IEEE P802.3cm 400G over MMF Task Force Agenda and General Information

Robert Lingle Jr, OFS

Acting Chair, IEEE 802.3cm 400G over MMF Task Force

IEEE 802.3 May 2018 Interim

Pittsburgh, PA USA

Agenda

- Appointment of Recording Secretary
- Appointment of Chair
- Welcome / Introductions
- Approval of Agenda
- IEEE 802 Participation
- Pre-PAR Patent Policy
- Study Group Information
- Attendance
- Ground Rules
- The Role of the Chair
- IEEE
    - Structure
    - Bylaws and Rules
    - IEEE 802.3 Standards Process
    - Study Group Chartering Motion
- Goals for the Week
- Presentations
- Discussion, Straw Polls, Motions
- Closing Business
- Future Meetings

Task Force Decorum

- Photography or recording by permission only (2016 SASB Op Manual 5.3.3.2)
- Cell phone ringers off
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (5.3.3.3)
- 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
- Please observe proper decorum in meetings

Guidelines for IEEE-SA 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, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings.

        - Technical considerations remain 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.**

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit http://standards.ieee.org/about/sasb/patcom/index.html

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

This slide set is available at https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.ppt

Participation in IEEE 802 Meetings

Participation in any IEEE 802 meeting (Sponsor, Sponsor subgroup, Working Group, Working Group subgroup, etc.) is on an individual basis

- **Participants in the IEEE standards development individual process shall act based on their qualifications and experience. (https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1)**

- **IEEE 802 Working Group membership is by individual; "Working Group members shall participate in the consensus process in a manner consistent with their professional expert opinion as individuals, and not as organizational representatives". (subclause 4.2.1 "Establishment", of the IEEE 802 LMSC Working Group Policies and Procedures)**

- **Participants have an obligation to act and vote as an individual and not under the direction of any other individual or group. A Participant's obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders.**

- **Participants shall not direct the actions or votes of any other member of an IEEE 802 Working Group or retaliate against any other member for their actions or votes within IEEE 802 Working Group meetings, see https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1.3 and the IEEE 802 LMSC Working Group Policies and Procedures, subclause 3.4.1 "Chair", list item x.**

By participating in IEEE 802 meetings, you accept these requirements. If you do not agree to these policies then you shall not participate.

(Latest revision of IEEE 802 LMSC Working Group Policies and Procedures: http://www.ieee802.org/devdocs.shtml)

IEEE 802 Executive Committee

IEEE 802.3cm 400G over MMF Task Force Information

- Robert Lingle Jr, Chair
- Home Page - http://www.ieee802.org/3/cm/index.html
- Reflector Information – http://www.ieee802.org/3/NGMMF/reflector.html
- Editors
  - Jonathan King, Finisar - SR8 & Chief Editor
  - Jonathan Ingham, FIT – SR4.2 clause
- Recording Secretary
  - Mabud Choudhury, OFS

Attendance

- Tutorial Material on attendance tool
  - http://ieee802.org/3/minutes/attendance_procedures.pdf

- Access details
  - URL: http://imat.ieee.org/
  - Password will be provided

- Attendance books
  - Keeps track of attendance in room
  - Used to support requests to verify attendance by chair if IMAT not used.
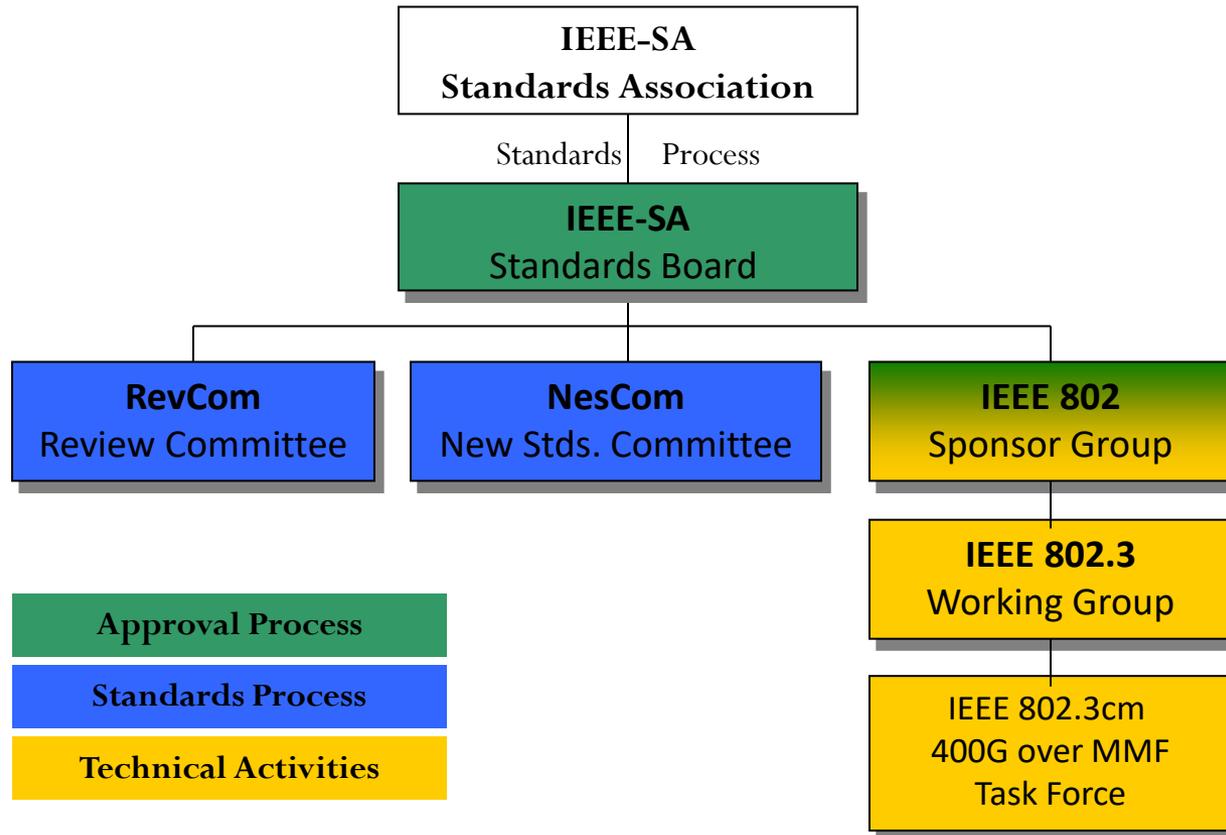
Ground Rules

- **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**
- **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**

The Role of the Chair

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

- Reminder - 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

IEEE–SA
Standards Association

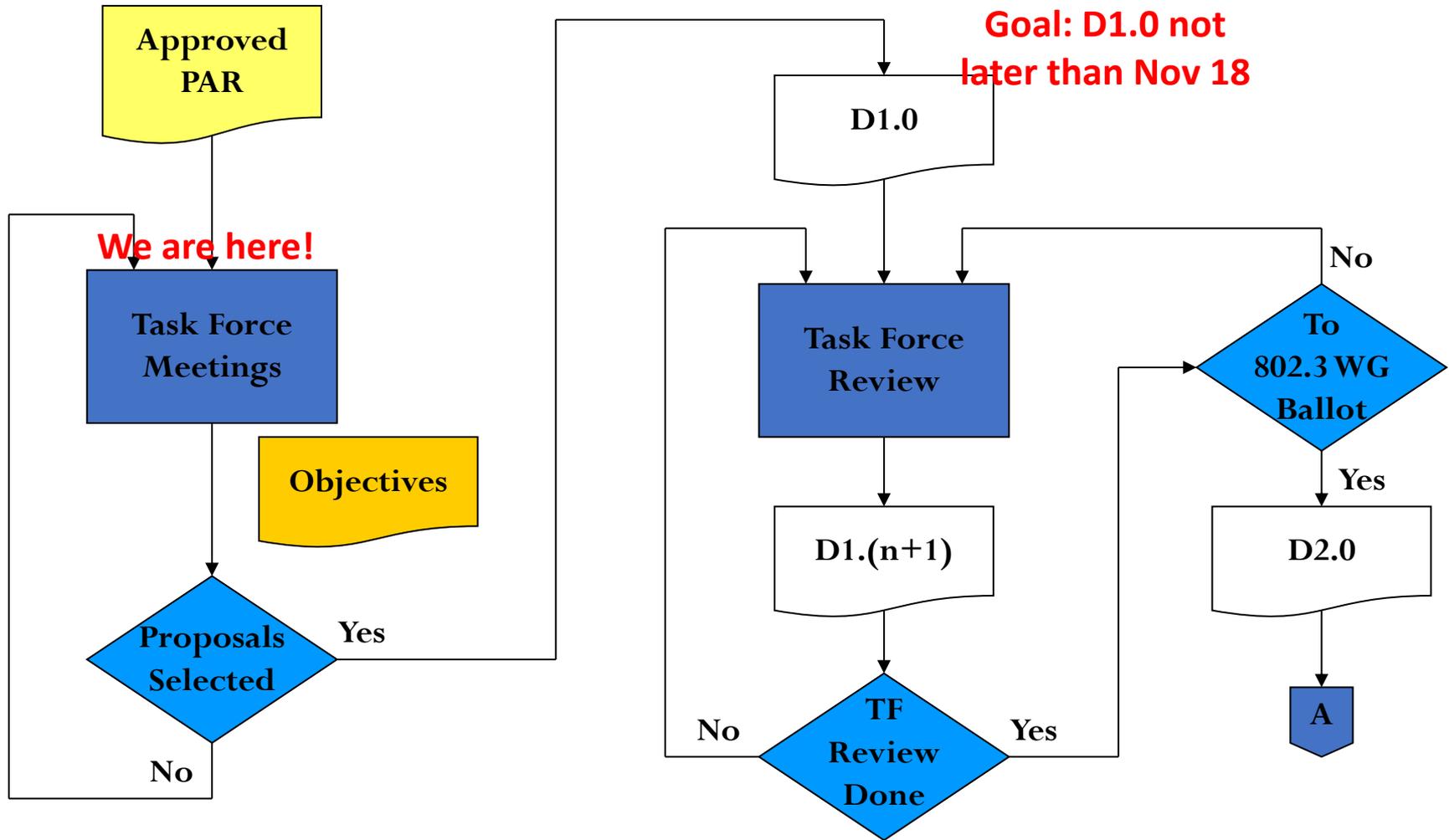Standards │ Process

IEEE-SA
Standards Board

RevCom
Review Committee

NesCom
New Stds. Committee

IEEE 802
Sponsor Group

IEEE 802.3
Working Group

IEEE 802.3cm
400G over MMF
Task Force

Approval Process

Standards Process

Technical Activities

Important Bylaws, Rules, & References

- **IEEE-SA Operations Manual**
  http://standards.ieee.org/sa/sa-om.pdf

- **IEEE-SA Standards Board Bylaws**
  http://standards.ieee.org/guides/bylaws/sb-bylaws.pdf

- **IEEE-SA Standards Board Operations Manual**
  http://standards.ieee.org/guides/opman/sb-om.pdf

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures**
  http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual**
  http://ieee802.org/PNP/approved/IEEE_802_OM_v19.pdf

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**
  http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf

- **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"**
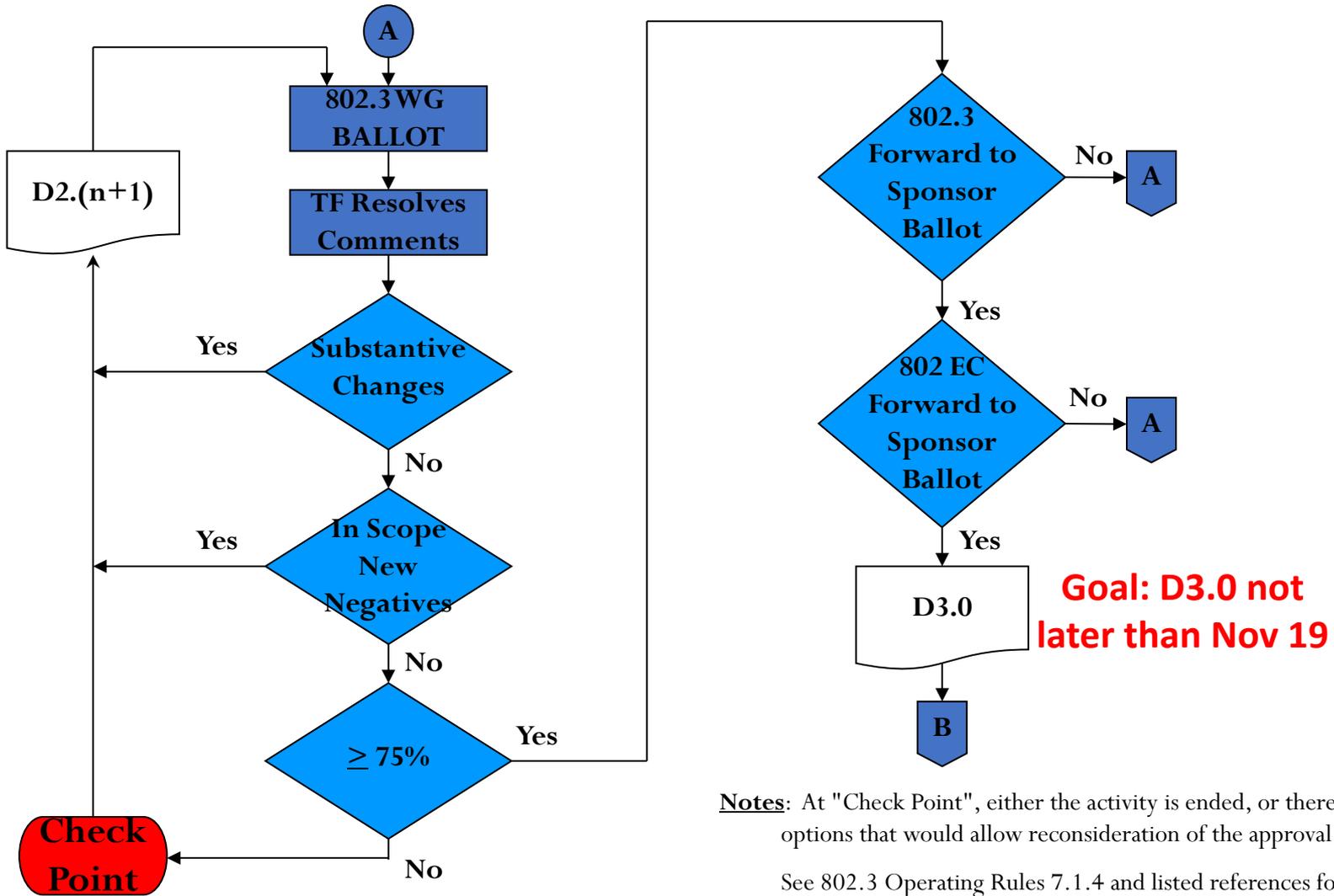 http://standards.ieee.org/develop/policies/antitrust.pdf
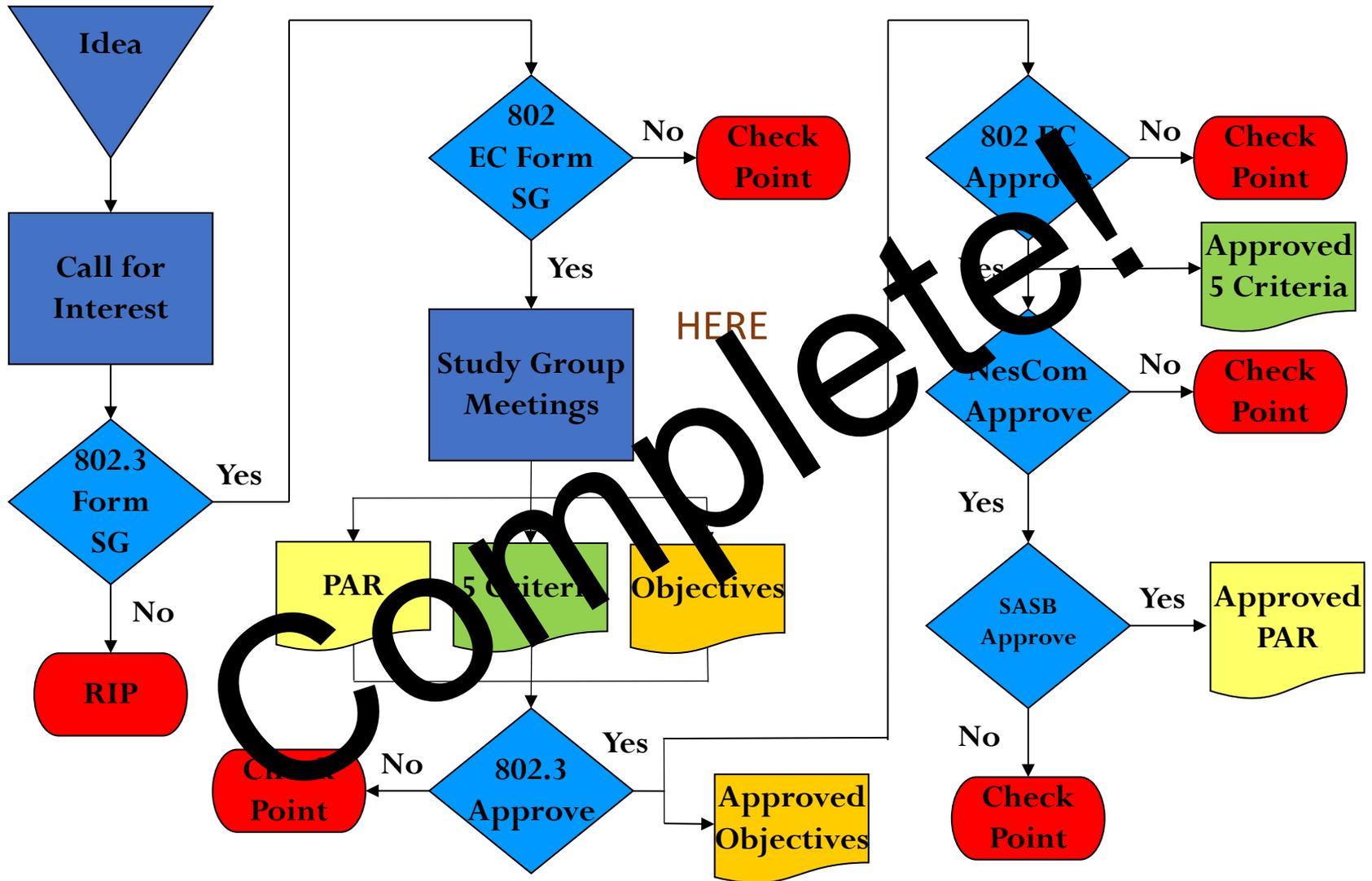
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase
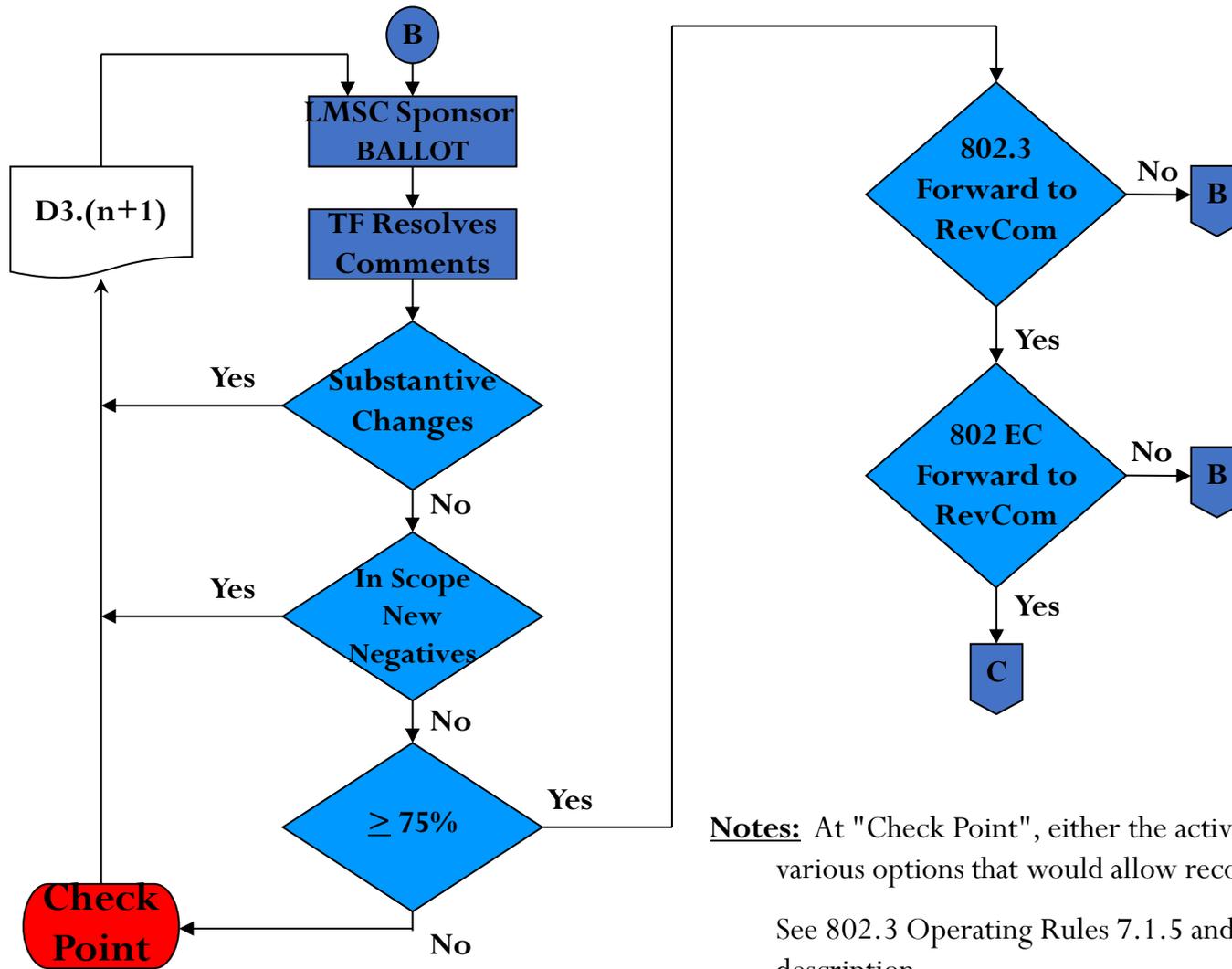
Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase

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

See 802.3 Operating Rules 7.1.4 and listed references for complete description

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

B

LMSC Sponsor BALLOT

TF Resolves Comments

D3.(n+1)

Substantive Changes — Yes → D3.(n+1) / No ↓

In Scope New Negatives — Yes → D3.(n+1) / No ↓

≥ 75% — Yes → / No → **Check Point**

802.3 Forward to RevCom — No → **B** / Yes ↓

802 EC Forward to RevCom — No → **B** / Yes ↓

C

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 7.1.5 and listed references for complete description

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

Goal: Complete not later than June 2020

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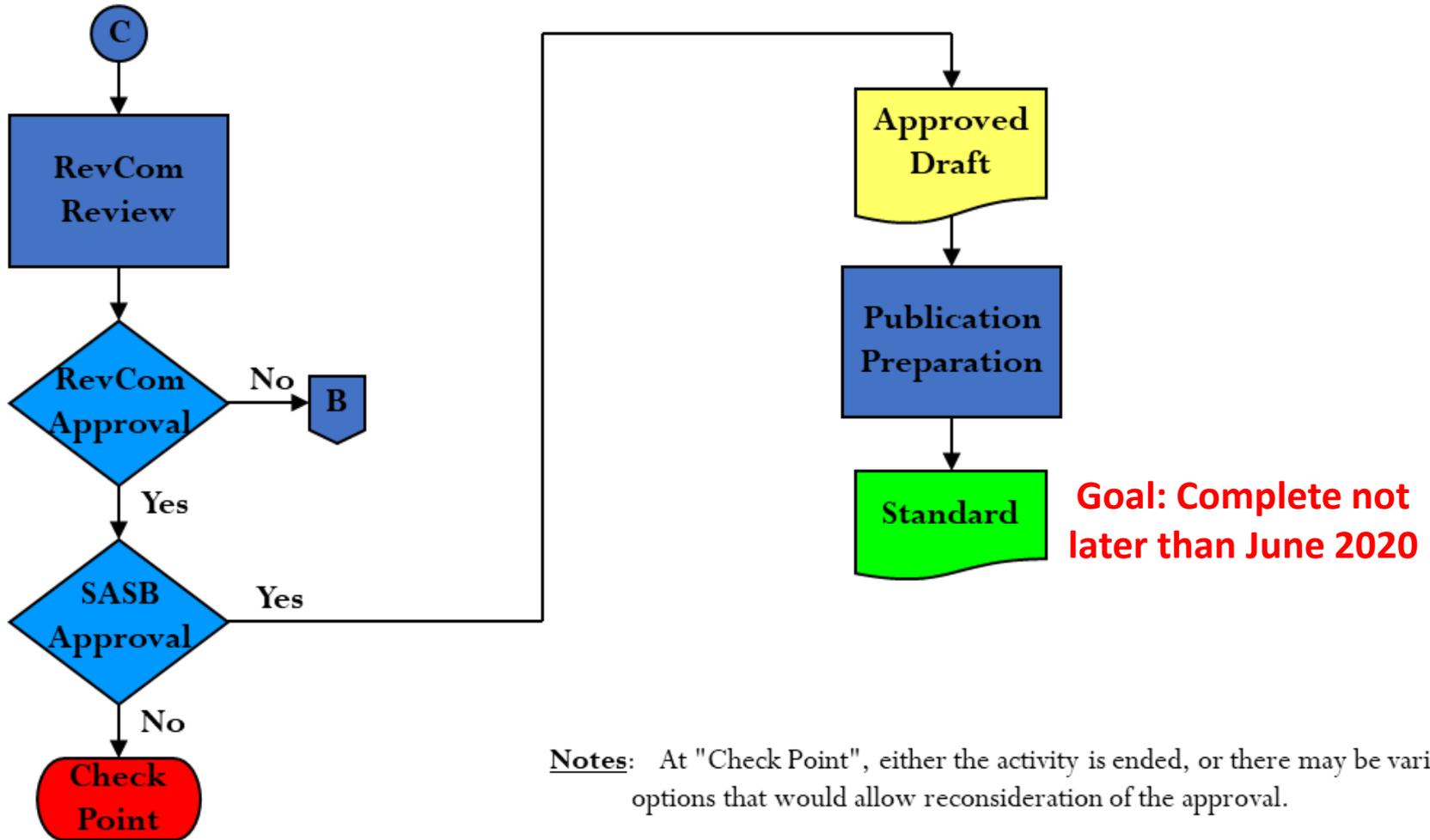
Our PAR and Objectives

http://www.ieee802.org/3/cm/P802_3cm_PAR_140518.pdf

Approved PAR for the "400G over MMF Task Force"

- Full title: Standard for Ethernet Amendment Physical Layer and Management Parameters for 400 Gb/s over Multimode Fiber

http://ieee802.org/3/NGMMF/public/Adopted_Objectives_NGMMF_01_23jan18.pdf

Specific objectives approved by WG

- Define a physical layer specification that supports 400 Gb/s operation over 8 pairs of MMF with lengths up to at least 100m

- Define a physical layer specification that supports 400 Gb/s operation over 4 pairs of MMF with lengths up to at least 100m

Ad Hoc Report

- April 12, 2018 (session 1): 5 attendees
  - Built a list of topics needing contributions at May Interim
- April 12, 2018 (session 2): 28 attendees
  - Built a list of topics needing contributions at May Interim
- April 26, 2018: 25 attendees
  - Continued discussion of topics needing contributions at May Interim
  - Discussed possible clause structure
- May 03, 2018: 30 attendees
  - Discussed contributions for May Interim

Meeting Minutes from March Plenary

- Approve NGMMF Study Group unapproved meeting notes for March Plenary meeting (posted 23-March, 2018) http://www.ieee802.org/3/NGMMF/public/Mar18/unapproved_meeting_minutes_NGMMF_01_mar18.pdf

Goals for the Week

➢ Get ALL issues needing debate, relevant to our two objectives, on the table for discussion

➢ Measure consensus on proposals and issues

➢ Attempt to adopt proposals that appear to have consensus

Big Ticket Items

- 400GBASE-SR8 PMD type
  - Review baseline proposal
  - Discuss incorporation into existing Clause 138
  - Consider MDI and lane assignments, vis-à-vis existing MSAs

- 400GBASE-SR4.2 PMD type
  - Consider a baseline proposal
  - Discuss wavelengths
  - Discuss optical mux/demux architecture

Schedule (1 of 2)

Monday Room Frick - check online schedule for updates!				
Time	**Presenter**	**Affiliation**	**Title**	**File Name**
8:30 AM	David Law	HPE	Appointment of Chair	
8:45 AM	Robert Lingle, Jr	OFS	Agenda & General Information	agenda_3cm_01_0518.pdf
9:15 AM	Paul Kolesar	CommScope	400 Gb/s 100-m 8-pair MMF objective baseline proposal	king_3cm_01a_0518.pdf
9:45 AM	Jeff Maki	Juniper	Port Mappings and Optical MDIs for Eight-Lane Form Factor	maki_3cm_01_0518.pdf
10:15 AM			Coffee Break	
10:45 AM	Steve Swanson	Corning	400G-SR8 MDI Definition and Lane Assignments	swanson_3cm_01a_0518.pdf
11:20 AM	Paul Kolesar	CommScope	400GBASE-SR8 MDI Choices	kolesar_3cm_01_0518.pdf
12:00 PM			Lunch	
1:15 PM	Jonathan Ingham	FIT	Towards a baseline proposal for a 400 Gb/s optical PMD supporting four MMF pairs	ingham_3cm_01_0518.pdf
2:15 PM	Jonathan King	Finisar	400G-SWDM4.2 choices	king_3cm_02_0518.pdf
3:00 PM			Coffee Break	
3:30 PM	Jose Castro	Panduit	Preliminary Evaluation of OFCS Hazards for VCSEL-MMF Channels	castro_3cm_02_0518.pdf
4:00 PM			Extended Discussion of SR4.2 & SR8 contributions	
4:45 PM			Straw Polls & Motions	
6:00 PM			Break for the Day	

Check room assignments
http://ieee802.org/3/interims/may18/daily-schedule.html

All times and order listed are subject to change.

Tuesday Room Frick - check online schedule for updates!				
8:30 AM	Jose Castro	Panduit	Optical Link Model for PAM-4 Multimode Channels with equalizers	castro_3cm_01_0518.pdf
10:15 AM	Coffee Break			
10:45 AM	Further discussion, straw polls, motions (if needed)			
12:00 PM	Adjourn			

Check room assignments

http://ieee802.org/3/interims/may18/daily-schedule.html

Future Meetings

- See: http://www.ieee802.org/3/interims/index.html

- July 2018
  - Week of July 9, 2018
  - Manchester Grand Hyatt
  - San Diego, CA, USA
- Sept 2018
  - Week of September 10, 2018
  - Davenport Historic Hotel
  - Spokane, Washington, USA
- Nov 2018
  - Week of November 12, 2018
  - Marriott Marquis Queen's Park
  - Bangkok, Thailand

Thank You!