

---

# Agenda and General Information

IEEE 802.3

Multi-Gigabit Automotive Optical PHYs Study Group

Robert M. (Bob) Grow

RMG Consulting / KDPOF

Waikoloa, Hawaii, USA, 12 November 2019

# Agenda

---

- Welcome and Introductions
- Approve Agenda
- Approve September 2019 Minutes
- Goals for this meeting
- Big Ticket Items
- Reflector and Web
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Liaisons and Communications
- Review of Action Items from September 2019 Meeting
- Presentations
- Motions and Closing Business
- Future Meetings

# Study Group 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. (January 2019 IEEE-SA Standards Board Ops Manual 5.3.3.2)
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (January 2019 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



# Goals for the meeting

---

- Create drafts of PAR, CSD, and Objectives
- Lay the ground work for the next meeting



# Big ticket items

---

- Hybrid (optical/electrical) links
- PAR, CSD, and Objectives

# Reflector and Web

---

- To subscribe to the Multi-Gigabit Automotive Optical PHYs 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-OMEGA <yourfirstname> <yourlastname>  
end
```

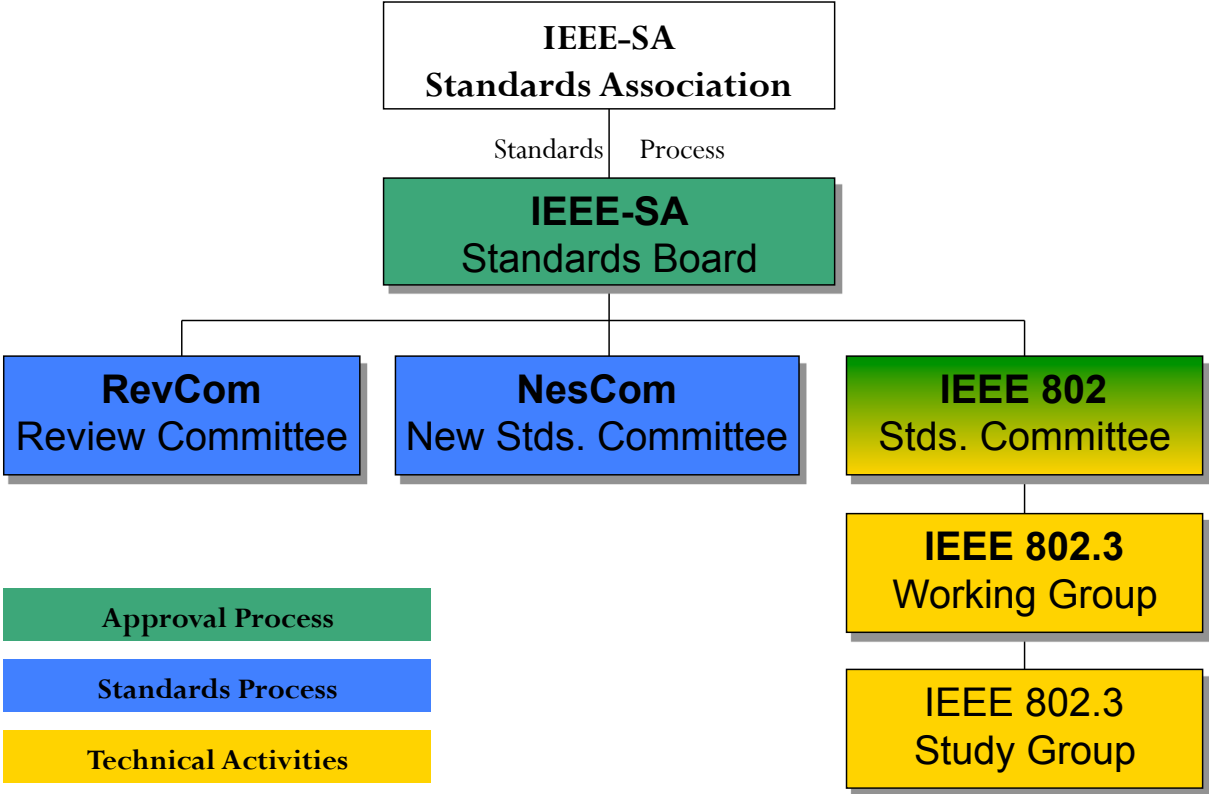
- Send Multi-Gigabit Automotive Optical PHYs reflector messages to:  
[stds-802-3-omega@listserv.ieee.org](mailto:stds-802-3-omega@listserv.ieee.org)
- Study Group web page URL:  
<http://www.ieee802.org/3/OMEGA/index.html>

# 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

# 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)

# Guidelines for IEEE-SA 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, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.
    - Technical considerations remain 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.**

-----  
If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at [patcom@ieee.org](mailto:patcom@ieee.org) or visit <http://standards.ieee.org/about/sasb/patcom/index.html>

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

This slide set is available  
at <https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.ppt>

March 2015  
IEEE-SA Standards Board Patent Committee

# **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 behavior 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

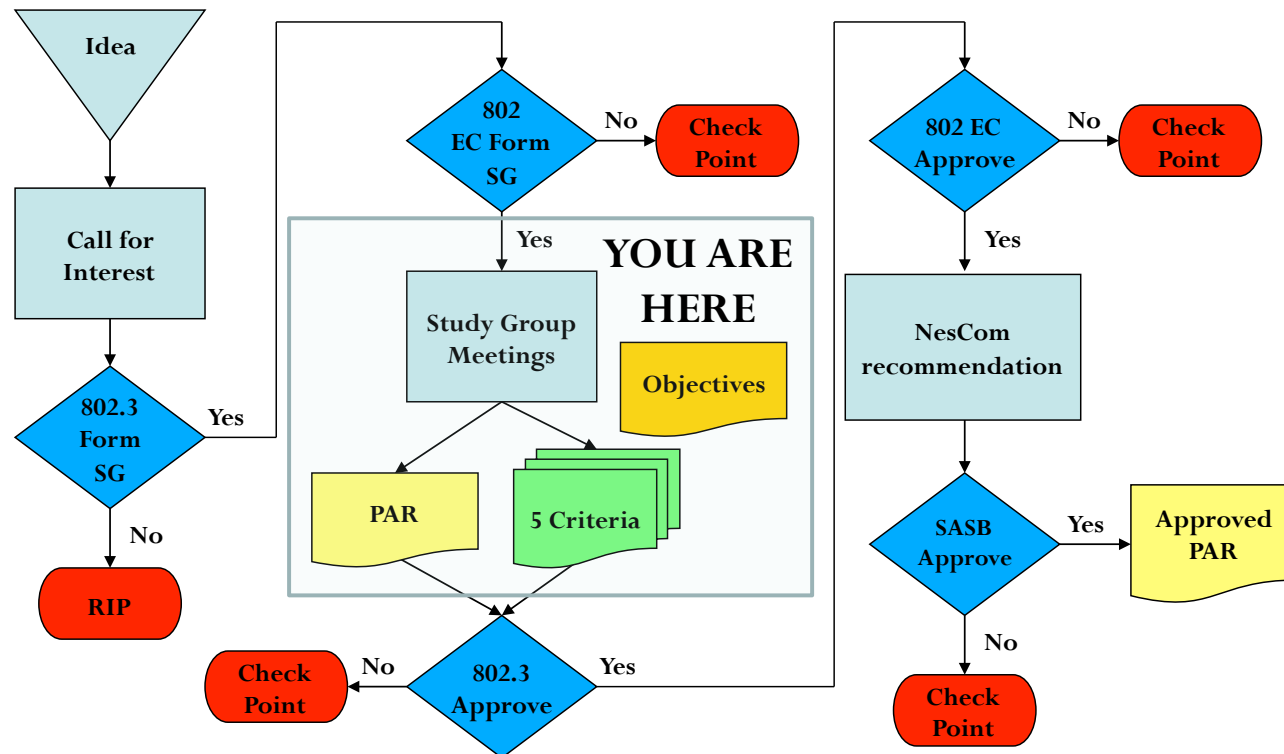
The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that “*the standards development process shall not be dominated by any single interest category, individual, or organization*”

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

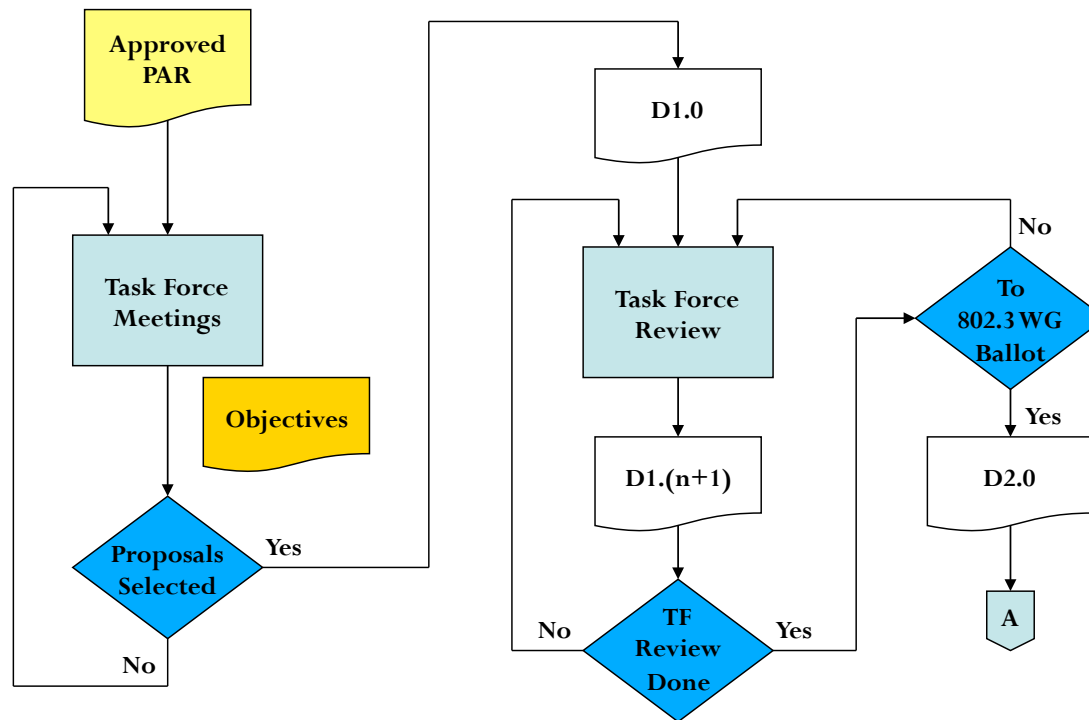
# Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase



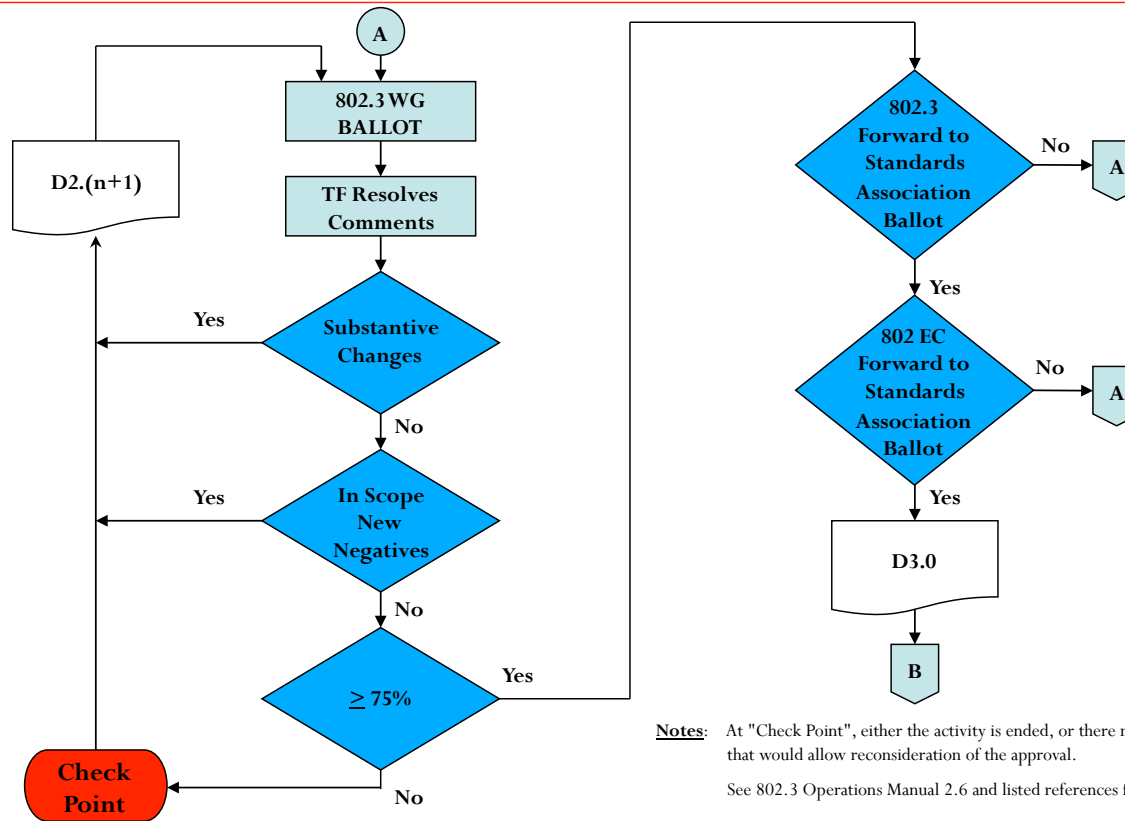
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.



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

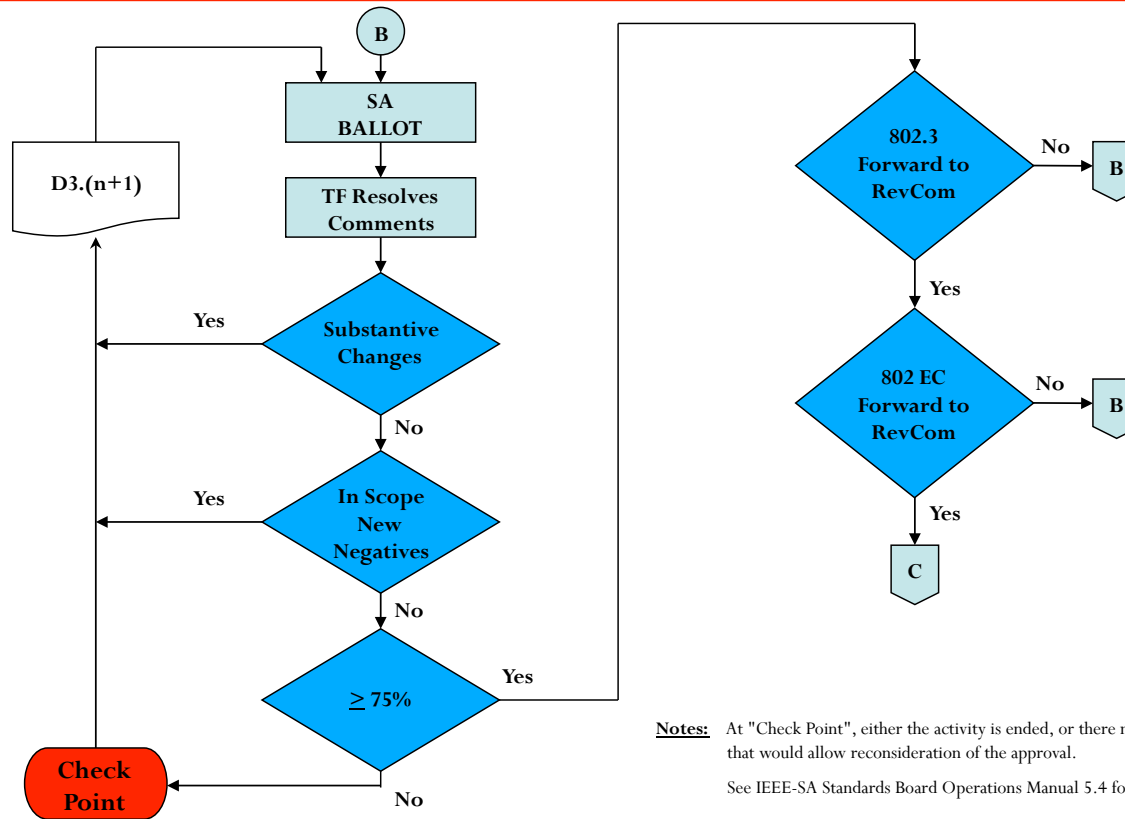


# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase

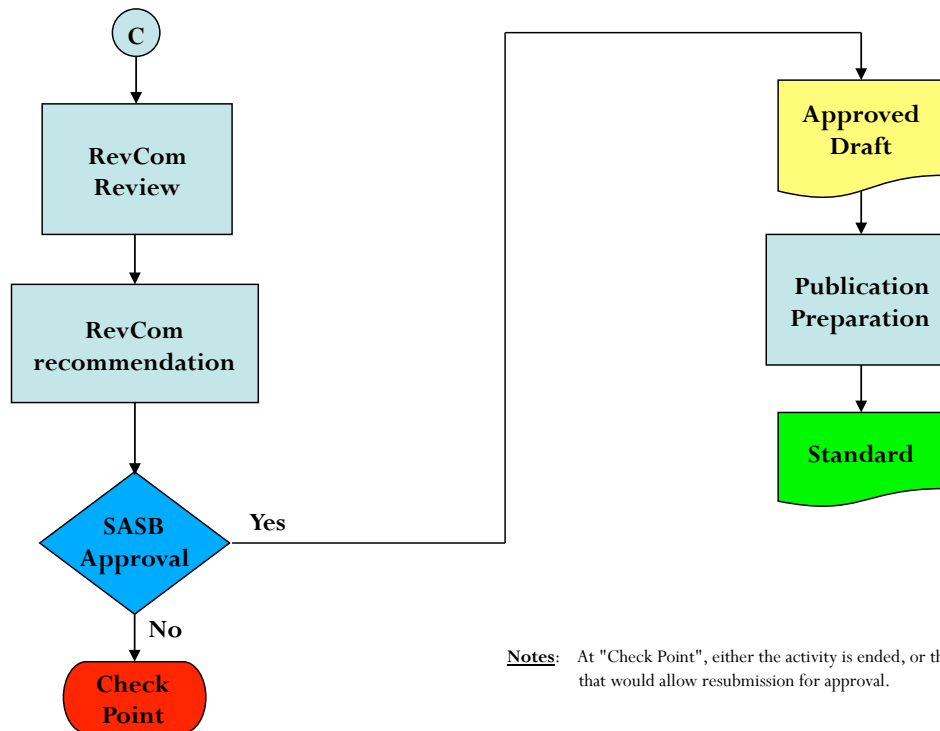


**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.  
See 802.3 Operations Manual 2.6 and listed references for complete description

# 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



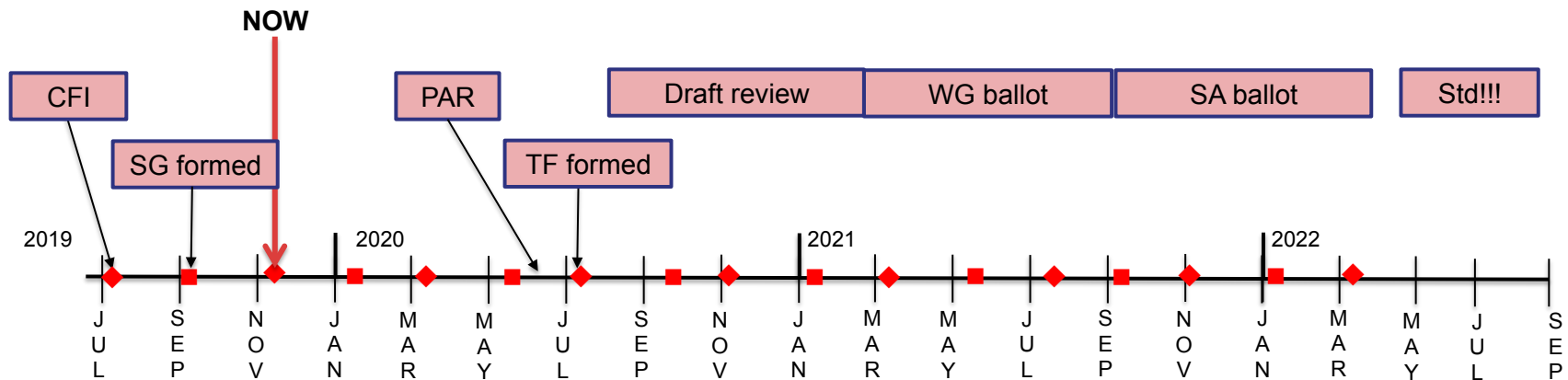
**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow resubmission for approval.

# The Study Group

---


- Normal function is to draft a complete PAR and Five Criteria
- Optionally provide a plenary week tutorial to the LMSC.
- Gain approval at the IEEE 802.3 WG, IEEE 802 EC, IEEE-SA NesCom and IEEE-SA Standards Board.
- SG only exists for 6 months
  - Extensions can be requested
  - Voted on by IEEE 802.3
  - Ratified by IEEE 802 EC
- Development of Objectives helps set the goals for the Task Force
- Consensus required to move forward
  
- Not a study group goal – choosing a solution.

# Major timeline benchmarks



- If PAR and CSD are ready for consideration at the March 802 meeting, SASB consideration based on current NesCom/SASB calendar would be in June, with the TF being organized at the July 802 meeting. If early consideration is scheduled for April, PAR and TF formed dates might move earlier.

\*\* Once we get to TF, we will want to adopt a timeline with target draft review/ballot dates.



## Request for Formation of Study Group (per July 2019 Plenary Motion, amended Sep/Oct 2019)

---

Move that the IEEE 802.3 Working Group request the formation of a Study Group to develop the Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for Multi Gigabit Automotive Optical PHYs.

# Liaisons and Communications

---

- None





# Action Items

---

- None

# 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/>

# Presentations

<b>Title</b>	<b>Presenter(s)/Author(s)</b>	<b>Affiliation(s)</b>
GaAs 14G VCSEL characterization for automotive applications	Ruben Perez Aranda	KDPOF
InGaAs 25G VCSEL characterization for automotive applications	Ruben Perez Aranda	KDPOF
VCSEL Simulation model	Ruben Perez Aranda	KDPOF
Introduction of SI Photonics transceiver technology with High temperature operation capability and MMF transmission	Ichiro Ogura Kazuhiko Kurata	PETRA AIO Core
Evaluation of the Link Loss Budget of the POF	Kazuya Takayama	Nitto
Link budget analysis for technical feasibility assesment	Ruben Perez Aranda	KDPOF
Glass Optical Fibers for Automotive	John Earnhardt Mabud Choudhury	OFS OFS
Technical Feasibility - EEE for Asymmetry	George Zimmerman	CME Consulting, Inc / Marvell
Fiber Components for Optical Automotive	Steve Swanson	Corning
VCSEL reliability analysis for technical feasibility assessment	Ruben Perez Aranda	KDPOF
Draft Objectives OMEGA	Carlos Pardo	KDPOF
Major PAR fields	Bob Grow	RMG Consulting/KDPOF
Draft CSD	Carlos Pardo	KDPOF



# Motions

---

# Future Meetings

---

- See: <http://www.ieee802.org/3/interims/index.html>
- January 20, 2020 Interim meeting week
  - ITU Headquarters, Geneva, Switzerland
- March 16-19, 2020 Plenary Meeting
  - Atlanta, Georgia, USA
- May 18, 2020 interim meeting week
  - Pasadena, California, USA
- July 13-16, 2020 Plenary Meeting
  - West Montreal, Quebec, Canada
- Anyone interested in hosting an interim meeting contact SG Chair, or the IEEE 802.3 Executive Secretary [Steve Carlson](#).

## Meeting polls

---

- I will attend the January Geneva, Switzerland meeting

Y: 11, N: 12, M: 8

- I will attend the March Atlanta, Georgia, USA meeting

Y: 21, N: 2, M:13



---

# Thank You!