Agenda and General Information

IEEE P802.3df Task Force
IEEE 802 Nov 2022 Plenary

Week of Nov 14, 2022
Bangkok, Thailand

John D'Ambrosia,
Chair, IEEE P802.3df Task Force
Futurewei, U.S. Subsidiary of Huawei

Non-payment of registration fees

Every attendee at any IEEE 802 plenary meeting (Face-to-Face or Remote) 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.

IEEE P802.3df Task Force
IEEE 802.3 Nov 2022 Plenary Session

- **Agenda**
  - **Approve Agenda**
  - **Approve Minutes –**
    - **Oct 2022 Session - https://www.ieee802.org/3/df/public/22_10/minutes_3df_2210_unapproved.pdf**
  - **Decorum**
  - **Attendance**
  - **Task Force Project Information**
  - **Ground Rules**
  - **Voting / Voting Rights**
  - **Review IEEE SA Policies (http://ieee802.org/3/policies.html / included)**
    - **IEEE SA Patent Policy**
    - **IEEE SA Participation Policy**
    - **IEEE SA Copyright Policy**
  - **Liaisons Overview**
  - **Ad hocs –**
  - **Presentations (See Pages 4 – 7)**
    - **Wed am – Consider comments submitted against IEEE P802.3df and IEEE P802.3dj PARs / CSDs – Related Motions**
  - **Discussion / Straw polls / Motions**
  - **Closing Business, including Future Meetings & Liaisons**

* Note – additional slides covering procedures and IEEE-SA Policies are in Backup

Nov 2022 Session (1 of 4)

Mon	14-Nov-22			
Time	Presenter	Affiliation	Title	File Name
1:00 PM	John D'Ambrosia	Futurewei, U.S. Subsidiary of Huawei	Agenda and General Information	agenda_3df_2211
1:30 PM	Mark Gustlin	Cisco	200G/Lane AUI FEC Direction	gustlin_3df_01_2211
2:00 PM	Adee Ran	Cisco	Analysis of PMA muxing options for 200G/lane signaling	ran_3df_01_2211
2:30 PM	Adee Ran	Cisco	Symbol-muxing PMA for 200 Gb/s per lane signaling - towards a PMA baseline proposal	ran_3df_02_2211
3:00 PM	Break			
3:20 PM	Yuchun Lu	Huawei	End-to-end FEC for 200G per lane based 200GbE, 400GbE, 800GbE and 1.6TbE	lu_3df_01_2211
3:50 PM	Will Bliss	Broadcom	Proposal of Inner Code for 200 Gb/s per Lambda IM-DD Optical PMD	bliss_3df_01_2211
4:20 PM	Arash Farhood	Marvell	Generic Overview of various FEC Architecture for 200Gb/s per Lane PMD	farhood_3df_01_2211
4:50 PM	Kechao Huang	Huawei	Further Consideration on the Concatenated FEC for 800G FR4 and LR4	huang_3df_01_2211
5:20 PM	Xiang He	Huawei	FEC Performance for 200 Gb/s per Lane Optical PHY and Interoperating	he_3df_01_2211
6:00 PM	Recess for Day			

Nov 2022 Session (2 of 4)

All times and order listed are subject to change.

Tues	15-Nov-22			
Time	Presenter	Affiliation	Title	File Name
8:00 AM	John D'Ambrosia	Futurewei, U.S. Subsidiary of Huawei	Chair's Opening Comments	
8:05 AM	Ali Ghiasi	Ghiasi Quantum / Marvell	Supporting 200G PMDs with Multiple AUIs and Concatenated FEC	ghiasi_3df_01_2211
8:35 AM	Arash Farhood	Marvell	Concatenated SFEC proposal for 200Gb/s per Lane IM-DD Optical PMD	farhood_3df_02_2211
9:05 AM	Kent Lusted	Intel	Higher Loss 200G/lane AUI C2M Specification Baseline Thoughts	lusted_3df_02_2211
9:35 AM	Kent Lusted	Intel	XSR Medium Loss AUI Specification Proposal	lusted_3df_03_2211
10:05 AM	Break			
10:25 AM	Rich Mellitz	Samtec	COM 3.9 Update	mellitz_3df_01_2211
11:25 AM	Liav Ben Artsi	Marvell	An Updated, High-Radix Switch Oriented, Fitted COM PKG Model	artsi_3df_01_2211
12:00 PM	Lunch			
1:00 PM	Nathan Tracy	TE Connectivity	Characteristics of a 224Gbps Chip to Module Channel with Various Host Architectures	tracy_3df_02_2211
1:30 PM	Matt Brown	Huawei	Considering advanced signal processing for assessing electrical channel performance	brown_3df_02_2211
2:00 PM	Hossein Shakiba	Huawei	A path toward incorporating the advanced signal processing in electrical channel performance assessment	shakiba_3df_01_2211
2:45 PM	Mike Li	Intel	A 212 Gbps-PAM4 High-Loss Chip-to-Module Channel and Its Characteristics	li_3df_01_2211
3:10 PM	Break			
3:40 PM	Mike Li	Intel	212 Gbps-PAM4 Chip-to-Module Link Simulation and Analysis with a High-Loss Channel	li_3df_02_2211
4:05 PM	Tobey P.-R. Li	MediaTek	Power considerations for 200G/L AUI	prli_3df_01_2211
4:35 PM	Leon Bruckman	Huawei	Exploration feasbility of 200 Gbps/Lane using Diff PAM4 and SE PAM4	bruckman_3df_01_2211
5:05 PM	Nathan Tracy	TE Connectivity	Update to tracy_3df_01a_2207: Characteristics of a Passive Direct Attach Copper Cable (DAC) Assembly in CR Channels with Various Host Architectures	tracy_3df_01_2211
5:05 PM	Potential Time available for Discussion / Strawpolls			
6:00 PM	Recess for Day			

All times and order listed are subject to change.

Wed	16-Nov-22			
Time	Presenter	Affiliation	Title	File Name
8:00 AM	John D'Ambrosia	Futurewei, U.S. Subsidiary of Huawei	Chair's Opening Comments	
8:05 AM	John D'Ambrosia	Futurewei, U.S. Subsidiary of Huawei	Summary of Comments Submitted Against IEEE P802.3df and IEEE P802.3dj PARs	dambrosia_3df_03_2211
8:35 AM	Motions - IEEE P802.3df / P802.3dj Comments Response			
9:05 AM	Guangcan Mi	Huawei	Baseline specifications of optical PMDs based on 200G/lane for 500m and 2km	mi_3df_02_2211
9:25 AM	Greg D. Le Cehminant	Keysight	Considerations for TECQ and TDECQ 200Gb/s transmitter lane specification and measurement	lecheminant_3df_01_2211
10:00 AM	Break			
10:20 AM	Chris Cole	Coherent/II-VI	Update to Modern SMF Parameters for use in Calculating PMD Penalties	cole_3df_02_2211
10:50 AM	Earl Parsons	CommScope	Statistical approach to chromatic dispersion	parsons_3df_01_2211
11:10 AM	Maxim Kuscherov	Huawei	Further discussion of DGD penalty and specification for 800G LR4	kuscherov_3df_01_2211
12:00 PM	Break			
1:00 PM	Roberto Rodes	Coherent	Towards an 800G-LR4 IMDD specification consensus - Nov 2022 Update	rodes_3df_01_2211
1:30 PM	Frank Chang	Source Photonics	Relative Cost Analysis on IM-DD vs Coherent for 800G 10km SMF Optics	chang_3df_01_2211
2:00 PM	James Harley	Ciena	Coherent Laser Specifications and Control for 800G 10km application	maniloff_3df_01_2211
2:30 PM	Mike Sluyski	Cisco	The challenges for a 10km PMD @ 800G	williams_3df_01_2211
3:00 PM	Break			
3:30 PM	Potential Time available for Discussion / Strawpolls			
6:00 PM	Recess for Day			

Nov 2022 Session (4 of 4)

All times and order listed are subject to change.

Time	Presenter	Affiliation	Title	File Name
8:00 AM	John D'Ambrosia	Futurewei, U.S. Subsidiary of Huawei	Chair's Opening Comments	
8:10 AM	Discussion / Strawpolls / Motions			
10:00 AM	Break			
10:20 AM	Matt Brown	Huawei	P802.3df Chief Editor's Report	brown_3df_01_2211
10:35 AM	John D'Ambrosia Mark Nowell Mark Gustlin Kent Lusted	Futurewei, U.S. Subsidiary of Huawei Cisco Cisco Intel	IEEE P802.3dj – Moving Forward	dambrosia_3df_01_2211
11:05 AM	Closing Business (including Liaison)			dambrosia_3df_02a_2211
12:00 PM	Adjourn			

Goals for the Week

- **Respond to comments submitted against submitted PARs**
  - **Modified IEEE P802.3df**
  - **Proposed IEEE P802.3dj**
- **Consider all technical presentations**
- **Consider received liaisons**

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)

In-Person Decorum

- **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
- **Do not sign into the teleconference**
- **Please line up at the floor mic(s) to join the queue**
- **Please don't speak from your seat—you won't be heard on the teleconference**
- **Please observe proper decorum in meetings—no sidebar conversations**

Teleconference Decorum

- Please **MUTE** unless called on
- Use the chat window to request getting into the queue
- **The chat can only send to "Everyone" or the WG officers**
- DO NOT TURN VIDEO ON
- **Please observe proper decorum in meetings**

Attendance

■ **All attendees must register their attendance via IMAT**

  – **IMAT –**
    ▪ **Tutorial - http://ieee802.org/3/minutes/attendance_procedures.pdf**
    ▪ **Access details**
      – **URL: http://imat.ieee.org/**
      – **802.3 Password – to be given out by chair at meeting**

■ **Face-to-face attendees**
  – **A sign-in book will be passed around for recording attendance in meetings.**
  – **The chair will only confirm individuals who sign-in this book if they forget to record their IMAT attendance.**

■ **Remote attendees**
  – **Please be sure to sign-in with your name / affiliation information**
  – **Zoom attendance will be used to identify remote attendance as well.**

IEEE P802.3df Task Force Project information

- **Organization**
  - **John D'Ambrosia, Chair, IEEE P802.3df Task Force**
  - **Mark Nowell, Vice-Chair, IEEE P802.3df Task Force; Chair, Optics Track**
  - **Matt Brown, IEEE P802.3df Chief Editor**
  - **Mark Gustlin, Chair, Architecture and Logic Track**
  - **Kent Lusted, Chair, Electrical Track**

- **Task force web and reflector information:**
  - **Home page: https://www.ieee802.org/3/df/index.html**
  - **Reflector Info - https://www.ieee802.org/3/df/reflector.html**
    - **TF Reflector: stds-802-3-b400g@listserv@ieee.org**
    - **Logic Reflector: stds-802-3-b400g-logic@listserv@ieee.org**
    - **Optical Reflector: stds-802-3-b400g-optx@listserv@ieee.org**
    - **Electrical Reflector: stds-802-3-b400g-elec@listserv@ieee.org**

- **Project Documentation –**
  - **PAR : https://www.ieee802.org/3/df/proj_doc/IEEE_P802.3df_PAR_11122021.pdf**
  - **CSD: https://mentor.ieee.org/802-ec/dcn/21/ec-21-0306-00-ACSD-p802-3df.pdf**
  - **Objectives: https://www.ieee802.org/3/df/proj_doc/objectives_P802d3df_211118.pdf**

- **P802.3df TF meeting information may be found on:**
  - **Public page: https://www.ieee802.org/3/df/public/index.html**
  - **802.3 Calendar: https://www.ieee802.org/3/calendar.html**
-

Ground Rules

◲ **Based upon IEEE 802.3 Rules**
- **Foundation based upon Robert's Rules of Order**
- **Anyone in the room may speak**
- **Anyone in the room may vote on straw polls, but we have to follow 802.3 Voting rules**

◲ **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**

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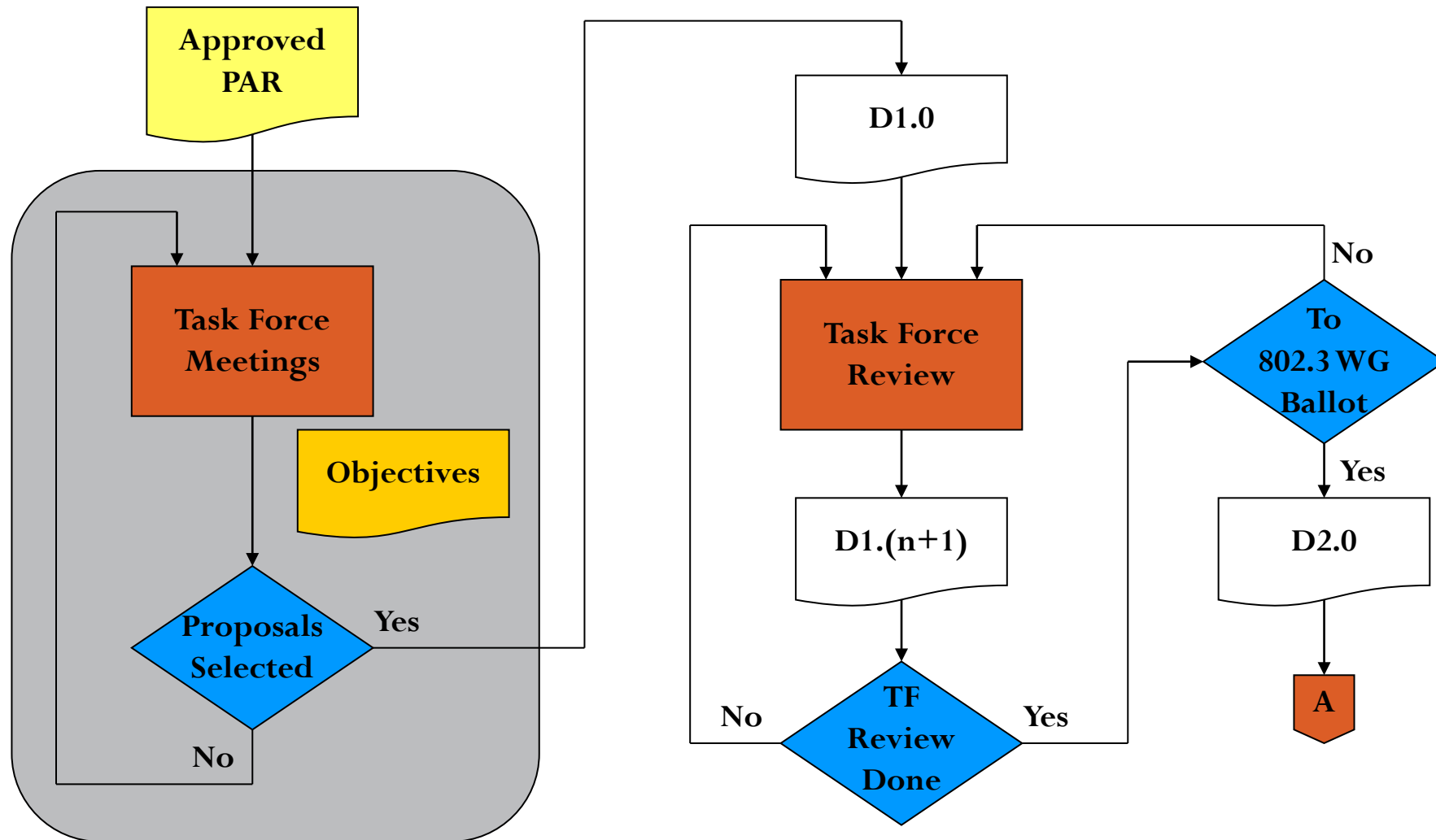
Voting

- July 2022 IEEE 802.3 Task Force Meeting has 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.

- Reference: Excerpt from Section 3.4.2, IEEE 802.3 Operations Manual
  - http://www.ieee802.org/3/rules/P802_3_rules.pdf

  There are two type of votes in the TF; votes on motions and votes in straw polls.

  In face-to-face meetings where a TF is operating with membership rules for voting (see 3.3) only the TF members may make and vote on motions. In face-to-face meetings where membership rules are not in force all TF participants may make and vote on motions, subject only to the provision that they believe that they are qualified to vote on the matter before the TF. **Electronic meetings that will consider motions shall be approved by the WG Chair prior to the meeting announcement. In such meetings only IEEE 802.3 Working Group members may make and vote on motions. If a motion is not approved by unanimous consent it shall be taken as a roll call vote**

  In all cases, regardless of any membership rules that may or may not be in force, all participants who feel qualified may participate in a straw poll

- IEEE 802.3 Requirements for Working Group voting membership – https://www.ieee802.org/3/rules/member.html

Voting

◻ Straw Polls
  - F2F attendees – traditional hand-count
  - Remote attendees vote via zoom straw poll
  - Tallies from both will be added for final count

◻ Motions
  - Chair will see if there is unanimous consent by 802.3 voters
  - If there is NOT unanimous consent, then roll call vote
    - All 802.3 voters only
    - All attendees vote via Direct Vote Live

Review of IEEE SA Policies

- **Email reminder (https://www.ieee802.org/3/B400G/email/msg00520.html) sent to Task Force Reflector reminding all to review and be familiar with following policies**
  - **Patent Policy**
  - **Copyright Policy**
  - **Participation**
- **See Backup for slides**

Liaisons (As of 08 Nov)

- OIF to IEEE 802.3: 800ZR/800LR IA Project Update - https://www.ieee802.org/3/df/public/22_09/OIF_liaison_letter_IEEE803.2_800LR_29Aug22_Redacted.pdf

- Proposed response for 802.3df – https://www.ieee802.org/3/df/public/22_11/dambrosia_3df_02a_2211_Redacted.pdf

Ad Hocs

Announcement - https://www.ieee802.org/3/B400G/email/msg00257.html

1. **Architecture and Logic Ad hoc – Mark Gustlin, Ad Hoc Chair**

    Charter: The Architecture and Logic Ad Hoc is chartered to address the following:

    1) Develop terminology and definitions for terms related to architecture, including but not limited to FEC Architecture, FEC Scheme, End-to-end FEC, Segmented FEC, Concatenated FEC. Draft definitions to be presented to Task Force at May 2022 session.

    2) Act as forum to discuss architectural requirements and consider proposals related to PCS, FEC, and PMA logic sublayers.

2. **Electrical Ad Hoc – Kent Lusted, Ad Hoc Chair**

    Charter: The Electrical Ad Hoc is chartered to address the following:

    1) Act as forum to discuss and consider technical proposals and contributions:

        a. Related to electrical interfaces and electrical PMD sublayers

        b. Related to logic PCS, FEC, and PMA sublayers that may impact electrical interfaces and electrical PMD sublayers

        c. Electrical interfaces and electrical PMD nomenclature

    2) Provide inputs based on electrical interfaces and electrical PMD sublayers into any relevant ad hocs

3. **Optics Ad Hoc – Mark Nowell, Ad Hoc Chair**

    Charter: The Optical Ad Hoc is chartered to address the following:

    1) Act as forum to discuss and consider technical proposals and contributions:

        a. Related to optical PMD sublayers

        b. Related to logic PCS, FEC, and PMA sublayers that may impact optical PMD sublayers

        c. Optical PMD nomenclature

    2) Provide inputs based on optical PMDs into any relevant ad hocs

Future Meetings (Task Force)
See https://www.ieee802.org/3/df/public/index.html

- **IEEE 802.3df Dec 2022 Session**
  - Weeks of 5 – 9 Dec , and December 12 - 16, 2022
  - [Call for Presentations](#), Due Date 28 Nov 2022 AoE
    6 Dec, 9am to 1pm, ET, [Meeting Access Info](#)
    7 Dec, 9am to 1pm, ET, [Meeting Access Info](#)
    8 Dec, 9am to 1pm, ET, [Meeting Access Info](#)
    13 Dec, 9am to 1pm, ET, [Meeting Access Info](#)
    14 Dec, 9am to 1pm, ET, [Meeting Access Info](#)
    15 Dec, 9am to 1pm, ET, [Meeting Access Info](#)

- IEEE 802.3 Jan 2023 Session
  - Week of 16 Jan 2023

Future Ad hoc Meetings

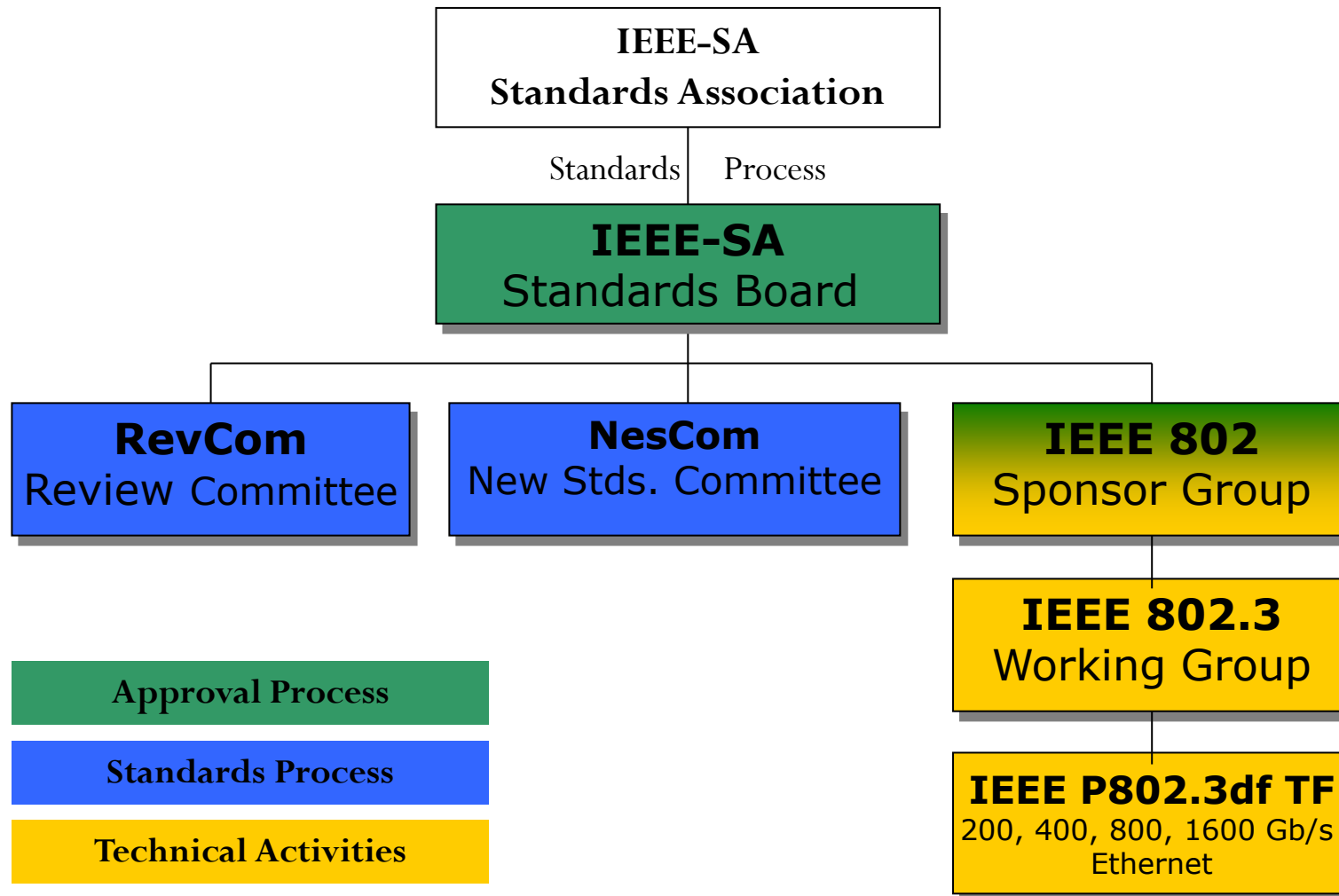**None currently scheduled**

THANK YOU!

BACKUP

IEEE P802.3df Task Force Organization

	Leadership	Editorial Team
Task Force	John D'Ambrosia, Chair Mark Nowell, Vice-Chair	Matt Brown, Chief Editor
Logic Track	Mark Gustlin, Chair	Gary Nicholl, Lead Editor
Optics Track	Mark Nowell, Chair	Tom Issenhuth, Lead Editor
Electrical Track	Kent Lusted, Chair	Adee Ran, Lead Editor

The Role of the Chair / Vice Chair

- **Per the IEEE 802.3 Ethernet WG Operations Manual (http://www.ieee802.org/3/rules/P802_3_rules.pdf)**

  - **Per 3.4 - Operation of the Task Force**

    - **The operation of the TF has to be balanced between democratic procedures that reflect the desires of the TF members and the TF Chair's responsibility to produce a draft standard, recommended practice, or guideline in a reasonable amount of time for review and approval by the WG. Robert's Rules of Order shall be used in combination with these operating rules to achieve this balance.**

  - **The full responsibilities of the chair are specified in 3.4.3 Task Force Chair's Responsibilities.**

  - **The Role of the Vice Chair is specified in 3.2 –**

    - **There may be a TF Vice-Chair. A TF Vice-Chair carries out the TF Chair's duties if the TF Chair is temporarily unable to do so or chooses to delegate specific duties.**

- **Reminders –**

  - **We are a contribution driven organization.   It should not be assumed by anyone that work will just get done without contributions to drive it. Areas not moving forward will be brought to the attention of the Task Force for consideration on how to address.**

  - **Individual standards activities within the WG are, at the discretion of the WG, carried out by Task Forces (TF) operating under, and reporting to, the WG.**

IEEE Structure


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                    ┌─────────────────────┐
                    │       IEEE-SA       │
                    │ Standards Association│
                    └─────────────────────┘
                       Standards │ Process
                    ┌─────────────────────┐
                    │       IEEE-SA       │
                    │   Standards Board   │
                    └─────────────────────┘
```

IEEE-SA
Standards Association

Standards | Process

IEEE-SA
Standards Board

RevCom
Review Committee

NesCom
New Stds. Committee

IEEE 802
Sponsor Group

IEEE 802.3
Working Group

IEEE P802.3df TF
200, 400, 800, 1600 Gb/s
Ethernet

Approval Process

Standards Process

Technical Activities

Important Bylaws, Rules, and References

- **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

- **"Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy"**
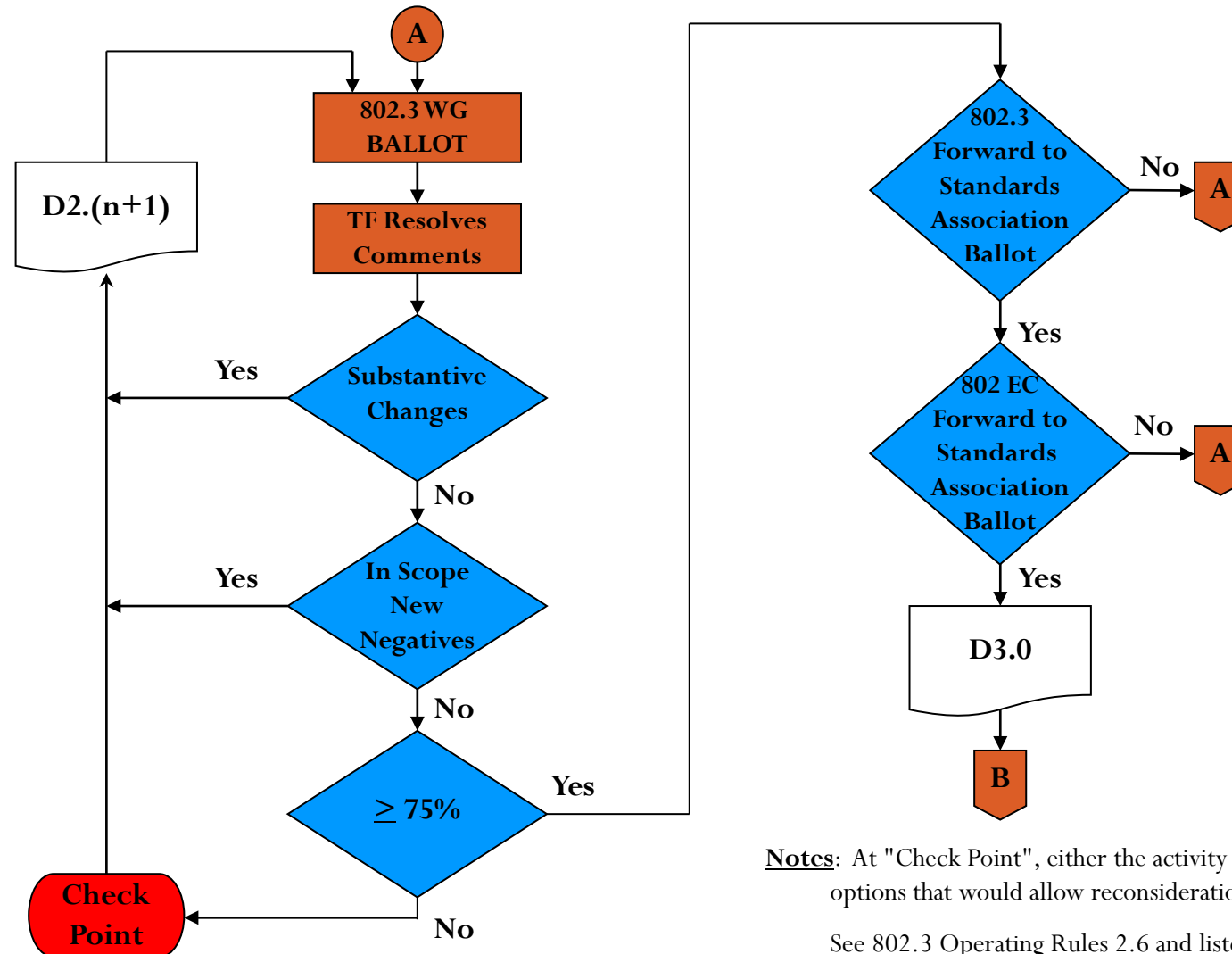 **http://standards.ieee.org/develop/policies/antitrust.pdf**
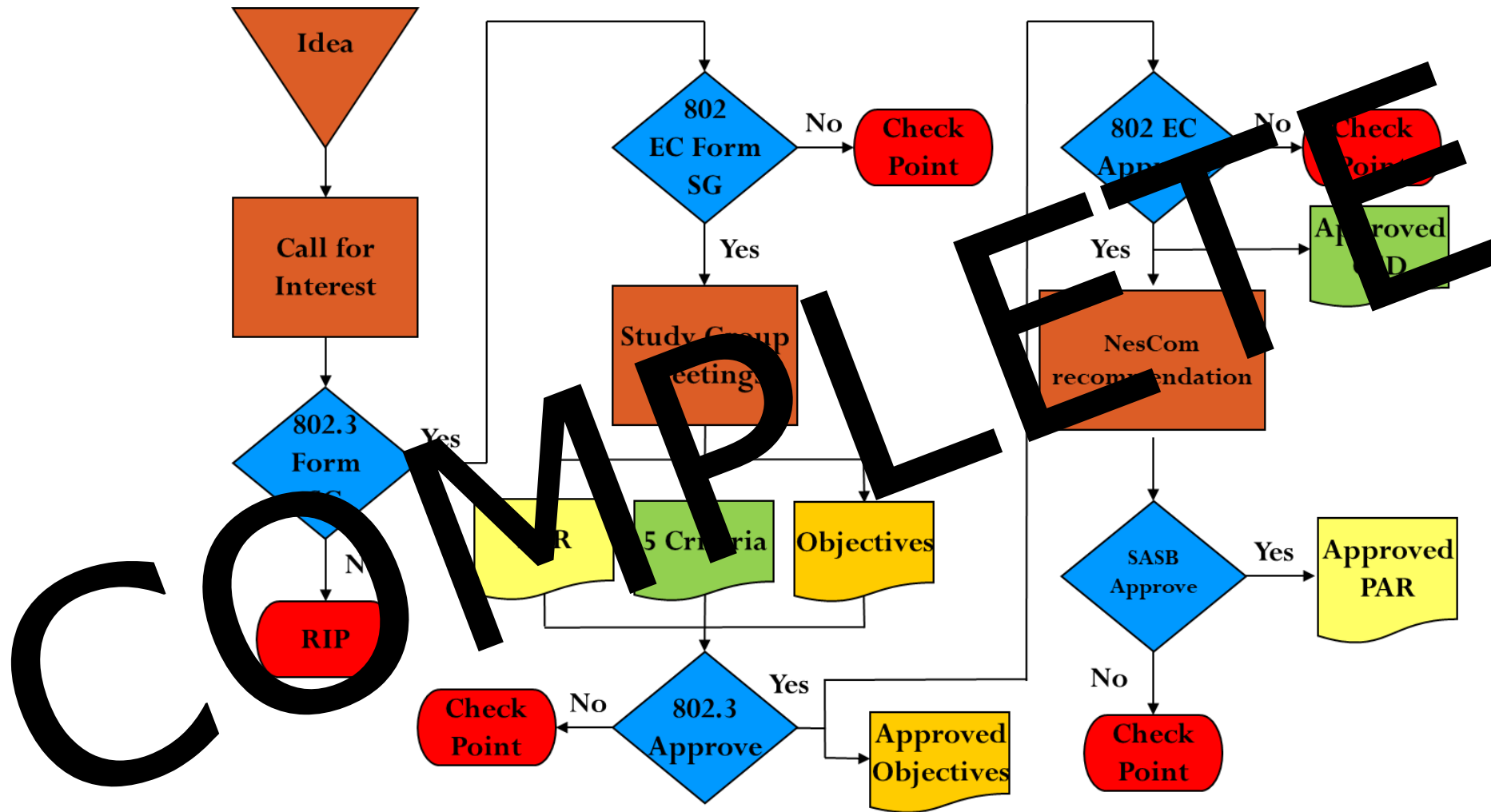
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

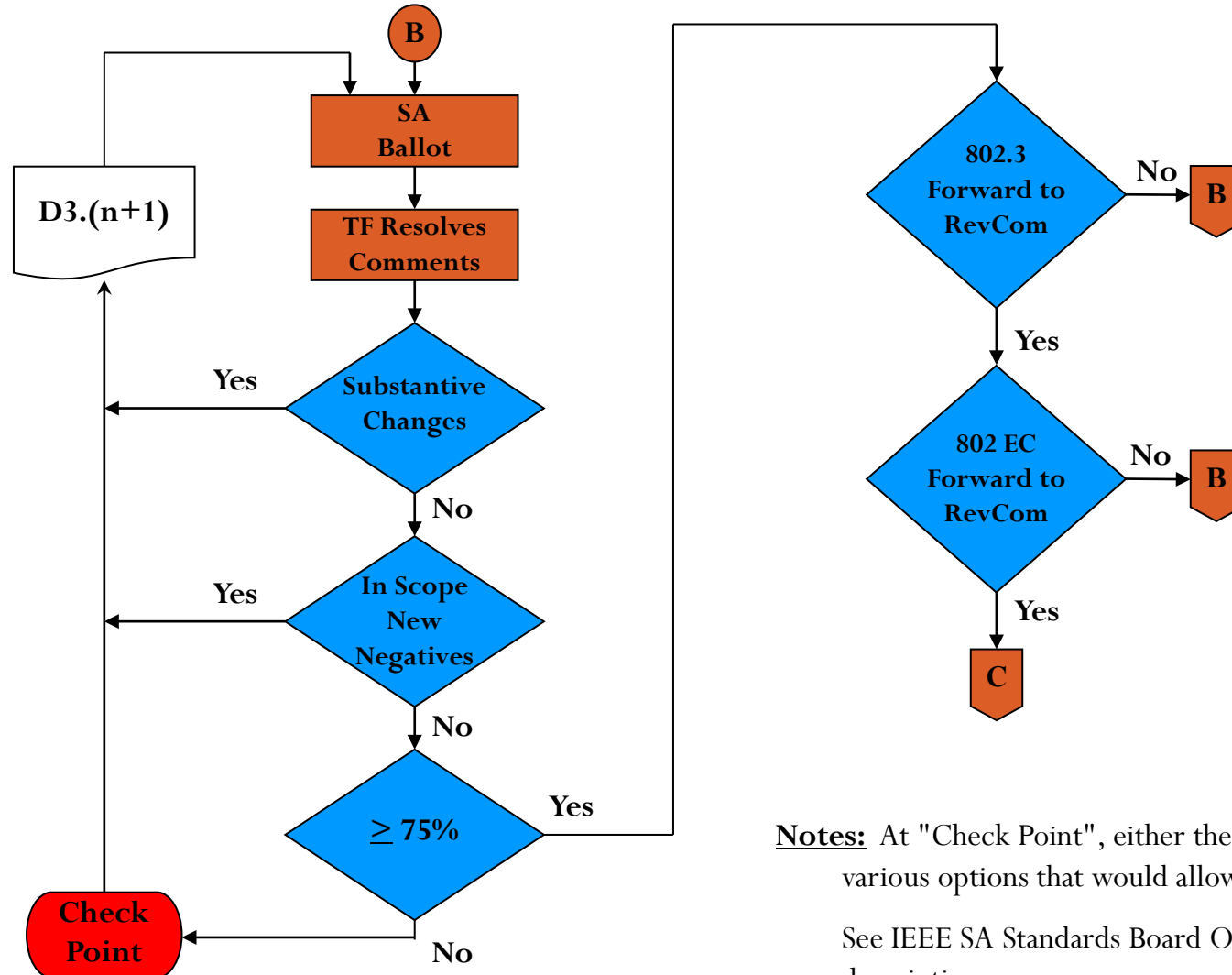# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase
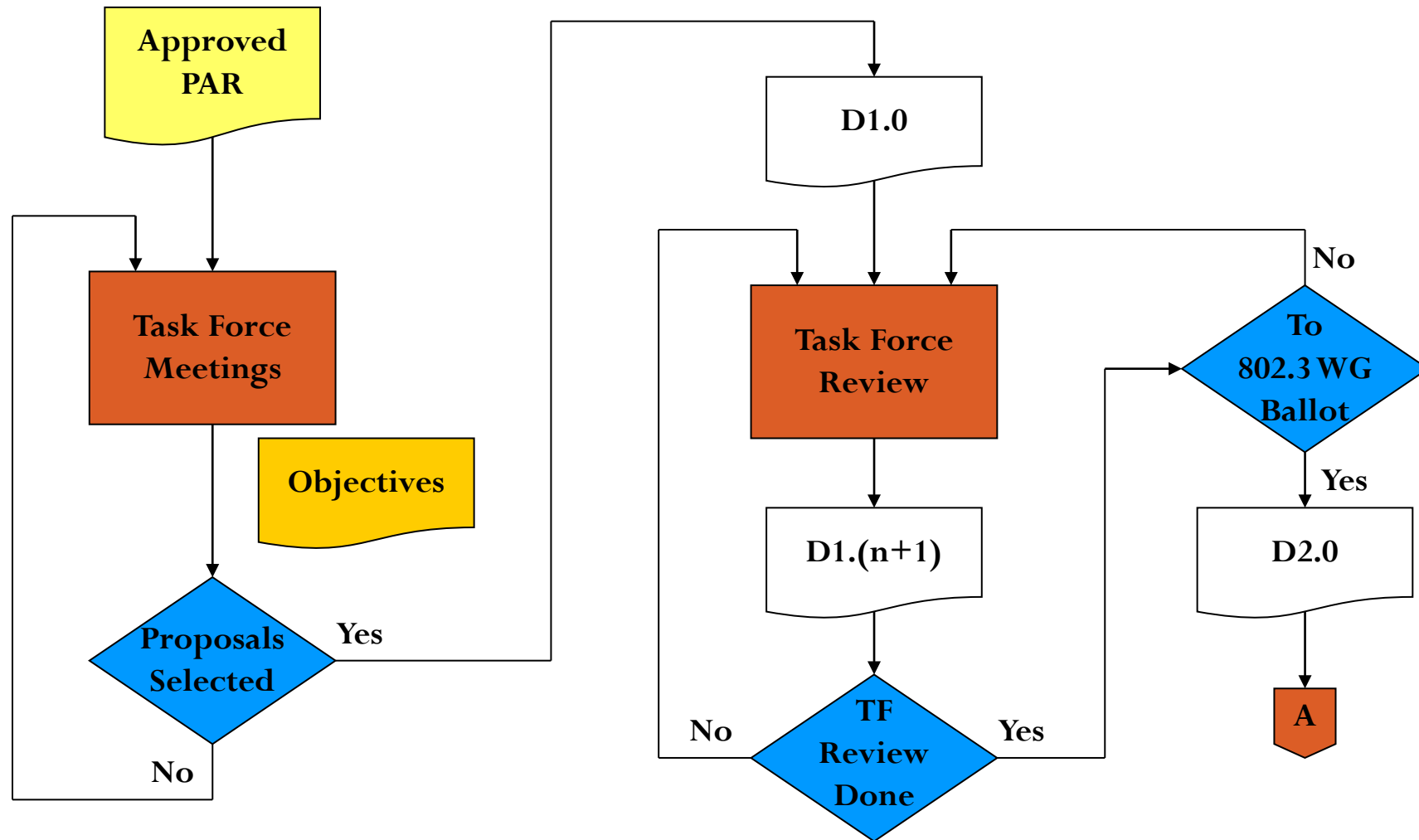
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.
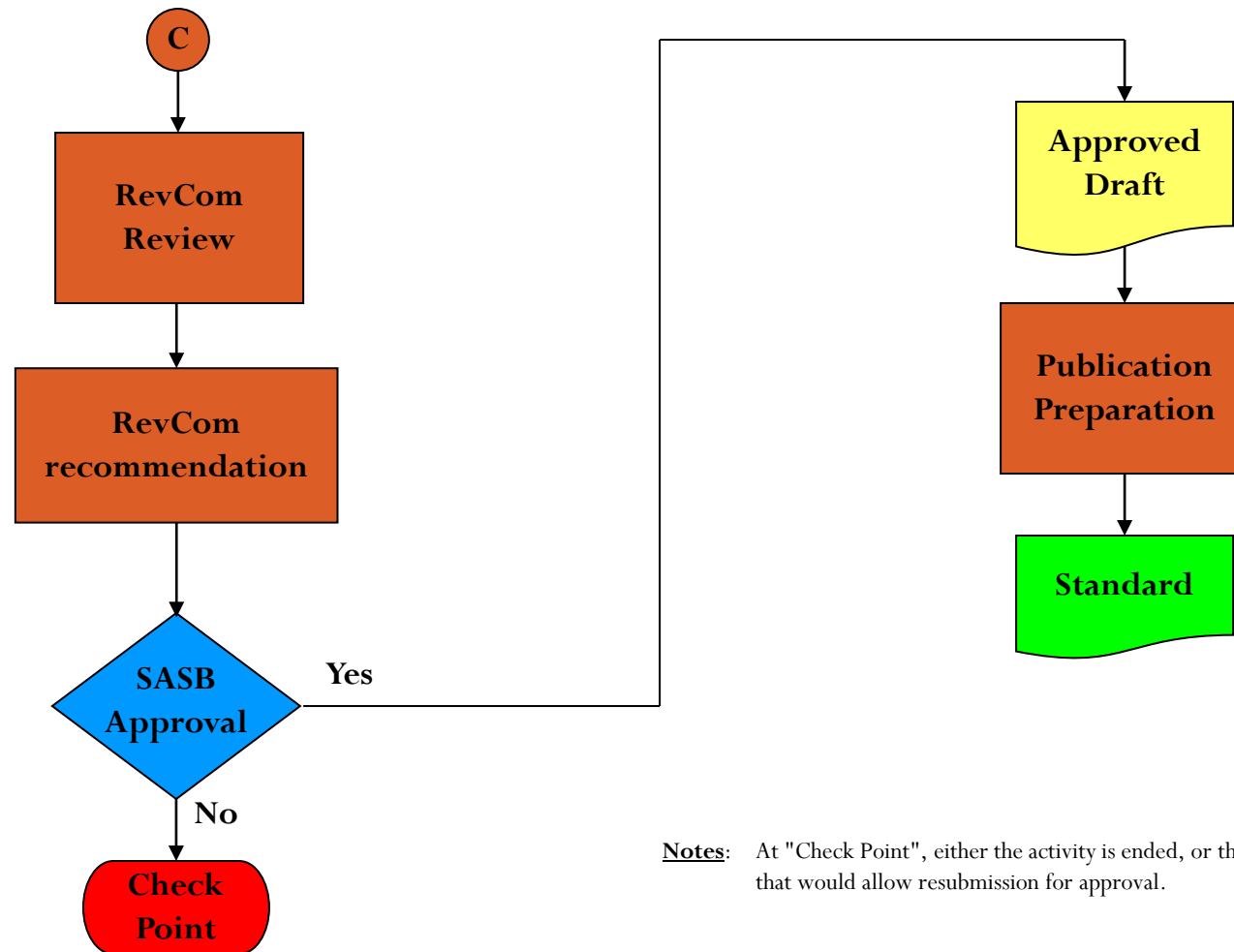
See 802.3 Operating Rules 2.6 and listed references for complete description

Overview of IEEE 802.3 Standards Process (4/5)- 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 Operation Manual 5.4 for complete description.

Overview of IEEE 802.3 Standards Process (5/5) – Final Approvals / Standard Release

C

RevCom Review

RevCom recommendation

SASB Approval

Yes

No

Check Point

Approved Draft

Publication Preparation

Standard

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

IEEE SA POLICIES

IEEE SA PATENT POLICY

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

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.

    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

IEEE SA COPYRIGHT POLICY

November 2019

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

IEEE SA PARTICIPATION SLIDES

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