Agenda and General Information

IEEE P802.3cy Greater than 10 Gb/s Electrical Automotive Ethernet PHYs Task Force

Steve Carlson, Chair

High Speed Design, Inc., Robert Bosch, Ethernovia

March 30, 2021 teleconference 15h00-17h00 UTC

Agenda

- Jon Lewis, Task Force Recording Secretary
- Welcome
- Approve Agenda
- No meeting minutes approvals this meeting
- Goals for this meeting
- Task Force Organization
- Reflector and Web
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Virtual Meetings
- Reminder of WG ballots
- Presentations
- To Do List
- Motions and Closing Business

Task Force Decorum

- **Please MUTE if you are not speaking**
- 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 2020 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 2020 IEEE-SA Standards Board Ops Manual 5.3.3.3)
- Please observe proper decorum in meetings

Task Force Organization

- ## Task Force Organization
  - Steve Carlson, Chair
  - Marek Hajduczenia, Chief Editor
  - Natalie Wienckowski, Ad hoc Chair
  - Jon Lewis, Recording Secretary

Goals for the meeting

- Review IEEE Patent, Copyright, and Individual Participation policies
- Review IEEE 802.3 Task Force operation
- Virtual Meetings
- Reminders
- Presentations
- Motions and Straw Polls
- Update To Do List

Reflector and Web

- To subscribe to the IEEE P802.3cy Beyond 10 Gb/s Electrical Automotive Ethernet PHYs Task Force reflector, send an email to:

  ListServ@ieee.org

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

  subscribe stds-802-3-B10GAUTO_<yourfirstname> <yourlastname>_

  end

- Send B10GAUTO reflector messages to:

  stds-802-3-B10GAUTO@listserv.ieee.org

- Task Force web page URL:

  http://ieee802.org/3/cy/index.html

Task Force Private Area

- URL: https://ieee802.org/3/cy/private/index.html
  - Username: 802.3cy
  - 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

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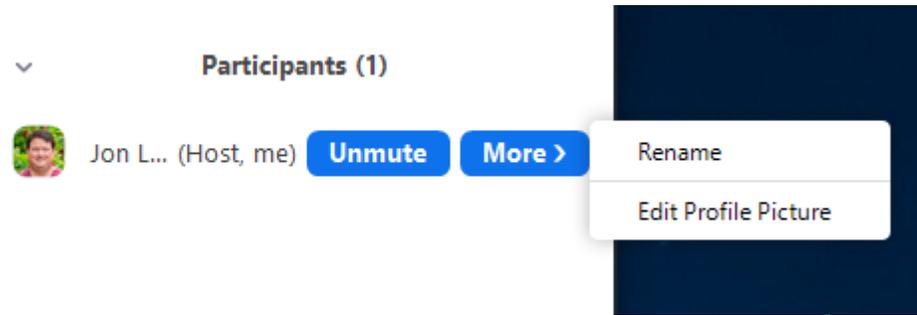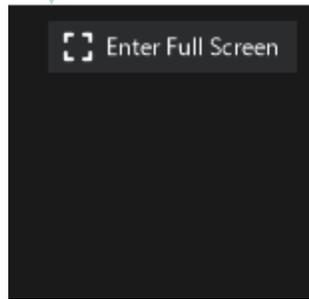- NO restrictive notices

Attendance

- Tutorial Material on attendance tool

  - http://ieee802.org/3/minutes/attendance_procedures.pdf

- Access details

  - URL: http://imat.ieee.org/

  - Session code: 4X6SYF

- Zoom rename – please make sure your Zoom name has your first and last names, employer and affiliation(s). See Renaming instructions for Zoom teleconferences
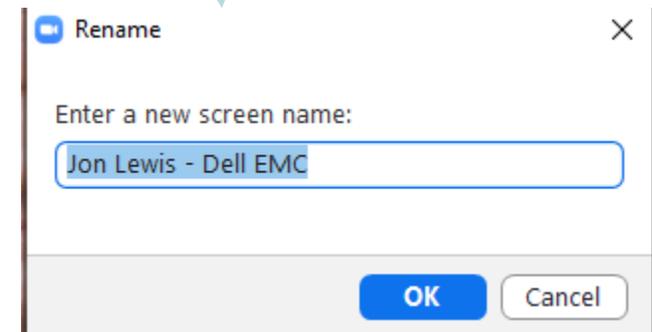
Select the Participants icon on the zoom toolbar
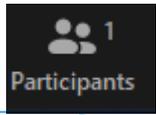
Your name should appear at the top of the list of participants. Hover over your name then select "More" → "Rename"

Participants 1

[ ] Enter Full Screen ⌄

Participants (1)

Jon L... (Host, me) **Unmute** **More >** | Rename

Edit Profile Picture

Modify your screen name to include your affiliation

Rename ✕

Enter a new screen name:

Jon Lewis - Dell EMC

OK Cancel

IEEE Structure
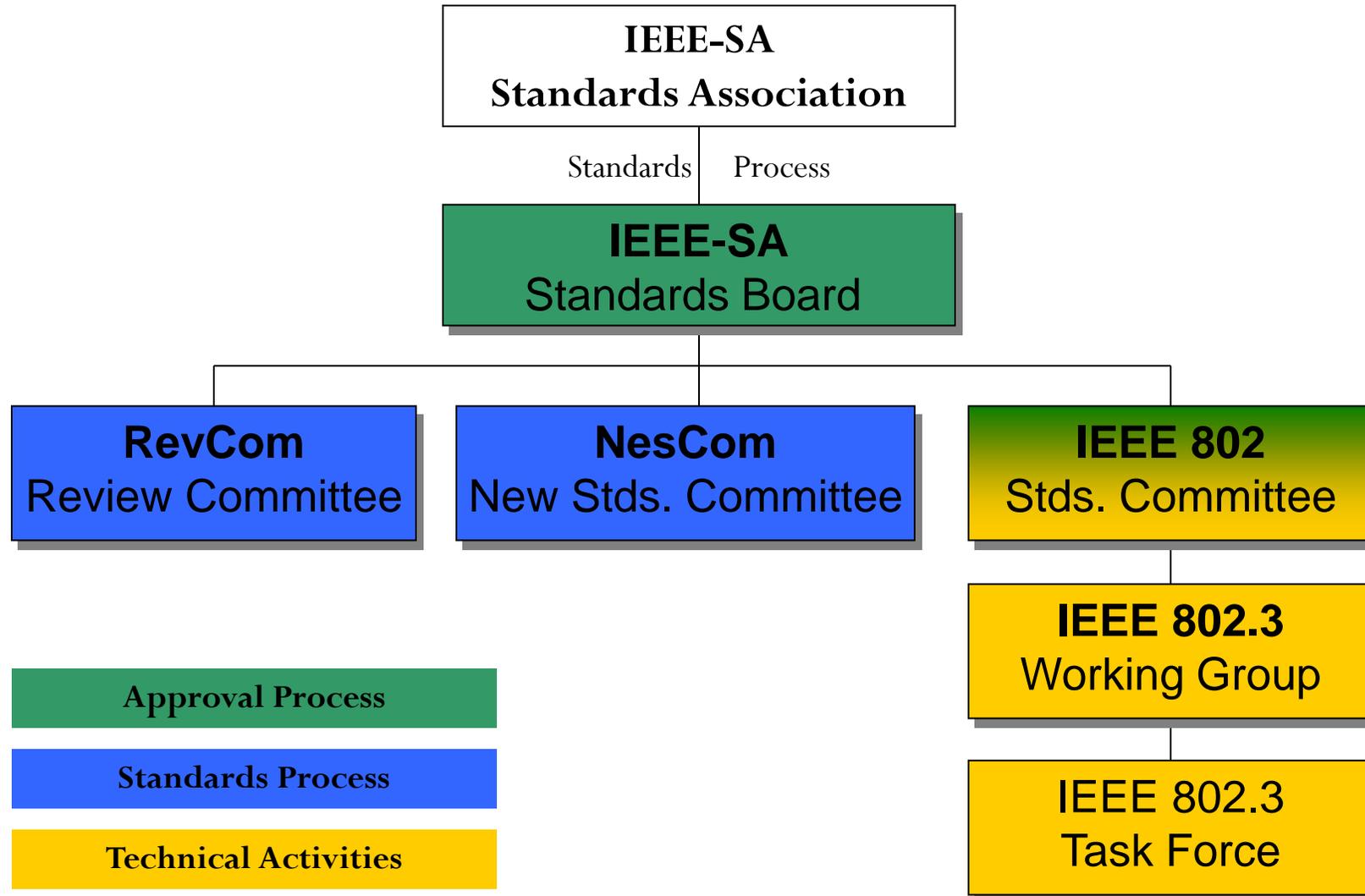
Important Bylaws and Rules

- **IEEE-SA Operations Manual**
  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

Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- **Show slides #1 through #4 of this presentation**
- **Advise the WG attendees that:**
  - IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.

- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG Chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

  Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

(Optional to be shown)

◆IEEE

Participants have a duty to inform the IEEE

- Participants <u>shall</u> 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 <u>should</u> 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

<u>Slide #1</u>

02 January 2018

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

◈IEEE

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

02 January 2018

◆IEEE

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

◆IEEE

INSTRUCTIONS FOR CHAIRS OF STANDARDS DEVELOPMENT ACTIVITIES

At the beginning of each standards development meeting the chair or a designee is to:

- Show the following slides (or provide them beforehand)
- Advise the standards development group participants that:
- IEEE SA's copyright policy is described in Clause 7 of the IEEE SA Standards Board Bylaws and Clause 6.1 of the IEEE SA Standards Board Operations Manual;
- Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy;
- Instruct the Secretary to record in the minutes of the relevant meeting:
- That the foregoing information was provided and that the copyright slides were shown (or provided beforehand).

IEEE SA STANDARDS ASSOCIATION

◆IEEE   2

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 STANDARDS ASSOCIATION

◈IEEE   3

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

■Distribution of Draft Standards (see 6.1.3 of the SASB Operations Manual)
- https://standards.ieee.org/about/policies/opman/sect6.html

IEEE SA STANDARDS ASSOCIATION

◆IEEE 4

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*

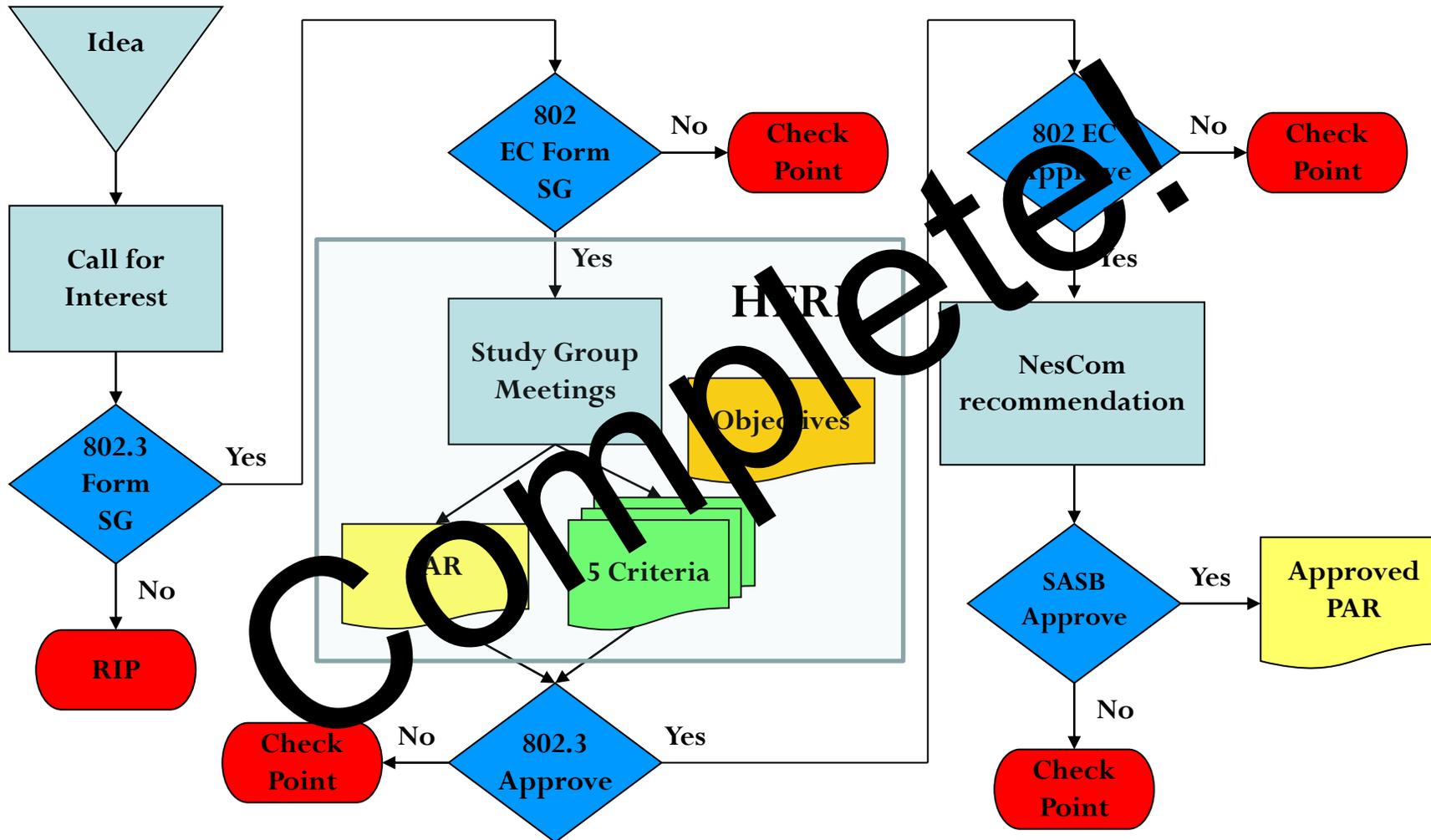- The most recent versions of these Codes are available at http://www.ieee.org/about/corporate/governance

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

Approved by SASB in June 2019

Slide 2

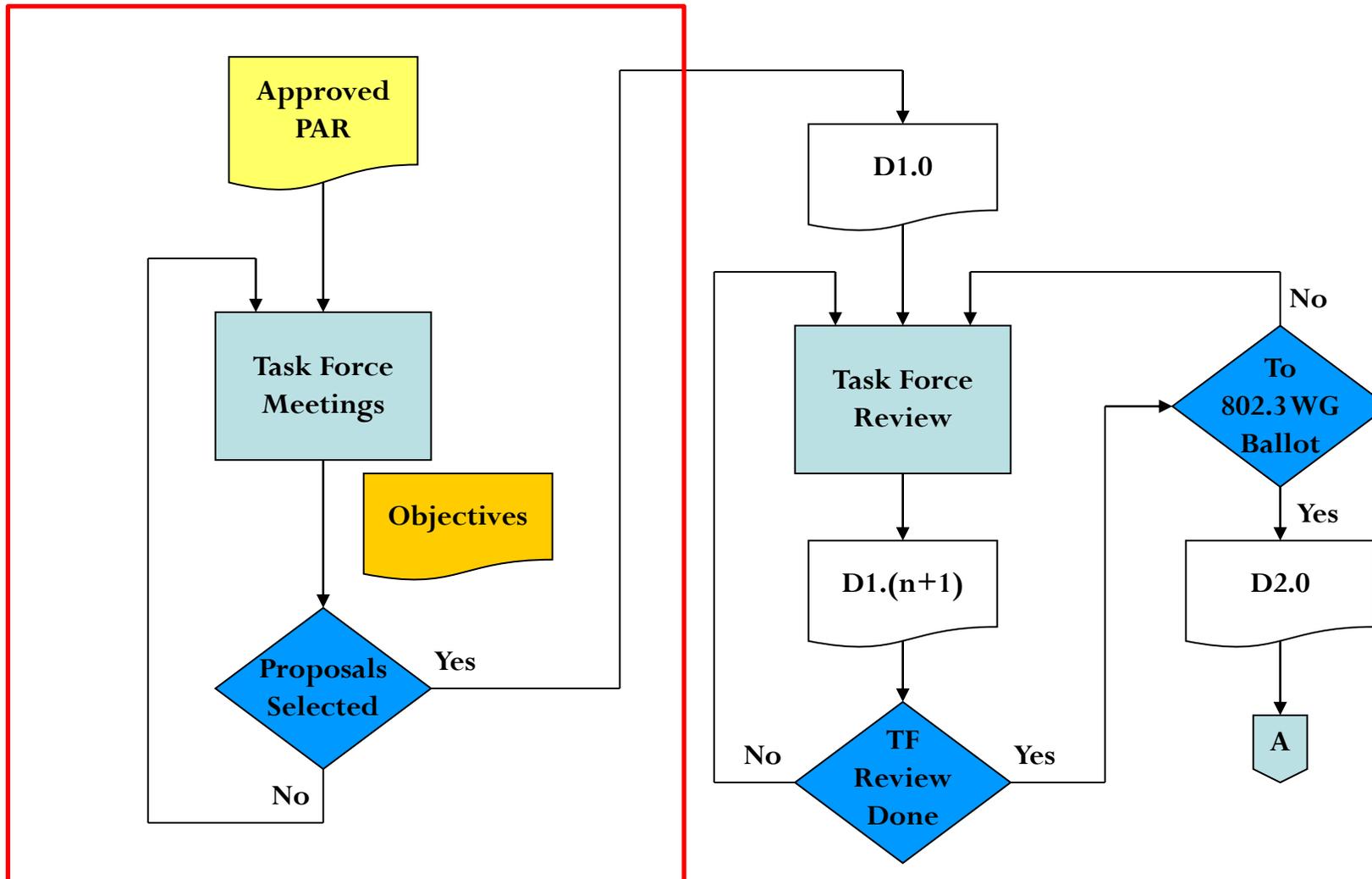## IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

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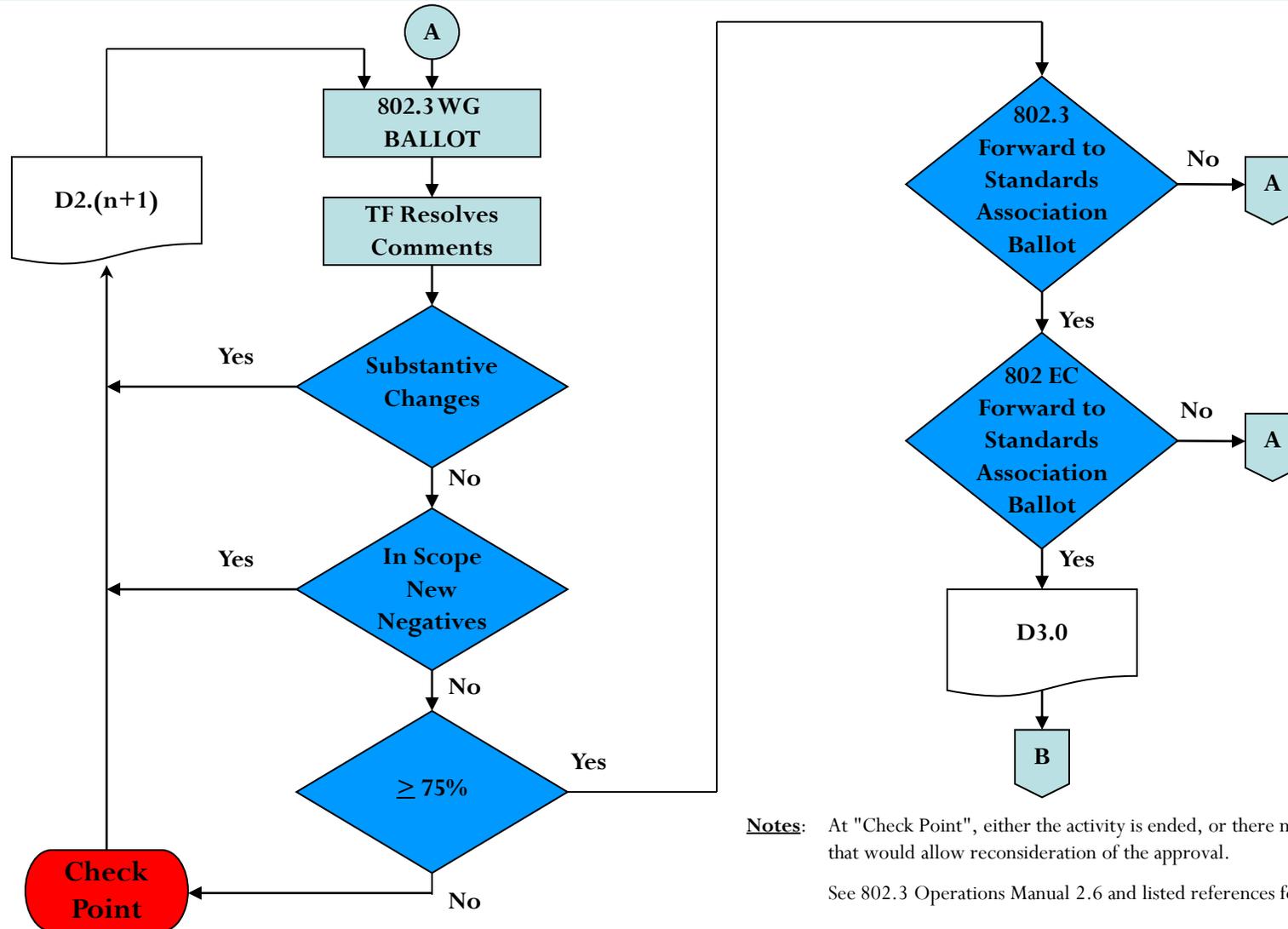
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase
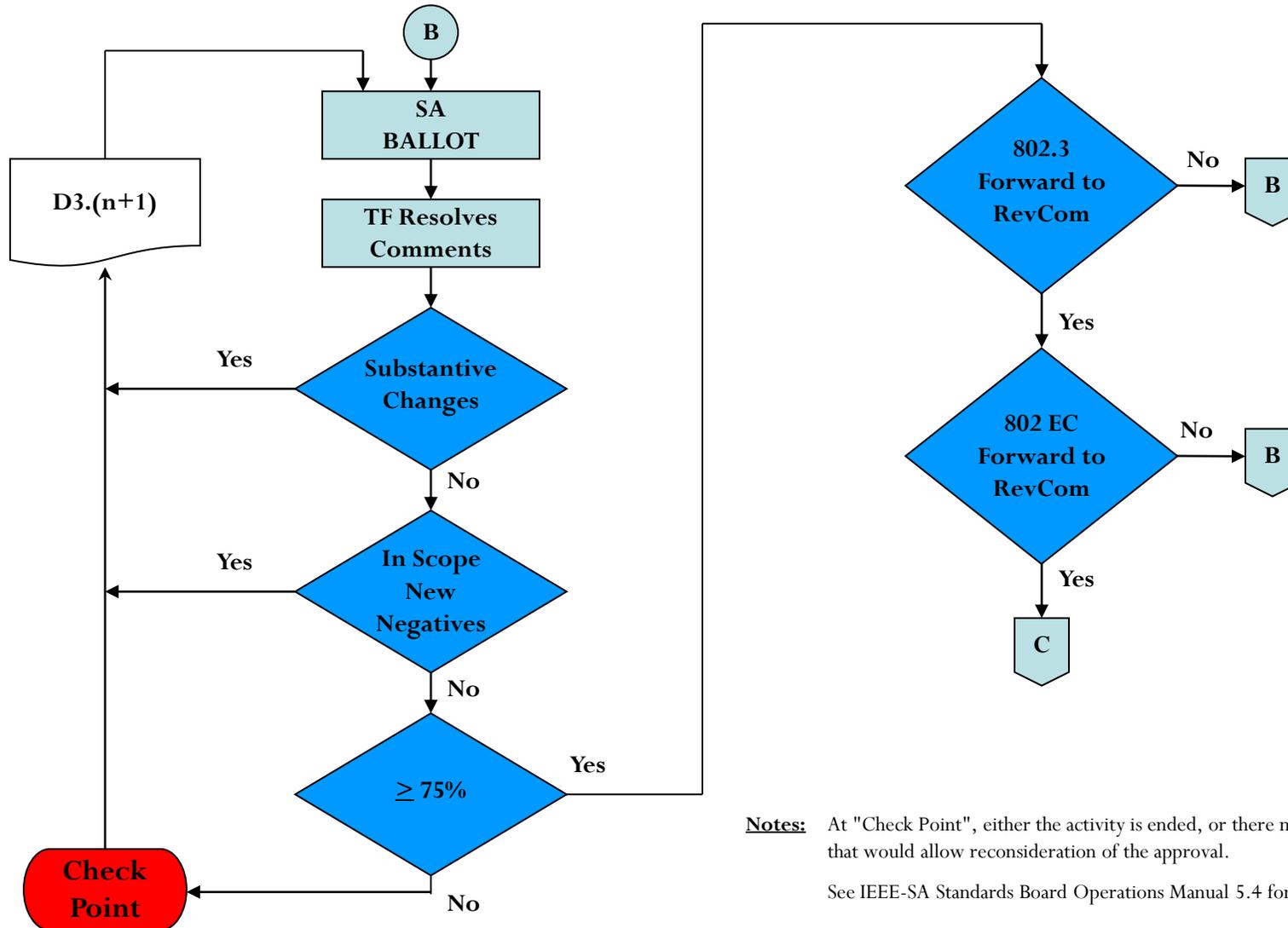
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operations Manual 2.6 and listed references for complete description

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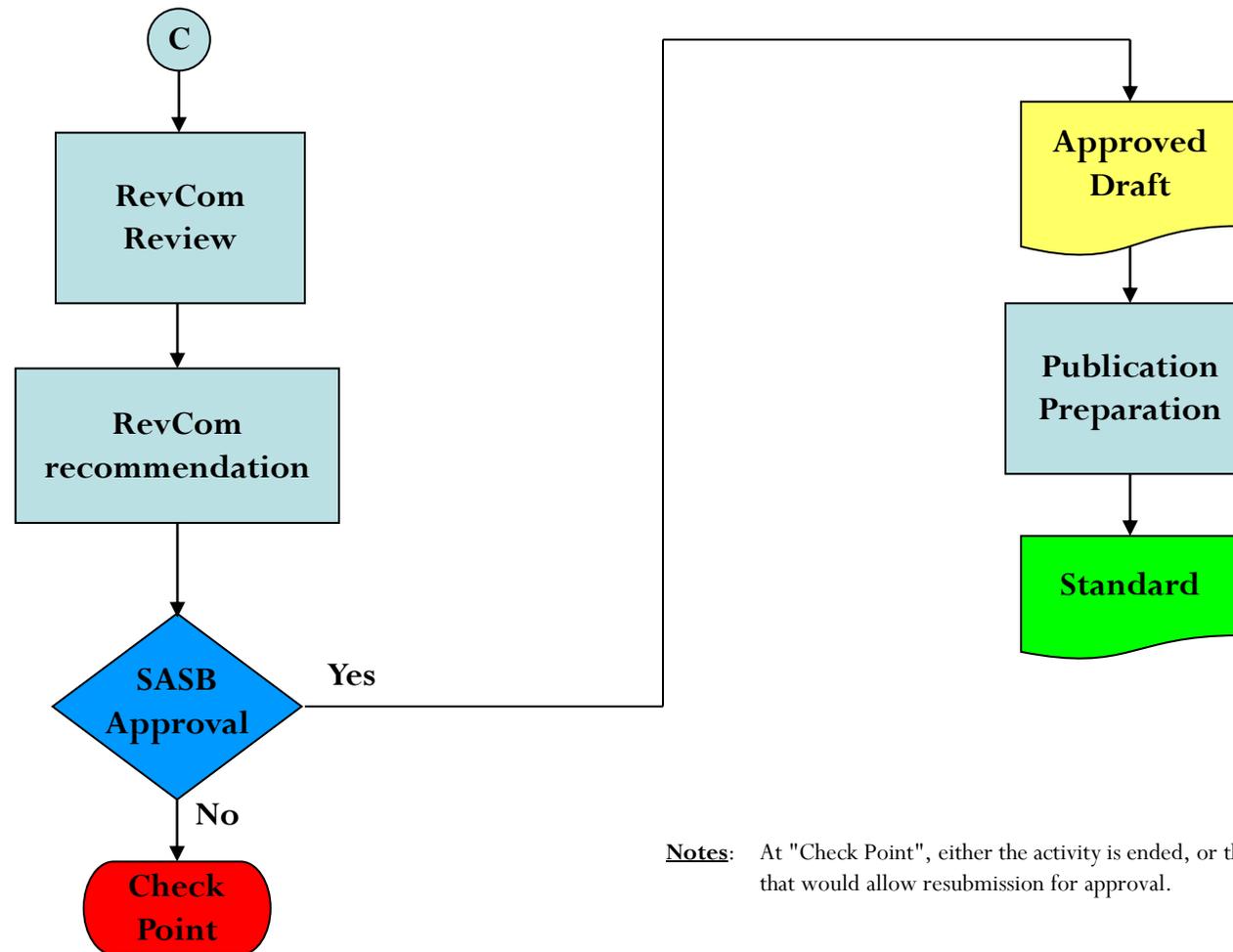
See IEEE-SA Standards Board Operations Manual 5.4 for complete description

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

Reminders

- IEEE 802.3 Working Group ballots
- IEEE 802.3 ballot and Task Force review announcements
- IEEE 802.3 Requirements for Working Group voting membership
- Frequently Asked Questions concerning IEEE 802.3 Balloting and Comment collection procedures

Reminders

- Open IEEE 802.3 Working Group ballots

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces	D2.0	Initial Working Group ballot	Friday 19th March 2021	Sunday 18th April 2021 23:59 AOE	Beth Kochuparambil	IEEE P802.3ck draft D2.0 ballot notice
IEEE P802.3cs Increased-reach Ethernet optical subscriber access (Super-PON)	D2.0	Initial Working Group ballot	Monday 22nd March 2021	Wednesday 21st April 2021 23:59 AOE	Claudio DeSanti	IEEE P802.3cs draft D2.0 ballot notice

Liaisons and Communications

- None at this time

Action Items

- To – Do List: https://ieee802.org/3/cy/todo/index.html
- Continue working towards link segment baseline

IEEE P802.3cy Beyond 10 Gb/s Electrical Automotive Ethernet PHYs Approved Project Documents

- PAR
  - http://grouper.ieee.org/groups/802/3/cy/P802d3cy_PAR.pdf
  - 5 Criteria
  - https://mentor.ieee.org/802-ec/dcn/20/ec-20-0094-00-ACSD-p802-3cy.pdf
  - Objectives
  - http://grouper.ieee.org/groups/802/3/cy/P802d3cy_OBJ_WG_0520.pdf

Approved Objectives P802.3cy

Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface

Preserve minimum and maximum frame size of the current IEEE 802.3 standard

Support full duplex operation only

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

Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent)

Support a data rate of 25 Gb/s, 50 Gb/s and 100 Gb/s at the MAC/PLS service interface

Support optional Auto-Negotiation

Support optional Energy Efficient Ethernet optimized for automotive applications

Support operation in automotive environments (e.g., EMC, temperature)

Do not preclude meeting FCC and CISPR EMC requirements

Approved Objectives P802.3cy

Define the performance characteristics of an automotive link segment and an **electrical** PHY to support 25 Gb/s point-to-point operation over this link segment supporting up to **2** inline connectors for at least **11 m** on at least one type of automotive cabling

Define the performance characteristics of an automotive link segment and an **electrical** PHY to support 50 Gb/s point-to-point operation over this link segment supporting up to **2** inline connectors for at least **11 m** on at least one type of automotive cabling

Define the performance characteristics of an automotive link segment and an **electrical** PHY to support 100 Gb/s point-to-point operation over this link segment supporting up to **2** inline connectors for at least **11 m** on at least one type of automotive cabling

Support optional Clause 104 power over data lines on appropriate media

Task Force Virtual Meetings

- For the foreseeable future, P802.3cy meetings will be virtual 2-hour teleconferences (15h00-17h00 UTC)
- There is contention for timeslots with other IEEE 802.3 groups
- It's not clear when in-person IEEE 802.3 meetings will resume
- It's not clear how future virtual IEEE 802 plenaries will be structured
- For IEEE 802.3, our current rules allow interim telecon meetings with 10-day advance notice
  - Decisions (votes) may be taken
  - Only IEEE 802.3 voting members may vote
  - There is considerable overhead for a virtual interim
  - Interims can't be cancelled

Task Force Virtual Meetings

- Teleconference ad hoc meetings have been used for many years in IEEE 802.3 to build consensus
    - We are working out how to move the project along with a combination of ad hocs and interims
    - The current concept will schedule ad hocs on a weekly basis
        - Presentations will be to build consensus and further discussion (use the email reflector!)
        - If your presentation will lead to a baseline proposal, let us know what it might be in the slides
        - This prepares the groundwork for a vote at an interim or plenary telecon
        - No votes taken on ad hoc calls
        - Ad hocs may be canceled without penalty

Task Force Virtual Meetings

- The current plan will schedule interims on an as – required schedule
  - Interims and plenaries will be used to vote on baselines
  - No votes will be allowed unless the baseline motion has been previewed at least two weeks prior to the interim/plenary meeting
- We'll see how this works and make changes as we gain experience

P802.3cy Meetings

- See: http://www.ieee802.org/3/interims/index.html
- IEEE 802.3 meetings calendar: http://www.ieee802.org/3/calendar.html

Presentations

Title	Presenter(s)	Affiliation(s)	Times
Micro-Reflection Limit	Ragnar Jonsson Hossein Sedarat	Marvell Ethernovia	07h20 PDT
Laning and OAM - update	George Zimmerman	CME Consulting, Inc., Marvell	07h50 PDT
Motions and Straw Polls			08h20 PDT
To Do List Updates 30 March	Natalie Wienckowski	GM	08h50 PDT

Motions and Straw Polls

Motion # 2

Move that: 802.3cy specify an OAM similar to the MultiGBASE-T1 OAM, leaving issues of what needs to change (based on the laning method chosen and multi-lane operation) open for future proposals.

M: Natalie Wienckowski

S: Haysam Kadry

Technical (>75%)

Pass/Fail - Passes by unanimous consent

Motions and Straw Polls

Straw Poll #1

I would support incorporating the material on Micro Reflection Limits in jonsson_3cy_01a_03_30_21.pdf, Slides 3 through 8, as a baseline.

Y: 38

N: 1

Requested by Ragnar Jonsson and Hossein Sedarat

Motions and Straw Polls

Motion #3

Move to adopt the text in (Micro-Reflection Limit Text, items #1 of 6, #2 of 6, #3 of 6 and #4 of 6, #5 of 6, and #6 of 6) in jonsson_3cy_01a_03_30_21.pdf as baseline text for the micro reflection limit.

M; Ragnar Jonsson

S: Hossein Sedarat

Technical >=75%

Y: 30   N: 0   A: 4 Motion passes

Future P802.3cy Ad Hoc Meetings

- A recurring meeting notice for every Tuesday between March 23rd and July 7th has been added to the calendar.

- Please note: Meetings will be changed to an Interim when there is a request to do so by any Member who has a Motion they'd like to offer. Please request this change at least 2 weeks in advance to comply with IEEE 802.3 rules.

Future Meetings

See [P802.3cy Ad Hoc Meetings](#) for upcoming teleconference details

See http://www.ieee802.org/3/calendar.html

Note –Times listed are subject to change.

Questions?

Thank you!