Agenda and General Information

IEEE P802.3cy 25 Gb/s Electrical Automotive Ethernet PHY Task Force

Steve Carlson, Chair
High Speed Design, Inc., Robert Bosch, Ethernovia
Natalie Wienckowski, Vice Chair, General Motors
August 16, 2022, teleconference interim 07h00-10h00 PDT

Agenda

- Jon Lewis, Task Force Recording Secretary
- Welcome
- Approve Agenda
- 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 and Future Meetings
- Tuesday, August 23, 2022
  - Comment resolution initial WG ballot
  - Presentations in support of comments
- Motions and Closing Business

General 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 2022 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 2022 IEEE-SA Standards Board Ops Manual 5.3.3.3)

Teleconference Decorum

- Please **MUTE** unless called on
- Use the "**Raise Hand**" function to be placed into the queue
  - Don't forget to lower your hand once recognized
- The chat can only send to "Everyone" or the WG officers
- Please observe proper decorum in meetings

Task Force Organization

- ## Task Force Organization
  - Steve Carlson, Chair
  - Natalie Wienckowski, Vice-Chair and Ad hoc Chair
  - Marek Hajduczenia, Chief Editor
  - 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
- D2.0 Comment resolution
- Future meetings timeline

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
  - Anyone in the virtual room may participate in straw polls
  - Only 802.3 voters may vote on teleconference calls
    - July 2022 IEEE 802.3 plenary meetings have been classified by 802.3 WG Chair as "electronic" for the purpose of voting.
      - See https://www.ieee802.org/3/minutes/may22/0522_802_3_interim.pdf#page=23.

- **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: A2Pz9f (23 August)
  - Zoom rename – please make sure your Zoom name has your first and last names, employer and affiliation(s). See Renaming instructions for Zoom teleconferences

Direct Vote Live

- DirectVoteLive
- https://vote.directvotelive.net/login.aspx?o=223
- If you have issues, please email Jodi Haasz <j.haasz@ieee.org>

IEEE Structure
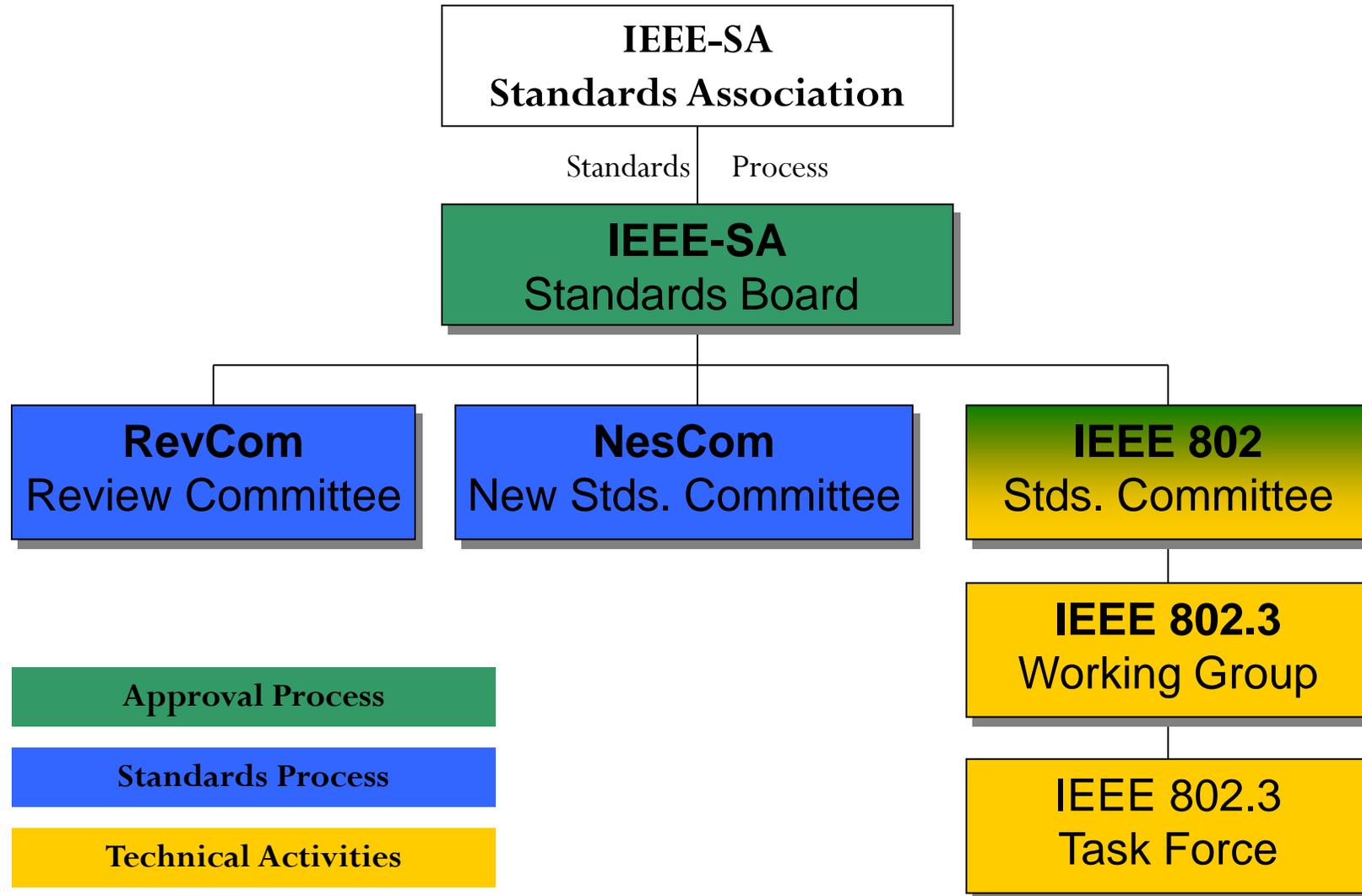
Important Bylaws and Rules

- **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 <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

IEEE SA STANDARDS ASSOCIATION

◆IEEE

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

IEEE SA STANDARDS ASSOCIATION

08 June 2021 – Slide 3

◈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

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

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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

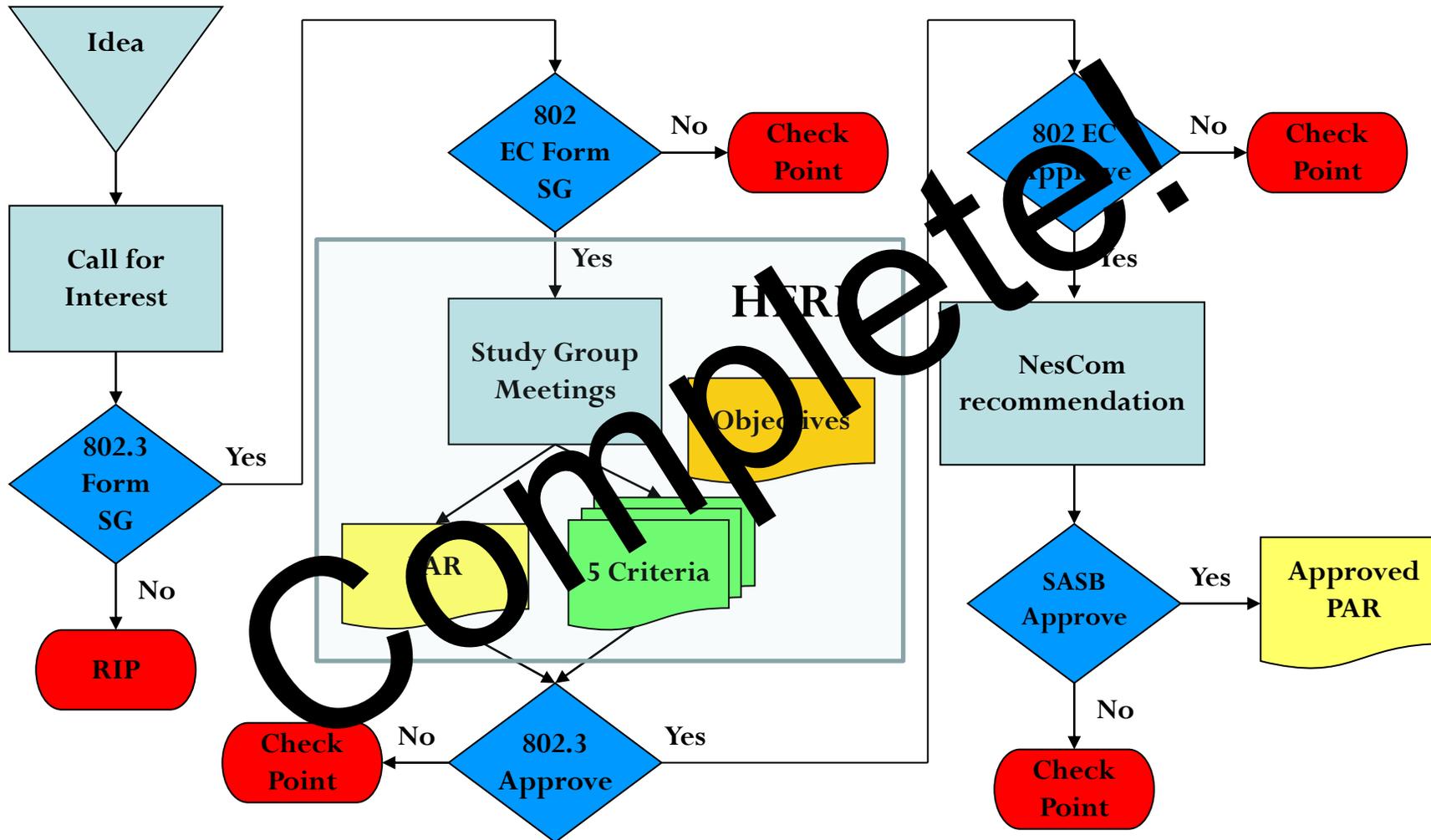- The IEEE-SA Standards Board Bylaws require that "*participants in the IEEE standards development individual process shall act based on their qualifications and experience*"

- 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

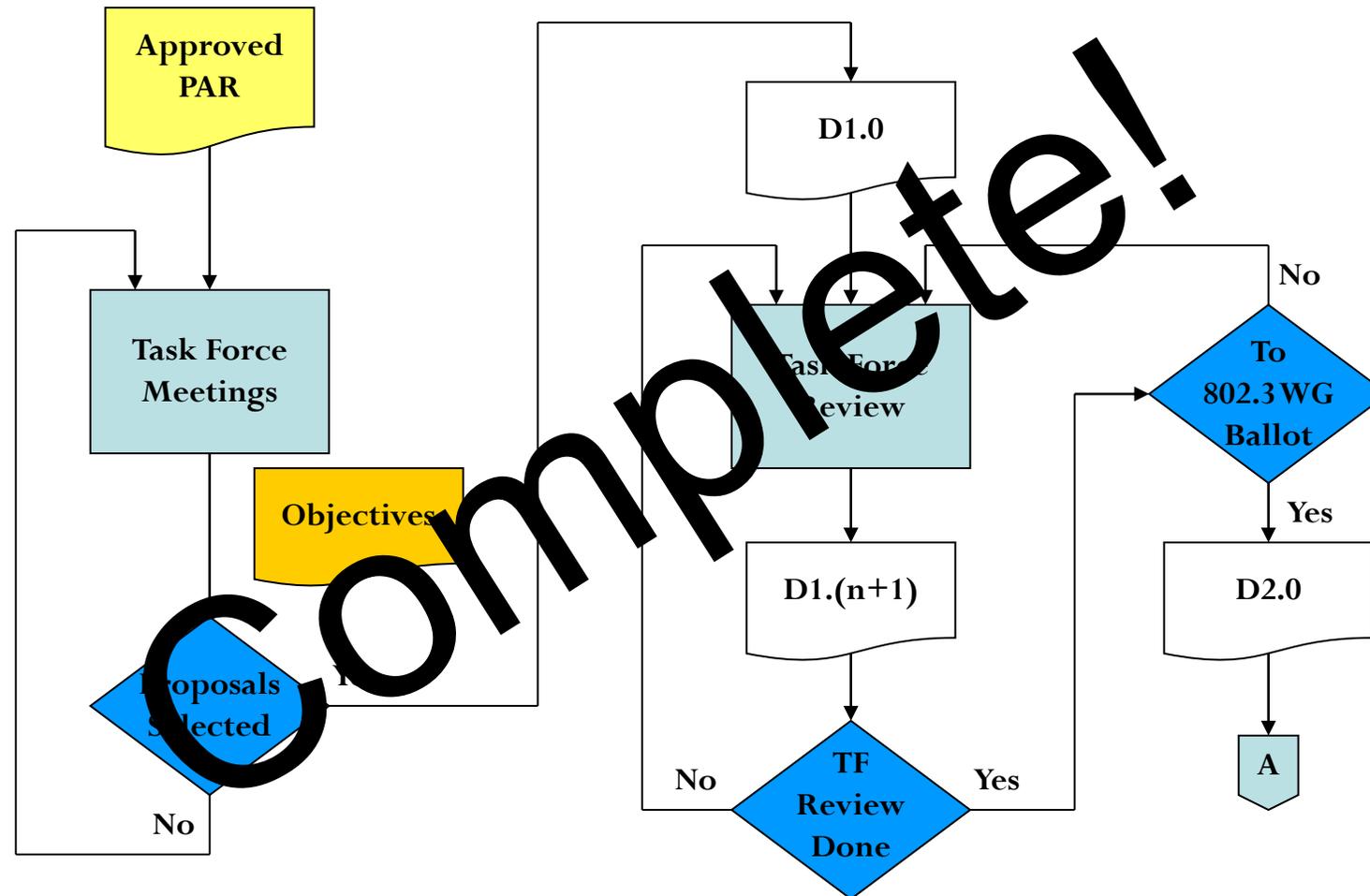# IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

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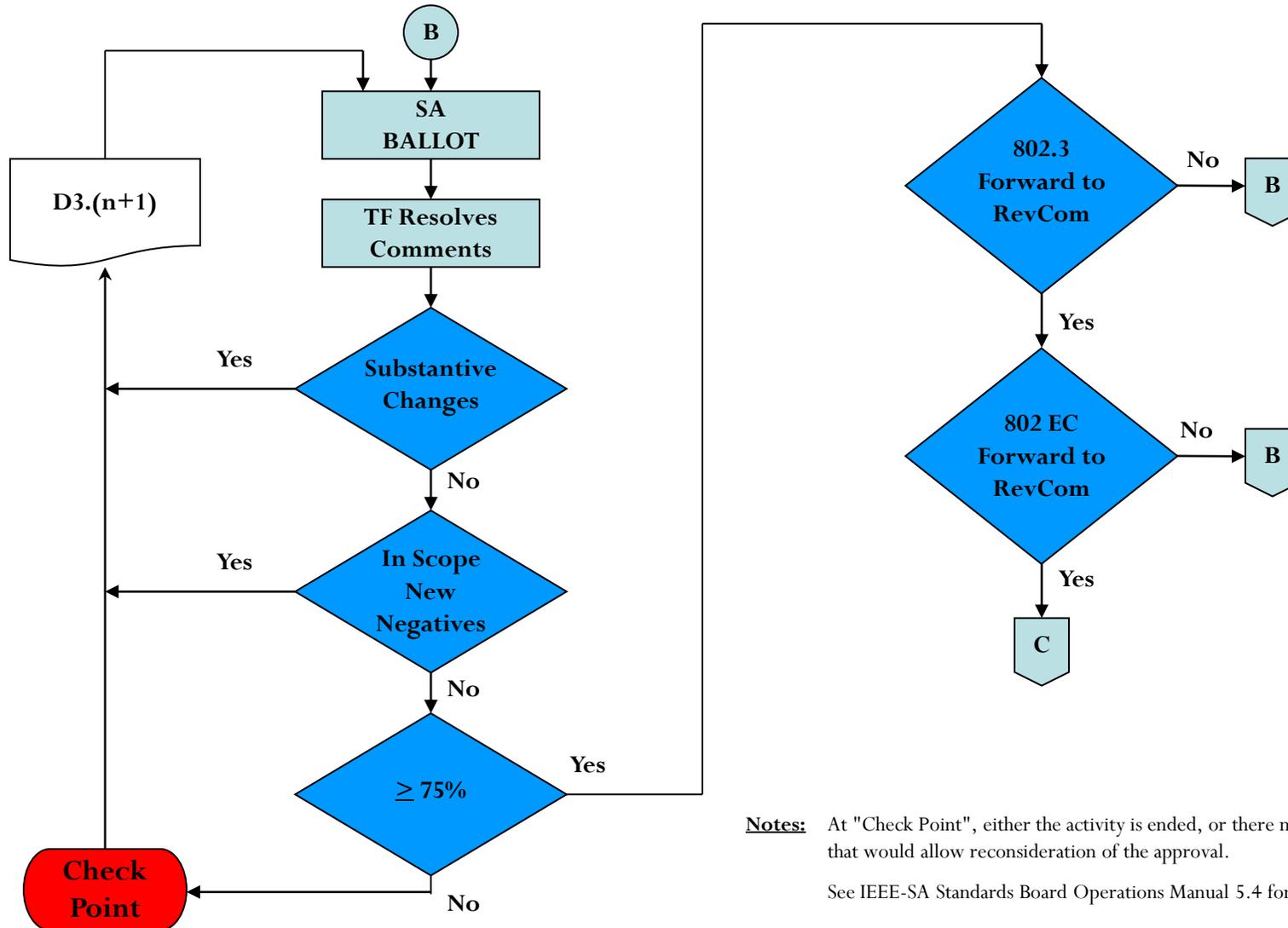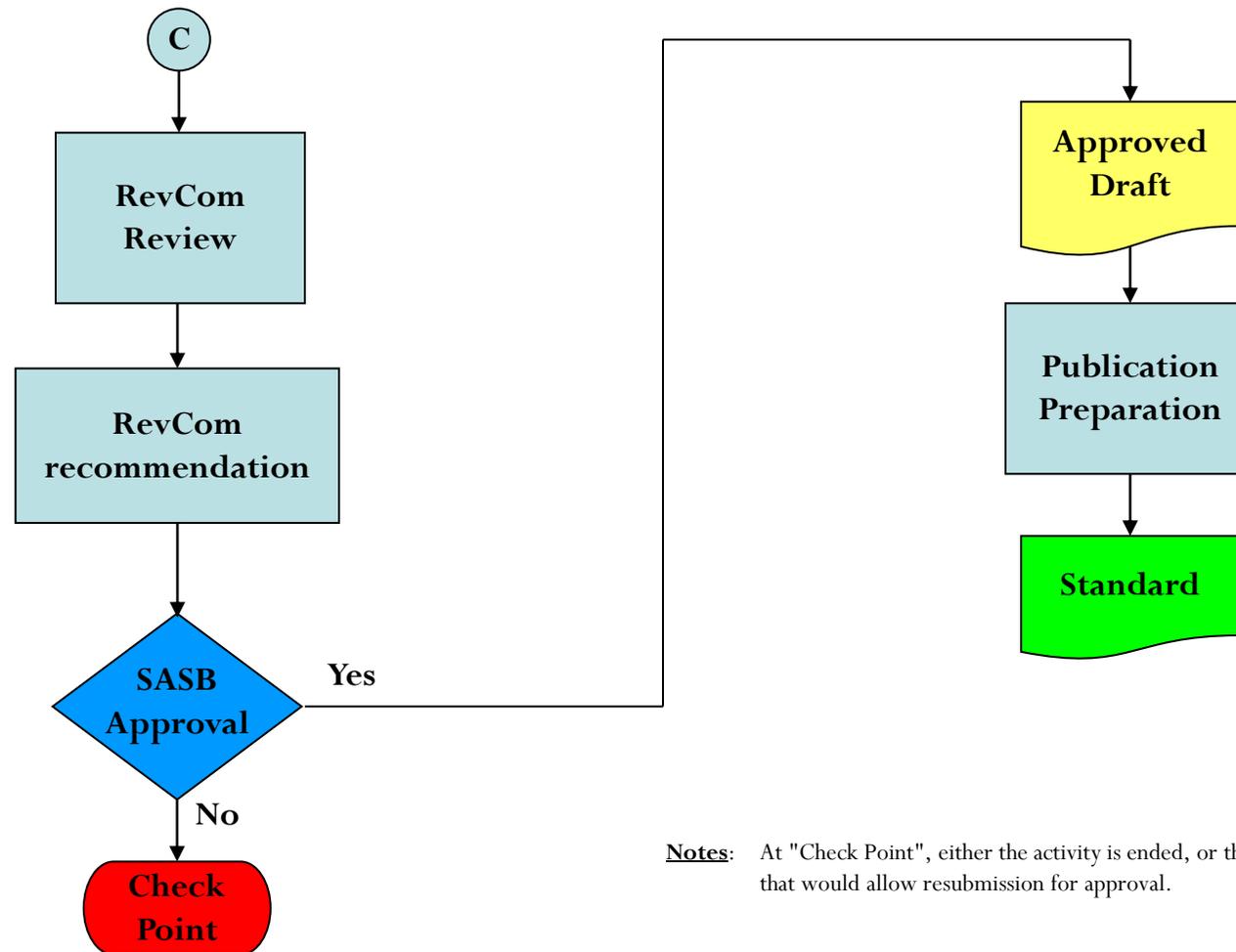
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.
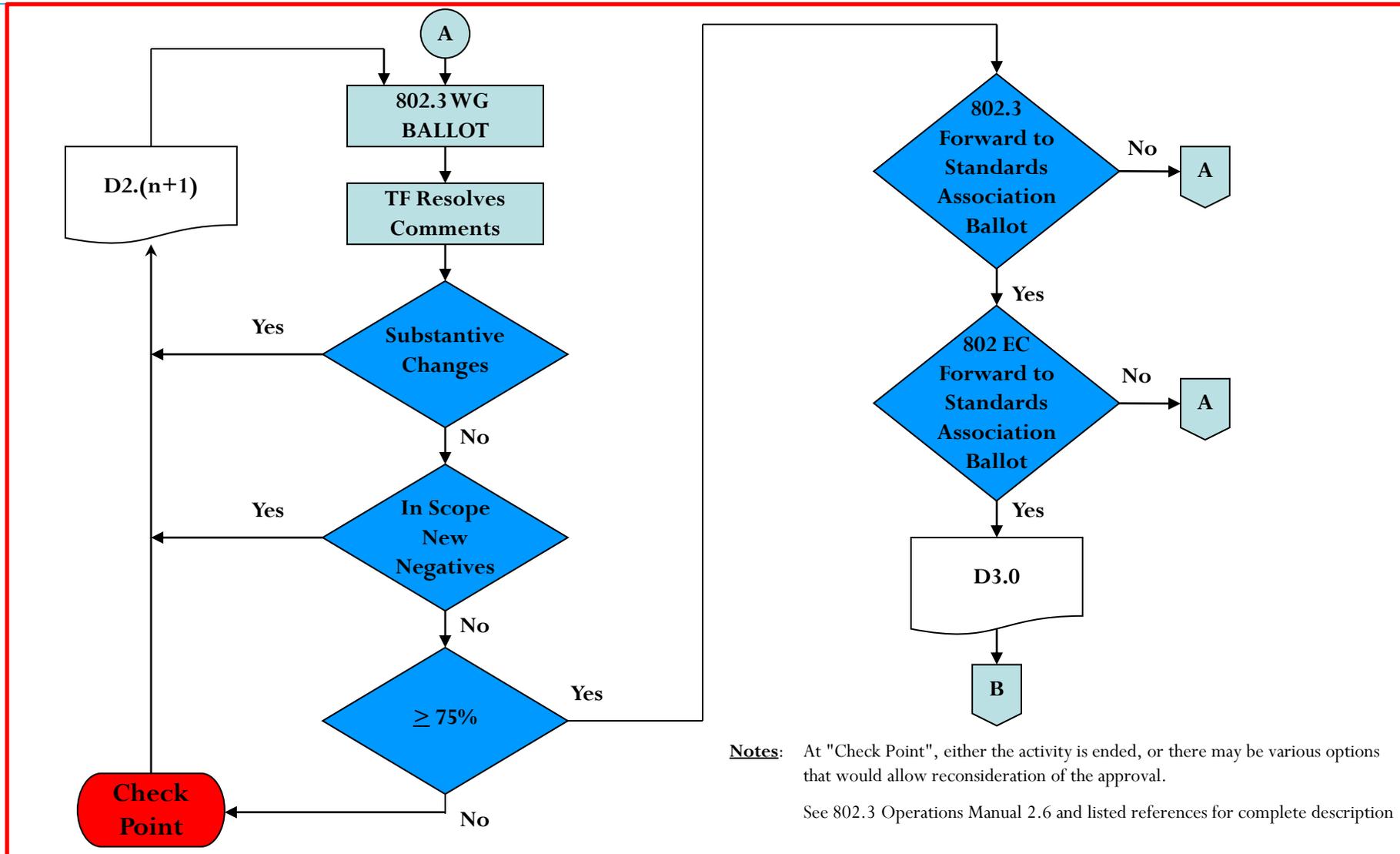
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See IEEE-SA Standards Board Operations Manual 5.4 for complete description

```
                    ( C )
                      |
                      v
         ┌────────────────────────┐                              ┌──────────────┐
         │      RevCom Review      │                              │   Approved   │
         │                         │                              │     Draft    │
         └────────────────────────┘                              └──────────────┘
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         ┌────────────────────────┐                              ┌──────────────┐
         │        RevCom           │                              │ Publication  │
         │    recommendation       │                              │ Preparation  │
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                   Point )
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Notes: At "Check Point", either the activity is ended, or there may be various options that would allow resubmission for approval.

Liaisons and Communications

- None at this time

Action Items

- To – Do List: https://ieee802.org/3/cy/todo/index.html

- P802.3cy_Meetings – Update (August)

- Comment resolution to D2.0; create D2.1 for 1st WG recirculation

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
  - https://grouper.ieee.org/groups/802/3/cy/P802d3cy_OBJ_UPDATED_APPROVED_07_14_22.pdf

WG 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

As revised June 7, 2022:

Motion #2: Move to approve the updated objectives as shown on slides 2 and 3 of https://ieee802.org/3/cy/public/may22/wienckowski_3cy_02_05_24_22.pdf.
M: Ragnar Jonsson
S: Sujan Pandey
Motion Passed by unanimous consent (Technical > 75%)

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 a 4-week or greater 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

D2.0 initial WG ballot

224 Voters
109 Approve
 12 Disapprove
 17 Abstain
138 Ballots returned

61% Response Rate (> 50% required)
12% Abstain Rate (< 30% required)
90% Approval Rate (>= 75% required)

D2.0 initial WG ballot

Voters	224					
Approve	110	**Response rate:**	**61.61%**	A = Approve	Dis w/o C	0
Disapprove with comment	11	**Approval rate:**	**90.91%**	C = Approve/Comments	Dis Raw	11
Disapprove without comment	0	**Abstain rate:**	**12.32%**	D = Disapprove		
Abstain	17			E = Abstain/Expertise	Non-voter comments	4
Returns	138	**Need to return:**	**-25**	T = Abstain/Time	Late comments:	51
Comments	398	**Need to flip:**	**-20**	O = Abstain/Other		
Comments w/ floor	453				Total:	55

D2.0 initial WG ballot

272 comments are currently in the EZ bucket, leaving 129 to be processed individually

Stats_by_Clause

Clause	E	G	T	ER	GR	TR	Open	Closed	Total
00	1	0	0	1	0	0	2	0	2
1	3	0	0	1	0	2	6	0	6
104	0	0	0	0	0	1	1	0	1
105	58	0	5	16	0	9	88	0	88
149B	1	0	0	0	0	0	1	0	1
165	100	0	97	5	0	15	217	0	217
165A	6	0	4	2	0	3	15	0	15
30	4	0	0	0	0	0	4	0	4
45	31	0	1	1	0	1	34	0	34
78	16	0	4	0	0	0	20	0	20
98	1	0	0	0	0	0	1	0	1
98B	1	0	0	0	0	0	1	0	1
FM	8	0	0	0	0	0	8	0	8
Participants	1	0	0	0	0	0	1	0	1
TOC	2	0	0	0	0	0	2	0	2
Total	**233**	**0**	**111**	**26**	**0**	**31**	**401**	**0**	**401**

Page 1 of 1

D2.0 initial WG ballot

- **Ballot and comment issues D2.0**
  - **Ballots cast by non-voters**
  - **Ballots/comments/supporting presentations not sent to the BALLOT reflector**
  - **Ballots with the wrong comment file/no comment file**
    - **If this happens well before the deadline, the commenter has time to send the correct file**
    - **If not, the commenter may be categorized as not returning a ballot or comments will be marked as "late"**
  - **Comments with incorrect clause/line numbers**
  - **Comments that don't clearly identify the issue, or ask a question**
  - **Comments that don't provide specific text in the response---the Editors will NOT guess what specific solution will satisfy the commenter if a specific change is not proposed**
  - **Comments submitted as ASCII text---it's an allowed format but wastes the Editor's time and can lead to errors**

EZ bucket

272 comments have been placed in the EZ bucket. Please send email to Natalie, Marek, and me by 3PM EDT Friday, August 19 for any comments you'd like pulled from the EZ bucket.

EZ bucket comments will be voted during the interims next week. An Excel spreadsheet file has been posted to make it easier for you to review the proposed and EZ bucket responses.

[D2.0, Excel spreadsheet with EZ bucket pulls with examples](#) (16 August 2022)
[D2.0, Excel spreadsheet with EZ bucket for your use](#) (16 August 2022)

Presentations – August 23

Presentations		
D2.0 Editor's report and comment resolution	**Marek Hajduczenia**	**Charter**
D2.1 Work Items		
P802.3cy D2.1 Work Items	**Natalie Wienckowski**	**GM**

Presentations in support of comments will be processed during comment resolution.

Motion

Motion #1: Approve the agenda as shown in
agenda_3cy_01_081622.pdf

There was no objection to approving the agenda via unanimous consent

Motion

Motion #2: **Move to accept all proposed resolutions to comments including the tag "EZ" in the comment database on P802.3cy D2.0.**

M: Natalie Wienckowski
S: Marek Hajduczenia
Technical >= 75%

Motion Passes by unanimous consent

Motion

Motion #3 **Move to instruct the Editor to create D2.1 for 1st WG recirculation from D2.0 and closed comments, with editorial license to implement.**
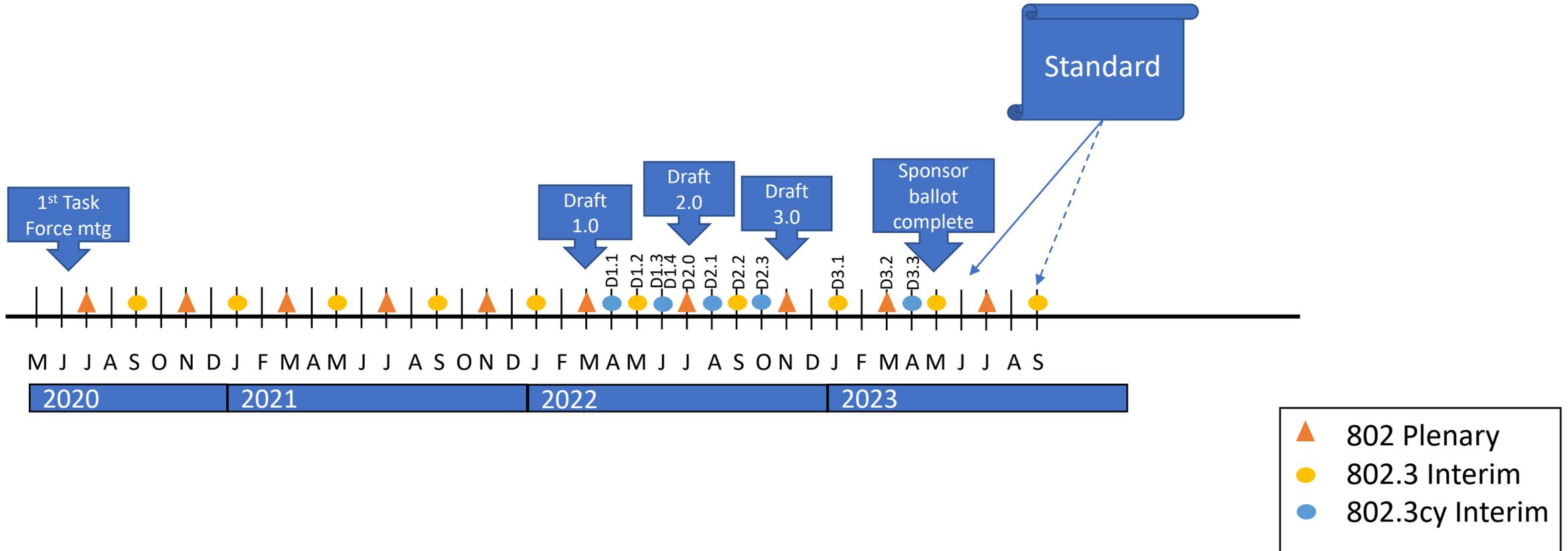
M: Natalie Wienckowski
S: Marek Hajduczenia
Technical >= 75%

Motion Passes by unanimous consent

P802.3cy Task Force Adopted Timeline June 2022

Straw Polls

Non-payment of plenary registration fees

Every attendee at any IEEE 802 virtual plenary meeting must register and pay a fee to participate.

<u>If the individual is in arrears:</u>

[1] The individual is not permitted to register for any future IEEE 802 Plenary or IEEE 802 Subgroup Interim (if registration is required).

[2] As a result of [1], the individual is not permitted to attend any portion of a technical meeting that is part of an IEEE 802 plenary session. They are also not permitted to attend any portion of a technical meeting that is part of an IEEE 802 Subgroup Interim if that IEEE 802 Subgroup Interim required registration.

50

Future Meetings

Ad hocs on July 26, August 2, and August 9.
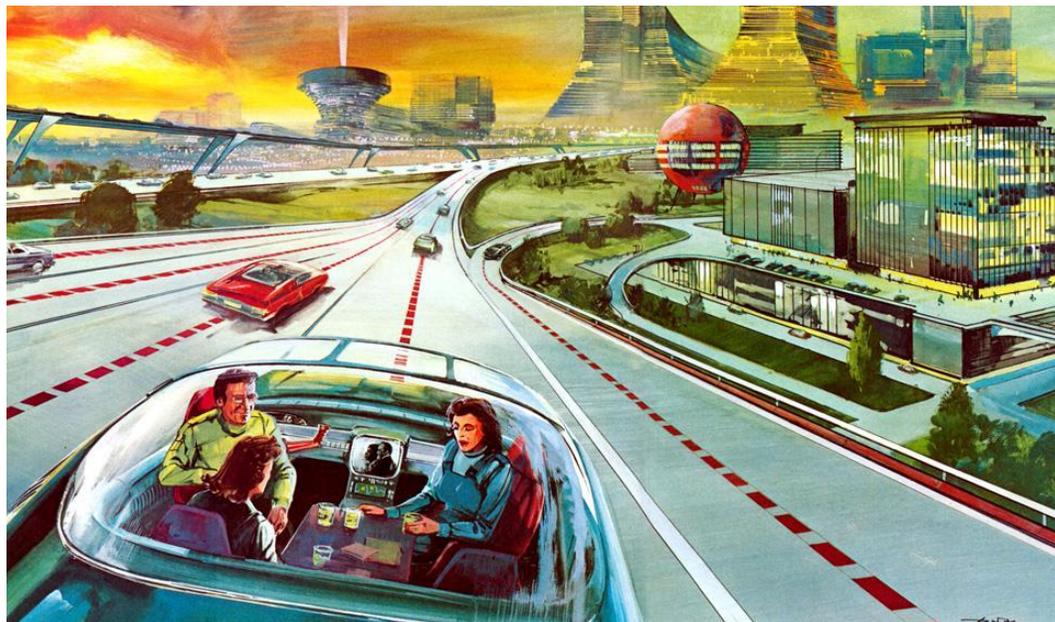
Interims for comment resolution:
~~Tuesday, August 16~~
~~Monday, August 22~~
Tuesday, August 23

Ad hoc and interim series announced soon.

Questions?

Thank you!