Agenda and General Information

IEEE 802.3 100 Gb/s per lane optical PHYs Study Group

Mark Nowell, Cisco

Salt Lake City, UT

Week of May 20th, 2019

Agenda

- Appointment of Recording Secretary
- Confirmation of Chair
- Welcome and Introductions
- Approve Agenda
- Approve Minutes
- Reflector and Web
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Liaisons and Communications
- Ad hocs
- Goals for this meeting
- Meeting Schedule
- Future Meetings
- Motions and Closing Business

P802.3cu Task Force Organization

- Chair: Mark Nowell, Cisco
- Recording Secretary: Kenneth Jackson, Sumitomo
- Chief Editor: Gary Nicholl, Cisco
- Ad hoc chair: TBD

Task Force Decorum

- An officer is permitted to make an audio or slideshow recording of this meeting exclusively for the purpose of generating minutes which shall not be copied or distributed. **IEEE 802.3 meetings do not use this option.** Recording of the proceedings by any other participant or observer, in part or in whole, via any means, is prohibited. (December 2018 IEEE-SA Standards Board Ops Manual 5.3.3.2)
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2018 IEEE-SA Standards Board Ops Manual 5.3.3.3)
- 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
- Please observe proper decorum in meetings

Reflector and Web

- To subscribe to the Study Group's reflector, send an email to:
  ListServ@ieee.org
  with the following in the body of the message (do not include "<>"):

  subscribe stds-802-3-100G-OPTX *<yourfirstname> <yourlastname>*

  end

- Send Study Group reflector messages to:
  stds-802-3-100G-OPTX@listserv.ieee.org

- Study Group's web page URL:
 http://www.ieee802.org/3/cu/index.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
- 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/
    - Use your imat login
        - (must be on meeting SSID – no VPN)

IEEE Structure
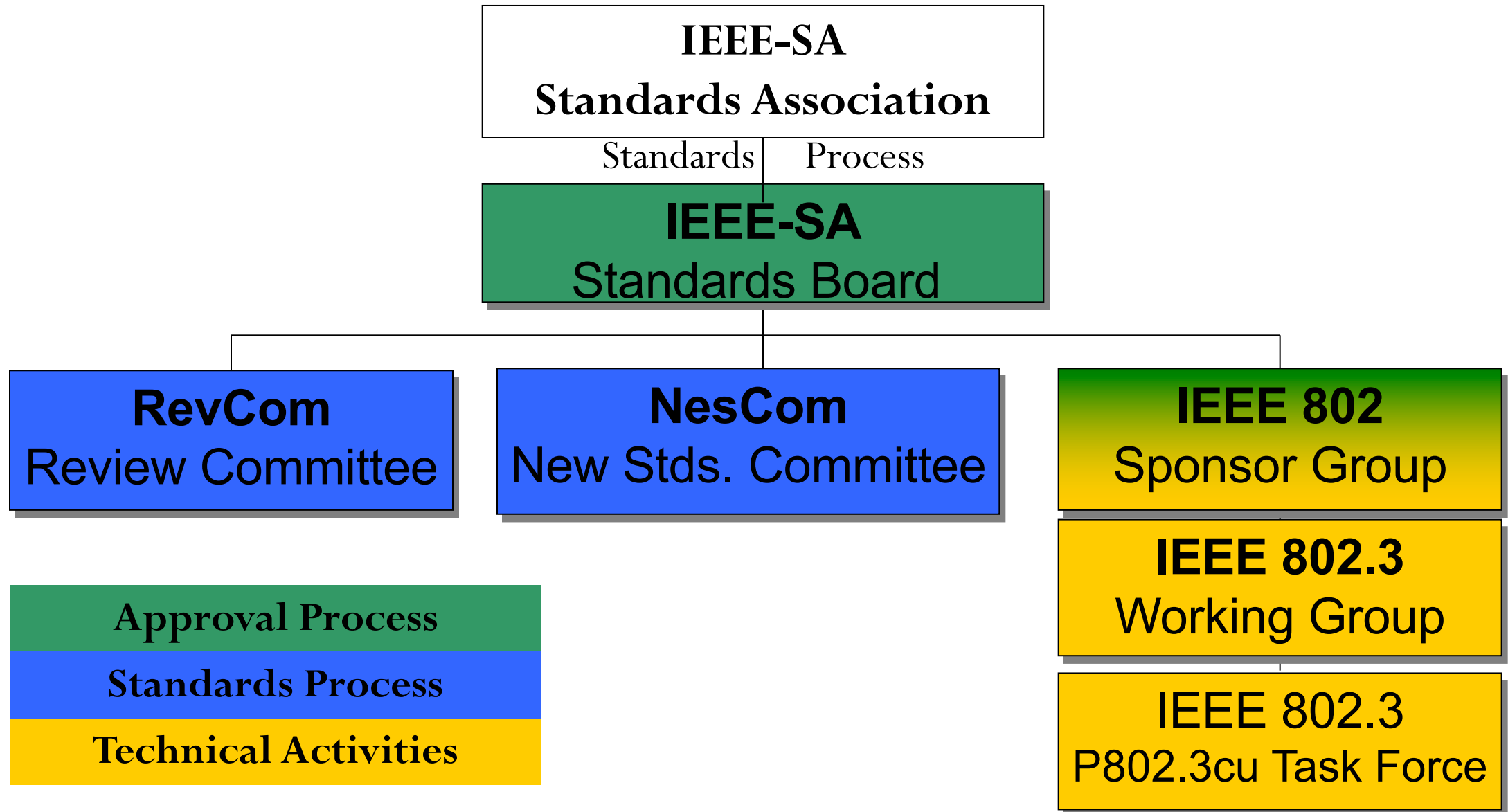
Important Bylaws and Rules

- 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

Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents

- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

- Early identification of holders of potential Essential Patent Claims is encouraged

Slide #1

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

Slide #3

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
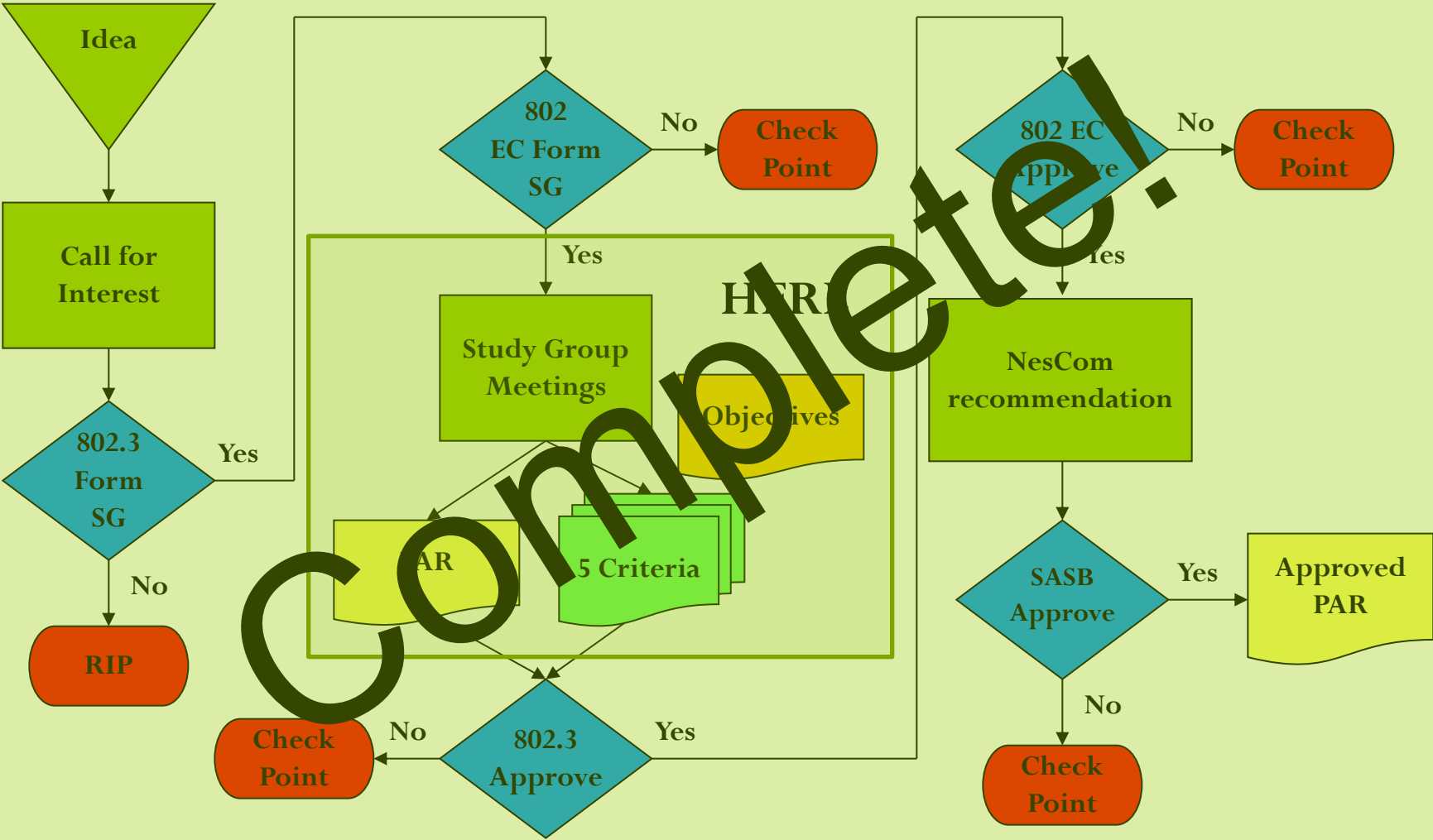
Participation in IEEE 802 Meetings

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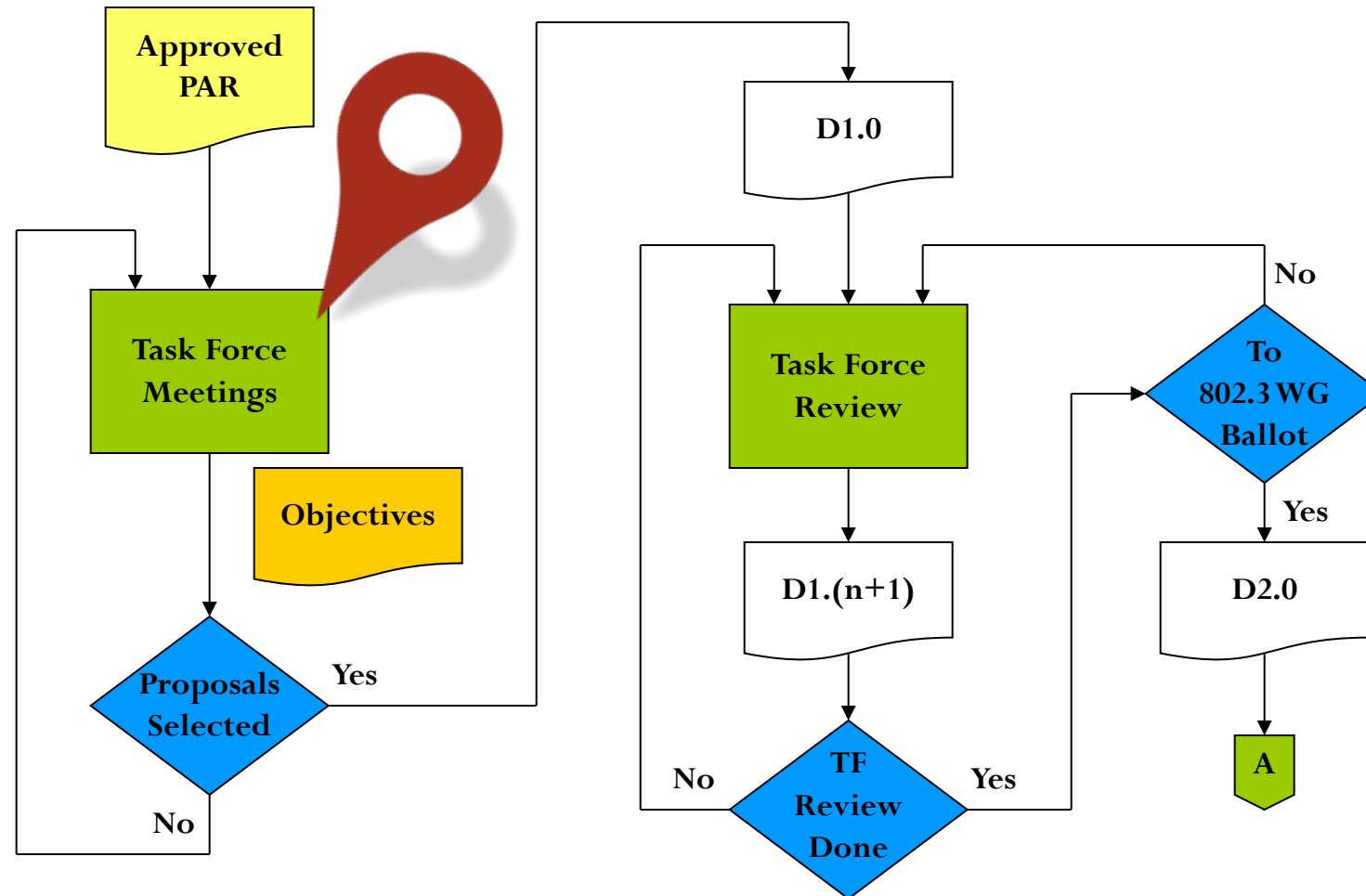
(Latest revision of IEEE 802 LMSC Working Group Policies and Procedures: http://www.ieee802.org/devdocs.shtml)

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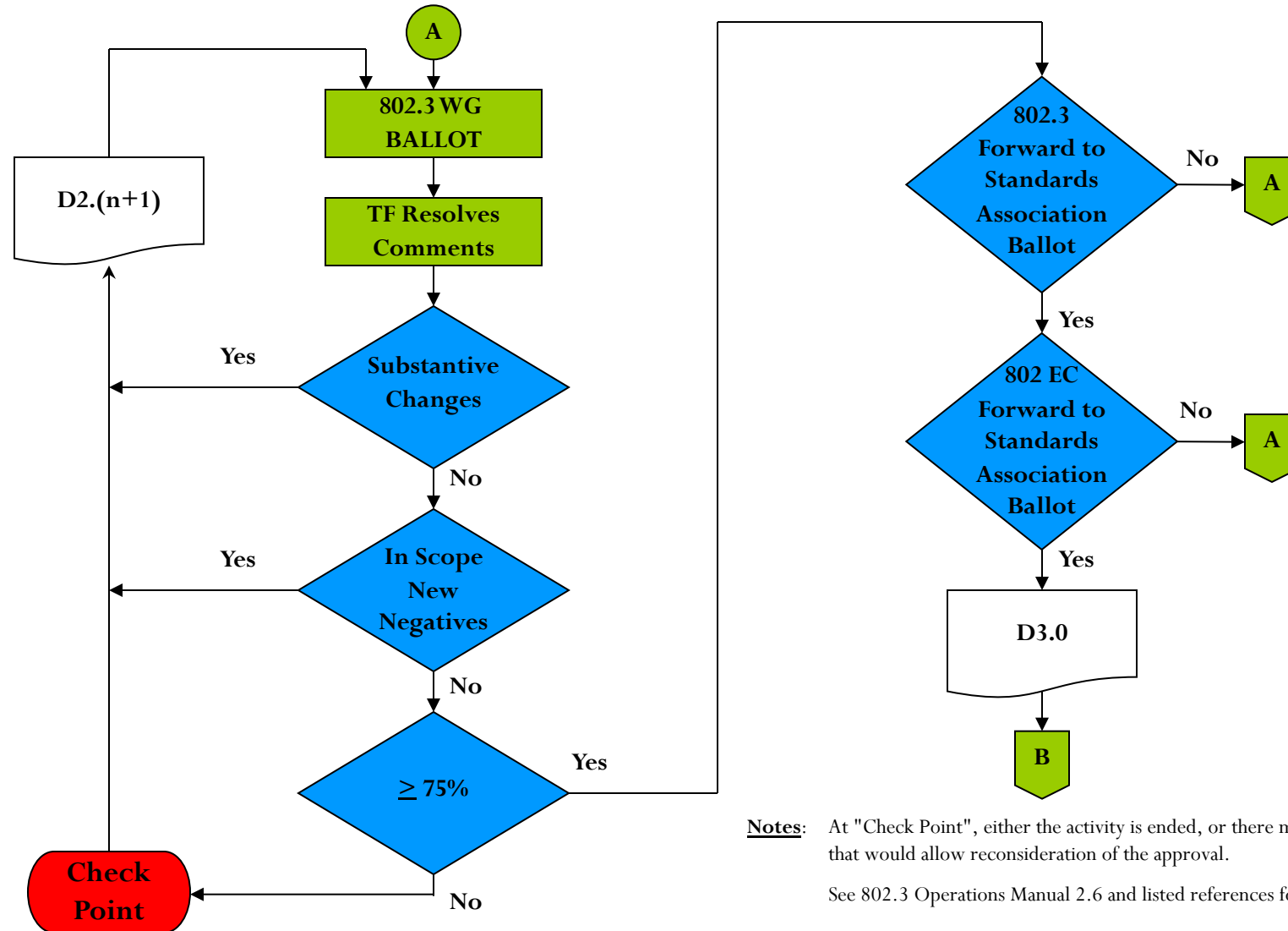
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operations Manual 2.6 and listed references for complete description

B

SA BALLOT

D3.(n+1)

TF Resolves Comments

Substantive Changes — Yes

In Scope New Negatives — Yes

No

No

≥ 75% — Yes

No

Check Point

802.3 Forward to RevCom — No → B

Yes

802 EC Forward to RevCom — No → B

Yes

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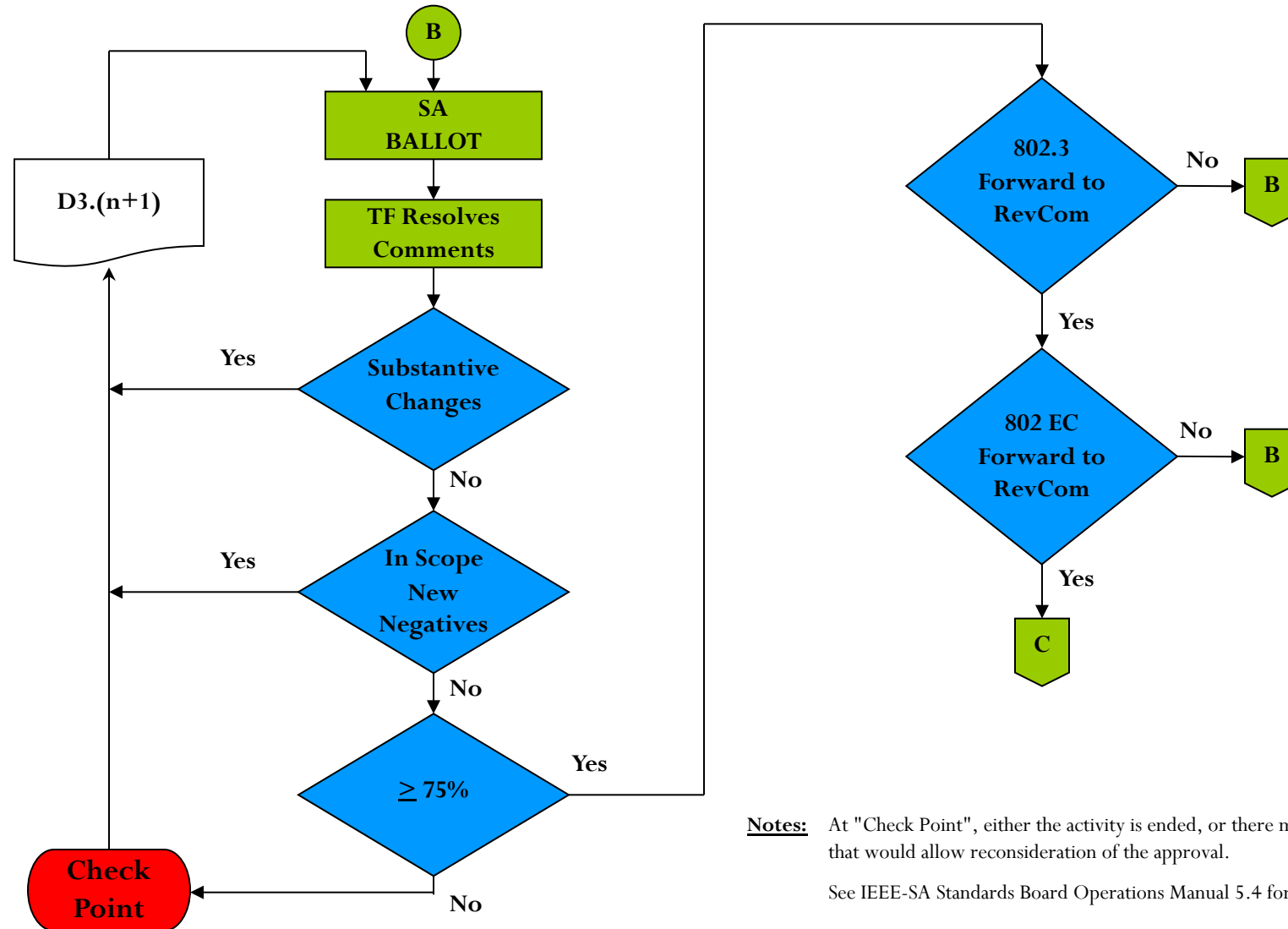
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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

C

RevCom Review

RevCom recommendation

SASB Approval

Yes

No

Check Point

Approved Draft

Publication Preparation

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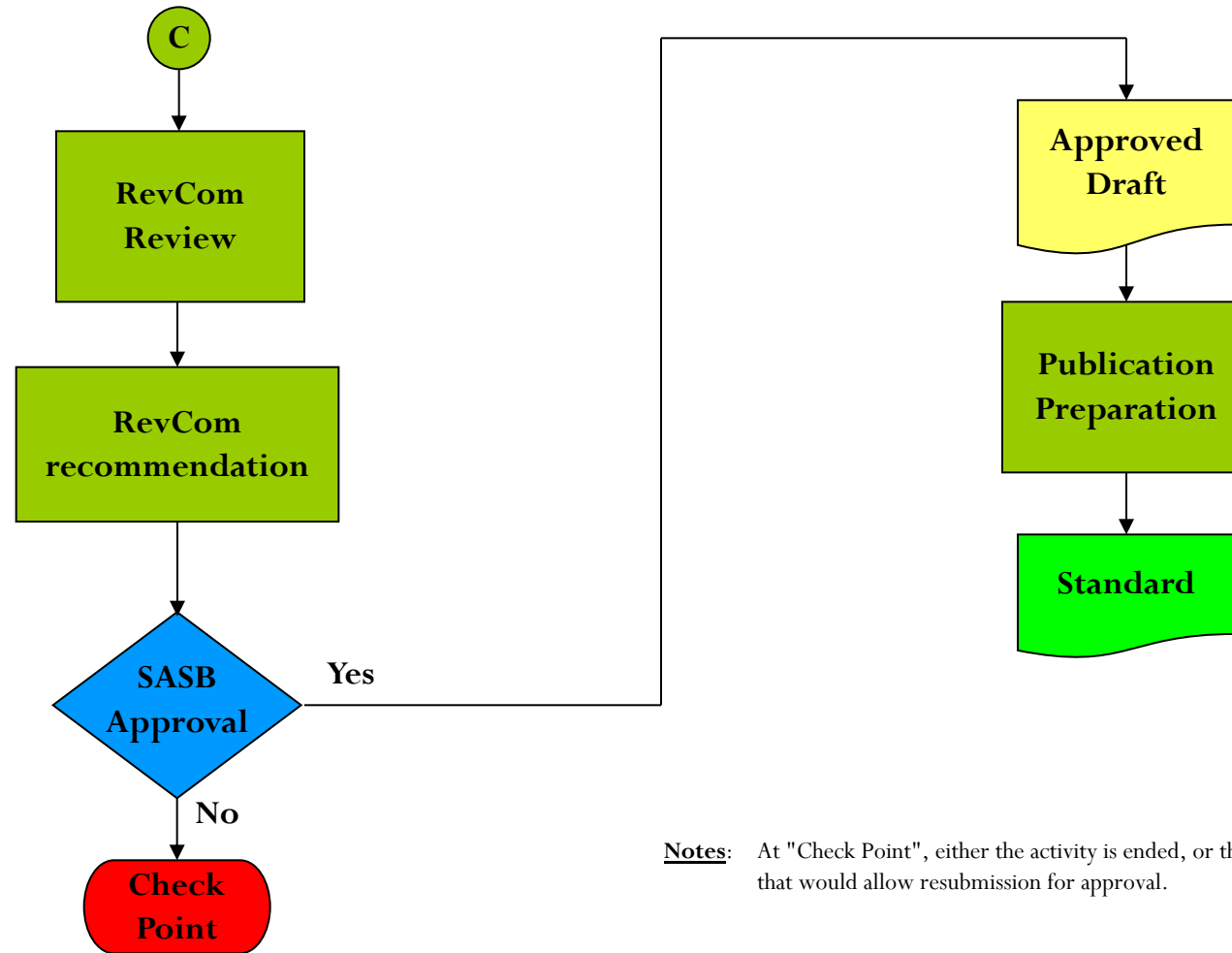
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow resubmission for approval.

Liaisons and Communications

Ad hocs

Charter: The charter of the IEEE 802.3cu Ad hoc is to discuss topics and provide contributions towards helping the Task Force with its decisions.

Chair: Mark Nowell (provisional)

http://www.ieee802.org/3/cu/public/cu_adhoc/cu_archive/index.html

Expected to continue the regular cadence.

• Timeslot TBD

IEEE P802.3cu Task Force Approved Project Documents
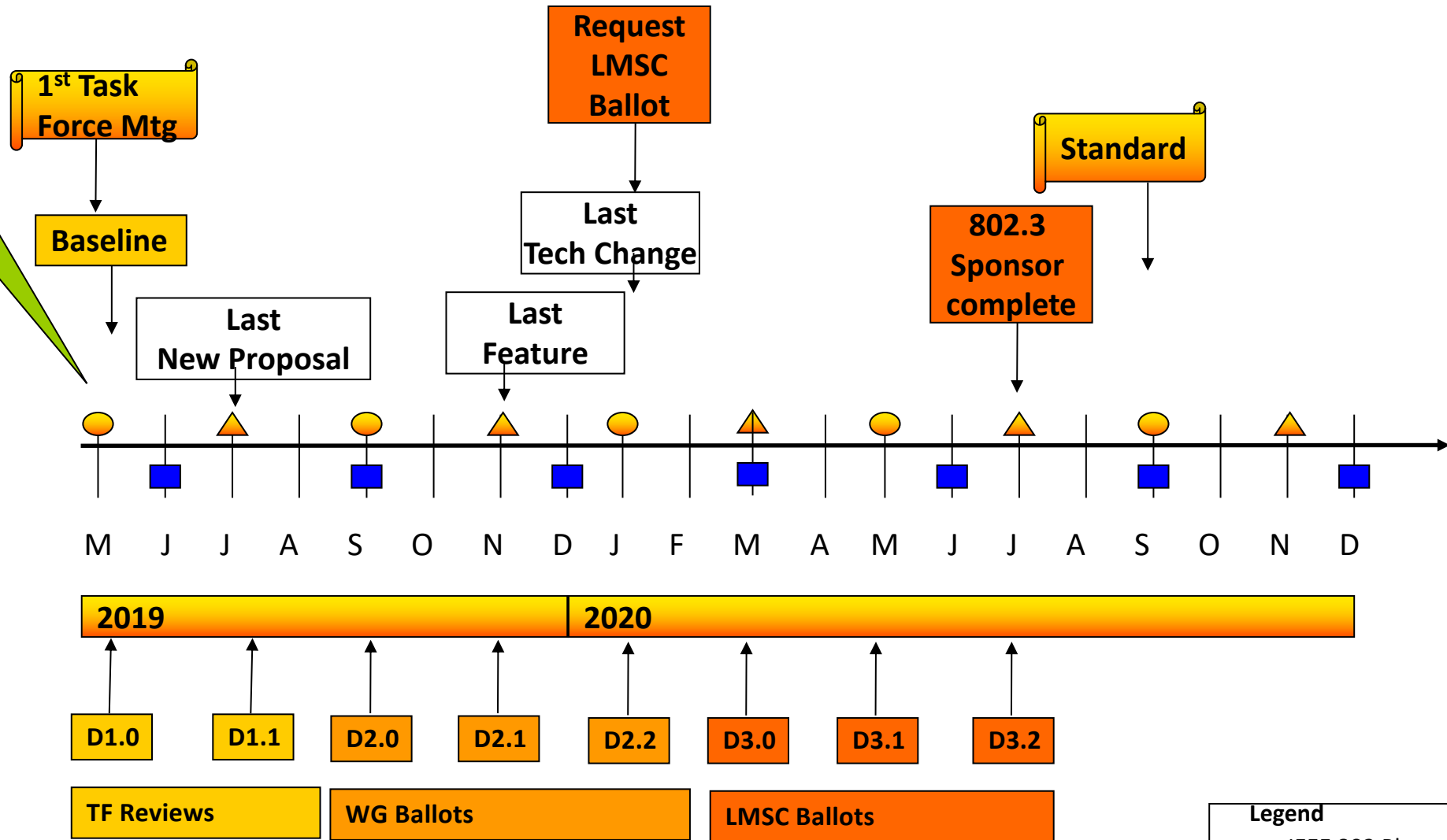
- PAR
  - http://www.ieee802.org/3/cu/P802_3cu_PAR.pdf
- CSD
  - https://mentor.ieee.org/802-ec/dcn/19/ec-19-0062-00-ACSD-p802-3cu.pdf
- Objectives
  - http://www.ieee802.org/3/cu/Objectives_Approved_Mar_2019.pdf
- Timeline
  - TBD

Approved Objectives (March 2019)

- Support a MAC data rate of 100 Gb/s
- Support a MAC data rate of 400 Gb/s
- Support full-duplex operation only
- Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Provide appropriate support for OTN
- Support a BER of better than or equal to 10-12 at the MAC/PLS service interface (or the frame loss ratio equivalent) for 100 Gb/s operation
- Support a BER of better than or equal to 10-13 at the MAC/PLS service interface (or the frame loss ratio equivalent) for 400 Gb/s operation
- Define a single-wavelength 100 Gb/s PHY for operation over SMF with lengths up to at least 2 km
- Define a single-wavelength 100 Gb/s PHY for operation over SMF with lengths up to at least 10 km
- Define a four-wavelength 400 Gb/s PHY for operation over SMF with lengths up to at least 2 km
- Define a four-wavelength 400 Gb/s PHY for operation over SMF with lengths up to at least 10 km

IEEE P802.3cu Task Force draft Timeline

We're here

1st Task Force Mtg

Baseline

Last New Proposal

Request LMSC Ballot

Last Tech Change

Last Feature

802.3 Sponsor complete

Standard

M J J A S O N D J F M A M J J A S O N D

| 2019 | 2020 |

D1.0 · D1.1 · D2.0 · D2.1 · D2.2 · D3.0 · D3.1 · D3.2

TF Reviews · WG Ballots · LMSC Ballots

Legend
△ IEEE 802 Plenary
○ IEEE 802.3 Interim
■ IEEE-SA Standards Board

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M J J A S O N D J F M A M J J A S O N D

2019   2020

D1.0   D1.1   D1.2   D2.0   D2.1   D2.2   D3.0   D3.1   D3.2

TF Reviews   WG Ballots   LMSC Ballots

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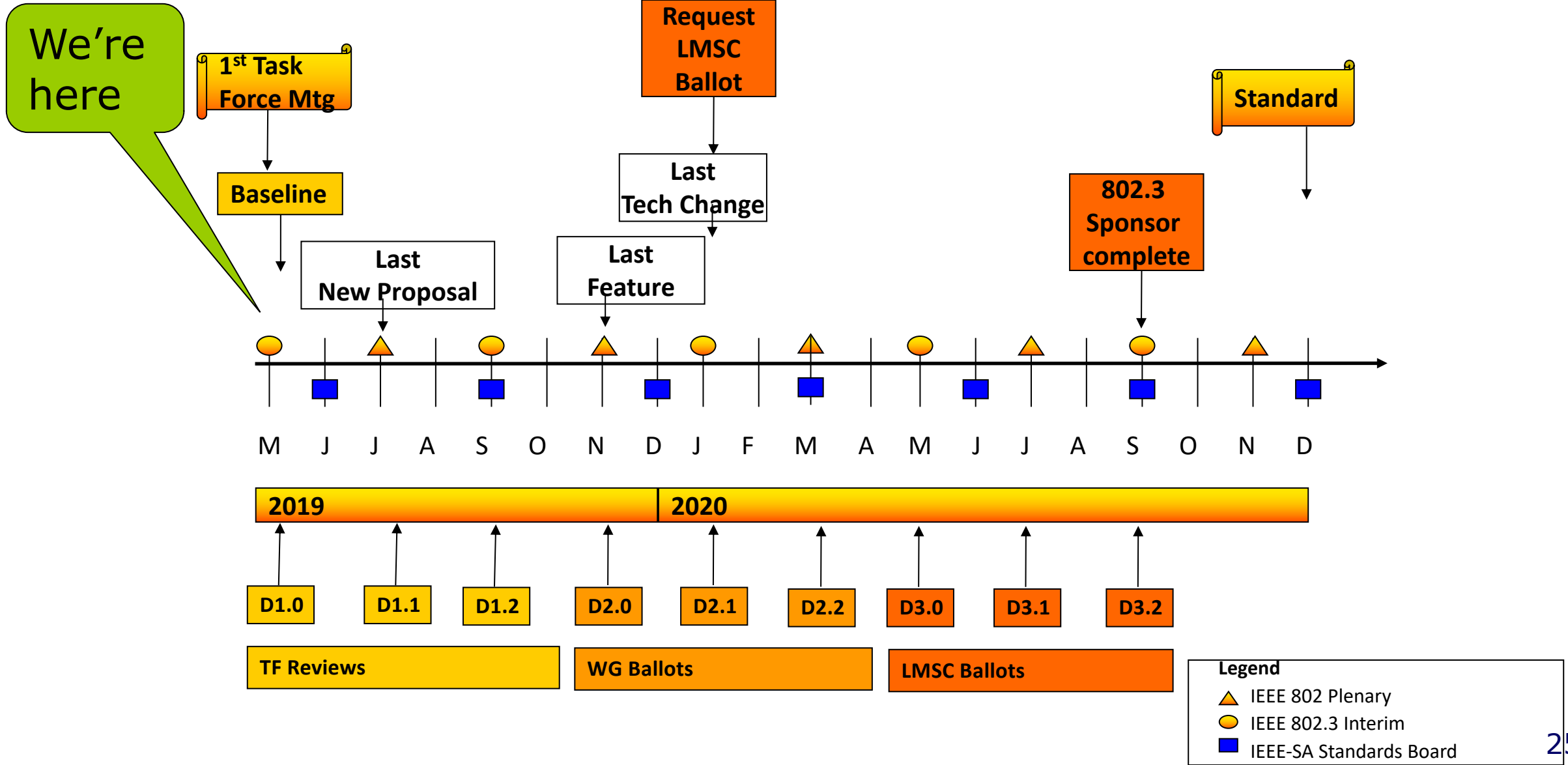
Timeline discussion

- IEEE 802 process has 3 review cycles:
    - Task Force review
    - Working Group review
    - Sponsor Ballot Review
- Ample time to discuss, refine, adjust parameters
- Baseline adoption is first "stake-in-the-ground"

Goals for the meeting

- Review technical contributions
- Adopt any baselines where consensus exists
- Depending on progress, initiate working document for task force review

Meeting Logistics

- Meeting room: Alta/Brighton – Lobby Level
- Thursday May 24th
  - 8 AM – ~6 PM
- Friday May 25th
  - 8 AM – 12 PM

Meeting Schedule – Thurs/Fri

Thursday
23-May-19

Time	Presenter	Affiliation	Title	File Name	Dur.
8:00 AM	Mark Nowell	Cisco	Agenda and General Information	agenda_3cu_01_0519.pdf	0:45
8:45 AM	Gary Nicholl	Cisco	Editorial update	nicholl_3cu_01_0519.pdf	0:15
9:00 AM	Kenneth Jackson	Sumitomo Electric	PMD Naming	jackson_3cu_01_0519.pdf	0:10
9:10 AM	Kenneth Jackson	Sumitomo Electric	Physical Layer clauses associated with the new 100 Gb/s and 400 Gb/s PMDs	jackson_3cu_02_0519.pdf	0:15
9:25 AM	John D'Ambrosia	Huawei	Past Performance is not indicative of Future Results	dambrosia_3cu_01_0519.pdf	0:15
9:40 AM	Brian Welch	Cisco	100GBASE-FR Baseline Proposal	welch_3cu_01_0519.pdf	0:20
10:00 AM			**Break**		0:15
10:15 AM	David Lewis	Lumentum	400GBASE-FR4 baseline proposal	lewis_3cu_01_0519.pdf	0:30
10:45 AM			Discussion, Straw Poll, Motions		0:30
11:15 AM	Ali Ghiasi	Ghiasi Quantum	Minimum Transmitter OMA Launch Window	ghiasi_3cu_01_0519.pdf	0:20
11:35 AM	Yu Xu	Huawei	Further Technical study for 400GE with 4*100G PAM4	yu_3cu_01_0519.pdf	0:20
11:55 AM	Scott Schube	Intel	Dispersion Penalty Measurement using a Silicon Photonics Transmitter	schube_3cu_03_0519.pdf	0:20
12:15 PM			**Lunch**		1:10
1:25 PM	Pete Anslow	Ciena	P802.3cu DGD penalty	anslow_3cu_01_0519.pdf	0:20
1:45 PM	Pete Anslow	Ciena	TDECQ and dispersion penalty for 100GBASE-LR4	anslow_3cu_02_0519.pdf	0:20
2:05 PM	Chris Cole	Finisar	Two SMF Spec Limit Types for 802.3 PMDs Proposal	cole_3cu_01_0519.pdf	0:20
2:25 PM	Brian Welch	Cisco	100GBASE-LR Baseline Proposal	welch_3cu_02_0519.pdf	0:20
2:45 PM	Peter Stassar	Huawei	400GBASE-LR4 baseline proposal	stassar_3cu_01_0519.pdf	0:20
3:05 PM			**Break**		0:20
3:25 PM	David Lewis	Lumentum	400GBASE-LR4 baseline proposal	lewis_3cu_02_0519.pdf	0:20
3:45 PM			Discussion, Straw Poll, Motions		2:15
6:00 PM			**Break**		-

Friday
24-May-19

Time	Presenter	Affiliation	Title	File Name	Dur.
8:00 AM	Mark Nowell	Cisco	Opening	agenda_3cu_01_0519.pdf	0:15
8:15 AM			Discussion, Straw Poll, Motions		1:45
10:00 AM			**Break**		0:20
10:20 AM			Discussion, Straw Poll, Motions		1:40
12:00 PM			**Adjourn**		-

Future Meetings & Ad hocs

- Ad-hoc meeting plans
  - On-going quasi-bi-weekly meetings, agendas will be published.
  - Timeslot TBD
- See: http://www.ieee802.org/meeting/index.html
- July 2019 Plenary
  - Week of July 15th, 2019. Vienna, Austria
- Sept 2019 Interim
  - Week of Sept 9th, 2019. Indianapolis, IN, USA
- Nov 2019 Plenary
  - Week of Nov 11th, 2019. Waikoloa Village, HI, USA
- Jan 2020, Interim
  - Week of Jan 20thm 2020, Geneva, CH

- Anyone interested in hosting an interim meeting contact me or the IEEE 802.3 Executive Secretary Steve Carlson.

Thank You!