

# Agenda and General Information

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

John D'Ambrosia, Dell  
Phoenix, AZ, USA

IEEE 802 Plenary: January 22-24, 2013

# Agenda

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- Welcome and Introductions
- Approve Agenda
- Approve the Minutes from Nov 2012 Plenary
- Goals 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
- Comment Resolution
- Motions and Closing Business
- Future Meetings

# Task Force Decorum

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- Photography or recording by permission only (2010 SASB Op Manual 5.3.3.4)
- Cell phone ringers off
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (5.3.3.5)
- 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

# Goals for the meeting week

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- Draft 1.3 Comment Resolution
  - Hear related technical presentations
- “Big Ticket” Items (see Chief Editor’s Report)
- Lay the ground work for Draft 1.4 and the next meeting
  
- Thanks to Luxtera for hosting the meeting!

# Reflector and Web

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- 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

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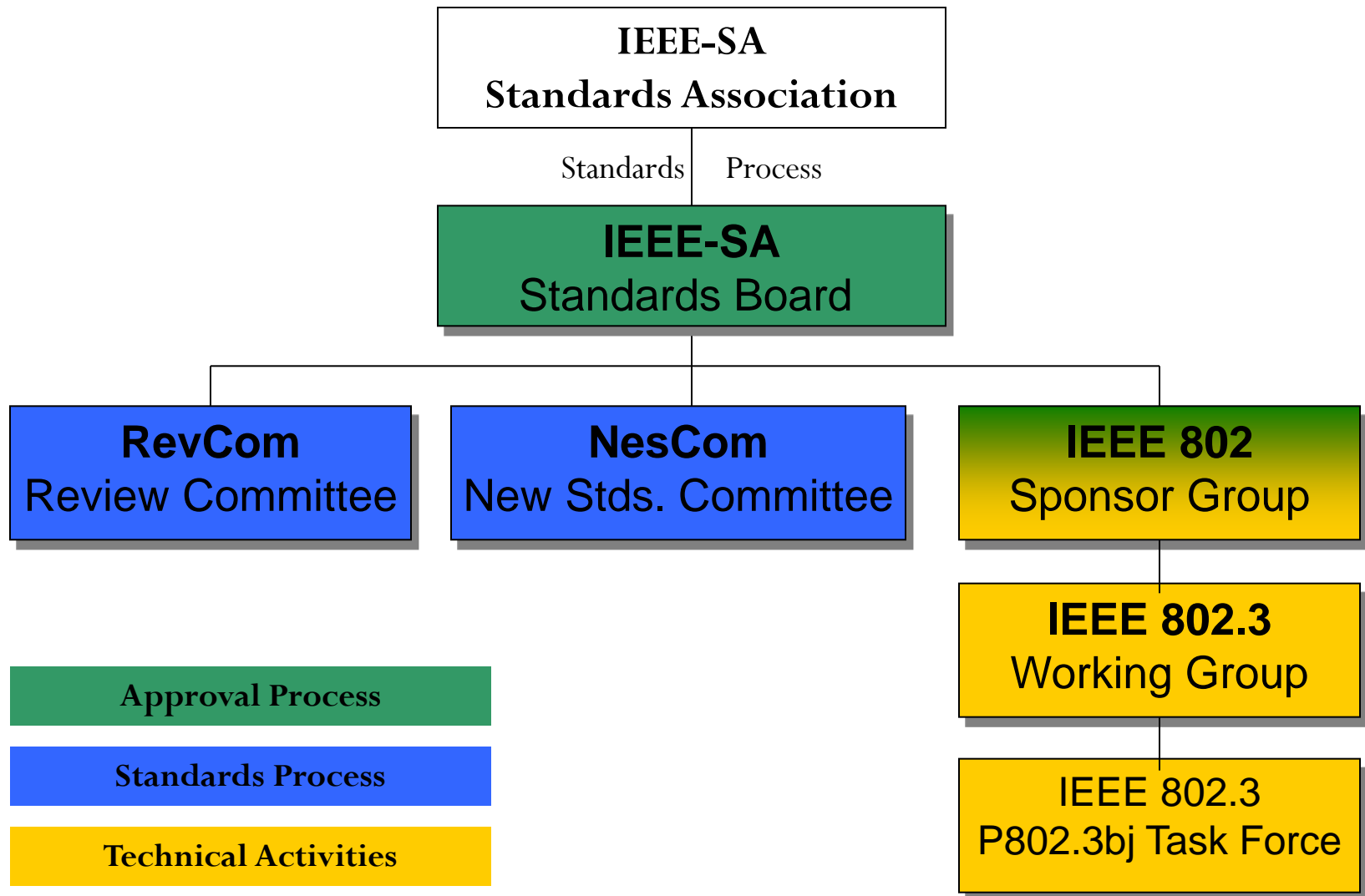
- URL: <http://www.ieee802.org/3/bj/private/index.html>
  - Username: xxxxxx
  - Password: xxxxxxxx
- Write it down...
- Note - The draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

# Ground Rules

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- 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

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- **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://www.ieee802.org/PNP/2010-07/IEEE\\_802\\_LMSC\\_OM\\_approved\\_100716.pdf](http://www.ieee802.org/PNP/2010-07/IEEE_802_LMSC_OM_approved_100716.pdf)
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**  
[http://www.ieee802.org/PNP/2010-07/IEEE\\_802\\_LMSC\\_WG\\_PandP\\_approved\\_100716.pdf](http://www.ieee802.org/PNP/2010-07/IEEE_802_LMSC_WG_PandP_approved_100716.pdf)
- **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 consistent with the ANSI patent policy and 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.



25 March 2008 (updated 29 March 2011)

(Optional to be shown)

# 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

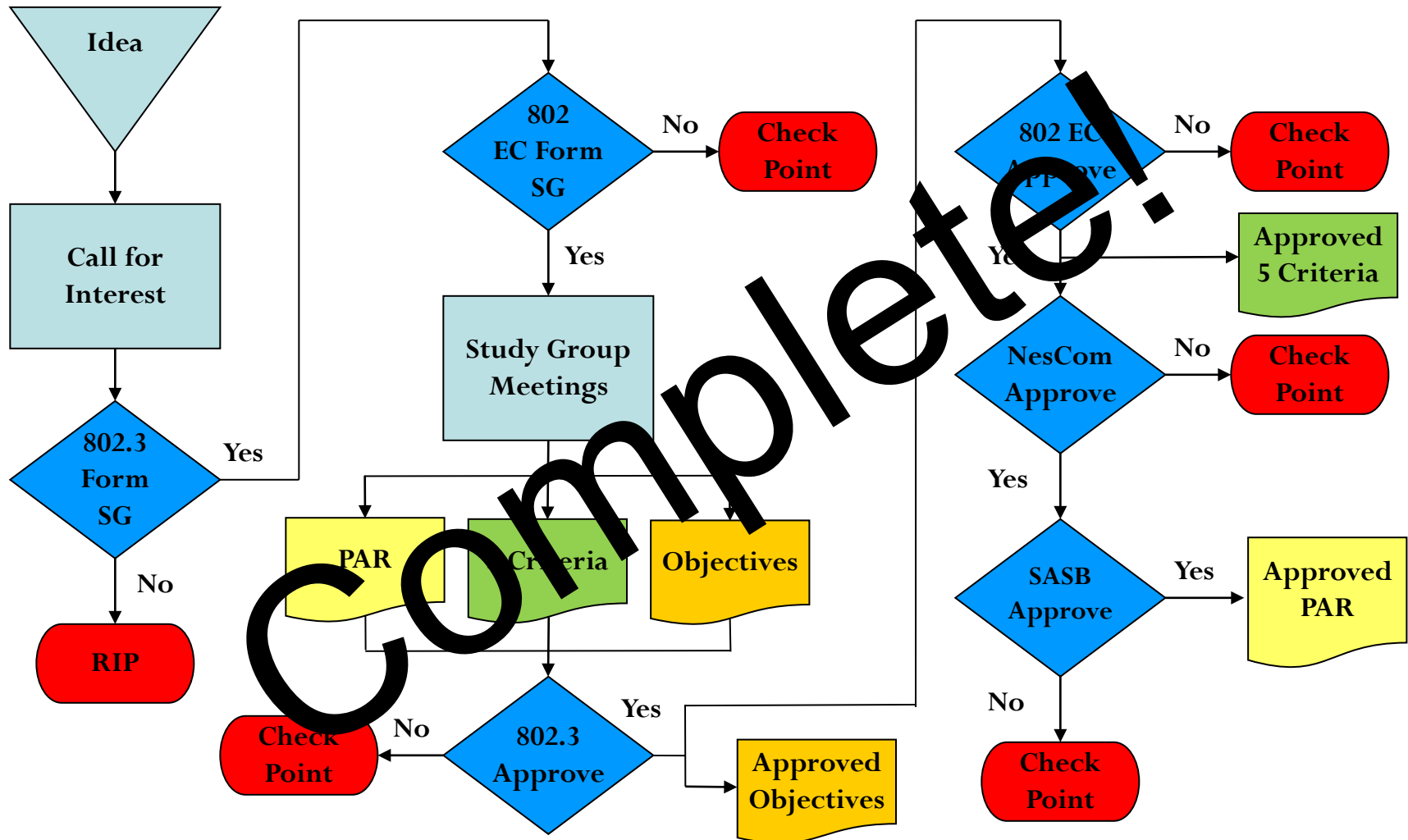
- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide 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.**

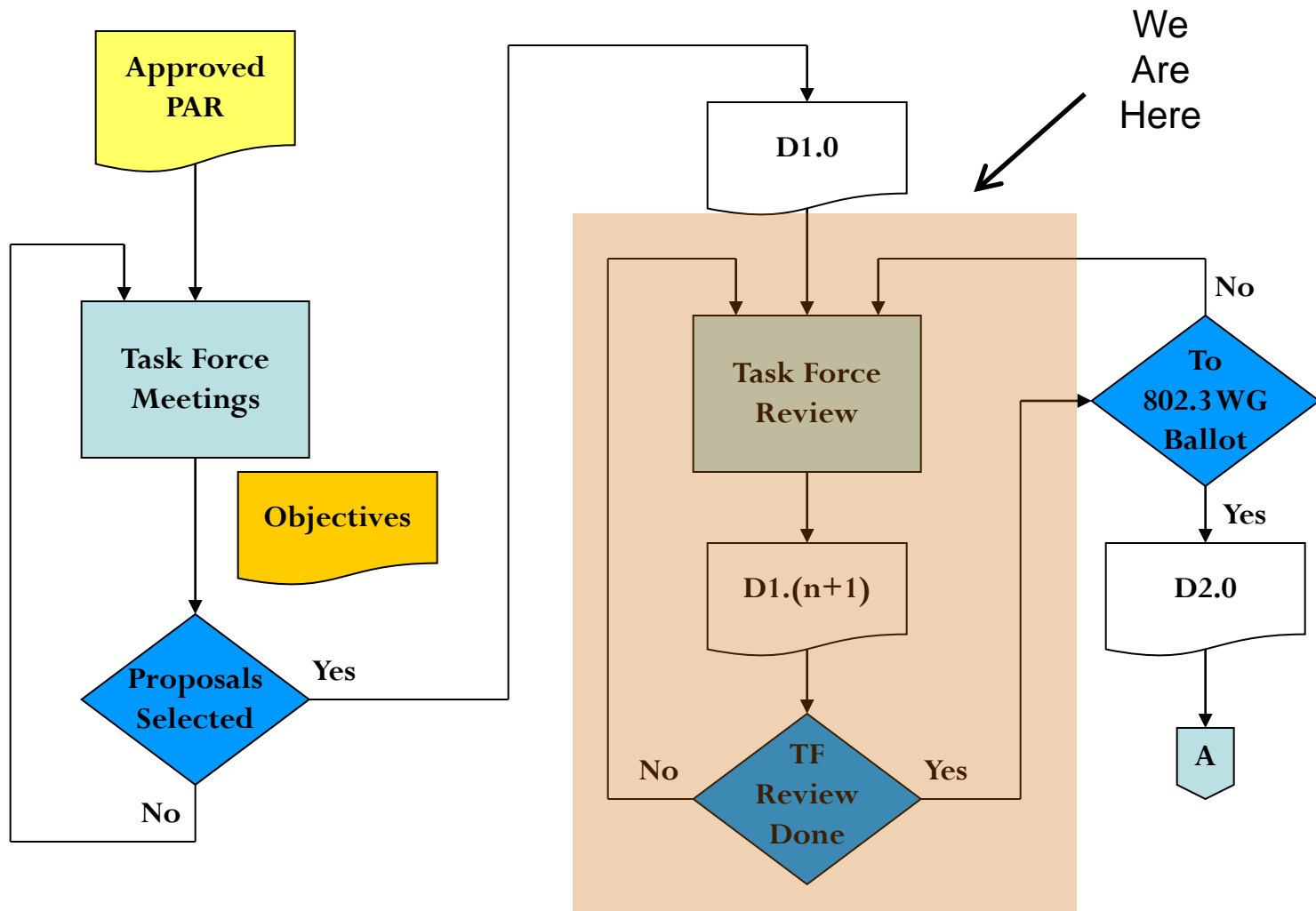
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See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy” for more details.

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



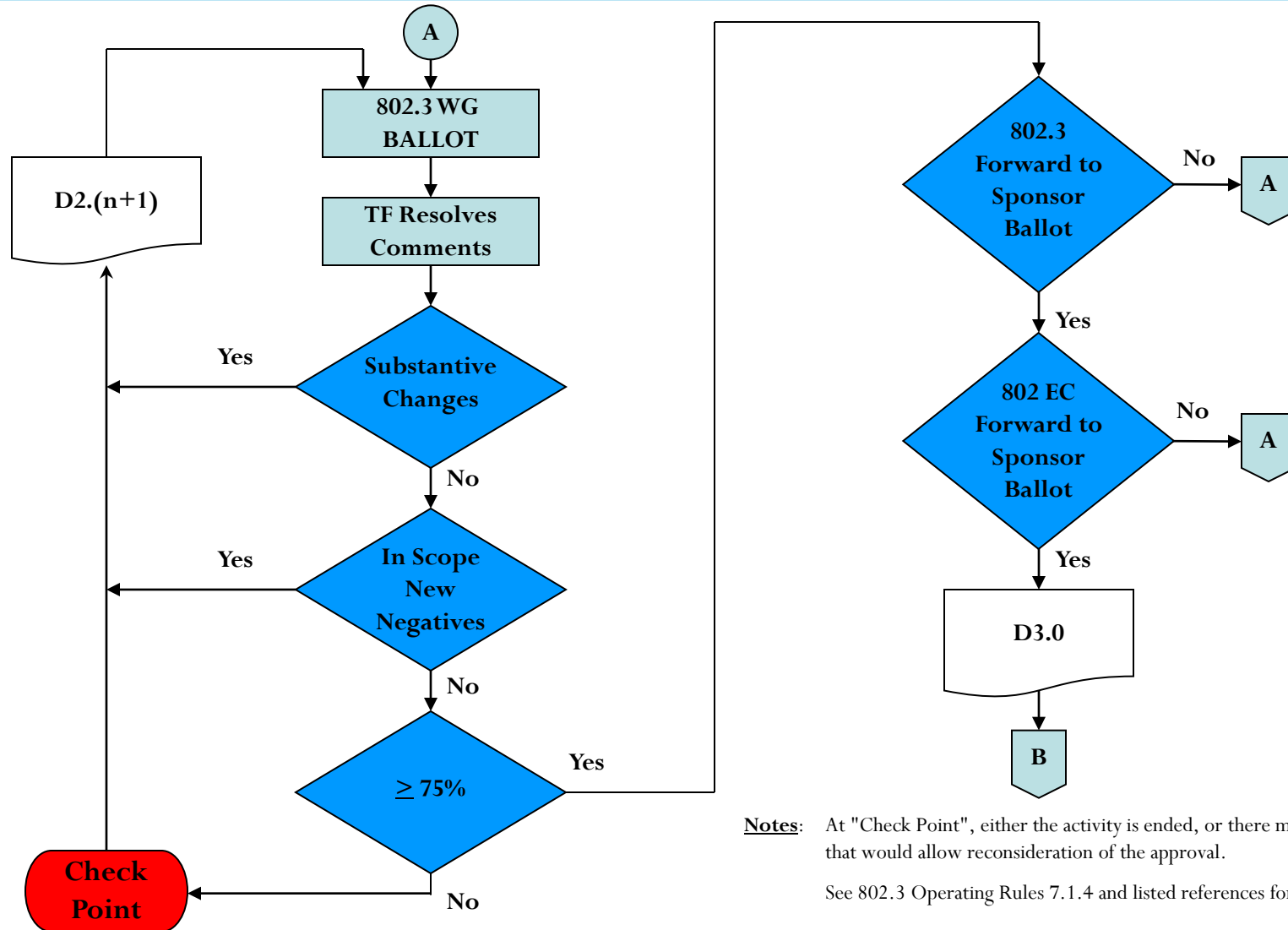
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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





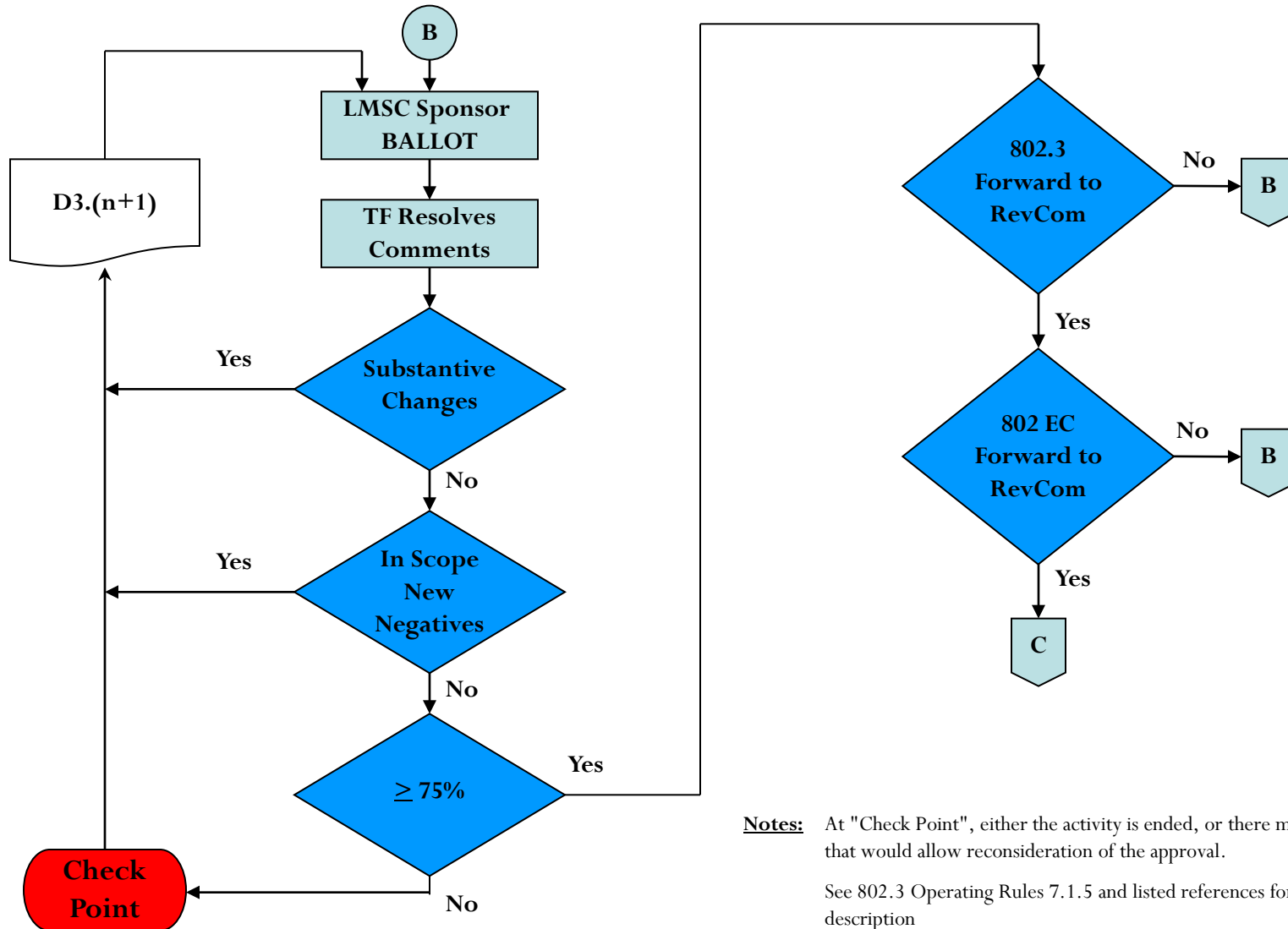
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



**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

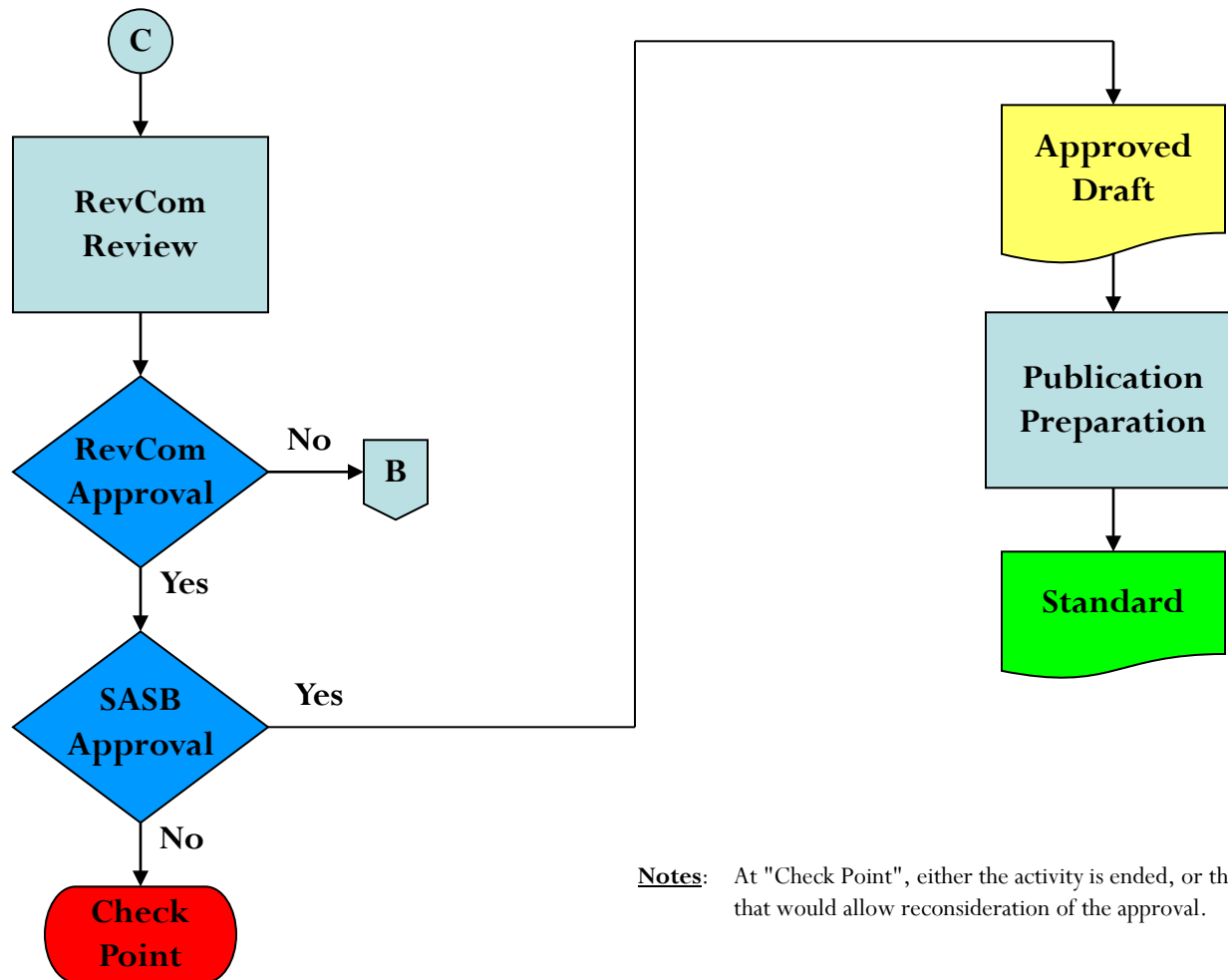
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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

# 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.

# Action Items

## September 2012 Action Items:

Volunteer	Action	Date Assigned	Status
Charles Moore, Mike Dudek	Run ad hoc to provide proposal with complete characteristics and parameters in Table 94-7, of Draft 1.1 for submission against draft 1.2	25 September 2012	Ongoing
Kent Lusted, Adee Ran, Matt Brown	Run ad hoc which defines suitable pattern, methodology, and values for 100GBASE-KP4 transition time.	25 September 2012	Ongoing
Task Force Channel Submitters	Compare diff return loss of target channels against informative limit for CI 93 and CI 94.	25 September 2012	Ongoing
Chris Diminico	Run ad hoc to harmonize electrical cable and transmitter parameters for Clause 92.	26 September 2012	Ongoing
Task Force Channel Submitters	Correlate their submitted channels against informative channel models and COM results.	26 September 2012	Ongoing

## November 2012 Action Items:

Volunteer	Action	Date Assigned	Status
Mark Bugg	Post S-parameters of worst case cable for use by Task Force	13 November 2012	Open
Rich Mellitz	Provide updated COM within 2 weeks.	15 November 2012	Done. Posted 3-Dec-2012
Rich Mellitz, Liav Ben-Artzi	Run ad hoc to resolve return loss in P802.3bj	15 November 2012	Open

# Liaisons and Communications

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- None

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

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- 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 Task Force Objectives

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- 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

# Going to WG Ballot

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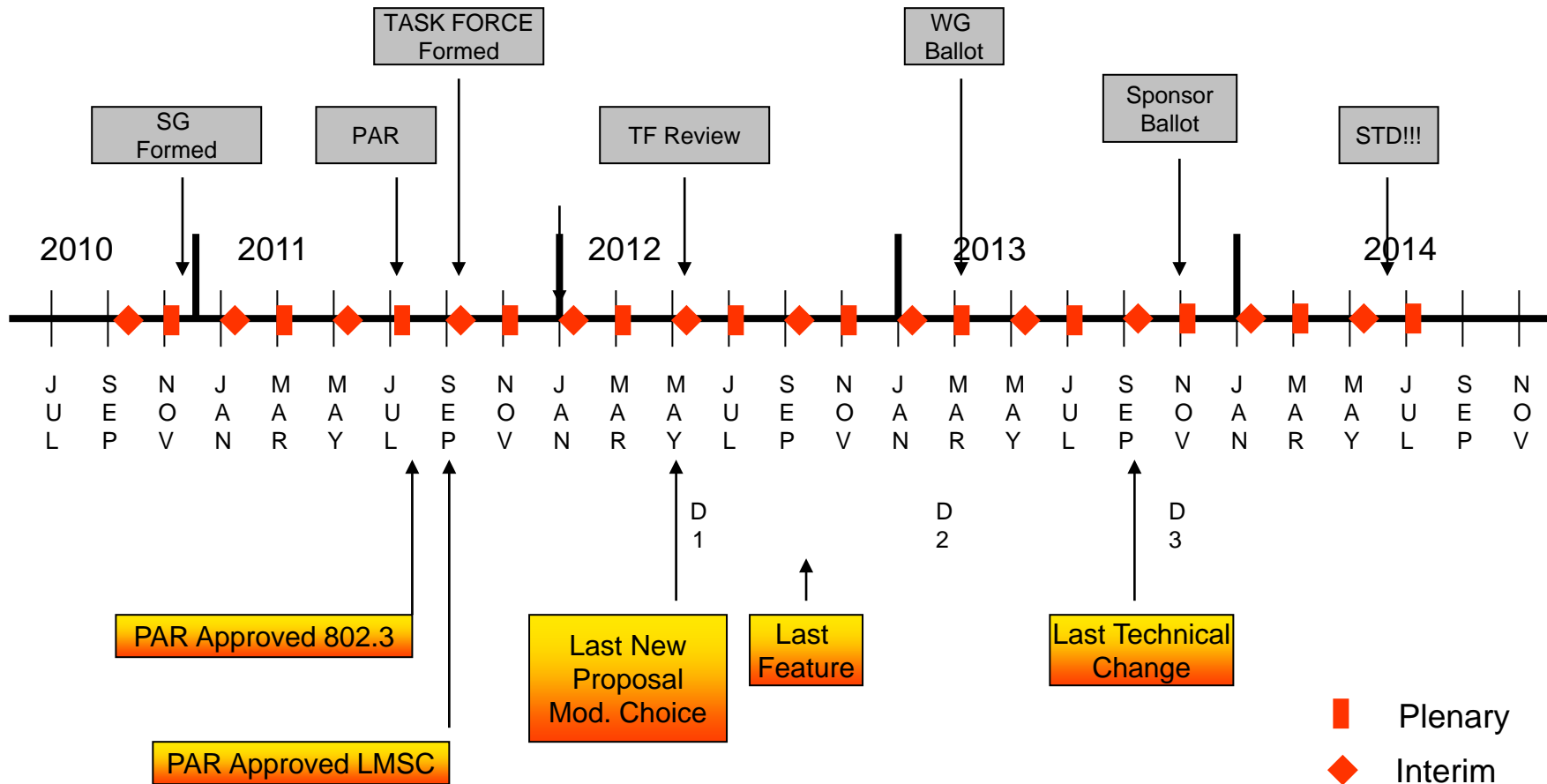
## 2.8.2 Draft Standard Balloting Requirements

Before a draft is submitted to WG letter ballot it shall in addition have met the following requirements:

- a) It must be complete with no open technical issues.
- b) It must be made available for pre-view by the membership by the Monday prior to the plenary week. If any changes are made to the draft after the draft was made available for pre-view the textual changes shall be presented for review during the closing plenary immediately prior to the vote for approval to go to WG ballot.
- c) It must be formatted according to the IEEE style selected by the WG Chair. This style will be selected to minimize the editorial work required for publication of the draft.
- d) It must be approved for submittal to WG ballot at the WG closing plenary.



# Adopted Timeline



# Tuesday

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Time	Presenter	Affiliation	Title	File Name
9:00 AM	John D'Ambrosia	Dell	Agenda and General Information	agenda_3bj_01_0113.pdf
9:30 AM	Adam Healey	LSI	Chief Editor's Report	healey_3bj_01_0912.pdf
9:45 AM	Adam Healey	LSI	Comment Resolultion, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf	
10:45 AM	Break			
11:05 AM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf	
12:00 PM	Lunch			
1:15 PM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf	
3:00 PM	Break			
3:20 PM	Adam Healey	LSI	Comment Resolultion, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf	
6:00 PM	Break for Day			

Note –Times listed are subject to change.

# Wed / Thurs

Wed\*

Time			
8:00 AM	John D'Ambrosia	Dell	Opening Comments
8:10 AM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
10:15 AM	Break		
10:35 AM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
12:00 PM	Lunch		
1:15 PM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
3:00 PM	Break		
3:20 PM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
6:00 PM	Break for Day		

Thurs\*

Time			
8:00 AM	John D'Ambrosia	Dell	Opening Comments
8:10 AM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
10:15 AM	Break		
10:35 AM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
12:00 PM	Lunch		
1:15 PM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
3:00 PM	Break		
3:20 PM	Adam Healey	LSI	Comment Resolution, Presentations will be dependent upon Comment Resolutions, see healey_3bj_01_0113.pdf
4:15 PM	John D'Ambrosia	Dell	Discussion, Motions, Closing Business
5:00 PM	Adjourn		

Note –Times listed are subject to change.

Start time for Wed & Thursday will be evaluated, based on progress of meeting each day. Any changes to the start time will be announced.

# Future Meetings

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- See: <http://www.ieee802.org/3/interims/index.html>
- March 2013 Plenary
  - Week of Mar 18
  - Caribe Royale, Orlando, FL, USA
- May 2013 Interim (Hosted by Ethernet Alliance)
  - Week of May 13
  - Location: Victoria, BC, Canada
- July 2013 Plenary
  - Week of July 14
  - Location: Geneva, CH
- Sept 2013 Interim (hosted by ADVA)
  - Week of Sept 2
  - York, UK
- Nov 2013 Plenary
  - Week of Nov 10
  - Dallas, TX, USA
- Anyone interested in hosting a meeting contact me.

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# Thank You!