

# Agenda and General Information

IEEE 802.3  
400 Gb/s Ethernet Study Group

John D'Ambrosia, Dell  
Geneva, Switzerland  
IEEE 802 July 2013 Plenary

# Agenda

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- Appointment of Recording Secretary
- Welcome and Introductions
- Approve Agenda
- Approve May Interim Minutes
- Goals for this meeting
- Reflector and Web
- Ground Rules
- IEEE
  - Structure
  - Bylaws and Rules
  - Guidelines for IEEE-SA Meetings
  - IEEE Standards Process
- Liaisons and Communications
- Ad Hoc Reports
- Presentations
- Discussion, Straw Polls, Motions
- 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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- Hear presentations (22) related to Objectives and 5 Criteria
- Develop consensus on PAR / Objectives
- Update on Time Sync Activities
- Liaisons
  - ITU-T Study Group 15
  - Potential liaison to TIA on single-mode connector return loss (see next slide).
- Lay the ground work for the next meeting

# Reflector and Web

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- To subscribe to the 400G 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-802-3-400G <yourfirstname> <yourlastname>  
end*

- Send 400G reflector messages to:

[STDS-802-3-400G@listserv.ieee.org](mailto:STDS-802-3-400G@listserv.ieee.org)

- Task Force web page URL:

<http://www.ieee802.org/3/400GSG/index.html>

- Ad hoc area URL:

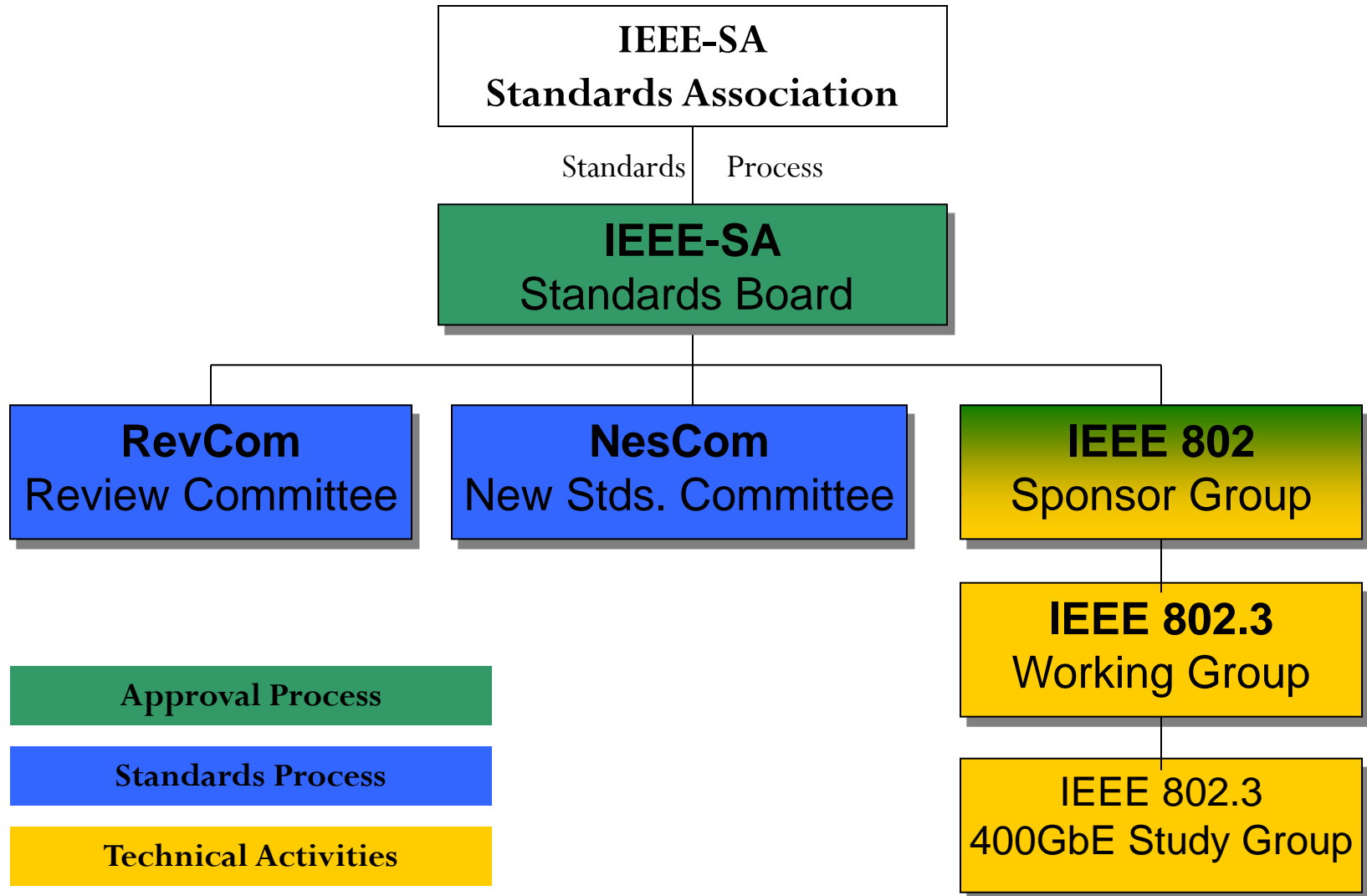
<http://www.ieee802.org/3/400GSG/public/adhoc/index.shtml>

# 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, Rules, & References

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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)
- **“Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy”**  
<http://standards.ieee.org/develop/policies/antitrust.pdf>



# Guidelines for IEEE-SA Meetings

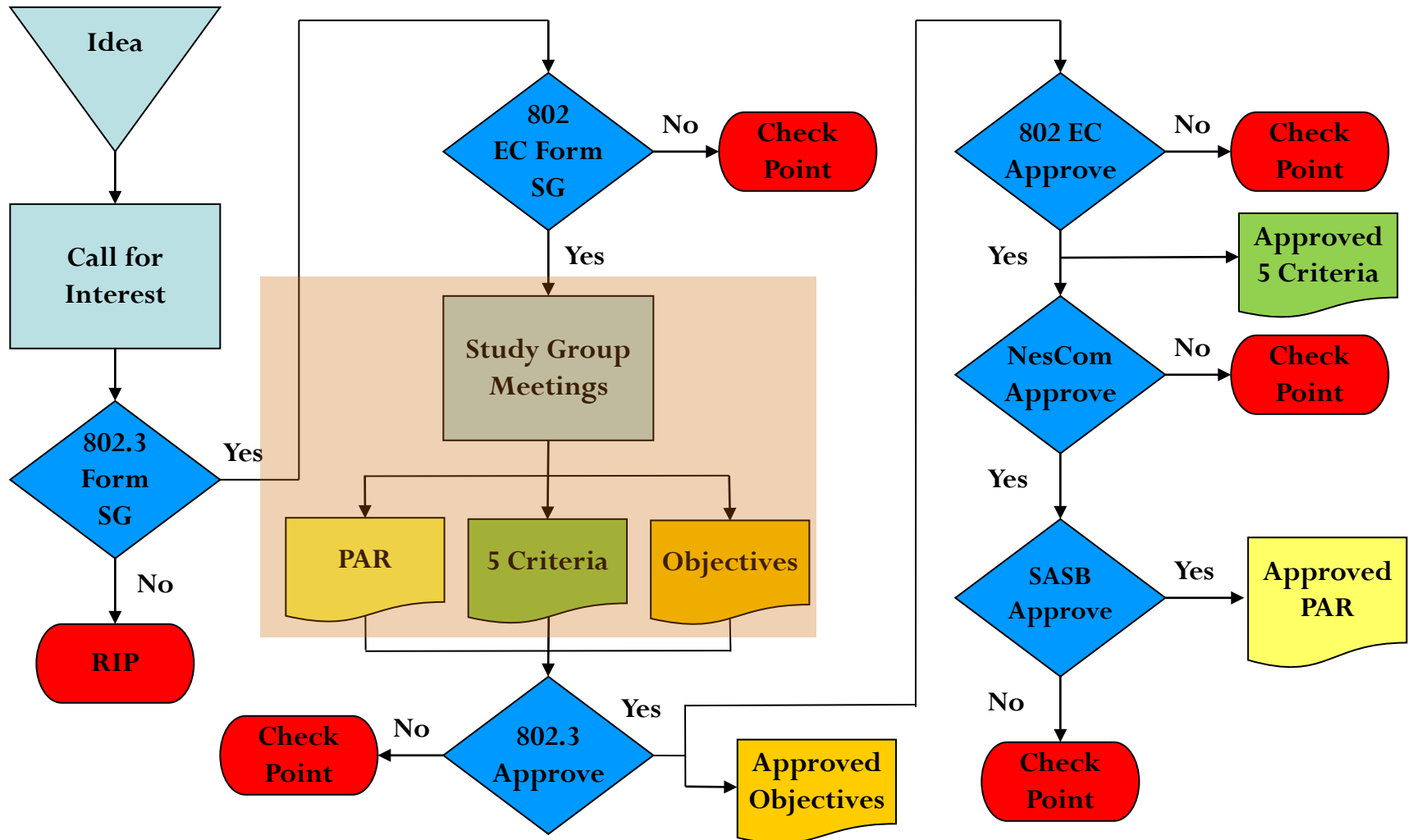
- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
- Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
- Don't discuss specific license rates, terms, or conditions.
  - Relative costs,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

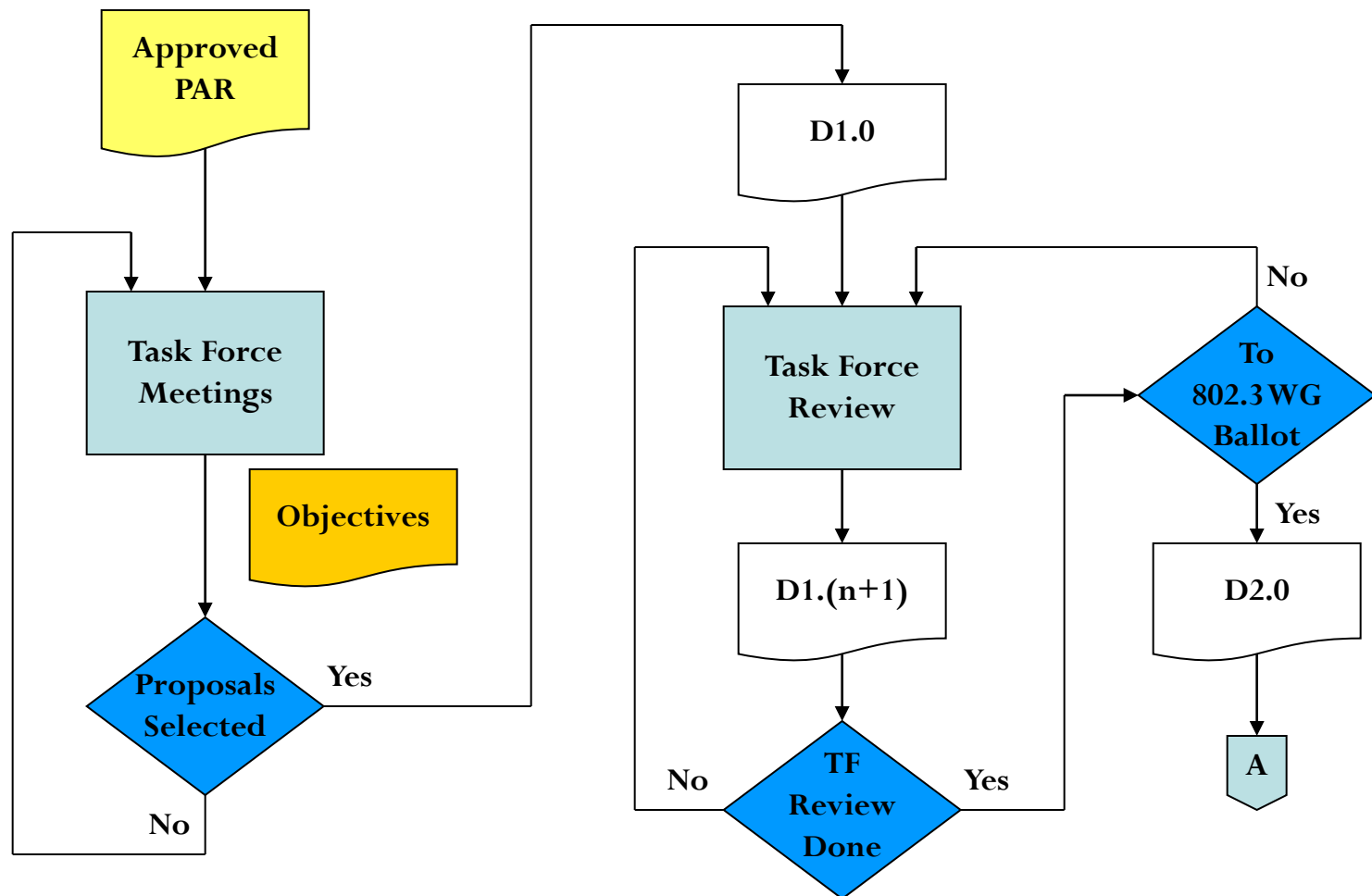
This slide set is available  
at <https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt>

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

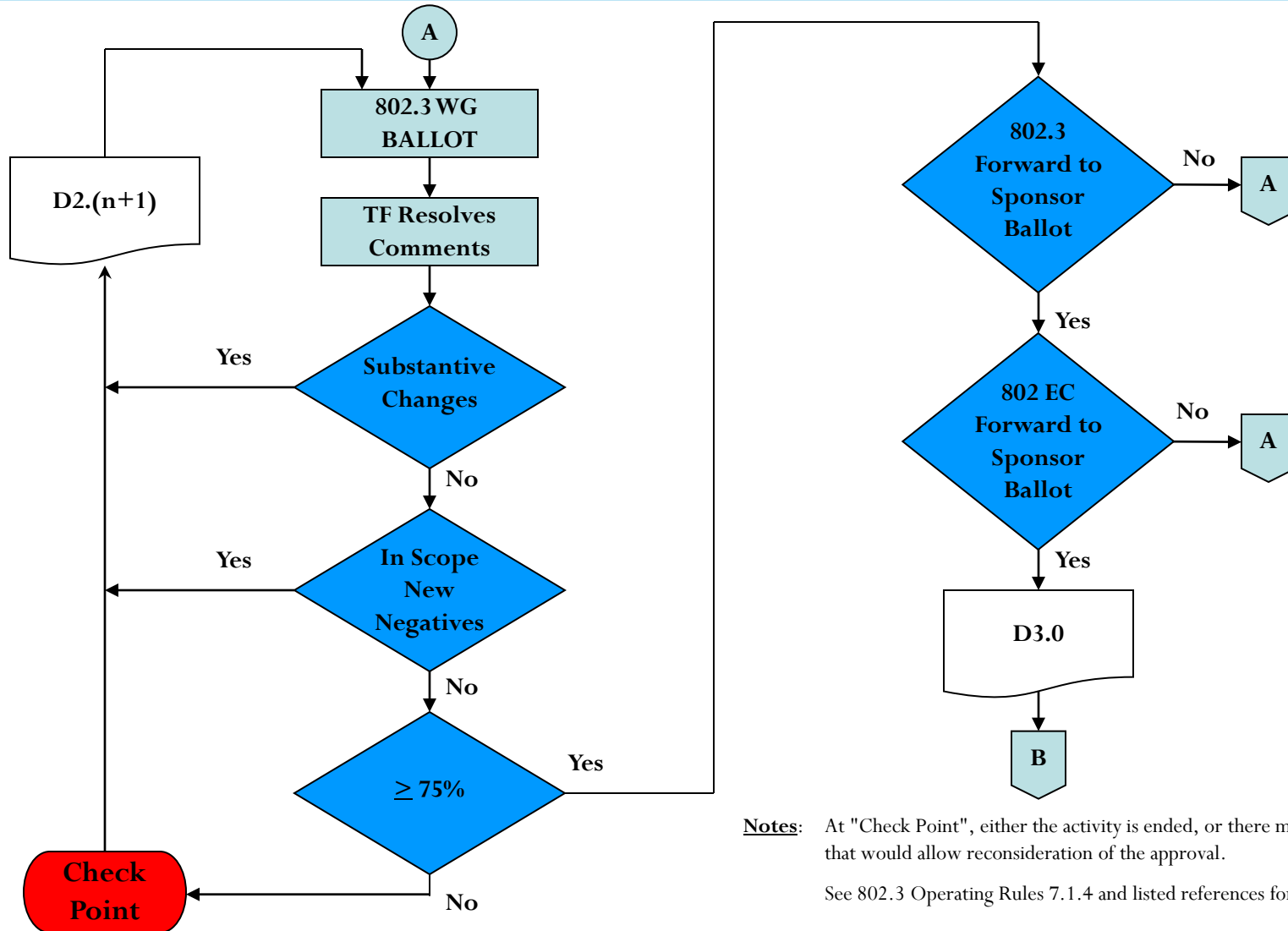


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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



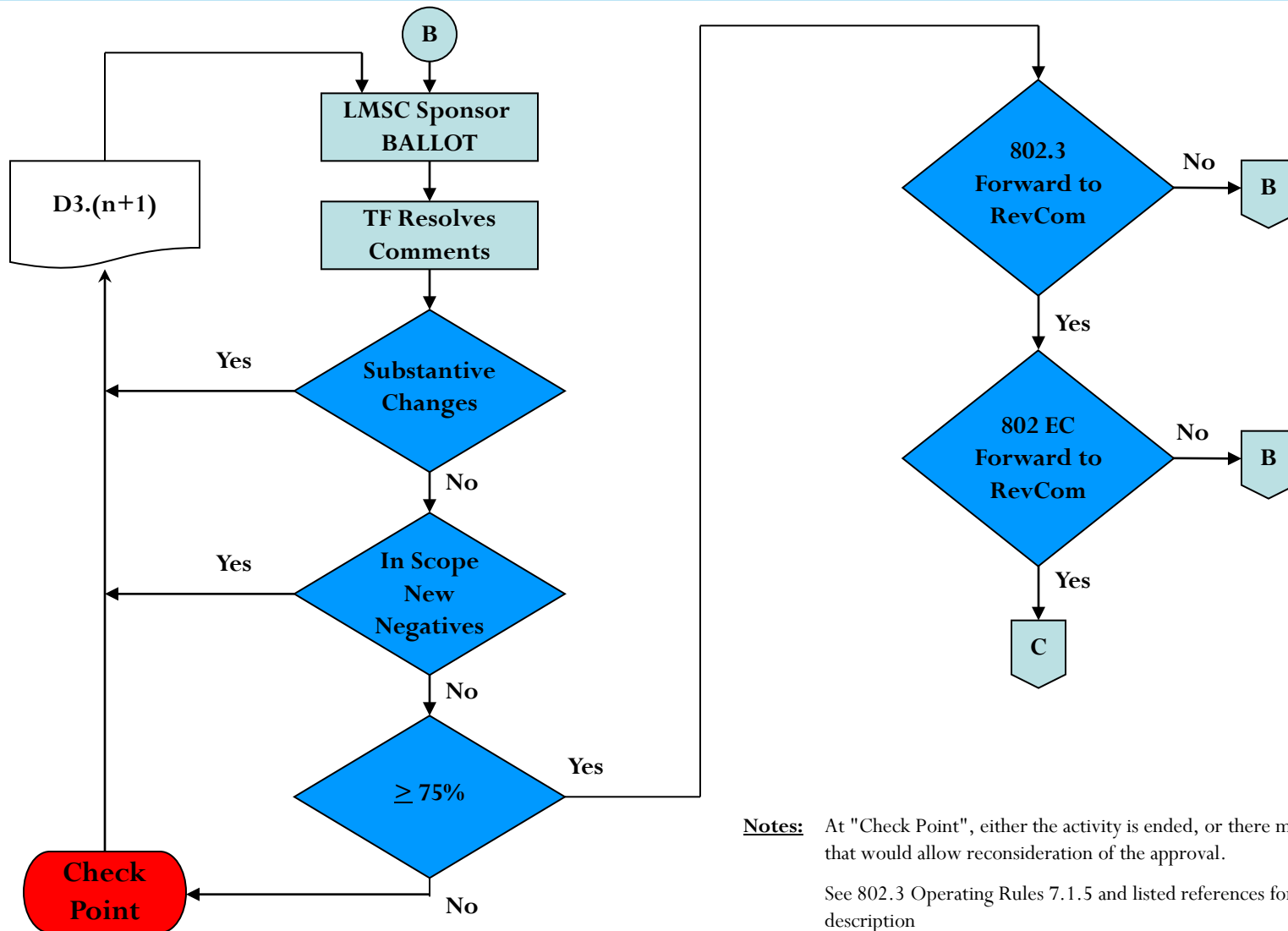
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



**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

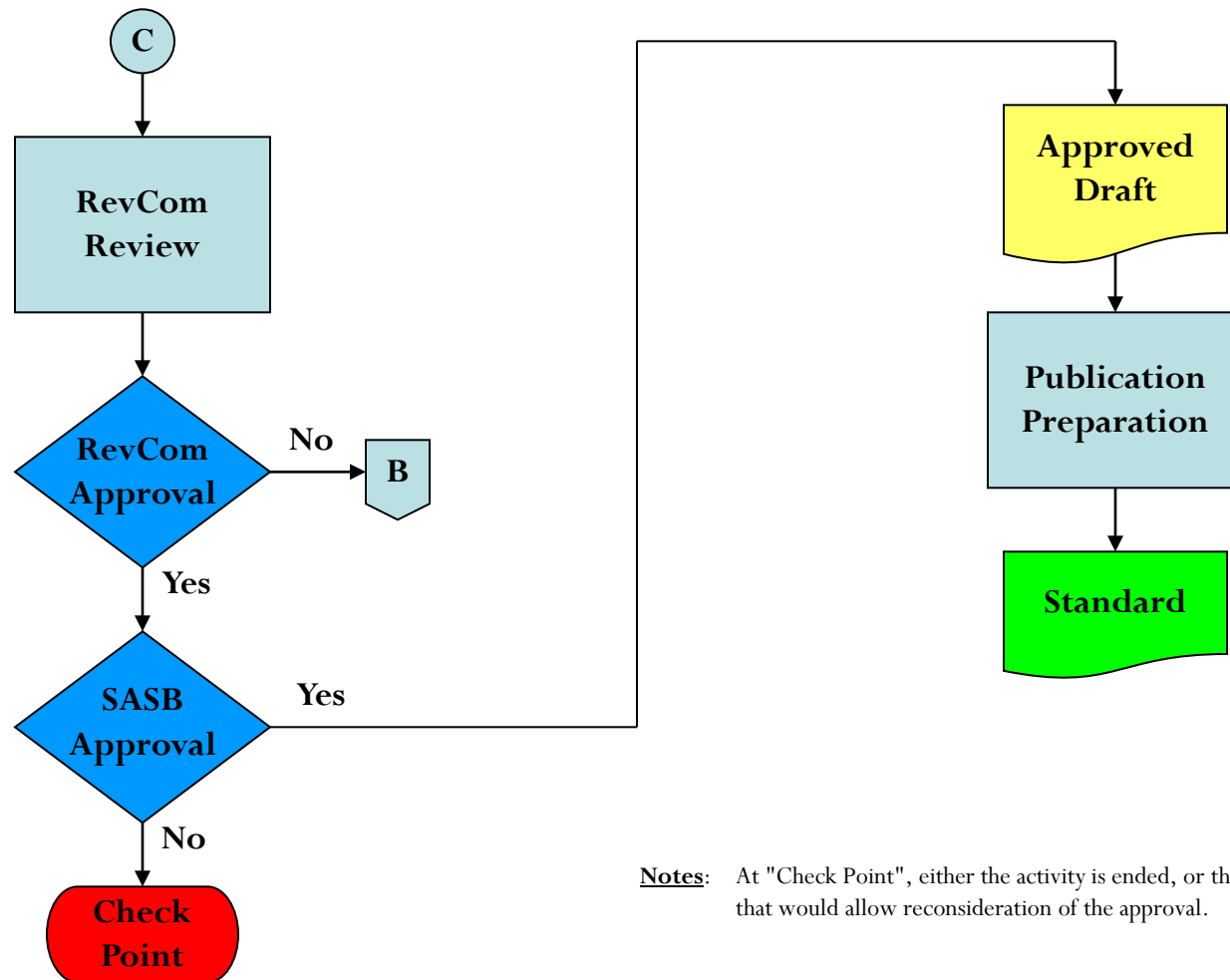
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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



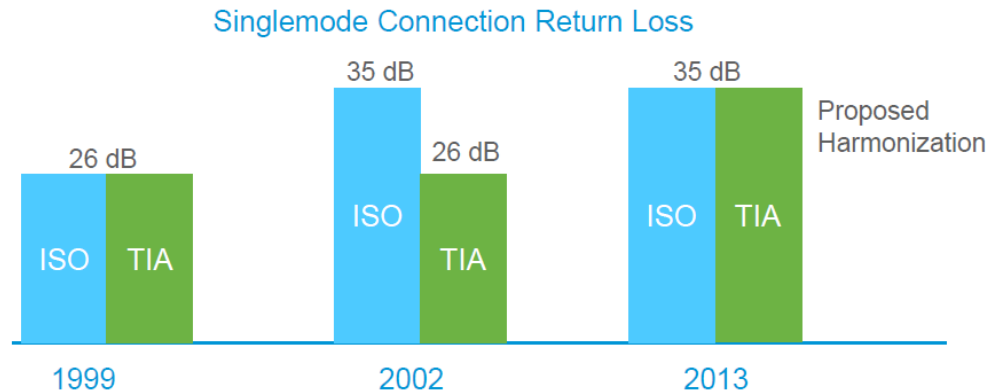
**Notes:** At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

# Liaisons and Communications

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- ITU-T Study Group 15
- A liaison to TIA has been proposed to address “Harmonizing Singlemode Connection Return Loss.”
  - Reference [bhatt\\_400\\_01\\_0713.pdf](#)
- Internal liaison / IC to 802.11 for BW / BMP data

# Harmonizing Singlemode Connection Return Loss



- There is a need to harmonize single-mode connection return loss spec of TIA (26 dB) with that of ISO/IEC (35 dB).
- For 400 Gb/s and higher Ethernet rates, MPI Noise resulting from Return Loss will be a key source of performance impairment.
- The state of the art today comfortably achieves 35+ dB.
- Therefore, it is prudent for us to take the initiative of recommending to the TIA to consider such harmonization.
- Reference: [bhatt\\_400\\_01\\_0713.pdf](#).



# Tuesday

Note –Times listed are subject to change.

Time	Presenter	Title	File Name
8:30 AM	John D'Ambrosia	Agenda and General Information	agenda_400_01_0713.pdf
9:00 AM	Mark Gustlin	Logic Ad hoc Update	gustlin_400_01_0713.pdf
9:15 AM	Vipul Bhatt	Harmonizing Connector Return Loss	bhatt_400_01a_0713.pdf
9:45 AM	Arien Vijn	End user perspective on 400Gb/s Ethernet	vijn_400_01a_0713.pdf
10:15 AM	Break		
10:30 AM	Randy Rannow	400G: Physics, Economics, & Business	rannow_400_01_0713.pdf
11:00 AM	Tom Palkert	Requirements for Broad Market Potential	palkert_400_01_0713.pdf
11:30 AM	Lunch		
1:00 PM	Song Xiaolu	Perspective and Scenario of Core Router on 400GbE	song_400_01_0713.pdf
1:30 PM	David Ofelt	BER Objective for 400GE	ofelt_400_01_0713.pdf
2:00 PM	Steve Trowbridge	OTN Support: What is it why is it important?	trowbridge_400_01_0713.pdf
2:30 PM	Zhao Wenyu	400GE SMF considerations	zhao_400_01_0713.pdf
3:00 PM	Break		
3:15 PM	Riu Hirai	Initial thought about Modulation format & FEC for "Long-reach" 400GbE	hirai_400_01_0713.pdf
3:45 PM	Toshiki Tanaka	Considerations on transmission distance of 400GbE	takahara_400_01_0713.pdf
4:15 PM	Wael Diab	EEE Overview and Proposal for an Objective	diab_400_01a_0713.pdf
4:45 PM	Jeff Maki	Long Shelf-Life Electrical Interfaces	maki_400_01_0713.pdf
5:15 PM	Jack Jewell	MMF Capabilities for 400-Gigabit Ethernet, and Beyond	jewell_400_01_0713.pdf
5:45 PM	Break for Day		

# Wednesday

Note –Times listed are subject to change.

8:30 AM	John D'Ambrosia	Day's Opening Comments	
8:40 AM	Ali Ghiasi	Scalable 400 GbE Architecture	ghiasi_400_01_0713.pdf
9:10 AM	Mark Gustlin	400 Gb/s PCS architectural options	gustlin_400_02_0713.pdf
9:40 AM	Zhongfeng Wang	400GbE Lane Configurations vs. FEC Options	wang_400_01_0713.pdf
10:10 AM	Break		
10:25 AM	Gary Nichol	Musings on FEC Objective for 400 Gb/s Ethernet	nichol_400_01_0713.pdf
11:00 AM	Michael Teener	Time Synchron	teener_400_01_0713.pdf
12:00 PM	Lunch		
1:30 PM	Suping Zhai	The Requirement Analysis of 400GE FEC for Gen1 PMDs	zhai_400_01_0713.pdf
2:00 PM	John D'Ambrosia	Architecture and FEC	dambrosia_400_02_0713.pdf
2:30 PM	Brad Booth	PSM in the Data Centre Survey	flatman_400_01_0713.pdf
3:00 PM	Break		
3:15 PM	Brian Holden	An exploration of the technical feasibility of the major technology options for 400GE backplanes	holden_400_01_0713.pdf
3:45 PM	Nathan Tracy	Backplane Channels Using Embedded Capacitor Connectors for Data Rates 25Gbps or higher	tracy_400_01a_0713.pdf
4:15 PM	David Law	Proposed PAR	dambrosia_400_01_0713.pdf
4:45 PM	Discussion & Strawpolls		
6:00 PM	Break for Day		

# Thursday

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9:00 AM	John D'Ambrosia	Dell	Day's Opening Comments	
9:10 AM	Discussion, Strawpolls Motions			
10:30 AM	Break			
10:40 AM	Discussion, Strawpolls Motions			
11:40 AM	Closing Business			
12:00 PM	Adjourn			

Note –Times listed are subject to change.

# Future Meetings

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- See: <http://www.ieee802.org/3/interims/index.html>
- Sept 2013 Interim (hosted by ADVA)
  - Week of Sept 2
  - York, UK
- Nov 2013 Plenary
  - Week of Nov 10
  - Hyatt Regency, Dallas, TX, USA
- January 2014 Interim (hosted by Xilinx)
  - Week of January 20
  - Hyatt Regency Indian Wells, CA
- Anyone interested in hosting a meeting contact me.

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# Thank You!