

IEEE 802dm Hybrid Meeting Practices

- In-room Attendees:
 - In Zoom choose connect without audio before you join
 - Use the Zoom raise-hand feature to indicate you want to speak
 - Wait to be called on before speaking (even at the microphone)
 - Repeat any questions that may be asked away from the microphone
- Remote Attendees:
 - Join Zoom and set Zoom audio as ‘music’
 - Use the Zoom raise hand feature to indicate you want to speak
 - Wait to be called on to speak – Please MUTE otherwise

Agenda and General Information

IEEE P802.3dm Asymmetrical Electrical Automotive
Ethernet Task Force

Jon Lewis

Dell Technologies

802.3dm Plenary Meeting, 11-14 November 2024

Vancouver, British Columbia Canada

Agenda

- Welcome and Introductions
- Vice-Chair Confirmation
- Approve Agenda
- 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
- Presentations
- Approve Prior Meeting Minutes
- Closing Business
- Future Meetings

Motion #1

- Move to confirm Natalie Wienckowski as Vice Chair of IEEE P802.3dm Task Force.
- M: Bob Voss
- S: Peter Jones
- 75% by rule

Motion #2

- Move to approve the agenda
- M: Bob Voss
- S: Peter Jones

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. (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
- Please **MUTE** unless called on
- Use the **Raise Hand feature in Zoom** to be placed in the queue
- The chat should be used only to send to “Everyone”, for official business – not for side conversations.

Goals for the meeting

- Review ad-hocs and progress
- Technical Presentations to progress the project
- Review Timeline
- Review ToDo list and draft outline

Plenary meeting - fees

- This meeting is conducted as part of the IEEE 802 plenary meeting series. Registration and payment of fees is required, and attendance without properly registering is subject to penalties under IEEE 802 rules.
- See <https://www.ieee802.org/3/interims/index.html> for further information and a registration link

Reflector and Web

- To subscribe to the Asymmetrical Electrical Automotive Ethernet 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-ISAAC <yourfirstname> <yourlastname>
end*

- Send 100 Mb/s Long-Reach Single-Pair Ethernet Task Force reflector messages to:

STDS-802-3-ISAAC@listserv.ieee.org

- Task Force web page URL:

<https://www.ieee802.org/3/dm/index.html>

Task Force Private Area

- URL: <http://www.ieee802.org/3/dm/private>
 - Username: 802.3dm
 - Password: <<XXXXXXXX>>
- 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, Only 802.3 voters vote on electronic meetings
- **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

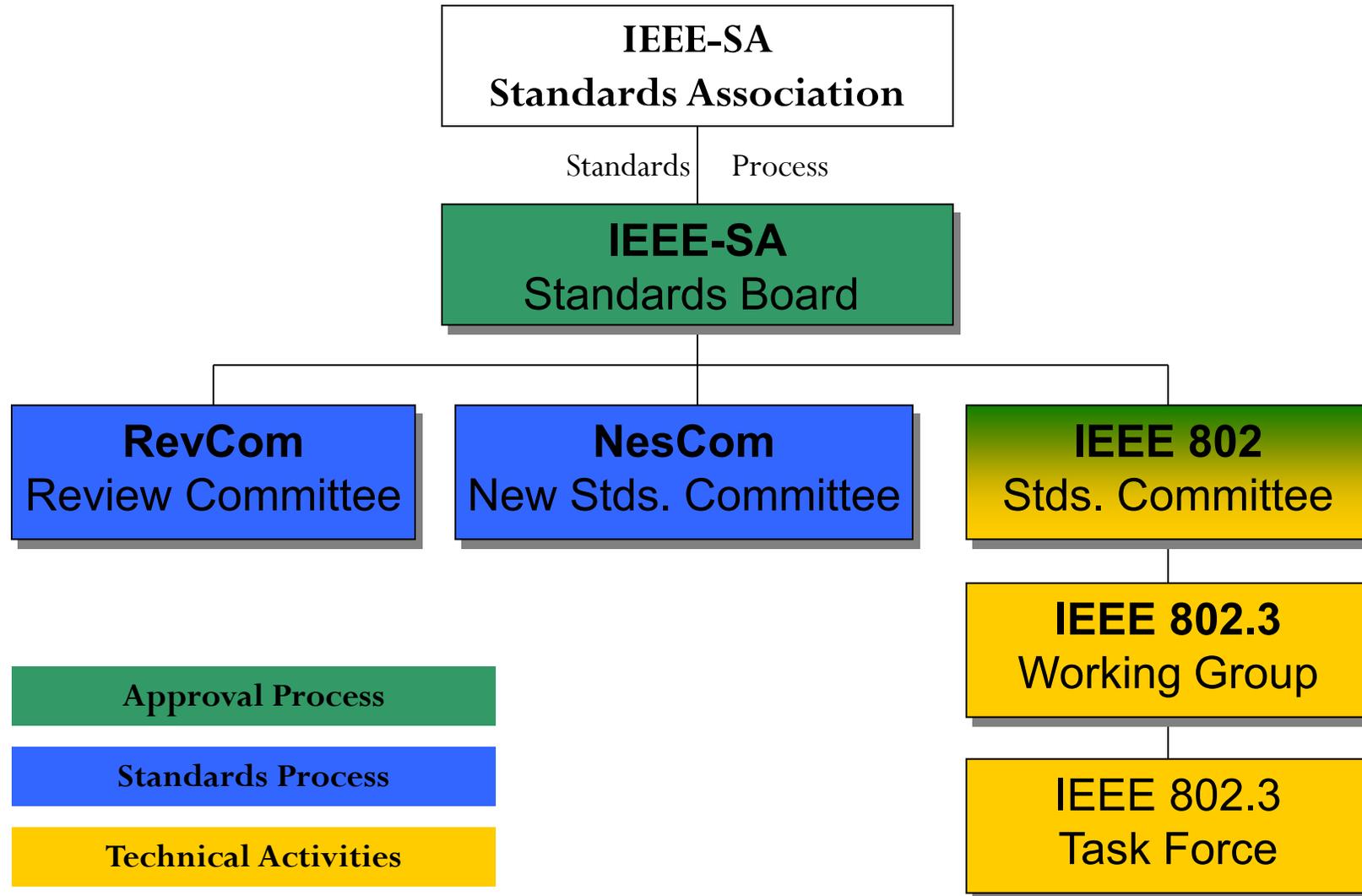
Membership and attendance recording

- Membership requirements (gaining)
 - Attendance in at least 75% of meeting slots at 2 of the last 4 plenary sessions
 - Attendance in at least 75% of meeting slots at recent IEEE 802.3 Ethernet Working Group or Task Group Interim Session may be substituted for one of the two Plenary Sessions
 - Attendance **in at least 75% of the meeting slot's duration** is required for that attendance to count towards gaining or maintaining voting membership
 - **You can only** claim IMAT attendance credit if you attend at least 75% of slot's duration
 - Officers may remove IMAT attendance credit if you attend less than 75% of slot's duration
 - Provide declaration of affiliation and valid contact information
 - Request to become member during potential voter agenda item at an IEEE 802.3 Ethernet Working Group opening or closing **plenary** meeting
- Membership requirements (retaining)
 - Continue to meet above attendance, contact, and affiliation requirements
 - Participate in **two** out of the last **three** Working Group Letter Ballot Series
- For more details see: <https://www.ieee802.org/3/rules/member.html>

Attendance

- Attendance will be taken from IMAT
 - IMAT is the official record – so be sure to sign in
- **PLEASE DO NOT FORGET TO SIGN INTO IMAT – NEED FOR CORRECTIONS IS STRONGLY DISCOURAGED**
- Please put your affiliation in your Zoom name. If you are unable to do this, please send me or Natalie a directed chat message and we will change it for you at our earliest convenience.

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.

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 WORKING GROUP 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. Formally object to the discussion immediately.

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**

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 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
- 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>

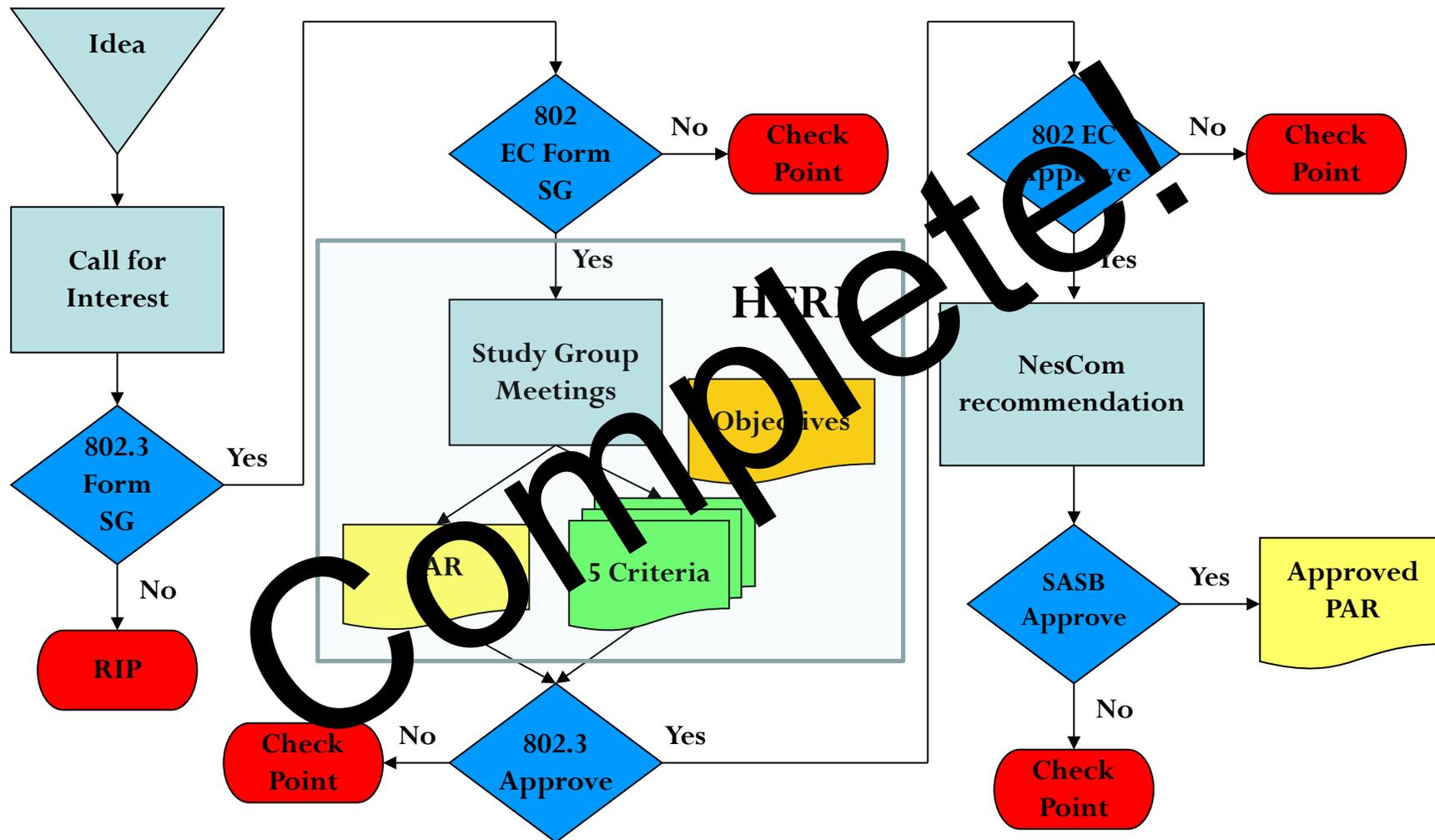
Participants in the IEEE-SA “*individual process*” shall act independently of others, including employers

- 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

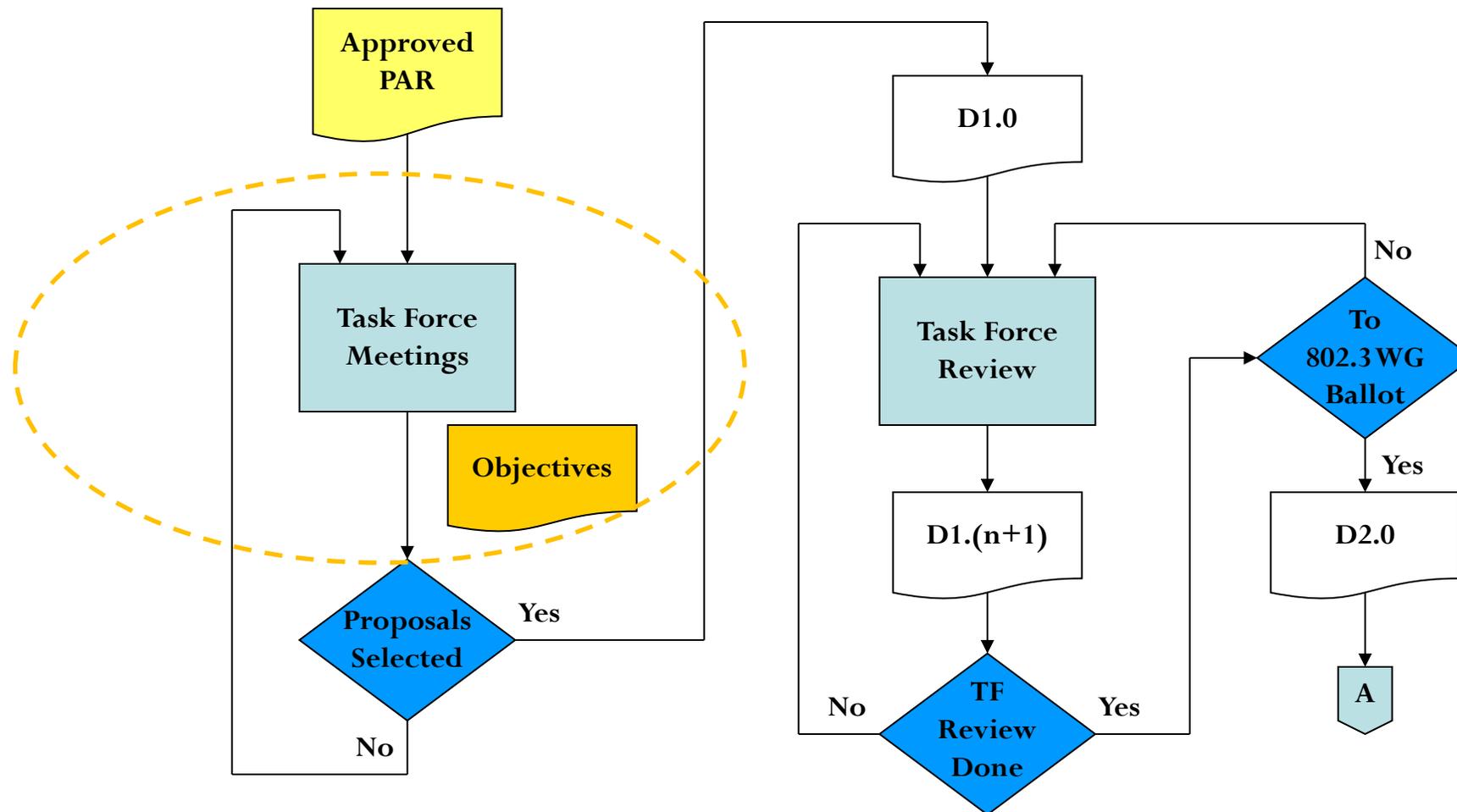
- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that *“the standards development process shall not be dominated by any single interest category, individual, or organization”*
 - This means no participant may exercise *“authority, leadership, or influence by reason of superior leverage,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

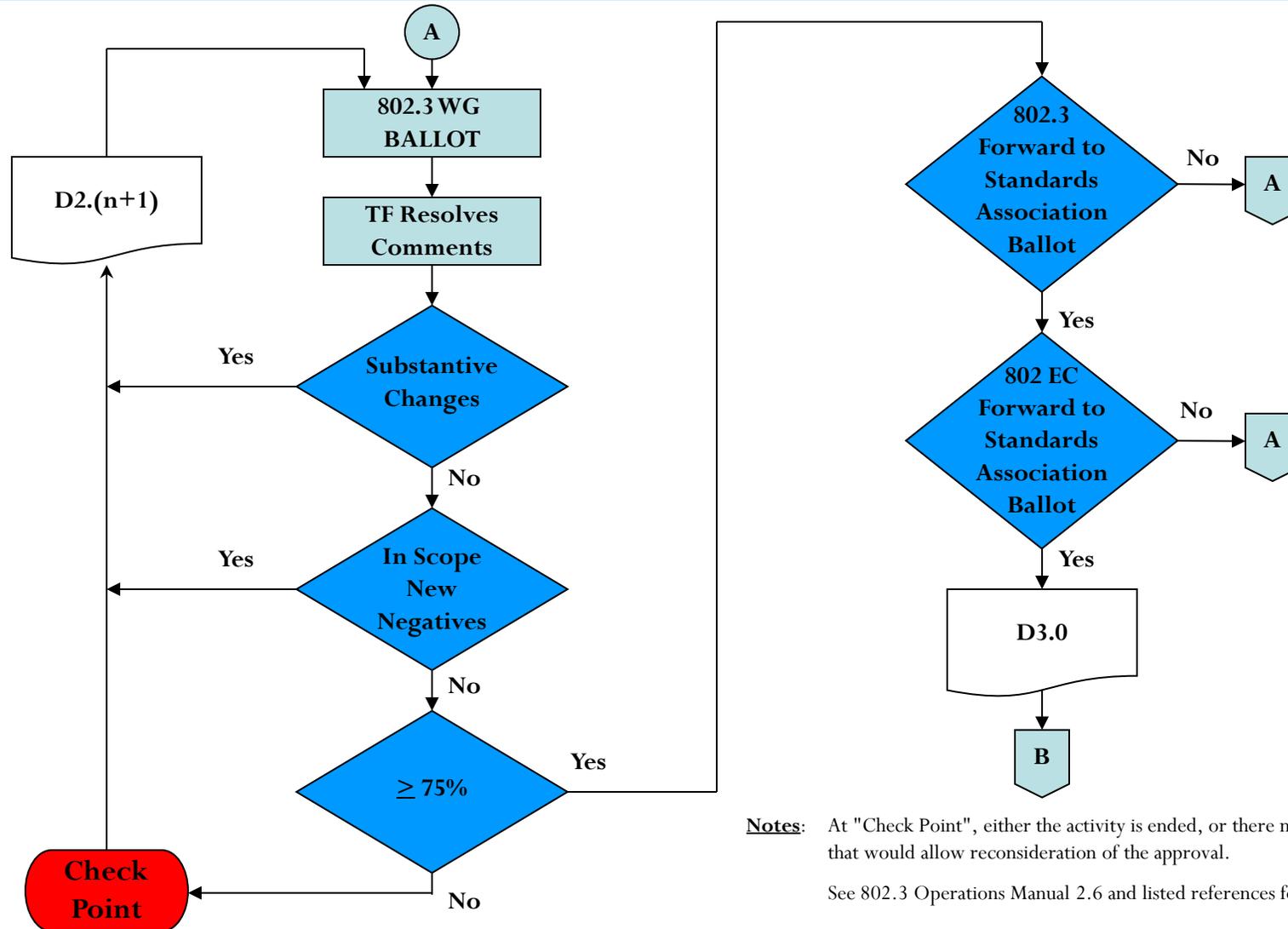


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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



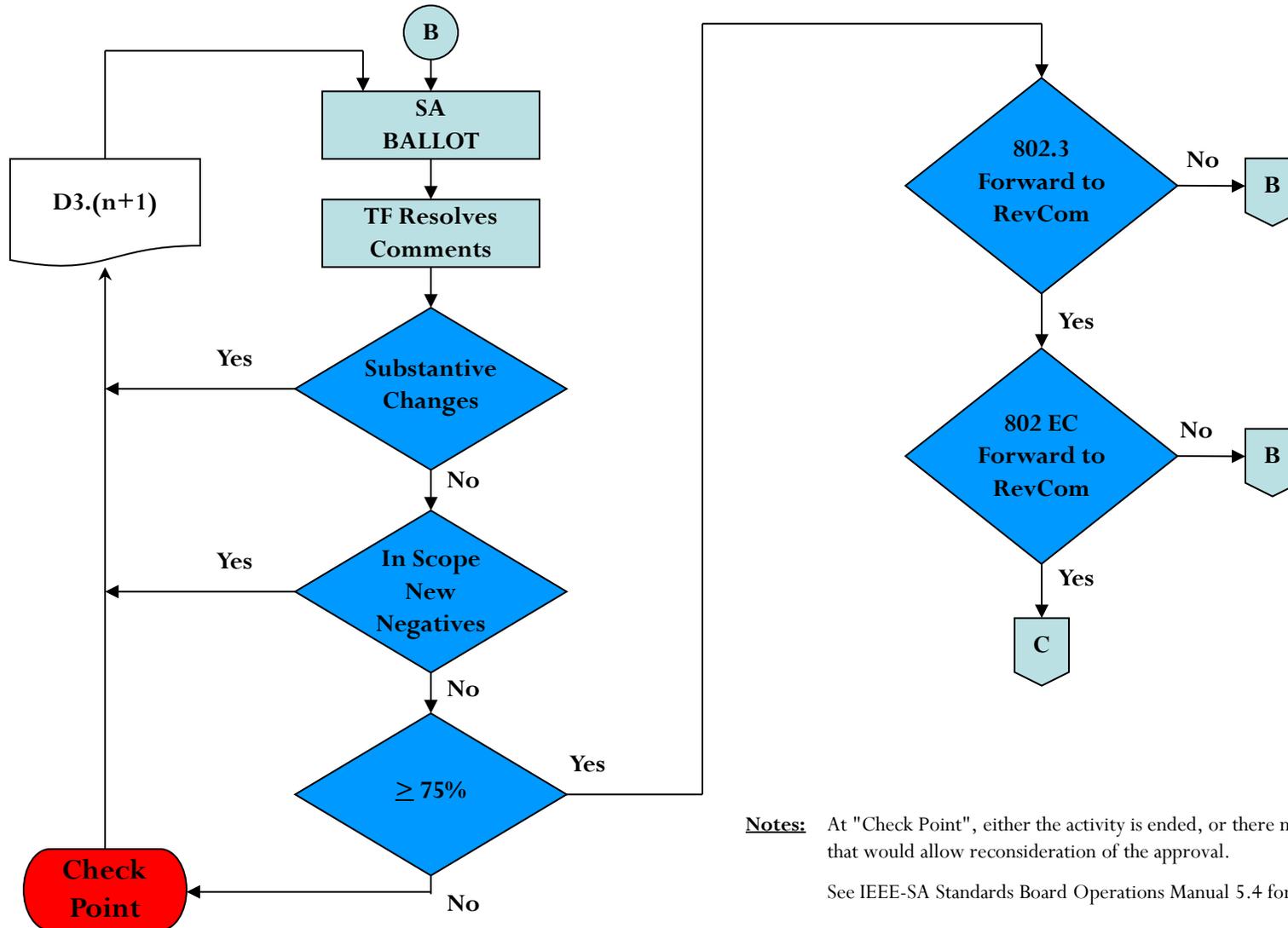
Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



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

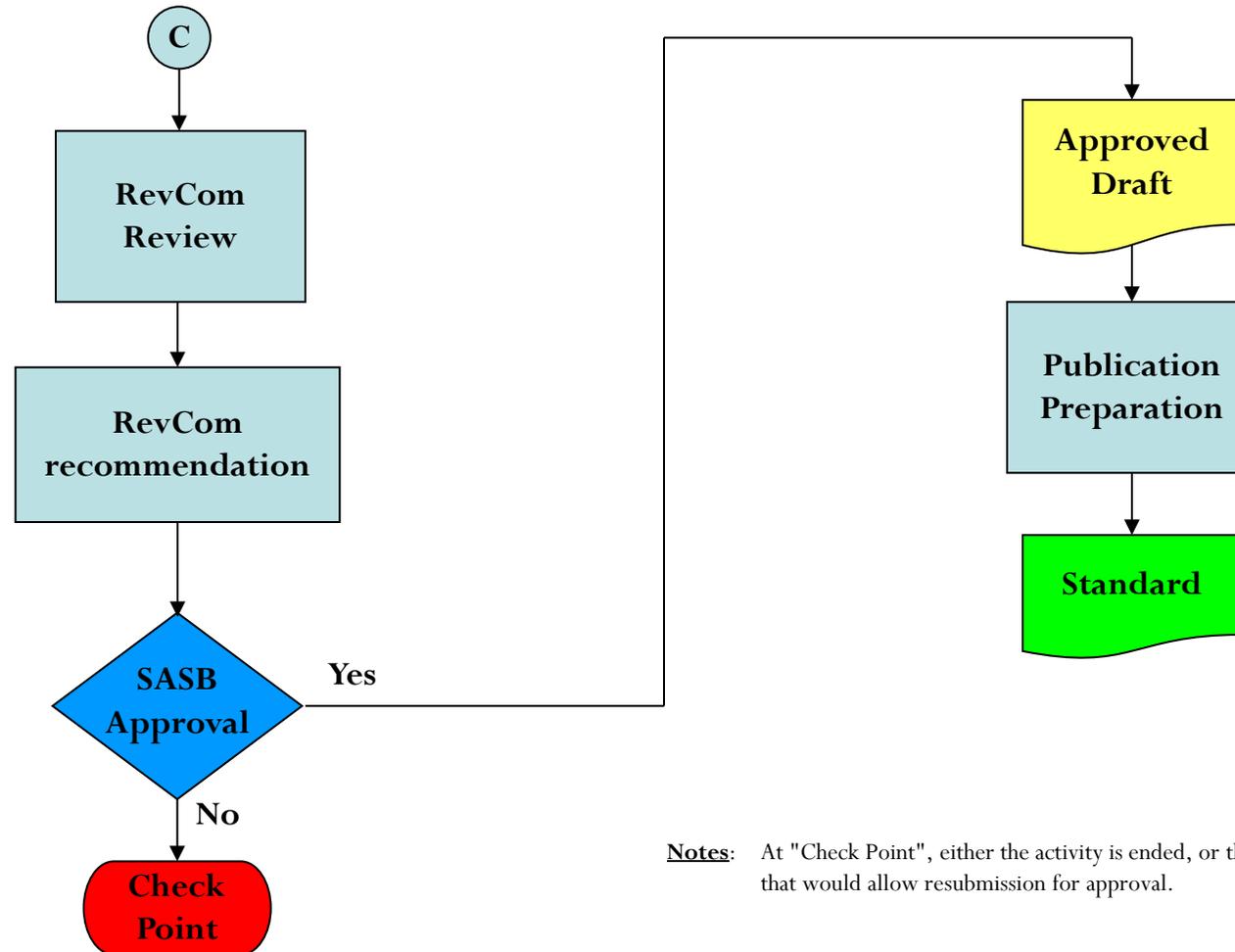
See 802.3 Operations Manual 2.6 and listed references for complete description

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



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

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.

Liaisons and Communications

- https://www.ieee802.org/3/minutes/nov24/incoming/2024-09-26_ASA_to_IEEE_Redacted.pdf
- ASA has liaised a copy of the ASA-MLE specification to the P802.3dm Task Force.
 - <https://www.ieee802.org/3/dm/private/index.html>

IEEE P802.3dm Approved Project Documents

- PAR

- https://ieee802.org/3/dm/P802.3dm_PAR.pdf

- 5 Criteria

- <https://mentor.ieee.org/802-ec/dcn/24/ec-24-0074-00-ACSD-p802-3dm.pdf>

- Objectives

- https://www.ieee802.org/3/ISAAC/public/0324/Objectives_ISAAC_01_0324.pdf

Timeline

- No accepted timeline yet

Presentations Day 1

Start Time	Presentation	Presenter	Affiliation
13h15	Agenda / Confirmation of Vice Chair	Jon Lewis	Chair / Dell Technologies
	Proposed Draft Outline	Natalie Wienckowski	IVN Solutions LLC
13h30	Automotive Cable Harness and Channel Limit	Conrad Zerna	Avivalinks Inc.
14h00	Considerations on Return Loss and Insertion Loss	Mathias Kleinwaechter	in-tech GmbH
14h20	Proposed text for 802.3dm RL & IL Limits and Shield Performance Proposal	Rich Boyer	Aptiv
	Break 15:00 – 15:30 Vancouver local		
15h30	On Channels with Poor Return Loss and Equalization Issues	Ramanjit Ahuja	Onsemi
15h50	Power over Coax and single inductor options	Mathias Kleinwaechter	in-tech GmbH
16h10	MDI RL limit proposal	Ragnar Jonsson	Marvell
16h40	BCI-Induced Noise Ingress to Coaxial MDI, Test Method and Measured Levels	Neven Pischl	Broadcom
17h10	EMI consideration and measurement.	Ky-Anh Tran	Aeonsemi Inc.
17h30	On RFI immunity and modulation	Alireza Razavi	Marvell
18h00	Recess for the day		
	all times are approximate		

all times are approximate

Presentations Day 2

Start Time	Presentation	Presenter	Affiliation
08h00	Agenda	Jon Lewis	Dell Technologies
08h15	PHY Delay Survey	William Lo	Axonne Inc.
08h35	Application level view and PHY requirements	Conrad Zerna	Avivalinks Inc.
09h15	TDD proposal	Conrad Zerna	Avivalinks Inc.
09h45	Modulation for 2.5 Gbps Data Rate: PAM4 vs PAM2	Hossein Sedarat	Ethernovia
10h15	Break		
10h40	Manchester Encoding: Differential or Not?	Hossein Sedarat	Ethernovia
11h10	Reference text for ACT modulation	Ragnar Jonsson	Marvell
12h10	Lunch		
13h15	Integration into Cameras	TJ Houck and Paul Fuller	Marvell
13h35	TDD Baseline Proposal for 802.3dm	Ahmad Chini	Broadcom
14h20	Power Spectral Density (PSD) and MDI Return Loss for TDD Baseline	Ahmad Chini	Broadcom
14h45	Benefits of Time Domain Duplexing for 802.3dm (TDD)	Kamal Dalmia	Aviva Links
15h15	Break		
	Continued Discussion on prior presentation		
15h30	Benefits and Tradeoffs of Time Division Duplexing (TDD) over Single-Wire Links	Scott Muma	Microchip Technology
16h00	Further Thoughts Regarding Timeline Considerations	Steve Gorshe	Microchip Technology

all times are approximate

Presentations Day 3

Start Time	Presentation	Presenter	Affiliation
08h00	Agenda	Jon Lewis	Dell Technologies
08h15	Missing considerations on 802.3dm	Gumersindo Veloso Cauce	BMW
08h35	Pros and Cons from OEM perspective	Kirsten Matheus	BMW AG
09h15	Motions and Straw Polls - Discussion		
10h15	Break		
10h40	Closing Business – Approve prior minutes		
12h10	Lunch		

Chartered Ad Hoc (July)

- Link segment & noise models
 - George Zimmerman – Chair
 - Natalie Wienckowski - Chair
- Use Case Ad Hoc
 - (includes error detection and reporting, latency)
 - Max Turner - Chair
- **As Needed based on project need:**
- General Ad Hoc or off-cycle interim meeting to progress the project outside of normal interim/plenary meeting cycle.
 - Single occurrence

Chartered Ad Hoc - September

- **As Needed based on project need:**
- General Ad Hoc
 - Max Turner - Chair
 - Natalie Wienckowski - Secretary
- Meeting October 10, 2024; 06h00 Pacific US time

- Hibernating ad hocs:
 - Link segment & noise models
 - Use Case Ad Hoc

Approve prior meeting minutes (Motion #)

- Move to approve:
- Task Force minutes from September 2024 Interim meeting series
- Ad Hoc Minutes:

- M:
- S:

Straw Poll

- As needed

Potential Timeline

Draft	Meeting Date
0.6	Nov 24
0.7	Jan 25
0.8	Mar 25
0.9	May 25
1	July 25
1.1	Sept 25
1.2	Oct 25
1.3	Nov 25
2	Jan 26
2.1	Mar 26
2.2	May 26
2.3	Jun 26
3	July 26
3.1	Sept 26
3.2	Oct 26
3.3	Nov 26

Motion #1

- Move
- M:
- S:
- Technical ($\geq 75\%$)
- 802.3 voters only
- Approved by unanimous consent

Next meeting

- January 802.3 interim – Phoenix, AZ USA (Jan 20-24)
 - In-person with remote access on a best effort basis
 - See <https://www.ieee802.org/3/interims/index.html> for information
 - NOTE: This will be a 5-day interim!!

Thank You!

