



IEEE P802.3ba 40Gb/s and 100Gb/s Ethernet Task Force

Agenda and General Information

Seoul, South Korea
September 2008




Agenda

- Welcome and Introductions
- Appoint / Volunteer Recording Secretary
- Approve Agenda
- Approve the Minutes
- Goals for this Week
- Ground Rules
- Reflector and Web
- IEEE
 - Structure
 - Bylaws and Rules
 - Call for Patents
 - IEEE Standards Process
- Chief Editor's Report
- Ad Hoc Reports
- 40G \geq 10km SMF Objective
 - Presentations
 - Discussion and Motions
- Other Technical Presentations
- Review D0.9
- Discussion and Motions
- Other Technical Presentations (XR MMF) if time available
- Future Meetings


Task Force Decorum



- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (2007 SASB Op Manual 5.3.3.5)
- Photography or recording by permission only (5.3.3.4)
- Cell phone ringers off
- Wear your badges at all times in meeting areas



Thanks to our Host
LG-Nortel!



IEEE P802.3ba Task Force Organization

<u>John D'Ambrosia</u>	Task Force Chair
<u>Ilango Ganga</u>	Task Force Chief Editor
<u>Mark Gustlin</u>	"Logic" Sub-task Force Chief Editor Editor – RS and PCS Clauses
<u>Chris DiMinico</u>	"Cu" Sub-task Force Chief Editor Editor – 40/100G Cu PMD
<u>Pete Anslow</u>	"Optical" Sub-task Force Chief Editor Editor – SMF PMD Clause(s)
<u>Hugh Barrass</u>	Editor – Mgmt Clauses
<u>Jonathan King</u>	Editor – SMF PMD Clause(s)
<u>Arthur Marris</u>	Editor – 40G Backplane Clauses
<u>Steve Trowbridge</u>	Editor – PMA Clause
<u>Ryan Latchman</u>	Editor – XLAUI / CAUI Annex
<u>Piers Dawe</u>	Editor – 40/100G MMF PMD Clause Chair – "Statistical Eye" Ad Hoc
<u>Alessandro Barbieri</u>	Co-chair – Extended Reach Parallel MMF Ad Hoc
<u>John Petrilla</u>	Co-chair - Extended Reach Parallel MMF Ad Hoc
<u>George Oulundsen</u>	Task Force Secretary
<u>Frank Chang</u>	Task Force Web Master

Goals for the Week

- Progress towards generating D1.0
 - Review D0.9
 - Resolve $40G \geq 10\text{km}$ SMF Objective
 - Proposals
 - Technical Presentations
 - Choose Baseline Proposal / Text
- Hear Technical Presentations
- Lay groundwork for the next meeting

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

Reflector and Web

- To subscribe to the IEEE P802.3ba 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-hssg <yourfirstname> <yourlastname>
end***

- Send IEEE P802.3ba Task Force reflector messages to:

STDS-802-3-HSSG@listserv.ieee.org

- Task Force web page URL:

http://www.ieee802.org/3/ba/

IEEE P802.3ba Private Area

- URL: <http://www.ieee802.org/3/ba/private/>
 - Username: 802.3ba
 - Password: xxxxxxxx

- Write it down...

Task Force Approved Project Documents

■ PAR

- http://ieee802.org/3/ba/PAR/par_0308.pdf

■ 5 Criteria

- http://ieee802.org/3/ba/PAR/P802.3ba_5C_0908.pdf

■ Objectives

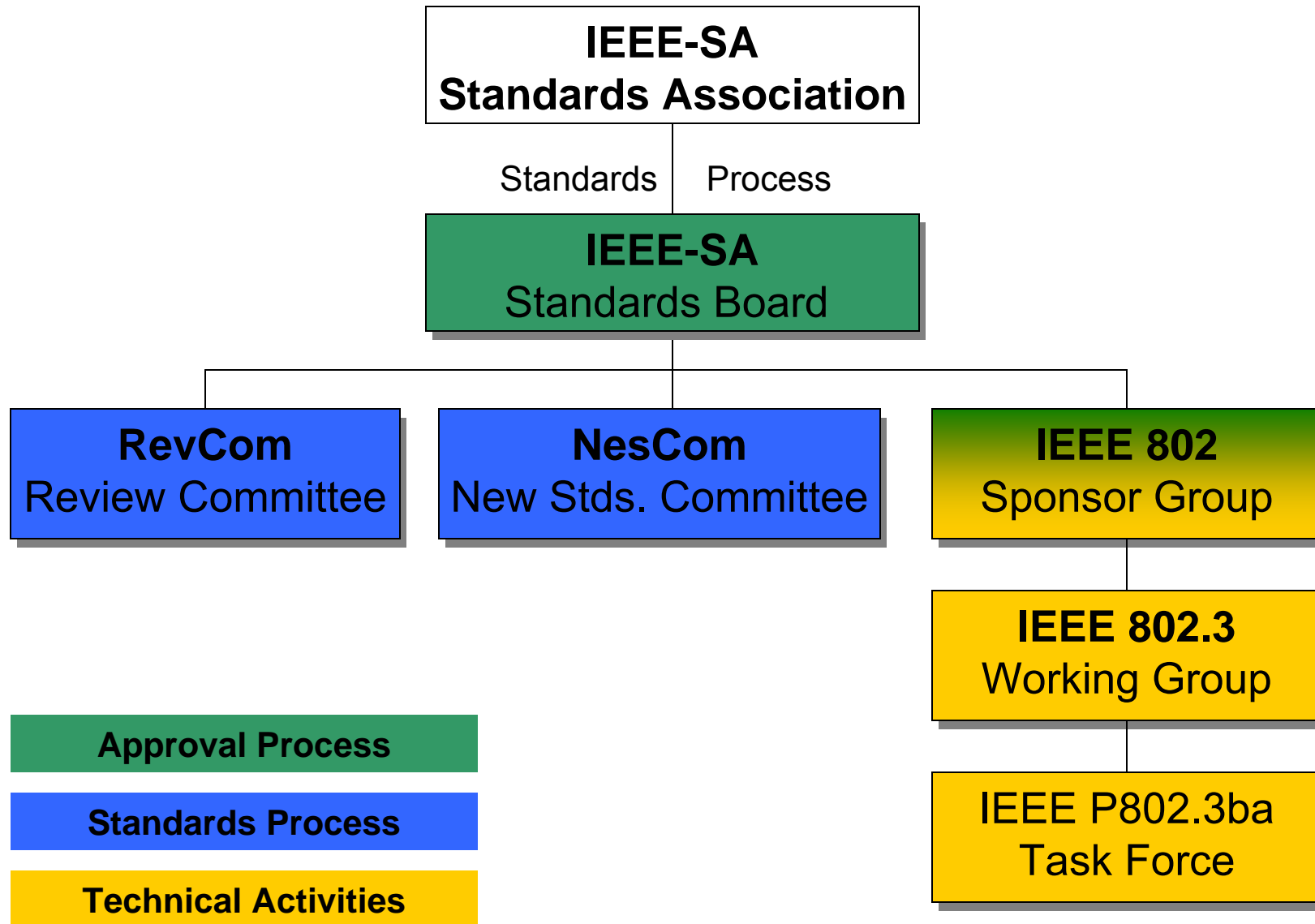
- http://ieee802.org/3/ba/PAR/P802.3ba_Objectives_0308.pdf

Task Force Objectives

- Support full-duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum FrameSize of current 802.3 standard
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- Provide appropriate support for OTN
- Support a MAC data rate of 40 Gb/s
- Provide Physical Layer specifications which support 40 Gb/s operation over:
 - at least 10km on SMF
 - at least 100m on OM3 MMF
 - at least 10m over a copper cable assembly
 - at least 1m over a backplane
- Support a MAC data rate of 100 Gb/s
- Provide Physical Layer specifications which support 100 Gb/s operation over:
 - at least 40km on SMF
 - at least 10km on SMF
 - at least 100m on OM3 MMF
 - at least 10m over a copper cable assembly

Adopted by IEEE P802.3ba and approved by 802.3 at Mar 2008 Plenary

IEEE Structure



Bylaws and Rules

- 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>
- LAN/MAN Standards Committee (LMSC) Policies and Procedures:
 - <http://ieee802.org/policies-and-procedures.pdf>
- IEEE 802.3 Working Group Operating Rules:
 - 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:

- ❑ “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

Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2

- 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/guides/bylaws/sect6-7.html#6>

IEEE-SA Standards Board Operations Manual

<http://standards.ieee.org/guides/opman/sect6.html#6.3>

Material about the patent policy is available at

<http://standards.ieee.org/board/pat/pat-material.html>

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at patcom@ieee.org or visit <http://standards.ieee.org/board/pat/index.html>

This slide set is available at <http://standards.ieee.org/board/pat/pat-slideset.ppt>

Call for Potentially Essential Patents

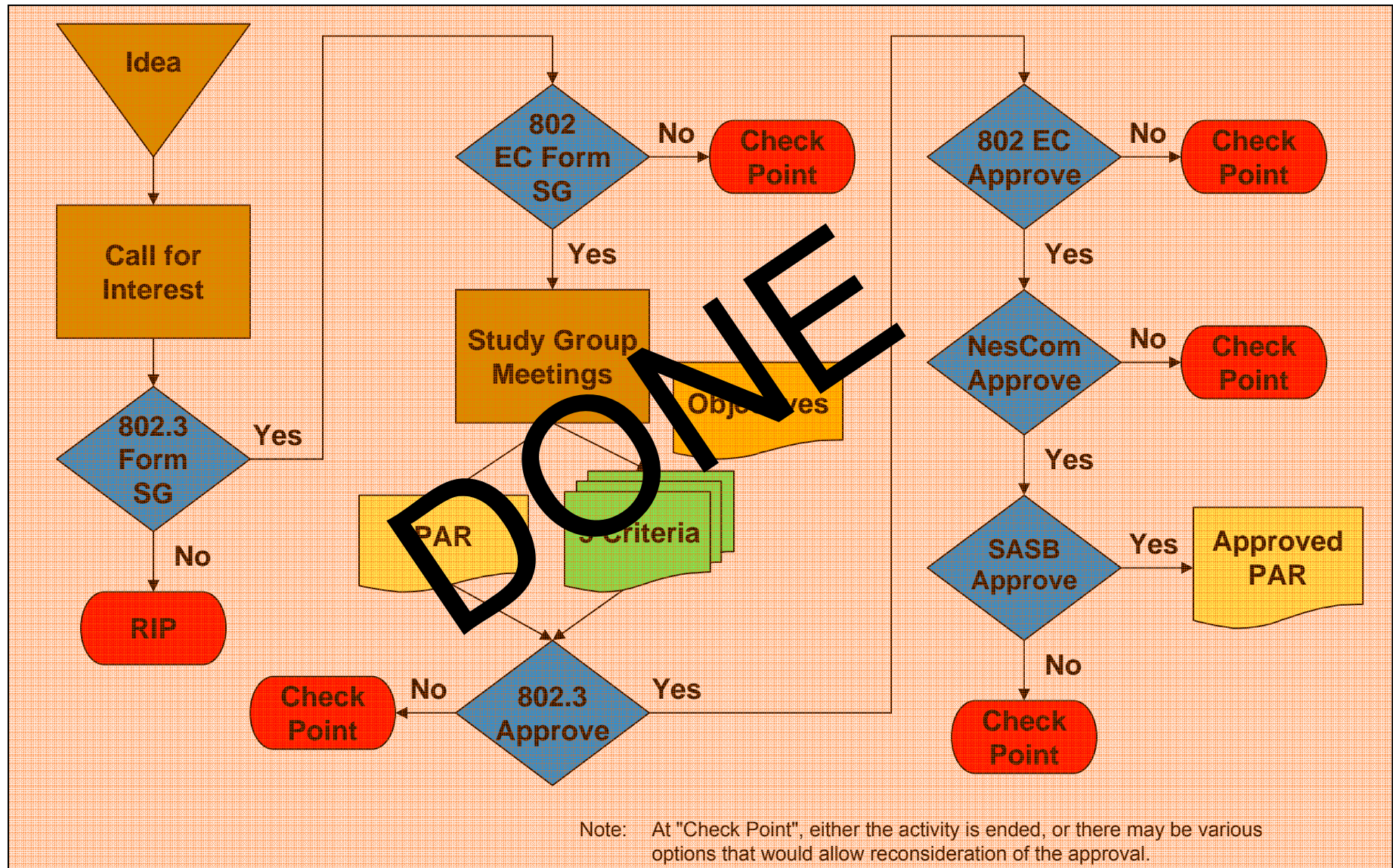
- If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance:
 - Either speak up now or
 - Provide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

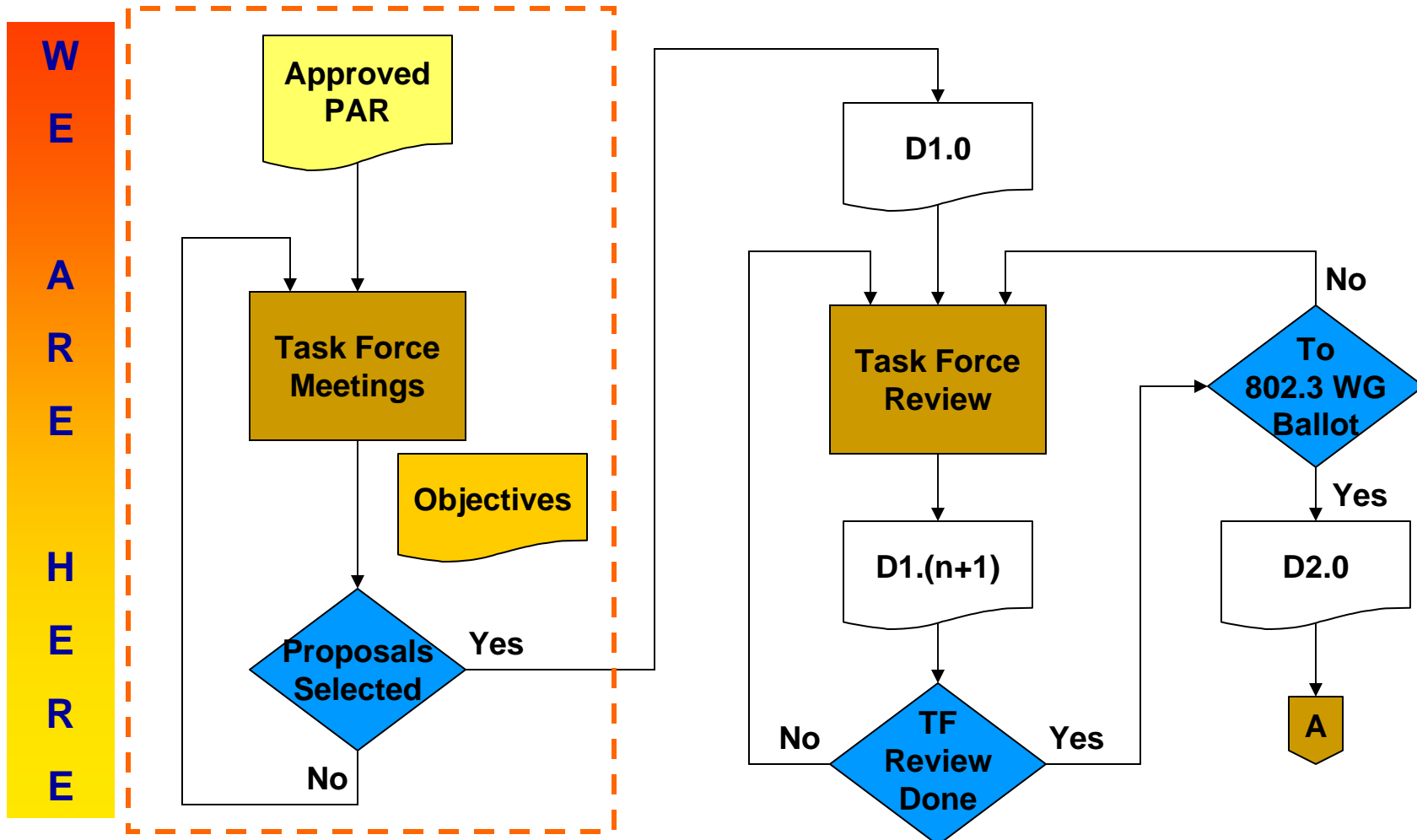
- **All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.**
 - **Don't discuss the interpretation, validity, or essentiality of patents/patent claims.**
 - **Don't discuss specific license rates, terms, or conditions.**
 -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

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.

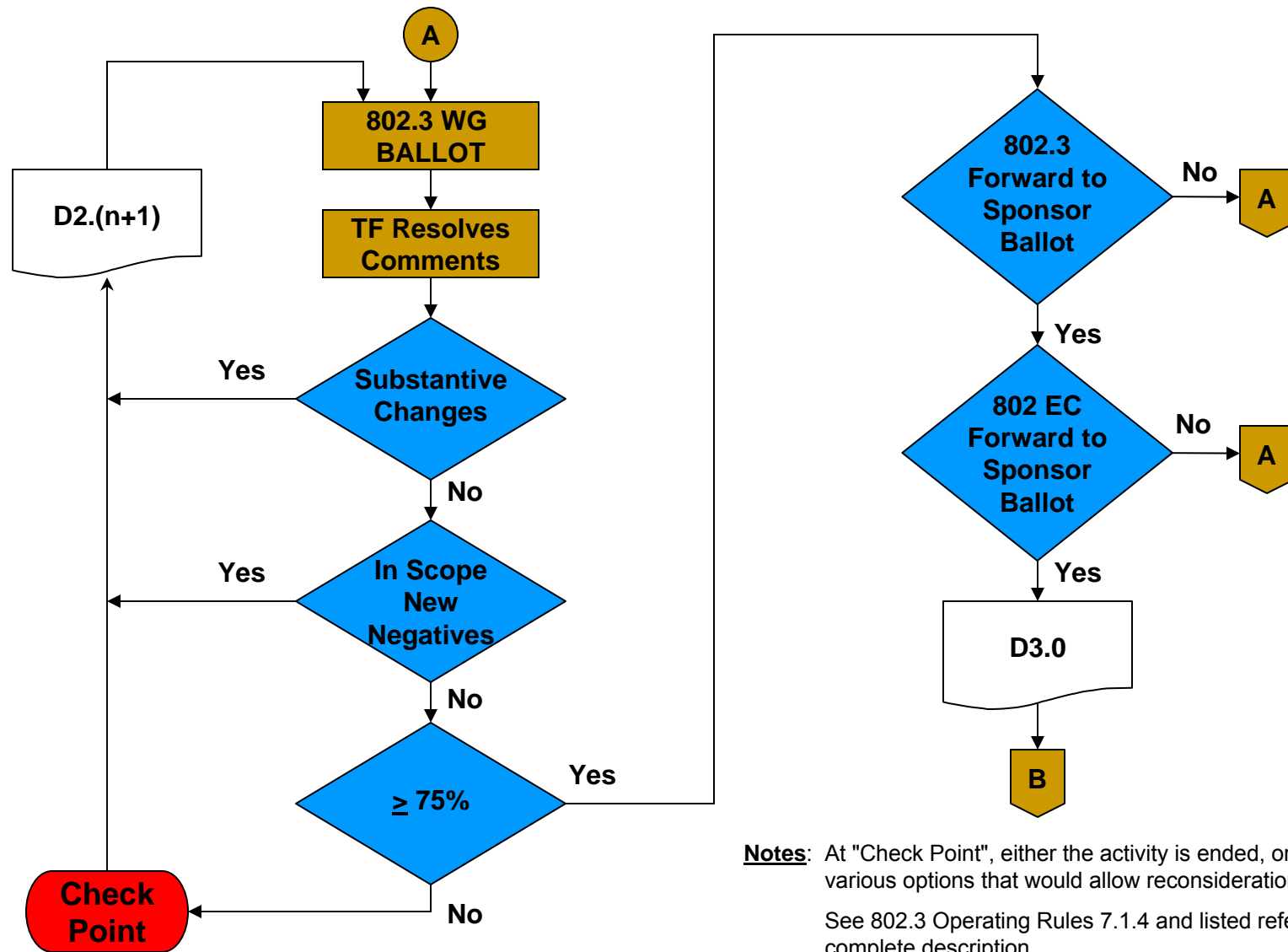
Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase



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

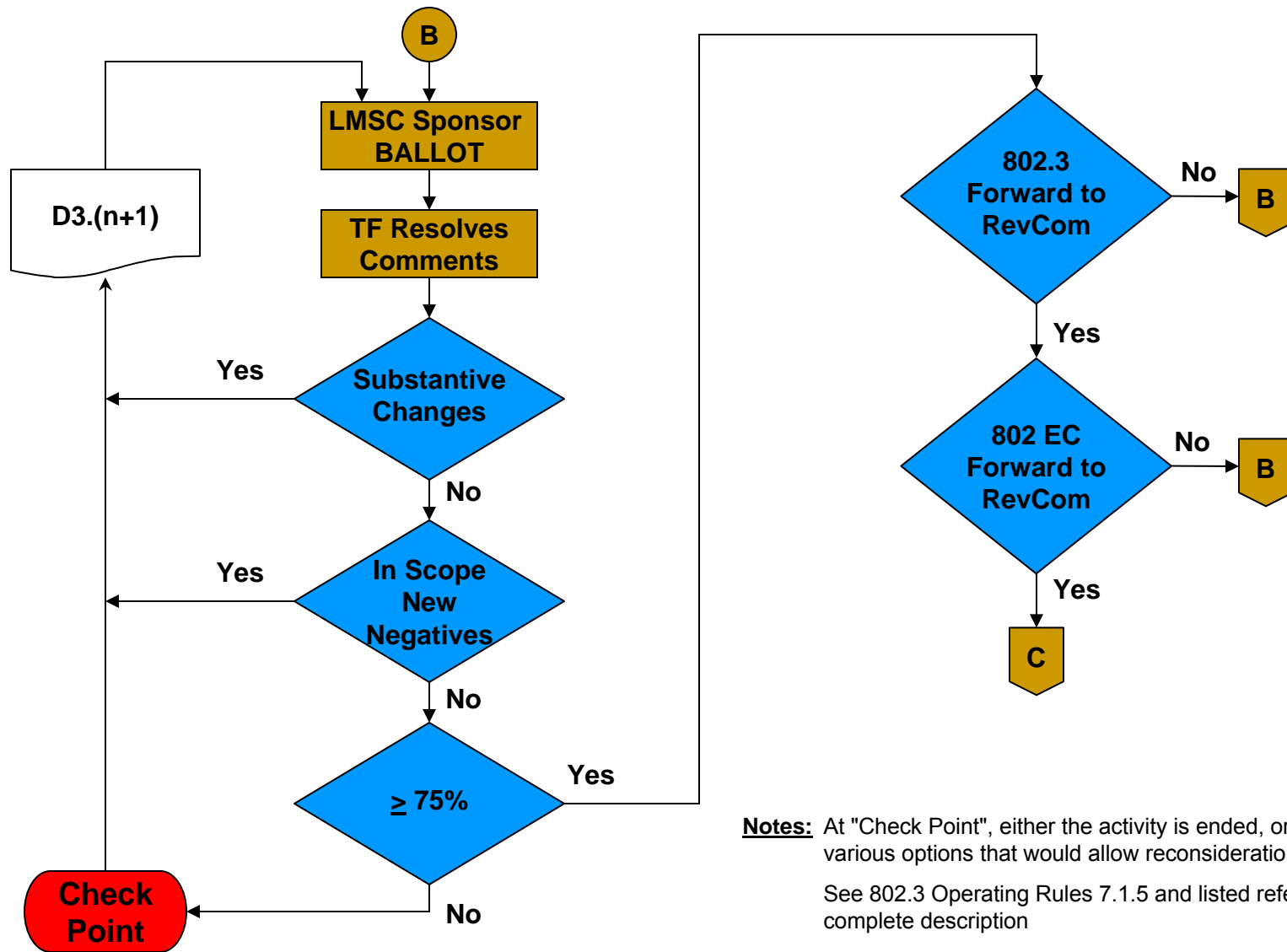


Overview of IEEE 802.3 Standards Process (3/5) - Working Group Ballot Phase



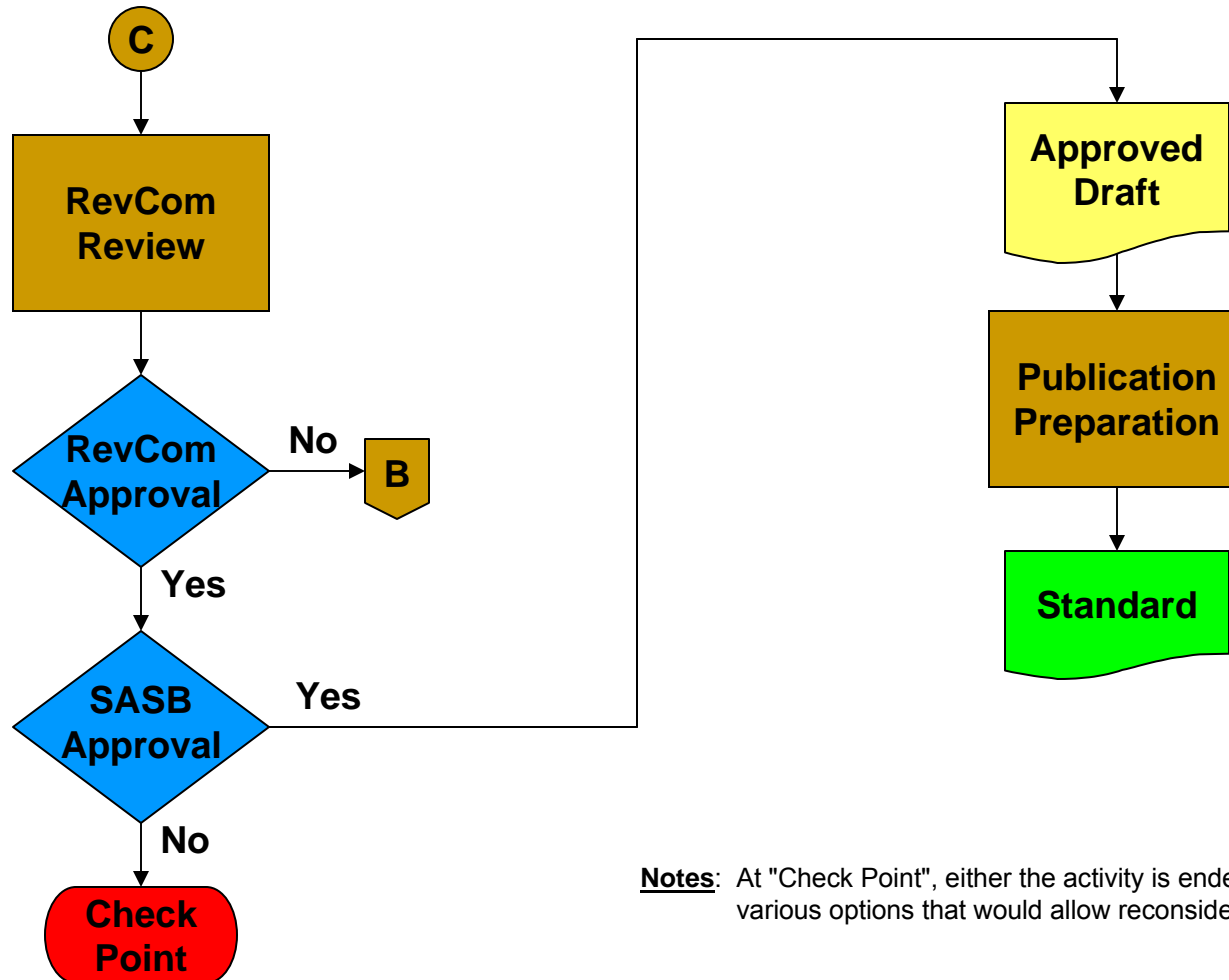
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval. See 802.3 Operating Rules 7.1.4 and listed references for complete description

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



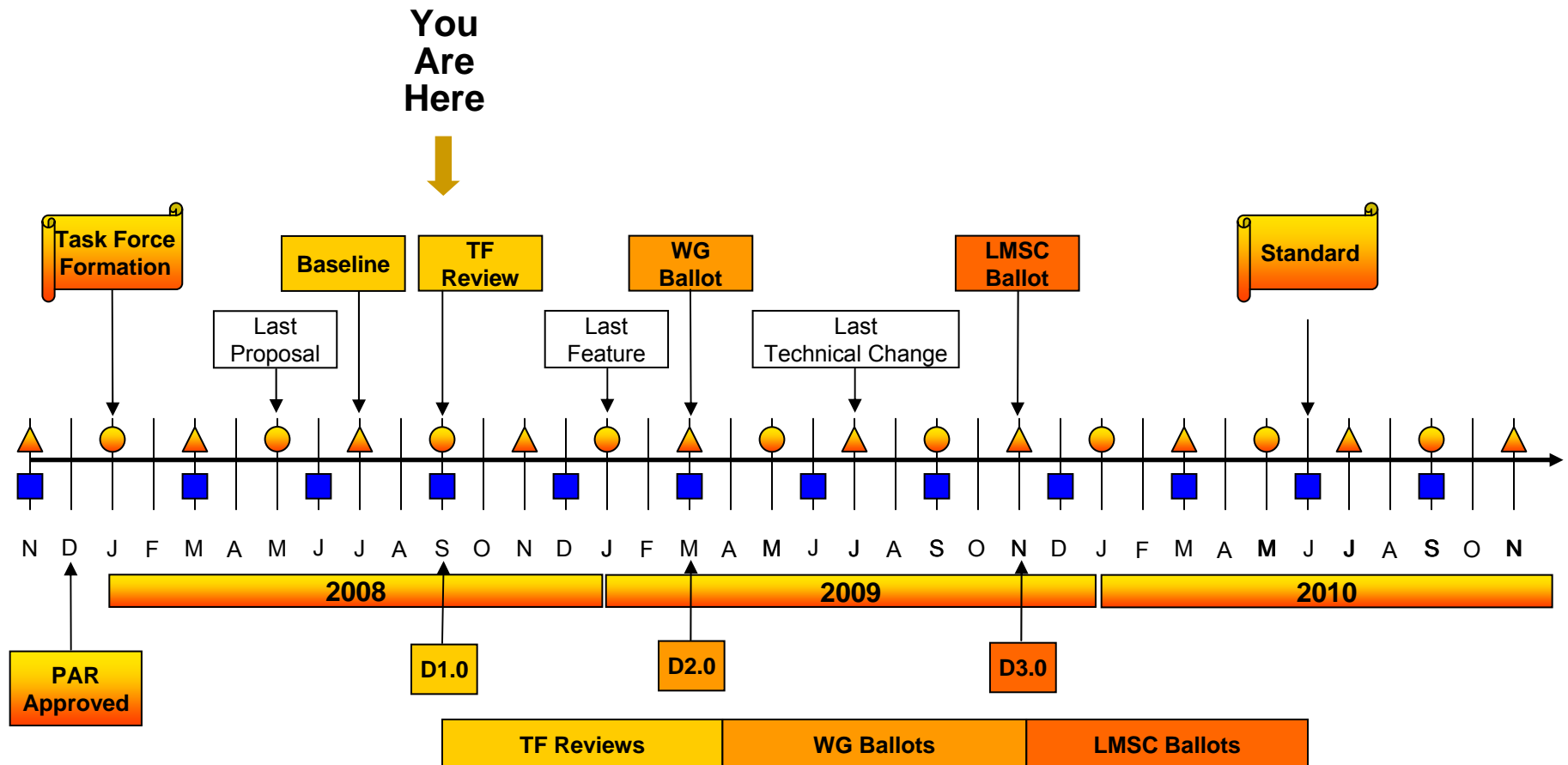
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval. See 802.3 Operating Rules 7.1.5 and listed references for complete description

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.

IEEE P802.3ba Task Force Timeline



* Adopted by IEEE P802.3ba TF at March 08 Plenary

Legend	
▲	IEEE 802 Plenary
●	IEEE 802.3 Interim
■	IEEE-SA Standards Board

Working Towards Draft 1.0

- **Motion #9 (July 08)**: Request that the 802.3ba editorial team create a draft based on adopted baseline proposals for circulation prior to the September 2008 interim meeting

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- Moved by: Hugh Barrass
- Second by: Matt Traverso
- Technical ($\geq 75\%$)

- Results All (y/n/a): 150 / 0 / 1
 802.3 (y/n/a): 80 / 0 / 0

- Draft 0.9 released August 25, 2008
- Goals for this meeting –
 - Review D0.9
 - Does proposed text reflect adopted proposal?
 - Note necessary modifications
 - Based on review of D0.9 create and adopt Draft 1.0 as baseline
 - Does not need to be technically complete

Task Force Review

- Goals for Task Force Review
 - produce a technically complete draft
 - produce a draft with no open technical issues
- What is complete?
 - All objectives are met
 - All of 5C are met
 - PAR Title, Scope, Purpose, Need are met
 - All essential requirements are definitively stated
- Goal for Task Force Review – Get to WG Ballot
- Right now for Draft 0.9 – all objectives are not met!
 - $40G \geq 10\text{km}$ SMF objective

40G \geq 10km SMF: What are the Scenarios

■ Best Case

- ❑ Adopt a proposal / text in Sept 08
- ❑ No added risk to WG Ballot in Mar 09

■ Worst Case

- ❑ No proposal / text adopted and objective remains
- ❑ Takes up meeting time at Nov Plenary
- ❑ Miss two review cycles if decision made in Nov
- ❑ Adds risk to getting approval to go to WG Ballot in Mar 09
- ❑ Potential 4 month slip

40G \geq 10km SMF Objective

- Three proposals
 - 40GBASE-LR (serial)
 - 40GBASE-LR2 (2x20)
 - 40GBASE-LR4 (4x10)
- Strawpolls #5 / #6 (July 08) indicate \approx 2:1 support for 40GBASE-LR4 proposal over other proposals
- Motion #8 (July 08) to adopt 40GBASE-LR4 fails. All(y/n/a): 81/38/31, 802.3(y/n/a) 52/22/8

Presentations – Tuesday, Sept 16

Time	Presenter	Affiliation	Title	File Name
8:30 AM	John D'Ambrosia	Force10	Agenda and General Information	agenda_01_0708.pdf
9:05 AM	Ilango Ganga	Intel	Chief Editor's Report	ganga_01_0908.pdf
9:40 AM	Piers Dawe	Avago	Statistical Eye Ad Hoc	dawe_02_0908.pdf
10:05 AM			Break	
10:20 AM	John Petrilla	Avago	802.3ba xr ad hoc status	petrilla_01_0908.pdf
10:35 AM	Wael Diab	Broadcom	Tutorial - Comments and Comment Entry Tool	diab_01_0908.pdf
11:05 AM	Alessandro Barbieri	Cisco Systems	40GbE Market: Timing and Opportunity	barbieri_01_0908.pdf
11:30 AM	Piers Dawe	Avago	Improved specifications for 40GBASE-LR2 40 Gb/s PMD for 10 km duplex SMF	dawe_01_0908.pdf
12:00 PM			Lunch	
1:30 PM	Kiyoo Hiramoto	Opnext	Demonstration of 40Gb/s 1310nm EA- DFB Laser feasibility for 40GbE 10km SMF application	hiramoto_01_0908.pdf
1:50 PM	Kazuyuki Mori	Fujitsu Labs	RFInterconnection Technologies for 40G Serial	mori_02_0908.pdf
2:10 PM	Kazuyuki Mori	Fujitsu Labs	Merits of a 40GbE serial solution for the 40GbE 10km SMF PMD objective	mori_01_0908.pdf
2:40 PM	Chris Cole	Finisar	40GE 10km SMF PMD Specifications	cole_01_0908.pdf
3:00 PM			Break	
3:20 PM	Ali Ghiasi	Broadcom	4x10G vs Serial 40G SerDes Maturity and Cost	ghiasi_01_0908.pdf
3:45 PM	Ryan Latchman	Gennum	40G SMF Analysis - XLAUI CDR vs 40G Mux / Demux	latchman_01_0908.pdf
4:05 PM	Chris Cole	Finisar	40GE 10km SMF PMD Alternatives	cole_02_0908.pdf
4:35 PM	Arlon Martin	Kotura	Advances in Silicon Photonics Muxs for CWDM and LAN WDM Applications	martin_01_0908.pdf
5:00 PM	Eddie Tsumura	Excelight	Feasibility Study of 4x10G CWDM - Potential Evolution of Technology	tsumura_01_0908.pdf
5:25 PM	Henk Steenman	AMS-IX	One Enduser's Perspective on 40GE SMF	steenman_01_0908.pdf
5:40 PM	Mark Nowell	Cisco Systems	40GbE SMF Recommendations	nowell_01_0908.pdf
6:10 PM			Discussion and Straw Polls	
7:00 PM			Break	

Note – Order of presentations and times listed are subject to change.

Presentations – Wed, Sept 17

Time	Presenter	Affiliation	Title	File Name
8:30 AM			Opening Comments	
8:35 AM			Motion(s) Related to 40G =>10km SMF Objective Only	
10:00 AM			Break	
10:30 AM	Ali Ghiasi	Broadcom	SFP+ Compliance Boards Requirements and Construction	ghiasi_02_0908.pdf
10:40 AM	Mike Dudek	JDSU	TP1 and TP4 Testing with Compliance Boards	dudek_01_0908.pdf
10:50 AM			Review	
12:00 PM			Lunch	
1:30 PM			Review	0
3:00 PM			Break	
3:20 PM			Review	
5:30 PM			Break	
5:50 PM			Review	
7:30 PM			Dinner	
9:00 PM			Review	
???			Break	

Note – Order of presentations and times listed are subject to change.

Presentations – Thurs Sept 18

Time	Presenter	Affiliation	Title	File Name
8:30 AM			Opening Comments	
8:35 AM			Review	
10:00 AM			Break	
10:20 AM			Review	
12:00 PM			Lunch	
1:30 PM			Review	0
3:00 PM			Break	
3:20 PM			Review	
5:30 PM			Break	
5:50 PM			Review	
7:30 PM			Dinner	
9:00 PM			Review	
???			Break	

Note – Order of presentations and times listed are subject to change.

Presentations – Fri, Sept 19

Time	Presenter	Affiliation	Title	File Name
8:30 AM			Opening Comments	
8:35 AM			Review	
10:00 AM			Break	
10:20 AM			Review	
12:00 PM			Lunch	
1:30 PM			Discussions & Motions	
3:00 PM			Break	
3:20 PM			Discussions & Motions	
If Time Allows	Paul Kolesar	CommScope	The Case for Extended Reach MM Objectives	kolesar_01_0908.pdf
If Time Allows	Alan Flatman	LAN	Long Data Centre Links vs Length	flatman_01_0908.pdf
4:00 PM			Closing Business	
5:00 PM			Adjourn	

Note – Order of presentations and times listed are subject to change.

Meeting Attendance

- The IEEE-SA Meeting Attendance Tool will be the basis of the official attendance record for this meeting

- To use the tool, you must have an IEEE Web Account
 - A tutorial on how to acquire an IEEE Web Account and use the Meeting Attendance Tool is available at...
 - http://iee802.org/3/minutes/jul08/0708_attendance_tool.pdf

Points of emphasis

- Your login is the primary e-mail address specified in your IEEE Web Account
 - The first time you login to the system, you will be asked to create a password
 - This password only applies to this meeting week, and it does not have to be your IEEE Web Account password
 - Use the same login and password throughout the meeting week

- You need to login only once per meeting day
 - You are certifying that you are attending a "substantial" portion of the meeting day

Contact information

- A participants web account information will be the official record for contact information
 - This information may be updated at any time by the participant
 - It is not subject to errors during transcription of a written record

- To obtain and maintain voting membership, you must maintain correct contact information in the official record

September 2008 specifics

- The Meeting Attendance Tool server for this meeting is...
 - <http://seabass.ieee.org/imat/>
- You must attend 3 meeting days, and declare affiliation, to receive meeting credit
 - Qualified interims are 3 or 4 days in duration
 - Ignore the calculated credit percentage displayed by the tool; it is based on a 5 day meeting week
- Christina Sahr will be on site to support participants with Web Account and Attendance Tool issues
 - Third floor foyer

Voting privileges

- The rules regarding obtaining and maintaining that privilege are found here:
<http://www.ieee802.org/3/rules/member.html>

- To become a voter:
 - Complete and current contact information recorded in the Working Group 802.3 database.
 - You must attend and sign attendance book for at least 75% of sessions of two 802.3 WG plenary meetings (within the last four)
 - Full attendance at a two-day 802.3 WG Interim can be substituted for one Plenary
 - Request to become a voter during the opening or closing Plenary meeting when solicited by the Chair from the “potential voters list”

- To remain a voter
 - Maintain Complete and current contact information in the Working Group 802.3 database.
 - Have 75% attendance during at least two of the last four plenaries
 - Attendance at an interim can substitute for attendance at no more than 1 plenary
 - Participate in Working Group ballots.
 - You can be dropped for lack of participation !

Remember to Declare Your Affiliation

- From the IEEE SA Standards Board By-laws

- **5.2.1.5 Disclosure of affiliation** (<http://standards.ieee.org/guides/bylaws/sect5.html#5.2.1.5>)

- Every member and participant in a working group, Sponsor ballot, or other standards development activity shall disclose his or her affiliation. An individual is deemed "affiliated" with any individual or entity that has been, or will be, financially or materially supporting that individual's participation in a particular IEEE standards activity. This includes, but is not limited to, his or her employer and any individual or entity that has or will have, either directly or indirectly, requested, paid for, or otherwise sponsored his or her participation. Failure to disclose every such affiliation may result in complete or partial loss of rights to participate in IEEE-SA activities. An individual is not excused from compliance with this policy by reason of any claim of a conflicting obligation (whether contractual or otherwise) that prohibits disclosure of affiliation.

- From the IEEE SA Standards Board Operations Manual

- **5.3.3.1 Disclosure of affiliation** (<http://standards.ieee.org/guides/opman/sect5.html#5.3.3.1>)

- Each participant's affiliation shall be disclosed at any working group or project meeting. The chair or the chair's delegate shall inform the meeting of the requirement for disclosure of affiliation (see [5.2.1.5](#) of the *IEEE-SA Standards Board Bylaws*). This shall be via a sign-in (e.g., sign-in sheet, electronic sign-in, verbal disclosure, or electronic communication) that provides for disclosure of employer and any other affiliation, a reminder of the definition of affiliation, and possible penalties for non-compliance.

Whenever an individual is aware that the ownership of his or her employer or other affiliation may be material to the process, or when the Sponsor or the IEEE-SA Standards Board requests, that individual shall also declare the "ultimate parent entity" of their affiliation. The ultimate parent entity is an entity that directly or indirectly, through one or more intermediaries, controls the entity identified as the individual's affiliation. For the purposes of this definition, the term "control" and its derivatives, with respect to for-profit entities, means the legal, beneficial or equitable ownership, directly or indirectly, of more than fifty percent (50%) of the capital stock (or other ownership interest, if not a corporation) of an entity ordinarily having voting rights. "Control" and its derivatives, with respect to nonprofit entities, means the power to elect or appoint more than fifty percent (50%) of the Board of Directors of an entity.

- **5.3.3.2 False or misleading disclosure** (<http://standards.ieee.org/guides/opman/sect5.html#5.3.3.2>)

- A meeting attendee who fails to disclose affiliation shall not accrue any membership rights, including rights of or towards voting membership, until such disclosures have been made. The chair shall review the adequacy of disclosures. Failure to disclose affiliation, or materially false or misleading disclosure of affiliation, shall result in loss of membership privileges and may also result in loss of other participation privileges within the IEEE-SA for such participants and any affiliated entities

Future Meetings

<http://iee802.org/3/interims/index.html>

- Nov 2008 Plenary
 - Nov 10 – 13
 - Hyatt Regency Dallas at Reunion
 - Dallas, Tx, USA
- Jan 2009 Interim
 - Jan 12 - 16
 - New Orleans, LA
- March 2009 Plenary
 - March 8 – 13
 - Hyatt Regency Vancouver and Fairmont Hotel
 - Vancouver, BC, Canada



Thank You!

