

# Agenda and General Information

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

John D'Ambrosia, Dell  
Minneapolis, MN, USA  
Interim: May 17 - 18, 2012

# Agenda

---

- Welcome and Introductions
- Approve Agenda
- Approve the Minutes from March 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
- Presentations
- Motions and Closing Business
- Future Meetings

# Task Force Decorum



- 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

---

- Hear technical presentations / last proposals
- Approve generation of D1.0
  
- Lay the ground work for Draft 1.1 and the next meeting

# 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)**

- Study Group web page URL:

**<http://www.ieee802.org/3/100GCU/index.html>**

# Task Force Private Area

---

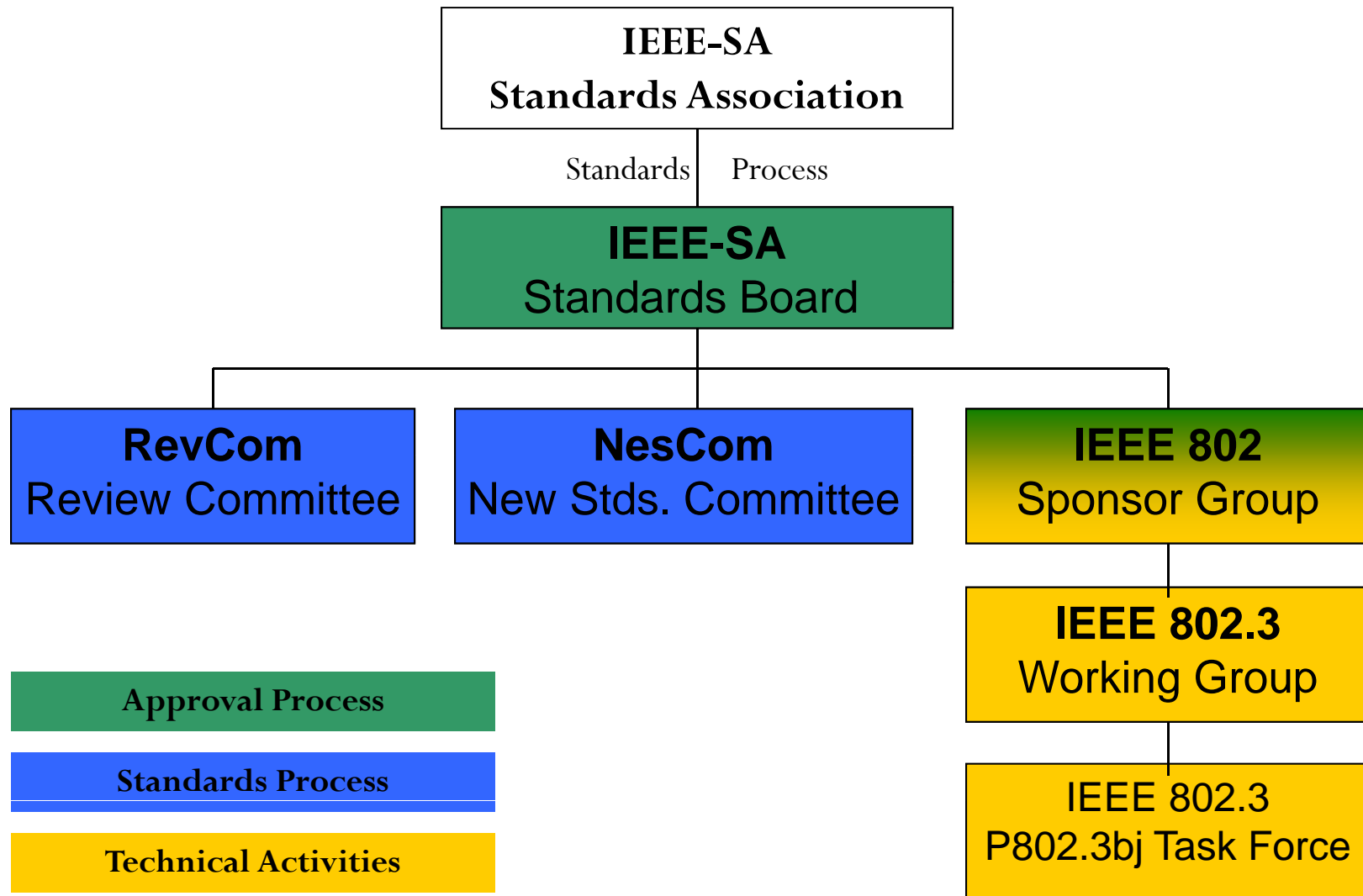
- URL: <http://www.ieee802.org/3/100GCU/private/index.html>
  - Username: xxxxxx
  - Password: xxxxxxxx
- Write it down...
- Note - The draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

# Ground Rules

---

- 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/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

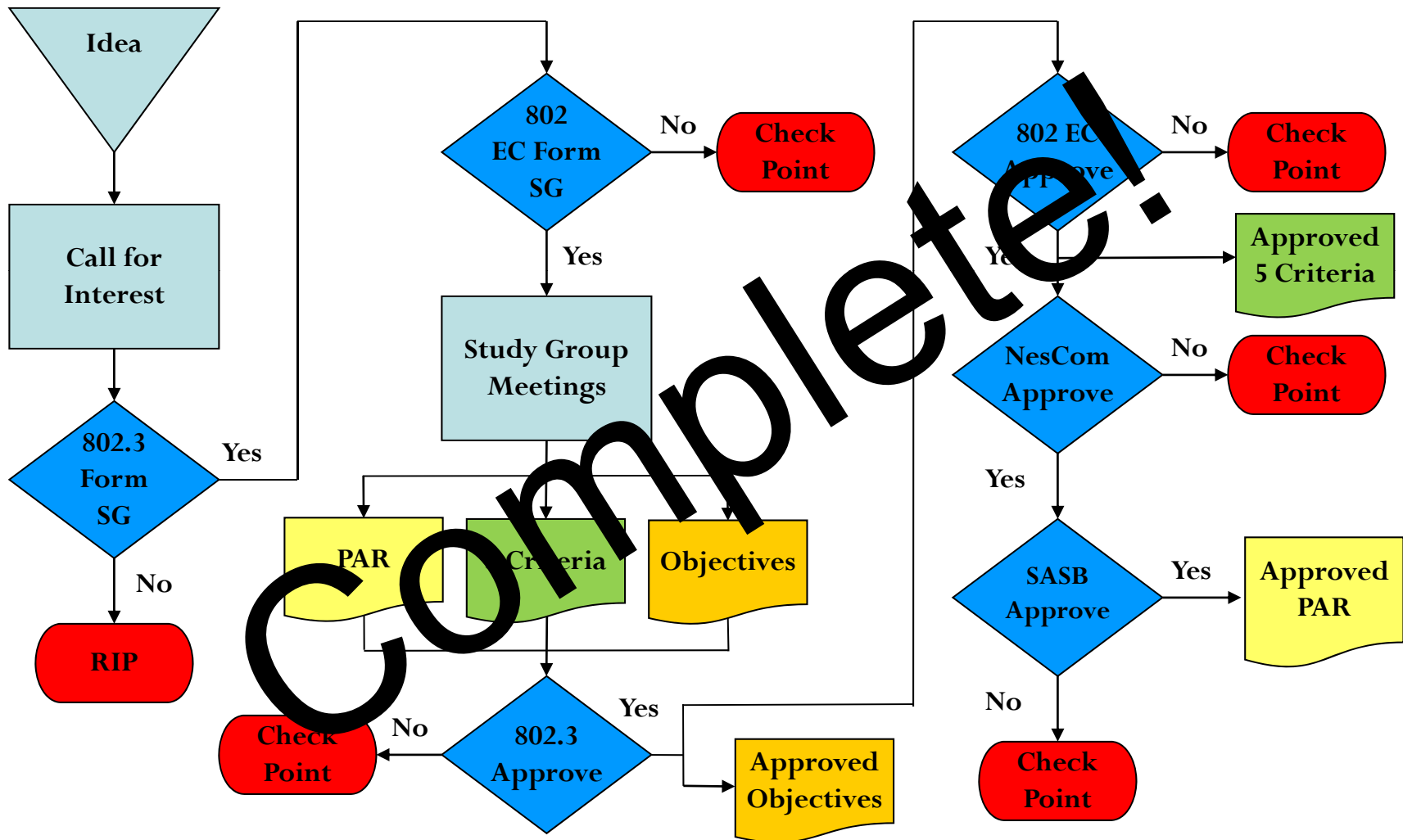
- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide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

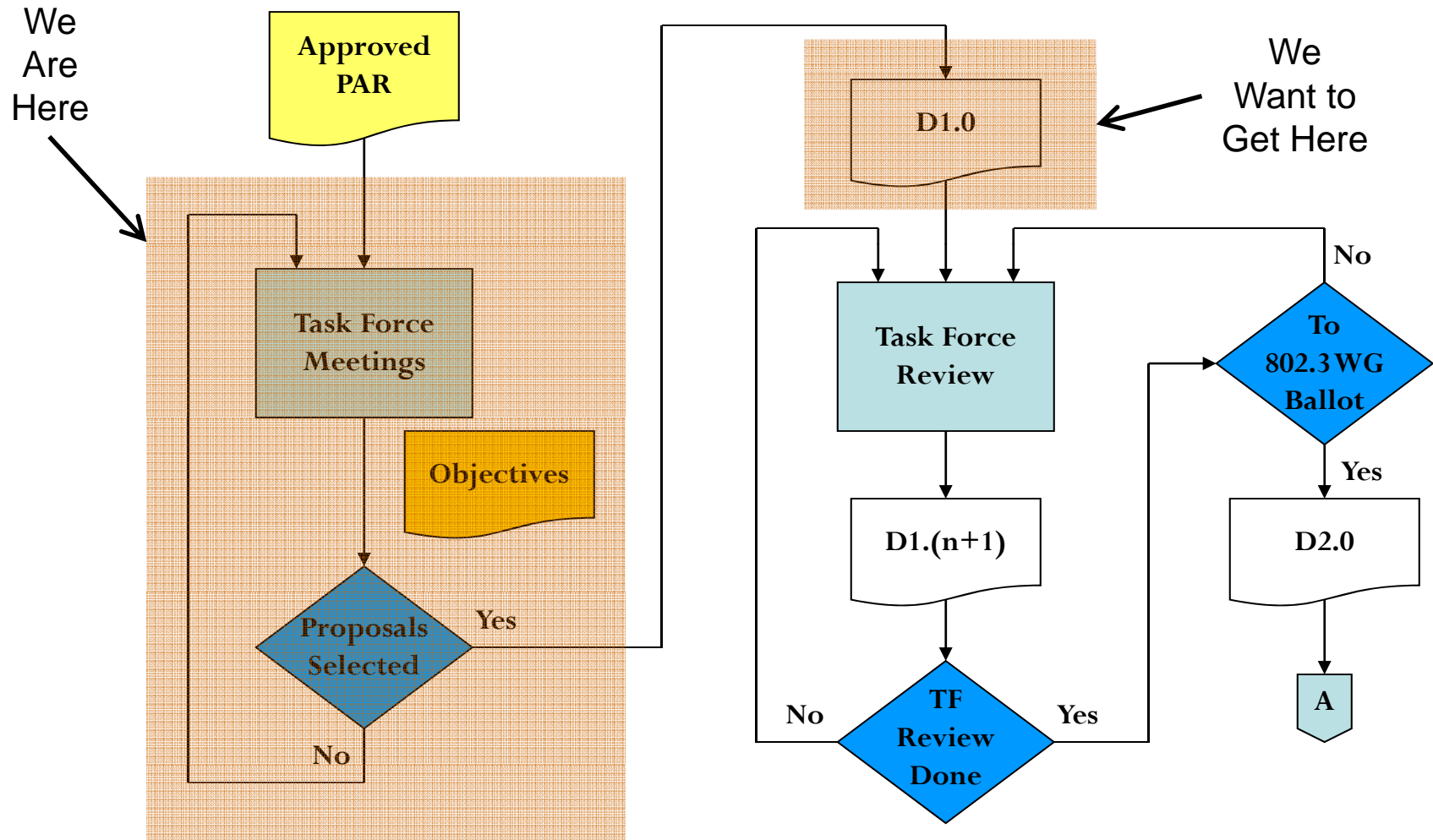
-----  
See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy” for more details.

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



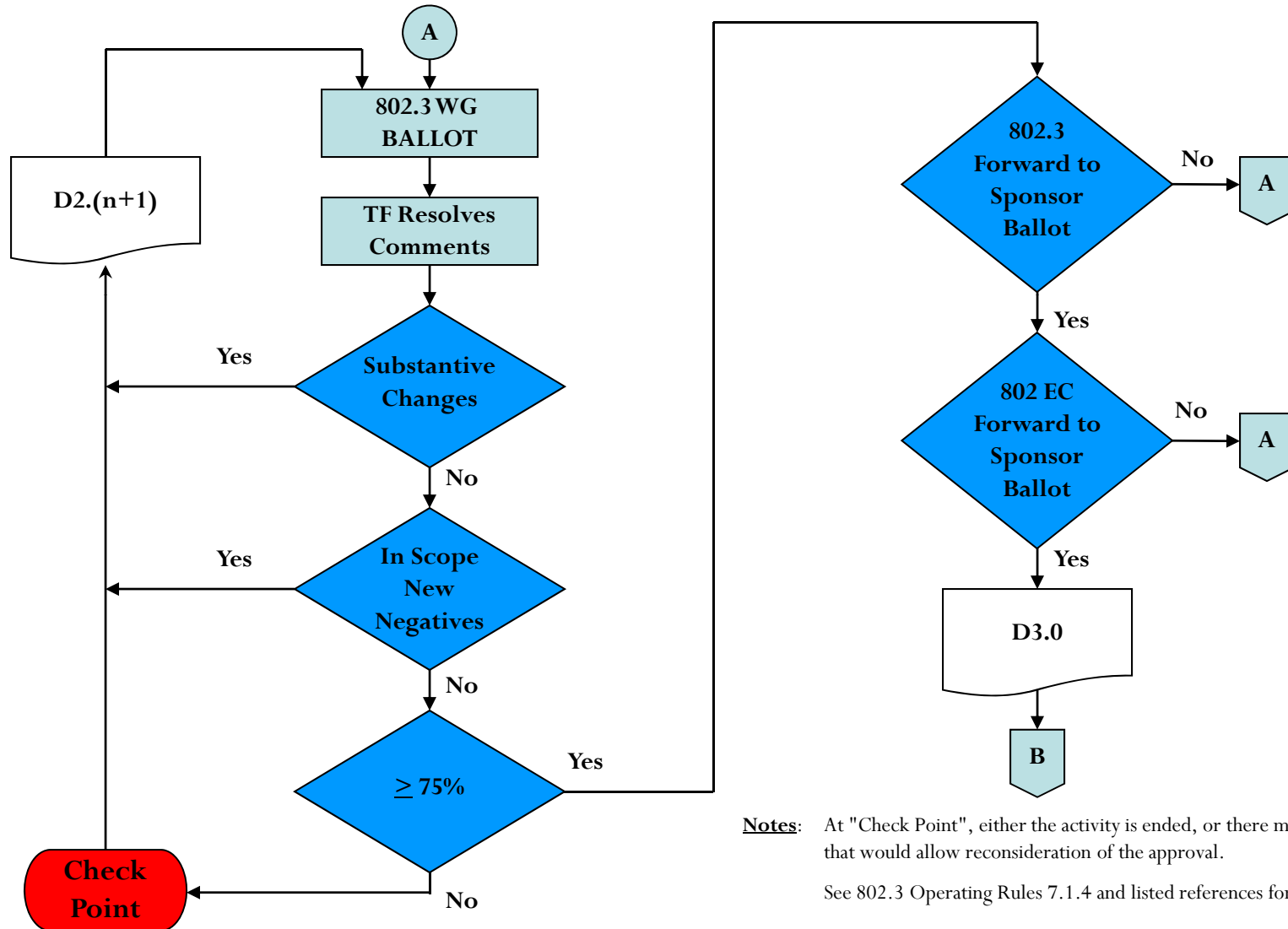
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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





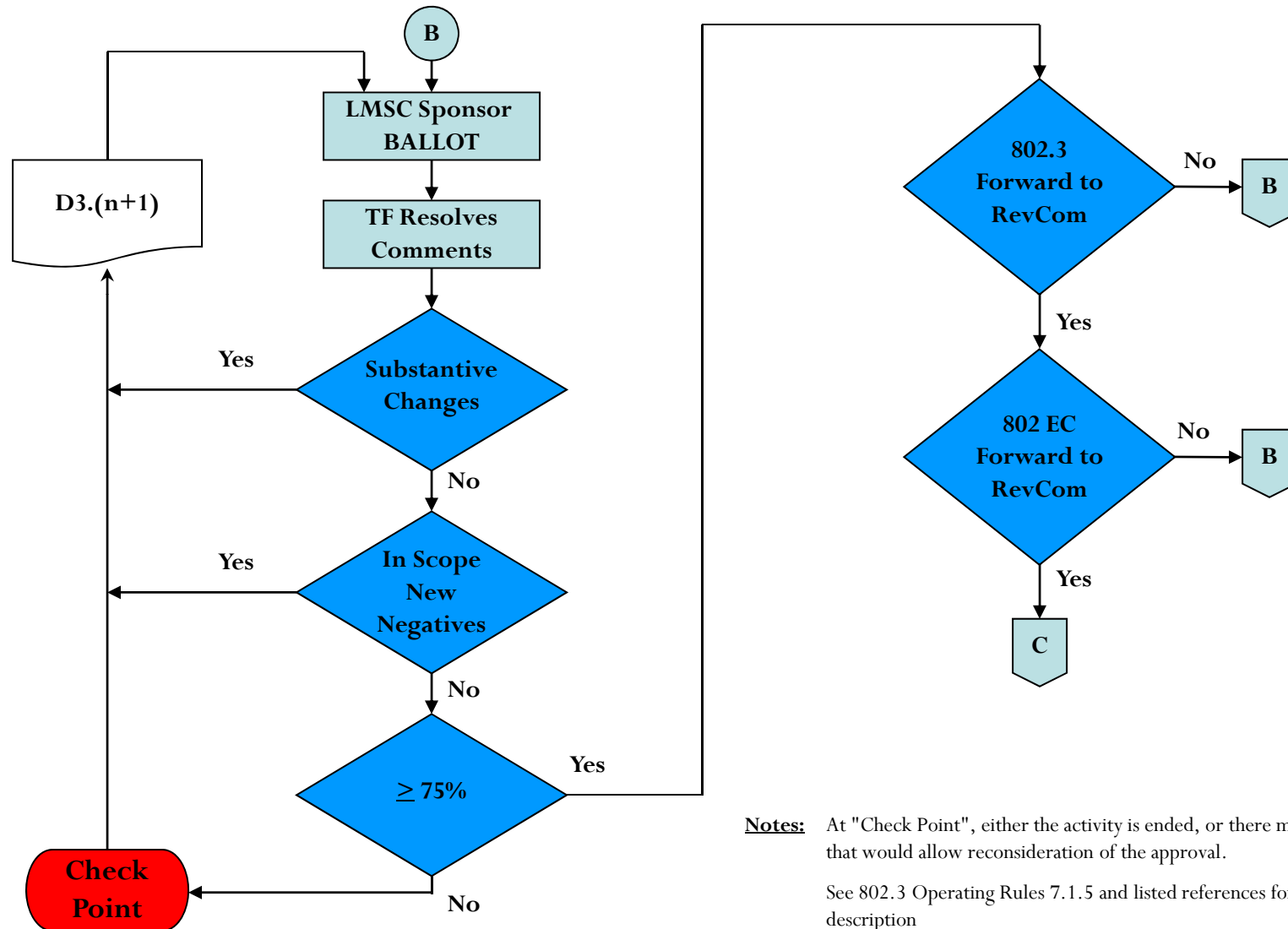
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



**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

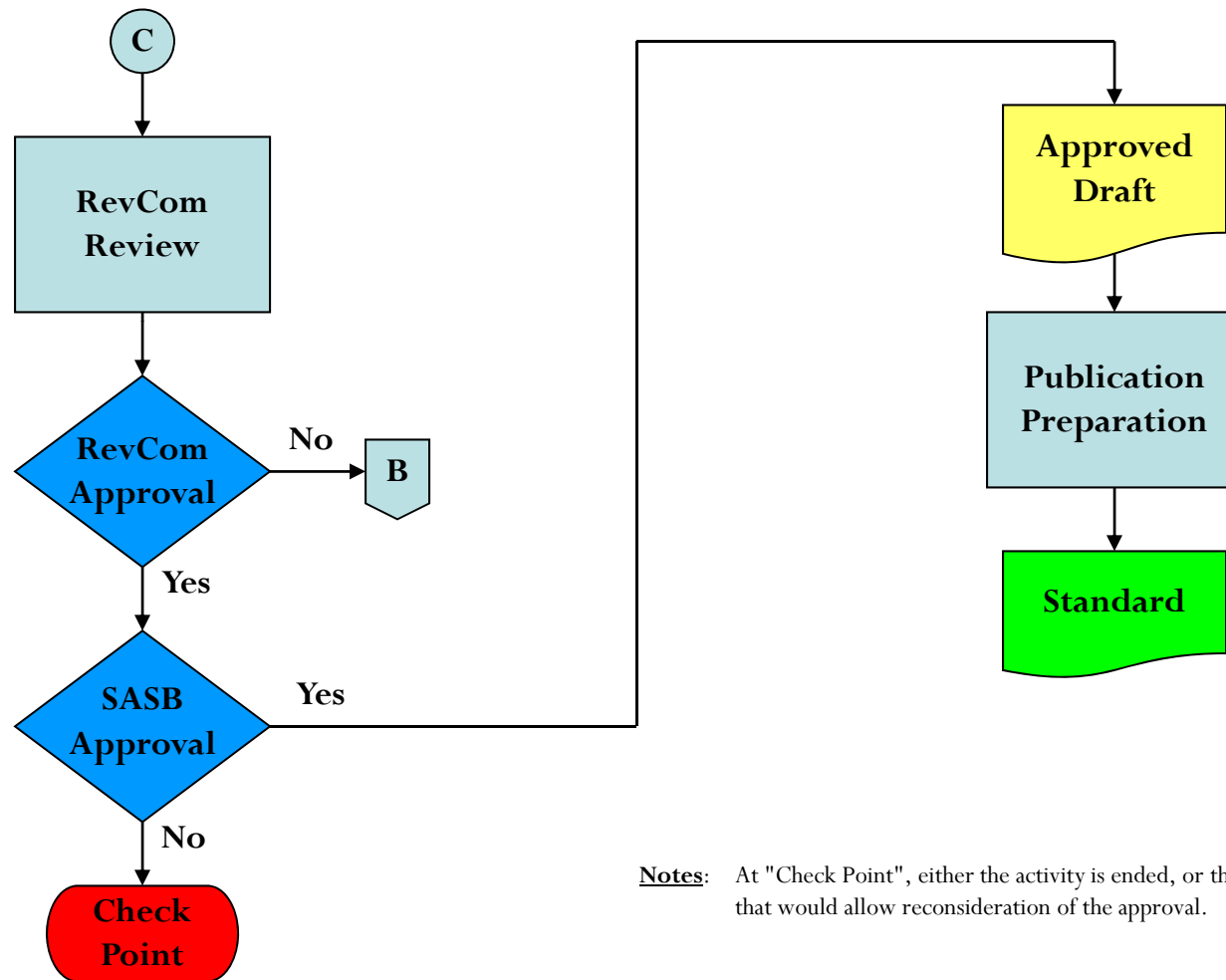
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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

---

<b>New Action Items March'12</b>		<b>Date Assigned</b>	<b>Status</b>
Charles Moore	Provide tool discussed in moore_01_312.pdf	3/15/2012	Done
Joel Goergen	Lead consensus building activity on backplane test points	3/15/2012	Done

# Liaisons and Communications

---

- None

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

---

- PAR
  - [http://www.ieee802.org/3/100GCU/par\\_a\\_0511.pdf](http://www.ieee802.org/3/100GCU/par_a_0511.pdf)
- 5 Criteria
  - [http://www.ieee802.org/3/100GCU/5C\\_0511.pdf](http://www.ieee802.org/3/100GCU/5C_0511.pdf)
- Objectives
  - [http://www.ieee802.org/3/bj/objectives\\_0312.pdf](http://www.ieee802.org/3/bj/objectives_0312.pdf)
- Adopted Timeline
  - [http://www.ieee802.org/3/bj/timeline\\_0911.pdf](http://www.ieee802.org/3/bj/timeline_0911.pdf)

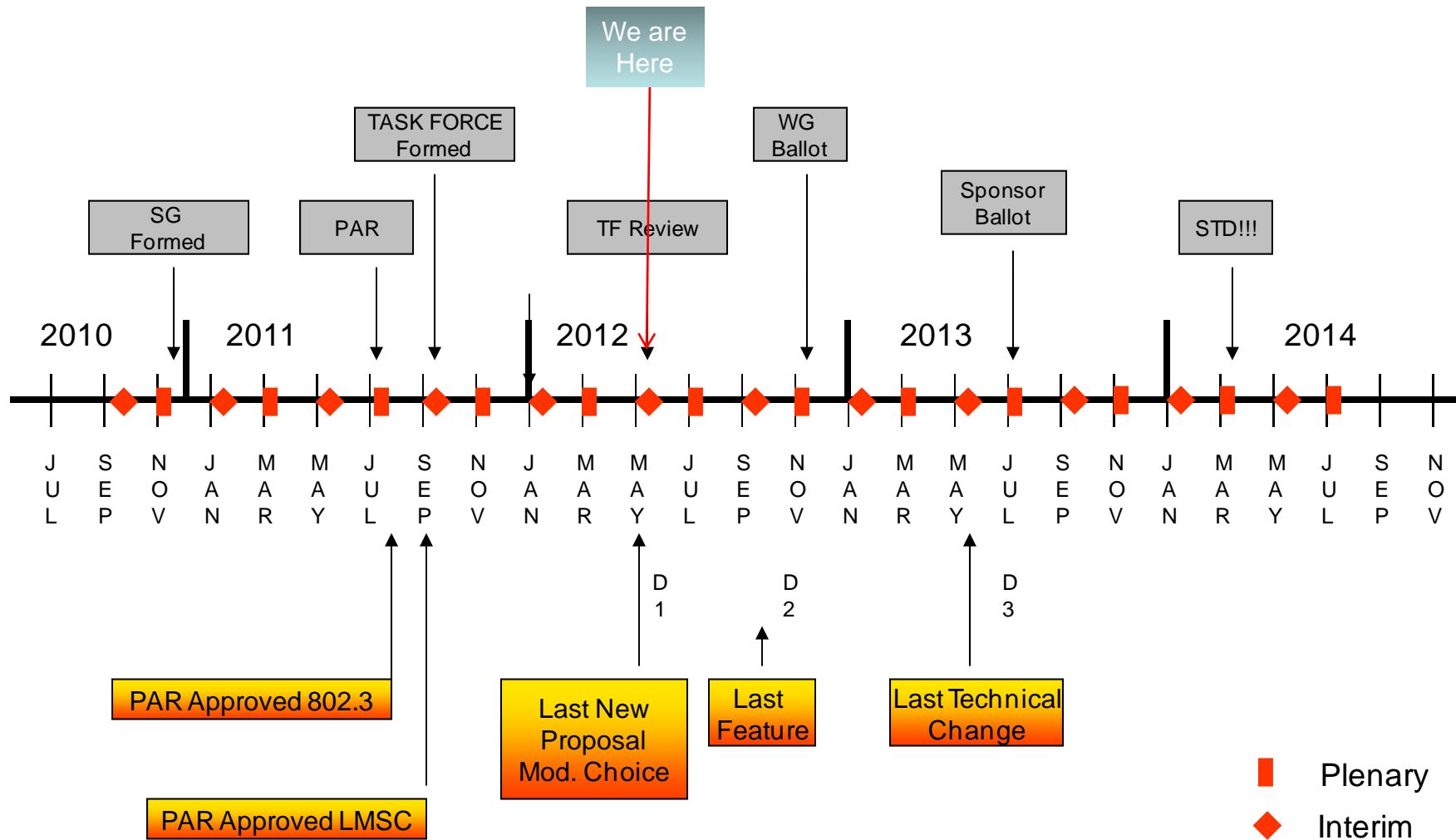
# IEEE P802.3bj Task Force Objectives

---

- 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\*

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

# Adopted Timeline



[http://www.ieee802.org/3/bj/timeline\\_0911.pdf](http://www.ieee802.org/3/bj/timeline_0911.pdf)



# Presentations (Thurs)

Time	Presenter	Affiliation	Title	File Name
8:30 AM	John D'Ambrosia	Dell	Day's Opening Comments	agenda_01_0512.pdf
9:15 AM	John D'Ambrosia	Dell	Thoughts on Naming New PMDs for IEEE P802.3bj	dambrosia_01_0512.pdf
9:45 AM	Adam Healey	LSI	Chief Editor's Report	healey_01_0512.pdf
10:00 AM			Break	
10:20 AM	Adam Healey	LSI	Introduction to Draft IEEE 802.3bj	
12:00 PM			Lunch	
1:15 PM	Matt Brown	APM	100G Backplane PAM4 PHY FEC/PMA Encoding Enhancements	brown_01_0512.pdf
1:45 PM	Pete Anslow	Ciena	Alignment marker scrambling for PAM4	anslow_01a_0512.pdf
2:15 PM	Zhongfeng Wang	Broadcom	Alignment Marker Lock State Machine for NRZ 100G-KR	wang_01_0512.pdf
2:45 PM	Kent Lusted	Intel	100G Link Training Proposal	lusted_01_0512.pdf
3:15 PM			Break	
3:35 PM	Chris DiMinico	MC Communications / Leoni	100GBASE-CR4 Specifications	diminico_01_0512.pdf
4:05 PM	Takeshi Nishimura	Yamaichi	Connector Performance for IEEE802.3bj MDI and Future Multi-hundred Gb/s System	nishimura_01_0512.pdf
4:35 PM	Chris Cole	Finisar	802.3bj 2nd MDI Proposal	cole_01a_0512.pdf
4:55 PM	Elizabeth Kochuparambil	Cisco	AC cap location and Test Points	goergen_01a_0512.pdf
5:25 PM			Discussion / Strawpolls	
6:10 PM	Wael Diab	Broadcom	Tutorial - Comment Tool	diab_01_0512.pdf
6:55 PM			Break for the Day	

Note –Times listed are subject to change.

# Presentations (Fri)

Time	Presenter	Affiliation	Title	File Name
9:00 AM	John D'Ambrosia	Dell	Day's Opening Comments	agenda_01_0512.pdf
9:10 AM	Hugh Barrass	Cisco	Gaps in D.0.9 for EEE	barrass_01_0512.pdf
9:40 AM	Roy Cideciyan	IBM	MTTFPA for Uncorrected Transcoded FEC Blocks	cideciyan_01_0512.pdf
10:10 AM			Break	
10:30 AM	Roy Cideciyan	IBM	Transmitter and Receiver Architecture Without Self-Synchronizing Rx Scrambler	cideciyan_02_0512.pdf
11:00 AM	Yasuo Hidaka	Fujitsu	Low-Frequency Effects of AC Coupling Capacitor	hidaka_01_0512.pdf
11:30 AM	Chris DiMinico	MC Communications / Leoni	Consensus Building Group Report Channel Analysis Method for 802.3bj Qualification and Specification	diminico_02a_0512.pdf
12:00 PM			Lunch	
1:30 PM	Mike Li	Altera	S-parameter to Single Bit Response (SBR) Transformation and Convergence	li_01_0512.pdf
2:00 PM	Rich Mellitz	Intel	Case Study: Gaussian Channel Crosstalk versus Realistic Statistical Crosstalk	mellitz_01_0512.pdf
2:30 PM	Charles Moore	Avago	Further work on S/N Budget Channel specification	moore_01_0512.pdf
3:00 PM			Break	
3:20 PM			Discussion / Straw Polls / Motions	
4:45 PM			Closing Business	
5:00 PM			Adjourn	

Note –Times listed are subject to change.

# Future Meetings

---

- See: <http://www.ieee802.org/3/interims/index.html>
- July 2012 Plenary
  - Date: Week of July 16
  - Location: Grand Hyatt Manchester, San Diego, CA, USA
- Sept 2012 Interim (Hosted by ITU)
  - Date: Week of Sept 24
  - Location: Geneva, CH
- Nov 2012 Plenary
  - Date: Week of Nov 12
  - Location, Grand Hyatt, San Antonio, San Antonio, TX, USA
  
- Anyone interested in hosting a meeting contact me.



---

# Thank You!