



# IEEE 802.3az

# Energy Efficient Ethernet

## Agenda and General Information

Orlando, Florida  
March 16, 2010

Mike Bennett  
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# Agenda

- Welcome and Introductions
- Appoint recording secretary
- Approve Meeting Minutes
- Goals for this Meeting
- Reflector and Web
- Rules
- Call for Patents
- IEEE
  - Structure
  - Bylaws and Rules
  - IEEE Standards Process
- Review missed comment issue
- Poll for future meetings
- Comment processing and presentations
- Discussion and Motions
- Future Meetings

# IEEE 802.3az EEE Contacts

## ■ Task Force Chair

■ Mike Bennett (mjbennett@ieee.org)

## ■ Web Master

■ Bruce Nordman (bnordman@lbl.gov)

## ■ Editor-in-Chief

■ Sanjay Kasturia (kasturia@teranetics.com)

# Task Force Decorum



- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (2007 SASB Op Manual 5.3.3.5)
- Photography or recording by permission only (5.3.3.4)
- Cell phone ringers off
- Wear your badges at all times in meeting areas

# Goals for this Meeting

- Respond to comments against D2.3
- Direct editorial team to produce the next draft
- Try to progress to Sponsor Ballot
  - In order to do this we need to stop making changes

# Reflector and Web

- To subscribe to the Energy Efficient Ethernet (EEE) reflector, send your request to:

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

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

*subscribe stds-802-3-eee <yourfirstname> <yourlastname>  
end*

- Send EEE reflector messages to:

*stds-802-3-eee@listserv.ieee.org*

- For complete instructions on reflector usage, subscription, and unsubscription:

<http://www.ieee802.org/3/az/reflector.html>

- EEE web page URL:

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

# Ground Rules

- Based upon IEEE 802.3 Rules
  - Meetings conducted based on 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, Average Sales Prices (ASP), etc. no matter what the currency
- NO restrictive notices

# 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/board/aud/LMSC\\_2009.pdf](http://standards.ieee.org/board/aud/LMSC_2009.pdf)

\* For the full hierarchy of rules see IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures



# Bylaws and Rules

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual:**

[http://www.ieee802.org/PNP/2009-11/LMSC\\_OM\\_approved\\_091120\\_rev\\_100213.pdf](http://www.ieee802.org/PNP/2009-11/LMSC_OM_approved_091120_rev_100213.pdf)

- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures:**

[http://www.ieee802.org/PNP/2009-11/LMSC\\_WG\\_PandP\\_approved\\_091120\\_rev\\_100213.pdf](http://www.ieee802.org/PNP/2009-11/LMSC_WG_PandP_approved_091120_rev_100213.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)

\* For the full hierarchy of rules see IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures

# 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.

# Participants, Patents, and Duty to Inform

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

Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2

- 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/guides/bylaws/sect6-7.html#6>*

IEEE-SA Standards Board Operations Manual

*<http://standards.ieee.org/guides/opman/sect6.html#6.3>*

Material about the patent policy is available at

*<http://standards.ieee.org/board/pat/pat-material.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/board/pat/index.html>**

**This slide set is available at <http://standards.ieee.org/board/pat/pat-slideset.ppt>**

# Call for Potentially Essential Patents

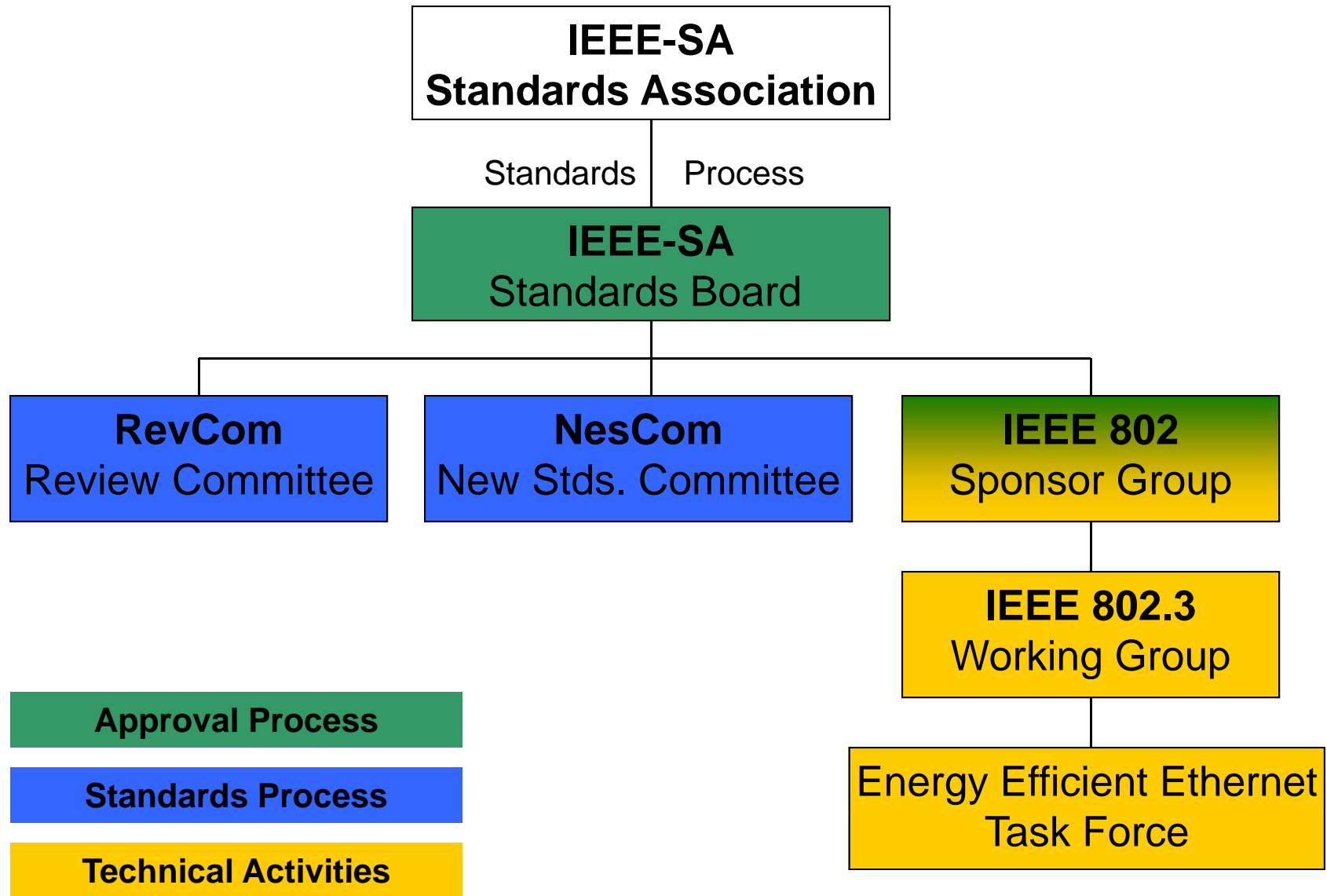
- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide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

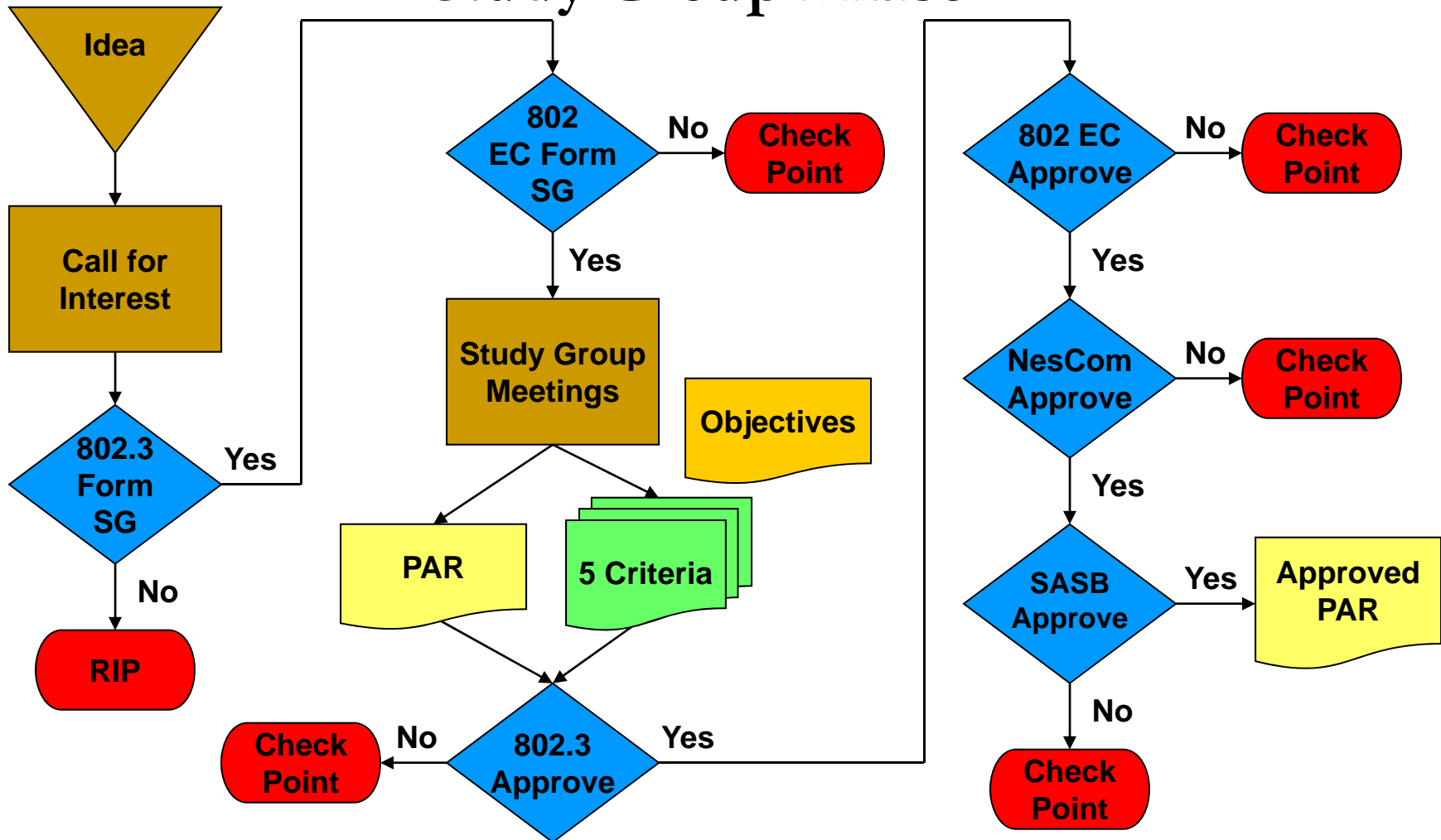
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See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

# IEEE Structure



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

## Study Group Phase

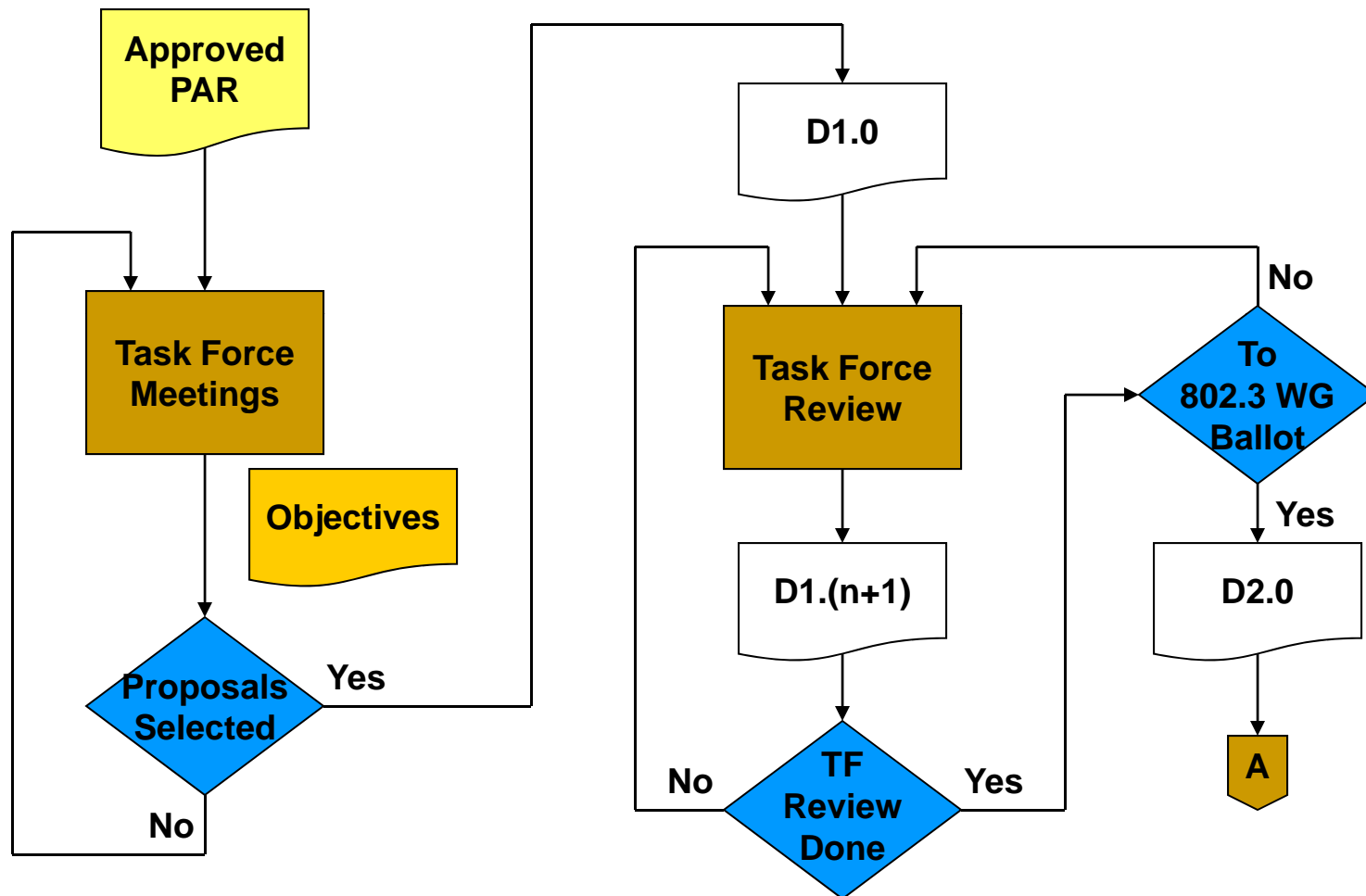


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.



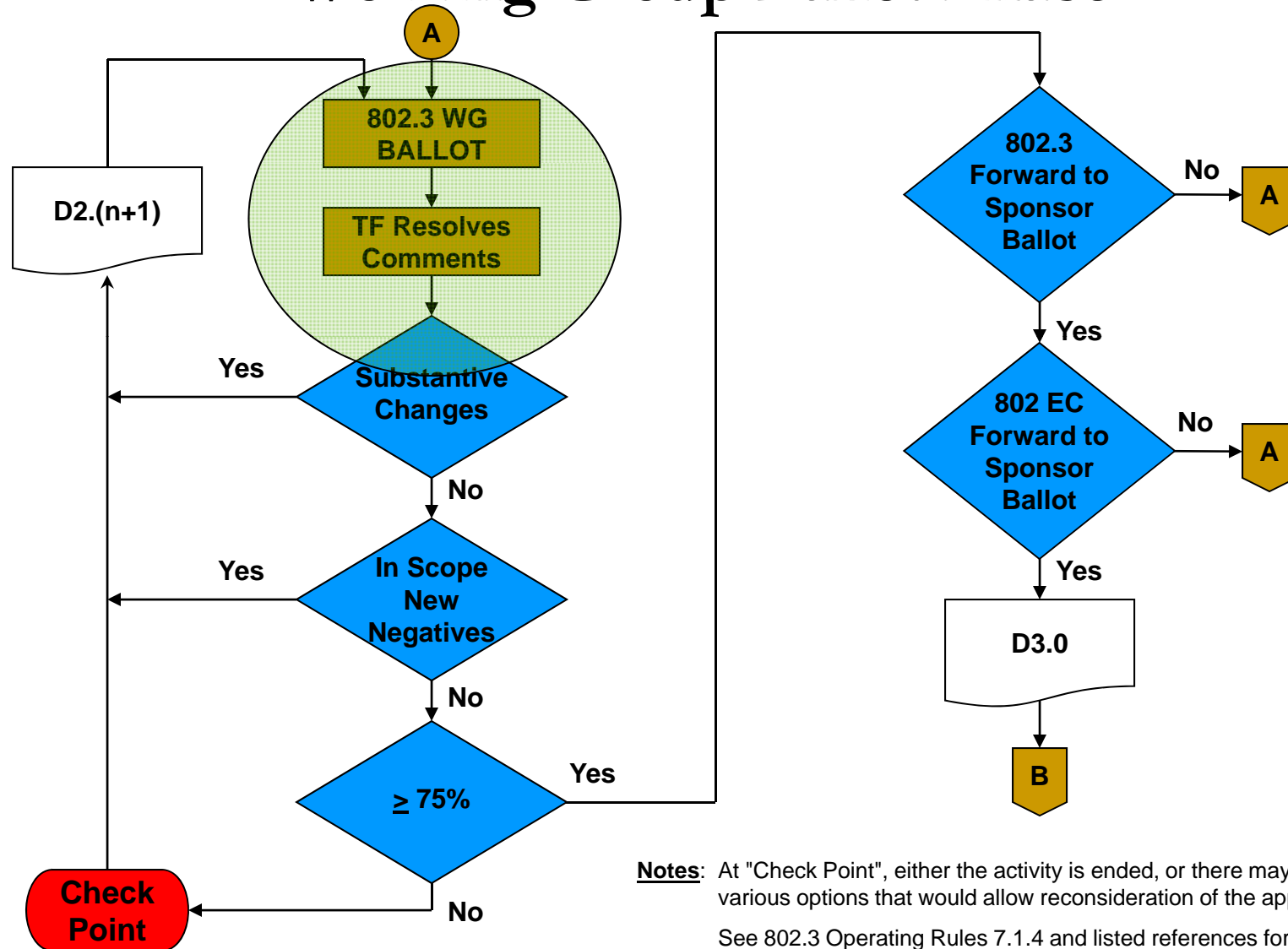
# Overview of IEEE 802.3 Standards Process (2/5)

## Task Force Comment Phase



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

## Working Group Ballot Phase

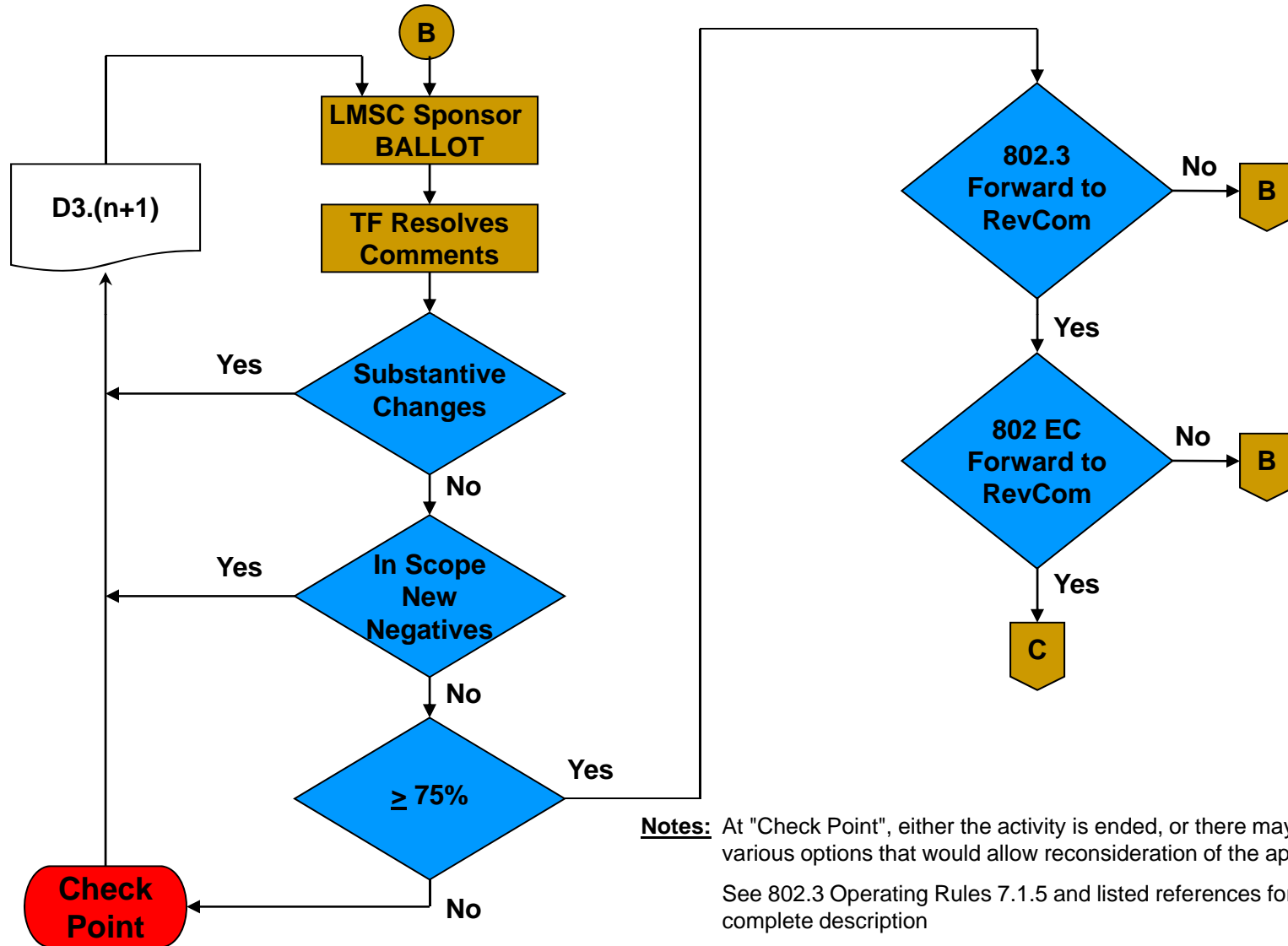


**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operating Rules 7.1.4 and listed references for complete description

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

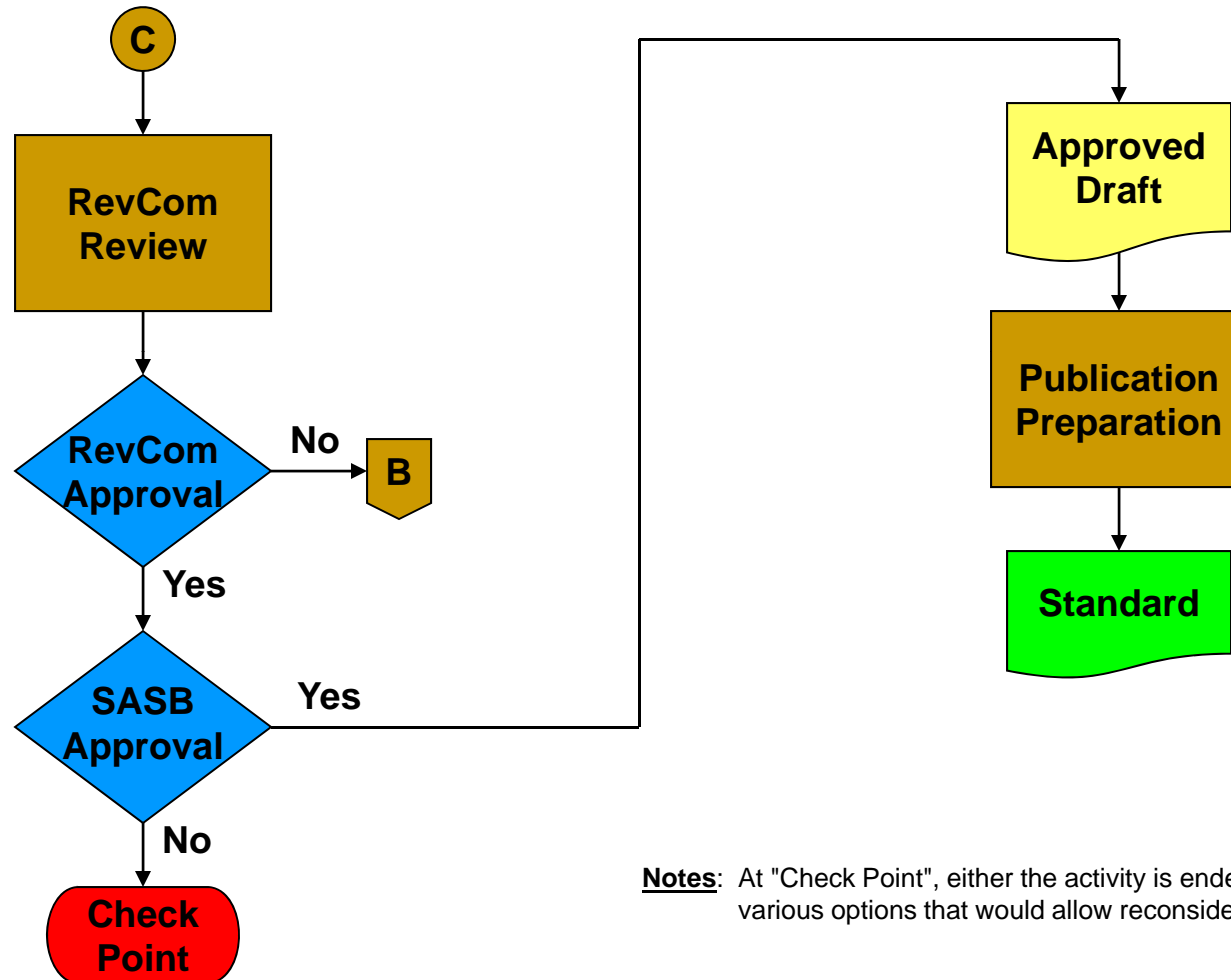
## Sponsor Ballot Phase



**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 and Standard Release



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

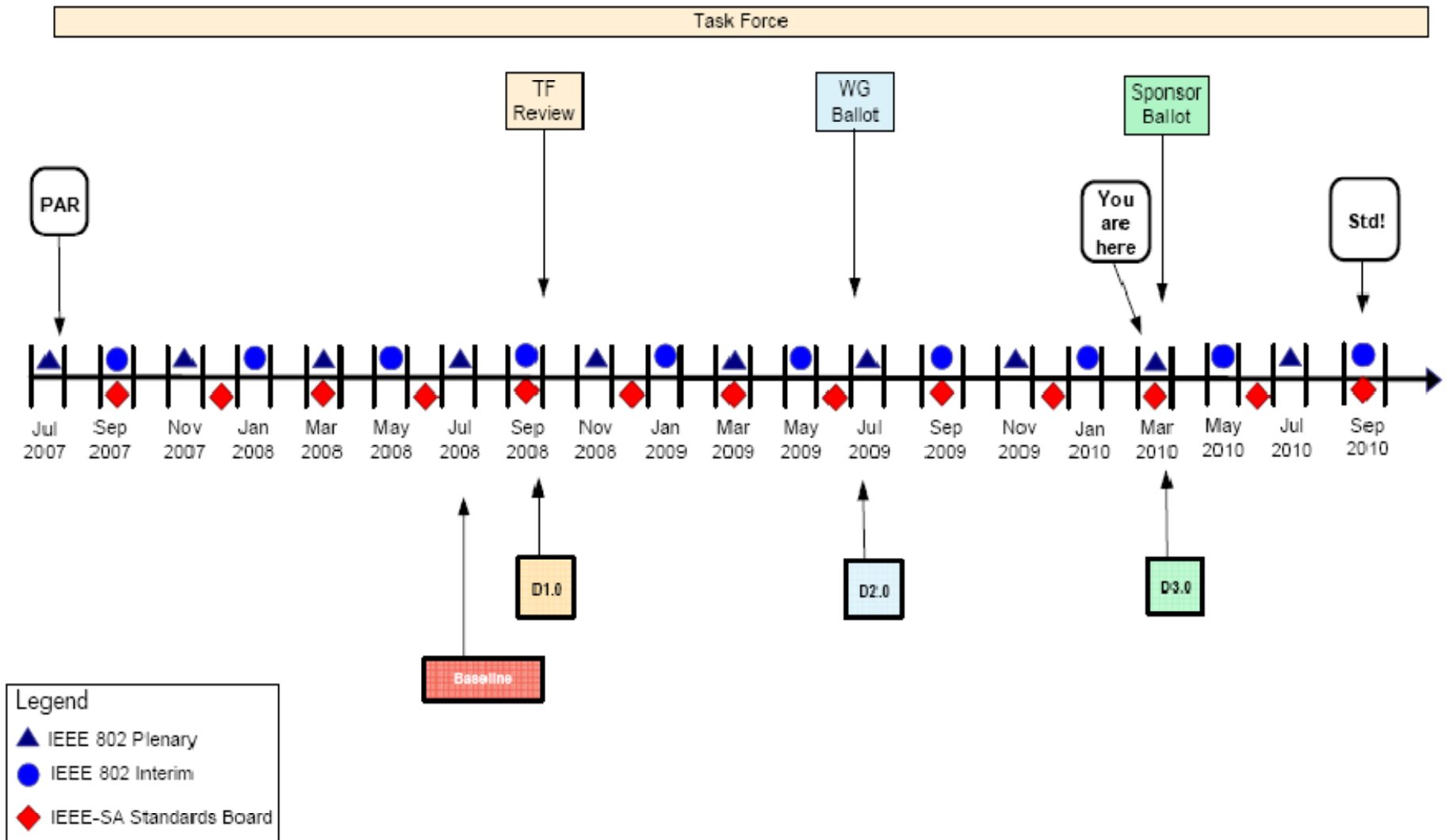
# IEEE 802.3az Objectives

- Define a mechanism to reduce power consumption during periods of low link utilization for the following PHYs
  - 100BASE-TX (Full Duplex)
  - 1000BASE-T (Full Duplex)
  - 10GBASE-T
  - 10GBASE-KR
  - 10GBASE-KX4
  - 1000BASE-KX (added July 2008)
  
- Define a protocol to coordinate transitions to or from a lower level of power consumption
  
- The link status should not change as a result of the transition

# IEEE 802.3az Objectives

- No frames in transit shall be dropped or corrupted during the transition to and from the lower level of power consumption
- The transition time to and from the lower level of power consumption should be transparent to upper layer protocols and applications
- Define a 10 megabit PHY with a reduced transmit amplitude requirement such that it shall be fully interoperable with legacy 10BASE-T PHYs over 100 m of Class D (Category 5) or better cabling to enable reduced power implementations.
- Any new twisted-pair and/or backplane PHY for EEE shall include legacy compatible auto negotiation

# P802.3az timeline



## Tuesday

Time	Title	File name	Presenter	Affiliation	Duration
9:00 AM	Introductions, Agenda and General Information	agenda_01_1109.pdf	Mike Bennett	LBNL	0:20
9:20 AM	comment processing*				0:40
10:00 AM	Break				0:20
10:20 AM	comment processing*		all		1:40
12:00 PM	Lunch				1:15
1:15 PM	comment processing*		all		1:45
3:00 PM	Break				0:20
3:20 PM	comment processing*		all		1:40
5:00 PM	Recess**				

## Wednesday

Time	Title	File name	Presenter	Affiliation	Duration
9:00 AM	comment processing***		all		1:00
10:00 AM	Break				0:20
10:20 AM	comment processing***		all		1:40
12:00 PM	Lunch				3:20
3:20 PM	comment processing***		all		1:40
5:00 PM	Recess**				

## Thursday

Time	Title	File name	Presenter	Affiliation	Duration
9:00 AM	comment processing***		all		1:00
10:00 AM	Break				0:20
10:20 AM	comment processing***, polls and motions		all		1:40
12:00 PM	Adjourn**				

\* Presentations related to specific comments will be given when that comment comes up for discussion

\*\* meetings may go past the estimated end times based on comment resolution progress

\*\*\* if time permits, when comment processing is finished, editor's meeting





# Comment Processing

# Future Meetings

- One-day Interim

- April 8<sup>th</sup>, 2010
- Lawrence Berkeley National Lab
- Berkeley, CA

- May Interim

- May 24 –28, 2010
- ITU Geneva
- Geneva, Switzerland

- Future meeting information at:

- <http://ieee802.org/3/interims/index.html>



Thank You!

