

# Agenda and General Information

IEEE P802.3bj  
100 Gb/s Backplane and Copper Cable Task Force

Beijing, China  
March 2014

Adam Healey  
LSI Corporation

# Agenda

- Welcome and introductions
- Approve agenda
- Approve January 2014 minutes
- Goal for this meeting
- Reflector and web
- Ground rules
- IEEE
  - Structure
  - Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Review of action items
- Liaisons and communications
- Sponsor ballot results
- Motions and closing business
- Future meetings

# Agenda – Tuesday 18 March

Time	Presenter	Affiliation	Title	File
09:00	Adam Healey	LSI Corporation	Agenda and General Information	agenda_3bj_01a_0314
09:30	Matt Brown	Applied Micro	Editor-in-Chief's Report	brown_3bj_01_0134
09:45	Matt Brown	Applied Micro	Comment resolution	
<b>10:00</b>	<b>Break</b>			
10:15	Matt Brown	Applied Micro	Comment resolution	
<b>12:00</b>	<b>Lunch</b>			
13:30	Matt Brown	Applied Micro	Comment resolution	
<b>15:30</b>	<b>Break</b>			
15:45	Matt Brown	Applied Micro	Comment resolution	
<b>17:00</b>	<b>Recess</b>			

NOTE – All times are guesses and not part of the agenda. Recess may be later depending on progress of comment resolution.

# Agenda – Wednesday 19 March

Time	Presenter	Affiliation	Title	File
09:00	Matt Brown	Applied Micro	Comment resolution	
<b>10:00</b>	<b>Break</b>			
10:15	Matt Brown	Applied Micro	Comment resolution	
<b>12:00</b>	<b>Lunch</b>			
13:30	Matt Brown	Applied Micro	Comment resolution	
<b>15:30</b>	<b>Break</b>			
15:45	Matt Brown	Applied Micro	Comment resolution	
<b>17:00</b>	<b>Recess</b>			

NOTE – All times are guesses and not part of the agenda. Start may be earlier and/or recess may be later depending on progress of comment resolution.

# Agenda – Thursday 19 March

Time	Presenter	Affiliation	Title	File
09:00	Matt Brown	Applied Micro	Comment resolution	
<b>10:00</b>	<b>Break</b>			
10:15	Adam Healey	LSI Corporation	Closing Business	agenda_3bj_01_0314
<b>12:00</b>	<b>Adjourn</b>			

NOTE – All times are guesses and not part of the agenda. Start may be earlier and/or recess may be later depending on progress of comment resolution.

# Presentations

Time	Filename	Title	Presenter	Affiliation	Comments
00:15	dawe_02_0314_optx.pdf	Changes following revised compliance board specifications	Piers Dawe	Mellanox	r01-43
00:15	dudek_3bj_01_0314.pdf	Return loss at TP2 for 100GBASE-CR4	Mike Dudek	QLogic	r01-49
00:15	healey_3bj_01_0314.pdf	Proposal for a causal transmission line model	Adam Healey Charles Moore Rich Mellitz Adee Ran Liav Ben-Artzi	LSI Corporation Avago Technologies Intel Corporation Intel Corporation Marvell Technology Group	r01-27, 29, 50
00:05	healey_3bj_02_0314.pdf	Proposed changes to Annex 93A and Clause 92	Adam Healey	LSI Corporation	r01-27, 29, 50
00:10	healey_3bj_03_0314.pdf	Uncorrelated jitter limit at TP2	Adam Healey	LSI Corporation	r01-44
00:10	mellitz_3bj_01_0314.pdf	Selecting new SNDR values for KP4 using new COM computation	Rich Mellitz	Intel Corporation	r01-28, 33, 54

# Task Force decorum



- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2013 IEEE-SA Standards Board Ops Manual 5.3.3.5)
- Photography or recording by permission only (December 2013 IEEE-SA Standards Board Ops Manual 5.3.3.4)
- 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

# Goal for this meeting

- Consider all comments received during 1<sup>st</sup> Sponsor ballot recirculation
- Chart the path to approval by the IEEE-SA Standards Board



# Reflector and web

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

[ListServ@ieee.org](mailto:ListServ@ieee.org)

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

*subscribe stds-802-3-100GCU <yourfirstname> <yourlastname>  
end*

- Send 100GCU reflector messages to:

[STDS-802-3-100GCU@listserv.ieee.org](mailto:STDS-802-3-100GCU@listserv.ieee.org)

- Task Force web page URL:

<http://www.ieee802.org/3/bj/index.html>

# Task Force private area

- URL: <http://www.ieee802.org/3/bj/private/index.html>
  - Username: thisisnottheusername
  - Password: thispasswordwontwork
- 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.

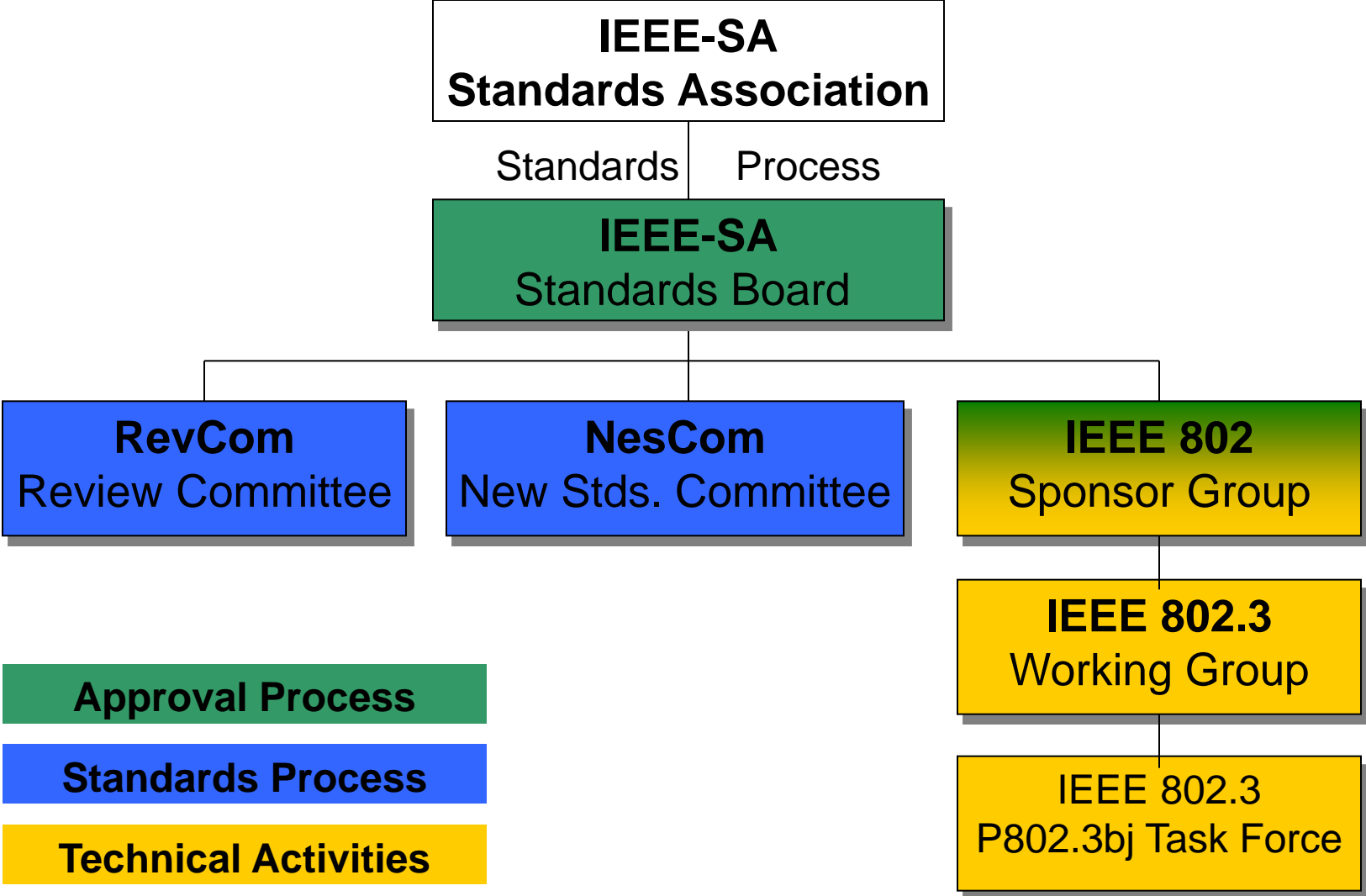
# Meeting attendance

- IEEE-SA Meeting Attendance Tool
- <http://imat.ieee.org>
  
- Tutorial material
- [http://ieee802.org/3/minutes/mar14/0314\\_imat.pdf](http://ieee802.org/3/minutes/mar14/0314_imat.pdf)
  
- Also be sure to sign the book

# 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



# 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:
  - The 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 the IEEE is not aware. Additionally, neither the 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 12 and 12a 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, Patents, and Duty to Inform

All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

- Participants [Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2]:
  - “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
    - “Personal awareness” means that the participant “is personally aware that the holder may have a potential Essential Patent Claim,” even if the participant is not personally aware of the specific patents or patent claims
  - “Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of such potential Essential Patent Claims” (that is, third parties that are not affiliated with the participant, with the participant’s employer, or with anyone else that the participant is from or otherwise represents)
- The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group
- Early identification of holders of potential Essential Patent Claims is strongly encouraged
- No duty to perform a patent search



# Patent Related Links

All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development.

Patent Policy is stated in these sources:

IEEE-SA Standards Boards 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) or visit <http://standards.ieee.org/about/sasb/patcom/index.html>

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



# 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:
  - Either speak up now 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
  - Cause an LOA to be submitted

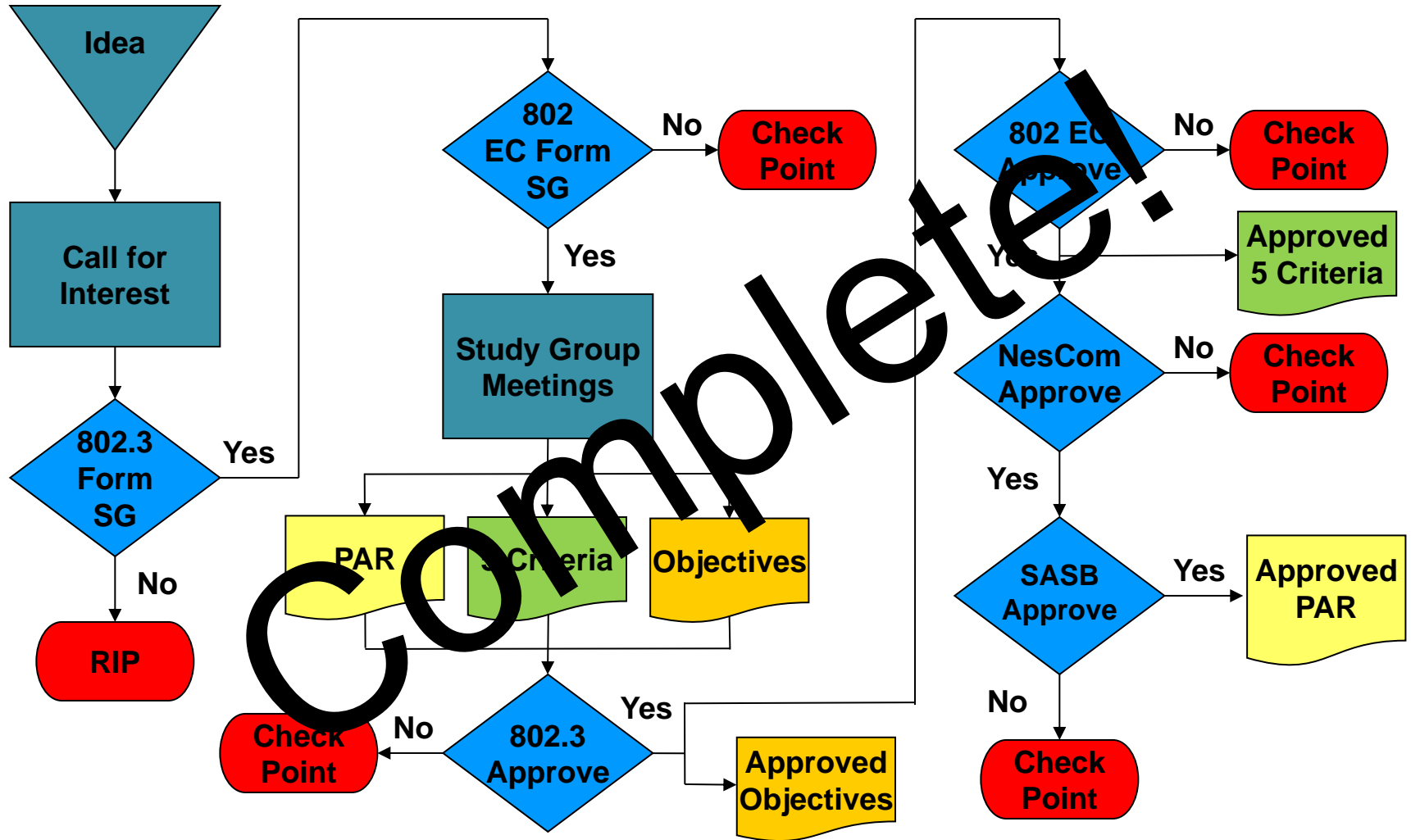
# Other Guidelines for IEEE WG Meetings

- **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, 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.**

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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.

# Overview of IEEE 802.3 Standards Process (1/5)

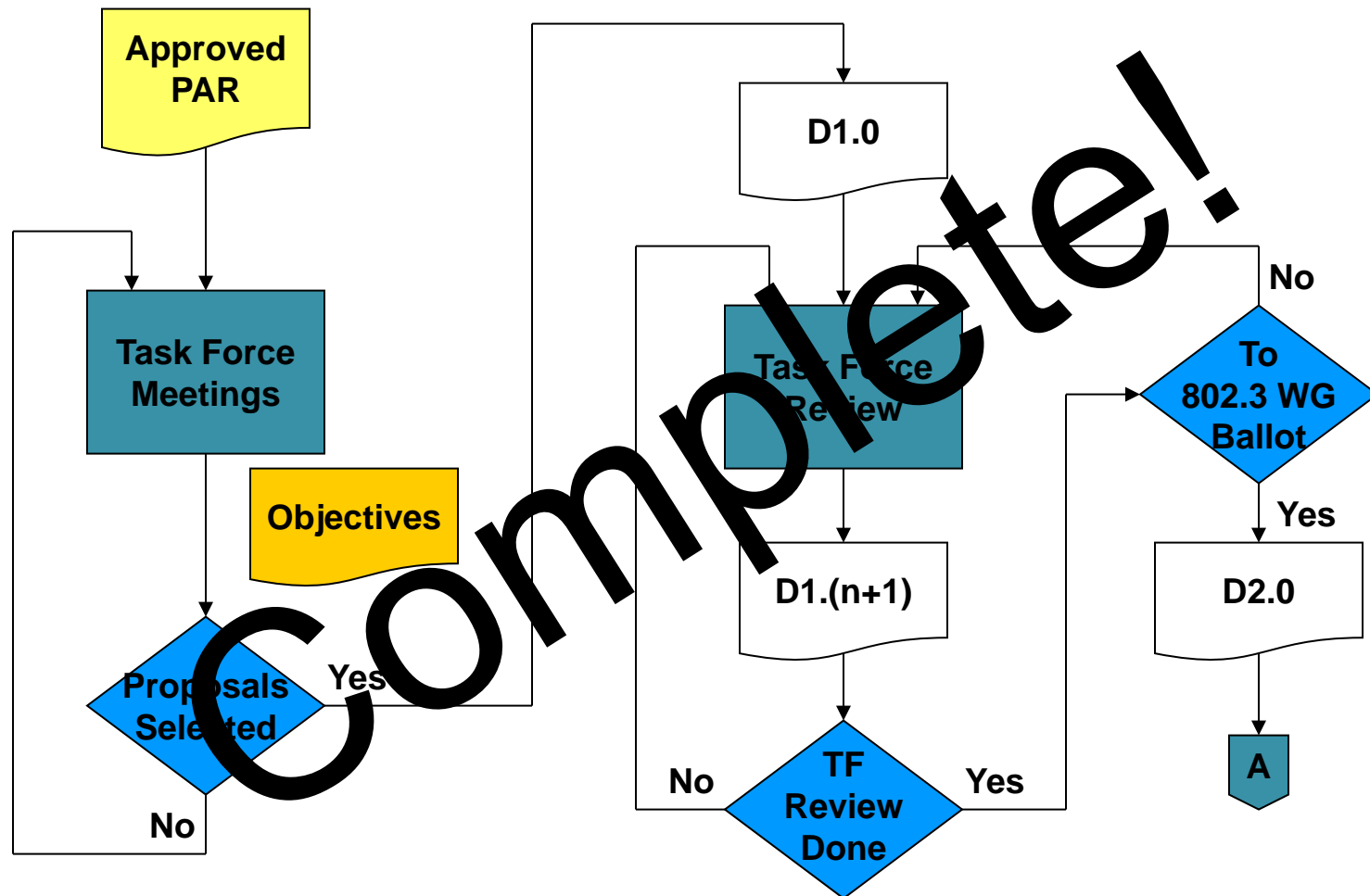
## Study Group Phase



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

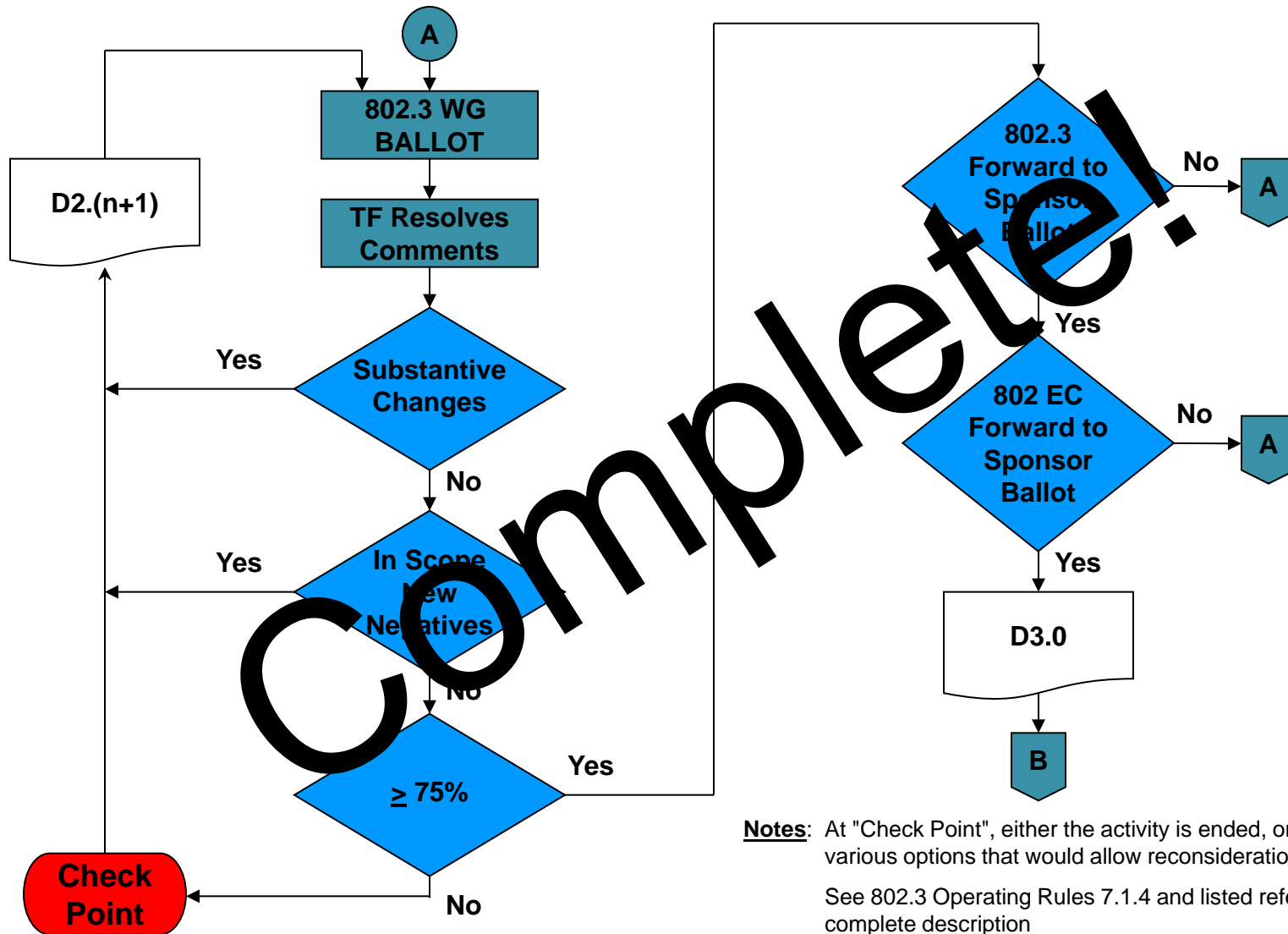
# Overview of IEEE 802.3 Standards Process (2/5)

## Task Force Comment Phase



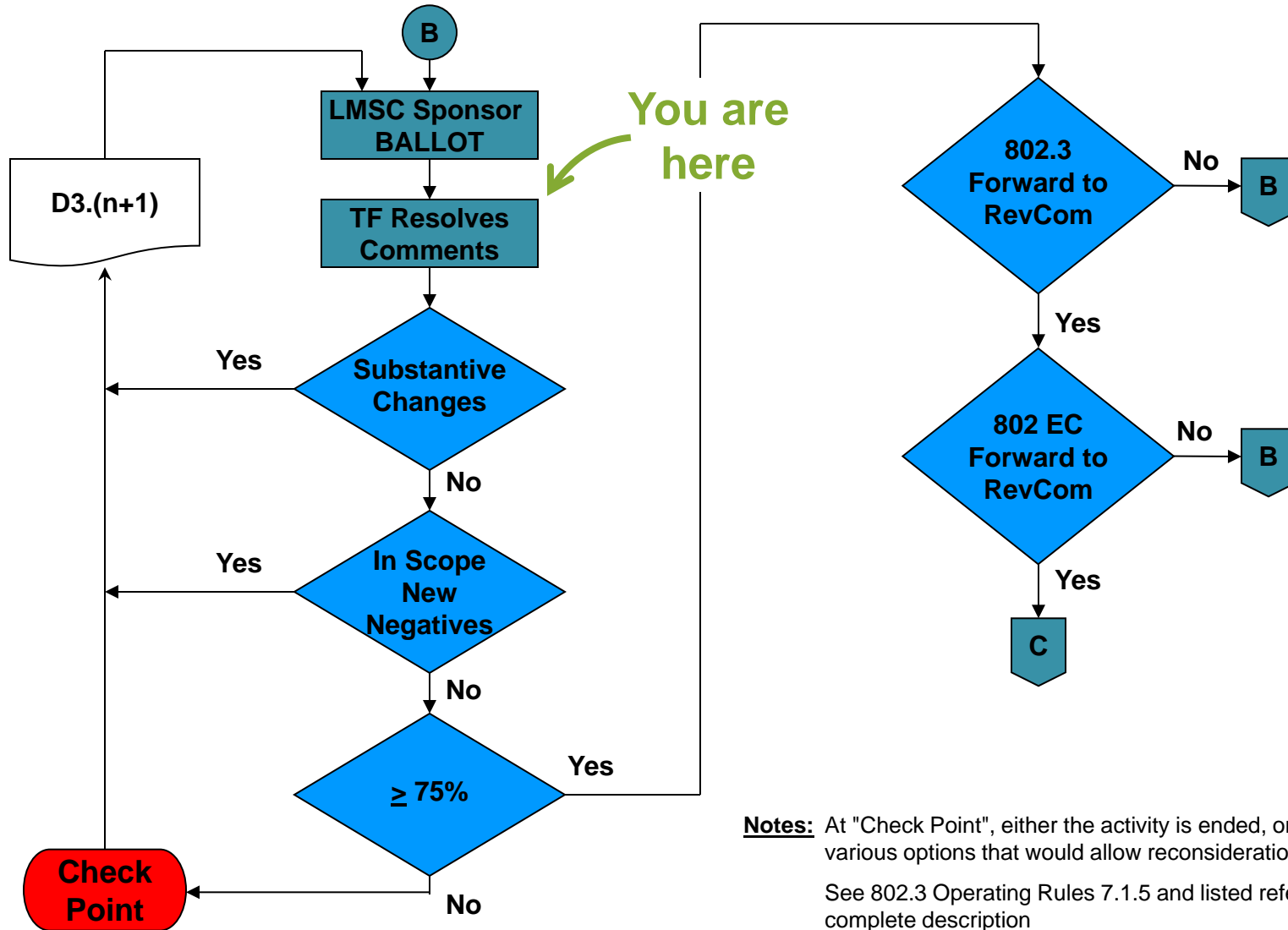
# Overview of IEEE 802.3 Standards Process (3/5)

## Working Group Ballot Phase



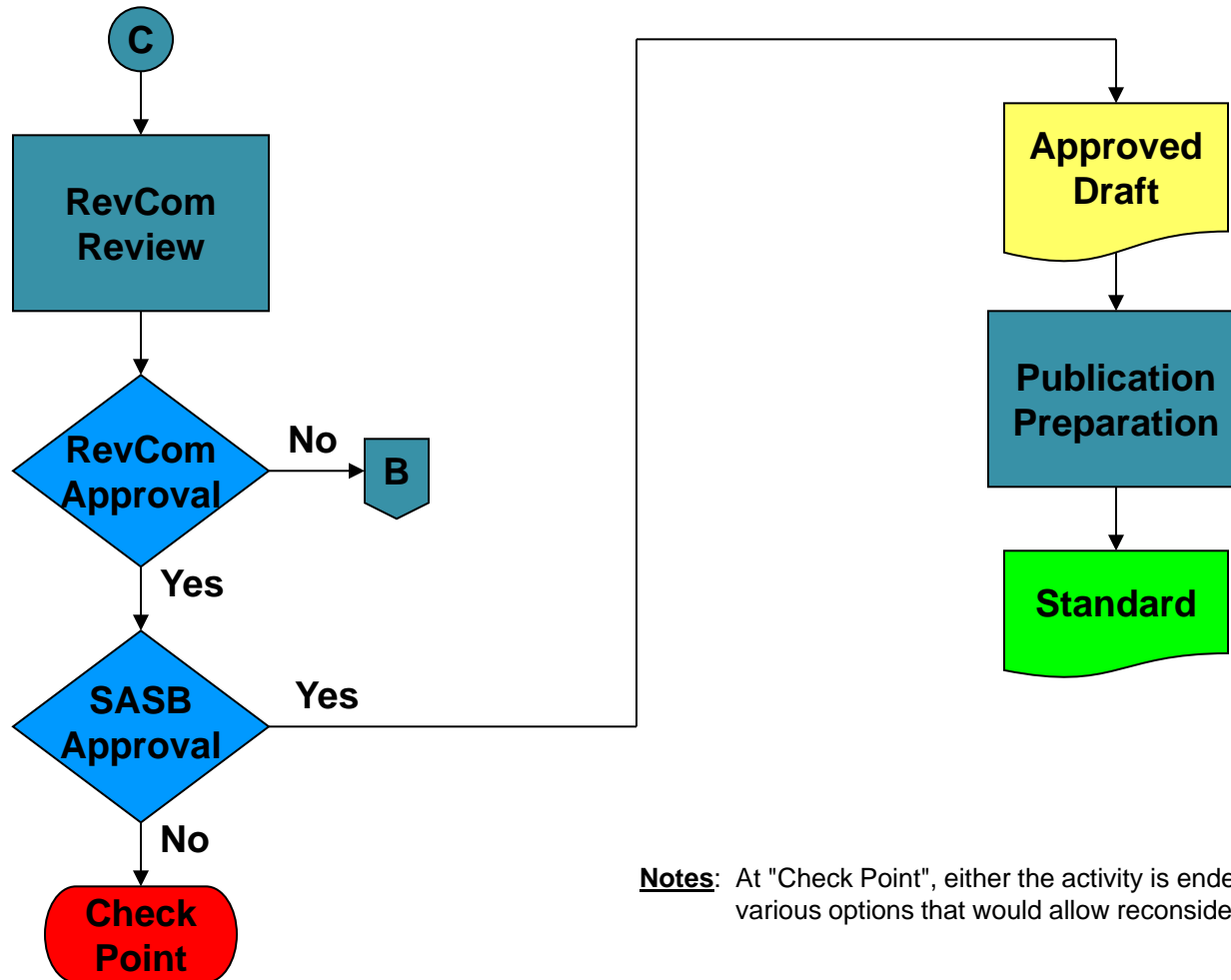
# Overview of IEEE 802.3 Standards Process (4/5)

## Sponsor Ballot Phase



# 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 reconsideration of the approval.



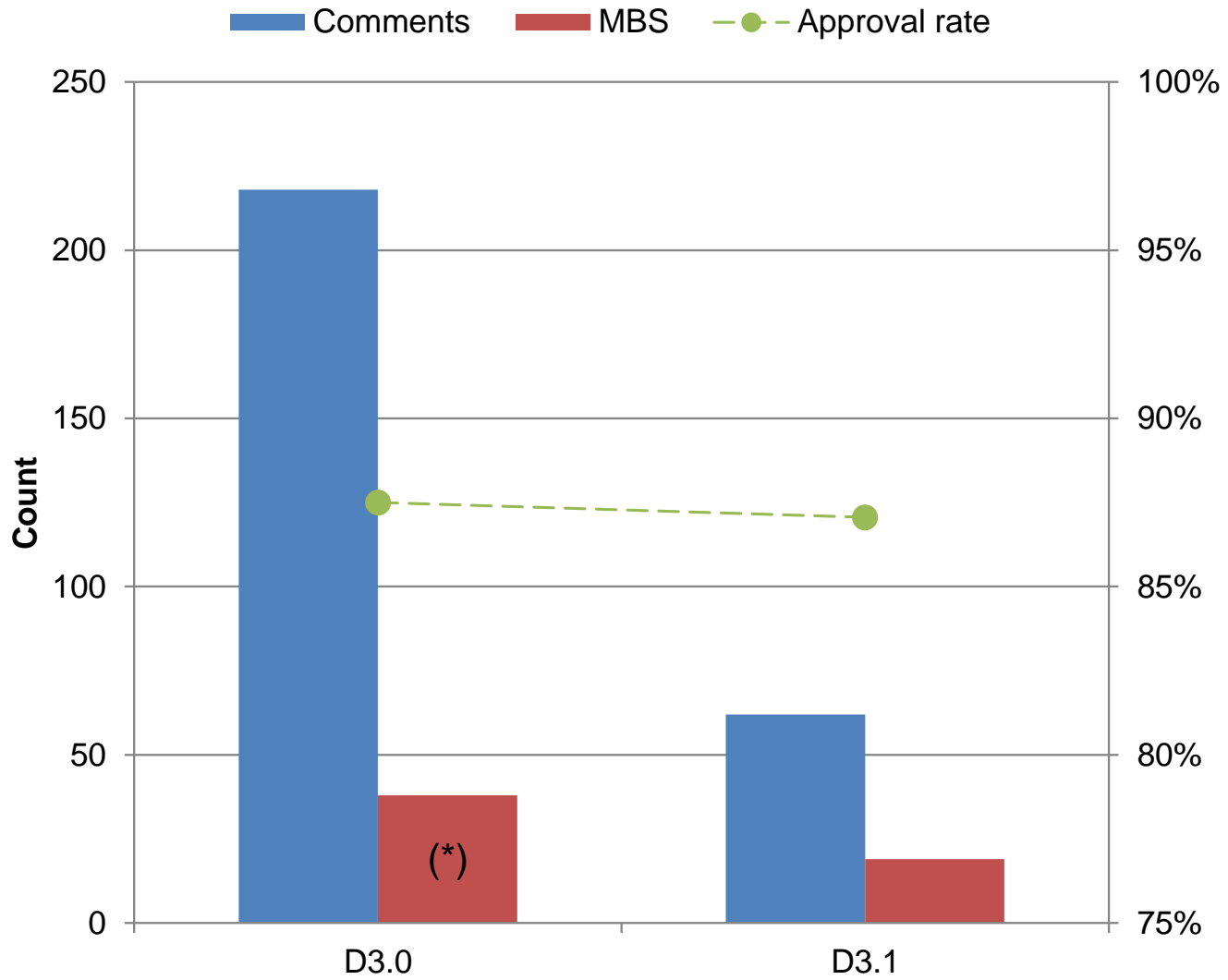
# 1<sup>st</sup> Sponsor recirculation ballot results

- Opened 13 February, closed 28 February
- 62 comments received (including 3 late comments)

Voters	109	Response rate	80.73%
Approve	74*	Approval rate	87.06%
Disapprove with comment	11*	Abstain rate	3.41%
Disapprove without comment	0		
Abstain	3		
Returns	88	Comments	62

\* One ballot “flipped” after the results were announced to the reflector.

# Ballot dashboard



\* All but 5 of 38 “must be satisfied” comments were satisfied.

# IEEE P802.3bj project documents

- PAR
  - [http://www.ieee802.org/3/bj/P802.3bj\\_1212.pdf](http://www.ieee802.org/3/bj/P802.3bj_1212.pdf)
- 5 Criteria
  - [http://www.ieee802.org/3/bj/5C\\_1112.pdf](http://www.ieee802.org/3/bj/5C_1112.pdf)
- Objectives
  - [http://www.ieee802.org/3/bj/objectives\\_0712.pdf](http://www.ieee802.org/3/bj/objectives_0712.pdf)
- Adopted Timeline
  - [http://www.ieee802.org/3/bj/timeline\\_1112.pdf](http://www.ieee802.org/3/bj/timeline_1112.pdf)

# IEEE P802.3bj project objectives

- Support full-duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum FrameSize of current 802.3 standard
- Support a BER of better than or equal to  $10^{-12}$  at the MAC/PLS service interface
- Define a 4 lane PHY for operation over a printed circuit board backplane with a total channel insertion loss of  $\leq 35$  dB at 12.9 GHz\*\*
- Define a 4 lane PHY for operation over a printed circuit board backplane with a total channel insertion loss of  $\leq 33$  dB at 7.0 GHz\*\*
- Define a 4-lane 100 Gb/s PHY for operation over links consistent with copper twin-axial cables with lengths up to at least 5m.
- To define optional Energy-Efficient Ethernet operation for 100G Backplane and Twinaxial cable PHYs specified in P802.3bj\*
- To define optional Energy-Efficient Ethernet operation for 100GBASE-CR10\*\*\*
- To define optional Energy-Efficient Ethernet operation for 40GBASE-CR4 and 40GBASE-KR4\*\*\*

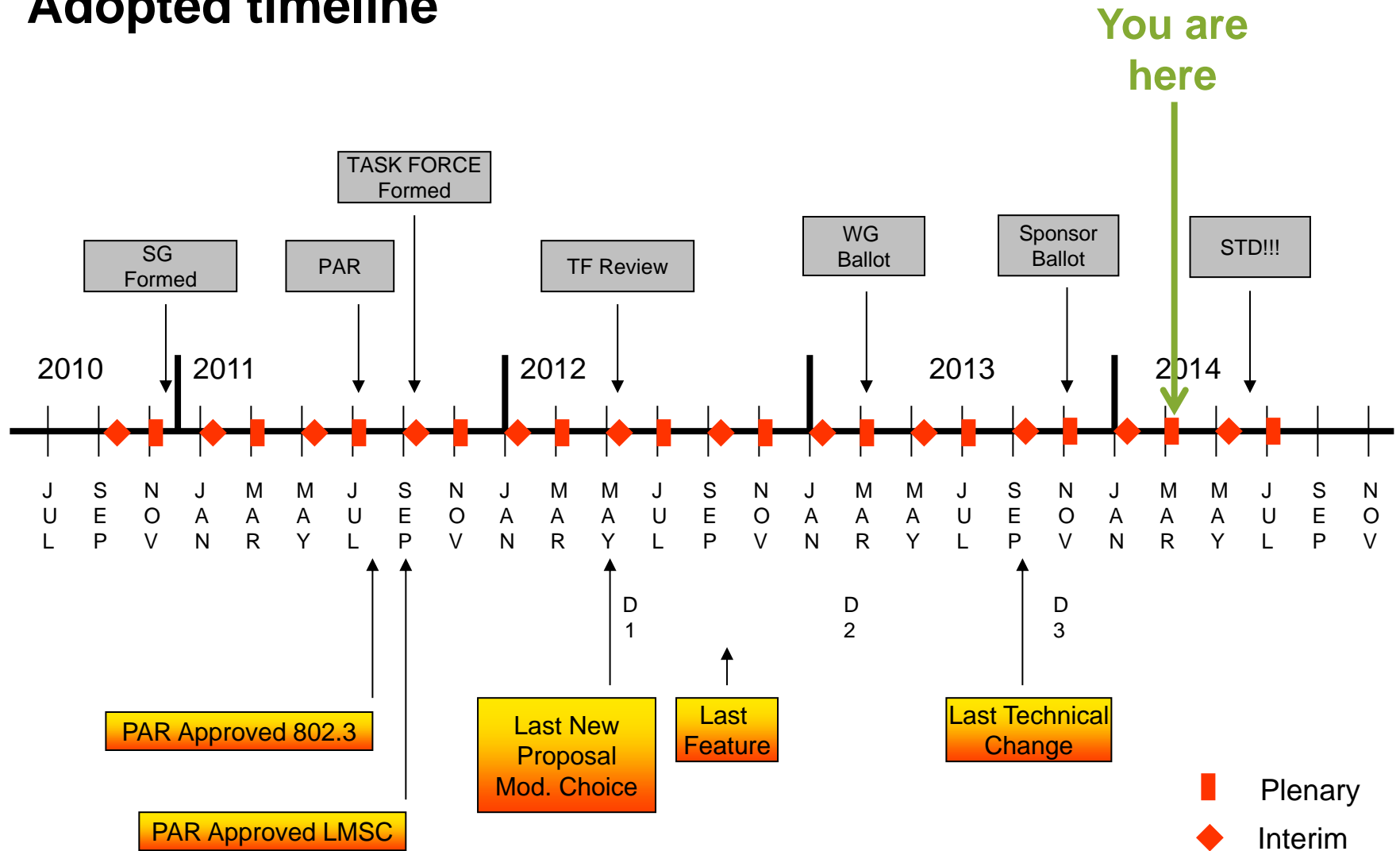
Objectives approved by IEEE 802.3 WG July 2011 IEEE 802 Plenary

\* Objective approved by IEEE 802.3 WG Nov 2011 IEEE 802 Plenary

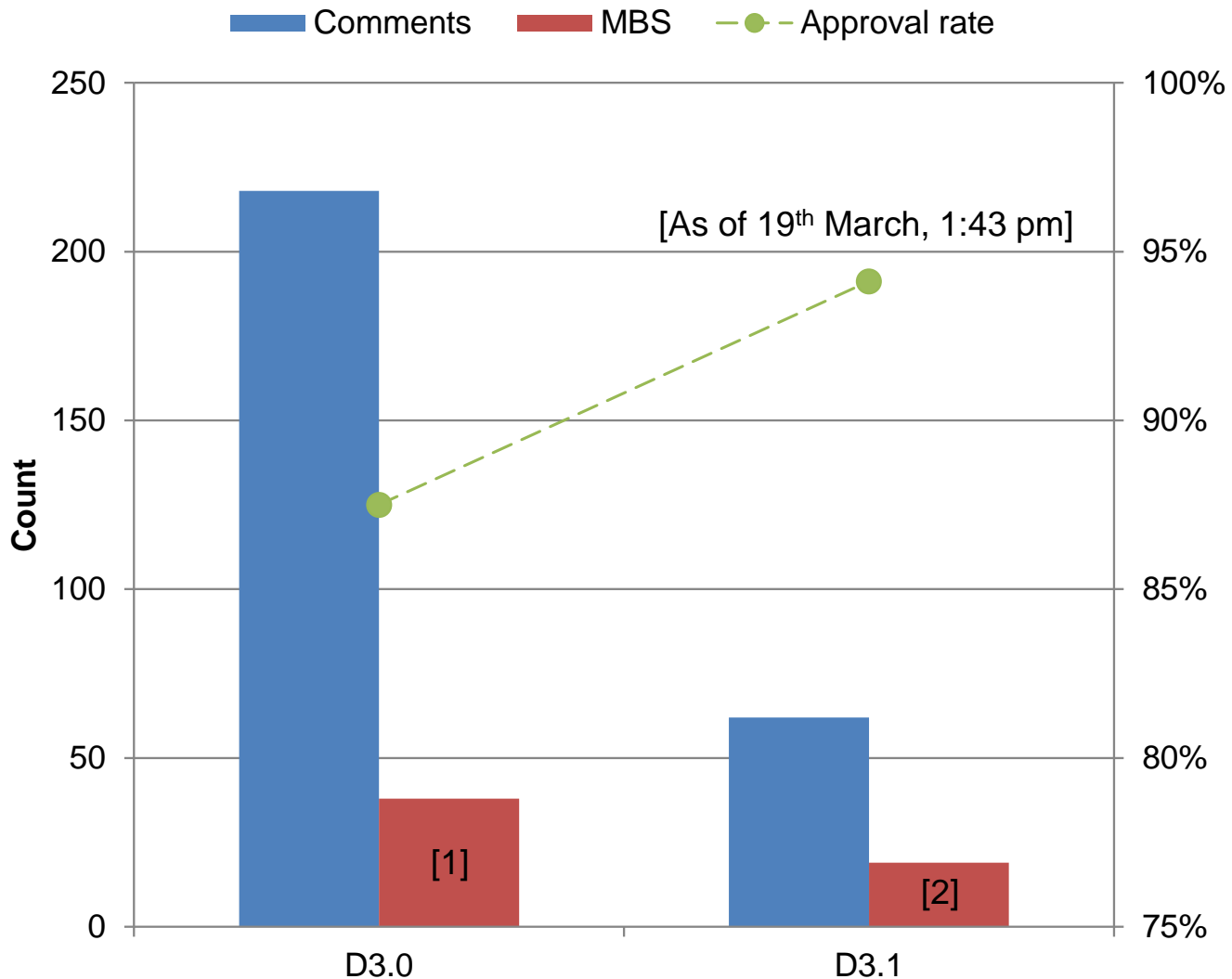
\*\* Objectives approved by IEEE 802.3 WG Mar 2012 IEEE 802 Plenary

\*\*\* Objectives approved by IEEE 802.3 WG July 2012 IEEE 802 Plenary

# Adopted timeline



# Ballot dashboard after D3.1 comment resolution



[1] All but 4 of 38 “must be satisfied” comments were satisfied.

[2] 13 of 19 “must be satisfied” comments were satisfied (disposition on 6 not yet known).

# Unresolved comments

- 5 DISAPPROVE votes
- 2 are not accompanied by comments marked “must be satisfied”
- 10 unresolved comments from 3 DISAPPROVE voters
  - Disposition to 6 comments not yet known

# Charting the path forward

- To keep to the adopted timeline, conditional approval to submit the draft to RevCom must be granted this week
- What are our options?



# The path forward: Option 1

- Request [unconditional] approval to submit to RevCom at the July 2014 meeting
- Target August SASB meeting series and delay approval by 2 months
- Significant “dead time” if criteria for RevCom submittal are met after the next recirculation

## The path forward: Option 2

- Request conditional approval from the WG to submit to RevCom
- Conduct 2<sup>nd</sup> Sponsor recirculation ballot
- If the criteria to proceed to RevCom submittal are met...
  - WG chair requests EC chair to grant permission to conduct 10 day EC ballot to approve RevCom submittal
  - May interim meeting will be cancelled
- If the criteria to proceed to RevCom submittal are not met...
  - Consider next steps at the May interim meeting
  - Schedule will slip by [at least] 2 months

## Motion #3

- Generate Draft 3.2 for Sponsor Ballot recirculation from Draft 3.1 and adopted comment responses
- M: Hugh Barrass
- S: Charles Moore
- Technical ( $\geq 75\%$ )
- Y: 11, N: 0, A: 0
- Result: PASSES

## Motion #4

- Request conditional approval to submit IEEE P802.3bj to RevCom
- M: Charles Moore
- S: Adee Ran
- Technical ( $\geq 75\%$ )
- Y: 11, N: 0, A: 0
- Result: PASSES

# Future meetings

- See: <http://www.ieee802.org/3/interims/index.html>
- May 2014 Interim (hosted by Ethernet Alliance)
  - May 13
  - Norfolk, VA, USA
- July 2014 Plenary
  - Week of July 13
  - San Diego, CA, USA
- Anyone interested in hosting a meeting contact me or the IEEE 802.3 Executive Secretary [Steve Carlson](#)

**Adjourn**