



# Agenda and General Information

IEEE 802.3

**25 Gb/s Ethernet over a single lane  
for server interconnect Task Force**

Mark Nowell, Cisco

Macau, China

Mar 14<sup>th</sup>, 2016

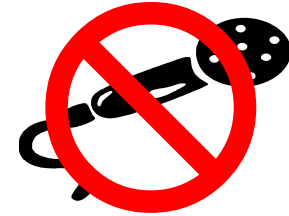
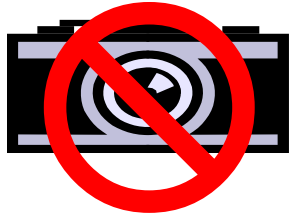
# Agenda

- Welcome and Introductions
- Approve Agenda
- Approve Minutes
- Reflector and Web
- Ground Rules
- IEEE
  - Structure, Bylaws and Rules
  - Call for Patents
  - IEEE Standards Process
- Liaisons and Communications
- Goals for this meeting
- Big Ticket Items
- Meeting Schedule
- Motions and Closing Business
- Future Meetings

# P802.3by Task Force organization

- Chair: Mark Nowell, Cisco
- Recording Secretary: Kent Lusted, Intel
- Chief Editor: Matt Brown, APM
- Ad hoc chairs:
  - Optical: Jonathan King, Finisar
  - Architecture: Matt Brown, APM

# Task Force Decorum



- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2013 IEEE-SA Standards Board Ops Manual 5.3.3.5)
- Photography or recording by permission only (December 2013 IEEE-SA Standards Board Ops Manual 5.3.3.4)
- Cell phone ringers off
- 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

- To subscribe to the 25Gb/s Ethernet Task Force reflector, send an email to:

**ListServ@ieee.org**

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

*subscribe stds-802-3-25G <yourfirstname> <yourlastname>  
end*

- Send 25Gb/s Ethernet reflector messages to:

**stds-802-3-25G@listserv.ieee.org**

- Task Force web page URL:

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

# Task Force Private Area

- URL: <http://www.ieee802.org/3/by/private/index.html>
  - Username: 802.3by
  - Password: \*\*\*\*\*
- 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.

# Ground Rules

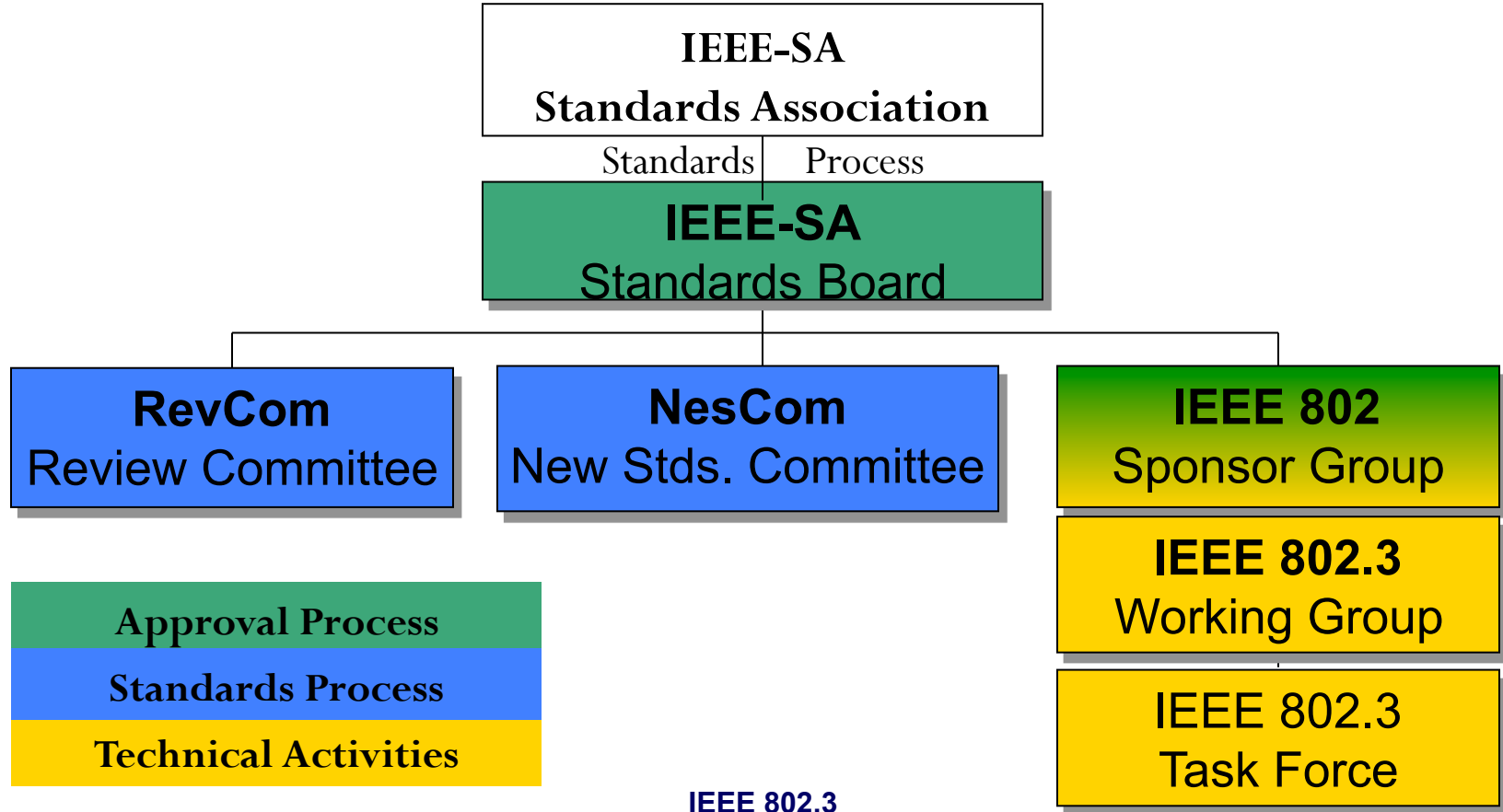
- Based upon IEEE 802.3 Rules
  - Foundation based upon Robert's Rules of Order
  - Anyone in the room may speak
  - Anyone in the room may vote
- **RESPECT**... give it, get it
- NO product pitches
- NO corporate pitches
- NO prices!!!
  - This includes costs, ASPs, etc. no matter what the currency
- NO restrictive notices

# Attendance

- Tutorial Material on attendance tool
  - [http://ieee802.org/3/minutes/attendance\\_procedures.pdf](http://ieee802.org/3/minutes/attendance_procedures.pdf)
- Access details
  - URL: <http://imat.ieee.org/>
  - Use your imat login
    - (must be on meeting SSID – no VPN)



# IEEE Structure



# Important Bylaws and Rules

- **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)

# 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
  - “Should inform the IEEE (or cause the IEEE to be informed)” of the identity of “any other holders of 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](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](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

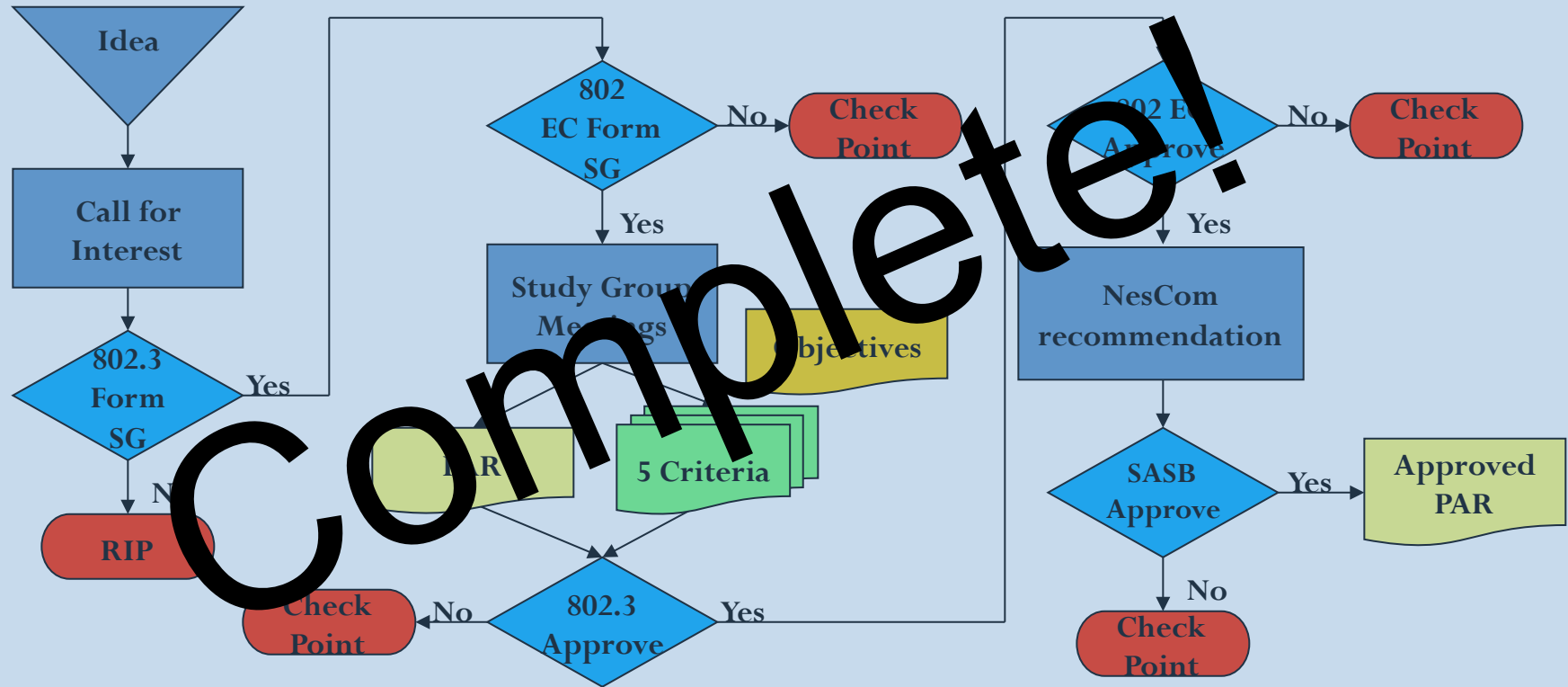
# Other Guidelines for IEEE WG Meetings

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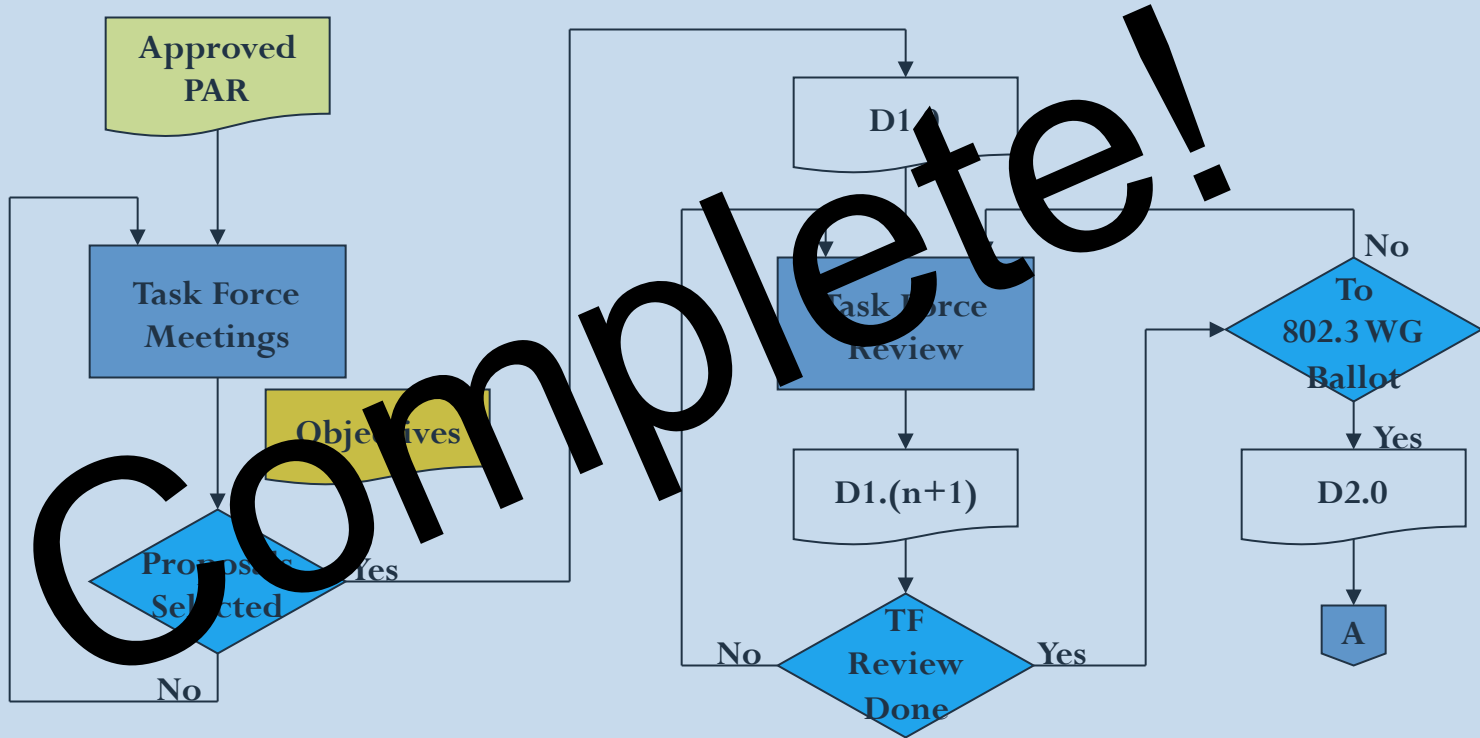
See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy” for more details.

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



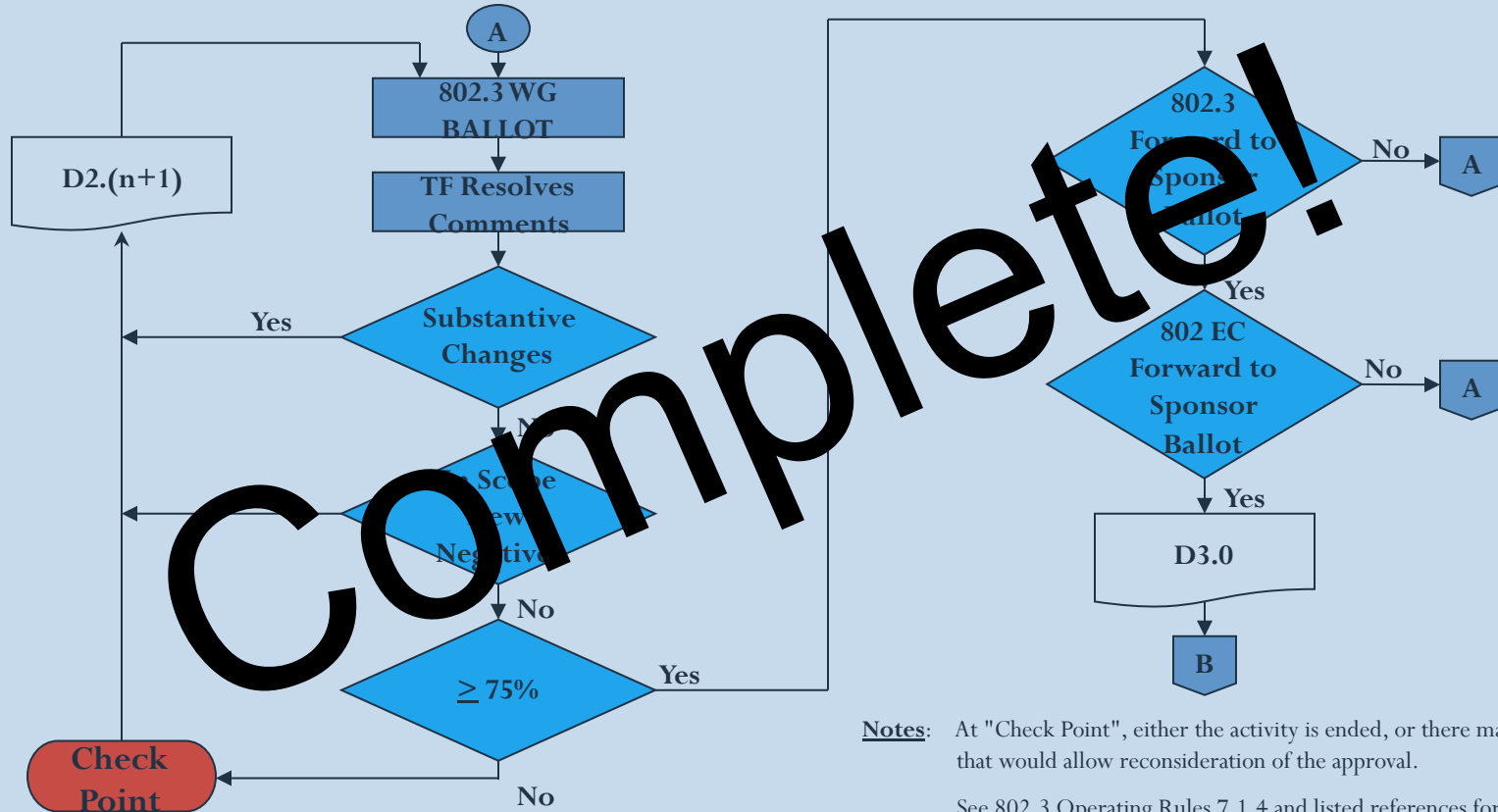
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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





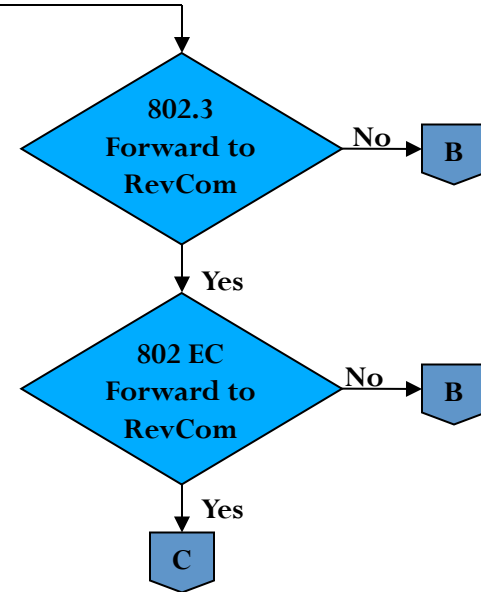
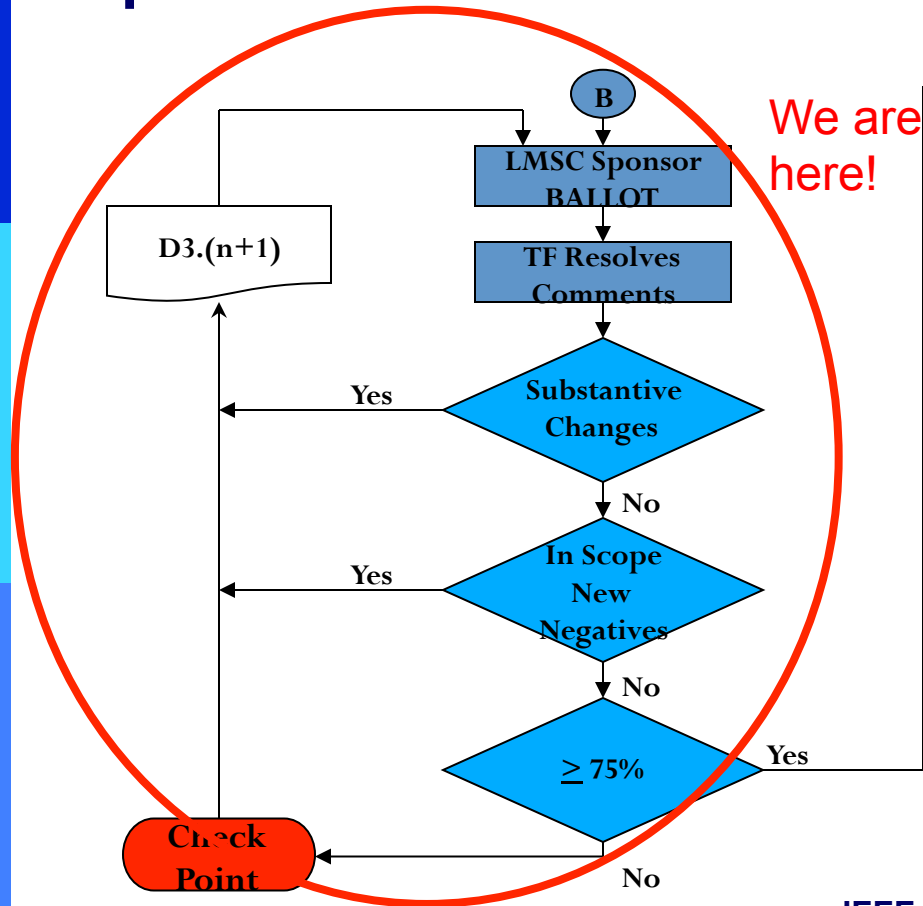
# Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



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

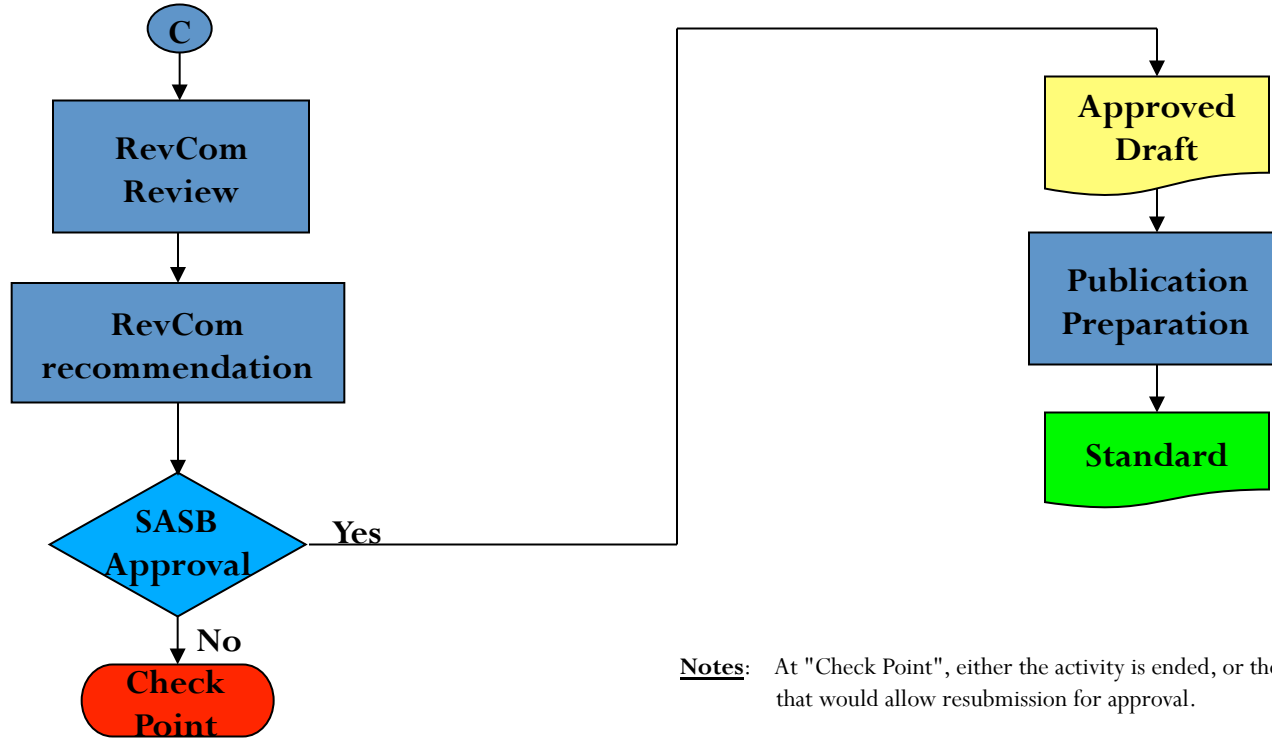
# Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



**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 resubmission for approval.

# Liaisons and Communications

- none

# IEEE P802.3by 25 Gb/s Ethernet Task Force

## Approved Project Documents

- PAR

- [http://www.ieee802.org/3/by/P802\\_3by\\_PAR\\_approved\\_121214.pdf](http://www.ieee802.org/3/by/P802_3by_PAR_approved_121214.pdf)

- CSD

- [http://www.ieee802.org/3/by/P802\\_3by\\_CSD.pdf](http://www.ieee802.org/3/by/P802_3by_CSD.pdf)

- Objectives

- [http://www.ieee802.org/3/by/P802\\_3by\\_Objectives.pdf](http://www.ieee802.org/3/by/P802_3by_Objectives.pdf)

- Timeline

- [http://www.ieee802.org/3/by/approved\\_timeline\\_3by.pdf](http://www.ieee802.org/3/by/approved_timeline_3by.pdf)

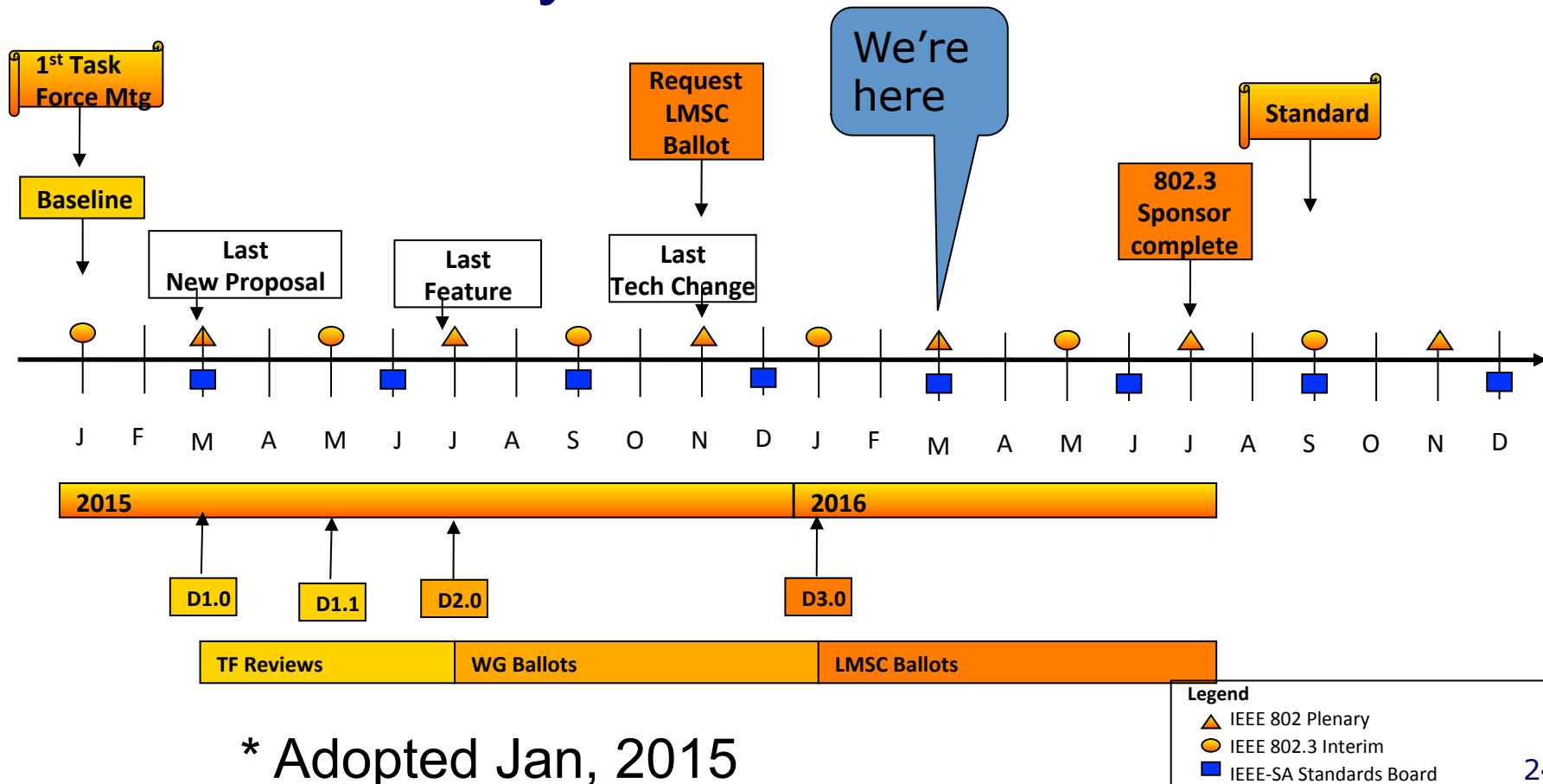
# IEEE P802.3by 25Gb/s Ethernet TF Objectives

- Support a MAC data rate of 25 Gb/s
- Support full-duplex operation only
- Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Support a BER of better than or equal to  $10^{-12}$  at the MAC/PLS service interface (or the frame loss ratio equivalent)
- Support optional Energy-Efficient Ethernet operation
- Define a single-lane 25 Gb/s PHY for operation over a printed circuit board backplane consistent with channels specified in IEEE Std 802.3bj-2014 Clause 93
- Define a single-lane 25 Gb/s PHY for operation over links consistent with copper twin axial cables, with lengths up to at least 3m
- Define a single-lane 25 Gb/s PHY for operation over links consistent with copper twin axial cables, with lengths up to at least 5m
- Define a single-lane 25 Gb/s PHY for operation over MMF consistent with IEEE P802.3bm Clause 95
- Provide appropriate support for OTN

# P802.3by Since January Interim

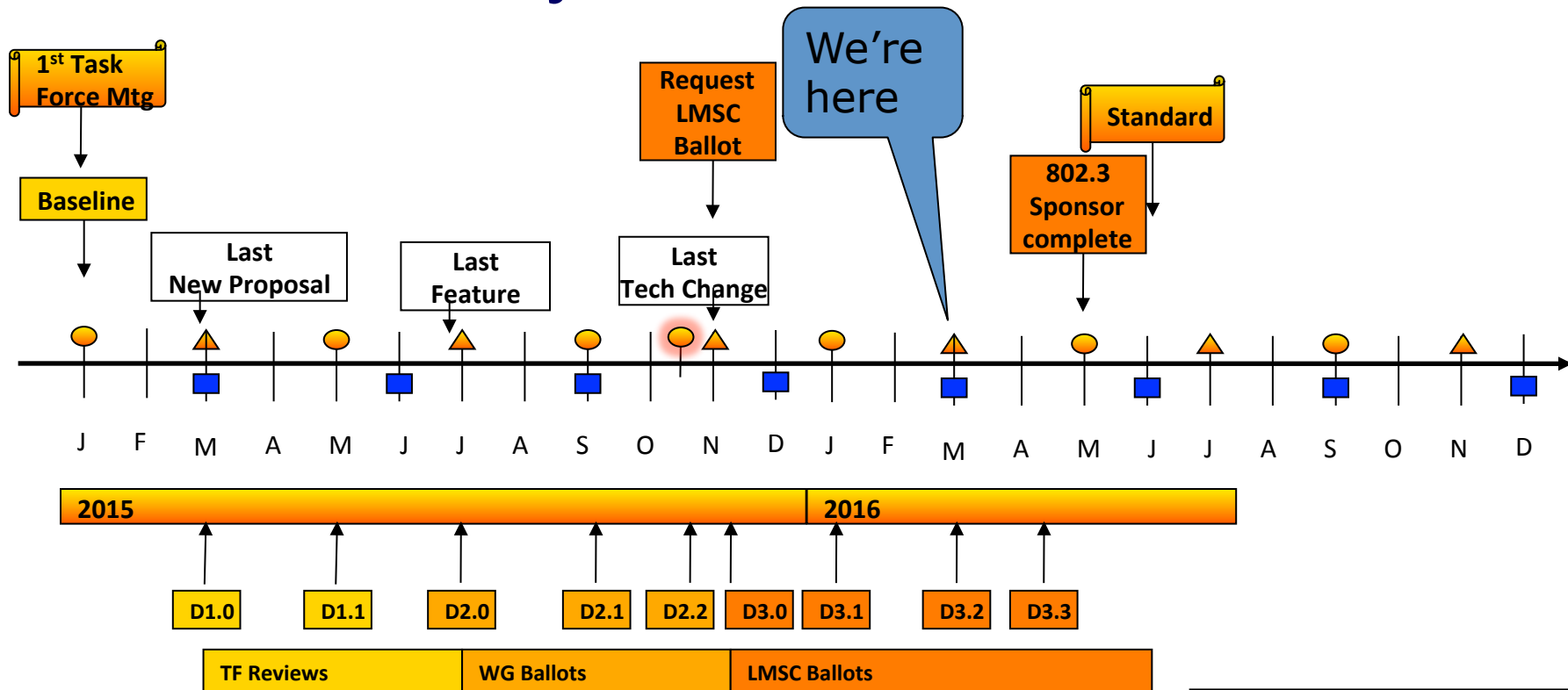
- Draft 3.1 generated and sent out for 1<sup>st</sup> Sponsor Ballot Recirculation:
  - Review Period Feb 10<sup>th</sup> - 25<sup>th</sup>
  - 35 comments received (G: 0 E:15 ER:0 T:10 TR:10)
  - 119 of 142 Voters responded. **Passes** 84% Response Rate (> 50% required)
  - 109 Approve, 3 Disapprove w/ comment. **Passes** 97% Approval Rate (>= 75% required)
  - 6 Abstain. **Passes** 5% Abstain Rate (< 30% required)
  - Comments and proposed responses: <http://www.ieee802.org/3/by/public/comments>

# IEEE P802.3by Task Force Timeline\*

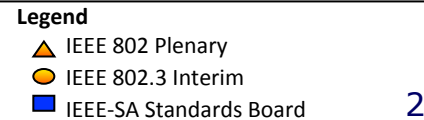




# IEEE P802.3by Task Force Timeline\*\*



\*\* Current trajectory



# Goals for the meeting

- D3.1 Comment review and resolution
- Adopt closed comments and generate D3.2
- Request conditional approval to progress draft to RevCom once sponsor ballot process has been successfully completed

# Meeting Schedule

<u>Monday</u> <u>18-Jan-16</u>	<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>	<u>File Name</u>	<u>Duration</u>
	8:30 AM	Mark Nowell	Cisco	Agenda and General Information	agenda_3by_01_0116.pdf	0:30
	9:00 AM	Matt Brown	APM	25 Gb/s Ethernet Architecture Ad-hoc report	brown_3by_01_0116.pdf	0:05
	9:05 AM	Matt Brown	APM	Chief Editor's Report	brown_3by_02_0116.pdf	0:20
	9:25 AM	Comment Resolution and presentations/motions as required				0:35
	10:00 AM	<b>Break</b>				0:15
	10:15 AM	Yasuo Hidaka	Fujitsu	Comment i-31: Single PMD w/ optional RS-FEC	hidaka_3by_01_0116.pdf	0:20
	10:35 AM	Joel Goergen	Cisco	Considerations for P802.3by Sponsor ballot open issues	goergen_3by_01_0116.pdf	0:20
	10:55 AM	Rob Stone	Broadcom	Single vs. Dual PHY discussion for 25G-BASE-CR	stone_3by_01_0116.pdf	0:20
	11:15 AM	PHY Designation (comment i-31) & CA-S treatment (comments i-84 & i-59) Discussion and motions				1:00
	12:15 PM	<b>Lunch</b>				<b>1:00</b>
	1:15 PM	Comment Resolution and presentations/motions as required				1:45
	3:00 PM	<b>Break</b>				0:15
	3:15 PM	Comment Resolution and presentations/motions as required				2:00
	5:15 PM	<b>Break</b>				

<u>Tuesday</u> <u>19-Jan-16</u>	<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>	<u>File Name</u>	<u>Duration</u>
	8:30 AM	Mark Nowell	Cisco	Opening		0:10
	8:40 AM	Comment Resolution and presentations/motions as required				1:20
	10:00 AM	<b>Break</b>				0:15
	10:15 AM	Comment Resolution and presentations/motions as required				1:45
	12:00 PM	<b>Lunch</b>				<b>1:00</b>
	1:00 PM	Comment Resolution and presentations/motions as required				1:45
	2:45 PM	<b>Break</b>				0:15
	3:00 PM	Comment Resolution and presentations/motions as required				2:00
	5:00 PM	<b>Adjourn</b>				1:00

Note –Times listed are subject to change.

Updated versions will be captured with new filename versions

Not all contributed presentations are scheduled. Will depend on comment resolution schedule.

# Future Meetings & Ad hocs

- Ad-hoc meeting plans
  - Single on-going weekly meetings, all topics (will cycle) – agendas will be published. 2hr duration.
  - Joint with 50 Gb/s and NGOATH Ethernet Study Groups
  - Wed 8-10 Pacific
- See: <http://www.ieee802.org/meeting/index.html>
- Additional Interim – April 20<sup>th</sup>, 2016 – Ottawa & Teleconference
- May 2016 Interim
  - Week of May 23<sup>rd</sup>, 2016 – Whistler, B.C., Canada
- July 2016 Plenary
  - Week of July 24<sup>th</sup>, 2016 – San Diego, CA
  
- Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary Steve Carlson.



# Thank You!