

# Agenda and General Information

IEEE P802.3ch Multi-Gigabit Automotive Ethernet PHY  
Task Force

Steve Carlson, Chair

High Speed Design, Inc., Robert Bosch, Marvell  
Waikoloa, HI, USA  
November 15, 2019

# Agenda

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- Jon Lewis – Recording Secretary
- Welcome and Introductions
- Approve Agenda
- Approve meeting minutes from September, October telecon and ad hoc calls
- 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
- Monday - Opening business, Editor's report, preparation for IEEE SA ballot
- Tuesday- Wednesday – Move to B10GAUTO SG
- Future Meetings

# 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. (June 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 (June 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

# Goals for the meeting

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- Review Task Force Operation and IEEE Process
- Create D3.0 for initial IEEE SA ballot and reaffirm CSD
- Plan for WG comment resolution in January
- Stay on our timeline!

# Big ticket items

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- Progress the draft to D3.0 and IEEE SA initial ballot

# Reflector and Web

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- To subscribe to the Multi-Gigabit Automotive Ethernet PHY 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-NGAUTO <yourfirstname> <yourlastname>  
end
```

- Send Multi-Gigabit Automotive Ethernet PHY reflector messages to:  
[STDS-802-3-NGAUTO@listserv.ieee.org](mailto:STDS-802-3-NGAUTO@listserv.ieee.org)
- Task Force web page URL:  
<http://www.ieee802.org/3/ch/index.html>

# Task Force Private Area

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URL: <http://www.ieee802.org/3/ch/private/index.html>

- Username: 802.3ch
- Password: \*\*\*\*\*
- 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

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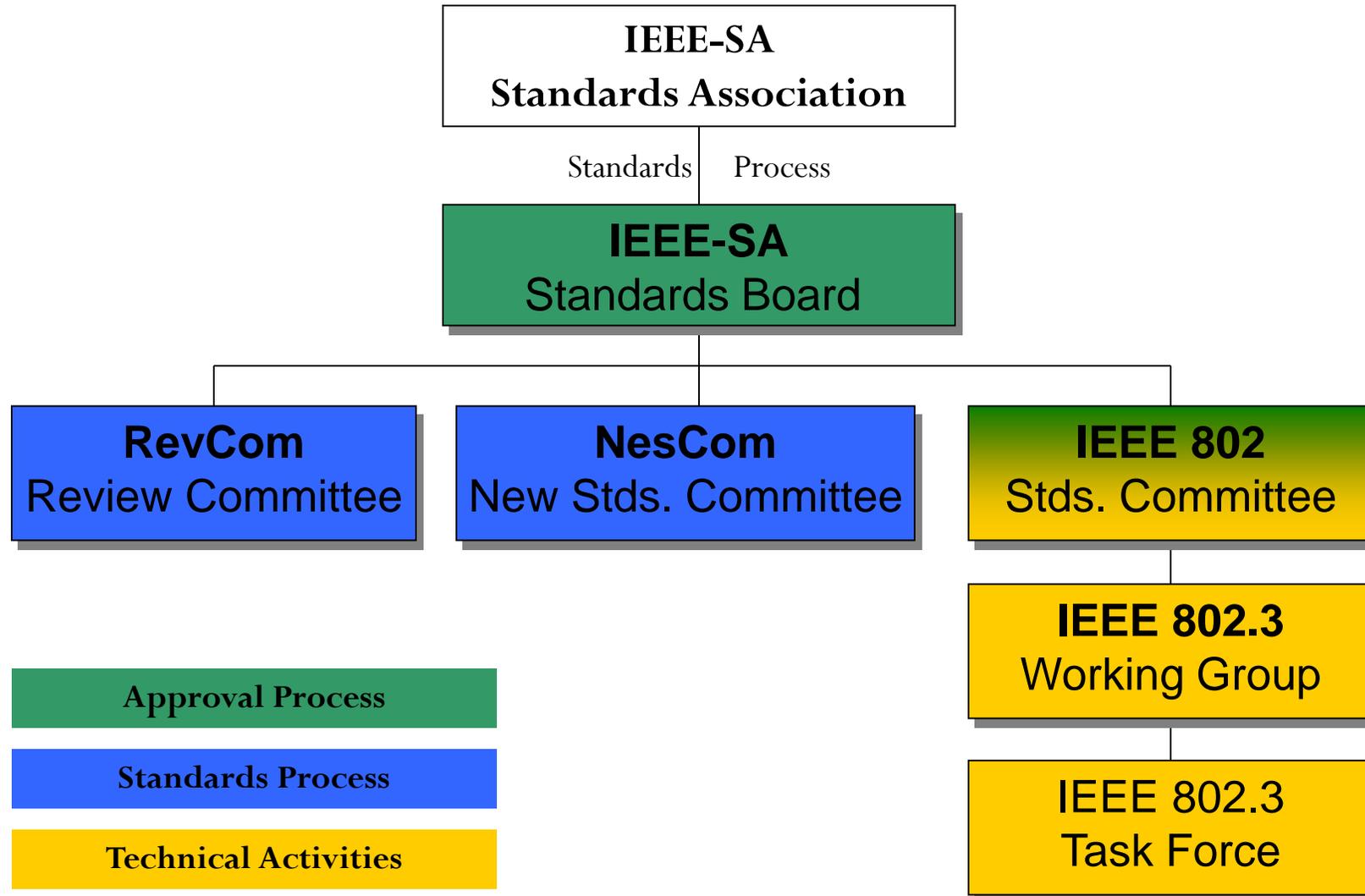
- Based upon IEEE 802.3 Rules
  - Foundation based upon Robert's Rules of Order
  - Anyone in the room may speak
  - Anyone in the room may vote
- **RESPECT**... give it, get it
- NO product pitches
- NO corporate pitches
- NO prices!!!
  - This includes costs, ASPs, etc. no matter what the currency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

# Attendance

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- 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/>
  - Session access code: \_\_\_\_\_
  - Please sign the paper attendance sheet

# IEEE Structure



# Important Bylaws and Rules

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- **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)

# 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); 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 SA COPYRIGHT POLICY

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**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

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- 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>

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## 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>

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

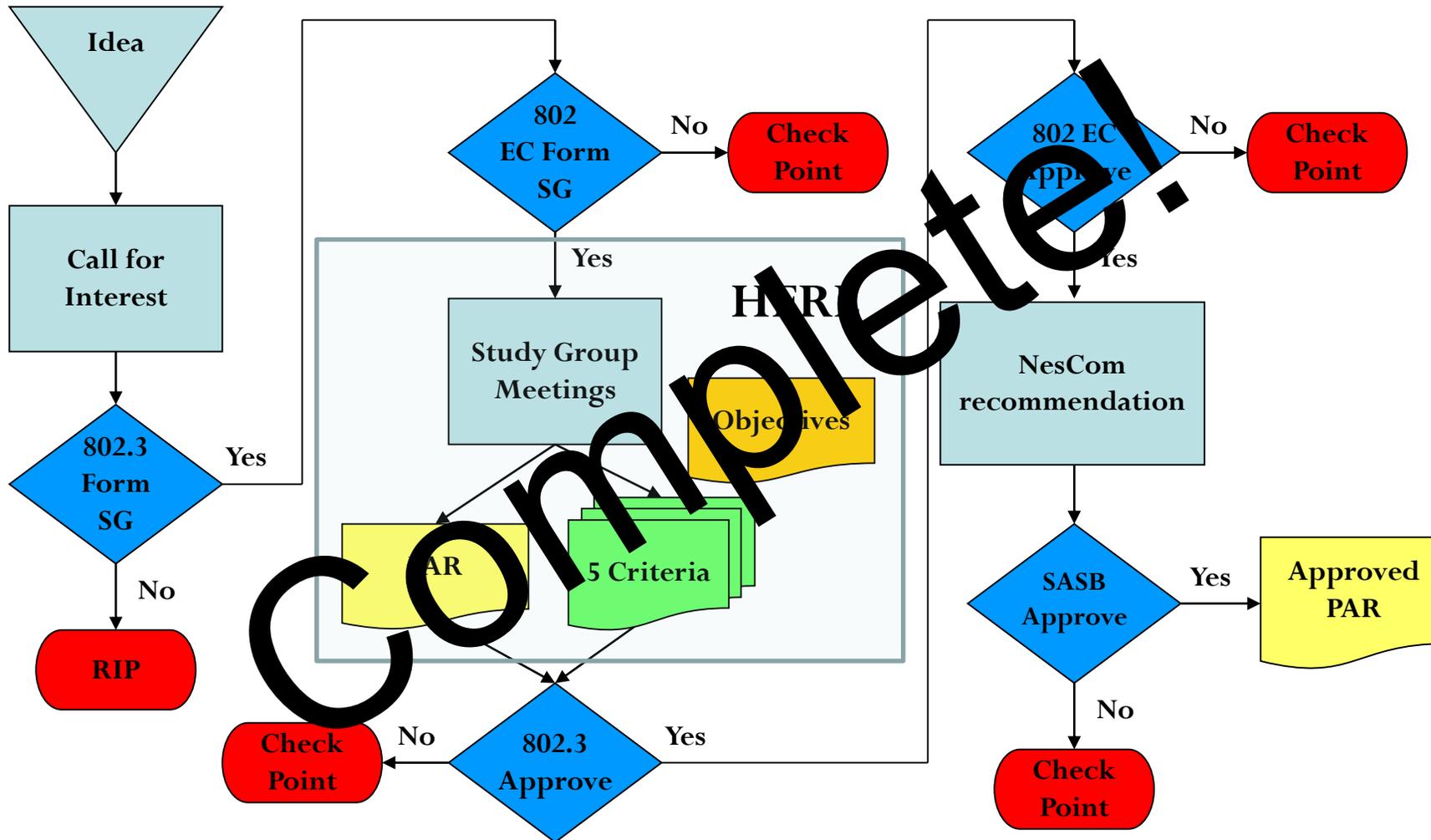
- The [IEEE-SA Standards Board Bylaws](#) require that “*participants in the IEEE standards development individual process shall act based on their qualifications and experience*”
- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, 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

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

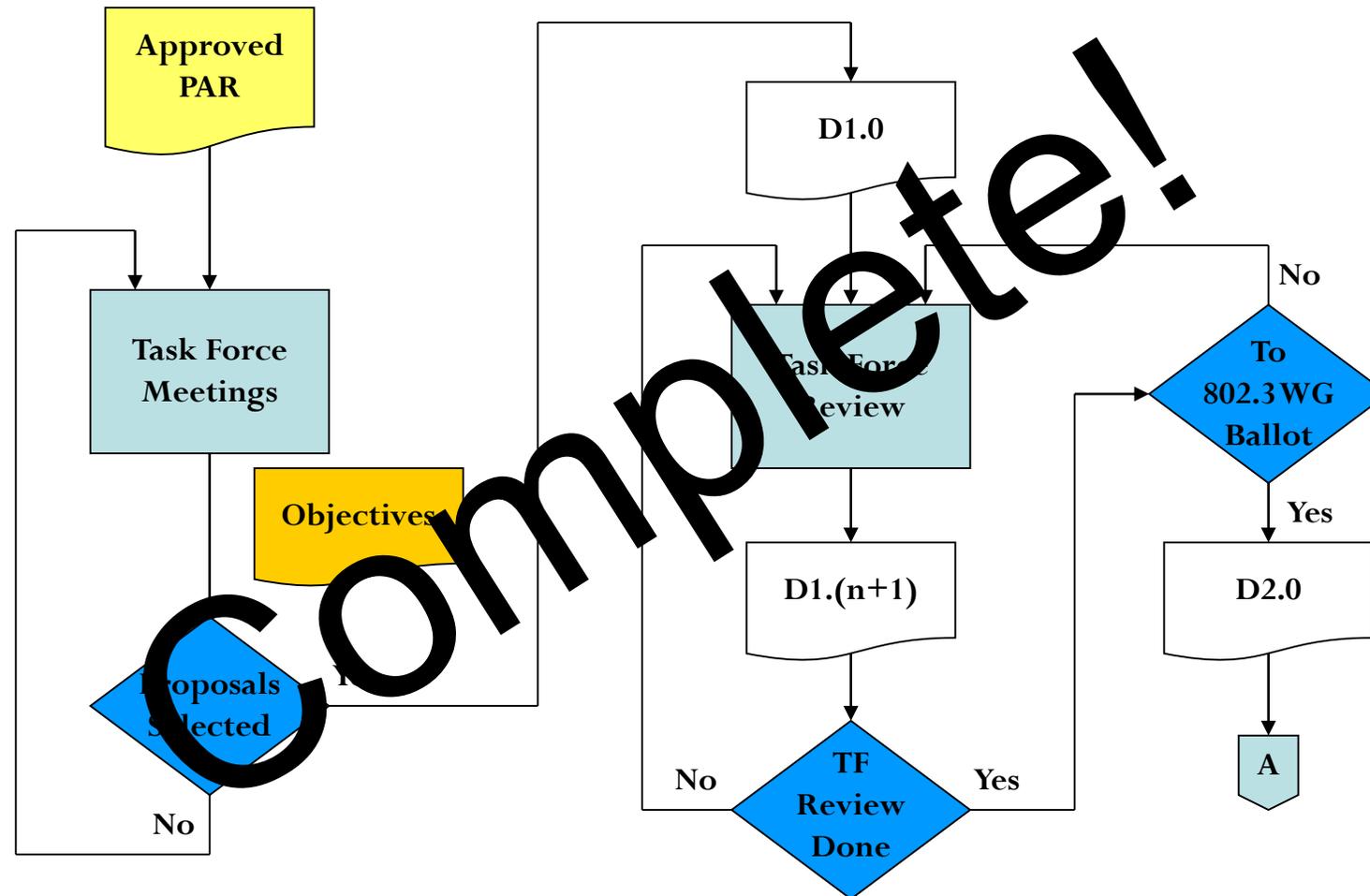
- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that “*the standards development process shall not be dominated by any single interest category, individual, or organization*”
  - This means no participant may exercise “*authority, leadership, or influence by reason of superior leverage, 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



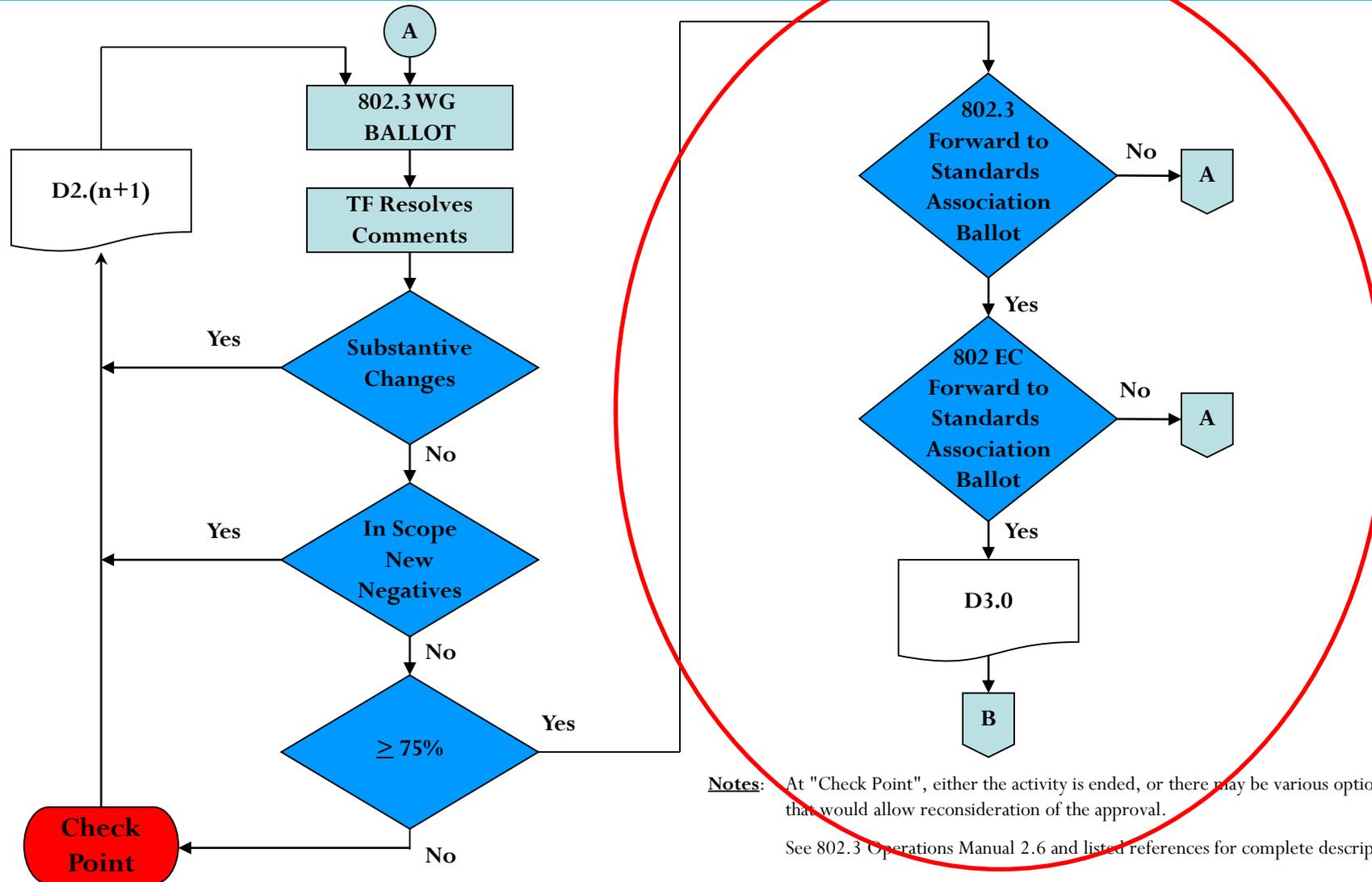
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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

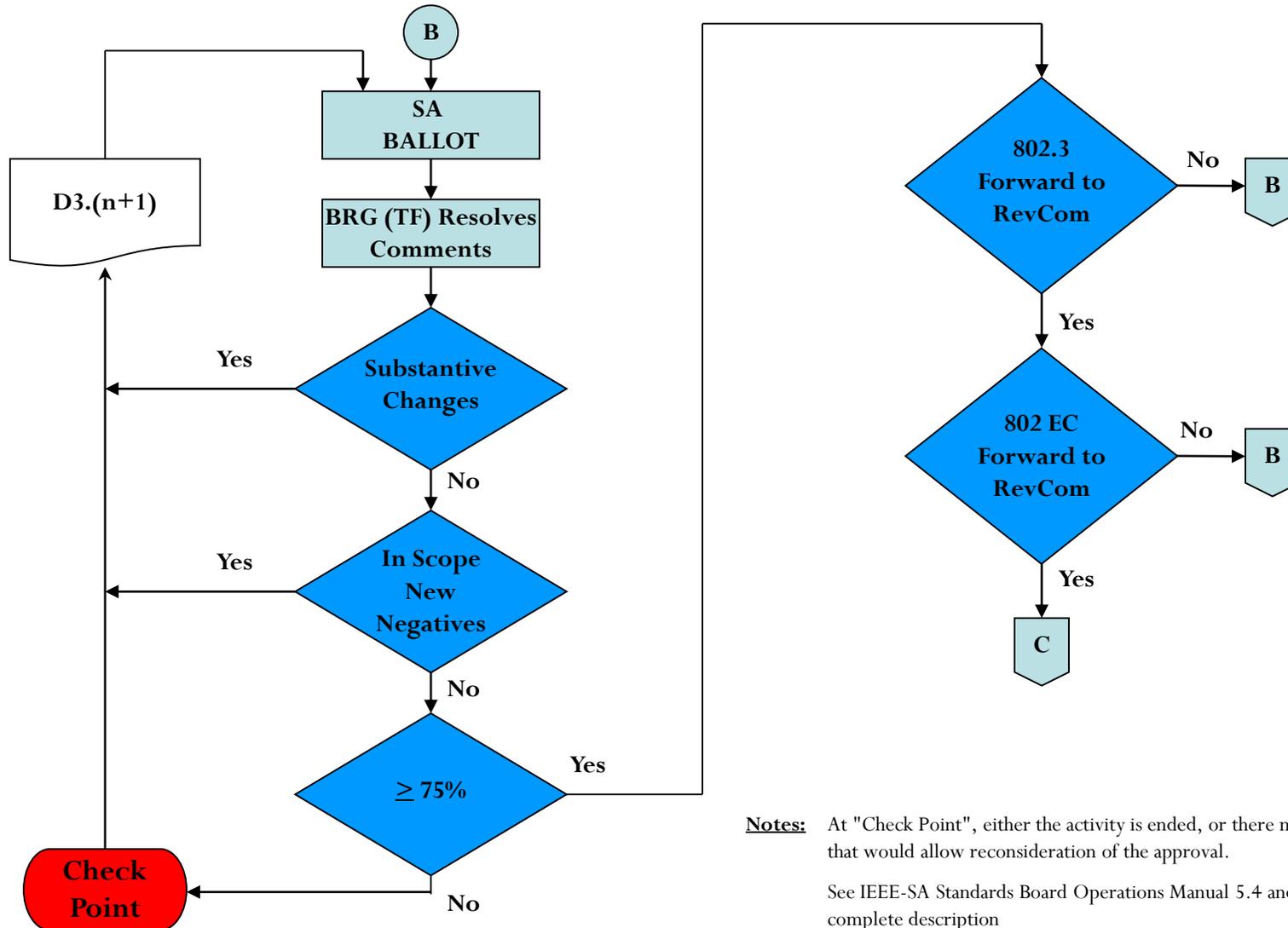


Complete!

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

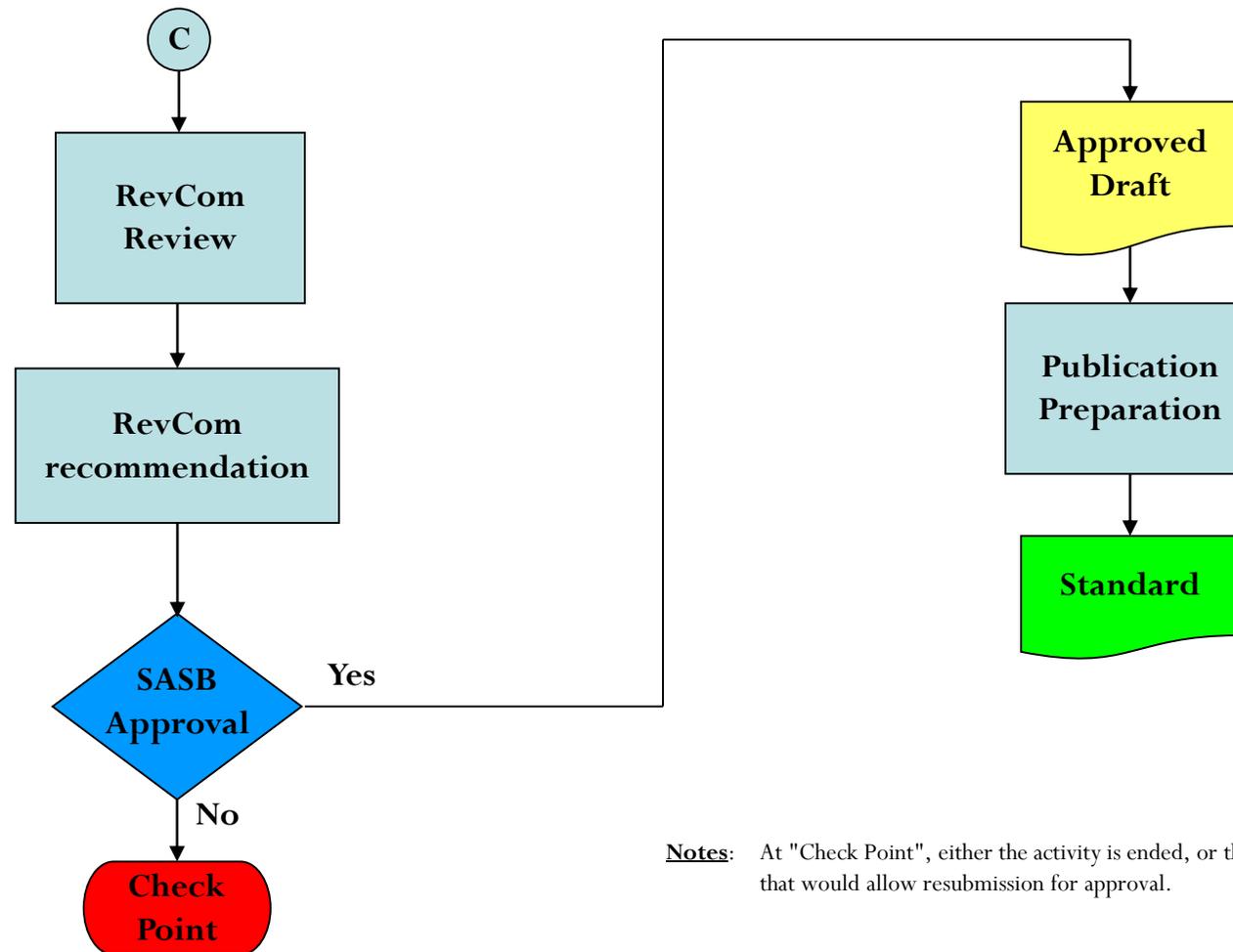


# Overview of IEEE 802.3 Standards Process (4/5)- IEEE Standards Association (SA) Ballot Phase



**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.  
See IEEE-SA Standards Board Operations Manual 5.4 and listed references for complete description

# 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.

# IEEE P802.3ch NGAUTO Ethernet PHY Task Force

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## Approved Project Documents

- PAR
  - [http://ieee802.org/3/ch/P802.3ch\\_PAR.pdf](http://ieee802.org/3/ch/P802.3ch_PAR.pdf)
- 5 Criteria
  - <https://mentor.ieee.org/802-ec/dcn/17/ec-17-0069-00-ACSD-802-3ch.pdf>
- Objectives
  - [http://ieee802.org/3/ch/0317\\_approved\\_objectives\\_3NGAUTO.pdf](http://ieee802.org/3/ch/0317_approved_objectives_3NGAUTO.pdf)

# IEEE P802.3 P802.3ch NGAUTO Ethernet PHY Task Force Objectives

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1. Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface
2. Preserve minimum and maximum frame size of the current IEEE 802.3 standard
3. Support full duplex operation only
4. Define optional startup procedure which enables the time from power\_on=FALSE to a state capable of transmitting and receiving valid data to be less than 100ms
5. Support data rates of 2.5 Gb/s, 5 Gb/s and 10 Gb/s at the MAC/PLS service interface.
6. Support a BER better than or equal to  $10^{-12}$  at the MAC/PLS service interface (or the frame loss ratio equivalent)
7. Support optional Auto-Negotiation
8. Support optional Energy Efficient Ethernet
9. Support operation in automotive environments (e.g., EMC, temperature)
10. Do not preclude meeting FCC and CISPR EMC requirements.

# IEEE P802.3ch NGAUTO Ethernet PHY Task Force Objectives

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11. Define the performance characteristics of an automotive link segment and an electrical PHY to support 2.5 Gb/s point-to-point operation over this link segment supporting up to four inline connectors for at least 15m on at least one type of automotive cabling (e.g., UTP, STQ, STP, SPP, Coax, or Twinax).
12. Define the performance characteristics of an automotive link segment and an electrical PHY to support 5 Gb/s point-to-point operation over this link segment supporting up to four inline connectors for at least 15m on at least one type of automotive cabling.

# IEEE P802.3 P802.3ch NGAUTO Ethernet PHY Task Force Objectives

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13. Define the performance characteristics of an automotive link segment and an electrical PHY to support 10 Gb/s point-to-point operation over this link segment supporting up to four inline connectors for at least 15m on at least one type of automotive cabling.
  
14. Support optional Clause 104 power over data lines on appropriate media.

# Liaisons and Communications

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# Presentation Guidelines

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- **Filenames**
  - Please follow the format
  - Revision
- **Templates**
  - Please make the title and author field selectable
- **PDF properties**
  - Please fill these fields out to aid the search engine
- **Confidentiality Statements**
  - No problems
  - Applies to presentations and emails
- **Discussion of Cost**
  - No issues

# Presentation Guidelines

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- Material from other presentations
  - If you use material from another presentation, it must be properly attributed
  - Use the filename
- Material from outside sources
  - Make sure you have permission and indicate that on the slide

# P802.3ch D2.3.1 ballot stats

Voters	235					
Approve	120	<b>Response rate:</b>	<b>60.85%</b>	A = Approve	Dis w/o C	0
Disapprove with comment	1	<b>Approval rate:</b>	<b>99.17%</b>	C = Approve/Comments	Dis Raw	1
Disapprove without comment	0	<b>Abstain rate:</b>	<b>15.38%</b>	D = Disapprove		
Abstain	22			E = Abstain/Expertise	Non-voter comment	0
Returns	143	<b>Need to return:</b>	<b>-25</b>	T = Abstain/Time	Late comments:	0
Comments	0	<b>Need to flip:</b>	<b>-30</b>	O = Abstain/Other		
Comments w/ floor	0				Total:	0

# Presentations

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- [Opening Editor's Report – P802.3ch Draft 2.3.1](#)
- [Closing Editor's Report – P802.3ch Draft 2.3.1](#)
- [Standards Association Ballot and RevCom Tutorial](#)
- **D3.0 Comment Preview – [Alien Crosstalk at the MDI](#)**

# Motions and Straw Polls

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- Straw Polls and Motions
- Motions
- Other business

# Future Meetings

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- See: <http://www.ieee802.org/3/interims/index.html>
- January 2020 Interim
  - January 20 - 24, ITU, Geneva, CH
  - Joint 802.1/802.3/ITU Workshop January 25
- March 2020 Plenary
  - March 16 -19
  - Hilton Atlanta, Atlanta, GA, USA
- Anyone interested in hosting an interim meeting contact the IEEE 802.3 Executive Secretary [Steve Carlson](#).

# Future Meetings

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Attendance:

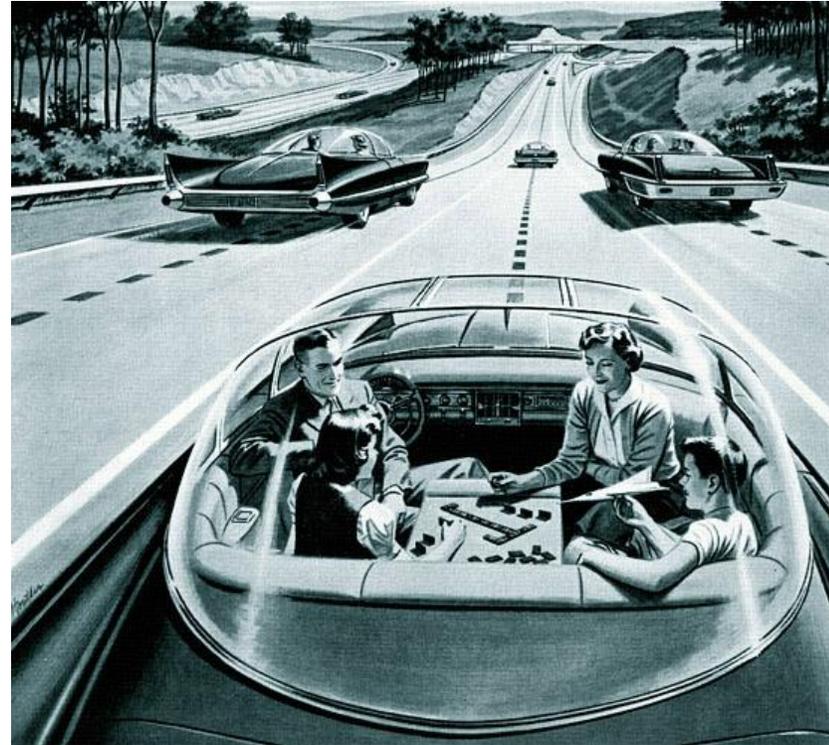
Attend January 2020 interim, Geneva, CH:

Y:    N:    M:

Attend March 2020 802 Atlanta plenary:

Y:    N:    M:

# Questions?



Thank you!