

# Agenda and General Information

IEEE P802.3bp  
1000BASE-T1 PHY

Steven B. Carlson  
High Speed Design, Inc.  
May 2014 – Norfolk, VA

# Agenda

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- Appoint Recording Secretary
- Thanks to John D'Ambrosia for Chairing in March
- New PICS Editor – Curtis Donahue from UNH-IOL
- Welcome and Introductions
- Approve Agenda
- Approve previous Minutes
- Goals for this meeting
- Reflector and Web
- Ground Rules
- IEEE
  - Structure
  - Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
  - Task Force Operation
- Liaisons and Communications
- Review of Action Items from previous Meeting
- Daily Schedule
  - Wednesday: Presentations
  - Thursday AM: Ad Hocs
- Motions and Closing Business – Thursday afternoon
- 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

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- Reports from ad hocs
- Presentations
  - P802.3bu liaison report
  - Automotive link segment and EMC
  - PHY baselines
  - Adopt baselines
- Set goals for next meeting
  - Continue work on channel, EMC and PHY baselines
  - Discuss things needed to advance draft
  - Discuss timeline
  - **Build consensus**

# Reflector and Web

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- To subscribe to the RTPGE 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-RTPGE <yourfirstname> <yourlastname>

- Send RTPGE reflector messages to:

**stds-802-3-RTPGE** [@listserv.ieee.org](mailto:stds-802-3-RTPGE@listserv.ieee.org)

- Task Force web page URL:

[www.ieee802.org/3/bp/index.html](http://www.ieee802.org/3/bp/index.html)

# Task Force Officers

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- **Steve Carlson**  
Task Force Chair
- **Marek Hajduczenia**  
Task Force Editor-in-Chief
- **Curtis Donahue**  
Task Force PICS Editor
- See <http://www.ieee802.org/3/contacts.html#RTPGE> for contact info

# 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

# Attendance

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- Tutorial Material on attendance tool
  - [http://www.ieee802.org/3/minutes/attendance\\_procedures.pdf](http://www.ieee802.org/3/minutes/attendance_procedures.pdf)
- URL
  - URL: imat.ieee.org
  - Session Code: \*\*\*\*\*
- Please sign the sheet that will be circulated each day including both employer and affiliation



# 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 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.

(Optional to be shown)

25 March 2008 (updated January 2012)



# 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

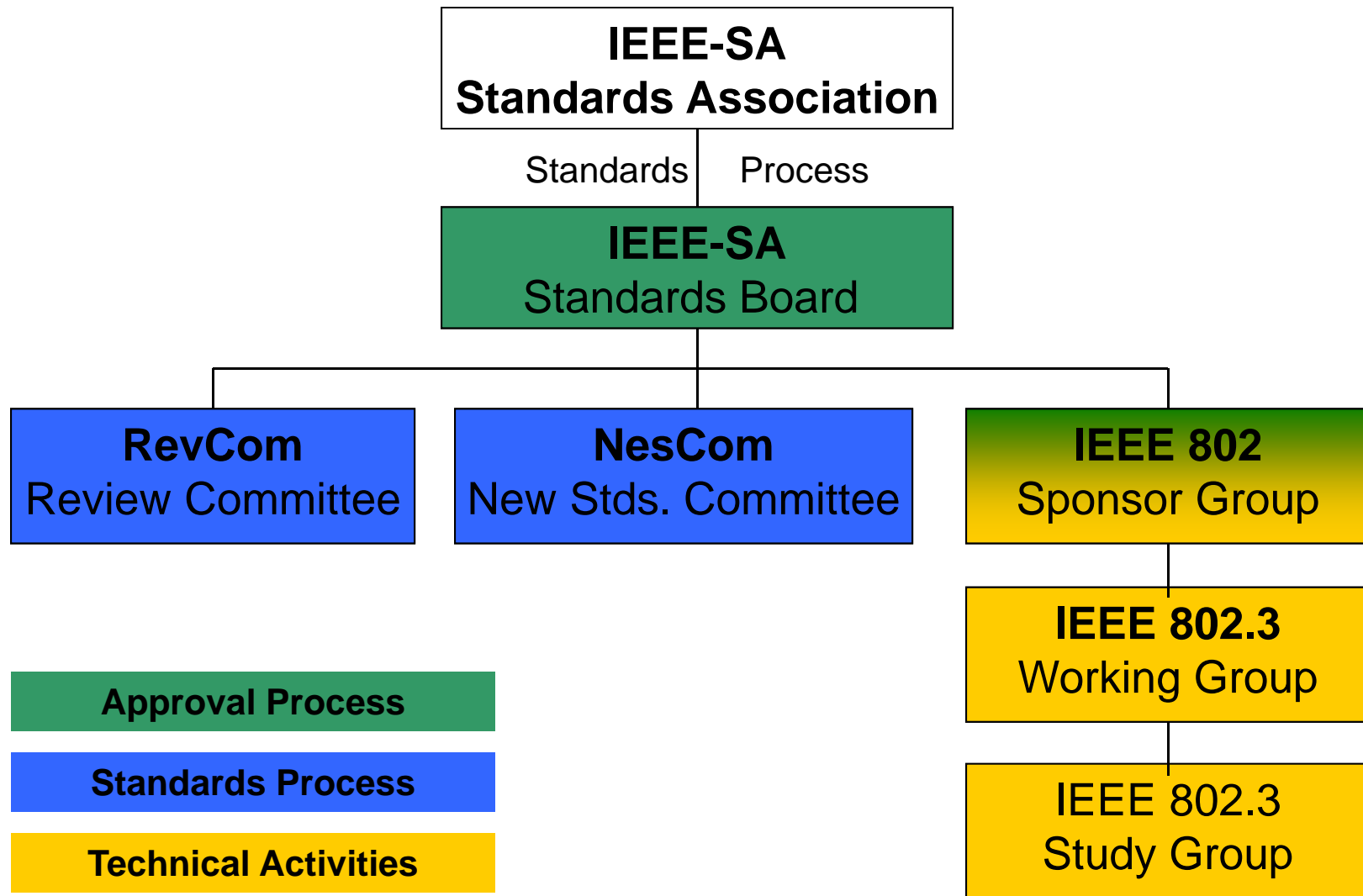
- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
  - Either speak up now or
  - Provide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

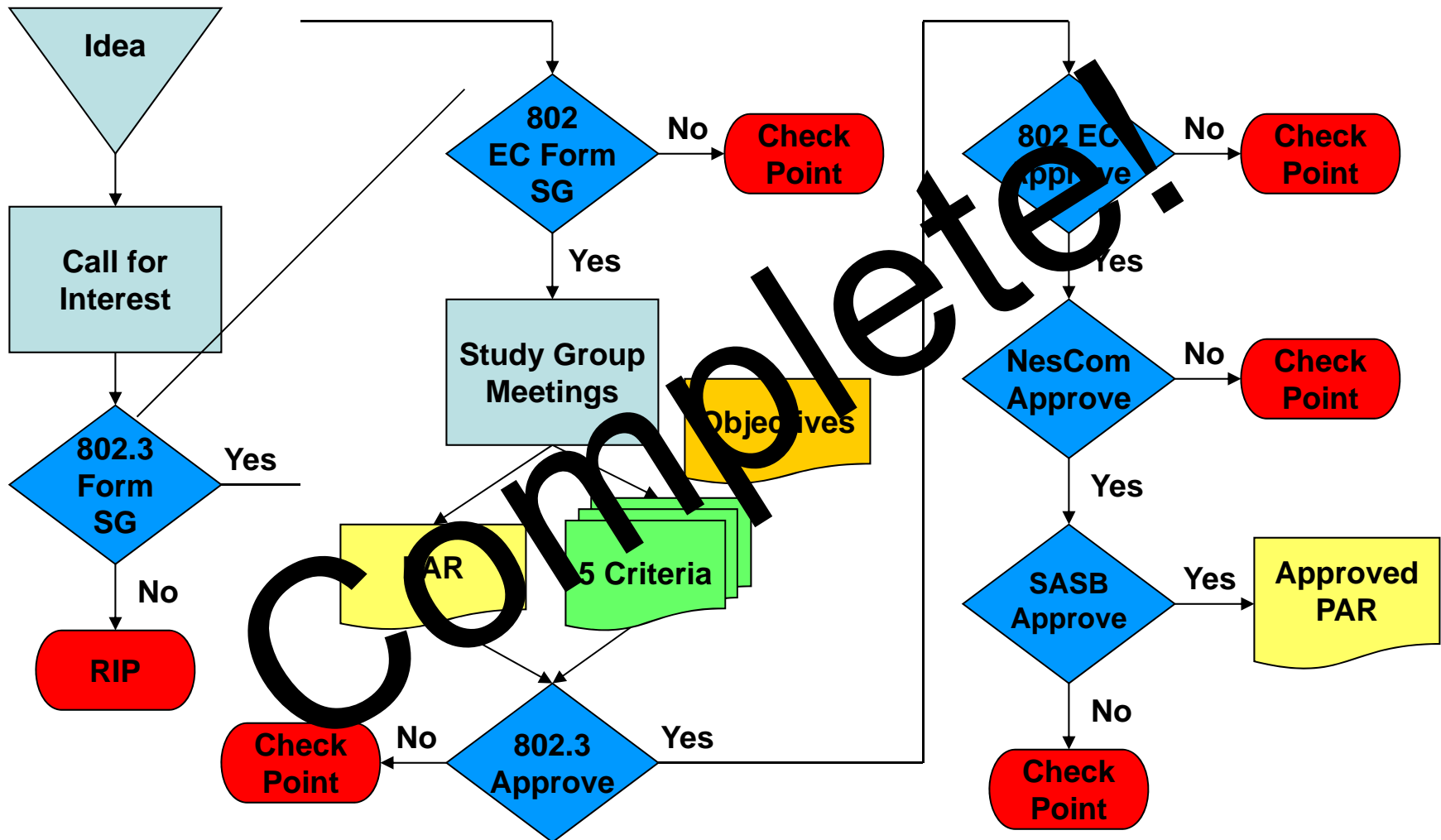
- **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**
  - **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
  - **Don't discuss specific license rates, terms, or conditions.**
    - 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.

# IEEE Structure



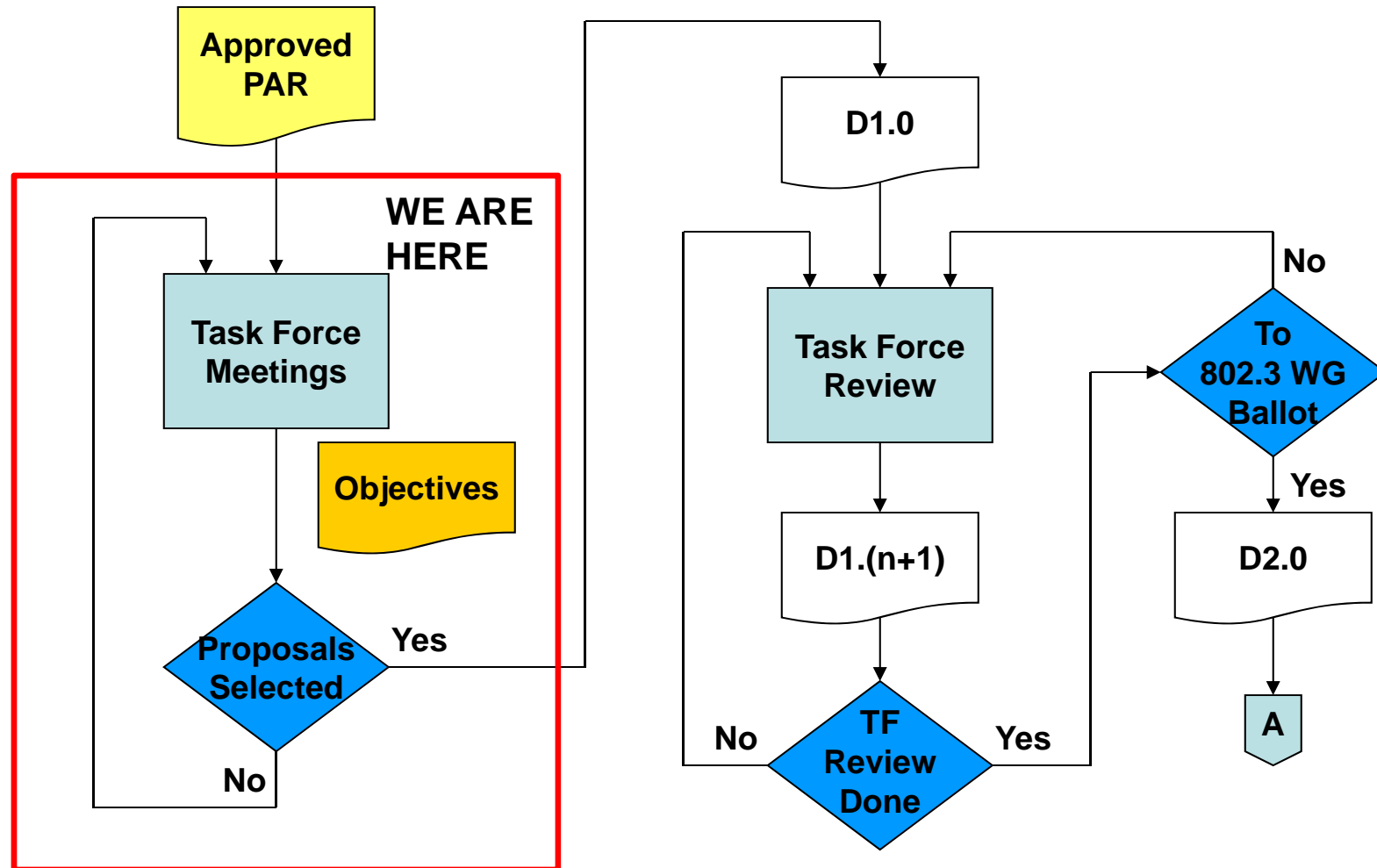
# Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase



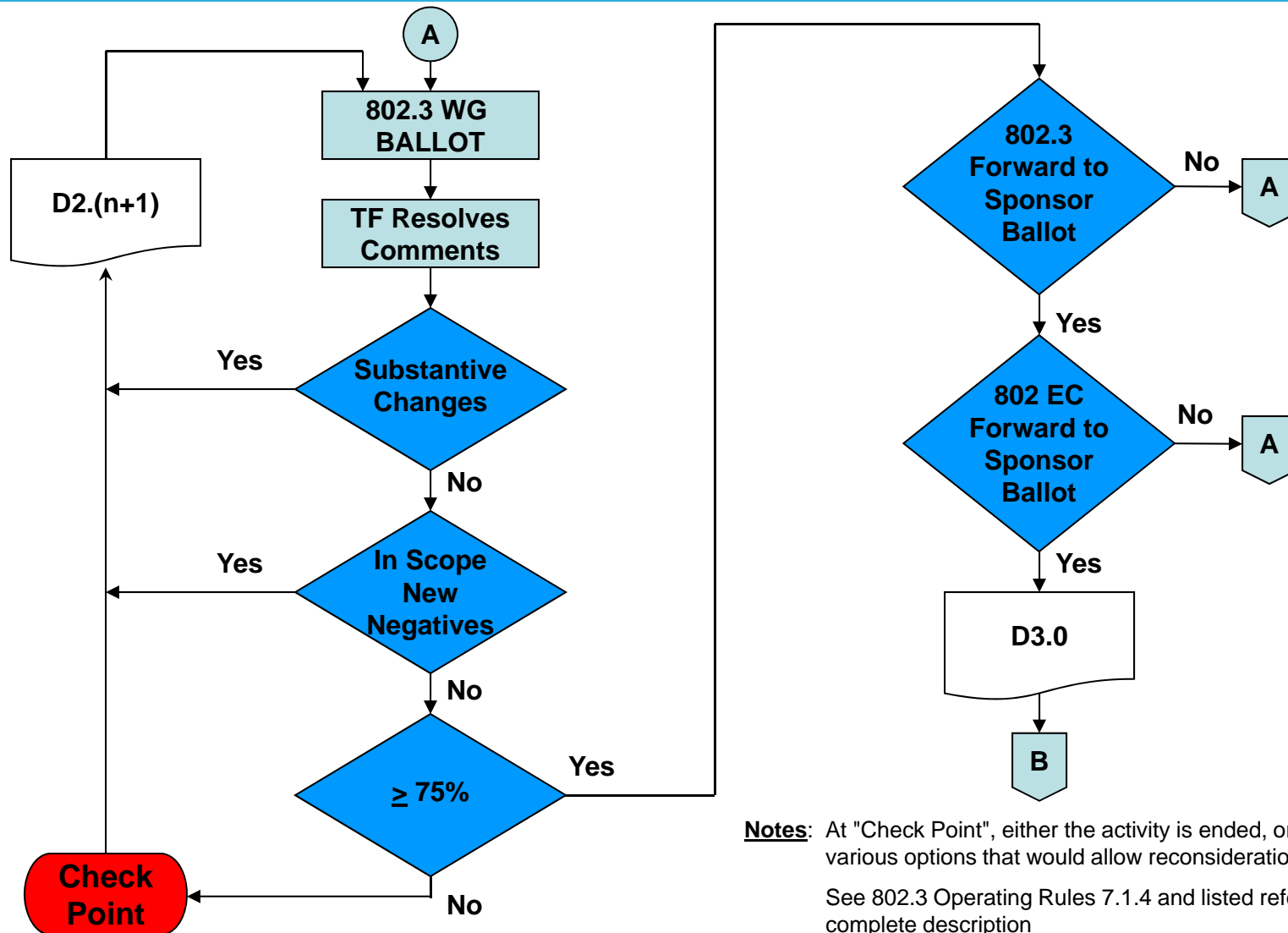
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.



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



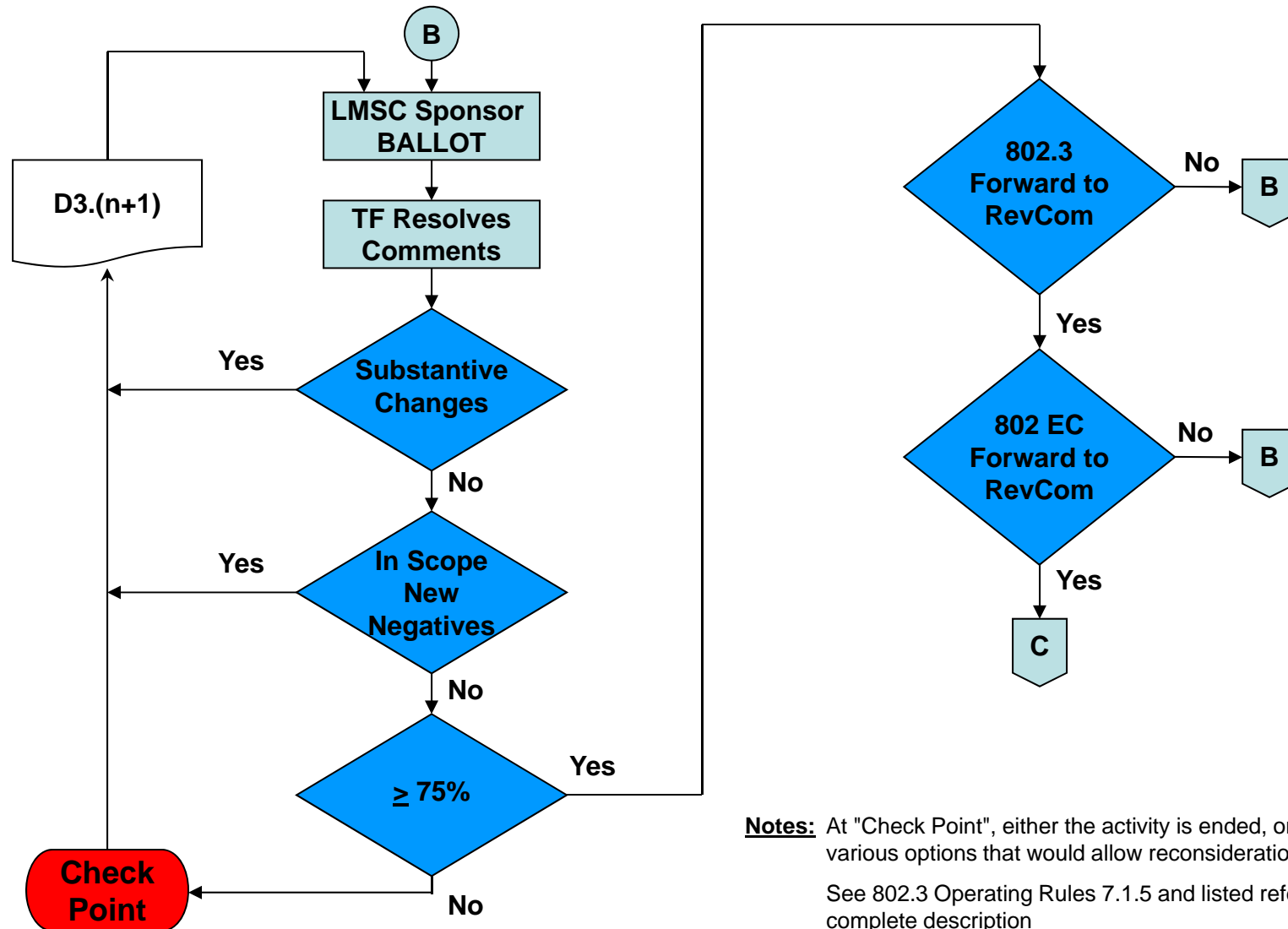
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



**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

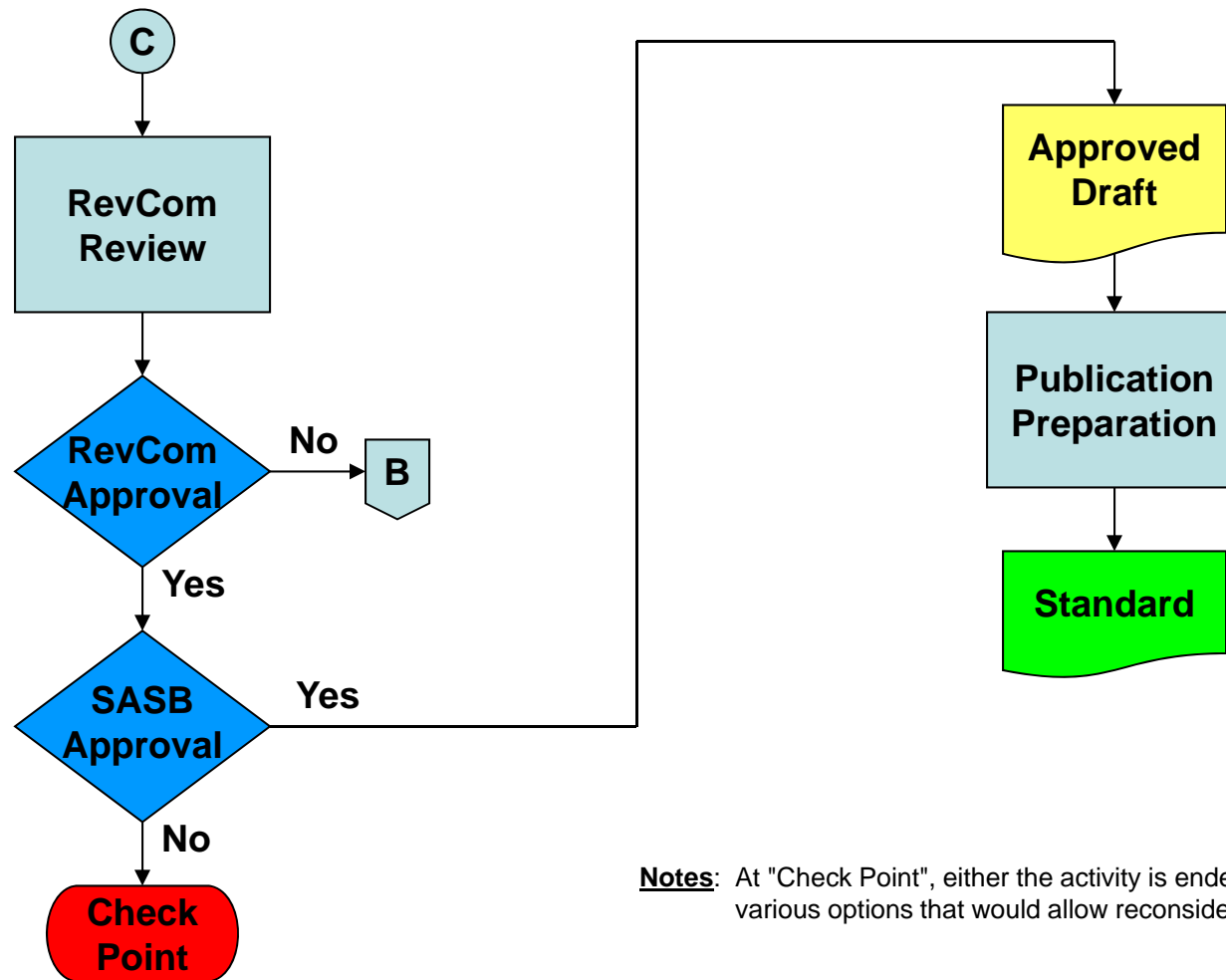
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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 / 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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- PoDL - 1000Base-T1 Liaison Report –  
Dave Dwelley

# Private Area

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- What is posted to the private area?
  - Drafts of the standard
  - Any drafts from other SDOs that have been supplied to us
  - Login and password info is never posted on slides or in emails
  - Login and password should not be given out to anyone

# Task Force Operation

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- The Task Force writes the standard
- P802.3bp will be a new clause to the 802.3 Standard
- P802.3bp will modify existing clauses 1, 30, 45 and 78
- Other clauses may also be modified

# Action Items

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- EMC and channel
- Work on joint PHY proposals
- Liaisons with P802.3bu PODL
- Adopt baselines
- Work on timeline
- Get text for standard



# IEEE P802.3bp Reduced Twisted Pair Gigabit PHY Task Force Project Documents

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- PAR
  - <http://www.ieee802.org/3/bp/P802.3bp.pdf>
- 5 Criteria
  - <http://www.ieee802.org/3/bp/5Criteria.pdf>
- Objectives
  - <http://www.ieee802.org/3/bp/Objectives.pdf>

# Presentation Issues

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- Late requests/submissions
  - All requests received after the two-week deadline will be placed in the best-effort queue
  - Late submissions of PDFs to the Chair will be placed in the best-effort queue
  - Late presentations **WILL NOT** be posted to the Website until (or if) they are presented

# Presentation Issues

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- Updates to submitted presentations
  - Updates will be accepted AFTER submission only if there is a technical correction
  - A final update (which can include added supporters, typo corrections, etc.) will be accepted at the end of the meeting for presentations and posting
  - Presentations must be read and approved by the Chair prior to presenting

# Presentation Issues

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- New filename conventions:
  - *presenter\_name\_3bp\_XYr\_mmyy*
  - *XY* is presentation number, i.e. 01, 02 ,03
  - Revisions (r) are a,b,c, etc.
  - Example: carlson\_3bp\_01a\_0113

# Nomenclature

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- It's 1000BASE-T1
  - Not 1000Base T1
  - Not 1000Base-T1

# Presentations

## [Channel Definitions Ad Hoc Report](#)

EMC Ad Hoc Report - 802.3bp 1000BASE-T1 EMC & Noise Ad Hoc Report (no report for May 2014)

## [Correction to 1000BASE-T1 PHY 8N/\(8N+1\) Encoder Equations](#)

## [PoDL Noise Limit](#)

## [BCI Profile vs. DFE Taps](#)

## [Differential CW Noise Test Setup & Procedure for 1000BASE-T1](#)

## [Consensus building ideas for 1000BASE-T1](#)

## [Signal Constellation Options to achieve Multiple Signaling Objectives in 1000BASE-T1](#)

## [DFE Error Performance Under 1000BASE-T1 Noise Environments](#)

## [DFE error propagation on FEC for 1000Base-T1](#)

## [Improved TX-PSD Mask for PAM3 Modulation](#)

## [Link Retry Study for 1000BASE-T1](#)

## [Thoughts on Modified Clause 73 Auto-Negotiation for 1000BASE-T1](#)

## [Analysis of different filtering schemes for PAM3 Modulation and effective margin to the Mask](#)

## [802.3bp Baseline Optional Link segment](#)

Chris DiMinico  
Mehmet Tazebay

Mehmet Tazebay  
Stefan Buntz

William Lo

Xiaofeng Wang

Shaoan Dai Zhenzhong Gu

Ahmad Chini Mehmet Tazebay

William Lo

Ahmad Chini Mehmet Tazebay  
Mike Tu

Xiaofeng Wang

BZ Shen  
Ahmad Chini Mehmet Tazebay  
Mike Tu

Ahmad Chini Mehmet Tazebay

William Lo

Pat Thaler  
Mehmet Tazebay

Naama Ben-arie Vijaya Ceekala  
Oren Shalita  
Jenny Wu

Chris DiMinico

MC Communications  
Broadcom

Broadcom  
Daimler AG

Marvell

Qualcomm

Marvell

Broadcom

Marvell

Broadcom

Qualcomm

Broadcom

Broadcom

Marvell

Broadcom

Texas Instruments

MC Communications/Panduit

# Other business

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<http://standards.ieee.org/about/get/802/802.3.html>

Full PDF copy of IEEE Std 802.3-2012 for free

# Future Meetings

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- See:  
<http://www.ieee802.org/3/interims/index.html>
- **IEEE 802 plenary**  
**Monday, July 14th through Thursday, July 17th, 2014**  
**Manchester Grand Hyatt**  
**San Diego, CA**  
**USA**

Attending the July Plenary?

Yes:                      Maybe:                      No:

- Anyone interested in hosting a meeting contact Steve Carlson



# Meetings Demystified

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- 802.3 is growing!
  - ~300 attendees---we're now the largest 802 WG
- 802 has two types of meetings
- **Plenary Meeting**
  - All of 802 meets (e.g. 802.1, 802.3, 802.11, etc.)
  - Three Plenaries a year: March, July and November
  - 802.3 Working Group meets Monday and Thursday afternoon
  - All SG and TF meet Tuesday, Wednesday and Thursday AM
    - Some TF may meet fewer than 2.5 days, e.g. Maintenance and MIB
  - Sometimes have joint sessions, e.g. 802.1 and 802.3
  - 802 is the meeting host
  - Wednesday evening social event (part of your Plenary fee)
  - Face-to-Face Events is the contracted 802 meeting planner
  - VeriLAN is the contracted 802 network and A/V services provider

# Meetings Demystified

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- **Interim Meeting**

- Only 802.3 meets unless we are co-locating with another 802 WG
  - If we do, it's usually 802.1
- Three Interims a year: January, May, and September
  - TF may schedule extra Interims to keep on timeline
- **NO** 802.3 Working Group meetings
- SG and TF meet during the week
  - Possible to schedule to reduce overlap, e.g. some TF Mon-Tue, others Wed-Thu
- May take five days---we're getting busy and big!
- The meeting host is a participating company or other non-802 entity
- Typically no social event---if there is, the host must pay for it
- May have no meeting planner, in-house meeting planner or contract with outside meeting planner
- Host is responsible for meeting network and A/V



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# Thank You!