



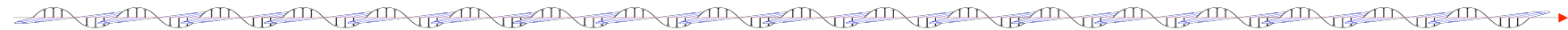
Agenda and General Information

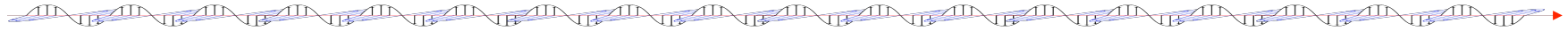
IEEE 802.3 40 Gb/s and 100 Gb/s Fiber Optic Task Force

Dan Dove

Applied Micro

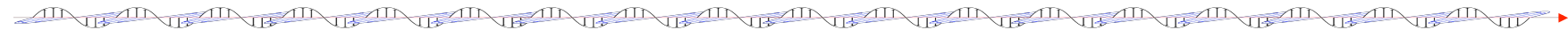
Geneva, CH – 26, 28 September 2012





Agenda

- Appointment of Recording Secretary
- Confirmation of Chair
- Welcome and Introductions
- Approve Agenda
- Approve Minutes of July Plenary Meeting
- Goals for this meeting
- Big Ticket Items
- Reflector and Web
- Ground Rules
- IEEE
 - Structure, Bylaws and Rules
 - Call for Patents
 - IEEE Standards Process
- Liaisons and Communications
- Review of Action Items from July Meeting
- Presentations
- Motions and Closing Business
- Future Meetings





Task Force Decorum

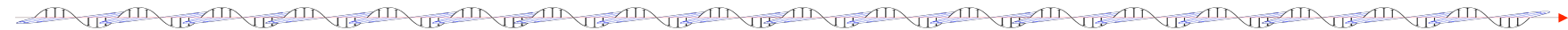


- Photography or recording by permission only (2010 SASB Op Manual 5.3.3.4)
- Cell phone ringers off
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (5.3.3.5)
- Wear your badges at all times in meeting areas
 - Help the hotel security staff improve the general 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

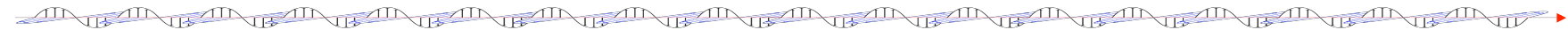
- Presentation of material relevant to our objectives
- Motions & Discussion





Big ticket items

- Review Task Force Operation & Schedule
- Review Ad hoc activities & reports
- Consider baseline proposals
- Consider motions & discussions
- Lay the ground work for the next meeting





Reflector and Web

- To subscribe to the *Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet* reflector, send an email to: ListServ@ieee.org

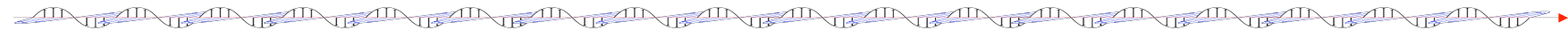
with the following in the body of the message (do not include “<>”):

subscribe stds-802-3-100Goptx <yourfirstname> <yourlastname>
end

- Send *Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet* reflector messages to:

STDS-802-3-100Goptx@LISTSERV.IEEE.ORG

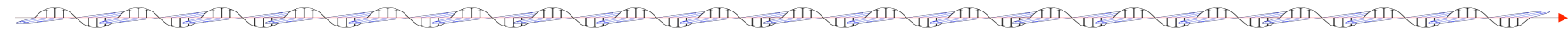
- Task Force web page URL:
<http://www.ieee802.org/3/bm/index.html>





Task Force Private Area

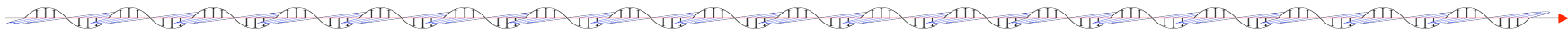
- URL: <http://www.ieee802.org/3/bm/private/index.html>
 - Username: To be provided
 - Password:
 - Write it down...
-
- Note - The draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of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





Ground Rules

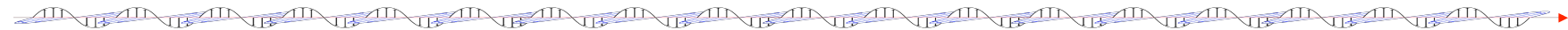
- Based upon IEEE 802.3 Rules
 - Foundation based upon Robert's Rules of Order
 - Anyone in the room may speak
 - Anyone in the room may vote
- **RESPECT**... give it, get it – Do unto others...
- NO product pitches (ex: “LightZippyDoo is the best!”)
- NO corporate pitches (ex: “We Illuminate Your Networks!”)
- NO prices!!!
 - This includes costs, ASPs, etc. no matter what the currency
- NO restrictive notices



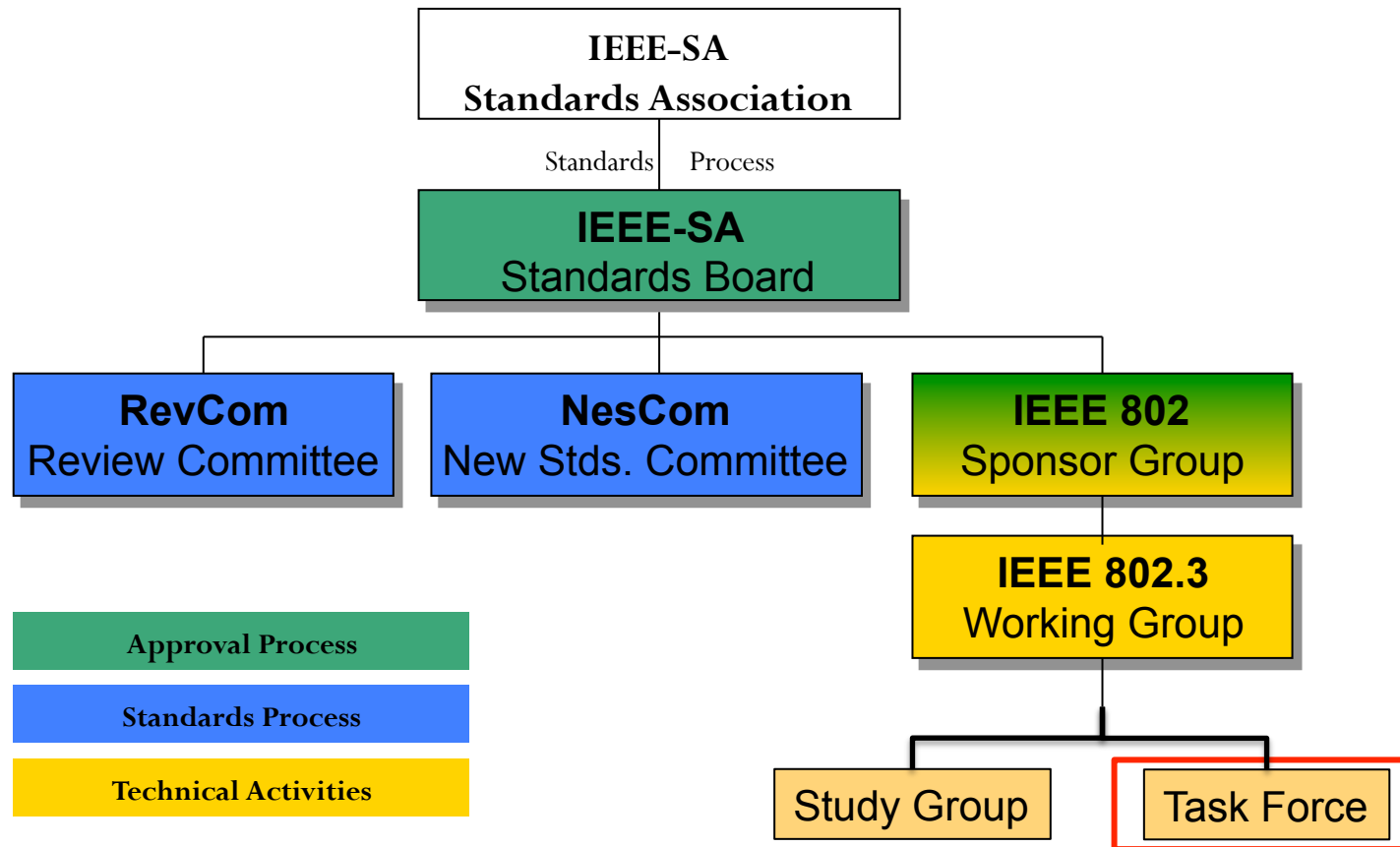


Attendance

- Tutorial Material on attendance tool
 - http://ieee802.org/3/minutes/mar11/0311_imat.pdf
- URL (Valid for this meeting only)
 - URL: <http://imat.ieee.org>
 - Password will be provided



IEEE Structure





Important 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>
- **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
- **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
- **IEEE 802.3 Working Group Operating Rules**
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.

If you have questions, contact the IEEE-SA Standards Board Patent Committee Administrator at 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>

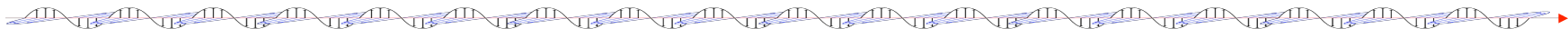




Participants, Patents, and Duty to Inform

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

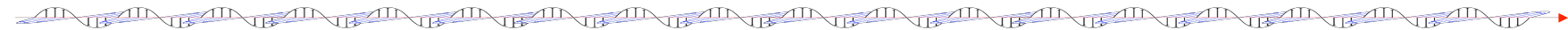
<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>

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 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>

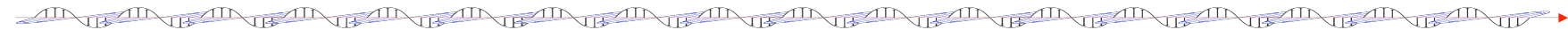




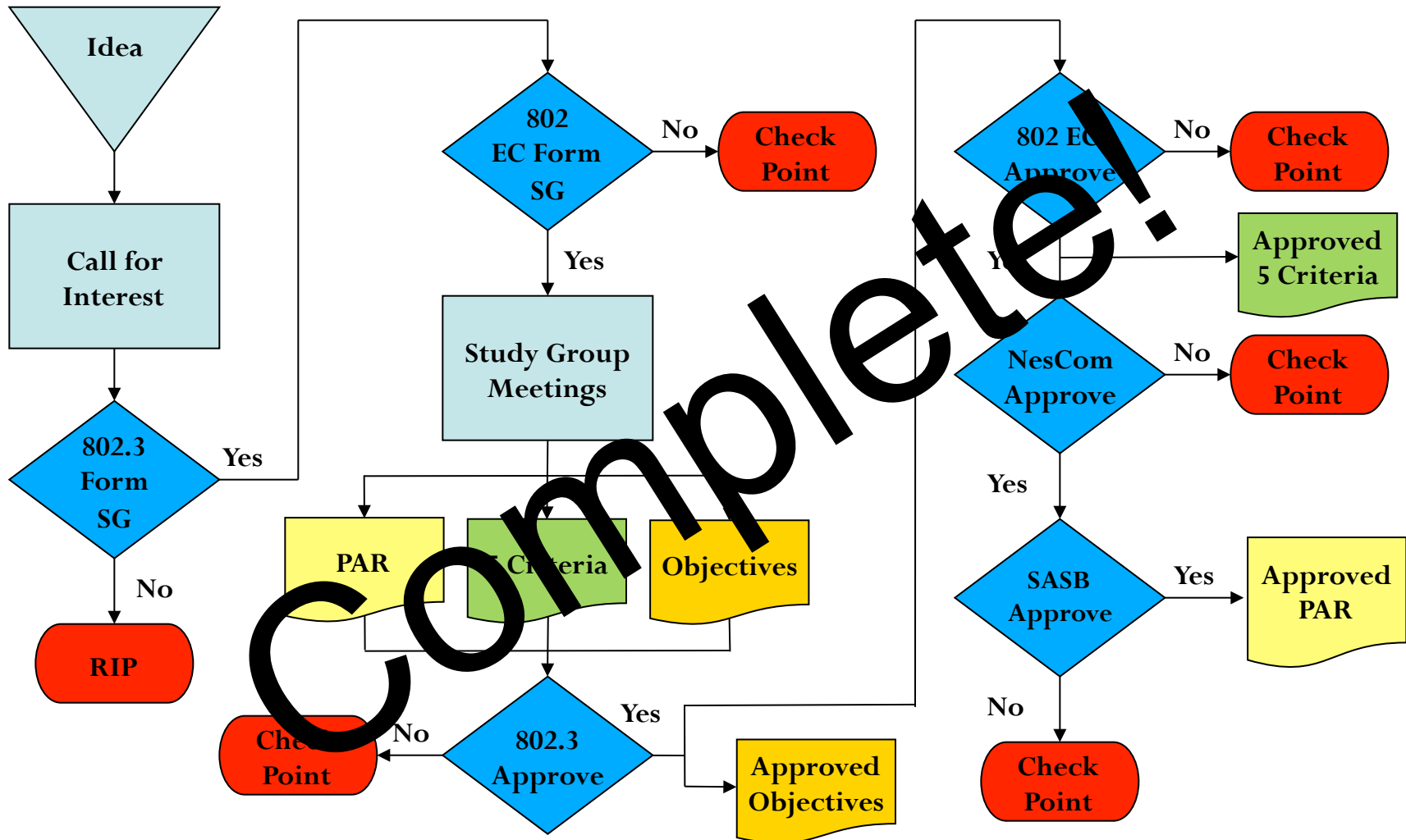
Call for Potentially Essential Patents

- 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

❖ NOTE TO SECRETARY – Record this Call & Response to Call

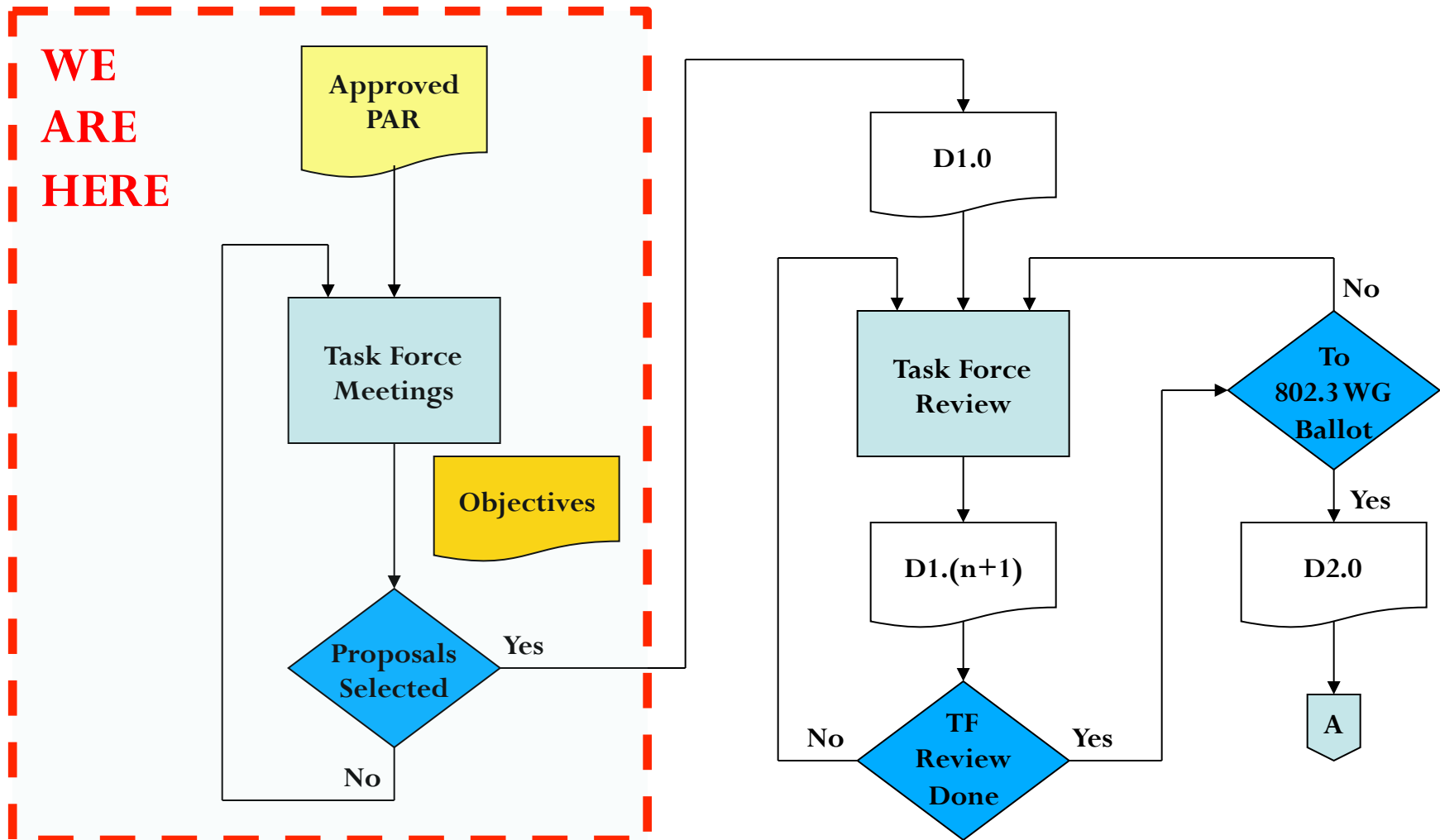


Overview of IEEE 802.3 Standards Process (1/5)- Study Group Phase

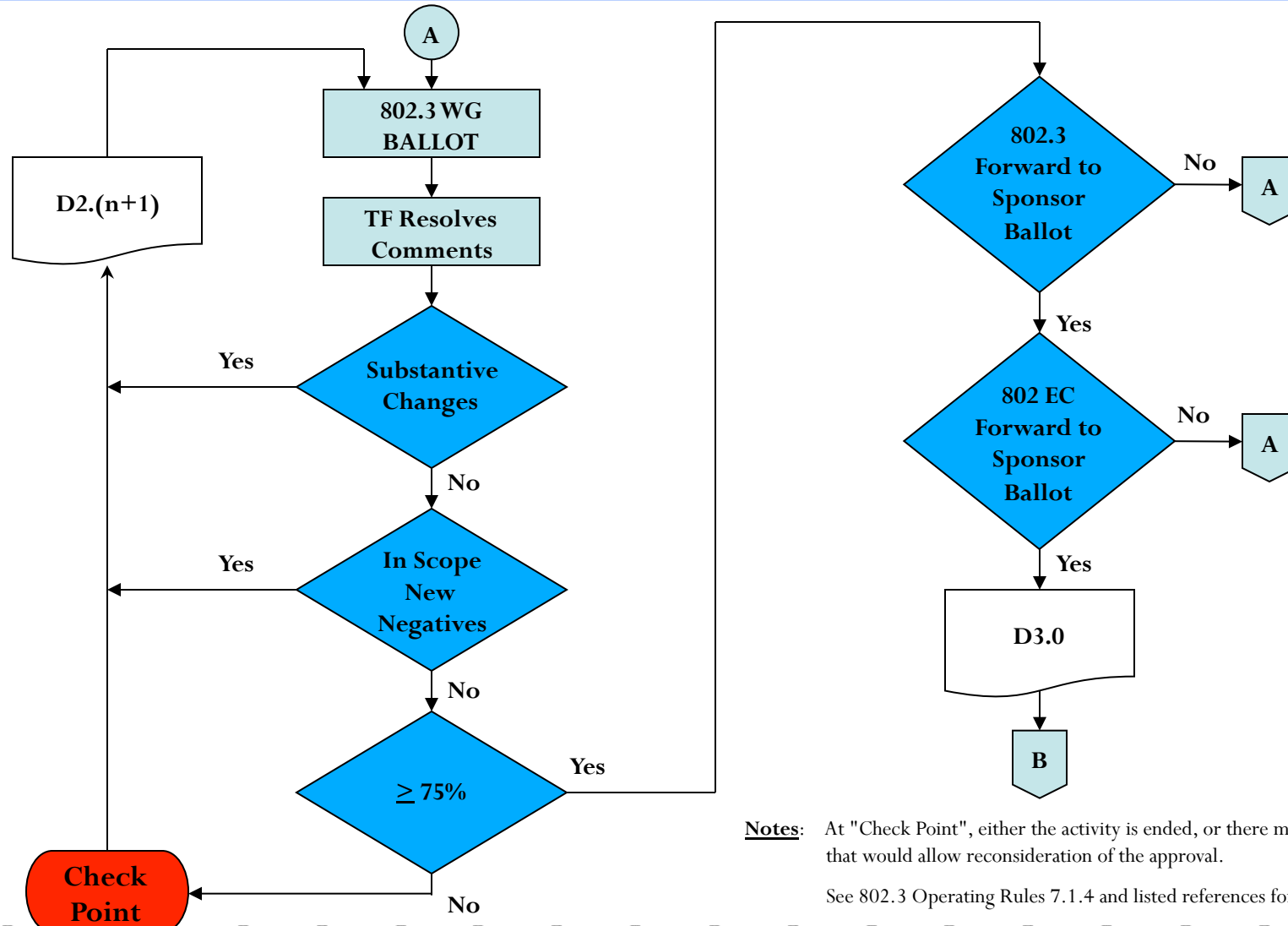


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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



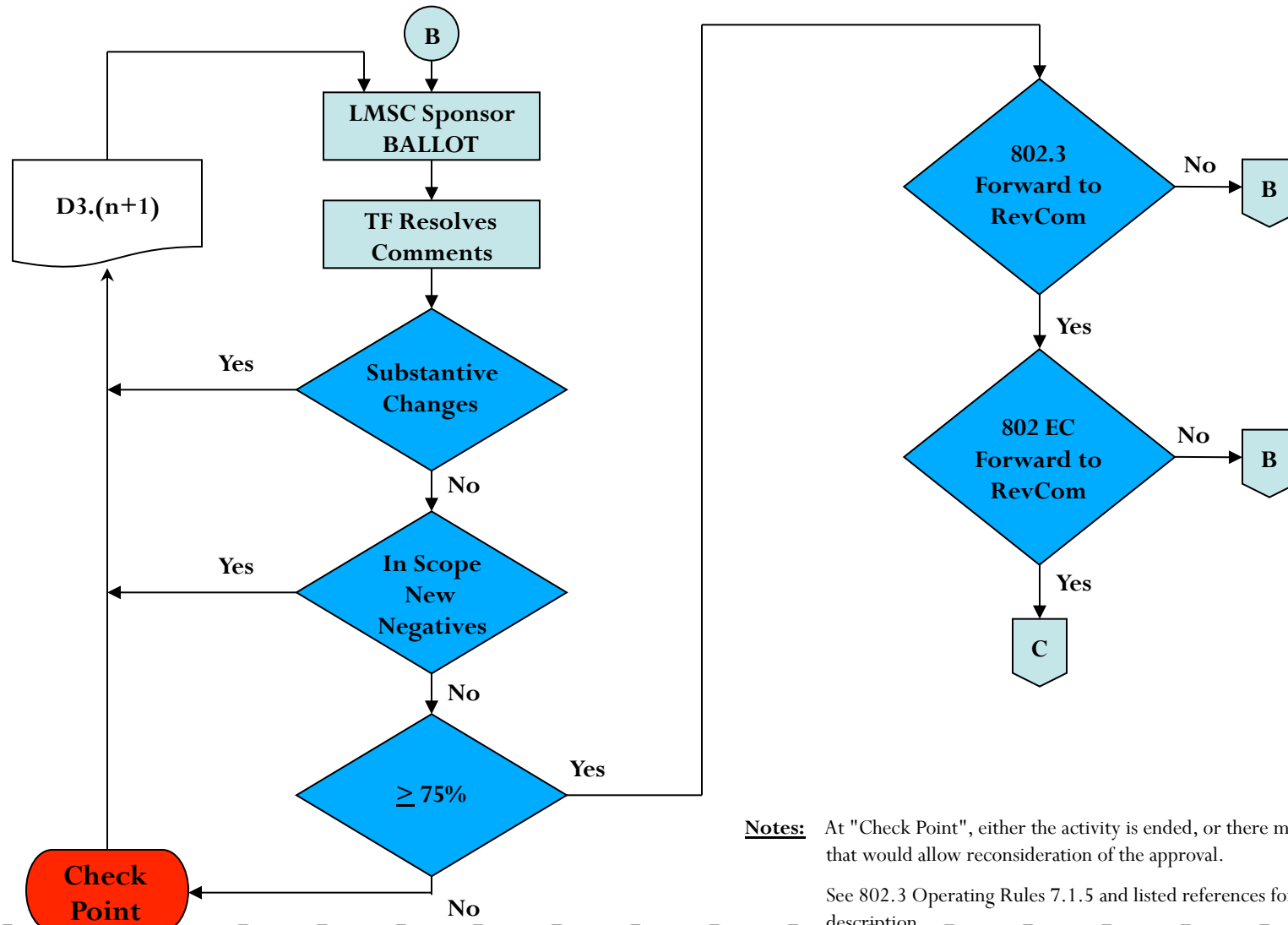
Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



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

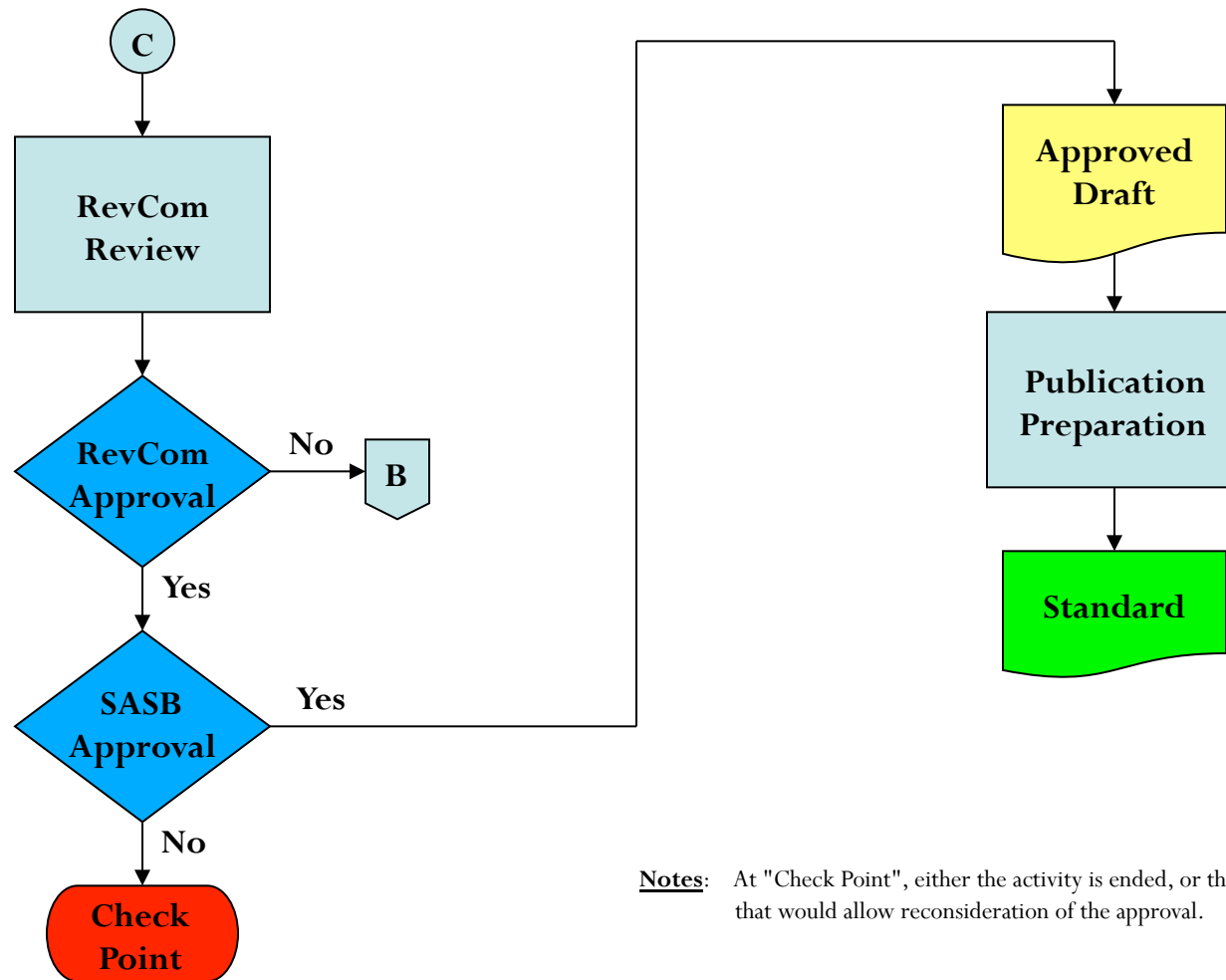
Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



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

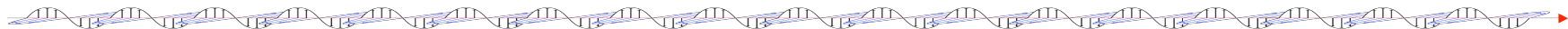


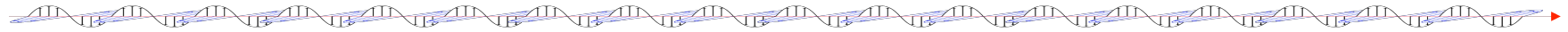
Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.



Liaisons and Communications

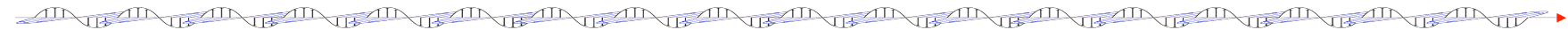
- **P802.3bj/P802.3bm Joint Session**
 - None at this meeting.
- **OIF**
 - Ongoing communications between OIF and IEEE 802.3 initiated by IEEE P802.3ba project
 - In regards to OIF CEI-25G-LR, CEI-28G-SR, CEI-28G-VSR
 - Currently being operated through 802.3 Working Group
- **ITU-T**
 - Proposed liaison activity to ensure alignment.
 - Joint Workshop just held in Geneva, Switzerland in September





Pending Action Items

- None





IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet Approved Project Documents

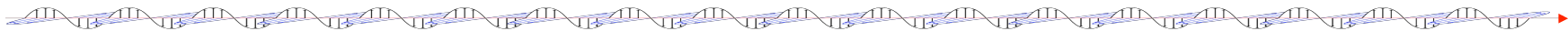
- PAR
 - <http://www.ieee802.org/3/bm/P802.3bm.pdf>
- 5 Criteria
 - <http://www.ieee802.org/3/bm/5Criteria.pdf>
- Objectives
 - <http://www.ieee802.org/3/bm/Objectives.pdf>





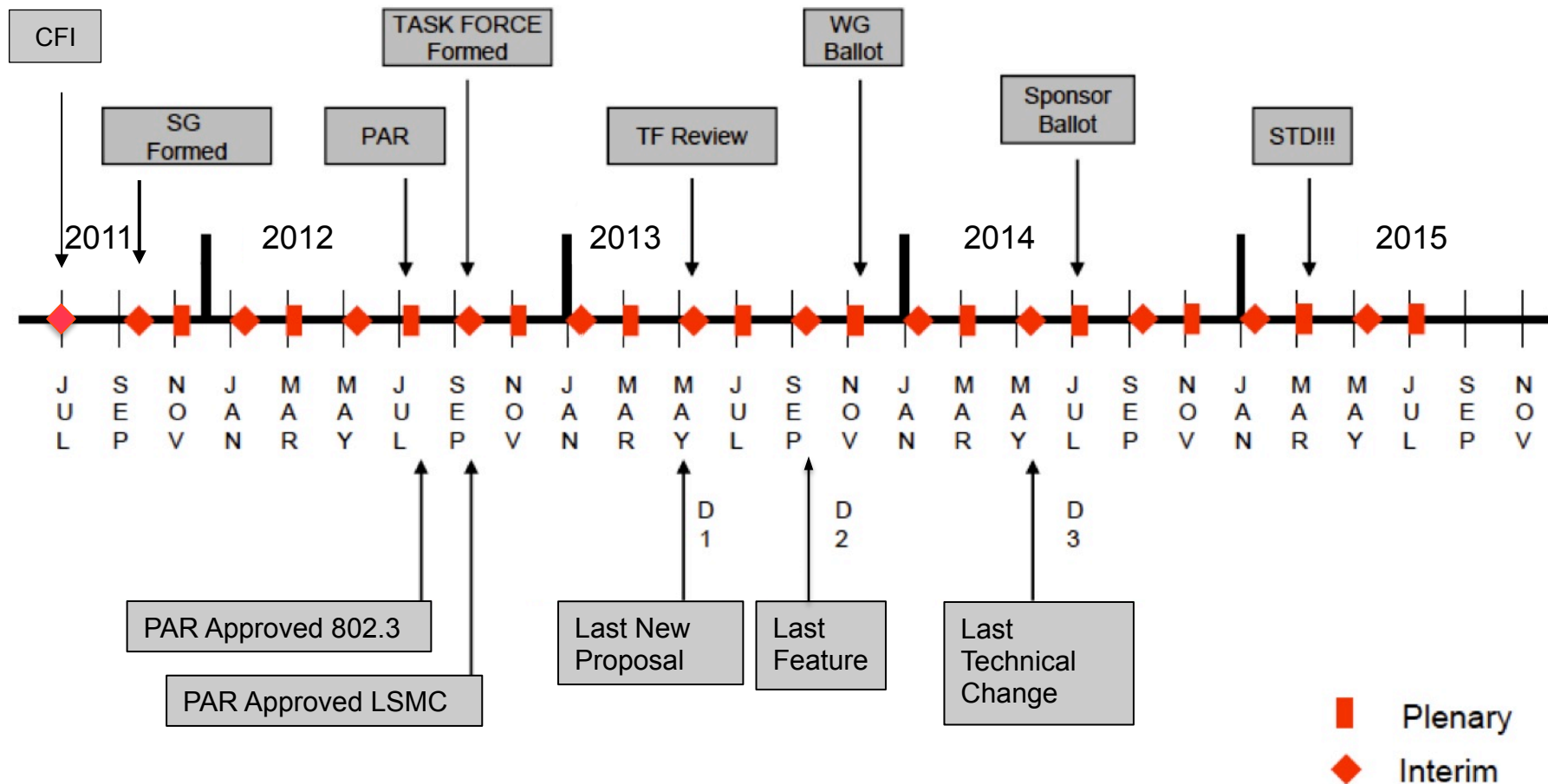
IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet Objectives

- Support full-duplex operation only
- Preserve the IEEE 802.3 / Ethernet frame format utilizing the IEEE 802.3 MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- Provide appropriate support for OTN
- Define re-timed 4-lane 100G PMA to PMA electrical interfaces for chip to chip and chip to module applications
- Define a 40 Gb/s PHY for operation over at least 40 km of SMF
- Define a 100 Gb/s PHY for operation up to at least 500 m of SMF
- Define a 100 Gb/s PHY for operation up to at least 100 m of MMF
- Define a 100 Gb/s PHY for operation up to at least 20 m of MMF



IEEE P802.3bm Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet

Proposed Timeline (Strawman – To be Approved at first TF Meeting)





Wednesday Presentations

Wednesday 26-Sept-2012

Note –Times listed are subject to change.

Wednesday		Start Time	14:30	Discussion Time	15
Presentation Time	Duration	Presenter	Affiliation	Title	Filename
14:30	30	Dan Dove	Applied Micro	Introductions, Review Task Force Operation	dove_01_0912_optx.pdf
15:00	15	Pete Anslow	Ciena	SMF Ad hoc report	anslow_01_0912_optx.pdf
15:30	15	Jonathan King	Finisar	MMF Ad hoc report	king_01_0912_optx.pdf
16:00	15	Hugh Barrass	Cisco	Update on EEE for IEEE P802.3bj	barrass_01_0912_optx.pdf
16:30	15	Mike Bennett	LBNL	EEE for P802.3bm	bennett_01_0912_optx.pdf
17:00	10	BREAK			
17:10	15	Mark Gustlin, Pete Anslow, John Dambrosia	Xilinx Ciena Dell	Update on FEC for IEEE P802.3bj	gustlin_01_0912_optx.pdf
	15	Zhongfeng Wang, Ali Ghiasi	Broadcom Broadcom	FEC Tradeoffs and Analyses for 100G Optical Networking	wang_01_0912_optx.pdf
17:40	0	RECESS Till 8:30am			



Thursday Presentations

Thursday 27-Sept-2012

Note –Times listed are subject to change.

Thursday		Start Time	8:30	Discussion Time	15
Presentation Time	Duration	Presenter	Affiliation	Title	Filename
8:30	15	Dan Dove	Applied Micro	Introductions, Review Task Force Operation	
8:45	15	Ryan Latchman	MindSpeed	CAUI-4 ad hoc	latchman_01_0912_optx.pdf
9:15					
9:45	15	Tom Palkert	Luxtera	Common Copper and optical CAUI4 solution	palkert_02_0912_optx.pdf
10:15		Marco Mazzini, Vinu Arumugham, Gary Nicholl	Cisco Cisco Cisco	4x28G "Asymmetric" electrical interfaces proposal	mazzini_01_0912_optx.pdf
10:45	15	BREAK			
11:00	20	Ali Ghiasi, Fred Tang	Broadcom Broadcom	Options and Simulations of CAUI-4	ghiasi_02_0912_optx.pdf
11:35	15	John Petrilla	Avago Technologies	10GbE Link Model Extensions	petrilla_01_0912_optx.pdf
12:05	60	Lunch			
13:05	15	John Petrilla	Avago Technologies	100G SR4 and RS(528, 514, 7, 10) FEC	petrilla_02_0912_optx.pdf
13:35	20	Piers Dawe	IPTronics	Coordinated proposal for 100GBASE-SR4, 100GBASE-UR4, CPPI-4 and CAUI-4	dawe_01_0912_optx.pdf
14:10	15	Robert Lingle	ofsoptics	How can we recover a common MMF link model?	lingle_01_0912_optx.pdf
14:40	20	Kasyapa Balemarthy	ofsoptics	Clarifying issues related to spreadsheet model vs. full link simulation for 25G on MMF	balemarthy_01_0912_optx.pdf
15:15	20	BREAK			
15:35	20	Toshiki Tanaka	Fujitsu	Discrete Multi-tone Technology for 100G Ethernet	tanaka_01_0912_optx.pdf
16:10		Tom Palkert, Jon Anderson, John Petrilla	Luxtera Oclaro Avago Technologies	PSM4 draft specification tables	palkert_01_0912_optx.pdf
16:40	15	John Petrilla	Avago Technologies	100G PSM4 and RS(528, 514, 7, 10) FEC	petrilla_03_0912_optx.pdf
17:10		Tom Palkert, Jon Anderson, John Petrilla	Luxtera Opnext Avago	100GbE PSM4 Optical Interface Specification – Working View	anderson_01_0912_optx.pdf
17:45	0	RECESS Till 8:30am			



Friday Presentations

Friday 28-Sept-2012

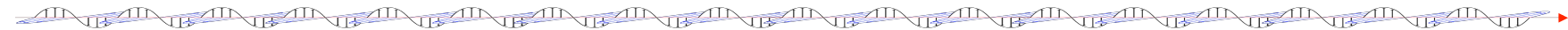
Note –Times listed are subject to change.

Friday		Start Time	8:30	Discussion Time	15
Presentation Time	Duration	Presenter	Affiliation	Title	Filename
8:30	15	Dan Dove	Applied Micro	Introductions, Review Task Force Operation	
8:45	15	Arlon Martin	Kotura	WDM C-Band Recommendation for nR4	martin_01_0912_optx.pdf
9:15	15	Arlon Martin	Kotura	WDM PICs Improve Cost for nR4	martin_02_0912_optx.pdf
9:45	15	Gary Nicholl, Vipul Bhatt	Cisco	Advanced Modulation for Next Gen 100GbE SMF PMD	nicholl_01_0912_optx.pdf
10:15	15	BREAK			
10:30	20	Arash Farhood	Cortina-systems	Optimal Unipolar PAM Solutions for 100G SMF link from Channel Capacity Perspective	farhood_01_0912_optx.pdf
11:05	15	Jinlong Wei, Jonathan Ingham, Richard Penty, Ian White, David Cunningham	University of Cambridge University of Cambridge University of Cambridge University of Cambridge Avago Technologies	Update on Performance Studies of 100 Gigabit Ethernet Enabled by Advanced Modulation Formats	wei_01_0912_optx.pdf
11:35	20	Vipul Bhatt, Sudeep Bhoja, Arash Farhood	Cisco Inphi Cortina	PAM-N Comparison	bhatt_01_0912_optx.pdf
12:05	60	Lunch			
13:05	20	Ali Ghiasi, Brian Welch	Broadcom Luxtera	Feasibility of PAM-4 and PAM-8 for Serial 100 GbE	ghiasi_01_0912_optx.pdf
13:40	15	David Lewis, John Heaton, Jinsong Wang, Beck Mason	JDSU	PAM-8 Eyes at 32 Gsym (96 Gbps)	lewis_01_0912_optx.pdf
14:10	15	BREAK			
14:25	35	Task Force		Motions & Discussion	
15:00	20	BREAK			
15:20	100	Task Force		Motions & Discussion	
17:00	0	Adjourn			



Future Meetings

- See: <http://www.ieee802.org/3/interims/index.html>
- **Monday, November 12th through Thursday, November 15th, 2012**
 - IEEE 802 plenary
 - **Grand Hyatt San Antonio**
 - **San Antonio, TX**
 - **USA**
- **Week of January 21st, 2013**
 - IEEE 802.3 Interim
 - TBD
 - USA
- **Monday, March 18th through Thursday, March 21st, 2012**
 - IEEE 802 plenary
 - **Caribe Royale Hotel**
 - **Orlando, FLA**
 - **USA**
- Anyone interested in hosting a meeting contact Steve Carlson.





Thank You!

