Agenda and General Information

IEEE P802.3dj TF Meeting

IEEE 802 July 2024 Plenary

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

Non-payment of registration fees

Every attendee (Face-to-Face or Remote) at any IEEE 802 meeting during the Jul 2024 IEEE 802 Plenary meeting series 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 P802.3dj Task Force Session Agenda

- Approve Agenda
- Approve Minutes (see next page)
- Meeting map & details
- Meeting Decorum
- Attendance
- Task Force Project Information
- Goals For Session
- Ground Rules
- Voting / Voting Rights
- Review IEEE SA Policies (http://ieee802.org/3/policies.html / included) *
- Liaisons Overview
- Ad Hocs Summary
- Presentations (Discussion & Strawpolls as noted)
- Discussion, Strawpolls, Motions
- Future Meetings
  - Task Force
  - Ad hocs
- Closing Business

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

Minutes to be Approved

■ **IEEE P802.3dj Task Force**
– **Jun Electronic Interim -** https://www.ieee802.org/3/dj/public/24_06/minutes_3dj_2406_unapproved.pdf

■ **Electrical Ad hoc**
– **20 Jun -** https://www.ieee802.org/3/dj/public/adhoc/electrical/24_0620/minutes_3dj_elec_240620_unapproved.pdf

■ **Optics / Logic Joint Ad hoc**
– **27 Jun -** https://www.ieee802.org/3/dj/public/adhoc/optics/0624_OPTX/minutes_3dj_optx_240627_unapproved.pdf

■ **COM Ad hoc**
– **18 Jun -** https://www.ieee802.org/3/dj/public/adhoc/COM/24_0618/minutes_3dj_COM_240618_unapproved.pdf
– **25 Jun -** https://www.ieee802.org/3/dj/public/adhoc/COM/24_0625/minutes_3dj_COM_240625_unapproved.pdf
– **2 Jul -** https://www.ieee802.org/3/dj/public/adhoc/COM/24_0702/minutes_3dj_COM_240702_unapproved.pdf

Meeting Map

	Mon	Tues		Wed	Thurs
AM1		Track #1 – L/0	Track#2 - E	TF	TF
AM2		Track #1 – L/0	Track#2 - E	TF	TF
LUNCH					
PM1	TF	Track #1 – L/0	Track#2 - E	TF	
PM2	TF	Track #1 – L/0	Track#2 - E	TF	

- Track Chairs will chair track sessions.

- Meeting invites have been sent out for all sessions and are on the 802.3 calendar. Please note that Track #1 will use the same bridge as the Task Force meeting. A separate invite has been sent out for Track #2.

- Any announcements regarding meetings and or presentations will be sent to the Task Force reflector (stds-802-3-b400g@listserv.ieee.org). Individuals should be subscribed to the reflector (See https://www.ieee802.org/3/df/reflector.html if not currently subscribed).

Meeting 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. (Feb 2023 IEEE-SA Standards Board Ops Manual 5.3.3.2)**
- **Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (Feb 2023 IEEE-SA Standards Board Ops Manual 5.3.3.3)**
- **Cell phone ringers off**
- **Please observe proper decorum in meetings**
- **Please mute your self when not speaking**
- **Please do not turn on video**

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 of meeting**

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

IEEE P802.3dj Task Force Project information

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

- **Task force web and reflector information:**
  - Home page: **IEEE P802.3dj Public (ieee802.org)**
  - 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/dj/projdoc/P802d3dj_PAR.pdf**
  - CSD: **https://mentor.ieee.org/802-ec/dcn/22/ec-22-0256-00-ACSD-p802-3dj.pdf**
  - Objectives: **https://www.ieee802.org/3/dj/projdoc/objectives_P802d3dj_240314.pdf**
  - Adopted Timeline: **https://www.ieee802.org/3/dj/projdoc/timeline_3dj_231128.pdf**

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

Goals for the Session

▣ **Big Ticket Items (see next slides)**

▣ **Continue work towards a technically complete document**

▣ **Respond to Liaisons**

Logic Track – Big Ticket Items

- 800GBASE-ER1[-20] PCS/PMA (Clause 186)
  - Initial review of Clause 186 in D1.1 necessary

- TimeSync support related to new SM-PMA and inner FEC sublayers
  - Potential updates to Clause 90/Annex 90A and/or addition of associated references in other clauses

- ILT implications for AN and link_status

- Skew Budget
  - Revisit skew specification in context of the new SM-PMA and inner FEC sublayers

Electrical Track – Big Ticket Items

- CR/KR:

  - COM parameters (eta0, d_w, N_fix, N_g, etc.), CA, TX values, SNDR, etc.

- MLSD: using for CR/KR or not? Implementation penalty proposal?

- ILdd C2M and C2C

- Jitter: J6u

- C2M Test1/Test2 losses and channel calibration

Optical Track – Big Ticket Items

IMDD

- Link budget methodology
  - TDECQ correlation with BER/FLR
  - refinement or improvement
- Reference Receiver definition
  - Tap weights
- Optical Channel model/Fiber specs topic
  - Resolve the fiber model/data/ITU analysis
  - 800G-LR4 related baseline concerns
  - Other PMDs
- Adopted PMDs
  - continued experimental validation to support current specs

Coherent

- Transmitter TQM
  - Reference receiver
- Initial review of Clause 186 in D1.1 necessary

OLT/OAN

- Clarity on baseline adoption/ completion

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 (802.3dj)
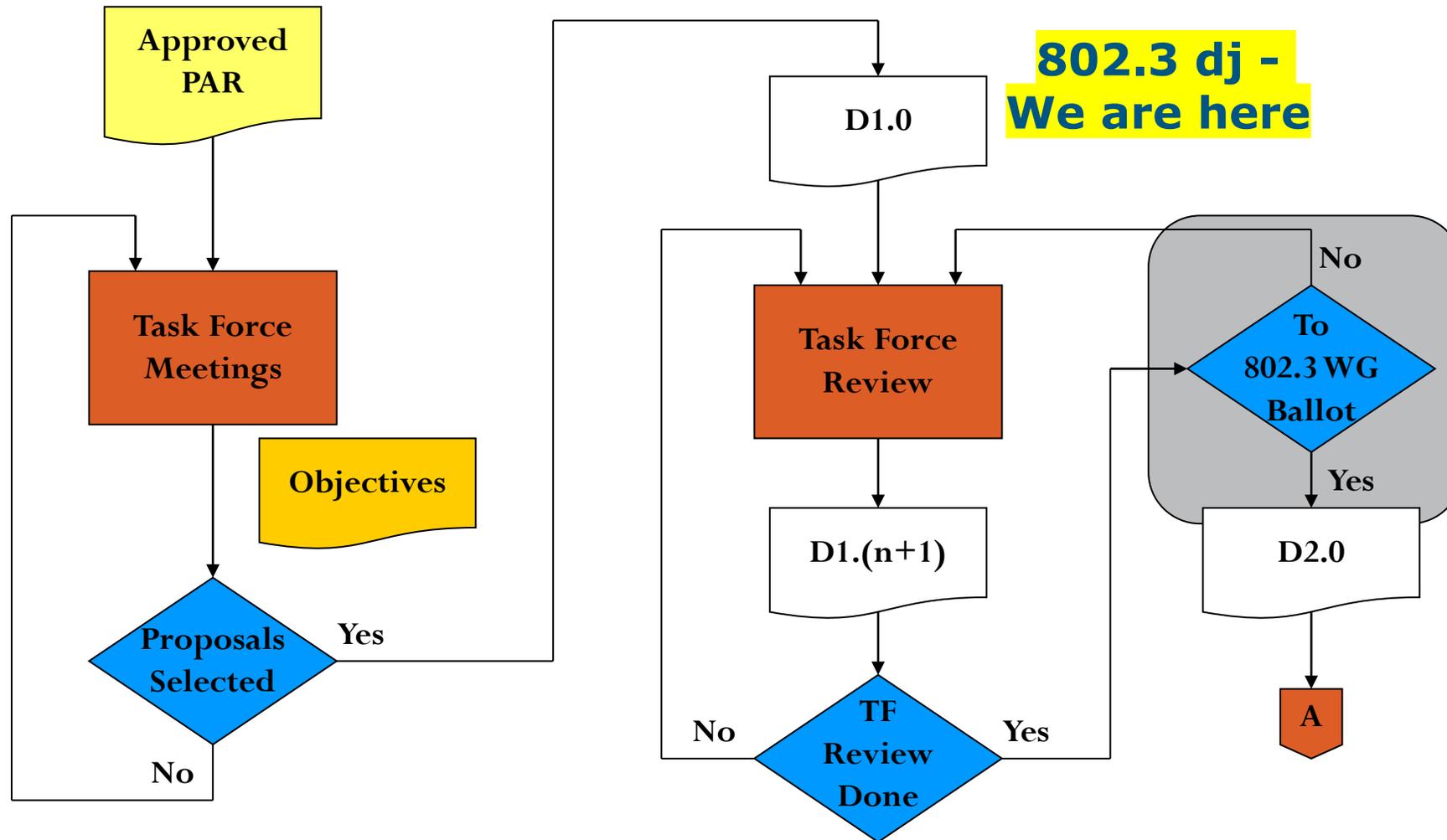
Voting

❑ Chair's Announcement - https://www.ieee802.org/3/email_dialog/msg01559.html

"IEEE 802.3 will hold its July 2024 plenary session from Monday 15 July 2024 through Thursday 18 July 2024. The plenary session will be held at the Le Centre Sheraton Montreal, Montreal, QC, Canada with support for mixed-mode attendance (i.e., remote attendance). Please note that the meetings are being planned around an in-person schedule, with remote access provided on a best-effort basis."

❑ 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

Note – Chair reserves the right to take informative straw polls by 802.3 WG voting membership

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

Voting Members – Reminder

❑ **https://www.ieee802.org/3/rules/member.html**

❑ **To remain a member you must:**

- Maintain current contact information in the IEEE 802.3 Working Group database.

- Attend and record attendance for at least 75% of the sessions at two of the last four IEEE 802.3 Working Group Plenary meetings.

  - If you attend and record attendance for at least 75% of the sessions at a two day, or longer, duly constituted IEEE 802.3 Task Force interim meeting or IEEE 802.3 Study Group meeting co-located with a Task Force meeting, this can be substituted for attendance at one, and only one, plenary.

- Participate in IEEE 802.3 Working Group ballots. Membership may be lost for not returning, or abstaining, other than for 'lack of expertise', in two of the last three IEEE 802.3 Working Group ballots (IEEE 802.3 member ballot return records).

Review of IEEE SA Policies

◉ Email (https://www.ieee802.org/3/B400G/email/msg01198.html)
sent to Task Force Reflector reminding all to review and
be familiar with following policies:

▪ IEEE SA Patent Policy

▪ IEEE SA Copyright Policy

▪ IEEE SA Participation Slides

◉ See Backup for slides or http://ieee802.org/3/policies.html.

Liaisons Overview

- From OIF: 800LR / 800ZR IA Project Updates
  - See - https://www.ieee802.org/3/minutes/may24/incoming/OIF_liaison_letter_IEEE_800ZR_12May24_Redacted.pdf
  - Attachment (password protected) - https://www.ieee802.org/3/private/liaison_docs/OIF/OIF_liaison_cover_IEEE802.3_800ZR_800LR_12May24-combined.pdf
- From OIF: Updated Rev. 05 of the CEI-224G-LR-PAM4 specification
  - See https://www.ieee802.org/3/minutes/may24/incoming/OIF_liaison_letter_CEI-224G-LR-PAM4_12May24_Redacted.pdf
  - Attachment (password protected) - https://www.ieee802.org/3/private/liaison_docs/OIF/OIF_liaison_cover_IEEE802.3_CEI-224G-LR-PAM4_12May24-combined.pdf

Ad Hocs Summary

- **Electrical –**
  https://www.ieee802.org/3/dj/public/24_07/lusted_3dj_01_2407.pdf

- **Logical / Optical –**
  https://www.ieee802.org/3/dj/public/24_07/nicholl_3dj_01_2407.pdf

- **COM –**
  https://www.ieee802.org/3/dj/public/24_07/lusted_3dj_02_2407.pdf

Jul 2024 Plenary – Mon 15 Jul

Mon	15-Jul-24			
Time	Presenter	Affiliation	Title	File Name
1:00 PM	John D'Ambrosia	Futurewei, US Subsidiary of Huawei	Agenda and General Information	agenda_3dj_2407
1:30 PM	Kent Lusted	Intel Corporation	COM Reference Update v4.6 – July 2024	lusted_3dj_05_2407
1:40 PM	Hossein Shakiba	Huawei Technologies Canada	MLSE Sequence Truncation Implementation Penalty	shakiba_3dj_01_2407
2:10 PM	Adam Healey	Broadcom Inc.	Modification to the calculation of COM for an MLSD reference receiver	healey_3dj_01_2407
2:35 PM	Upen Reddy Kareti	Cisco Systems, Inc	Comparison of different options to account for - ADC quantization noise and - MLSE implementation Penalty	kareti_3dj_02_2407
3:00 PM	Break			
3:30 PM	Mike Peng Li	Intel	An Updated 212.5 Gbps PAM4 Link Simulations and Analyses for KR and CR Channels Using COM 4.60 Beta4	lim_3dj_02_2407
4:00 PM	Tobey P.-R. Li	MediaTek	200Gbps/Lane CR & KR Channel Selection Criteria for Reference RX Analysis	lit_3dj_01_2407
4:30 PM	Upen Reddy Kareti	Cisco Systems, Inc.	224G - CR/KR Channel Analysis	kareti_3dj_01_2407
5:00 PM	Discussion Strawpolls			
6:00 PM	Meeting Recessed for the Day			

Jul 2024 Plenary – Tues 16 Jul

Tues	16-Jul-24	Electrical		
8:30 AM	Kent Lusted	Intel	Track Chair Opening Comments	
8:45 AM	Adee Ran	Cisco	Host PCB model parameters	ran_3dj_01_2407
9:10 AM	Sam Kocsis	Amphenol	Steps Towards CR Compliance Methodology	kocsis_3dj_01_2407
9:35 AM	Howard Heck	Intel Corporation	AUI C2C COM Tap Weight Analysis & Recommandations	heck_3dj_01_2407
10:00 AM	Break			
10:30 AM	Steve Sekel	Wilder Technologies	224G C2M Compliance Fixture Measurement Data	sekel_3dj_01_2407
11:00 AM	John Calvin	Keysight Technologies	1.6Tbps output jitter decomposition associated with high loss AUI-C2M channel conditions	calvin_3dj_01_2407
11:20 AM	John Calvin	Keysight Technologies	1.6Tbps Vertical Eye Closure associated with high loss AUI-C2M channel conditions	calvin_3dj_02_2407
12:00 PM	Lunch			
1:30 PM	Alexander Rysin	Nvidia	Transmitter Jitter specifications for CL178	rysin_3dj_01_2407
1:55 PM	Christopher DiMinico	PHY-SI/SenTekse/MC Communications	ANNEX 179A TBDs Insertion Loss Parameters D1.1	diminico_3dj_01_2407
2:25 PM	Discussion Strawpolls			
2:55 PM	Break			
3:25 PM	Discussion Strawpolls			
6:00 PM	Meeting Recessed for the Day			

Tues	16-Jul-24	Optical / Logic		
10:30 AM	Mark Nowell	Cisco	Track Chair Opening Comments	
10:45 AM	Kishore Kota	Marvell Semiconductor	Test Vectors for 800GBASE-LR1	kota_3dj_01_2407
11:05 AM	Andras de Koos	Microchip Technology	TimeSync clarifications for 802.3dj PHYs	dekoos_3dj_01_2407
11:35 AM	Mike Dudek	Marvell	Deskew in 800GbE/1.6TbE for Inner FEC (CL177) updated	dudek_3dj_01_2407
12:00 PM	Lunch			
1:30 PM	Qirui Fan	Huawei	Reference Receiver Design for Transmitter Constellation Closure (TCC) as a Transmitter Quality Metric (TQM) for coherent transmitters	fan_3dj_02_2407
1:55 PM	Aditya Kakkar	Infinera Corporation	Thoughts on TQM Definition and Characterization Requirements for Coherent Short Reach	kakkar_3dj_01_2407
2:25 PM	Kishore Kota	Marvell Semiconductor	TQM Analysis and results for 800GBASE-LR1	kota_3dj_02_2407
2:55 PM	Kishore Kota	Marvell Semiconductor	Additional optical specifications for 800GBASE-LR1 PMD	kota_3dj_03_2407
3:25 PM	Break			
3:55 PM	Earl Parsons	CommScope	Chromatic Dispersion Statistics of Different Data Sets	parsons_3dj_01_2407
4:25 PM	John Johnson	Broadcom	Baseline proposal for 800GBASE-FR4 chromatic dispersion specifications	johnson_3dj_01_2407
4:55 PM	Roberto Rodes	Coherent	Baseline proposal for 800GBASE-LR4 chromatic dispersion specifications	rodes_3dj_01_2407
5:20 PM	Rangchen Yu	InnoLight	800G-LR4 CD Specifications with Fiber Statistical Model Support	yu_3dj_02_2407
6:00 PM	Meeting Recessed for the Day			

Jul 2024 Plenary – Wed 17 Jul

Wed	17-Jul-24			
8:00 AM	John D'Ambrosia	Futurewei	Chair Opening Comments	
8:15 AM	Haojie Wang	China Mobile	Consideration on chromatic dispersion from telecom's realistic deployment of optical cables	wang_3dj_01_2407
8:40 AM	Haojie Wang	China Mobile	Consideration on optical management for network maintenance	wang_3dj_02_2407
9:05 AM	Qirui Fan	Huawei	Update on the impact of CD limits on RX sensitivity penalty and TDECQ measurements	fan_3dj_01_2407
9:30 AM	Rang-Chen Yu	InnoLight	800G (4x200G-PAM4) Module Test Data with FECi and FECo	yu_3dj_01_2407
10:00 AM	Break			
10:20 AM	Guangcan Mi	Huawei	Proposal to update the specification of 2km optical PMDs	mi_3dj_01_2407
10:40 AM	Ali Ghiasi	Ghiasi Quantum /Marvell	Improving Reference Equalizer Tap Limits	ghiasi_3dj_02_2407
11:05 AM	Pavel Zivny	Tektronix	Noise Measurements: more details re. ad-hoc (RINxOMA, others)	zivny_3dj_01_2407
11:30 AM	Adee Ran	Cisco	Limiting output jitter in optical PMDs	ran_3dj_02_2407
12:00 PM	Lunch			
1:30 PM	Ali Ghiasi	Ghiasi Quantum/Marvell	Practical C2M Loss Limit	ghiasi_3dj_01_2407
1:55 PM	Kent Lusted	Intel Corporation	P802.3dj C2M Loss -- Starting Point	lusted_3dj_04_2407
2:20 PM	Mike Peng Li	Intel	An Updated P802.3dj COM Parameter Value Proposal for KR and CR	lim_3dj_01_2407
2:45 PM	Break			
3:15 PM	Kent Lusted	Intel Corporation	P802.3dj COM Parameter Values for CR/KR -- Starting Point	lusted_3dj_06_2407
3:40 PM	Discussion Strawpolls			
6:00 PM	Meeting Recessed for the Day			

Jul 2024 Plenary – Thurs 18 Jul

Time	Presenter	Affiliation	Title	File Name
8:00 AM	John D'Ambrosia	Futurewei, U.S. Subsidiary of Huawei	Chair Opening Comments	
8:10 AM	Matt Brown	Alphawave Semi	IEEE P802.3dj Editorial Team Report	brown_3dj_01_2407
8:40 AM	Discussion, straw polls, Motions			
10:00 AM	Break			
10:20 AM	Discussion, straw polls, Motions			
11:00 AM	Kent Lusted	Intel Corporation	Channel Operating Margin (COM) Code Pathway to Open Source – July Update	lusted_3dj_03_2407
11:30 AM	Closing Business			
12:00 PM	Adjourn			

Future Meetings

IEEE 802.3: https://www.ieee802.org/3/interims/index.html
IEEE P802.3dj: https://www.ieee802.org/3/dj/public/index.html

- IEEE 802.3 Sept 2024 Interim
  - Week of Sept 16-20, 2024
  - Hamburg, Germany
- IEEE P802.3dj Contingent Electronic Meetings after Sept 2024 Interim to be announced
- IEEE 802 Nov 2024 Plenary
  - Week of Nov 11-15, 2024
  - Vancouver, BC, Canada
- IEEE 802.3 Jan 2025 Interim
  - Week of Jan 20-25, 2025
  - Location: Kimpton Hotel Palomar
  - Phoenix, AZ, USA
- IEEE 802 Mar 2025 Plenary
  - Week of Mar 10-14, 2025
  - Atlanta, GA, USA

Future Ad hoc Meetings

- Logic – To Be Announced

- Electrical
  - 01 Aug 2024, 9:30am-12:30pm ET
  - 22 Aug 2024, 9:30am-12:30pm ET

- Optics
  - 29 Aug 2024, 10am - 1pm ET

- COM
  - 30 July 2024, 10am – 10:30am ET
  - 13 Aug 2024, 10am – 10:30am ET
  - 27 Aug 2024, 10am – 10:30am ET

CLOSING BUSINESS

Reminders

- **IEEE P802.3dj 2ⁿᵈ Task Force Review (D1.1)**
  - **Opens - Thursday, 11 July 2024**
  - **Closes - Friday 09 August 2024, 11:59 PM AOE**
  - **Scope – Entire Document**
  - **Details - https://www.ieee802.org/3/B400G/email/msg01205.html**
- **01 Aug 2024 Electrical Ad hoc –**
  - **AUI C2M Loss Budget Agenda Item**

- **Pay attention to IEEE 802.3 WG Ballot Announcements!**

THANK YOU!

BACKUP

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.

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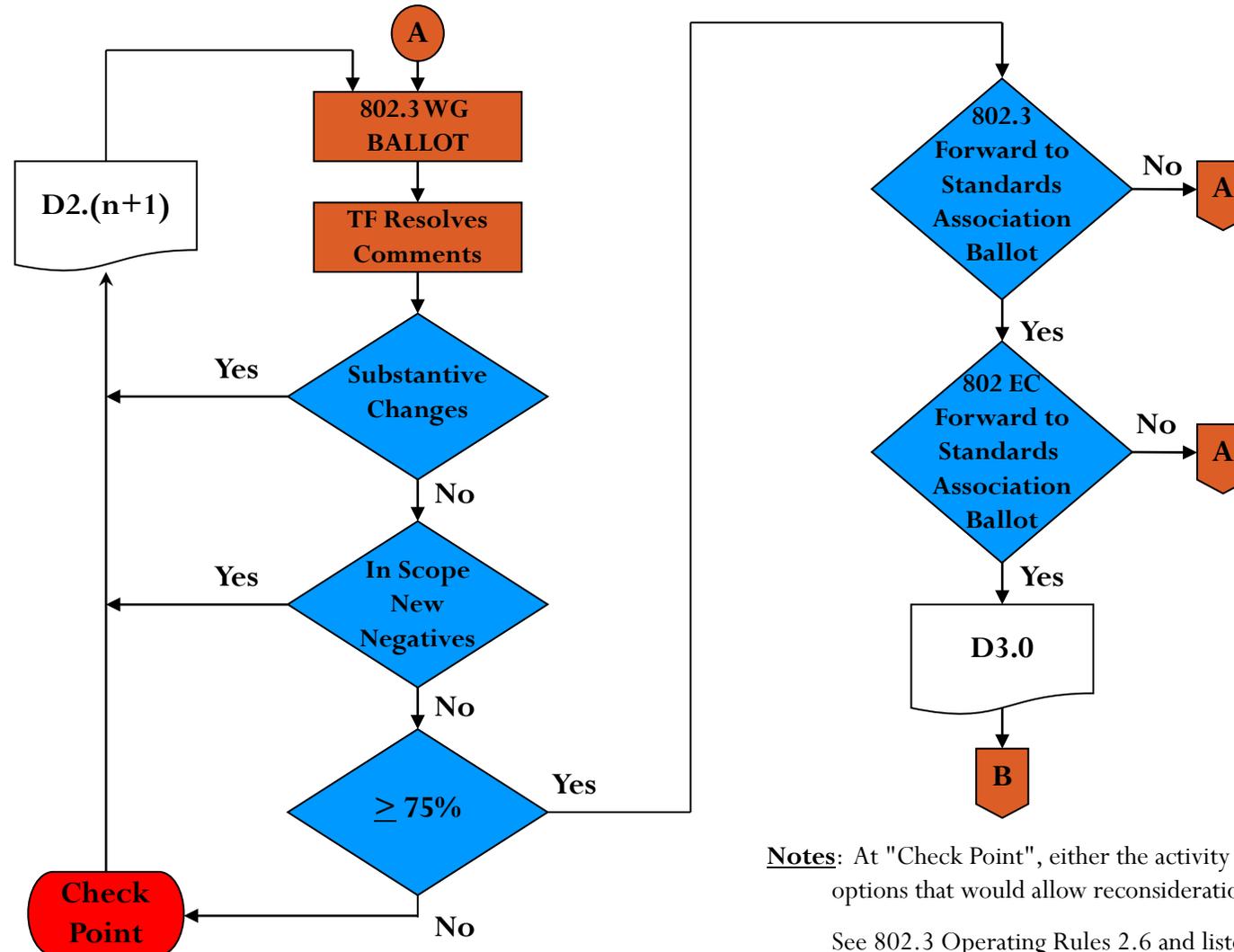
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

A

802.3 WG BALLOT

D2.(n+1)

TF Resolves Comments

Substantive Changes — Yes / No

In Scope New Negatives — Yes / No

≥ 75% — Yes / No

Check Point

802.3 Forward to Standards Association Ballot — No → A / Yes

802 EC Forward to Standards Association Ballot — No → A / Yes

D3.0

B

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
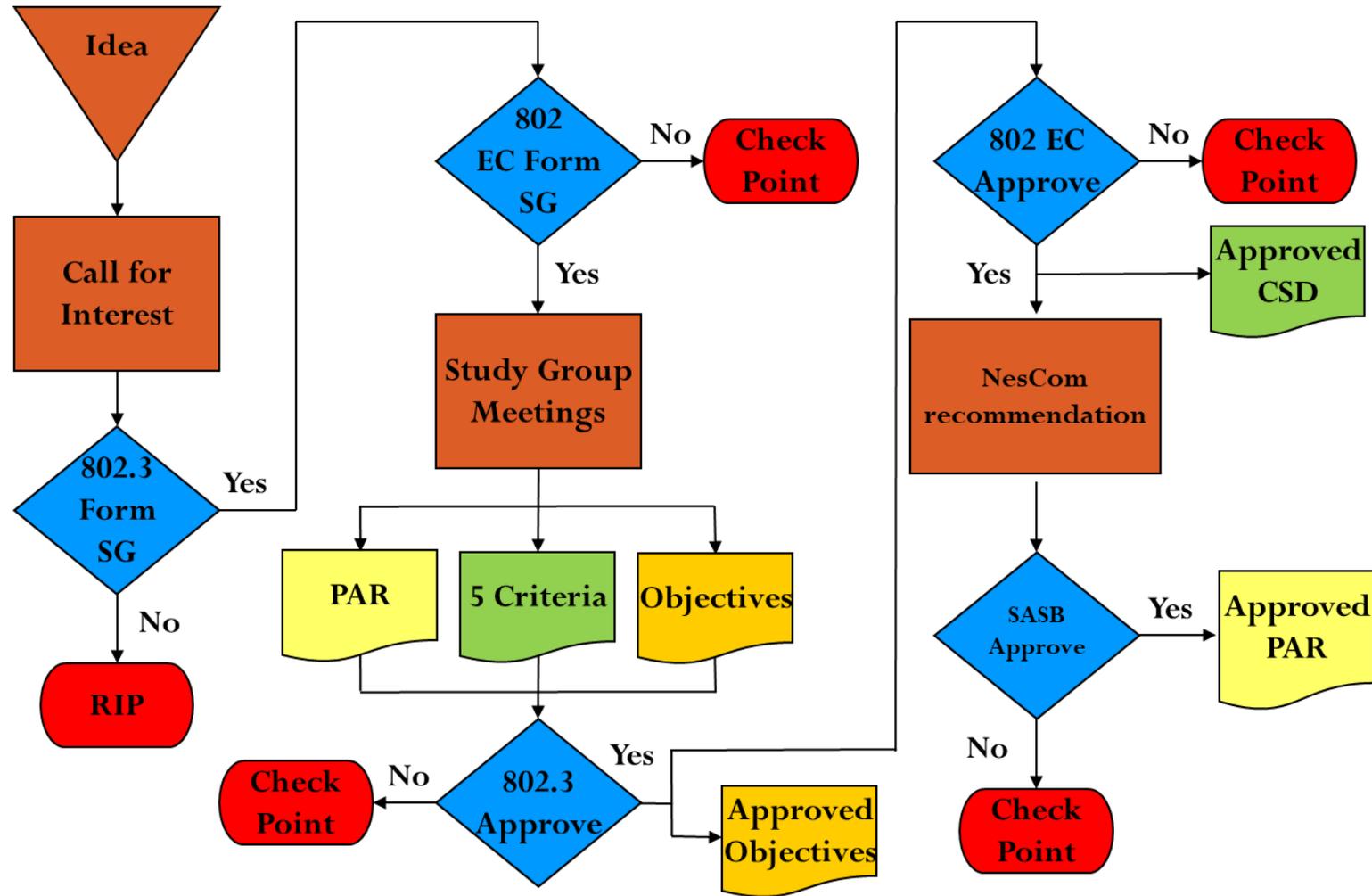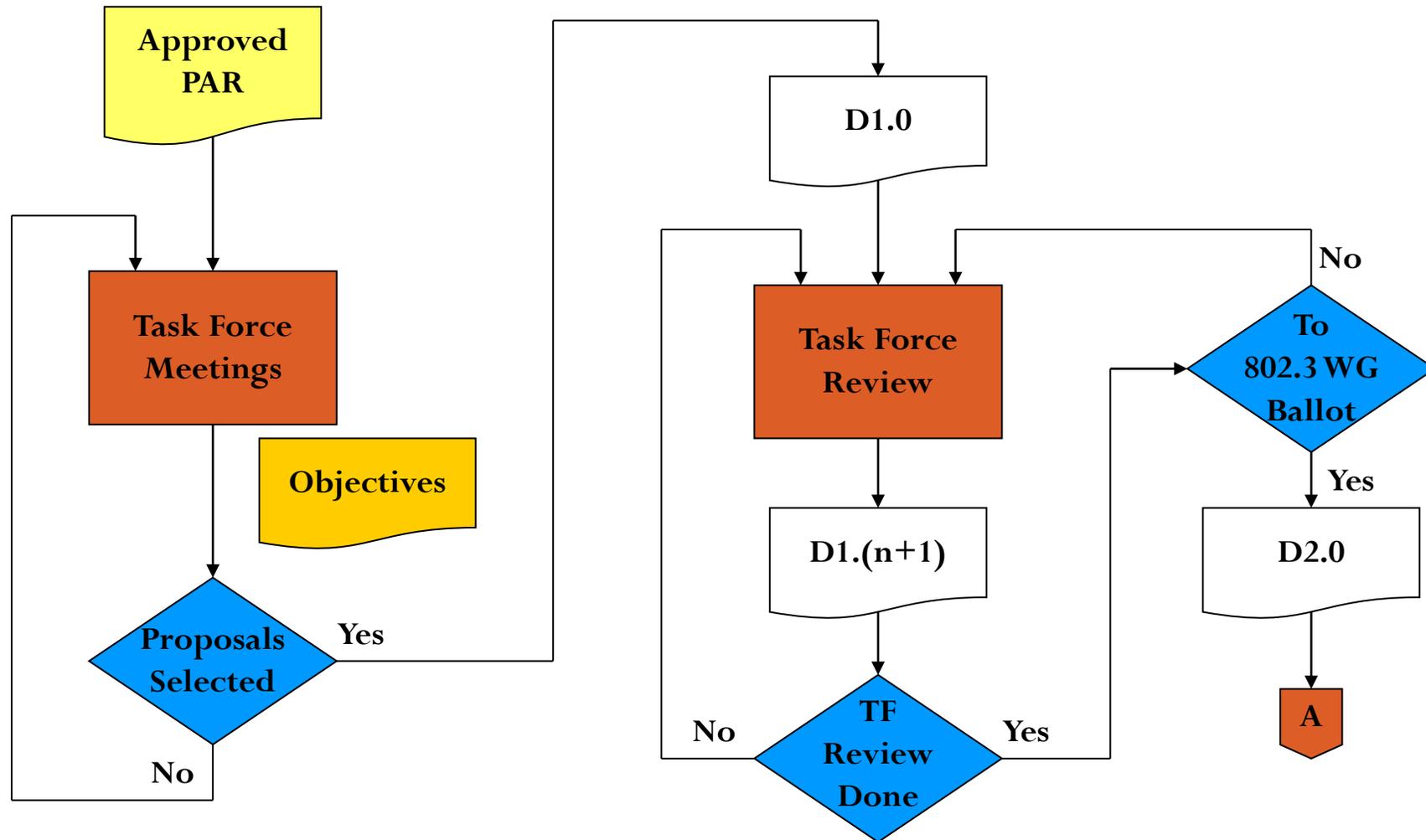
Overview of IEEE 802.3 Standards Process (4/5)- Standards Association (SA) Ballot Phase
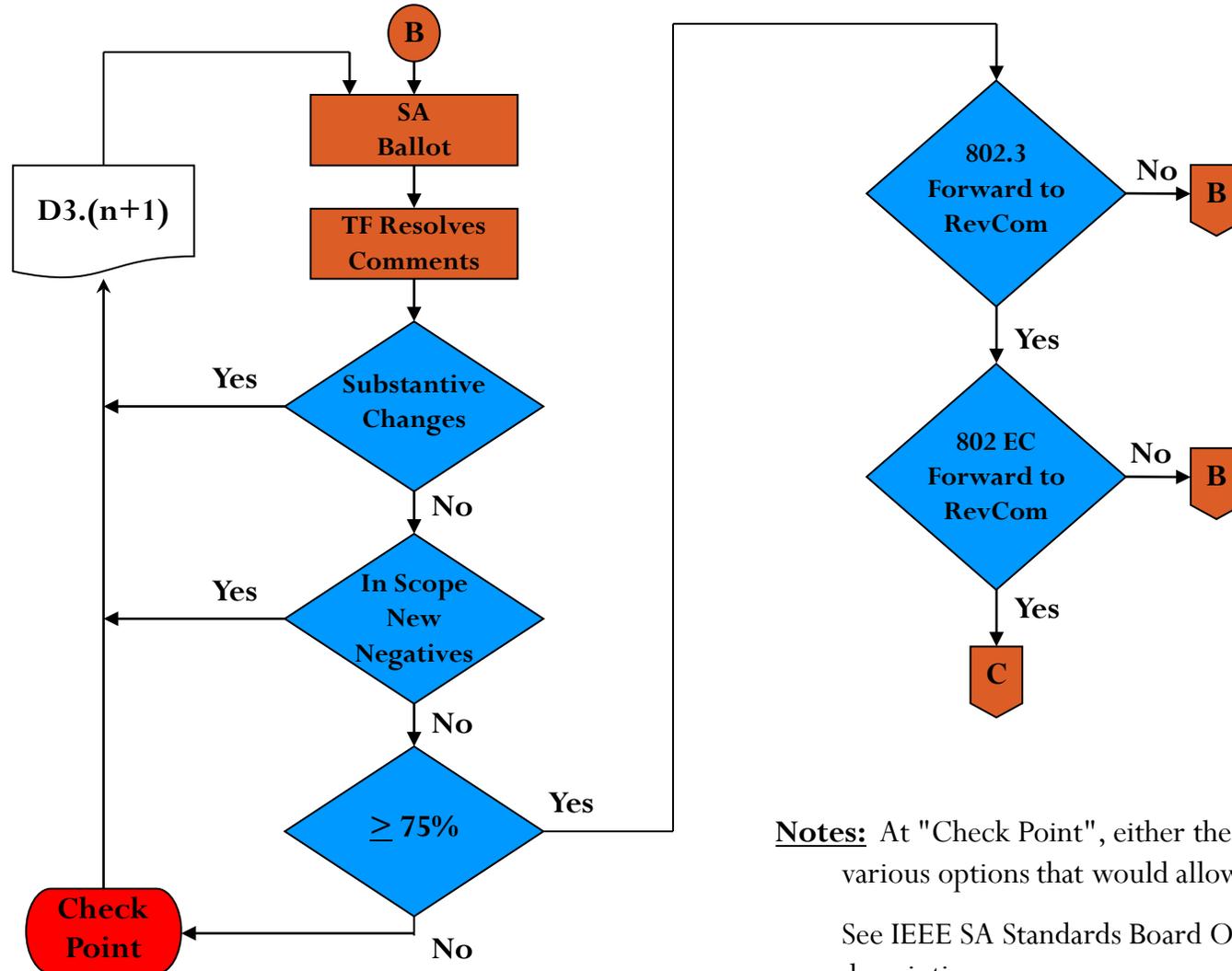
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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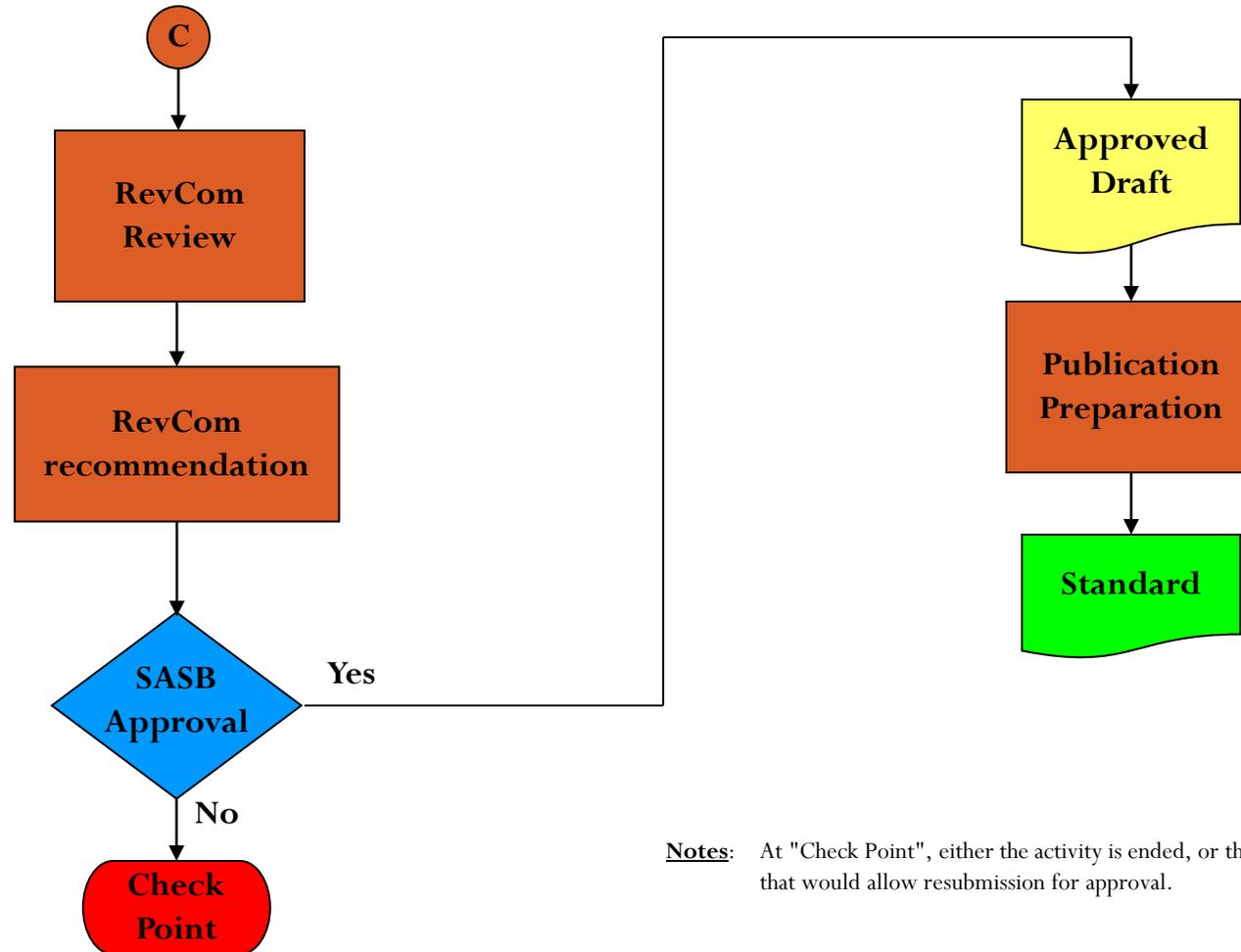
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow resubmission for approval.

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 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

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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

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).

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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.

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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

- IEEE SA Best Practices for IEEE Standards Development
- http://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/best_practices_for_ieee_standards_development_051215.pdf

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

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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