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# AGENDA AND GENERAL INFORMATION

## IEEE P802.3CK - 100 GB/S, 200 GB/S, AND 400 GB/S

### ELECTRICAL INTERFACES TASK FORCE

BETH KOCHUPARAMBIL, EMPLOYED BY AND AFFILIATED WITH CISCO SYSTEMS  
KENT LUSTED, EMPLOYED BY AND AFFILIATED WITH INTEL CORPORATION

SAN DIEGO, USA – JULY 9-12, 2018

# AGENDA

- Welcome and Introductions
- Approve Agenda
- Approve May 24<sup>th</sup> Minutes
- Ground Rules
- IEEE Structure, Bylaws and Rules / Call for Patents / IEEE Standards Process
- Reflector and Web
- Goals for this meeting
- Liaisons and Communications
- 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. (December 2017 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 2017 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

**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 802.3**  
Task Force

Approval Process

Standards Process

Technical Activities

# IMPORTANT BYLAWS AND RULES

- **IEEE-SA Operations Manual**  
[http://standards.ieee.org/develop/policies/sa\\_opman/](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**  
<http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf>
- **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](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.

## 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**



## WAYS TO INFORM IEEE

- **Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto: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.**

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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](mailto:patcom@ieee.org)**

## Participation in IEEE 802 Meetings

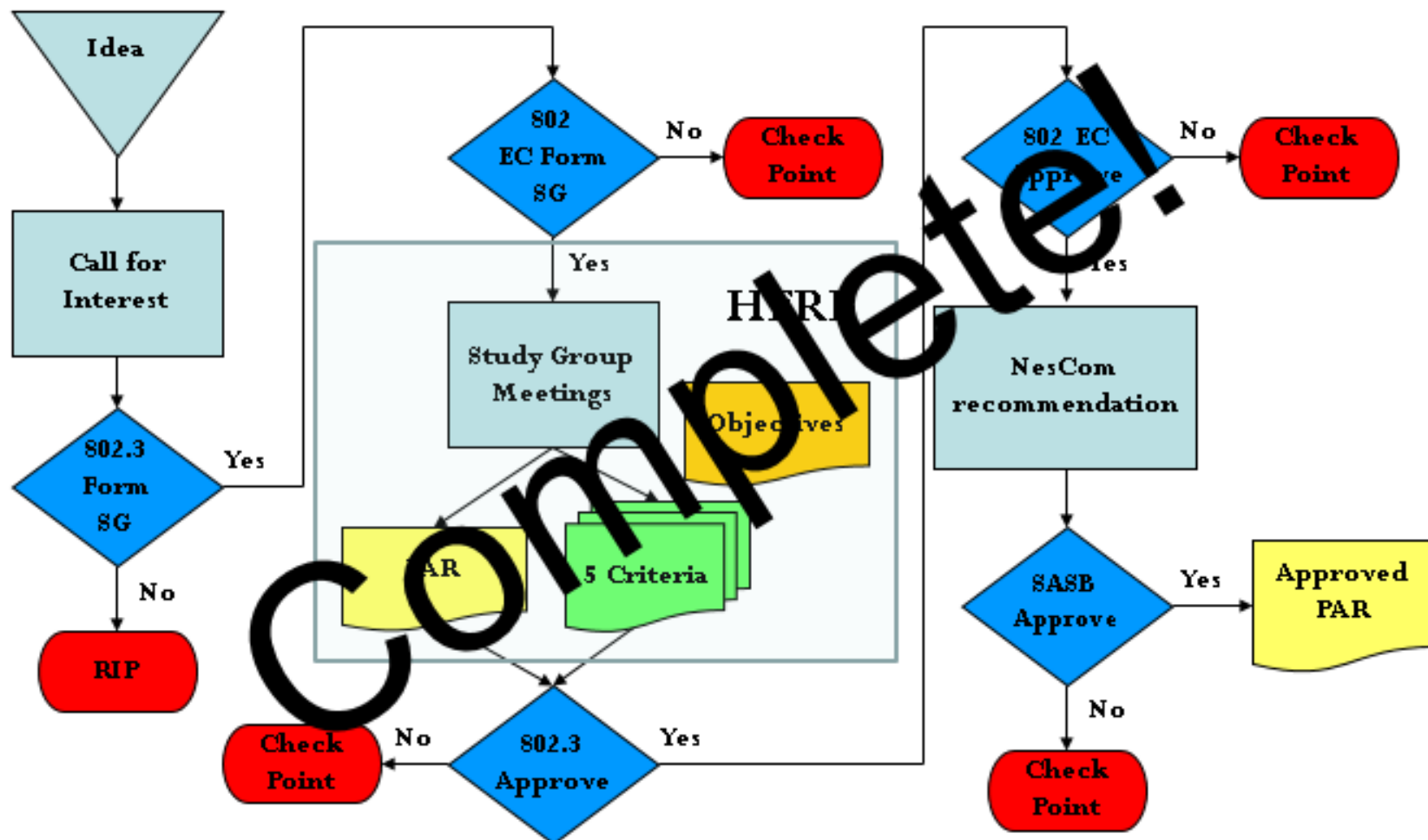
**Participation in any IEEE 802 meeting (Sponsor, Sponsor subgroup, Working Group, Working Group subgroup, etc.) is on an individual basis**

- 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](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](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.**

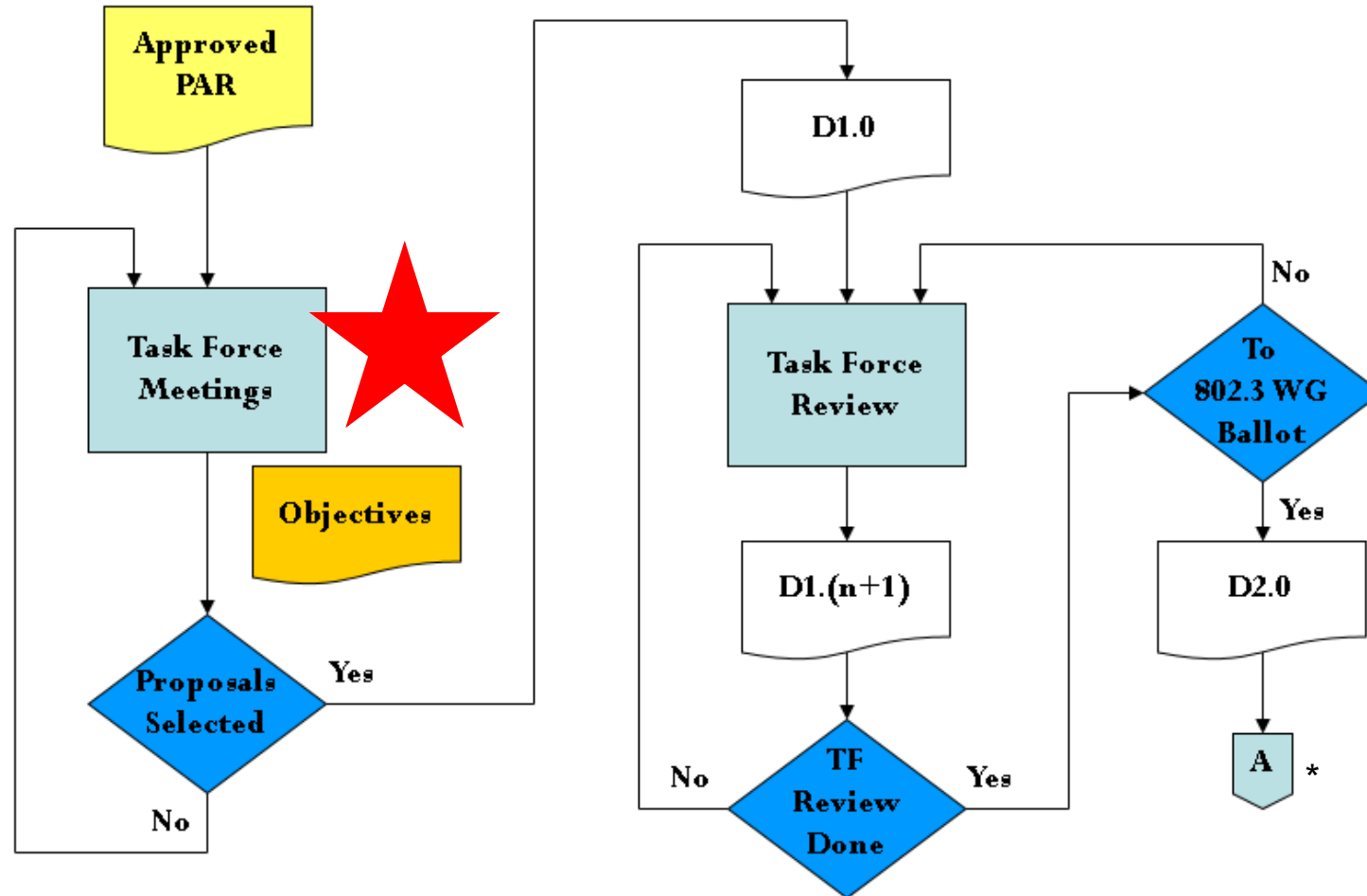
(Latest revision of IEEE 802 LMSC Working Group Policies and Procedures: <http://www.ieee802.org/devdocs.shtml>)

# Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase

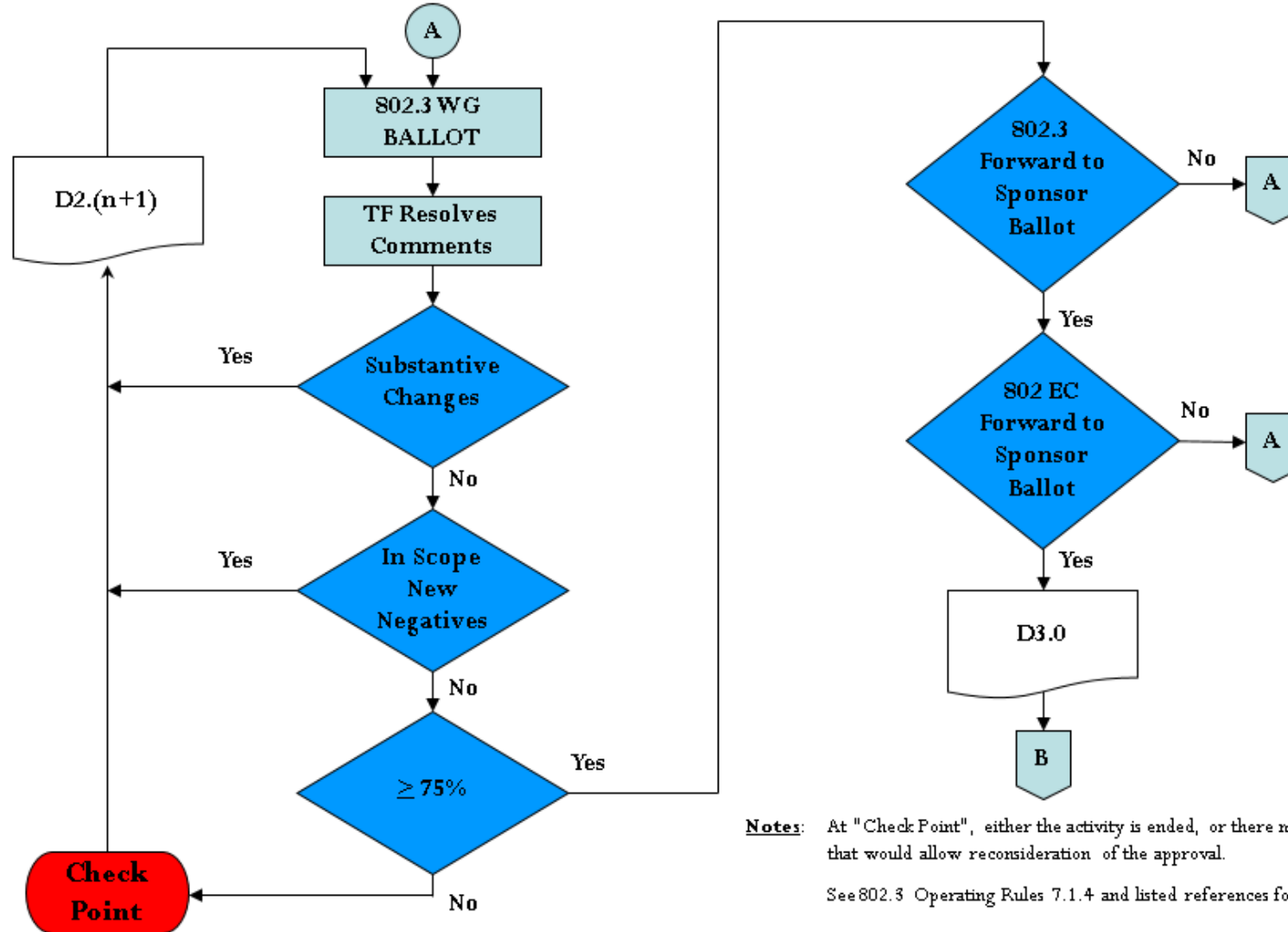


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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



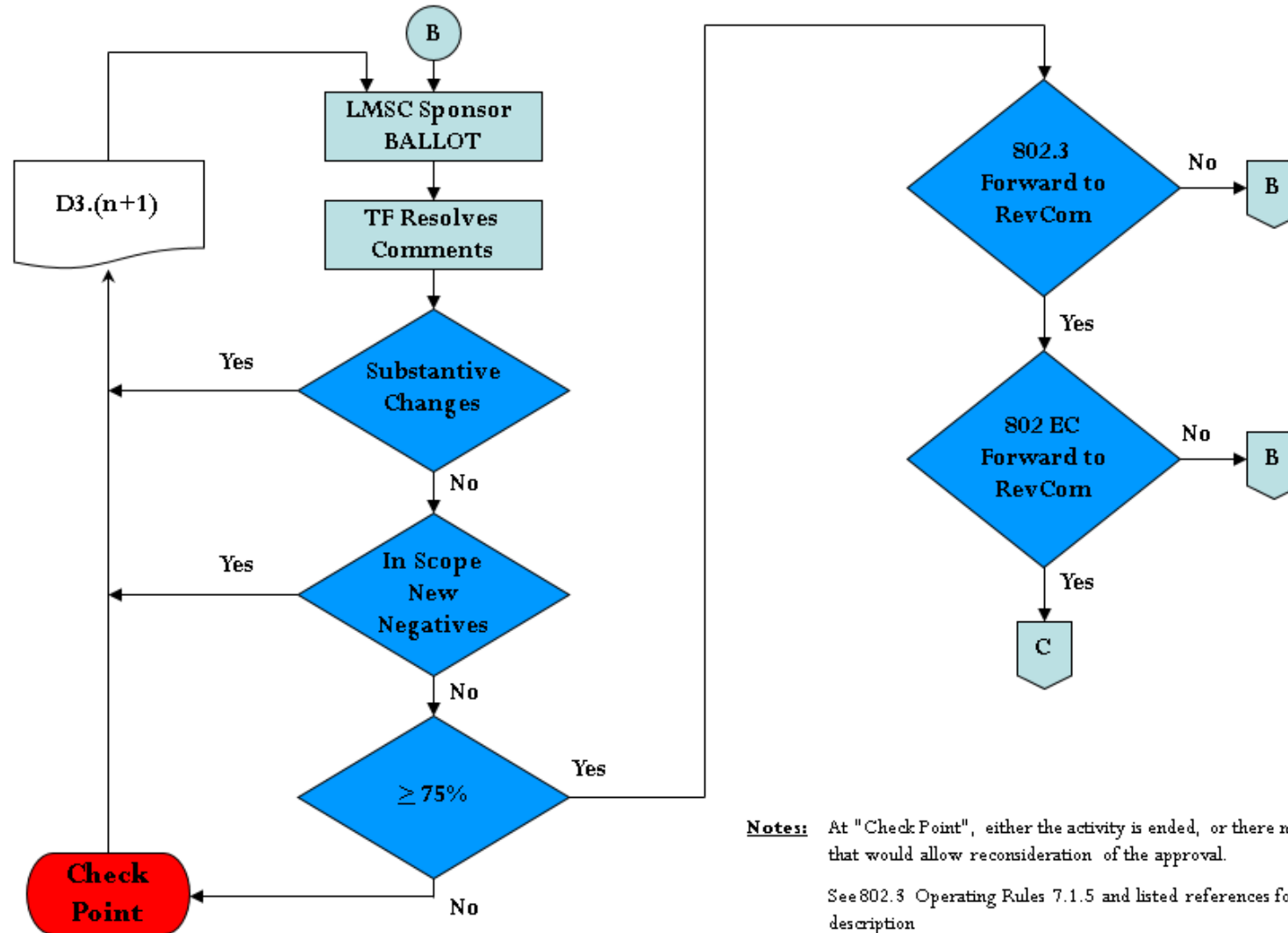
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



**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



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

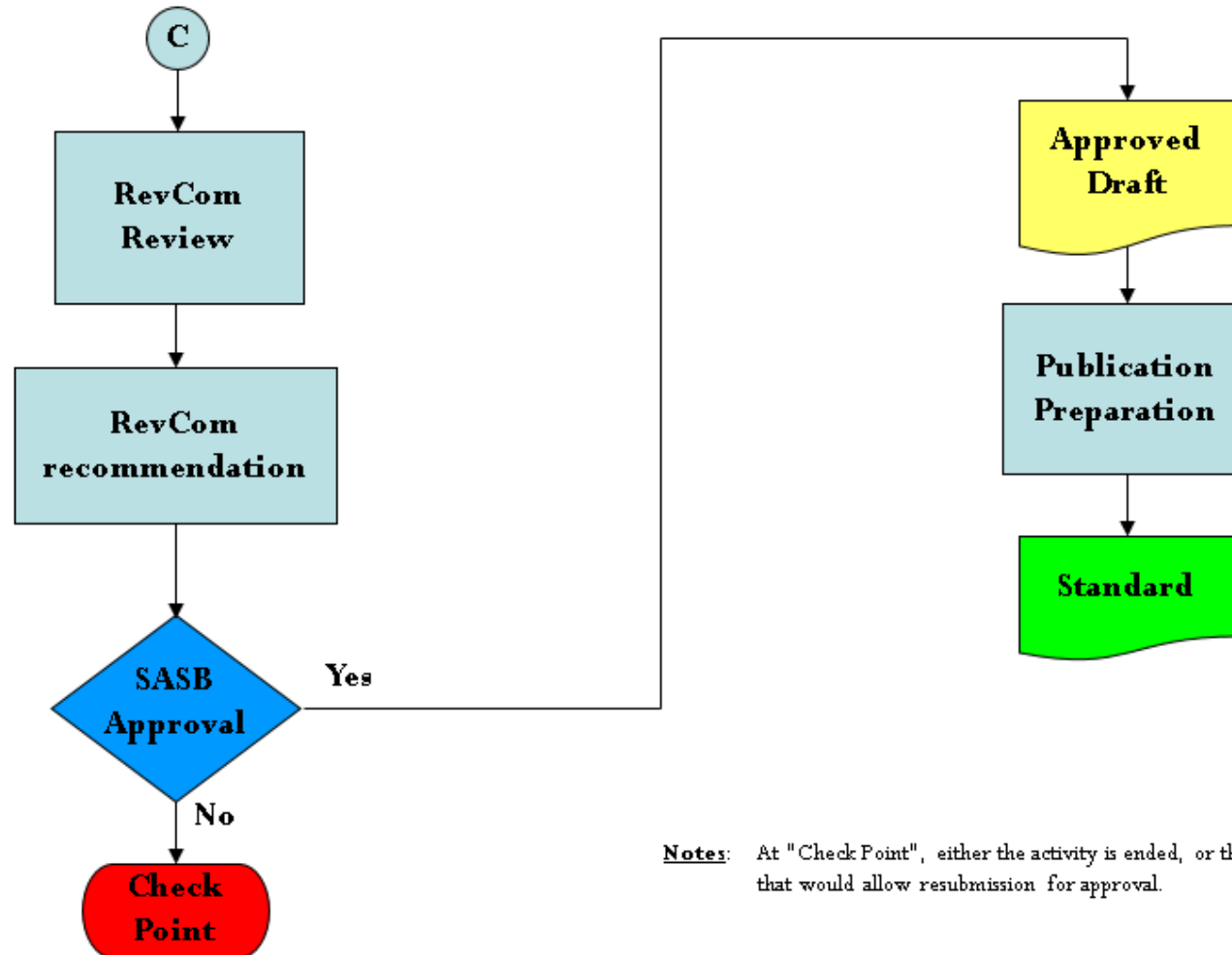
See 802.3 Operating Rules 7.1.5 and listed references for complete description



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

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

# IEEE P802.3CK – 100 GB/S, 200 GB/S, 400 GB/S ELECTRICAL INTERFACES TASK FORCE - APPROVED PROJECT DOCUMENTS

- PAR: [http://www.ieee802.org/3/ck/P802\\_3ck\\_PAR\\_140518.pdf](http://www.ieee802.org/3/ck/P802_3ck_PAR_140518.pdf)
- CSD: [http://www.ieee802.org/3/ck/P802\\_3ck\\_CSD\\_06apr18.pdf](http://www.ieee802.org/3/ck/P802_3ck_CSD_06apr18.pdf)
- Objectives: [http://www.ieee802.org/3/ck/P802\\_3ck\\_Objectives\\_2018mar.pdf](http://www.ieee802.org/3/ck/P802_3ck_Objectives_2018mar.pdf)

## 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-802-3-100GEL@LISTSERV.IEEE.ORG*

- Task Force  web page URL:

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

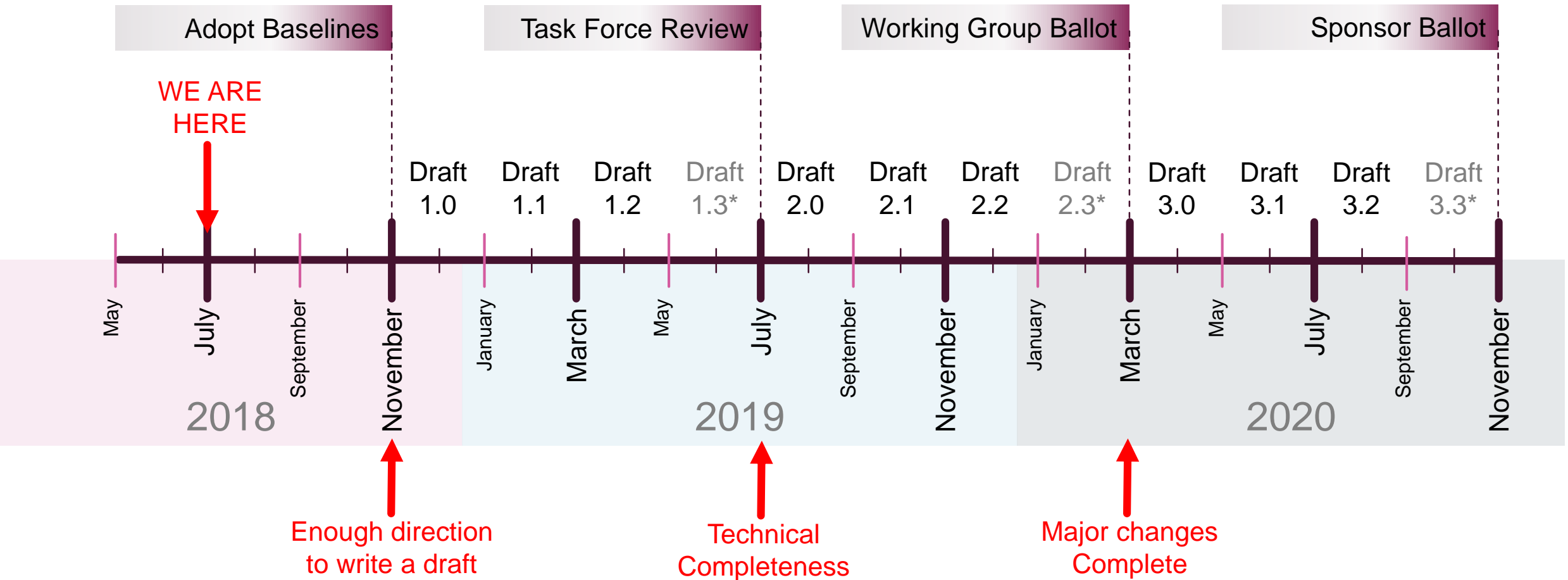
# ATTENDANCE

- Tutorial Material on attendance tool
  - [http://ieee802.org/3/minutes/attendance\\_procedures.pdf](http://ieee802.org/3/minutes/attendance_procedures.pdf)
- Access details
  - URL: <http://imat.ieee.org/>
  - You may need to sign off your VPN to record attendance

## GOALS FOR THE MEETING

- Continue technical discussions leading to baseline proposals
- Lay the ground work for baseline creation
  
- Big Ticket Items
  - C2M budget and analysis
  - COM Architecture

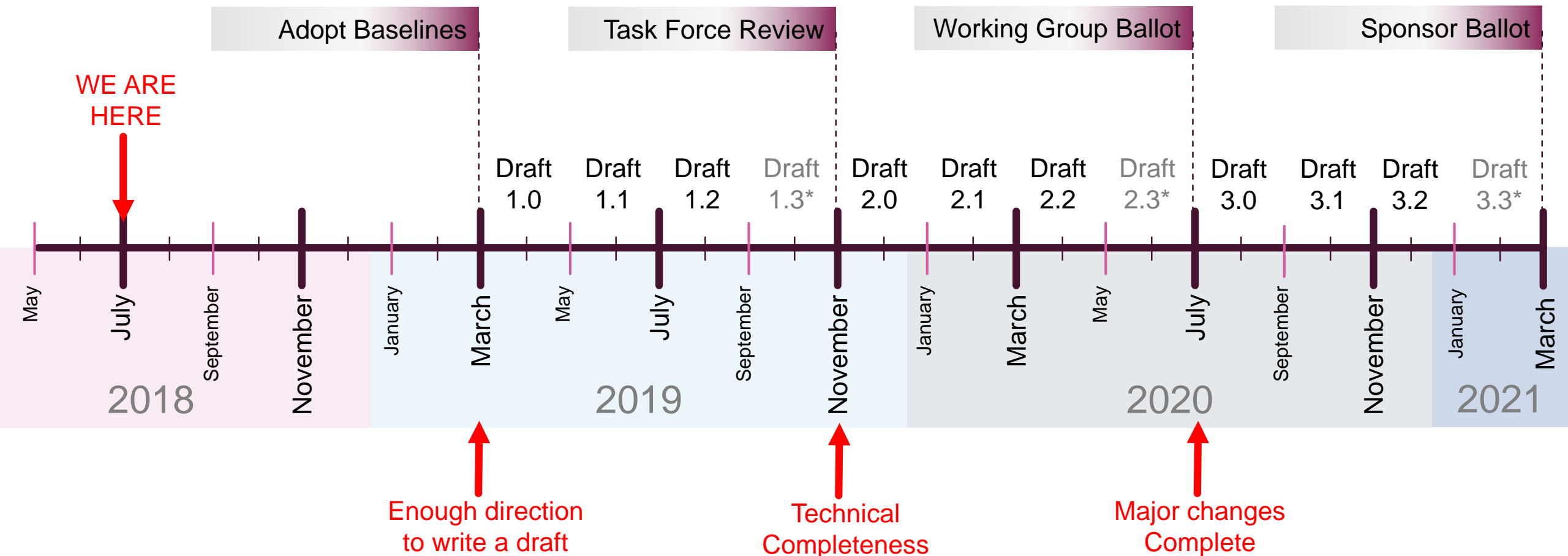
# PROPOSED TIMELINE (I)



— Plenary meeting      — Interim meeting

\* These drafts should have no/minor comments in order to move to next phase of the project.

# PROPOSED TIMELINE (2)



— Plenary meeting

— Interim meeting

\* These drafts should have no/minor comments in order to move to next phase of the project.

## LIAISONS AND COMMUNICATIONS

- OIF to IEEE 802.3 Regarding progress on OIF CEI-112G project
  - Attachment (password protected)



Time	Presenter	Affiliation	Title	File Name	Duration
8:30 AM	Beth Kochuparambil	Cisco	Agenda	agenda_3ck_01_0718	0:40
	Mark Gustlin	Xilinx	RS Symbol Muxing Option for 802.3ck	gustlin_3ck_01_0718	0:25
	Kent Lusted	Intel	Server NIC Trace Lengths	lusted_3ck_01_0718	0:15
10:00 AM	BREAK				0:15
	Toshiaki Sakai	Socionext	100Gb/s C2M Channel Simulation	sakai_3ck_01_0718	0:30
	Adam Healey	Broadcom	100 Gb/s/lane chip-to-module interface simulation analysis	healey_3ck_01_0718	0:30
	Jeff Twombly	Credo	Lower Power 100G PAM4 Receiver Alternative Based on Balanced Equalization	twombly_3ck_01_0718	0:30
12:00 PM	BREAK				1:00
	Ali Ghiasi	Ghiasi Quantum	Architectural and test consideration for C2M and Cu MDI	ghiasi_3ck_01_0718	0:30
	Jane Lim	Cisco	100GEL C2M Channel Reach Update	lim_3ck_01_0718	0:30
	Discussion & Straw Polls				
3:00 PM	BREAK				0:20
	Rich Mellitz	Samtec	A Correlation Study Between COM Reference PKG and Physical Models	mellitz_3ck_01_0718	0:40
	Discussion & Straw Polls				
5:00 PM	Hard Stop at 6:00pm -- BREAK FOR THE DAY -- Social starts @ 6:30 PM, 4th floor pool deck				

▲ WEDNESDAY ▲

- MEETING SCHEDULE -

▼ THURSDAY ▼

Time	Presenter	Affiliation	Title	File Name	Duration
8:30 AM	Beth Kochuparambil	Cisco	Opening		0:10
	Matt Brown	APM	Editorial Considerations for Baselines ( <i>late contribution by chair's request</i> )		
	Discussions & Straw Polls, Closing Business				
12:00 PM	CLOSE OF MEETING - Working Group Mtg starts @ 1:00 PM				

## FUTURE MEETINGS

- September Interim – Spokane, WA
  - Week of September 10<sup>th</sup>
  - <http://ieee802.org/3/interims/sept18/index.html>
- November Plenary – Bangkok, Thailand
  - Week of November 12<sup>th</sup>
- January Interim – Location: TBA
  - Week of January 14<sup>th</sup>
- See <http://www.ieee802.org/3/interims/index.html> for more information
- Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary [Steve Carlson](#).

# FUTURE MEETINGS

- Likely to be two or three 2hour Ad Hocs between now and September.
  - Possibly starting July 25<sup>th</sup>, pending .3cd progress and needs
  - Watch reflector for announcement

May						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					



THANK YOU!

