

# Agenda and General Information

IEEE 802.3

Next Generation BASE-T Study Group

Bill Woodruff, Broadcom, Chair

David Chalupsky, Intel, Vice Chair

San Antonio, November 13-14, 2012

# Agenda

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- Appointment of Recording Secretary
- 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
- Liaisons and Communications
- Review of Action Items from previous meeting
- Presentations
- Motions and Closing Business
- Future Meetings

# Study Group 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

# Status

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- Initial SG meeting in Geneva, Sept 2012
- Approved nine Objectives
  - [http://www.ieee802.org/3/NGBASET/objectives\\_draft\\_ngbt\\_1112.pdf](http://www.ieee802.org/3/NGBASET/objectives_draft_ngbt_1112.pdf)
- Approved PAR
  - [http://www.ieee802.org/3/NGBASET/P802\\_3bq\\_PAR\\_Detail\\_092612.pdf](http://www.ieee802.org/3/NGBASET/P802_3bq_PAR_Detail_092612.pdf)

# Objectives

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adopted September 25, 2012

- Support full duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support a BER better than or equal to  $10^{-12}$  at the MAC/PLS service interface
- Support Auto-Negotiation (Clause 28)
- Support optional Energy Efficient Ethernet
- Support local area networks using point-to-point links over structured cabling topologies, including directly connected link segments
- Do not preclude meeting FCC and CISPR EMC requirements
- Support a data rate of 40 Gb/s at the MAC/PLS Service Interface

# Goals for the meeting

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- Hear technical tutorials and presentations supporting the development of the project documentation
  - Objectives (on-going)
  - PAR (complete)
  - 5C
- Request an Extension of this Study Group
- Lay the ground work for the next meeting

# Big ticket items

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- Objectives to be addressed
  - Reach
- Lay the ground work for the next meeting

# Reflector and Web

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- To subscribe to the Next Generation BASE-T 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* NGBASE-T <*yourfirstname*> <*yourlastname*>

*end*

- Send NGBASE-T reflector messages to:

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

- Study Group web page URL:

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

# Study Group Private Area

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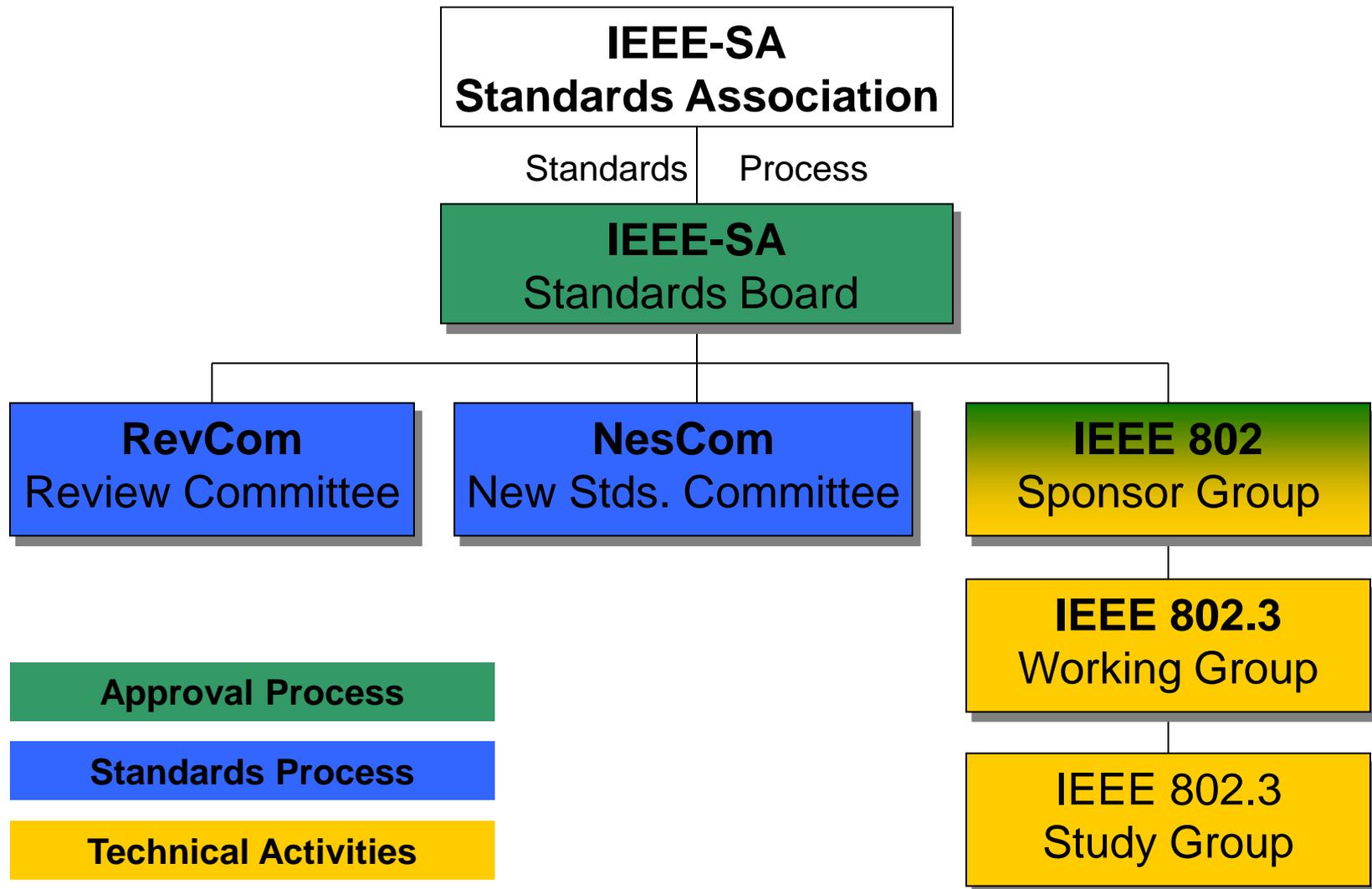
- URL: <http://www.ieee802.org/3/NGBASET/private/index.html>
  - Username: <<XXXXXX>>
  - Password: <<XXXXXXXX>>
- Write it down...
- Note - The content is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document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

# Ground Rules

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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 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/PNP/2012-03/IEEE\\_802\\_LMSC\\_OM\\_approved\\_120604.pdf](http://www.ieee802.org/PNP/2012-03/IEEE_802_LMSC_OM_approved_120604.pdf)
- **IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures**  
[http://www.ieee802.org/PNP/2012-03/IEEE\\_802\\_LMSC\\_WG\\_PandP\\_approved\\_120604.pdf](http://www.ieee802.org/PNP/2012-03/IEEE_802_LMSC_WG_PandP_approved_120604.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)

# Guidelines for IEEE-SA Meetings

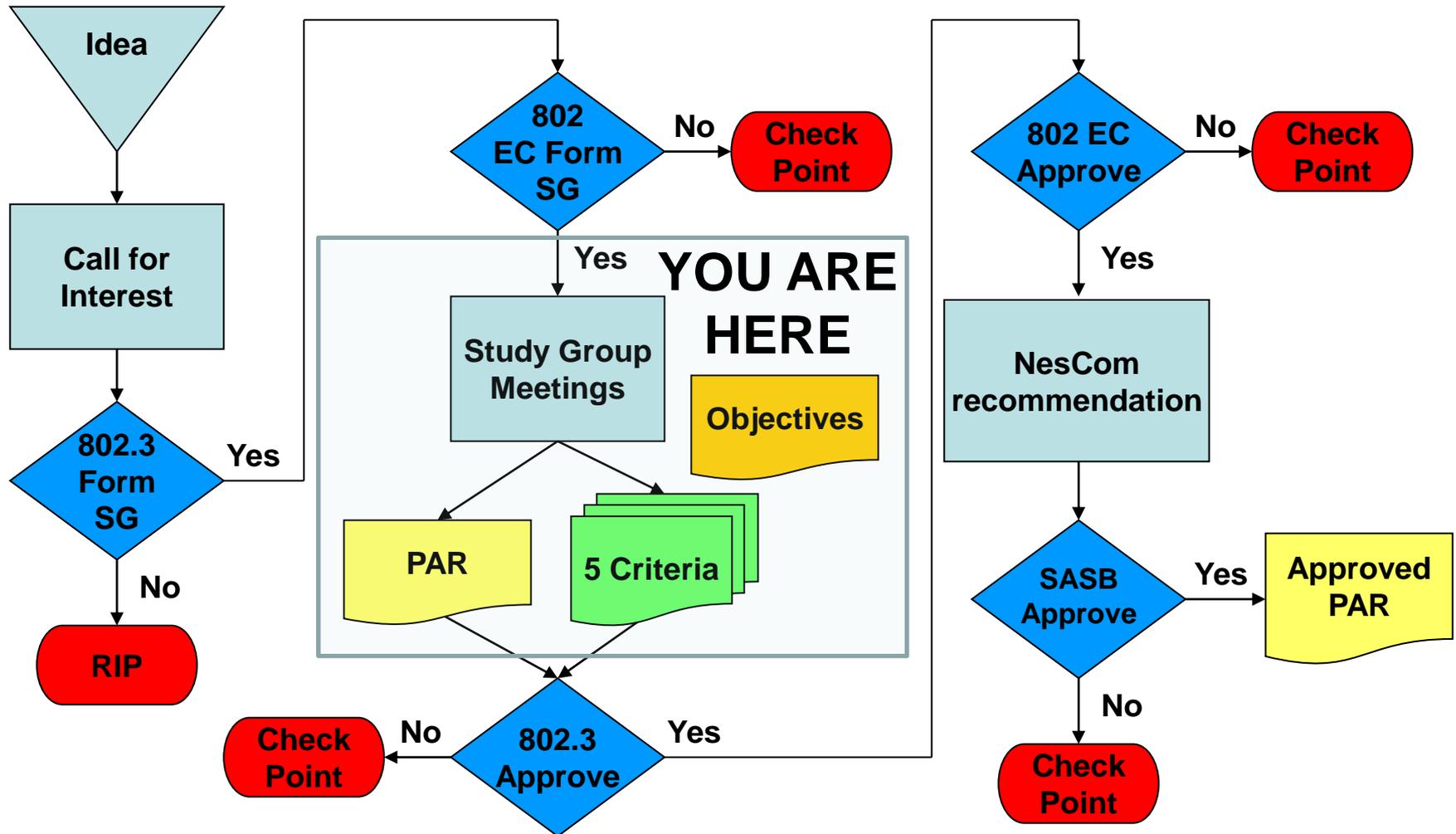
- | **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**
- | **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
- | **Don't discuss specific license rates, terms, or conditions.**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

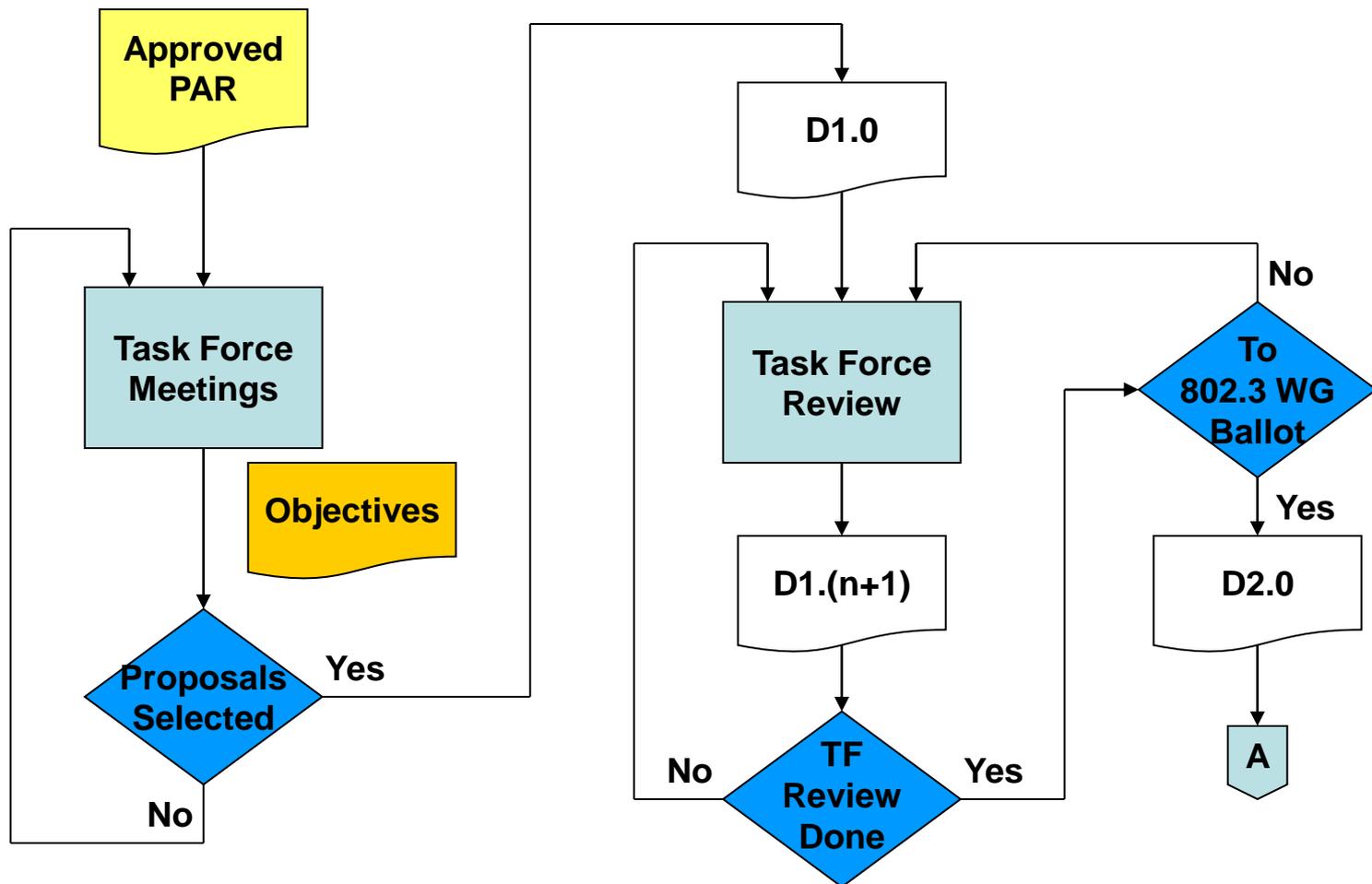
This slide set is available  
at <https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt>

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

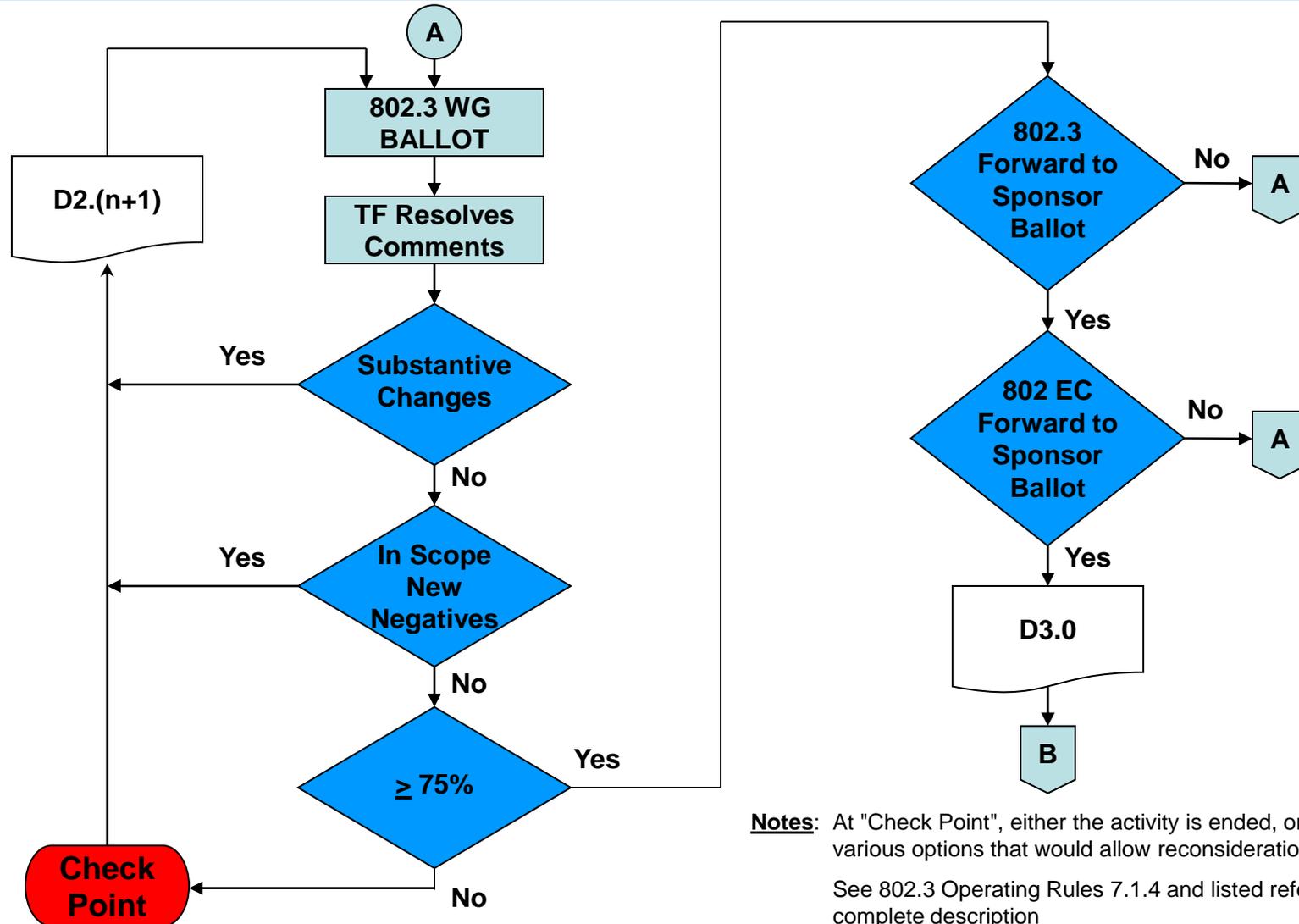


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

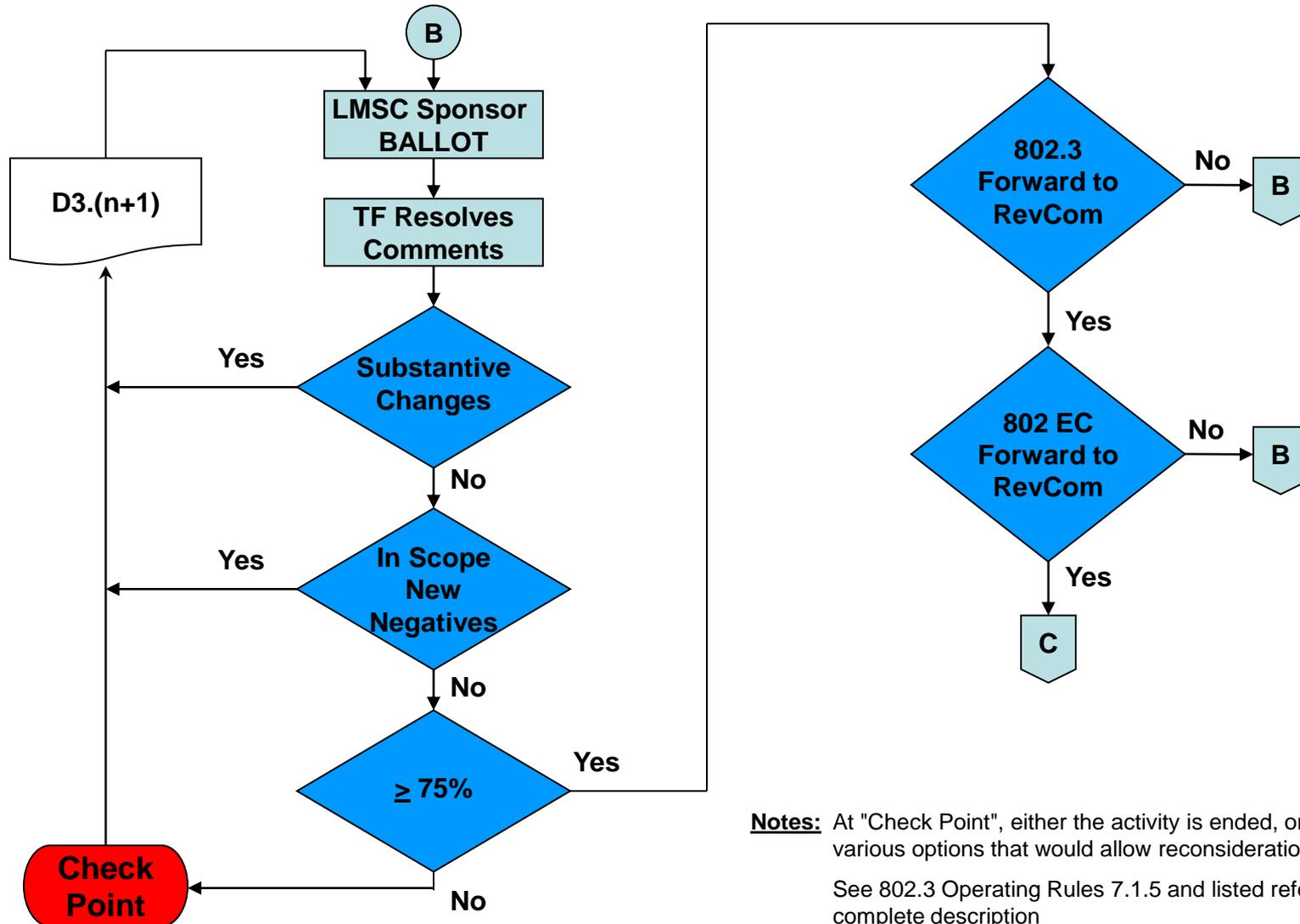
# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase



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



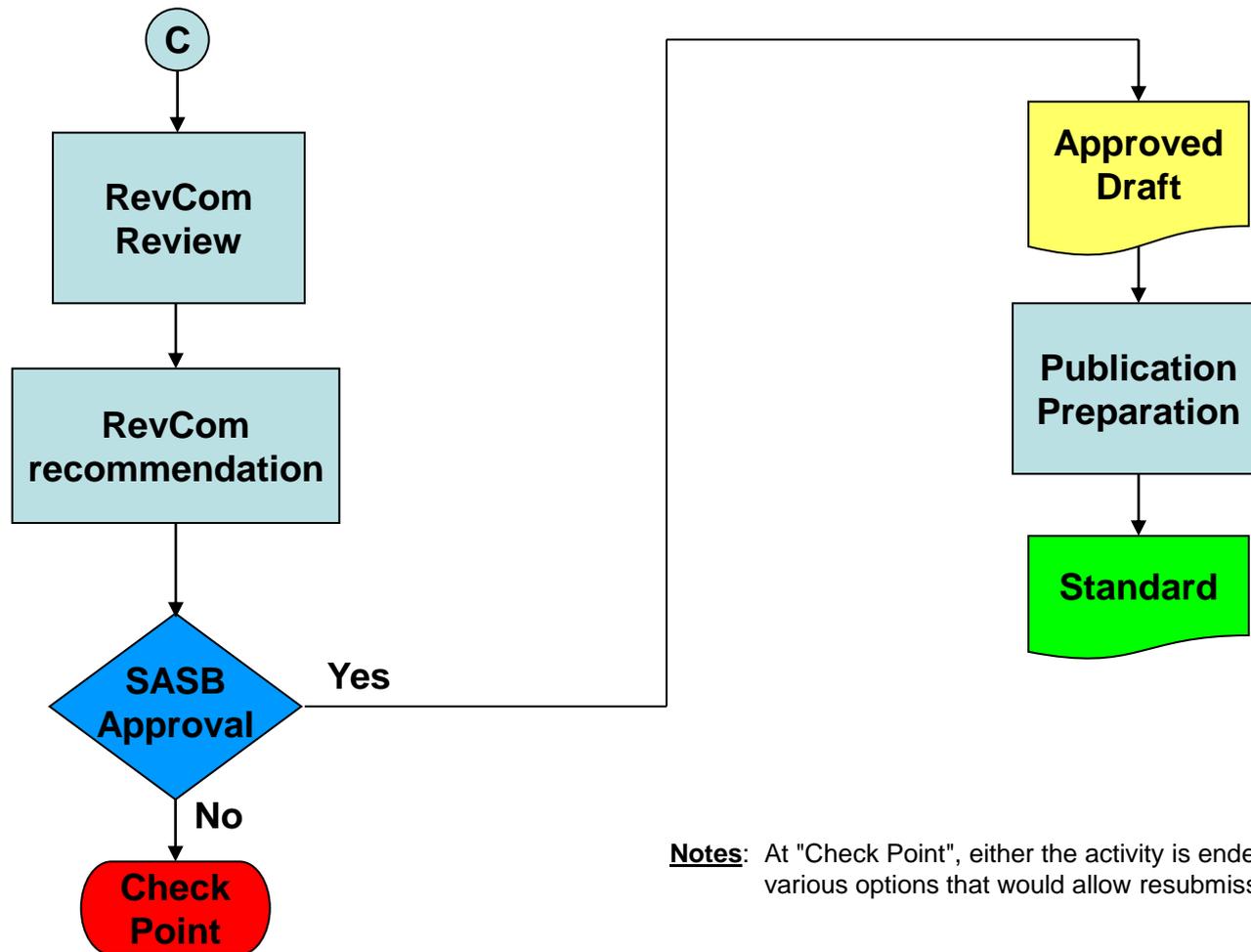
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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 resubmission for approval.

# The Study Group

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- Normal function is to draft a complete PAR and Five Criteria
- Provide a plenary week tutorial to the LMSC.
- Gain approval at the IEEE 802.3 WG, IEEE 802 EC, IEEE-SA NesCom and IEEE-SA Standards Board.
- SG only exists for 6 months
  - Extensions can be requested
  - Voted on by IEEE 802.3
  - Ratified by IEEE 802 EC
- Development of Objectives helps set the goals for the Task Force
- Consensus required to move forward
  
- Not a goal – choosing a solution.

# Liaisons and Communications

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- Letter from ISO/IEC JTC 1/SC 25/WG 3 in relation to 40 Gb/s cabling systems
  - [http://www.ieee802.org/3/minutes/nov12/incoming/25N2052\\_Liaison\\_to\\_IEEE802\\_3.pdf](http://www.ieee802.org/3/minutes/nov12/incoming/25N2052_Liaison_to_IEEE802_3.pdf)
  - The SG will prepare a draft response for consideration by the WG
- Letter from TIA TR-42 to IEEE 802.3 Working Group
  - [http://www.ieee802.org/3/minutes/nov12/incoming/TR42-2012-10-194A\\_Outgoing\\_Liaison\\_Letter\\_to\\_IEEE%20802.3.pdf](http://www.ieee802.org/3/minutes/nov12/incoming/TR42-2012-10-194A_Outgoing_Liaison_Letter_to_IEEE%20802.3.pdf)
  - The SG will prepare a draft response for consideration by the WG

# Action Items

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- Response to ISO/IEC Liaison Request
- Response to TIA TR-42 Liaison Request
- Request for this SG to propose a Liaison letter to TIA

# Attendance

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- Tutorial Material on attendance tool
  - [http://ieee802.org/3/minutes/mar11/0311\\_imat.pdf](http://ieee802.org/3/minutes/mar11/0311_imat.pdf)
- Attendance tool URL
  - URL: <http://imat.ieee.org>
  - No password – must be on VeriLAN network
  - Disable you VPN while logging attendance

# Agenda (Tuesday)

Time	Title	Presenter	Affiliation	File Name
9:00 AM	Agenda and General Information	David Chalupsky	Intel	agenda_01a_1112_ngbt.pdf
9:30 AM	Category 8 Limits and modeling tutorial	Sterling Vaden	OCC	vaden_01_1112_ngbt.pdf
10:00 AM	NGBASE-T Reach, Density, Power & Throughput Relationships	Harry Forbes	Nexans	forbes_01_1112_ngbt.pdf
10:40 AM	<b>BREAK</b>			
11:10 AM	Category 8 Cabling Demonstration	Wayne Larsen	Commscope	larsen_01_1112_ngbt.pdf
11:40 AM	Data Center Copper Channel Length Usage	Bob Wagner	Panduit	wagner_01_1112_ngbt.pdf
12:10 PM	<b>LUNCH</b>			
1:30 PM	Data Centre Link Lengths	Alan Flatman	LAN Technologies	flatman_01_1112_ngbt.pdf
2:00 PM	NGBASE-TSR - Application Specific PMDs That Interoperate	Dan Dove	APM	dove_01_1112_ngbt.pdf
2:30 PM	TIA Letter Generation Breakout			
3:00 PM	<b>BREAK</b>			
3:30 PM	ISO/IEC Liaison breakout			
4:00 PM	TIA Liaison breakout			
4:30 PM	Break for the day			

Note –Times listed are subject to change.

# Agenda (Wednesday/Thursday)

Time	Title	Presenter	Affiliation	File Name
9:00 AM	Open Meeting	David Chalupsky	Intel	agenda_01a_1112_ngbt.pdf
9:15 AM	Reach and Energy Efficiency in NG-BASE-T	Mike Bennett	LBNL	bennett_01_1112_ngbt.pdf
9:45 AM	NGBASE-T Link Segments	Chris DiMinico	MC Communications	diminico_01_1112_ngbt.pdf
10:15 AM	<b>BREAK</b>			
10:45 AM	Link Distance and Server Connectivity	Scott Kipp	Brocade	kipp_01_1112_ngbt.pdf
11:15 AM	Reach Objective Considerations	Brad Booth	Dell	booth_01a_1112_ngbt.pdf
11:45 AM	<b>LUNCH</b>			
1:00 PM	Liaison letter review			
2:00 PM	Discussion, Motions & Straw Polls			
4:00 PM	Closing, future logistics and other business			
5:00 PM	Adjourn			
	THURSDAY – if needed			
9:00-12:00				

Note –Times listed are subject to change.

# Motion #

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- Request 802.3 extend the Next Generation Twisted Pair Study Group for an additional period of 6 months

M:

S:

Procedural, 50%

# Future Meetings

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- See: <http://www.ieee802.org/3/interims/index.html>
- January 2013 interim
  - Hyatt Regency Phoenix
  - Week of January 21, 2013
- March 2013 plenary
  - Orlando, Florida
  - March 18-21 2013
- May 2013 joint interim
  - The Fairmont Empress, Victoria, BC, Canada
  - Week of May 13, 2013
- Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary [Steve Carlson](#).

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# Thank You!