Agenda and General Information

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s
Electrical Interfaces Task Force

Kent Lusted, Vice-Chair
Employed by and Affiliated with Intel Corporation
January 21-23, 2020, Geneva, Switzerland

Agenda

- Appointment of Recording Secretary
- Welcome and Introductions
- Approve Agenda
- Approve November 2019 Minutes
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - Participant Policy
  - Copyright Policy
  - IEEE Standards Process
- Reflector and Web
- Goals for this meeting
- Liaisons and Communications
- Comment Resolution & Presentations
- Motions and Closing Business
- Future Meetings

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. (January 2019 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 2019 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

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

IEEE Structure
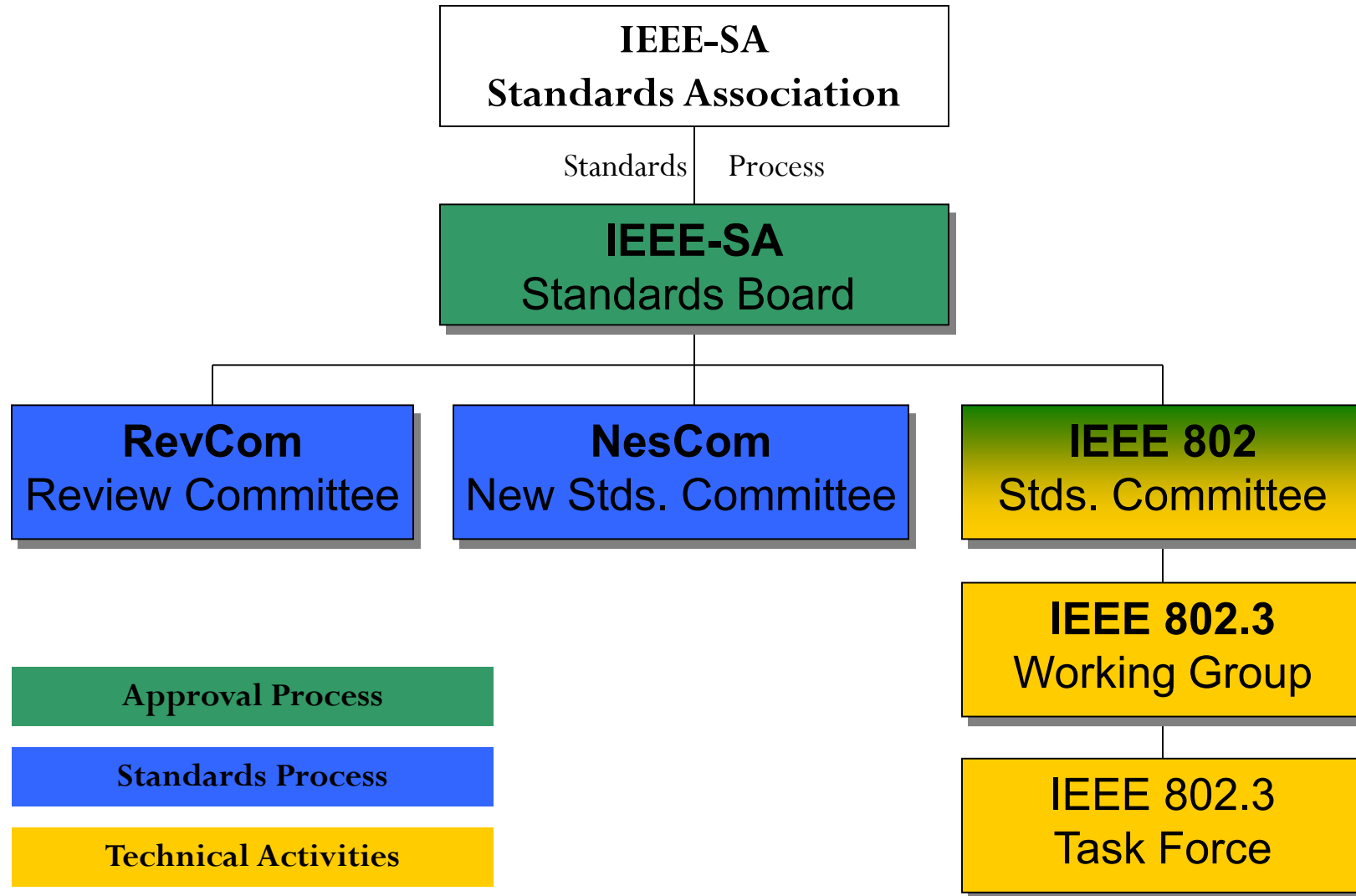
Important Bylaws and Rules

- **IEEE-SA Operations Manual**
  http://standards.ieee.org/develop/policies/sa_opman/

- **IEEE-SA Standards Board Bylaws**
  http://standards.ieee.org/develop/policies/bylaws/

- **IEEE-SA Standards Board Operations Manual**
  http://standards.ieee.org/develop/policies/opman/

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures**
  https://ieee.app.box.com/v/PandP-LMSC

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual**
  http://www.ieee802.org/devdocs.shtml

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**
  http://www.ieee802.org/devdocs.shtml

- **IEEE 802.3 Working Group Operating Rules**
  http://ieee802.org/3/rules/P802_3_rules.pdf

Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- **Show slides #1 through #4 of this presentation**
- **Advise the WG attendees that:**
  - IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.

- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG Chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

  Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

(Optional to be shown)

◆IEEE

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

INSTRUCTIONS FOR CHAIRS OF
STANDARDS DEVELOPMENT ACTIVITIES

At the beginning of each standards development meeting the chair or a designee is to:

- Show the following slides (or provide them beforehand)
- Advise the standards development group participants that:
- IEEE SA's copyright policy is described in Clause 7 of the IEEE SA Standards Board Bylaws and Clause 6.1 of the IEEE SA Standards Board Operations Manual;
- Any material submitted during standards development, whether verbal, recorded, or in written form, is a Contribution and shall comply with the IEEE SA Copyright Policy;
- Instruct the Secretary to record in the minutes of the relevant meeting:
- That the foregoing information was provided and that the copyright slides were shown (or provided beforehand).

IEEE SA STANDARDS ASSOCIATION

◆IEEE

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IEEE SA COPYRIGHT POLICY

By participating in this activity, you agree to comply with the IEEE Code of Ethics, all applicable laws, and all IEEE policies and procedures including, but not limited to, the IEEE SA Copyright Policy.

- Previously Published material (copyright assertion indicated) shall not be presented/submitted to the Working Group nor incorporated into a Working Group draft unless permission is granted.

- Prior to presentation or submission, you shall notify the Working Group Chair of previously Published material and should assist the Chair in obtaining copyright permission acceptable to IEEE SA.

- For material that is not previously Published, IEEE is automatically granted a license to use any material that is presented or submitted.

IEEE SA STANDARDS ASSOCIATION

◆IEEE

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◆IEEE

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

http://www.ieee802.org/3/100GSR/index.html

■IEEE SA Copyright FAQs
  - http://standards.ieee.org/faqs/copyrights.html/

■IEEE SA Best Practices for IEEE Standards Development
  - http://standards.ieee.org/develop/policies/best_practices_for_ieee_standards_development_051215.pdf

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

IEEE SA STANDARDS ASSOCIATION   ◆IEEE   4

Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - IEEE Code of Ethics
  - IEEE Code of Conduct

- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*

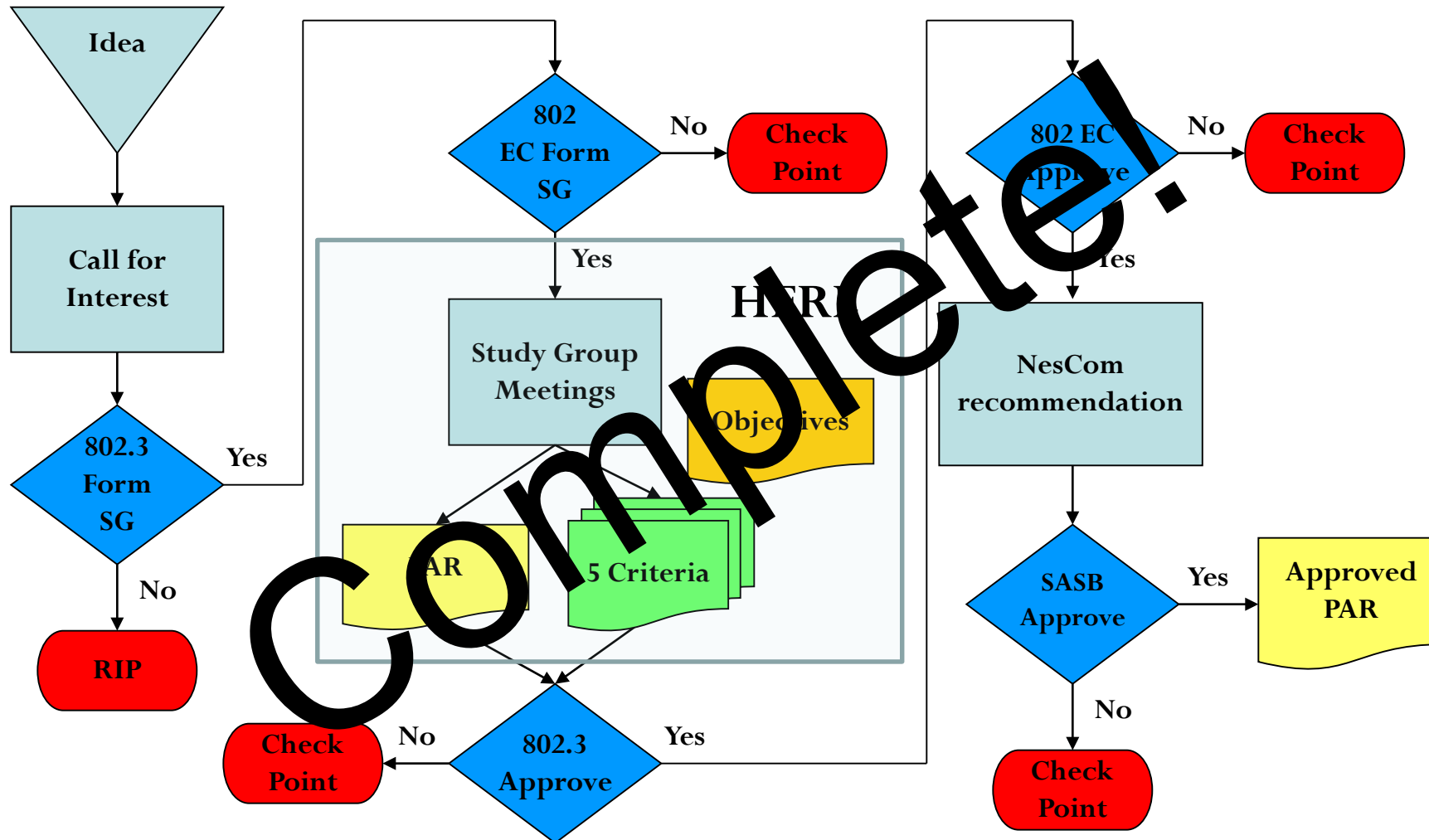- The most recent versions of these Codes are available at http://www.ieee.org/about/corporate/governance

Participants in the IEEE-SA "*individual process*" shall act independently of others, including employers

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

- This means participants:

  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications

  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders

  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions

- By participating in standards activities using the "*individual process*", you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

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

- The IEEE-SA Standards Board Bylaws (clause 5.2.1.3) specifies that "*the standards development process shall not be dominated by any single interest category, individual, or organization*"

  – This means no participant may exercise *"authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints"* or *"to hinder the progress of the standards development activity"*

- This rule applies equally to those participating in a standards development project and to that project's leadership group

- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project's IEEE-SA Program Manager
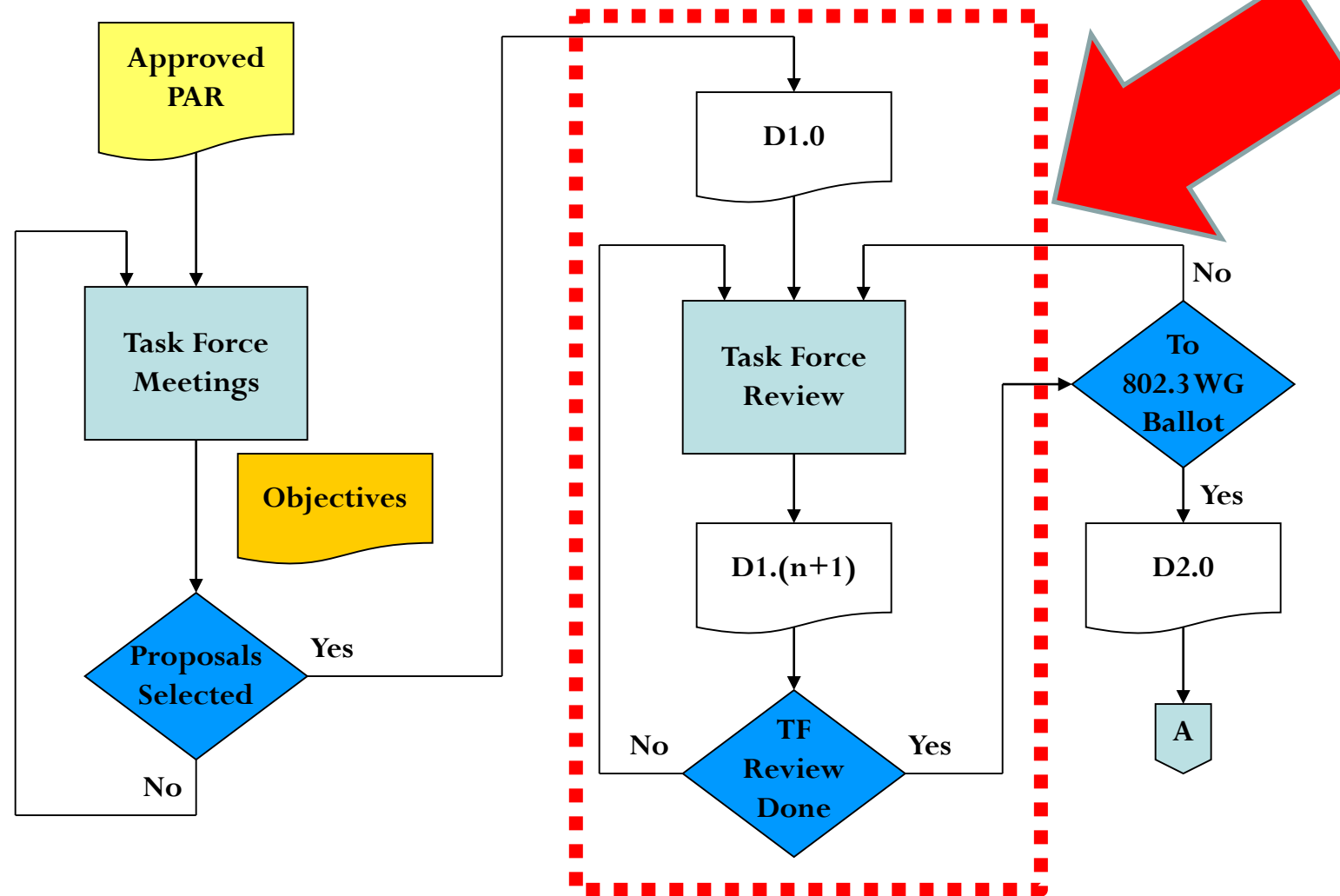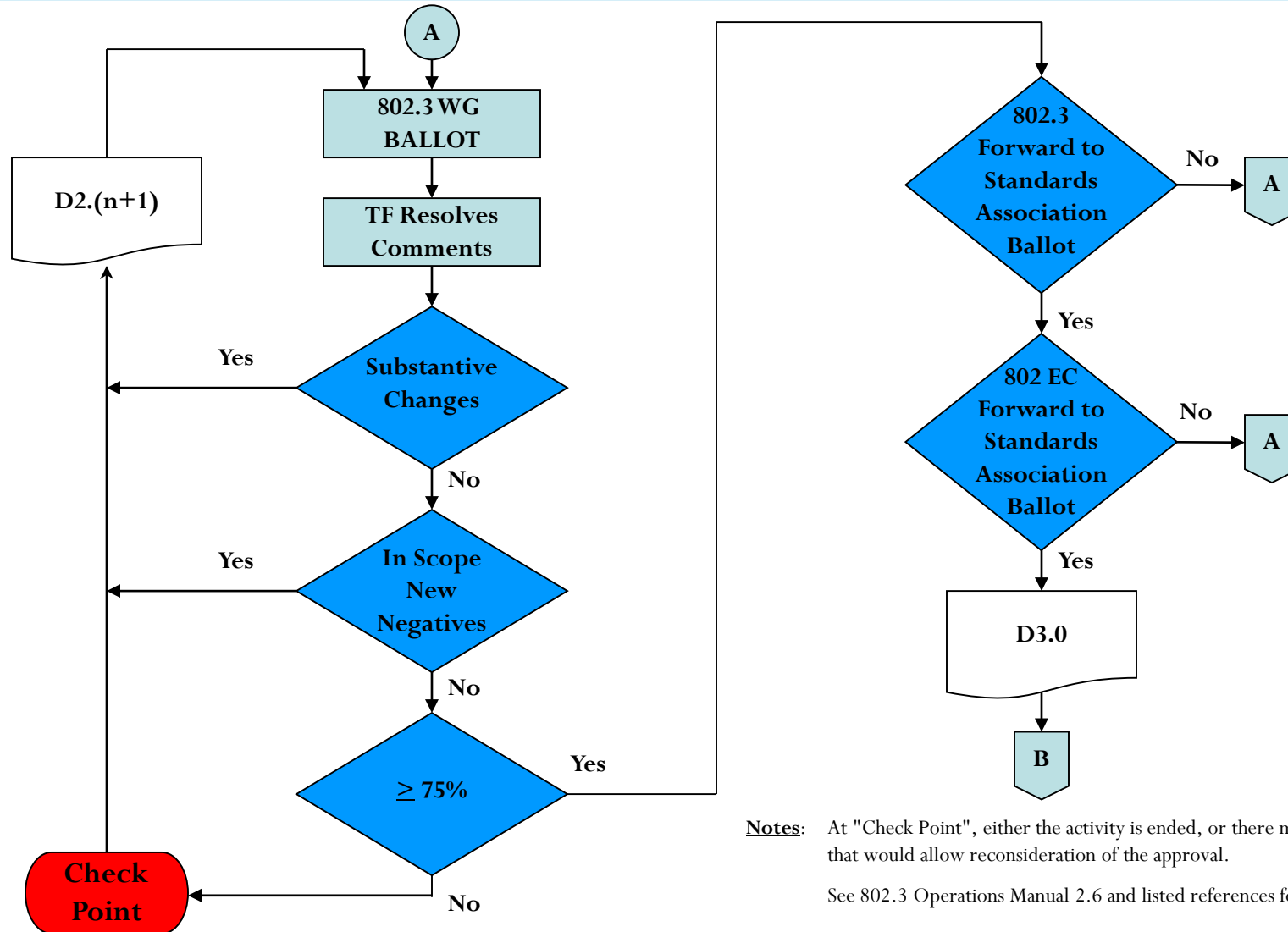
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

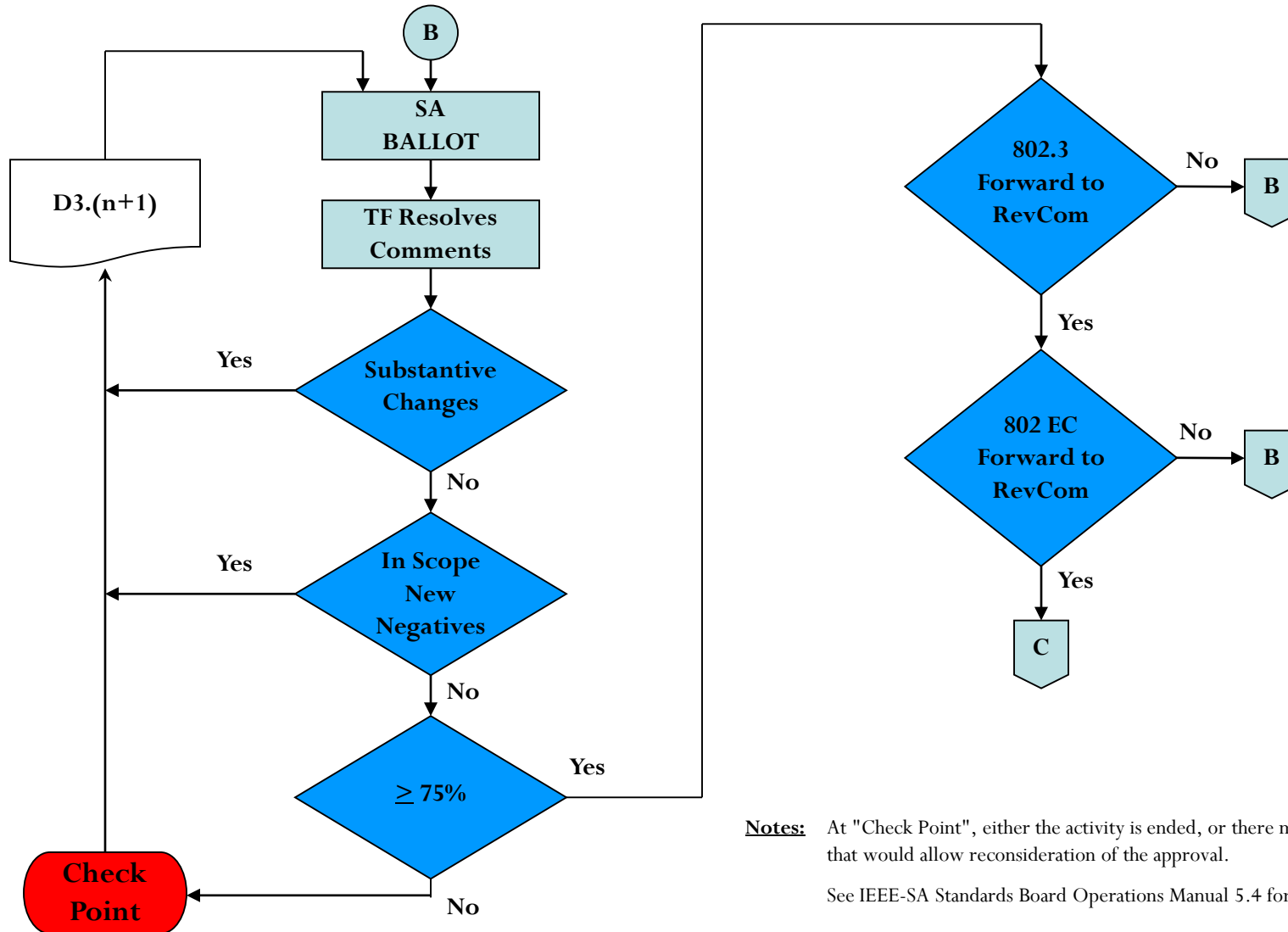# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase

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 Operations Manual 2.6 and listed references for complete description

Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.
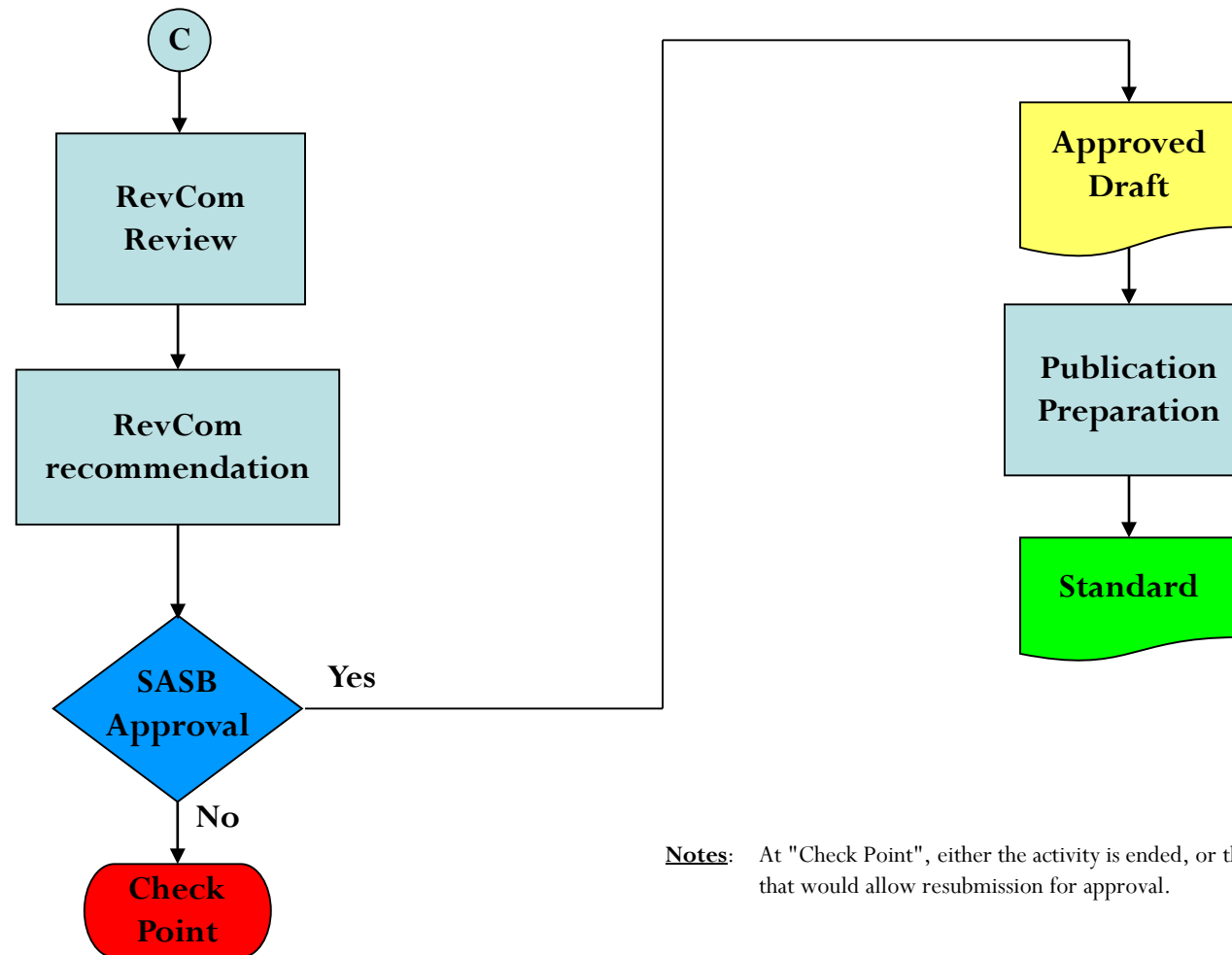
See IEEE-SA Standards Board Operations Manual 5.4 for complete description

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

Task Force Leadership Team

- TF Chair: Beth Kochuparambil (Cisco)
- TF Vice-Chair: Kent Lusted (Intel)
- TF Chief Editor: Matt Brown (Huawei)

Editor	Duties
Matt Brown	Chief Editor, 120G (C2C), 120G (C2M), legacy clauses
Arthur Marris	Clauses 30/45/73, other legacy clauses
Howard Heck	Clause 162 (CR), Annex 93A
Chris Diminico	Clause 162 (CR) cable assembly subclauses/annexes
Phil Sun	Clause 163 (KR)
Mark Gustlin	Clauses 91, 161
Jeff Slavick	Advisor and reviewer for logic clauses/annexes
Mike Dudek	Advisor and reviewer for CR/KR/AUI clauses/annexes

Reflector and Web

- To subscribe to the 100GEL reflector, send an email to:

  ListServ@ieee.org

  with the following in the body of the message (do not include "<>"):

  subscribe **STDS-802-3-100GEL** *<yourfirstname> <yourlastname>*

  end

- Send 100GEL reflector messages to:

  STDS-802-30100GEL@listserv.ieee.org

- Task Force web page URL:

  http://www.ieee802.org/3/ck/index.html

Task Force Private Area

- URL: http://www.ieee802.org/3/ck/private/index.html
  - Username: 802.3ck
  - Password:
- Write it down…

- Note - The draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

Attendance

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

- Access details
  - URL: http://imat.ieee.org/

Goals for the meeting

- Resolve comments against D1.0
- Hear presentations
- Generate Draft 1.1

Comment Agenda

- There are many comments to process and 17 presentations in January
  - ~24 hours meeting time
  - Many unique comments; it is going to be hard to close all of the comments
- The TF leadership is exploring options on how to keep moving forward efficiently.

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Comment Criteria

- There will not be time at the interim meeting to craft solutions on the floor.
- Comments having certain criteria will be deferred to the end of the meeting; for example:
  - The comment is poorly written, no/bad justification, no/unclear remedy, etc.
  - The comment may be relevant but is far from mature, requires future detailed proposal, etc.
  - The comment may be relevant, is not critical to close, but may require a lot of consensus building to gain closure.

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Some Potential Paths towards D1.1

- If there are a large number of comments still open as meeting time runs out, we may need to consider and discuss options, including but not limited to:

- Option 1: Delay D1.1 recirc and close unresolved comments in telephonic interim meetings.

- Option 2: Leave D1.0 unresolved comments open during D1.1 recirculation

- Option 3: Close comments with REJECT response (and a request to resubmit it in D1.1 review) indicating it was due to the deferral criteria.

-

Liaisons and Communications

- OIF – Progress on 112G-VSR and 112G-LR Projects

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces -- Approved Project Documents

- PAR
  - http://www.ieee802.org/3/ck/P802_3ck_PAR_14may18.pdf
- CSD
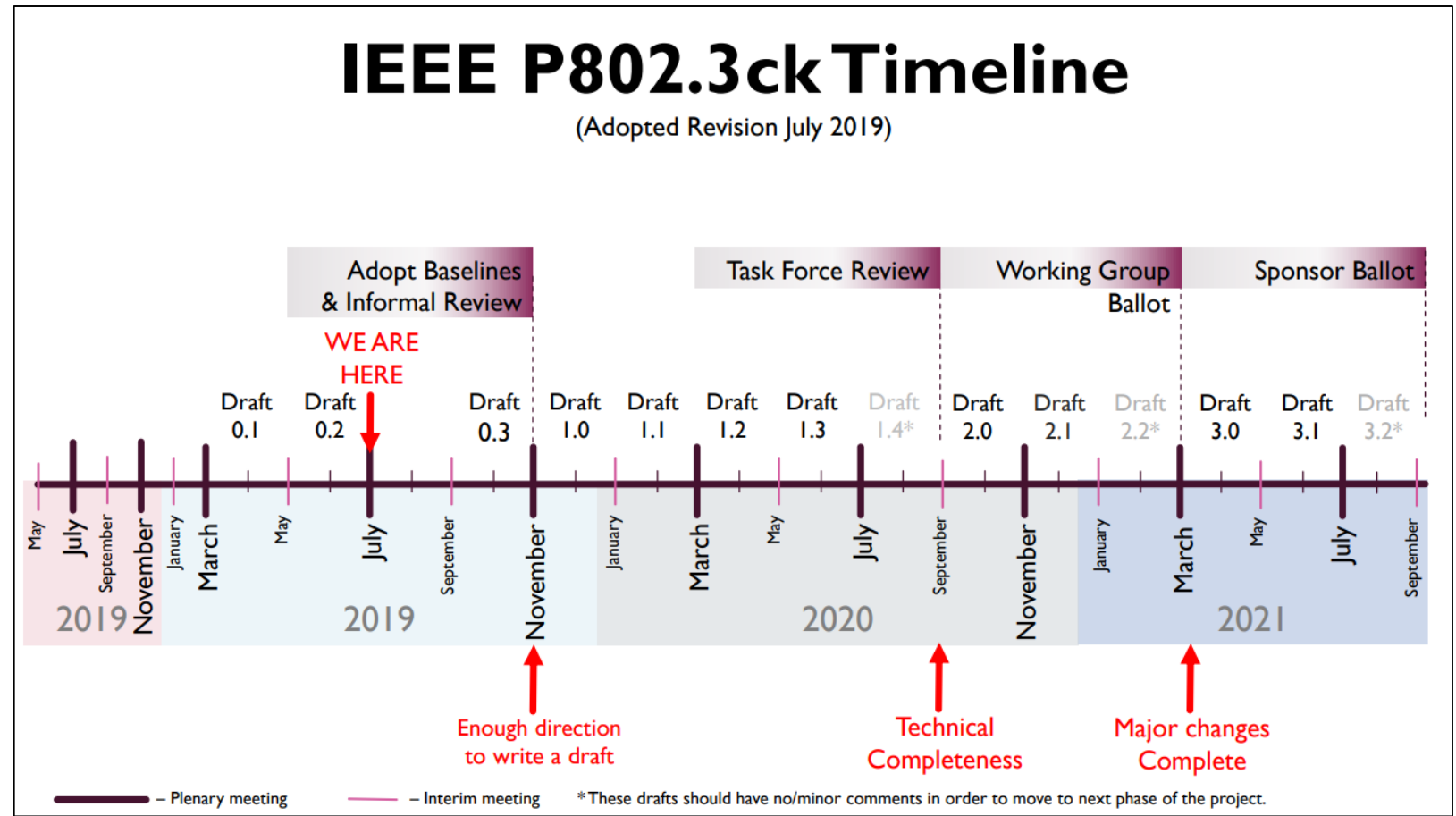 - http://www.ieee802.org/3/ck/P802_3ck_CSD_06apr18.pdf
- Objectives
  - http://www.ieee802.org/3/ck/P802_3ck_Objectives_2018mar.pdf

IEEE P802.3ck Timeline

- Updated in July 2019

http://www.ieee802.org/3/ck/P802_3ck_Timeline_18july19.pdf

Contributed Presentations

Topic	Author(s)	Affiliation(s)	Title
FEC	Jeff Slavick	Broadcom	Supporting Material for Comment 103
FEC	Mark Gustlin, et. al.	Cicso	100GBASE-KR1/CR1 AN Direction
FEC	Shawn Nicholl	Xilinx	Sublayer Delay for Interleaved 100G FEC
C2M	Mau-Lin Wu, et. al.	MediaTek	C2M TP1a EVEC spec proposal
C2M	Mike Dudek, et. al.	Marvell	Effect of improved connector and additional module IC noise on whole channel performance and the comparison with TP1a performance
C2M	Ali Ghiasi	Ghiasi Quantum LLC / Inphi	C2M Methodology, CTLE gain, and DFE taps
C2M	Phil Sun, et. al.	Credo	C2M VEC thresholds
CR	Ali Ghiasi	Ghiasi Quantum LLC / Inphi	In support of test fixtures comments
CR	Chris DiMinico	MC Communications/PHY-SI LLC/Panduit	162B.1 Mated Test Fixtures
CR	Chris DiMinico	MC Communications/PHY-SI LLC/Panduit	CR Minimum Cable Assembly and Channel Insertion Loss
KR	Rich Mellitz, et. al.	Samtec	Practical Device Test Fixtures for 100G KR ... or Not and the Impact on ERL and P max /V f (ref: comment 19, 20, 21)
KR	Tom Palkert	Molex	BP OD Channel Analysis
C2C	Ali Ghiasi	Ghiasi Quantum LLC / Inphi	C2C Channel Equalization
ERL	Mau-Lin Wu, et.al	MediaTek	ERL Capable of DFE Floating-Tap (Update)
C2M	John Calvin, et. al.	Keysight and others	Evaluation of 53 GBd PAM4 ("112G") signal through Wilder OSFP Fixture
ERL	*Adam Healey*	*Broadcom*	*A closer look at effective return loss -- late*

http://www.ieee802.org/3/ck/public/20_01/index.html

Agenda – Tuesday

Time	Author(s)	Affiliation(s)	Title	Duration
8:00:00 AM	Kent Lusted	Intel	Agenda	0:45
8:45:00 AM	Matt Brown	Huawei	Editors report	0:10:00
8:55:00 AM	Matt Brown	Huawei	Comment Agenda	0:10:00
8:55:00 AM			Comment Resolution (and presentation as needed)	1:35:00
10:30:00 AM	Break			0:20:00
10:50:00 AM			Comment Resolution (and presentation as needed)	1:10:00
12:00:00 PM	Lunch			1:00:00
1:00:00 PM			Comment Resolution (and presentation as needed)	2:00
3:00:00 PM	Break			0:20:00
3:20:00 PM			Comment Resolution (and presentation as needed)	2:40:00
6:00:00 PM	Break for the Day			0:25:00

Note –Times listed are subject to change.

Agenda - Wednesday

Time	Author(s)	Affiliation(s)	Title	Duration
8:00:00 AM	Kent Lusted	Intel	Annoucements	0:05
8:05:00 AM			Comment Resolution (and presentation as needed)	1:55:00
10:00:00 AM	Break			0:20:00
10:20:00 AM			Comment Resolution (and presentation as needed)	1:40:00
12:00:00 PM	Lunch			1:00:00
1:00:00 PM			Comment Resolution (and presentation as needed)	2:00
3:00:00 PM	Break			0:20:00
3:20:00 PM			Comment Resolution (and presentation as needed)	2:40:00
6:00:00 PM	Break for the Day			0:25:00

Note –Times listed are subject to change.

Agenda – Thursday

Time	Author(s)	Affiliation(s)	Title	Duration
8:00:00 AM	Kent Lusted	Intel	Annoucements	0:05
8:05:00 AM			Comment Resolution (and presentation as needed)	1:55:00
10:00:00 AM	Break			0:20:00
10:20:00 AM			Comment Resolution (and presentation as needed)	1:40:00
12:00:00 PM	Lunch			1:00:00
1:00:00 PM			Comment Resolution (and presentation as needed)	2:00
3:00:00 PM	Break			0:20:00
3:20:00 PM			Comment Resolution (and presentation as needed)	1:40:00
5:00:00 PM			Motions and Closing business	1:00:00
6:00:00 PM	Break for the Day			0:25:00

Note –Times listed are subject to change.

Meeting Map

- Meeting 3 days this week – times are subject to change (see online schedule for latest!):
  - Tuesday – TBD
  - Wednesday – TBD
  - Thursday – TBD

Future Meetings

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

- March 2020 Plenary
  - Week of March 16, 2020
  - Atlanta, GA, USA

- May 2020 Interim
  - Week of May 18, 2020
  - Pasadena, CA, USA

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

Ad Hocs

- Will continue 2 hour ad hocs
  - Wednesdays at 7am Pacific (to be announced over email reflector)
    - Assume start on February 5
  - Weekly or every other week recurrence
  - Will cancel or shorten on Tuesday prior, as needed.

  Potentially recategorize some of these meetings to be telephonic interim meetings to enable/acclerate comment resolution.

Thank You!

IEEE P802.3ck 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force – January 2020 Interim meeting