Agenda and General Information

IEEE 802.3

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

Mark Nowell, Cisco

Waikoloa, HI, USA

July 13th-14th, 2015

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.
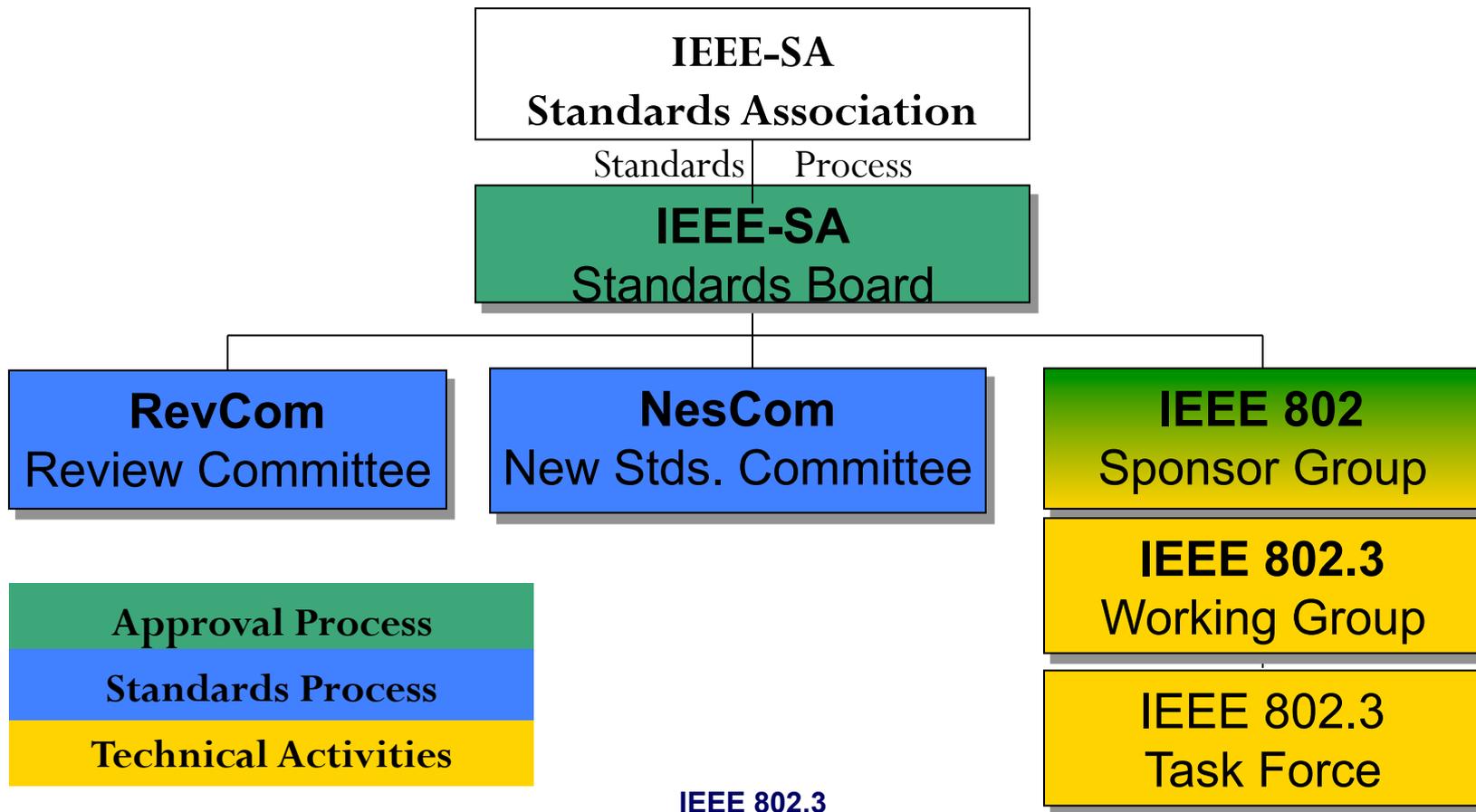
Ground Rules

- 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

- Access details
  - URL: http://imat.ieee.org/
  - Use your imat login
    - (must be on meeting SSID – no VPN)

IEEE Structure

IEEE-SA
Standards Association

Standards | Process

IEEE-SA
Standards Board

RevCom
Review Committee

NesCom
New Stds. Committee

IEEE 802
Sponsor Group

IEEE 802.3
Working Group

IEEE 802.3
Task Force

Approval Process

Standards Process

Technical Activities

IEEE 802.3

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Important Bylaws and Rules

- **IEEE-SA Operations Manual**
  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

IEEE 802.3

Participants, Patents, and Duty to Inform

New

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 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
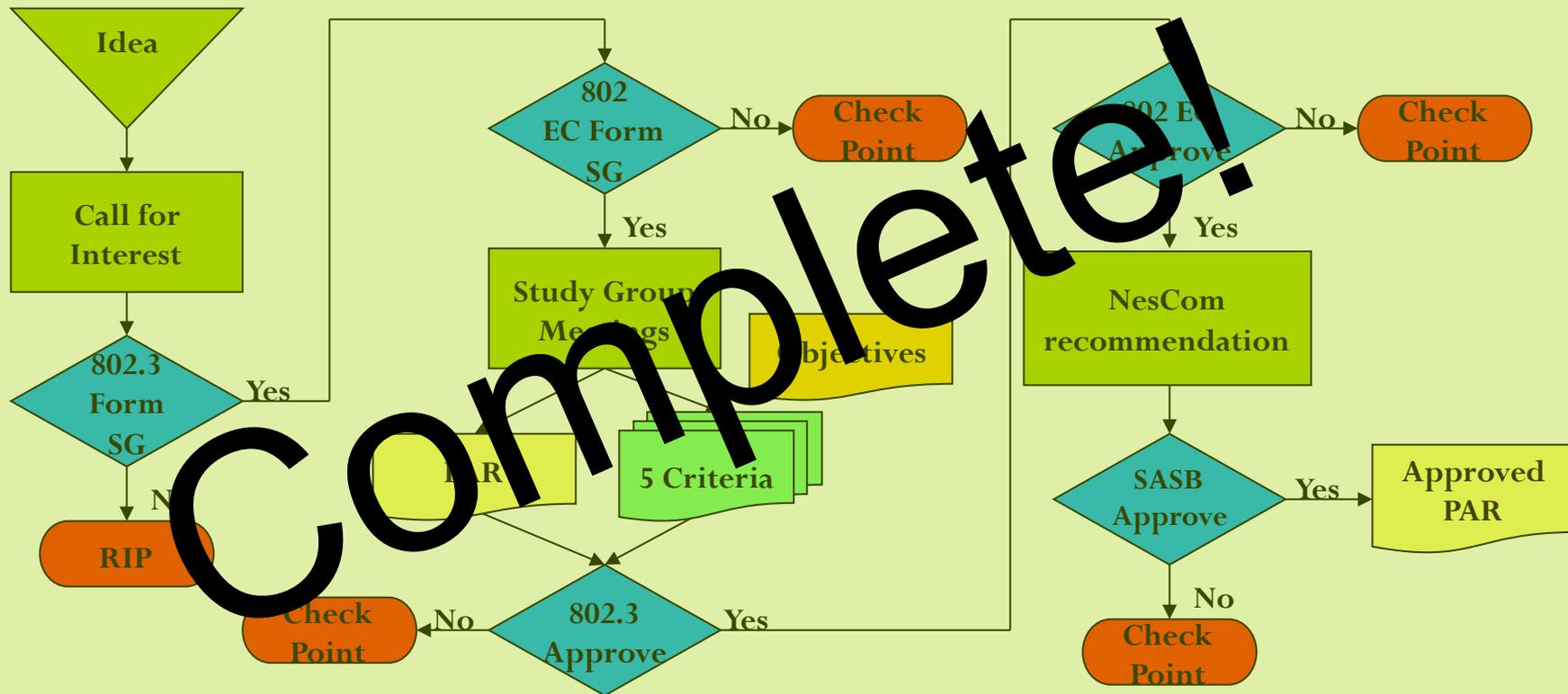
Call for Potentially Essential Patents

- 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

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.**

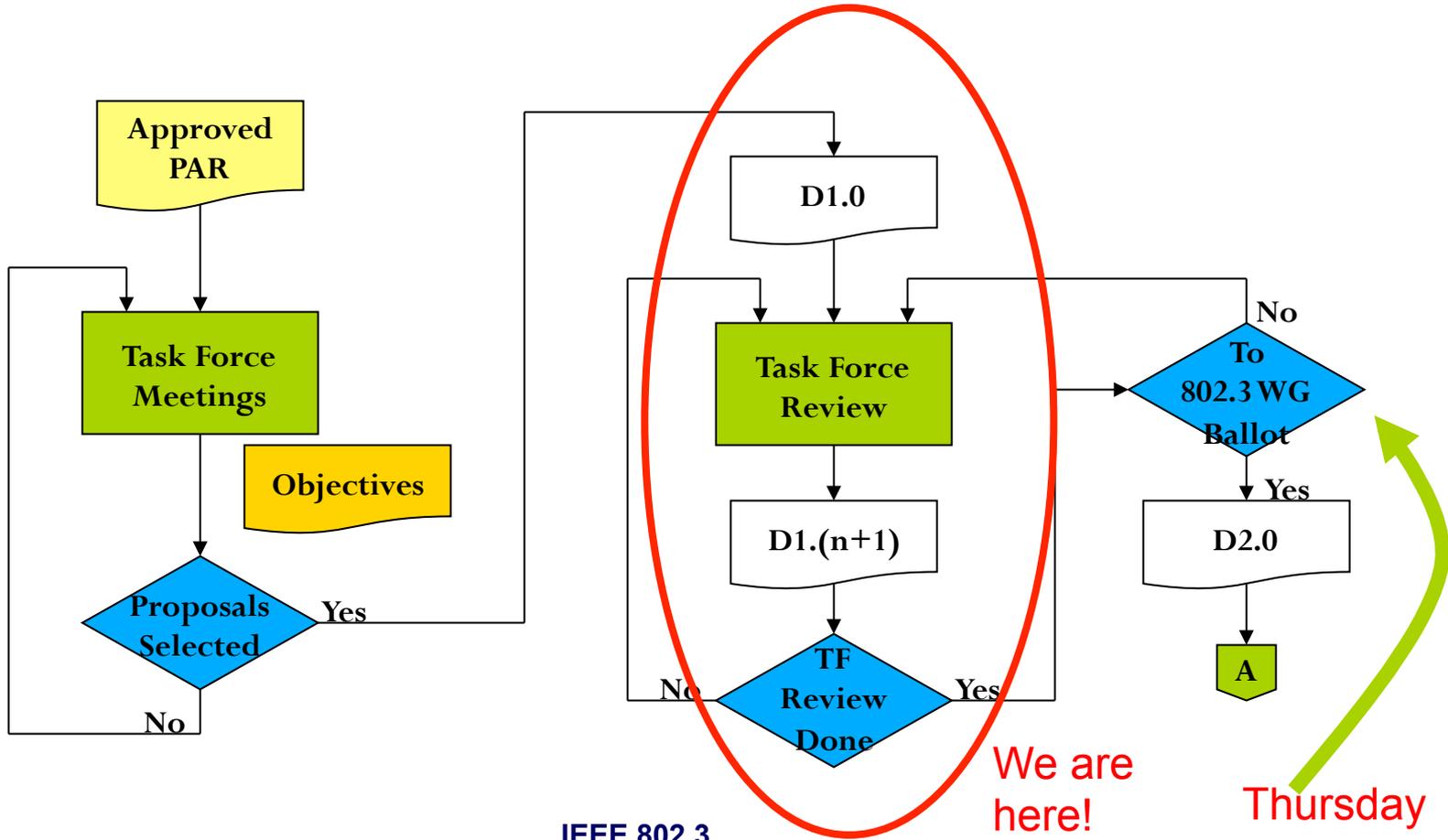 - **Don't be silent if inappropriate topics are discussed … do formally object.**

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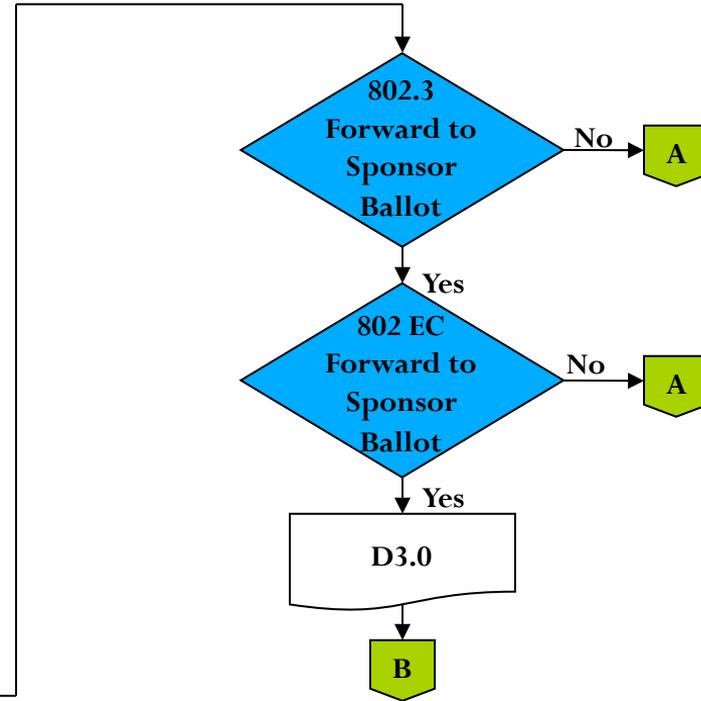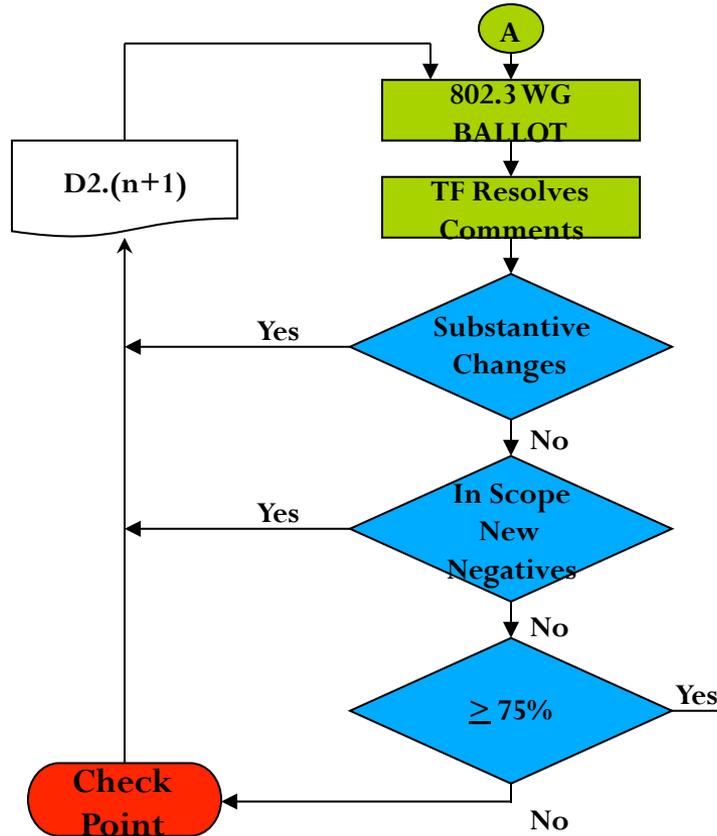
Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

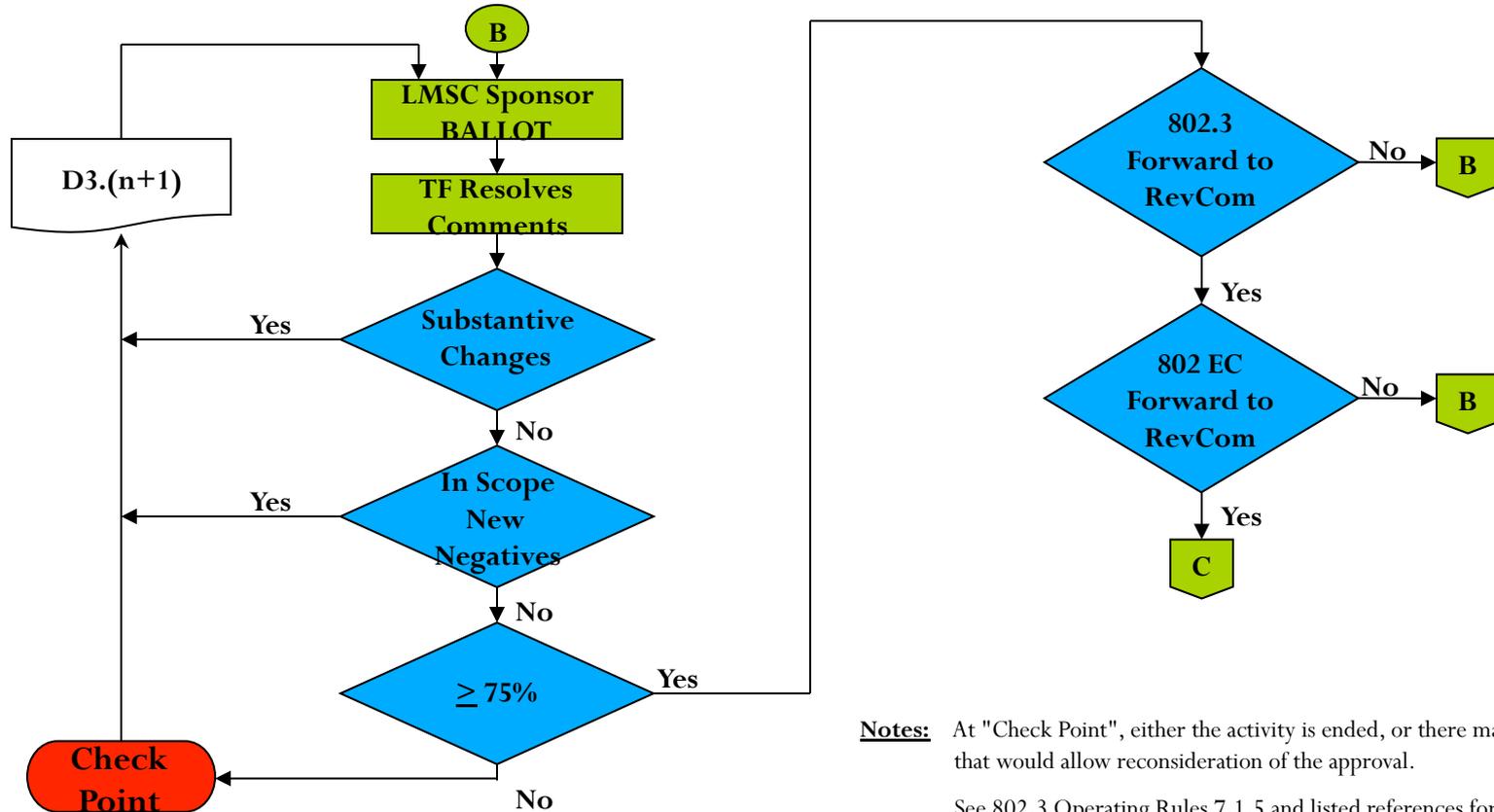# Overview of IEEE 802.3 Standards Process (2/5) – Task Force Comment Phase

Approved PAR

Task Force Meetings

Objectives

Proposals Selected

Yes

No

D1.0

Task Force Review

D1.(n+1)

TF Review Done

No

Yes

To 802.3 WG Ballot

No

Yes

D2.0

A

We are here!

Thursday

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

IEEE 802.3

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

B

LMSC Sponsor BALLOT

TF Resolves Comments

D3.(n+1)

Substantive Changes — Yes

In Scope New Negatives — Yes

≥ 75% — No → Check Point

≥ 75% — Yes

802.3 Forward to RevCom — No → B

802.3 Forward to RevCom — Yes

802 EC Forward to RevCom — No → B

802 EC Forward to RevCom — Yes → C

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

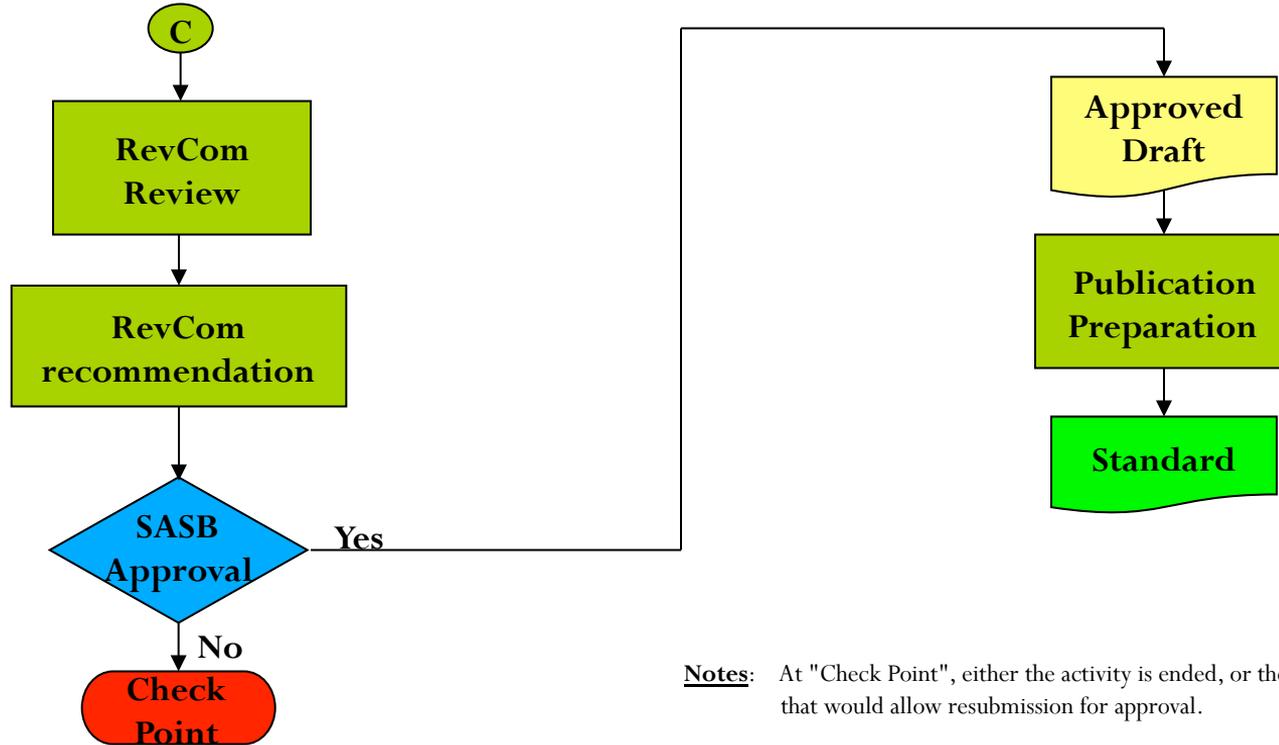See 802.3 Operating Rules 7.1.5 and listed references for complete description

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Overview of IEEE 802.3 Standards Process (5/5) – Final Approvals / Standard Release

C

RevCom Review

RevCom recommendation

SASB Approval

Yes

No

Check Point

Approved Draft

Publication Preparation

Standard

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

Liaisons and Communications

- Response from SFF committee (forwarded to reflector)

- Update from John D'Ambrosia on Ethernet Alliance 25 Gb/s technology demonstration plugfest

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

- ## CSD
  - http://www.ieee802.org/3/by/P802_3by_CSD.pdf

- ## Objectives
  - http://www.ieee802.org/3/by/P802_3by_Objectives.pdf

- ## Timeline
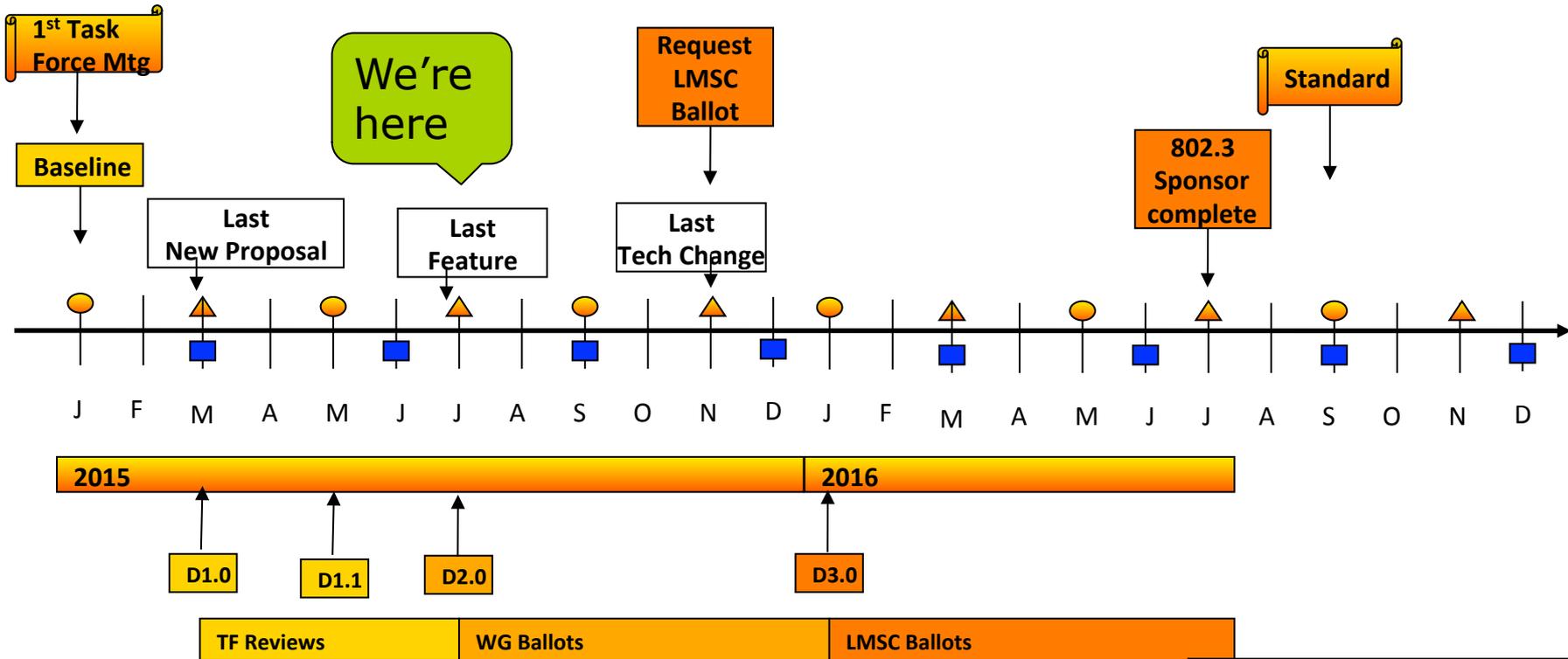 - http://www.ieee802.org/3/by/approved_timeline_3by.pdf

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 May Meeting summary

- Interim Task Force meeting in May 2015, Pittsburgh
  - 111 Attendees, 8 Presentations, 6 Motions
  - Fully reviewed and resolved all comments from D1.0. Task Force Review
  - Full EEE approach adopted to address incomplete solution
  - No changes adopted to rest of architecture
  - Motion to publish D1.1 and pre-submit for approval for WG Ballot
- Draft 1.1 generated and sent out for Task Force review:
  - Review Period June 10th – June 25th
  - 4 comments received (2 Editorial, 2 Technical)
  - All comments and proposed responses are posted: http://www.ieee802.org/3/by/public/comments

IEEE P802.3by Task Force Timeline*

* Adopted Jan, 2015

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Goals for the meeting

- D1.1 Comment review and resolution
- Adopt closed comments and generate D2.0
- Big Ticket item (discussion only)
  - 3m copper cable w/o FEC feasibility
- Motions

Going to WG Ballot

2.8.2 Draft Standard Balloting Requirements

Before a draft is submitted to WG letter ballot it shall in addition have met the following requirements:

a) It must be complete with no open technical issues.

b) It must be made available for pre-view by the membership by the Monday prior to the plenary week. If any changes are made to the draft after the draft was made available for pre-view the textual changes shall be presented for review during the closing plenary immediately prior to the vote for approval to go to WG ballot.

c) It must be formatted according to the IEEE style selected by the WG Chair. This style will be selected to minimize the editorial work required for publication of the draft.

d) It must be approved for submittal to WG ballot at the WG closing plenary.

Meeting Schedule

Monday
13-Jul-15

Time	Presenter	Affiliation	Title	File Name	Duration
1:00 PM	Mark Nowell	Cisco	Agenda and General Information	agenda_3by_01_0715.pdf	0:30
1:30 PM	Matt Brown	APM	25 Gb/s Ethernet Architecture Ad-hoc report	brown_3by_01_0715.pdf	0:05
1:35 PM	Matt Brown	APM	Chief Editor's Report	brown_3by_02_0715.pdf	0:15
1:50 PM	Comment resolution				0:40
2:30 PM	**Break**				0:20
2:50 PM	Comment resolution & Motions				1:00
3:50 PM	Joel Goergen	Cisco	25 GE 3m NO FEC Consensus Building	goergen_3by_01_0715.pdf	0:40
4:30 PM	Joel Goergen	Cisco	"Why" Behind a 3m No-FEC Copper Cable Solution	goergen_3by_02_0715.pdf	0:20
4:50 PM	**Break**				0:15

Tuesday
14-Jul-15

Time	Presenter	Affiliation	Title	File Name	Duration
9:30 AM	Mark Nowell	Cisco	Opening	-	0:10
9:40 AM	Matt Brown	APM	D2.0 review	-	0:20
10:00 AM	Closing business and motions				0:20
10:20 AM	**Adjorn**				

Note –
Times listed
are subject
to change.

Updated
versions will
be captured
with new
filename
versions

Future Meetings & Ad hocs

- Ad-hoc meeting plans
    - Single on-going weekly meetings, all topics (will cycle) – agendas will be published. 90 mins duration.
    - Wed 8-9:30 Pacific
- See: http://www.ieee802.org/meeting/index.html
- Sept 2015 Interim
    - Week of Sept 14th, 2015. Bonita Springs, Florida
- Under consideration – additional Interim
    - Oct 15th/16th or Oct 19th/20th
- November 2015 Plenary
    - Nov 8-13th, 2015. Dallas, Tx
- Jan 2016 Interim
    - Week of Jan 18th, 2016. Atlanta, GA
- March 2016 Plenary
    - Week of March 13th, 2016 – Macau, China

- Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary Steve Carlson.

Thank You!