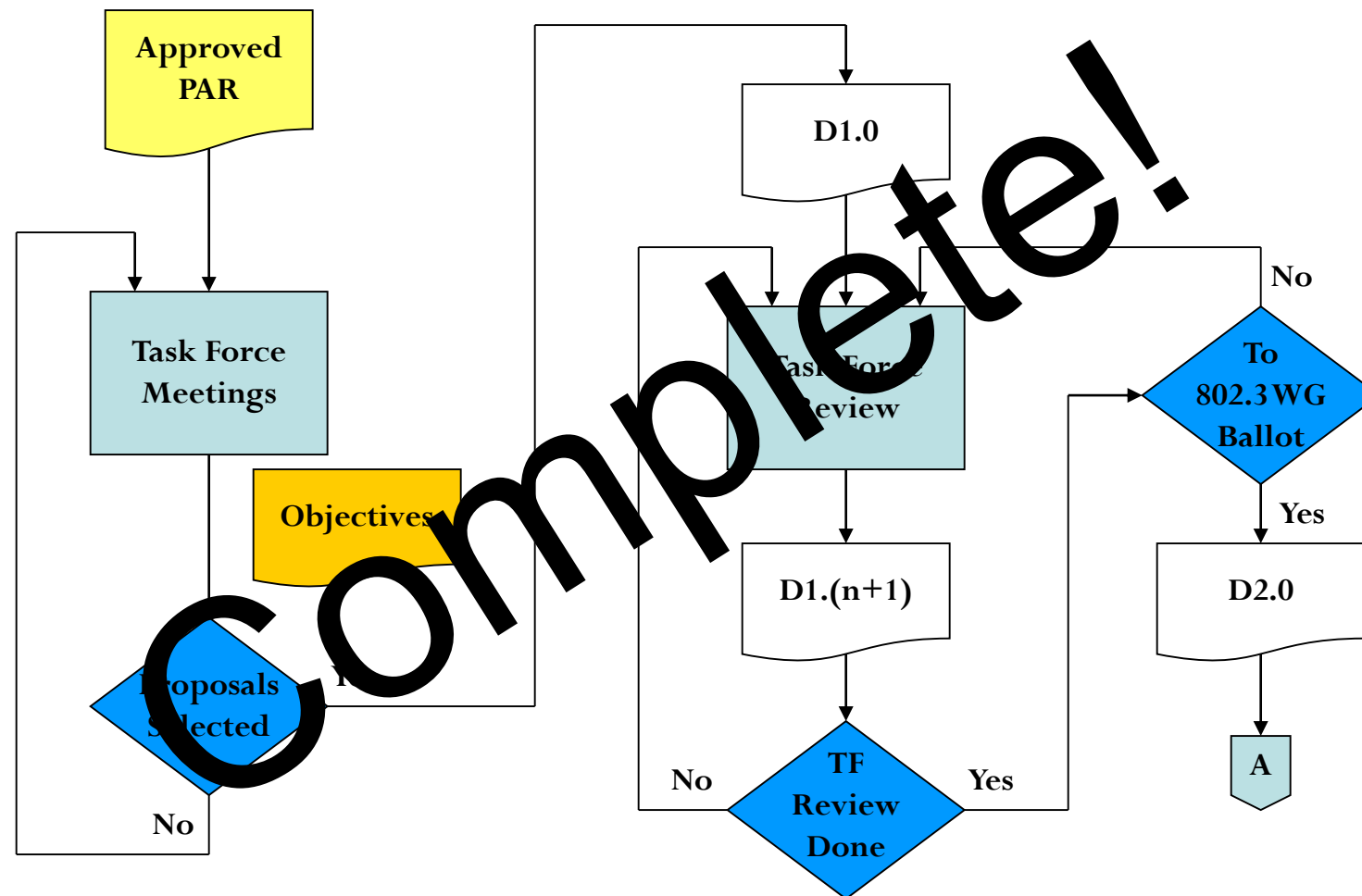
- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that “*the standards development process shall not be dominated by any single interest category, individual, or organization*”
  - This means no participant may exercise “*authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints*” or “*to hinder the progress of the standards development activity*”
- This rule applies equally to those participating in a standards development project and to that project’s leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project’s IEEE-SA Program Manager

# 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.

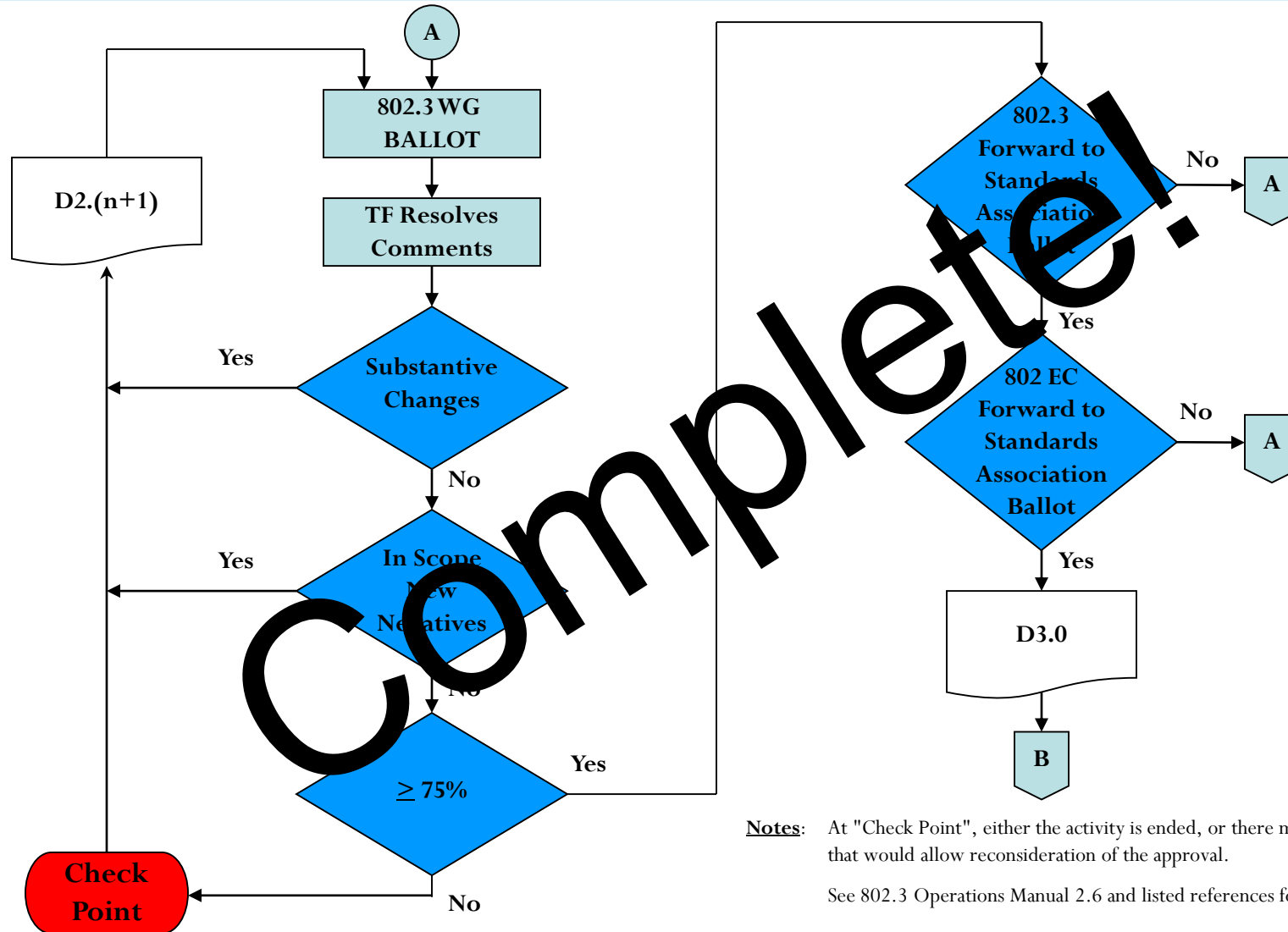
# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase



Complete!

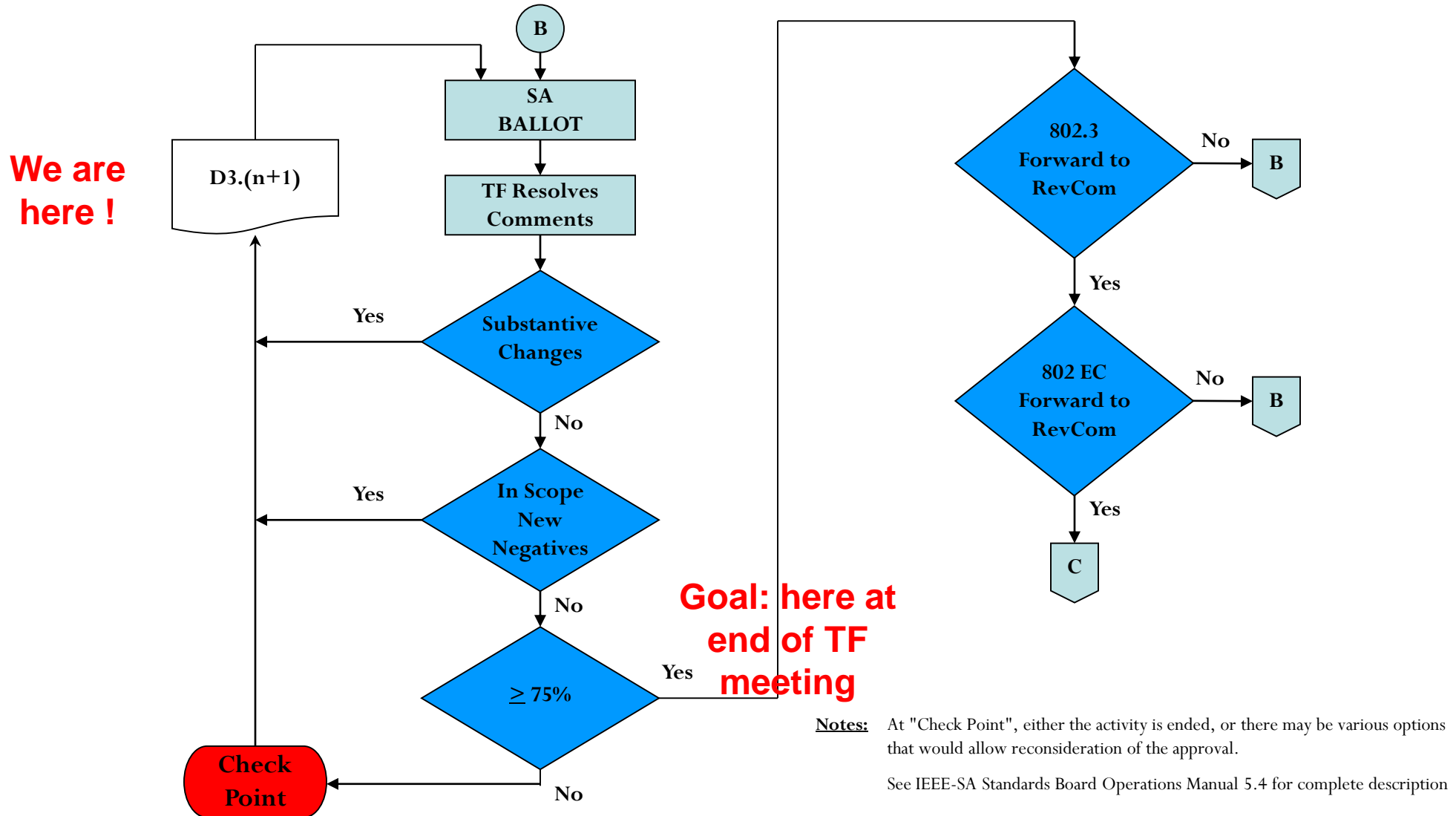


# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase

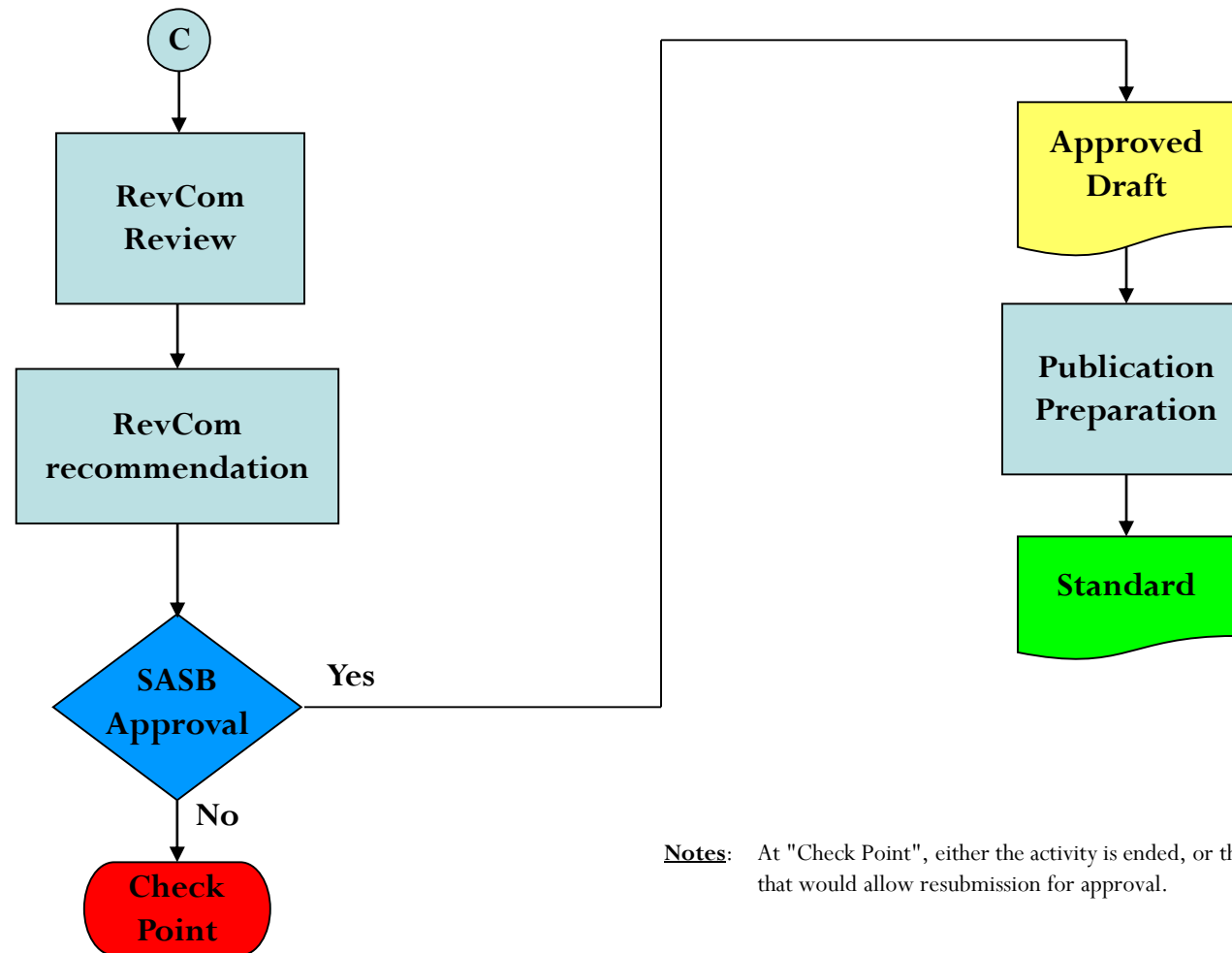


**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.  
See 802.3 Operations Manual 2.6 and listed references for complete description

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



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



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

**Goal: Complete  
not later than  
January 2020  
(since SASB will  
not meet in  
December 2019)**

# IEEE P802.3cm 400 Gb/s over Multimode Fiber Task Force Approved Project Documents

---

- PAR

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

- CSD

- <https://mentor.ieee.org/802-ec/dcn/18/ec-18-0078-00-ACSD-802-3cm.pdf>

- Objectives

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

# IEEE P802.3cm 400 Gb/s over Multimode Fiber Task Force Objectives (1 of 1)

---

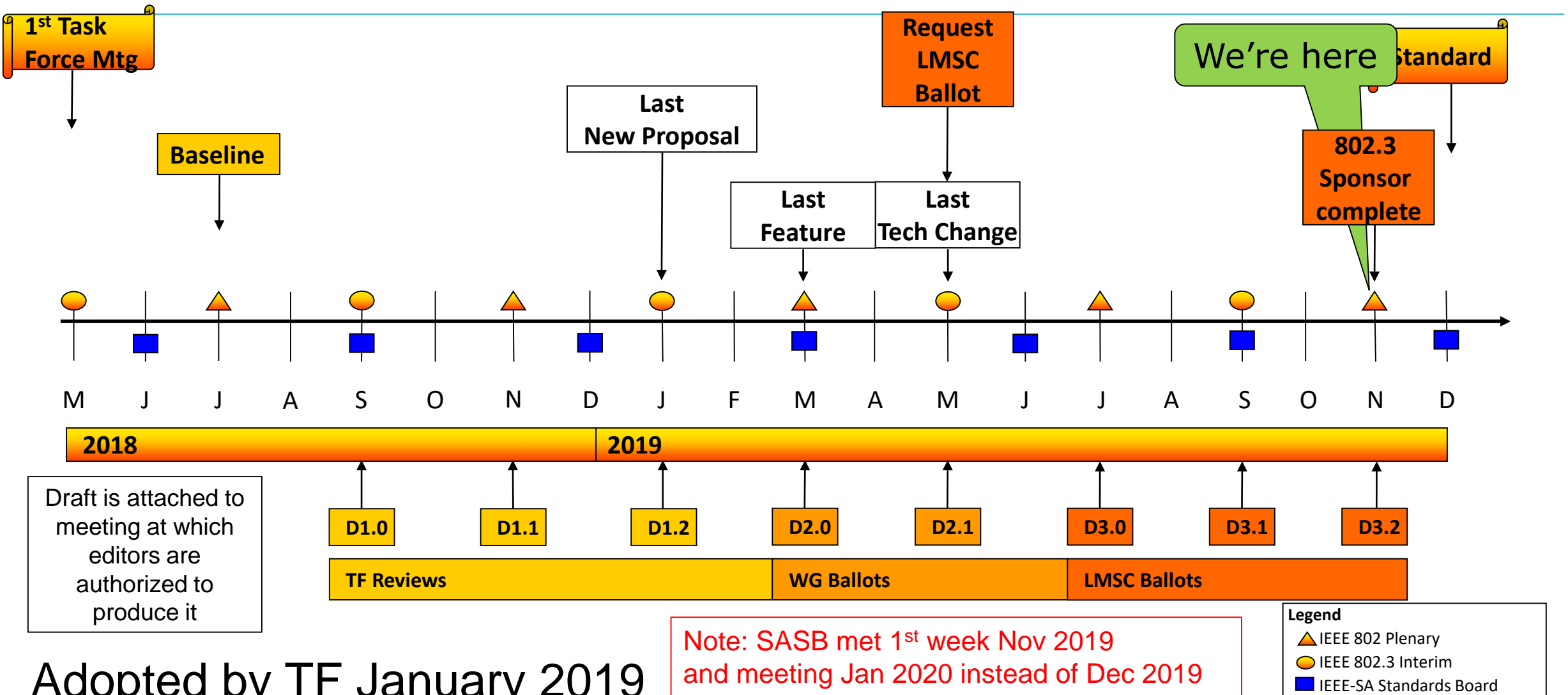
1. Support full-duplex operation only
2. Preserve the Ethernet frame format utilizing the Ethernet MAC
3. Preserve the minimum and Maximum FrameSize of current Ethernet standard
4. Provide appropriate support for OTN
5. Specify optional Energy Efficient Ethernet (EEE) capability
6. Support a BER of better than or equal to  $10^{-13}$  at the MAC/PLS service interface (or the frame loss ratio equivalent)
7. Support a MAC data rate of 400 Gb/s

# IEEE P802.3cm 400 Gb/s over Multimode Fiber Task Force Objectives (1 of 2)

---

8. Define a physical layer specification that supports 400 Gb/s operation over 8 pairs of MMF with lengths up to at least 100m
9. Define a physical layer specification that supports 400 Gb/s operation over 4 pairs of MMF with lengths up to at least 100m

# IEEE P802.3cm Task Force Timeline



# IEEE P802.3cm Standards Association D3.1 ballot results

- Item 1 - Date the ballot closed:
  - 1<sup>st</sup> recirculation Standards Association ballot on the Amendment IEEE P802.3cm 400 Gb/s over Multimode Fiber closed successfully on 11th October 2019 23:59 AOE.

- Item 2 - Vote tally:

Comments: 1	1 <sup>st</sup> recirculation SA ballot Draft D3.1			Req %
	#	%	Status	
Abstain	3	3	PASS	< 30
Disapprove with comment	2	-	-	-
Disapprove without comment	0	-	-	-
Approve	91	97	PASS	≥ 75
Ballots returned	96	93	PASS	≥ 75
Voters	103	-	-	-



# Presentations

---

- “Agenda and General Information”: [agenda\\_3cm\\_01\\_1119](#)
- “Editorial report and comment agenda”: [ingham\\_3cm\\_01\\_1119](#)

Note –Times listed are subject to change.

# Schedule for November 13

Wednesday November 13: Hilton Waikoloa Village, Kona 1 --> please check online schedule for updates!				September Interim Meeting
Time	Presenter	Affiliation	Title	File Name
1:00 PM	Robert Lingle, Jr	OFS	Agenda & General Information	<a href="#">agenda_3cm_01_1119.pdf</a>
1:30 PM	Jonathan Ingham	FIT	Editorial report and comment agenda	<a href="#">ingham_3cm_01_1119.pdf</a>
2:00 PM	Comment Resolution			
4:30 PM	Straw polls & motions			
5:00 PM	Break/Adjourn for day			

Note –Times listed are subject to change. Please check link below for latest schedule and room assignments

<http://schedule.802world.com/schedule/schedule/show>

# Future meetings

---

- See: <http://www.ieee802.org/3/interims/index.html>
- January 2020 Interim
  - ITU Headquarters, Geneva, CH
  - January 20-24, 2020
- March 2020 Plenary
  - Hilton Atlanta, Atlanta, GA USA
  - March 16-19, 2020
- May 2020 Interim
  - The Westin Pasadena, Pasadena, CA, USA
  - Week of May 18, 2020
- Anyone interested in hosting an interim meeting contact me or the IEEE 802.3 Executive Secretary [Steve Carlson](#).

---

# Thank You!