

Agenda and General Information

IEEE 802.3

MultiGigabit Automotive Ethernet Study
Group (NGAUTO)

Steve Carlson (Chair)

High Speed Design, Inc.

Warren, MI, USA, 21 January 2017

Agenda

- Appointment of Recording Secretary – Curtis Donahue
- Welcome and Introductions
- Approve Agenda
- (prior minutes will be approved in March)
- Goals for this meeting – adopt PHY objective(s)
- Big Ticket Items
- Reflector and Web
- Ground Rules
- IEEE
 - Structure, Bylaws and Rules
 - Call for Patents
 - IEEE Standards Process
- Liaisons and Communications
- Presentations
- Motions and Closing Business
- Future Meetings

Study Group Decorum



- Photography or recording by permission only (December 2014 IEEE-SA Standards Board Ops Manual 5.3.3.2)
- Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (December 2014 IEEE-SA Standards Board Ops Manual 5.3.3.3)
- 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

Goals for the meeting

- Adopt PHY objective(s) for the project
- Review presentations substantiating the above
- Lay the ground work for the next meeting

Big ticket items

- Same as the goals
- Objectives!
- Lay the ground work for the next meeting

Reflector and Web

- To subscribe to the MultiGigabit 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-NGAUTO <yourfirstname> <yourlastname>
end

- Send MultiGigabit Ethernet reflector messages to:
[STDS-802-3-NGAUTO @listserv.ieee.org](mailto:STDS-802-3-NGAUTO@listserv.ieee.org)
- Study Group web page URL:
<http://www.ieee802.org/3/NGAUTO/index.html>

Study Group Private Area

- We currently have NO Study Group private area.
- Should we have one, the username and password will be shown at the face-to-face meetings only, and not be in the posted slides.
- If we receive copyrighted material, for example, specs from another SDO, we would establish a study group private area.

Presentation Filenames

- Please use the following filename convention:
presenter_last_name_3NGAUTO_presentation_number_revision_level_date_code
- Example of a filename: *presenter_last_name*: Smith; *3NGAUTO*; *presentation_number* is the number of the presentation, e.g. 01 for your first presentation, 02 for the second, etc.; *revision_level* is appended if the presentation is updated, e.g. 01a, 01b, etc.; *date_code* is the number of the month followed by the year, e.g. 0117 for January 2017. The resulting filename would be ***smith_3NGAUTO_01_0117***.

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

Participation in IEEE 802 Meetings

November 2016

IEEE Participation Requirements

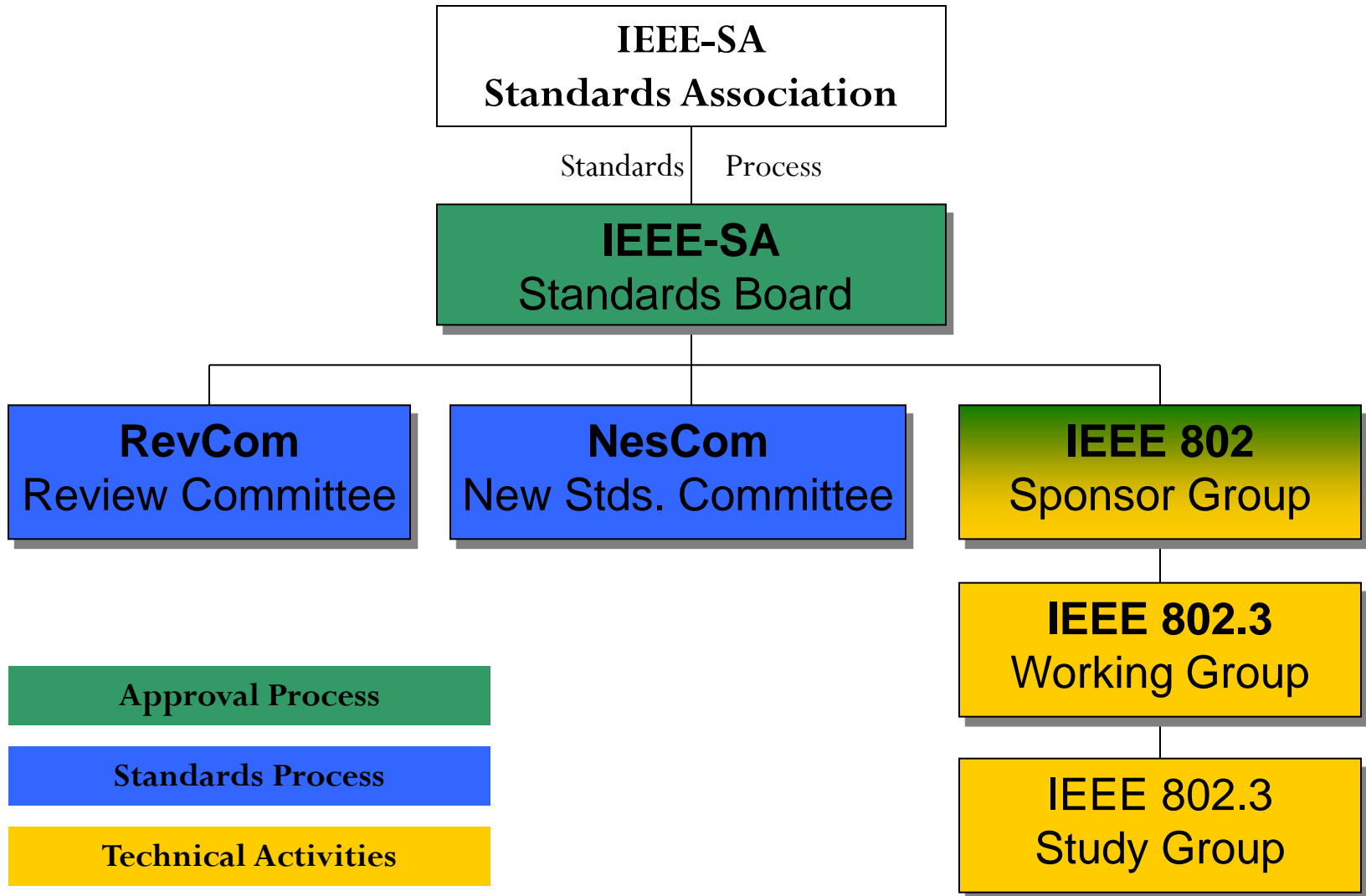
All participation in IEEE 802 Working Group meetings is on an individual basis

- *Participants in the IEEE standards development individual process shall act based on their qualifications and experience.*
(https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1)
- *IEEE 802 Working Group membership is by individual; “Working Group members shall participate in the consensus process in a manner consistent with their professional expert opinion as individuals, and not as organizational representatives”.*
(http://ieee802.org/PNP/approved/IEEE_802_WG_PandP_v19.pdf section 4.2.1)
- You have an obligation to act and vote as an individual and not under the direction of any other individual or group. Your obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders.
- You shall not direct the actions or votes of any other member of an IEEE 802 Working Group or retaliate against any other member for their actions or votes within IEEE 802 Working Group meetings, see https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1.3 and http://ieee802.org/PNP/approved/IEEE_802_WG_PandP_v19.pdf section 3.4.1, list item x

By participating in IEEE 802 meetings, you accept these requirements. If you do not agree to these policies then you shall not participate.

Policy: IEEE 802 Executive Committee

IEEE Structure



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

Guidelines for IEEE-SA Meetings

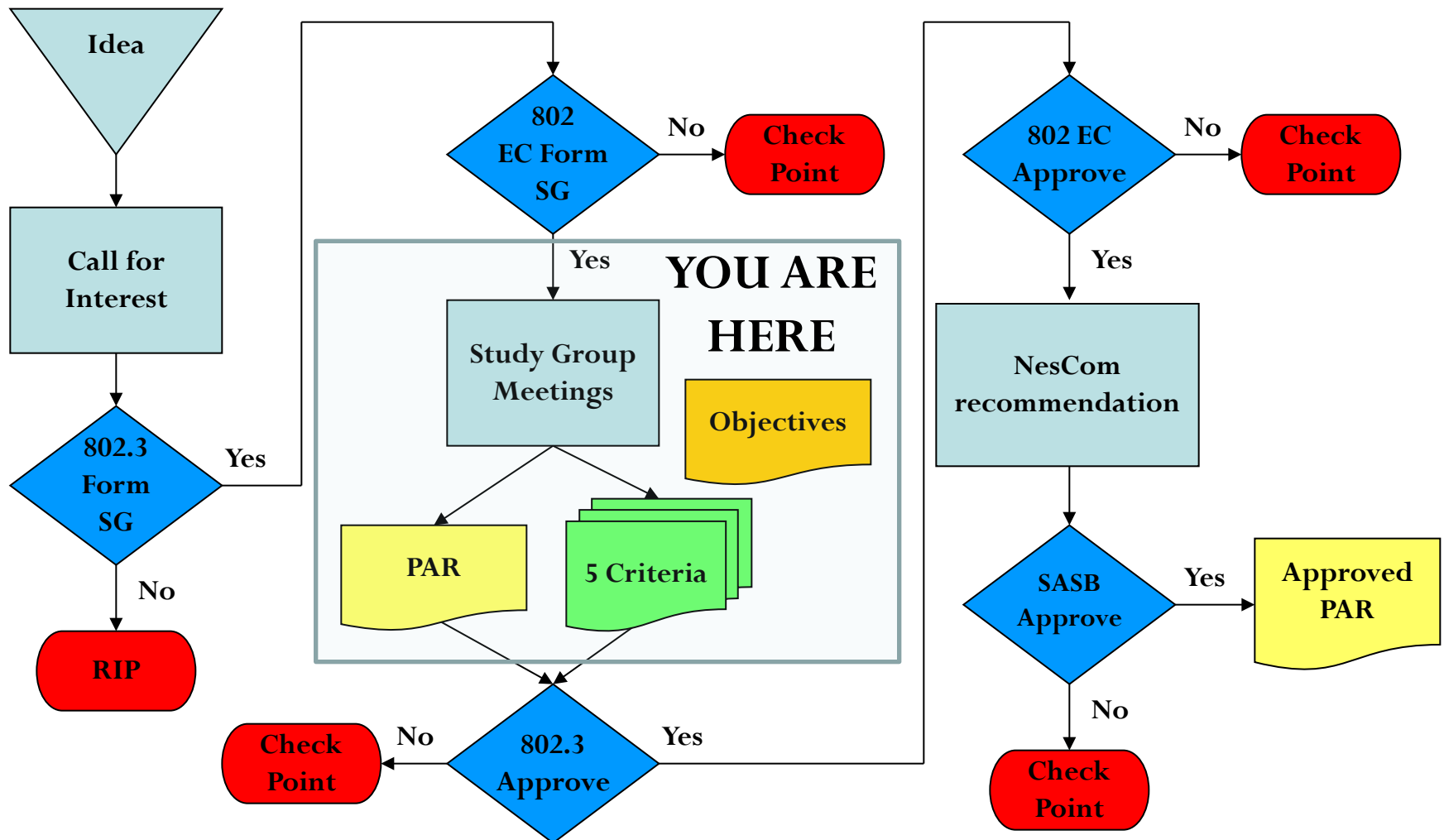
- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
- Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
- Don't discuss specific license rates, terms, or conditions.
 - Relative costs,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

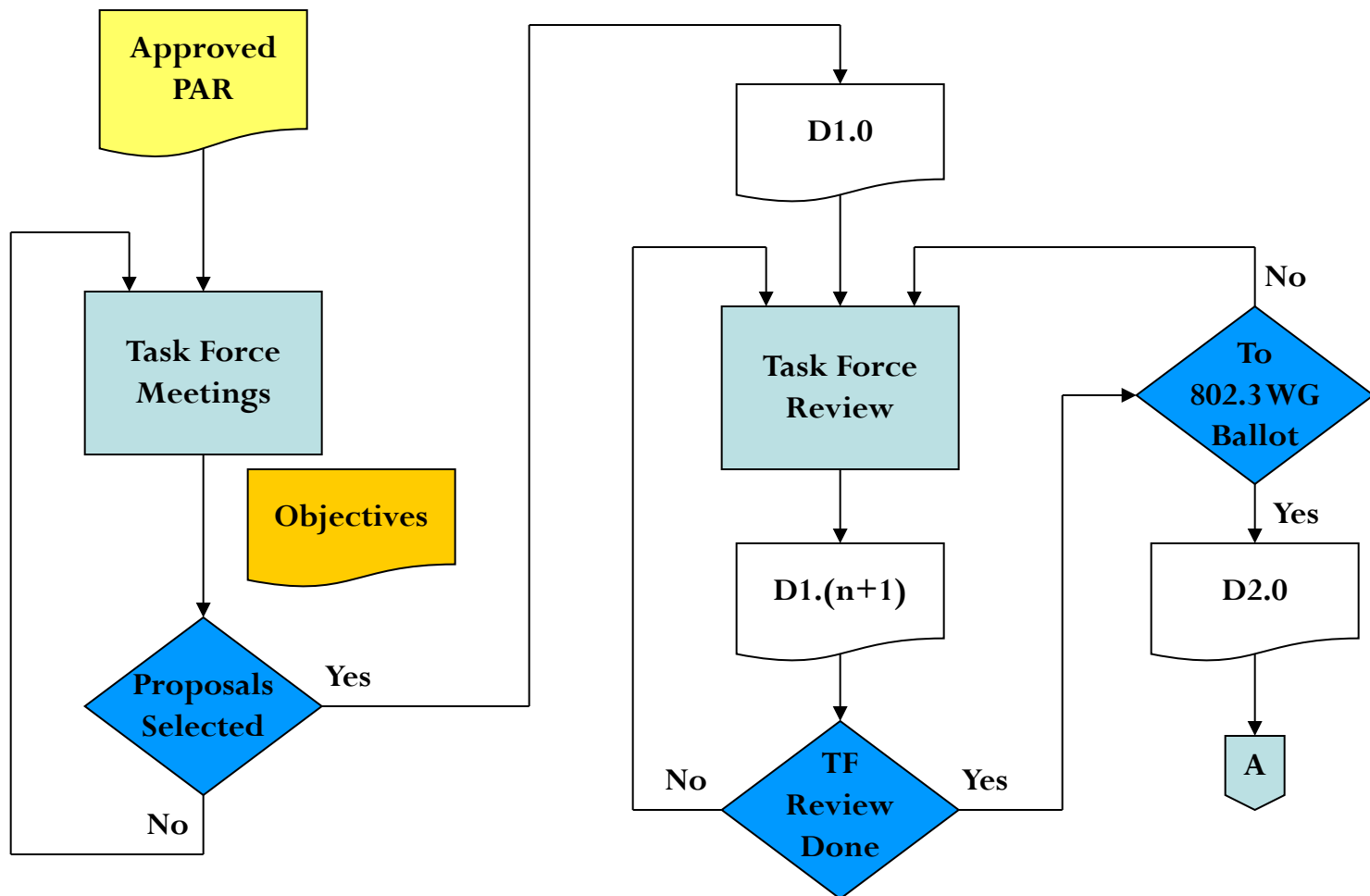
This slide set is available
at <https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.ppt>

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

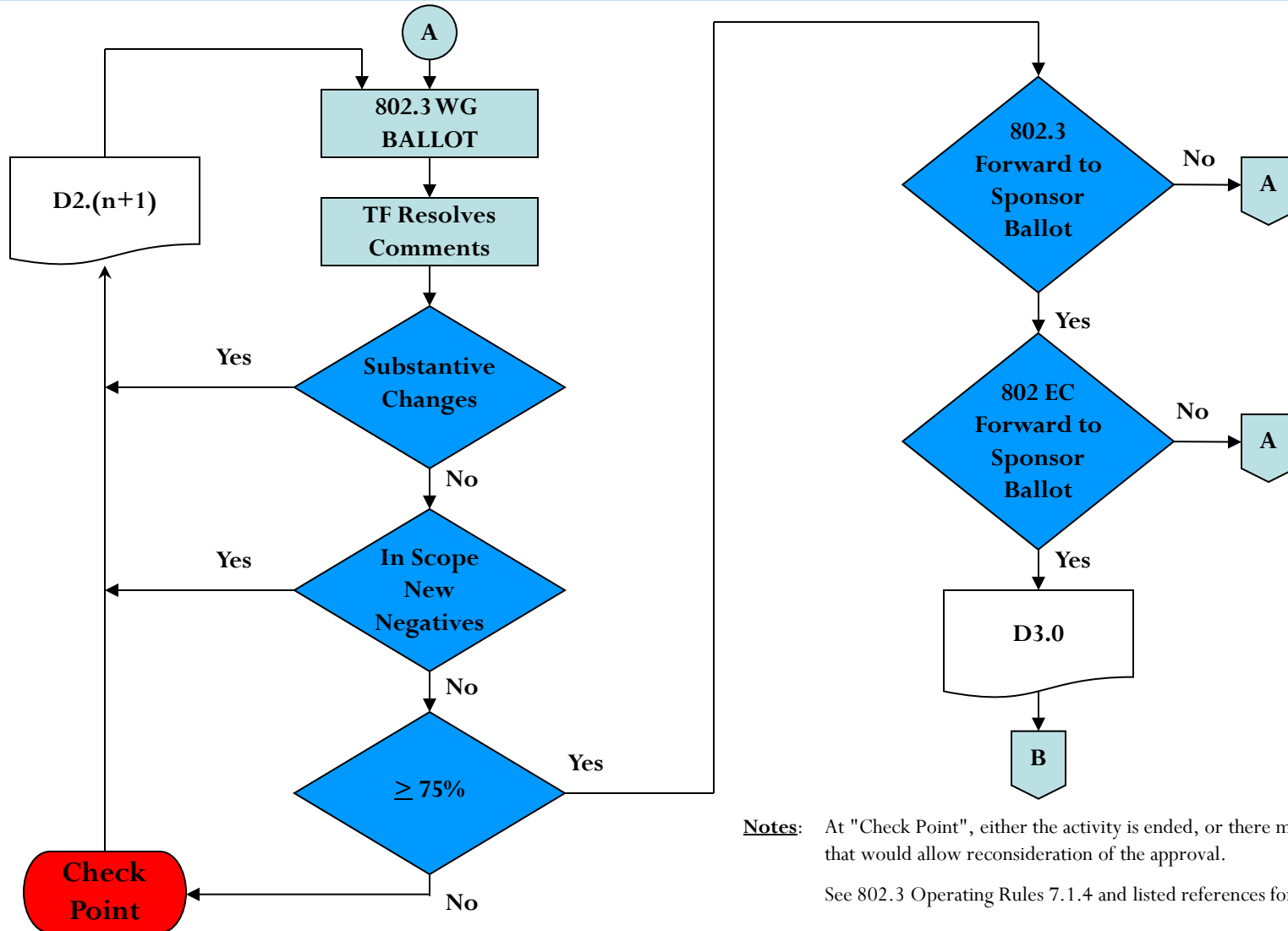


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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



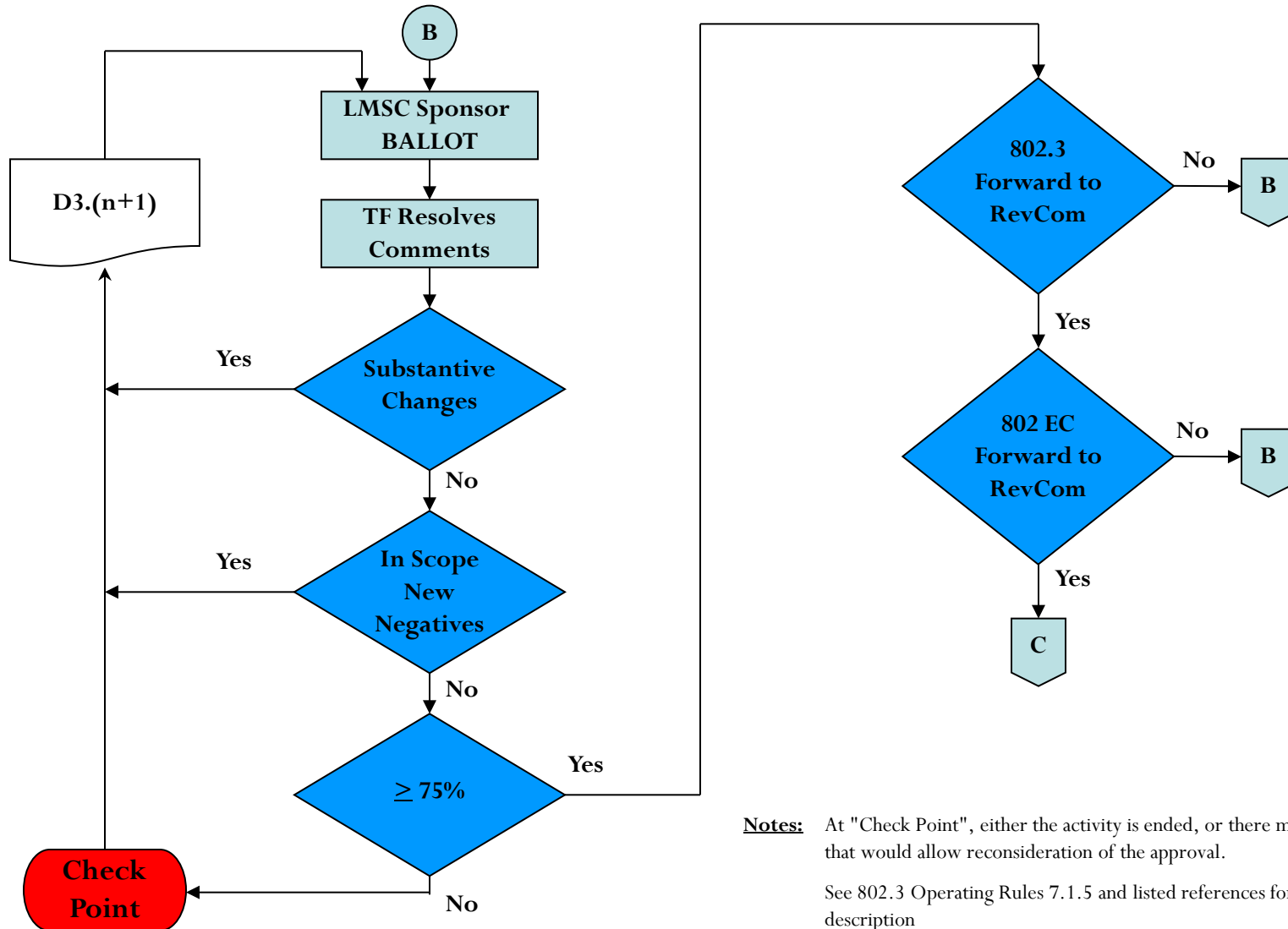
Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



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

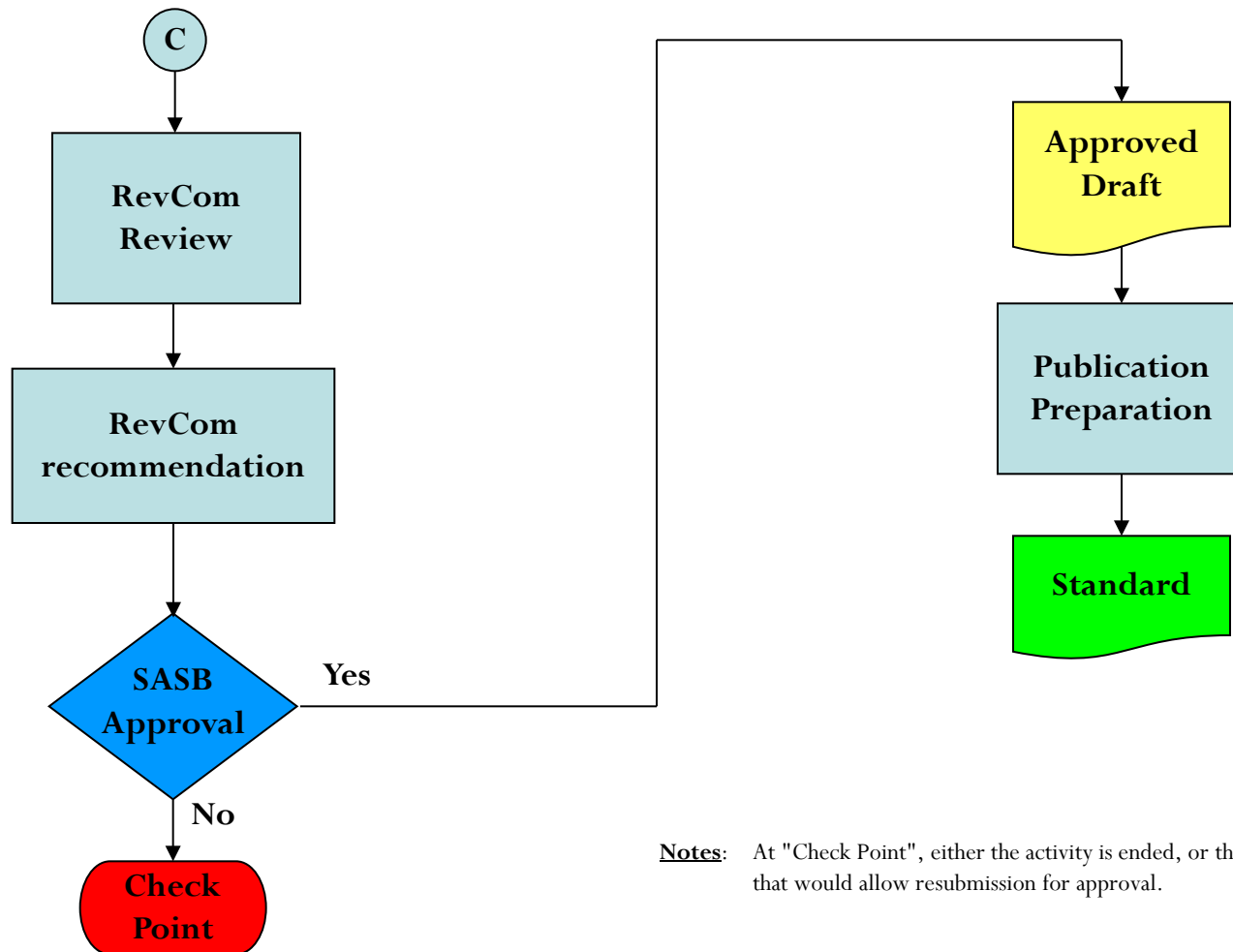
Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



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.

The Study Group

- Normal function is to draft a complete PAR and Criteria for Standards Development (CSD) – done at January interim
- Provide a plenary week tutorial to the LMSC. (not always done)
- 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 but SG can only exist for 1 year
 - 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.**

Request for Formation of Study Group (as per November 2016 Plenary Motion)

- Move that the IEEE 802.3 Working Group request the formation of a Study Group to develop a Project Authorization Request (PAR) and Criteria for Standards Development (CSD) responses for MultiGig Automotive Ethernet PHY

Crash course on Study Group goals

For an overview of Study Group activities, please refer to:

Overview of the Process – Wael Diab

http://www.ieee802.org/3/400GSG/public/13_05/diab_400_01_0513.pdf

Review of the 5 Criteria – Howard Frazier

http://www.ieee802.org/3/400GSG/public/13_05/frazier_400_01_0513.pdf

Guidelines for Project Objectives – Howard Frazier

http://www.ieee802.org/3/400GSG/public/13_05/frazier_400_02_0513.pdf

The following slides are adapted from these excellent presentations. The originals, while a little dated, remain, in spirit, correct.

(THANKS TO MARK NOWELL and the 25Gbps Study Group)

What does the Study Group Produce?

- PAR
 - Our “contract” with the IEEE-SA and “authorization” to develop a standard
 - Goes all the way up the hierarchy
 - Broadly focuses on what the standard is that group will work on including scope, purpose, broad timeline (not a project plan)
 - High level - to notify anyone interested as to what we’re attempting to do
- 5 Criteria (now called CSDs)
 - Broad Market Potential, Compatibility, Distinct Identity, Technical Feasibility, Economic Feasibility
 - Controlled at the 802 EC level
- Objectives
 - Our “contract” with 802.3 – controlled at the 802.3 level

History and Traditions

(adapted from Howard Frazier “Guidelines for Project Objectives”)

- Project objectives are brief statements, usually bullet form that summarize technical objectives for an 802.3 standards project
- They represent high-level technical requirements
- They are created by the study group, but approved and owned by the 802.3 working group, and are fulfilled by the Task Force
 - Working group ballot drafts may be measured on fulfilling these
 - The objectives may be modified in Task Force, but the working group must approve
- They are not a product spec
- They typically address major characteristics: bit rate, media, reach, BER, compatibility, impairments, coexistence
- They do not typically address implementation characteristics (power, cost, integration)

Guidelines for writing and adopting

- Consensus building is key
 - Get support before you offer a motion
 - Understand the sources of opposition
 - Remember, 25% can block
- We may consider objectives one at a time, or as a group, if there is no objection
- Pay attention to specifics – that is where consensus can fall apart

Liaisons and Communications

- (none at this time)

Presentations (subject to change)

General – Industry Needs		
Thoughts on 802.3 Asymmetric Rates	George Zimmerman	CME Consulting/Commscope, LTC, Aquantia
PoDLfor NGAUTO: Demonstration of Feasibility	Andy Gardner	Linear Technology Corp
Copper Link Segment		
MGbps Link Segment open questions	Kirsten Matheus, Michael Kaindl	BMW (Remote Presentation)
Inline Connector Evaluation for NGAUTO	Eric DiBiaso	TE Connectivity
NGAuto channel options	Thomas Müller	Rosenberger
Feasibility and Objectives		
NGAUTO – Objectives Uses Cases + speedgrades	Helge Zinner	Continental AG (Remote Presentation)
PHY Perspective on NGAUTO	Michael Leung	Marvell Semiconductor
Proposal for 2.5G Objective	Michael Leung	Marvell Semiconductor
NGAUTO Objectives	Stefan Buntz	Daimler AG (Remote Presentation)
Possible Objective Text	George Zimmerman	CME Consulting/Commscope, LTC, Aquantia
Multi-gig Automotive Ethernet PHY Study Group Proposed Objective	Natalie A. Wienckowski	General Motors
Multi-Gig Automotive PHY: TECHNICAL FEASIBILITY Challenges for 10G over Shielded Twisted Pair	Tzahi Madgar	Valens
Optical Objective		
Proposal to include optical fiber objective in Multi-gig Automotive Ethernet	Mike Yadlowsky, Alex Umnov	Corning

Future Meetings

- See: <http://www.ieee802.org/3/interims/index.html>
- March 2017 802 Plenary
 - Vancouver, BC Canada (Hyatt Regency/Fairmont Vancouver)
 - March 12-17, 2017
- May 2017 802.3 Interim
 - New Orleans, Louisiana (Intercontinental Hotel)
 - May 22-26, 2017
- Anyone interested in hosting a interim meeting contact the IEEE 802.3 Executive Secretary [Steve Carlson](#).

Straw Poll on Attendance

- Attend March 802. Plenary:
 - Y: N: M:
- Attend May 802.3 Interim:
 - Y: N: M:

Thank You!