



Agenda and General Information

IEEE 802.3

**25 Gb/s Ethernet over single-mode
fiber Study Group Meeting**

David Lewis, Lumentum

Atlanta, GA, January 18th, 2016

Agenda

- Appointment of Recording Secretary
- Confirmation of Chair
- Welcome and Introductions
- Approve Agenda
- Reflector and Web
- Ground Rules
- IEEE
 - Structure, Bylaws and Rules
 - Call for Patents
 - IEEE Standards Process
- Crash course on Study Groups
- Goals for this meeting
- Big Ticket Items
- Meeting Schedule
- Motions and Closing Business
- Future Meetings

Study Group organization

- Chair: David Lewis, Lumentum
- Recording Secretary: Kohichi Tamura, Oclaro
- Ad hoc chair: Peter Jones, Cisco

Study Group 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 Study Group reflector, send an email to:

ListServ@ieee.org

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

subscribe stds-802-3-25GSMF <yourfirstname><yourlastname>

end

- Send 25Gb/s Ethernet reflector messages to:
stds-802-3-25GSMF@listserv.ieee.org
- Study Group web page URL:
<http://www.ieee802.org/3/25GSMF/index.html>

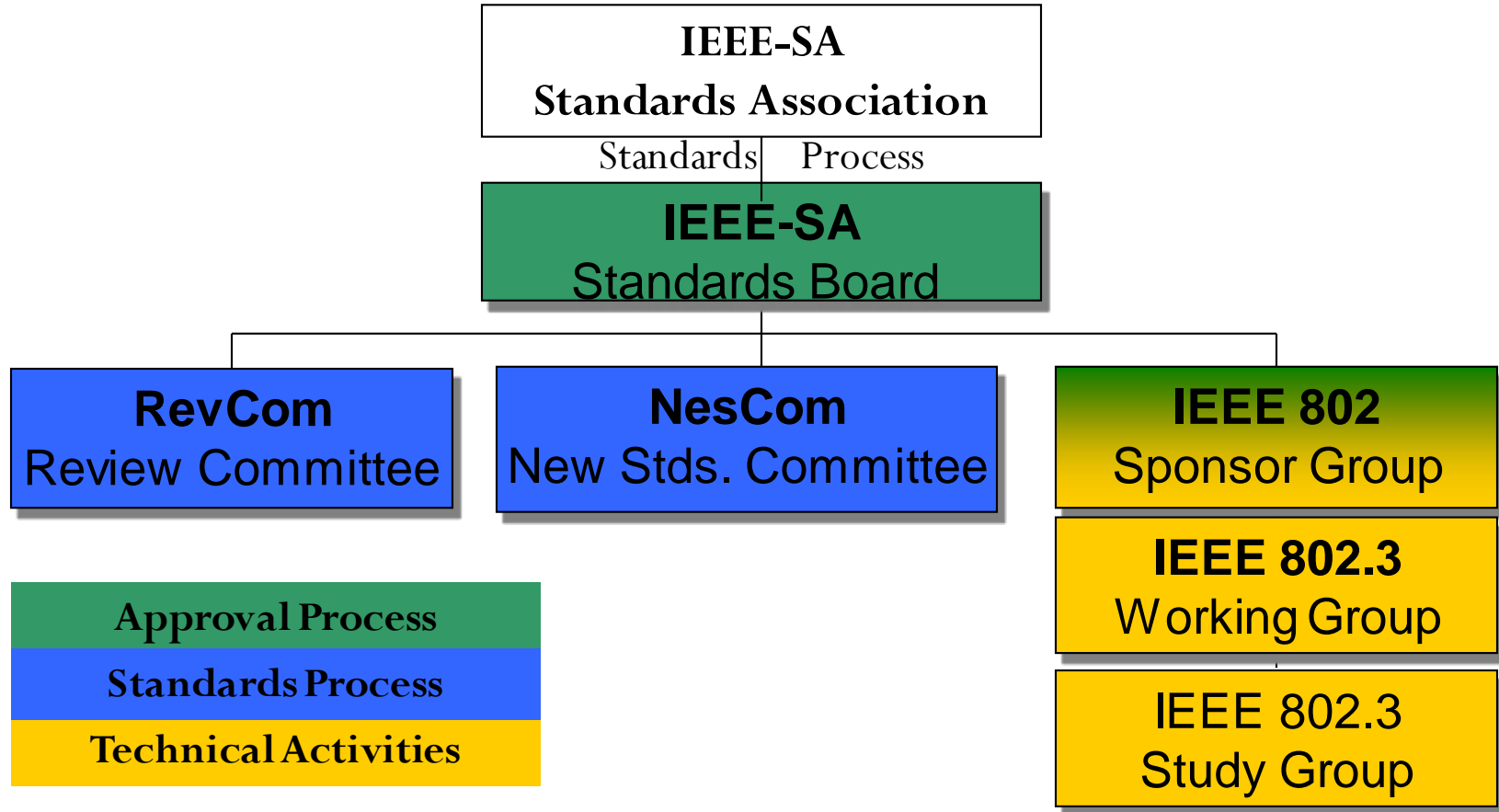
Ground Rules

- 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



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>

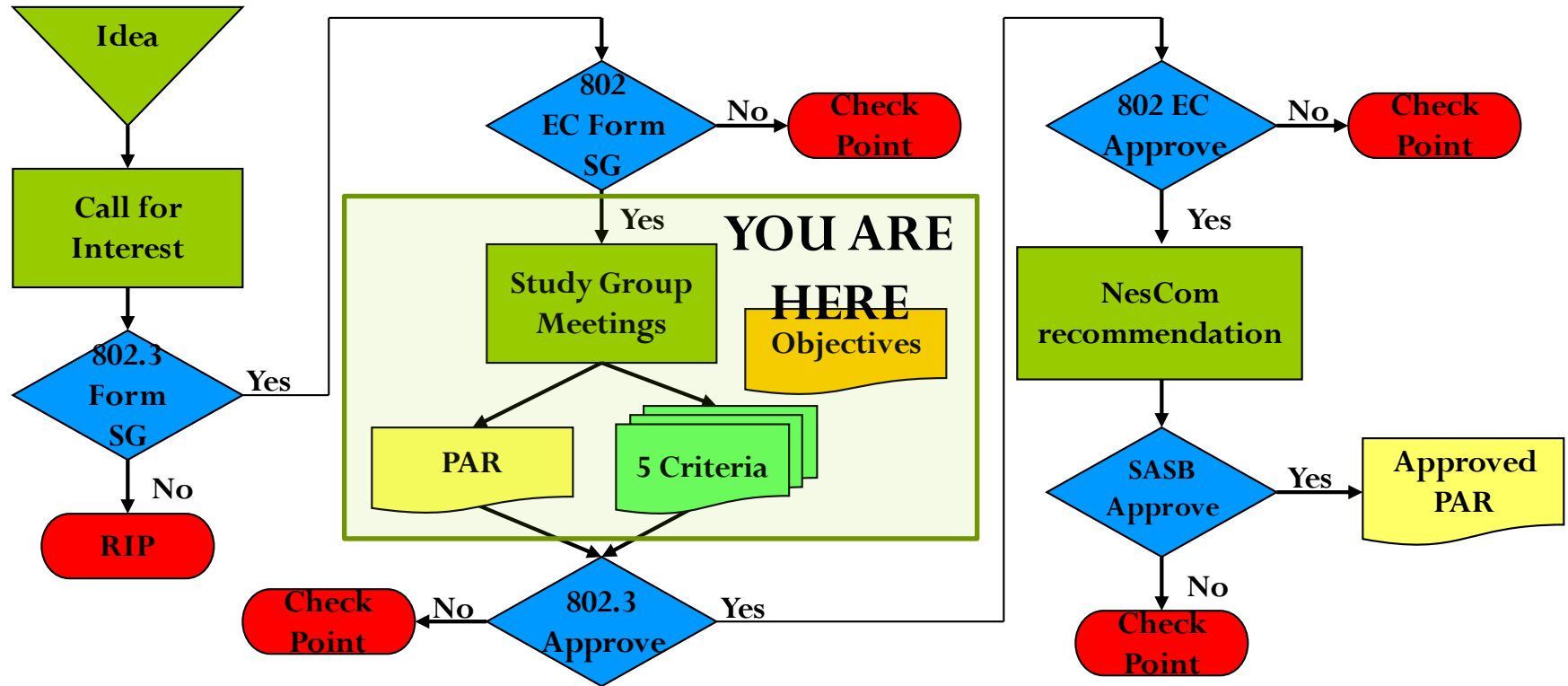
See IEEE-SA Standards Board Operations Manual, clause 5.3.10 and “Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy” for more details.

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

March 2015

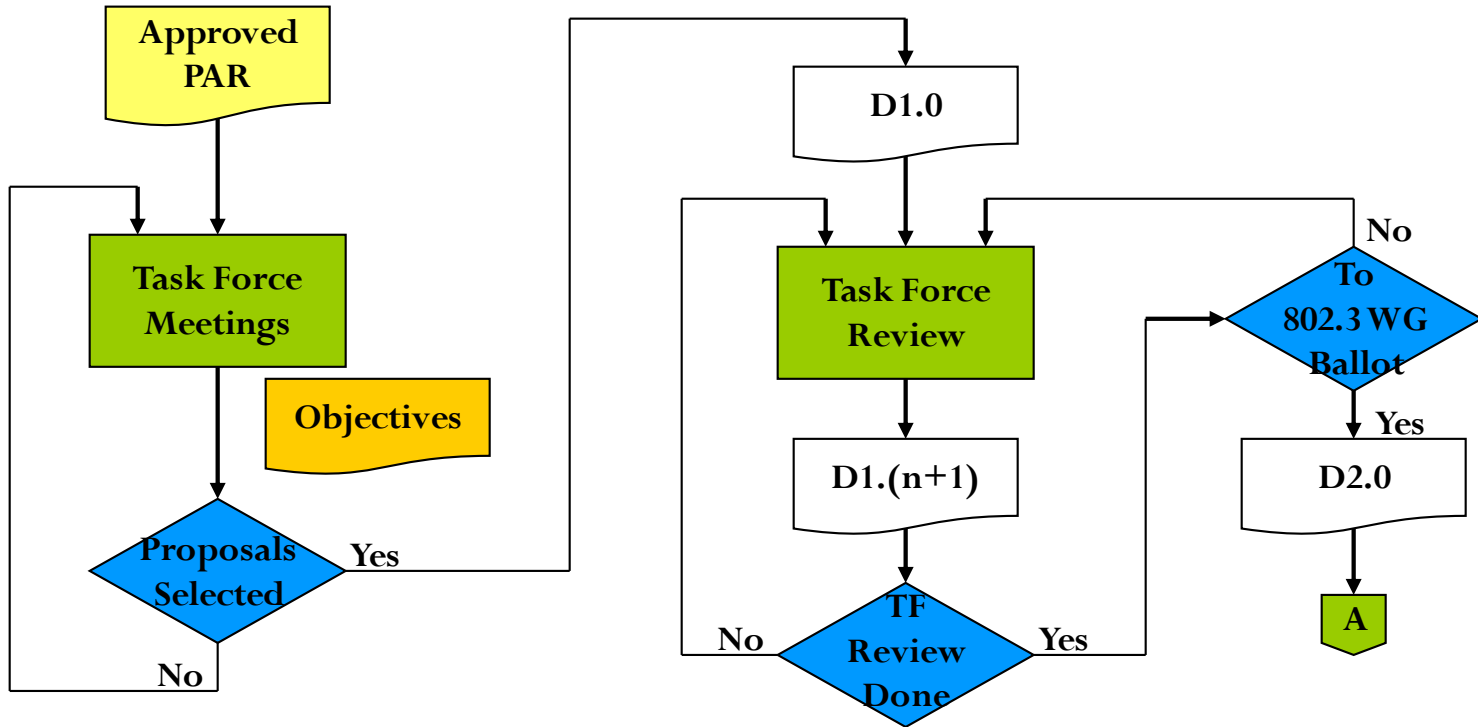
IEEE-SA Standards Board Patent Committee

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

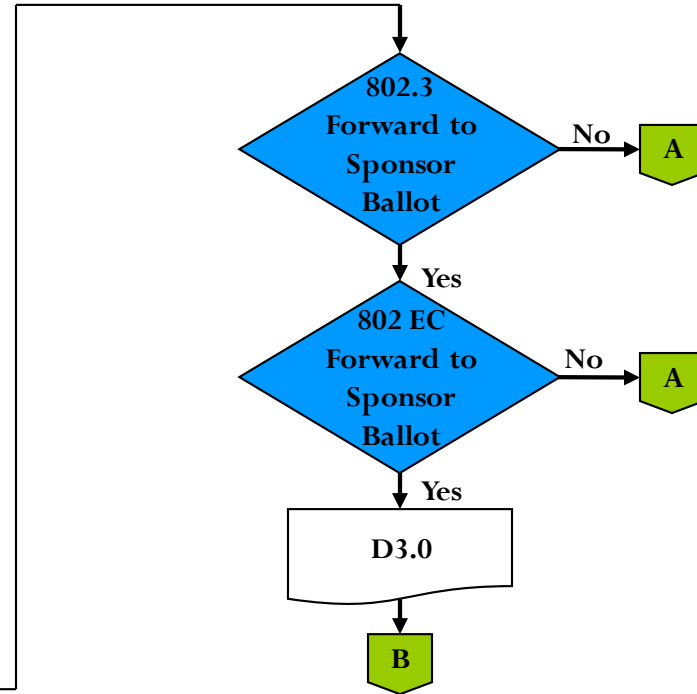
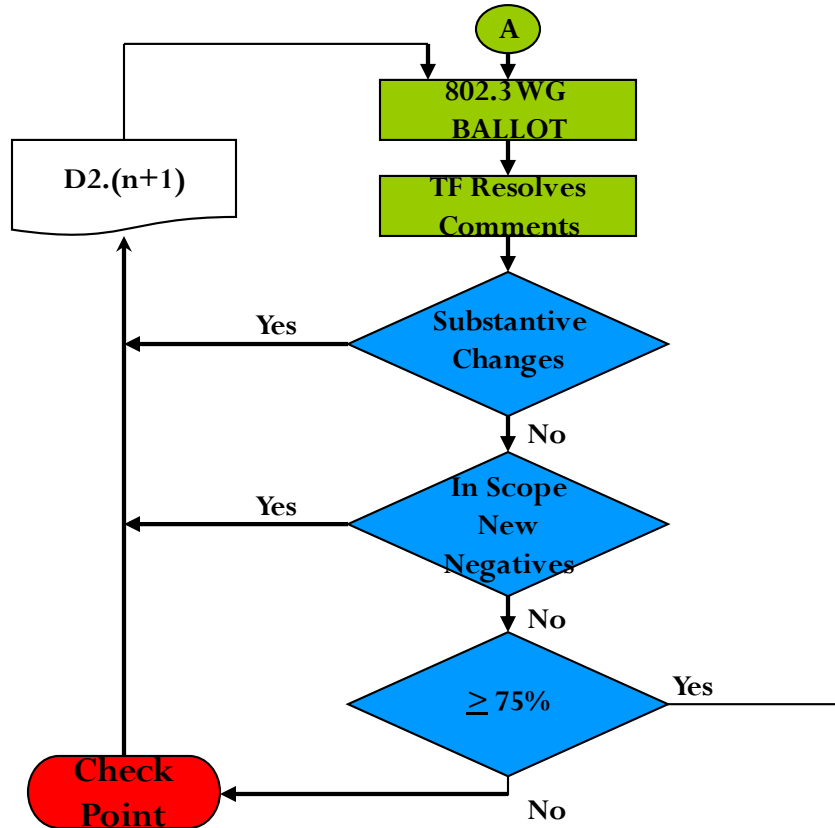


Note: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

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



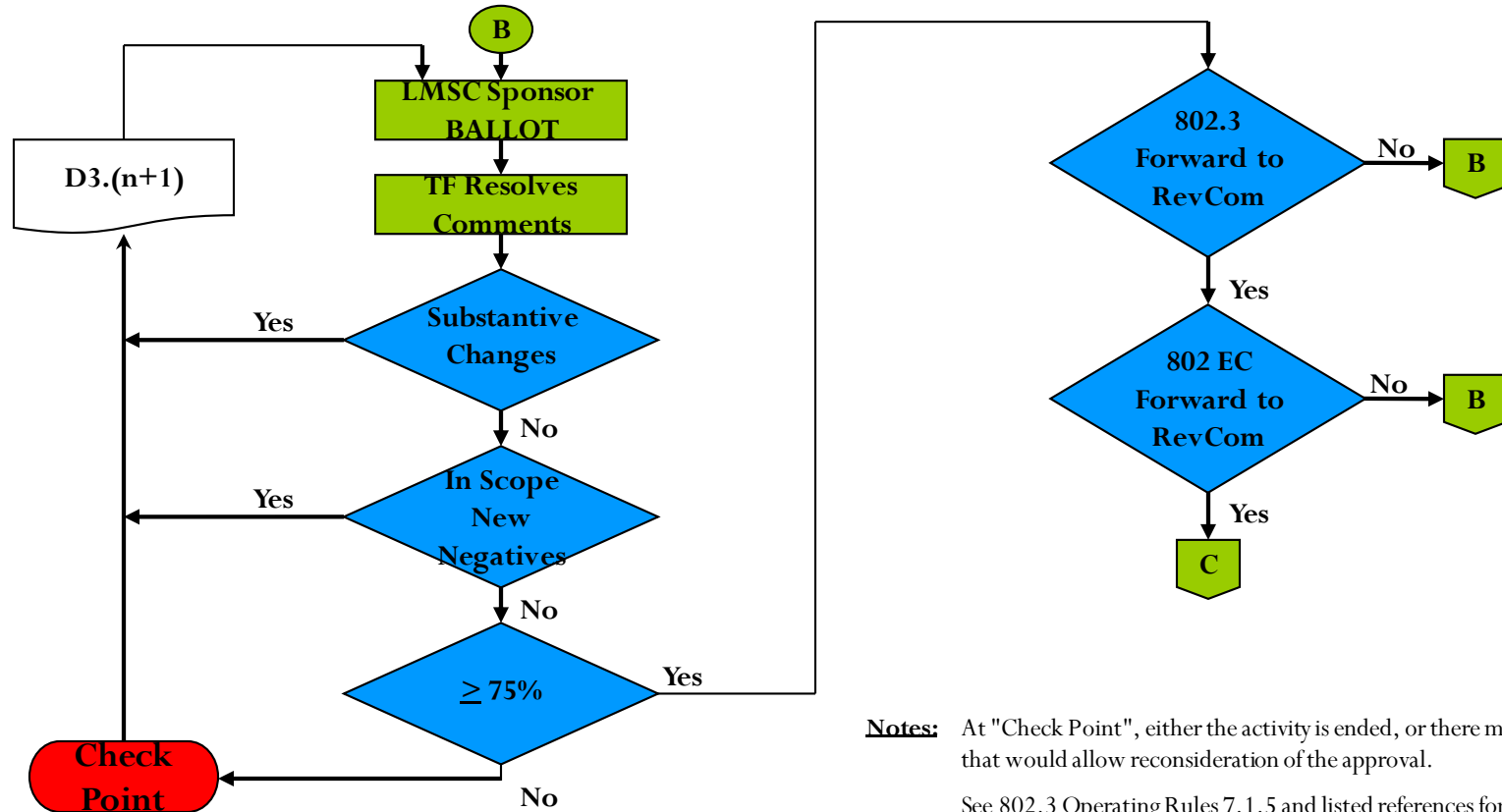
Overview of IEEE 802.3 Standards Process (3/5) – Working Group Ballot Phase



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

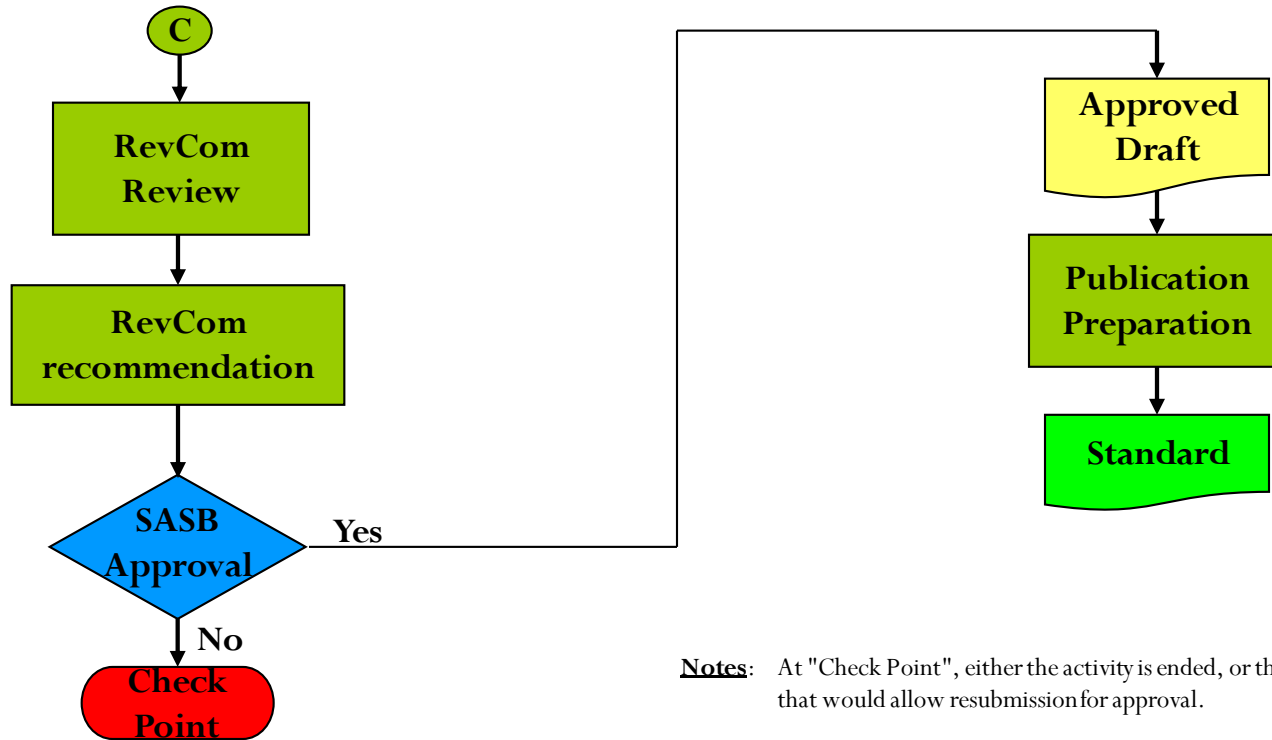
Overview of IEEE 802.3 Standards Process (4/5)- Sponsor Ballot Phase



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.

Request for Formation of Study Group (as per November 2015 Plenary Motion)

MOTION #27

Move that the IEEE 802.3 WG form a study group to develop a PAR and CSD for: “25 Gigabit/s Ethernet PMD(s) for single mode fiber”

M: D. Lewis S: K. Tamura

> 50%

Y: 68, N: 0, A: 4

Passed 12-November 2015, 6:29 pm

Crash course on Study Group goals

For an excellent overviews of the 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 taken from these excellent presentations

What does the Study Group produce?

- 5 Criteria
 - Broad Market Potential, Compatibility, Distinct Identity, Technical Feasibility, Economic Feasibility
- PAR
 - Your “contract” with the IEEE-SA and “authorization” to develop a standard
 - Broadly focuses on what the standard is that group will work on including scope, purpose, broad timeline (not a project plan)
 - Good idea to look at examples of prior projects
- Objectives
 - Your “contract” with 802.3
 - At a high level it is what the group will work on (and what it will not)
 - Somewhat more specific than the scope in the PAR

From:
Overview of the Process –
Wael Diab
http://www.ieee802.org/3/40/OGSG/public/13_05/diab_400_01_0513.pdf

Final Thoughts

- Goal is to get to a Task Force
- To do that, focus on
 - Producing the objectives
 - Producing the PAR
 - Producing the 5 criteria
 - Work on building consensus
 - Leave the rest of it to the Task Force phase
 - Plenty of time to work on solutions
 - Plenty of time to debate the text of the solutions

From:
Overview of the Process –
Wael Diab
http://www.ieee802.org/3/40/OGSG/public/13_05/diab_400_01_0513.pdf

History and traditions

- Project objectives are brief statements, usually written in bullet form, that summarize the technical objectives for a standards project in IEEE 802.3
- They represent a distilled set of high-level technical requirements
- They are created by the study group, approved by the parent working group, and are fulfilled by the task force
 - The task force may modify them, with the approval of the working group
- They typically address areas such as operating speed (bit rate), media, reach, BER, compatibility, impairments, coexistence
- Note that some other working groups address such areas in their Project Authorization Request, but we tend not to do this
- Every project undertaken in the IEEE 802.3 working group since (at least) 1992 has been guided by a set of objectives

From:
Guidelines for Project
Objectives – Howard
Frazier

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

Guidelines for writing and adopting

- Consensus building is key
 - Don't even think about offering up a motion to adopt an objective until you know you have significant support for it, otherwise, things will get ugly
- Offer objectives one at a time, using a motion like this:
 - Example - for illustrative purposes only!**
 - Move that the Study Group adopt the following objective:
 - Provide a BER of 10^{-12} or better at the MAC/PLS service interface
- All votes on objectives are technical, requiring $\geq 75\%$ approval
- Sometimes, we try adopting just the form of an objective, before we can reach agreement on the specific values
 - These are called “Mad-libs” objectives
 - Example - for illustrative purposes only!**
 - Move that the Study Group adopt the following objective:
 - Provide a BER of 10^{-n} or better at the MAC/PLS service interface
 - This is not the preferred approach!

From:
Guidelines for Project
Objectives – Howard
Frazier

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

Audience

- The 5 criteria are drafted and approved by a study group
- They are reviewed and approved (individually) by the working group
- They are subject to review and approval by each and every other working group in IEEE 802®
- They are reviewed and approved by the IEEE 802 executive committee

Purpose

- The 5 criteria are used to evaluate proposed projects
- They are used to filter out projects that are not appropriate for standardization in IEEE 802
- They are unique to IEEE 802
- They are one of the reasons why IEEE 802 standards are relatively successful
- They help perpetuate the “IEEE 802 culture”

From:
Review of the 5 Criteria –
Howard Frazier
http://www.ieee802.org/3/4/00GSG/public/13_05/frazier_400_01_0513.pdf

The 5 Critters



Broad
Market
Potential



Compatibility



Distinct
Identity



Technical
Feasibility



Economic
Feasibility

From:
Review of the 5 Criteria –
Howard Frazier
http://www.ieee802.org/3/4/00GSG/public/13_05/frazier_400_01_0513.pdf

Managed Objects

Describe the plan for developing a definition of managed objects. The plan shall specify one of the following:

- a) The definitions will be part of this project.**
- b) The definitions will be part of a different project and provide the plan for that project or anticipated future project.**
- c) The definitions will not be developed and explain why such definitions are not needed.**

Coexistence

A WG proposing a wireless project shall demonstrate coexistence through the preparation of a Coexistence Assurance (CA) document unless it is not applicable.

- a) Will the WG create a CA document as part of the WG balloting process as described in Clause 13?**
- b) If not, explain why the CA document is not applicable**

- A CA document is not applicable because the proposed project is not a wireless project.

Broad Market Potential

Each proposed IEEE 802 LMSC standard shall have broad market potential. At a minimum, address the following areas:

- a) Broad sets of applicability.
- b) Multiple vendors and numerous users.
- c) **Balanced Costs (LAN versus attached stations) [Removed from IEEE 802 5 Criteria Nov 2012]**



Compatibility

Each proposed IEEE 802 LMSC standard should be in conformance with IEEE Std 802, IEEE 802.1AC, and IEEE 802.1Q. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with IEEE 802.1 WG prior to submitting a PAR to the Sponsor.

- a) Will the proposed standard comply with IEEE Std 802, IEEE Std 802.1AC and IEEE Std 802.1Q?
- b) If the answer to a) is “no”, supply the response from the IEEE 802.1 WG.
- c) Compatibility with IEEE Std 802.3
- d) Conformance with the IEEE Std 802.3 MAC
- e) Managed object definitions compatible with SNMP (see Managed Objects)



Distinct Identity

Each proposed IEEE 802 LMSC standard shall provide evidence of a distinct identity. Identify standards and standards projects with similar scopes and for each one describe why the proposed project is substantially different.

Substantially different from other IEEE 802.3 specifications / solutions.



Technical Feasibility

Each proposed IEEE 802 LMSC standard shall provide evidence that the project is technically feasible within the time frame of the project. At a minimum, address the following items to demonstrate technical feasibility:

- a) Demonstrated system feasibility.
- b) Proven similar technology via testing, modeling, simulation, etc.



Economic Feasibility

Each proposed IEEE 802 LMSC standard shall provide evidence of economic feasibility. Demonstrate, as far as can reasonably be estimated, the economic feasibility of the proposed project for its intended applications.

Among the areas that may be addressed in the cost for performance analysis are the following:

- a) Balanced costs (infrastructure versus attached stations).
- b) Known cost factors.
- c) Consideration of installation costs.
- d) Consideration of operational costs (e.g. energy consumption).
- e) Other areas, as appropriate.



Goals for the meeting

- Develop a set of objectives for the project
- Develop responses for the CSD (Criteria for Standards Development)
- Develop a PAR
- Review presentations substantiating the above
- Lay the ground work for the next meeting

Meeting Schedule

<u>Time</u>	<u>Presenter</u>	<u>Affiliation</u>	<u>Title</u>	<u>File Name</u>	<u>Duration</u>
1:00 PM	David Lewis	Lumentum	Agenda and General Information	agenda_25gsmf_01_0116.pdf	1:00
2:00 PM	Peter Jones	Cisco	25GSMF Ad-hoc report	jones_25gsmf_03_0116.pdf	0:10
2:10 PM	Peter Jones	Cisco	Proposed PAR text	jones_25gsmf_02_0116.pdf	0:20
2:30 PM	Peter Jones	Cisco	Support for 10km/40km reach objectives	jones_25gsmf_01_0116.pdf	0:20
2:50 PM	David Lewis	Lumentum	Discussion on Proposed Objectives	lewis_25gsmf_01_0116.pdf	0:25
3:15 PM	Break				0:15
3:30 PM	Discussion & Straw Polls on Objectives				0:20
3:50 PM	Weyl Wang	Accelink	25Gb/s Single Lane SMF 10km PMDs Technical Feasibility	cao_25gsmf_01_0116.pdf	0:20
4:10 PM	Kohichi Tamura	Oclaro	25GbE SMF 40km Technical Feasibility Review and Approach to Specification	tamura_25gsmf_01_0116.pdf	0:20
4:30 PM	David Lewis	Lumentum	Discussion on Proposed CSD responses	lewis_25gsmf_02_0116.pdf	0:20
4:50 PM	Discussion & Straw Polls on CSD responses				0:30
5:20 PM	Study Group Documentation (PAR, CSD etc.) Presentation review, polls, motions				0:30
5:50 PM	Closing business and motions				0:10
6:00 PM	Adjourn				

Note – Times listed are subject to change.

Updated versions will be captured with new filename versions

Ad hoc charter

Ad-hoc meeting plans

Single on-going weekly meetings, all topics (will cycle) – agendas will be published. 90 mins.

Wed 2-3:30 Pacific proposed

Charter

The charter of the 25 Gb/s Ethernet single-mode fiber study group Ad Hoc is to discuss topics towards supporting the developed objectives, PAR and CSD or for preparing the Task Force with contributions to help it prepare for future decisions.

Future Meetings & Ad hocs

- Ad-hoc meeting plans
 - Single on-going weekly meetings, all topics (will cycle) – agendas will be published. 90 mins.
 - Wed 2-3:30 Pacific proposed
- See: <http://www.ieee802.org/meeting/index.htm>
- March 2016 Plenary
 - Week of March 13th, 2016 – Macau, China
- May 2016 Interim
 - Week of May 23rd, 2016 – Whistler, B.C., Canada
- July 2016 Plenary
 - Week of July 24th, 2016 – San Diego, CA
- Anyone interested in hosting a interim meeting contact me or the IEEE 802.3 Executive Secretary Steve Carlson.

Thank You!