

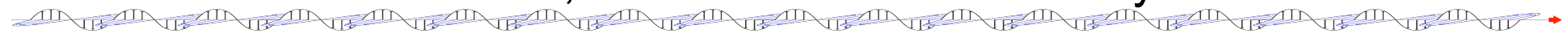


# Agenda and General Information

IEEE P802.3bm  
40 Gb/s and 100 Gb/s Fiber Optic  
Task Force

Dan Dove  
Dove Networking Solutions  
Affiliated with Huawei

Indian Wells, CA USA – 22 - 24 January 2014





# Agenda

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- Welcome and Introductions
- Appointment of Secretary
- Approve Agenda
- Approve Minutes of November Plenary Meeting
- Reflector and Web
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Liaisons and Communications
- Review of Action Items from November Meeting
- Discuss Goals for this meeting
  - Big Ticket Items
- Ad Hoc Reports
- Comment Resolution (Led by Pete Anslow, Chief Editor)
- Motions, Discussions and Closing Business
- Future Meetings

# Task Force Decorum



- Photography or recording by permission only (2012 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



# Reflector and Web

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- To subscribe to the *Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet* 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-802-3-100Goptx <yourfirstname> <yourlastname>**  
**end**

- Send *Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet* reflector messages to:

**STDS-802-3-100Goptx@LISTSERV.IEEE.ORG**

- Task Force web page URL:

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



# Task Force Private Area

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- URL: <http://www.ieee802.org/3/bm/private/index.html>
  - Username: XXXXXXXX
  - 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.



# Attendance

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- Tutorial Material on attendance tool
  - [http://ieee802.org/3/minutes/nov13/1113\\_imat.pdf](http://ieee802.org/3/minutes/nov13/1113_imat.pdf)
- URL
  - <http://imat.ieee.org/>
- PASSWORD
  - XXXXXX

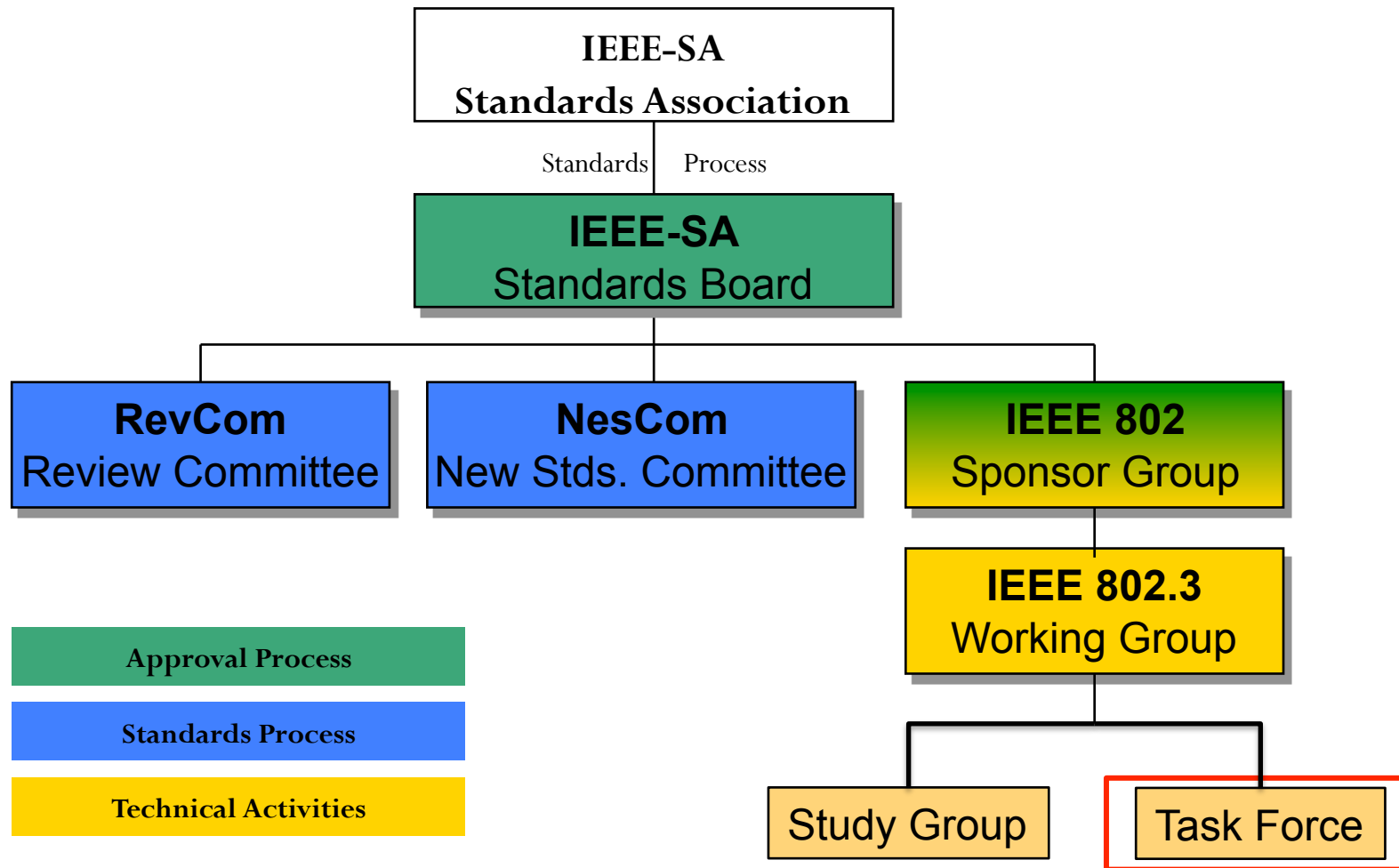


# Ground Rules

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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 – Do unto others...
- NO product pitches (ex: “LightZippyDoo is the best!”)
- NO corporate pitches (ex: “We Illuminate Your Networks!”)
- 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/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)



# Guidelines for IEEE-SA Meetings

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- **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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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>

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.

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



# Participants, Patents, and Duty to Inform

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

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- **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

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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>



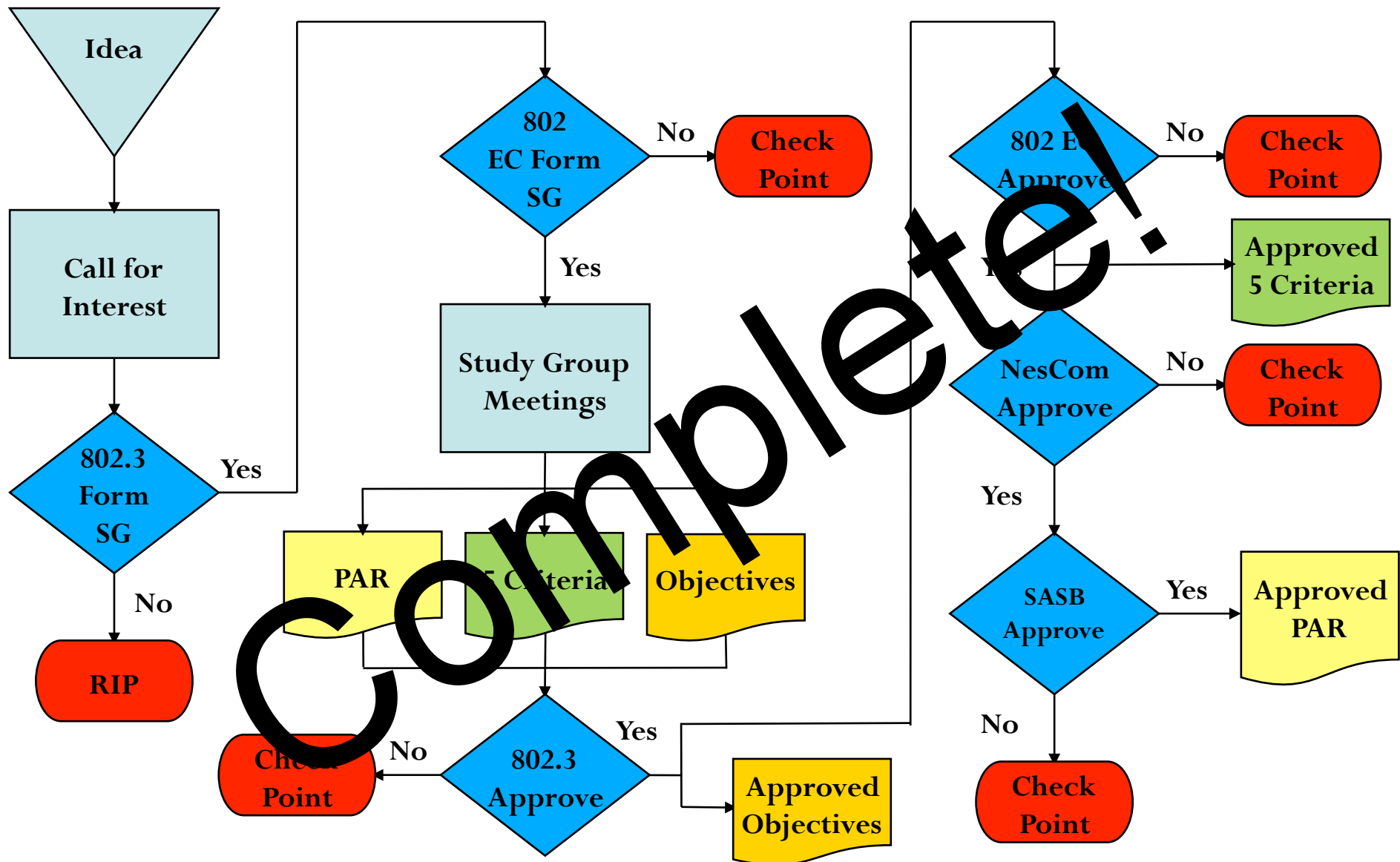
# Call for Potentially Essential Patents

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- 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

❖ **NOTE TO SECRETARY – Record this Call & Response to Call**

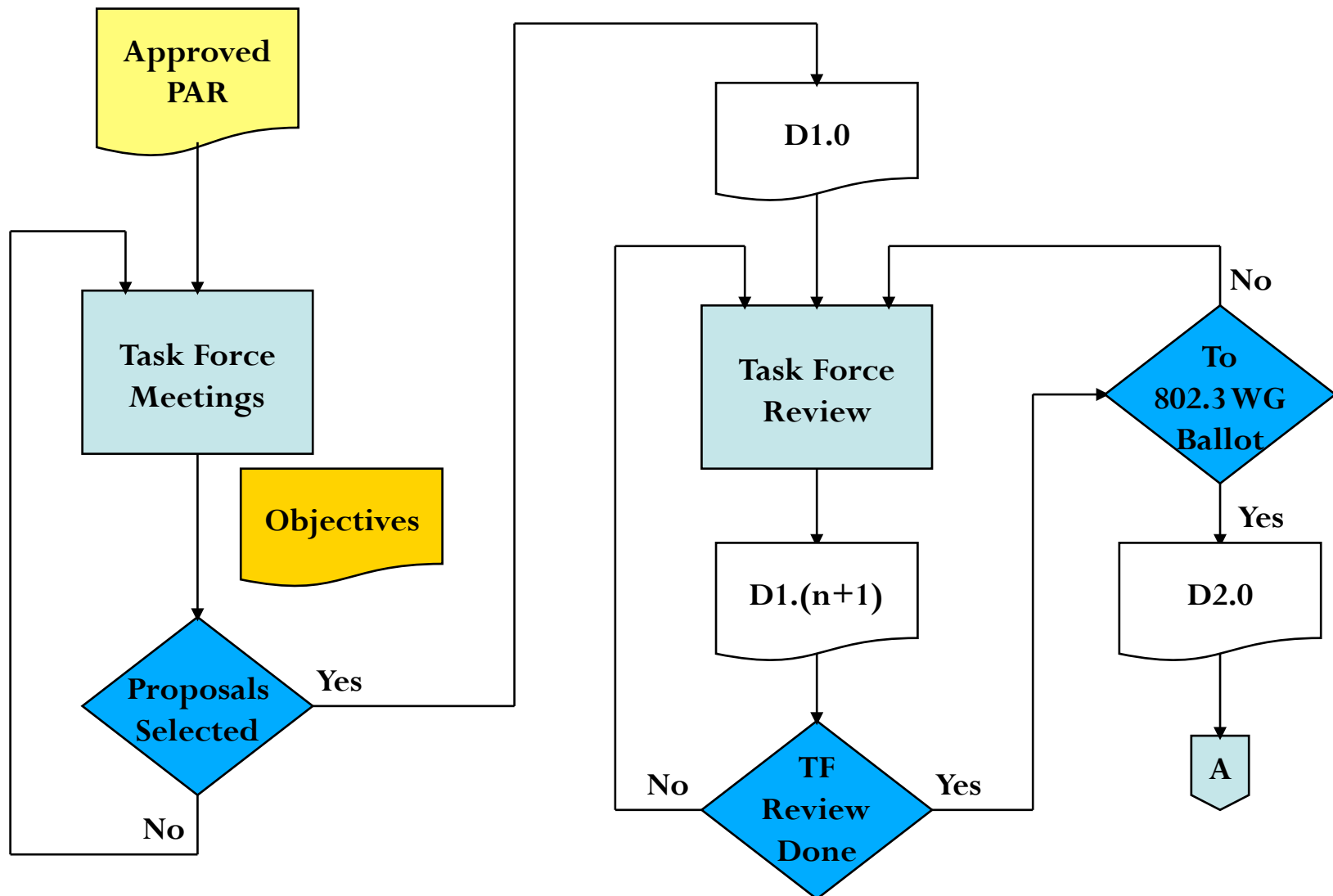
# Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase



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

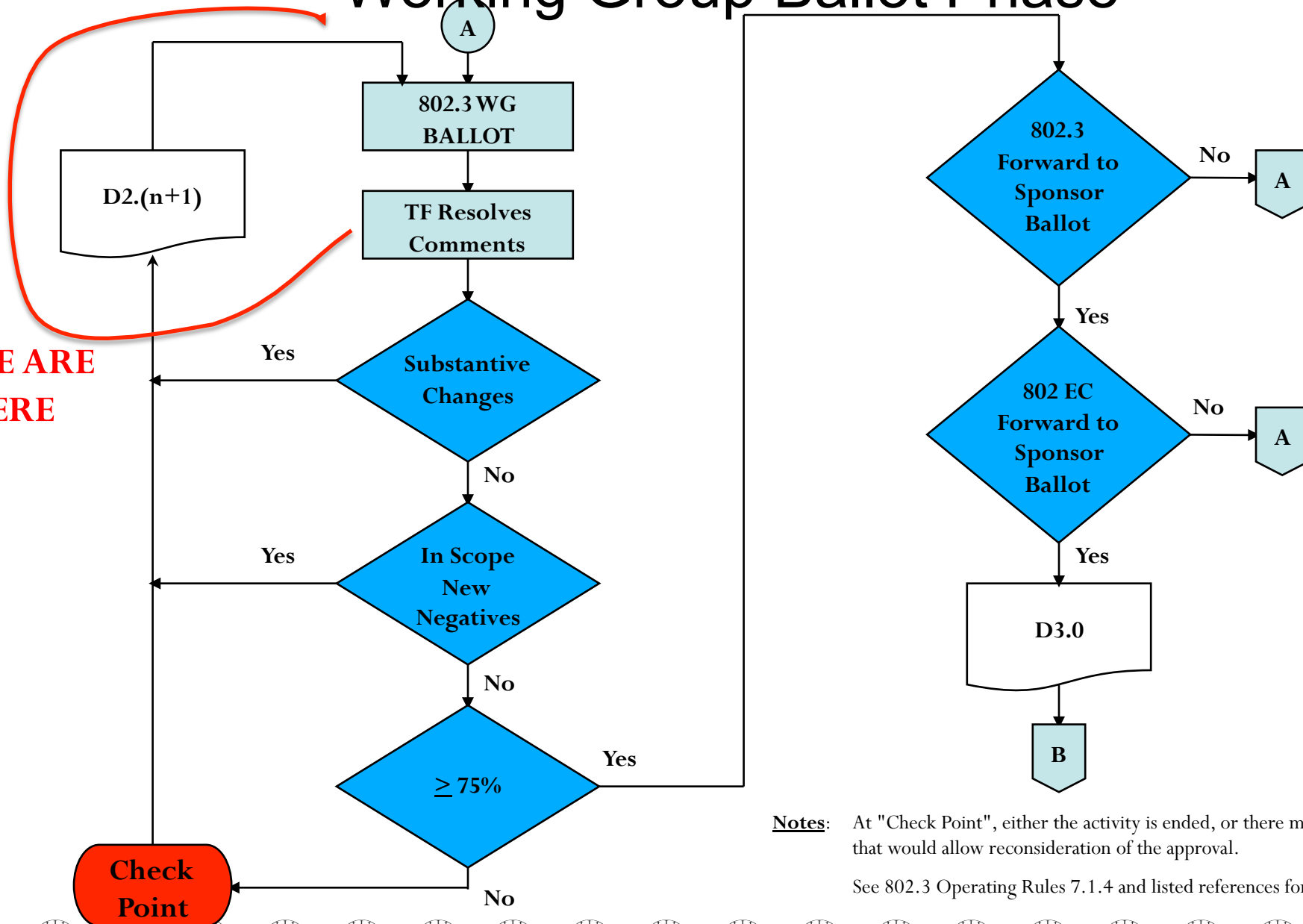
# Overview of IEEE 802.3 Standards Process (2/5)

## Task Force Comment Phase



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

## Working Group Ballot Phase



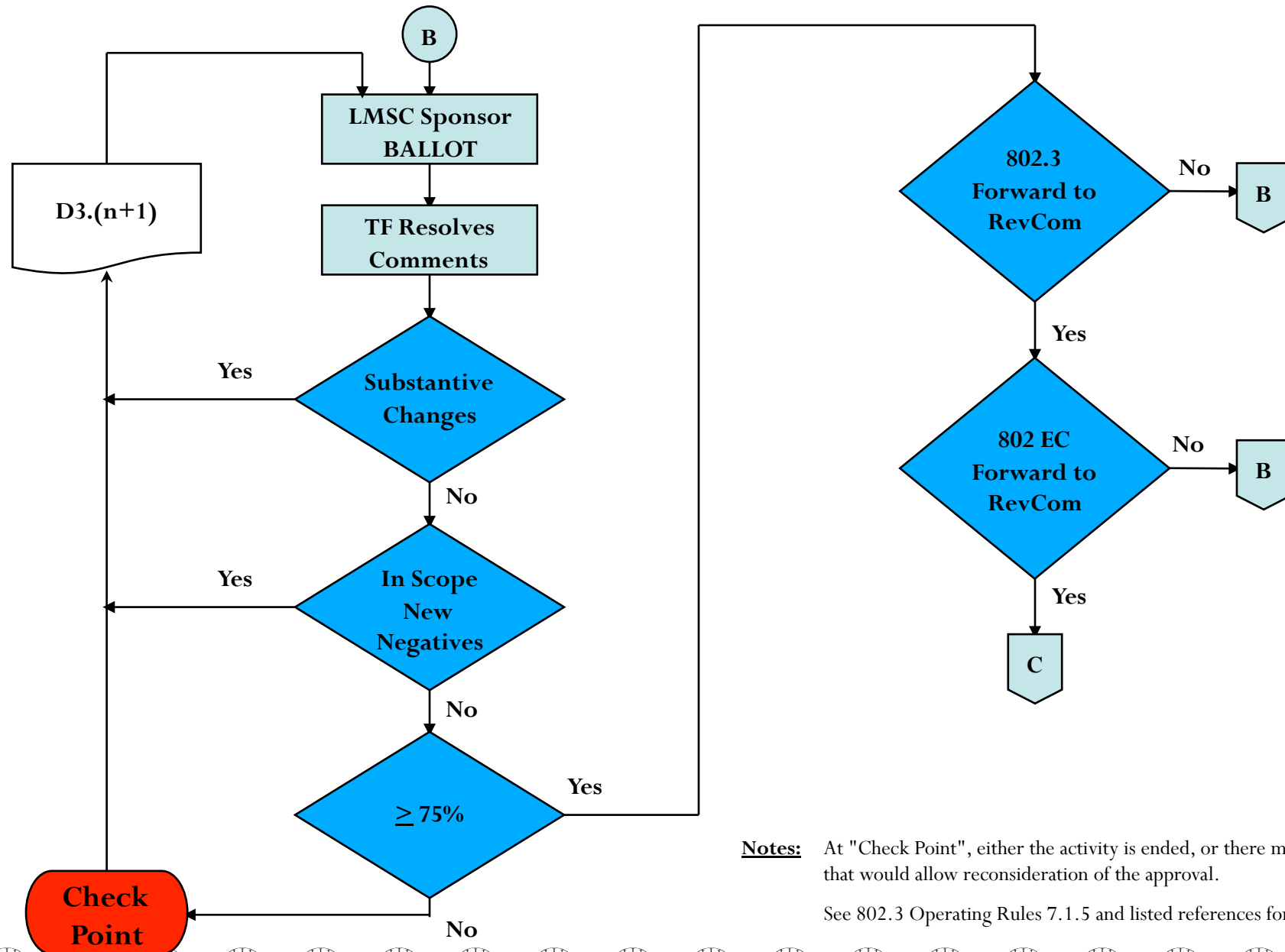
**WE ARE  
HERE**

**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



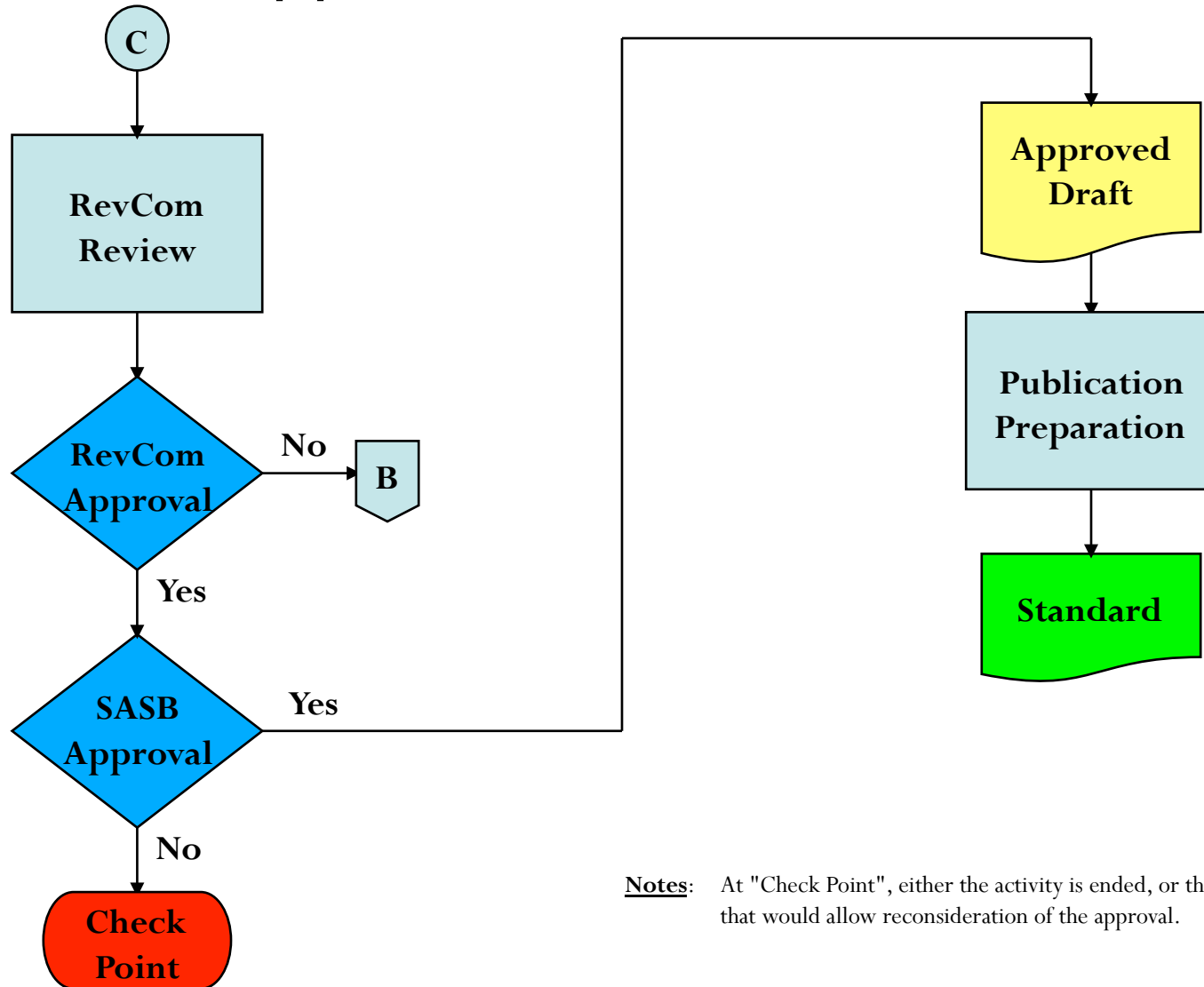
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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.



# Liaisons and Communications

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- OIF
  - Ongoing communications between OIF and IEEE 802.3 initiated by IEEE P802.3ba project
  - In regards to OIF CEI-25G-LR, CEI-28G-SR, CEI-28G-VSR
  - Currently being operated through 802.3 Working Group
  - No new Liaison letters received since 8 November, 2013
    - [http://www.ieee802.org/3/bm/public/nov13/OIF\\_liaison\\_IEEE\\_T11\\_T10\\_08Nov13.pdf](http://www.ieee802.org/3/bm/public/nov13/OIF_liaison_IEEE_T11_T10_08Nov13.pdf)
    - CEI-28G-VSR updated
      - <http://www.ieee802.org/3/bm/private/oif2010.404.15.pdf>
      - CEI-28G-MR updated
      - <http://www.ieee802.org/3/bm/private/oif2013.066.03.pdf>
- ITU-T
  - Continued liaison activity to ensure alignment



# Goals for the meeting

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- Review Task Force Operation & Schedule
- Review ad hoc Activities & Reports
- Complete resolution of D2.0 comments and authorize production of D2.1 for recirculation as a IEEE 802.3 WG Ballot
- Presentations of Material Relevant to comment resolution
- Consider Motions & Discussions
  - Authorize generation of D2.1 and re-circulate WG ballot
  - Review Timeline and consider update
  - Lay the ground work for the next meeting
- Wrap Up & Future Meeting Discussion



# Pending Action Items

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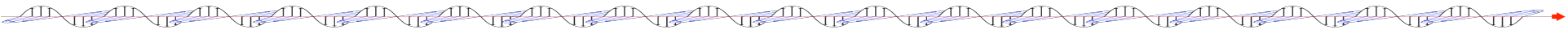
- Draft 2.0 comment resolution and generation of Draft 2.1
- Review of Adopted Timeline for potential changes to align with SASB and NESCOM schedules



# IEEE P802.3bm 40 Gb/s and 100 Gb/s Fiber Optic Task Force Approved Project Documents

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- **PAR** (as approved in May 2013)
  - [http://www.ieee802.org/3/bm/P802.3bm\\_May2013.pdf](http://www.ieee802.org/3/bm/P802.3bm_May2013.pdf)
- **5 Criteria** (as approved in November 2013)
  - [http://www.ieee802.org/3/bm/P8023bm\\_5Criteria\\_1113.pdf](http://www.ieee802.org/3/bm/P8023bm_5Criteria_1113.pdf)
- **Objectives** (as approved in November 2013)
  - [http://www.ieee802.org/3/bm/P8023bm\\_Objectives\\_1113.pdf](http://www.ieee802.org/3/bm/P8023bm_Objectives_1113.pdf)
- **Timeline**
  - [http://www.ieee802.org/3/bm/timeline\\_0912.pdf](http://www.ieee802.org/3/bm/timeline_0912.pdf)

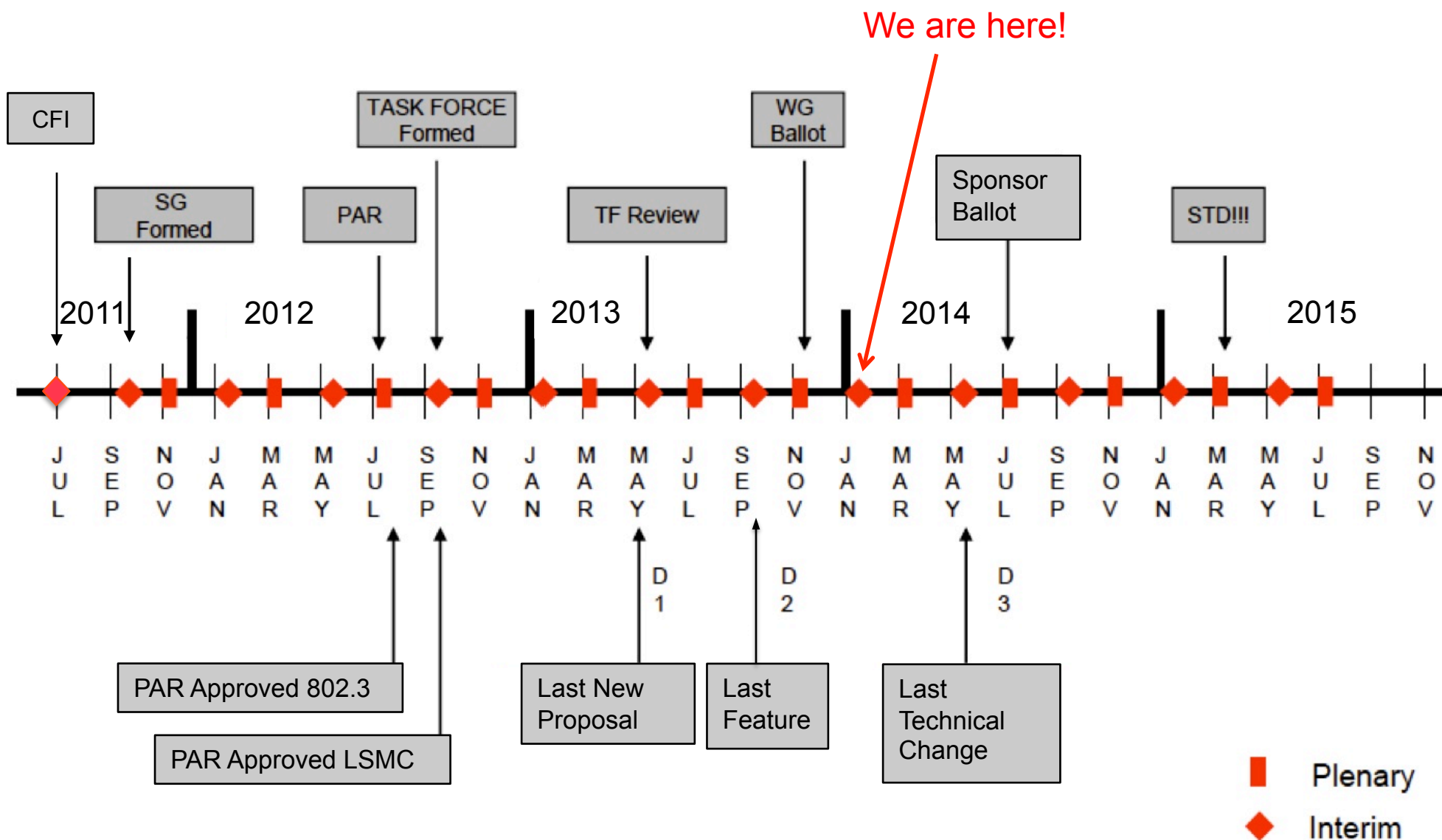


# IEEE P802.3bm 40 Gb/s and 100 Gb/s Fiber Optic Task Force Objectives

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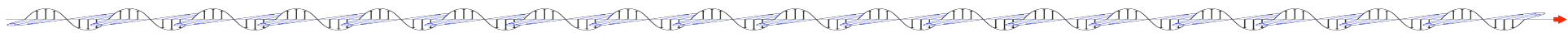
- ✧ Support full-duplex operation only
- ✧ Preserve the IEEE 802.3 / Ethernet frame format utilizing the IEEE 802.3 MAC
- ✧ Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- ✧ Support a BER better than or equal to  $10^{-12}$  at the MAC/PLS service interface
- ✧ Provide appropriate support for OTN
- ✧ Define re-timed 4-lane 100G PMA to PMA electrical interfaces for chip to chip and chip to module applications
- ✧ Define a 40 Gb/s PHY for operation over at least 40 km of SMF
- ✧ Define a 100 Gb/s PHY for operation up to at least 100 m of MMF
- Specify optional Energy Efficient Ethernet (EEE) for 40 Gb/s and 100 Gb/s operation over fiber optic cables.
  
- ✧ (approved by 802.3 July 2011)
- (approved by 802.3 November 2012)

# IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet Timeline (Adopted 28<sup>th</sup>, September 2012)

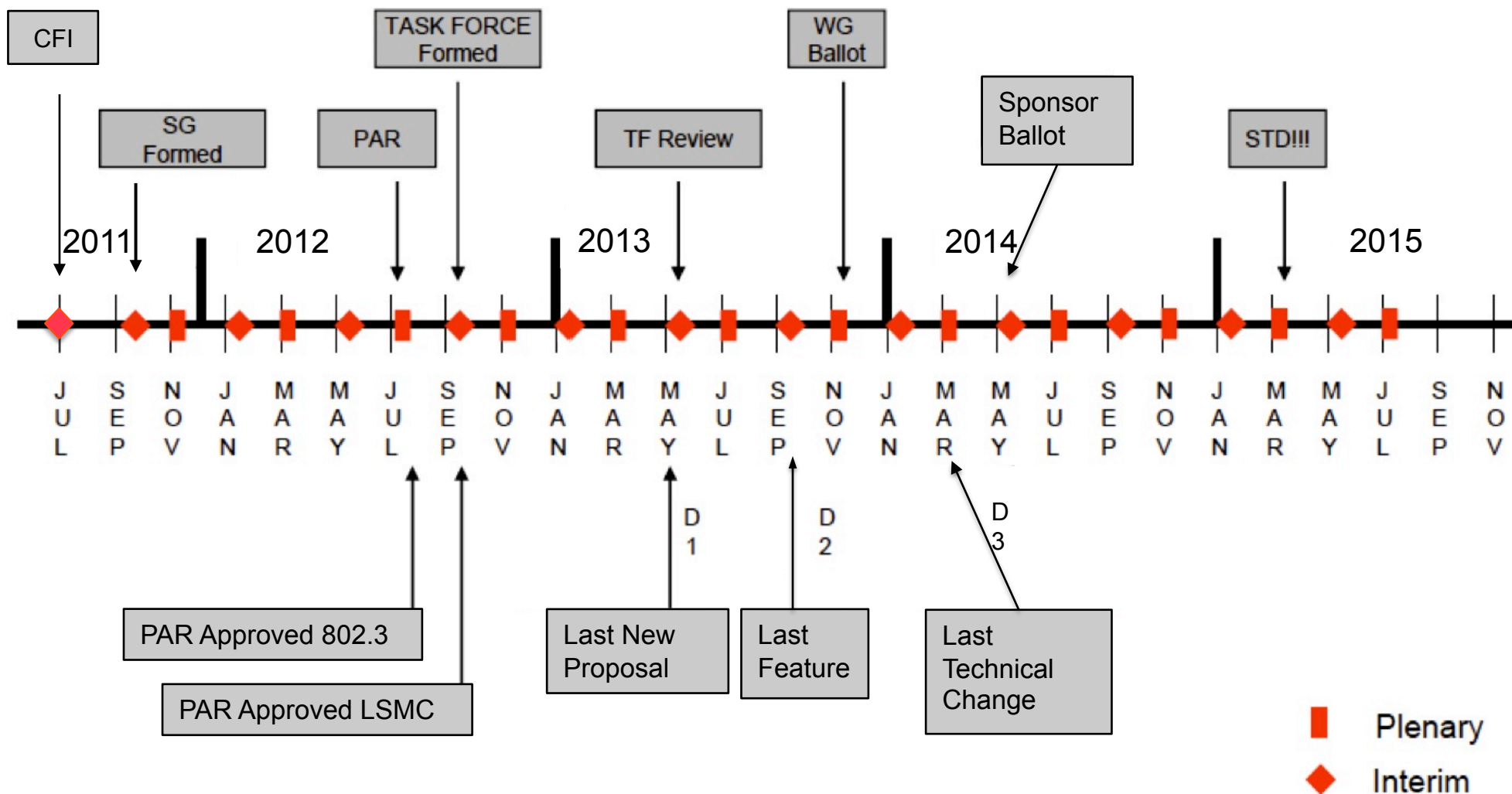


We are here!





# IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet Timeline (to be considered in Jan 2014)





# Wednesday Agenda

Wednesday 22 – January - 2014

Note –Times listed are subject to change.

Wednesday		Start Time	9:00	Discussion Time	15
Presentation Time	Duration	Presenter	Affiliation	Title	Filename
9:00	25	Dan Dove	Dove Networking	Introduction & Agenda	dove_01_0114_optx.pdf
9:25	15	Jonathan King	Finisar	MMF Ad hoc report	king_01_0114_optx.pdf
9:40	15	Ryan Latchman	MACOM	CAUI-4 Ad hoc Report	latchman_01_0114_optx.pdf
9:55	15	Pete Anslow	Ciena	Editor's Opening Report	anslow_01_0114_optx.pdf
10:10	15	BREAK			
10:25	95	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
12:00	60	LUNCH			
13:00	90	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
14:30	15	BREAK			
14:45	135	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
17:00	0	Adjourn			



# Thursday Agenda

Thursday 23 – January - 2014

Note –Times listed are subject to change.

Thursday		Start Time	9:00	Discussion Time	15
Presentation Time	Duration	Presenter	Affiliation	Title	Filename
9:00	60	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
10:00	15	BREAK			
10:15	105	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
12:00	60	LUNCH			
13:00	90	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
14:30	15	BREAK			
14:45	135	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
17:00	0	Adjourn			

# Friday Agenda

Friday 24 – January - 2014

Note –Times listed are subject to change.

Friday		Start Time 9:00		Discussion Time 15	
Presentation Time	Duration	Presenter	Affiliation	Title	Filename
9:00	60	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
10:00	15	BREAK			
10:15	105	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
12:00	60	LUNCH			
13:00	105	Pete Anslow	Ciena	Comment Resolution	P802d3bm_D2p0_comments_prop_ID.pdf
14:45	15	Pete Anslow	Ciena	Timeline Discussion	anslow_02_0114_optx.pdf
15:00	15	BREAK			
15:15	15	Pete Anslow	Ciena	Editor's Closing Report	anslow_03_0114_optx.pdf
15:30	90			Motions & Discussion	
17:00	0	Adjourn			



# Presentation Requests

Note –Times listed are subject to change.

Presentation Requests: To be scheduled in conjunction with comment resolution				
30	Adee Ran	Intel	Title: PCS error burst counting proposal Description: Possible usage of a DFE in link segments such as CAUI-4 chip-to-chip can introduce burst of errors which can degrade MTTFFPA. The proposal adds a PCS feature that can detect and count bursts of different lengths. This can be used in component testing (with added stress) or in the field.	ran_01_0114_optx.pdf
20	Piers Dawe	Mellanox	FEC-protected chip-to-module CAUI-4 specification	dawe_01_0114_optx.pdf
40	Piers Dawe	Mellanox	TDP, Mask and VCP	dawe_02_0114_optx.pdf
20	Piers Dawe	Mellanox	Maps of OMA, TDP and mean power	dawe_03_0114_optx.pdf
10	Piers Dawe	Mellanox	Modal Noise in 100GBASE-SR4	dawe_04_0114_optx.pdf
10	Piers Dawe	Mellanox	Effect of pattern length on apparent peak-to-peak voltage	dawe_05_0114_optx.pdf
20	Ali Ghiasi	Ghiasi Quantum LLC	Title: Comprehensive Transmitter and Receiver Jitter Methodology	ghiasi_01_0114_optx.pdf
20	Ali Ghiasi	Ghiasi Quantum LLC	Title: Defining 10 dB CTLE C2C Link	ghiasi_02_0114_optx.pdf
15	John Petrilla	AvagoTech	Title: 100G SR4 TDP Update Description: Results of an analysis of additional worst case MM transmitters are presented. Updates are proposed for the MMF Tx and SRS eye masks. A new metric, TxVEC, is proposed to replace TDP	petrilla_01_0114_optx.pdf



# Future Meetings

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- See: <http://www.ieee802.org/3/interims/index.html>
- See: <http://802world.org/plenary/future-plenary-sessions/>
- **Week of March 16-21, 2014 (Plenary)**
  - China World Hotel, Beijing, China
- **Week of May 12, 2014 (Interim)**
  - All IEEE 802.3 Task Force and Study Groups will meet
  - Sheraton Norfolk Waterside Hotel, Norfolk Virginia
  - Hosted by: Ethernet Alliance
- **Week of July 13-18, 2014 (Plenary)**
  - Manchester Grand Hyatt  
San Diego, California USA
- **Week of September 8, 2014 (Interim)**
  - All IEEE 802.3 and 802.1 Task Force and Study Groups will meet
  - Brooktree Hotel – Ottawa, Canada
  - Hosted by: Ericsson
- Anyone interested in hosting a meeting contact Steve Carlson.



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# Thank You!

