



IEEE 802.3 Energy Efficient Ethernet Study Group

Agenda and General Information

Orlando, FL
March, 2007

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Agenda

- Welcome and Introductions
- Appoint/Volunteer Recording Secretary
- New Sign-in Rules
- Goals for this Meeting
- Reflector and Web
- Ground Rules
- IEEE
 - Structure
 - Bylaws and Rules
 - Call for Patents
 - IEEE Standards Process
- Presentations
- Discussion and Motions
- Future Meetings

New sign-in rules

- Based on last discussion with the 802.3 chair ...
- Red/Blue book setup with the addition of the affiliation sheets
 - Now three sections to check
- The Attendance will be the same as Dallas format, the Affiliation will contain Name, Employer and Affiliation, w/Affiliation pre-populated with January declaration
- More about this when the books go around
- Don't forget the sign-in sheet as attendees need to go in the meeting minutes as well

Goals for this Meeting

- Hear presentations related to 5 Criteria, Goals, and Objectives
- Develop consensus on EEESG Objectives
- Develop consensus on EEESG 5 Criteria for EEE
- Lay the ground work for the next meeting

Reflector and Web

- To subscribe to the EEESG reflector, send your request to:

ListServ@ieee.org

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

*subscribe stds-802-3-eesg <yourfirstname> <yourlastname>
end*

- Send EEESG reflector messages to:

stds-802-3-eesg@listserv.ieee.org

- For complete instructions on reflector usage, subscription, and unsubscription:

<http://www.ieee802.org/3/eesg/reflector.html>

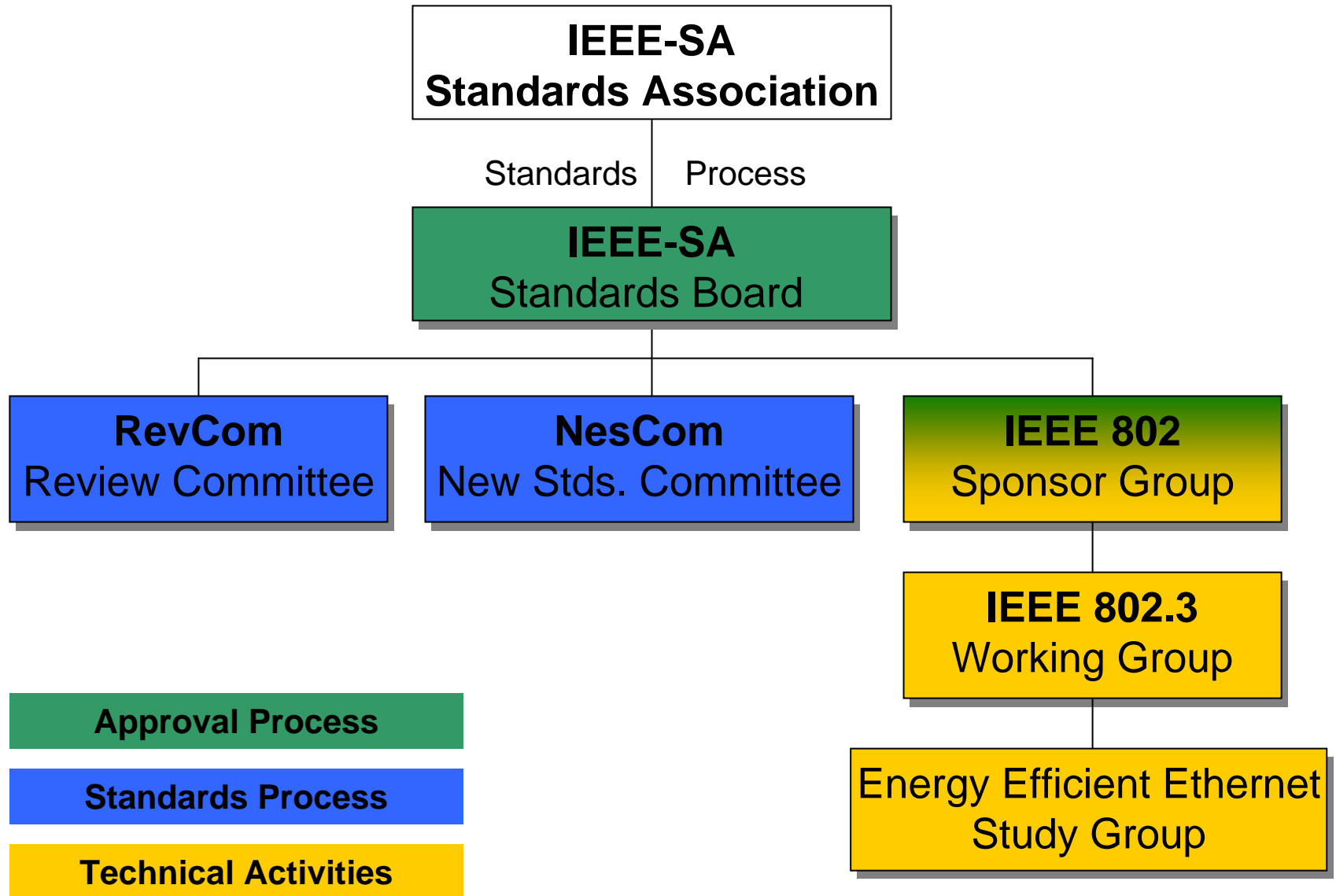
- EEESG web page URL:

<http://www.ieee802.org/3/eesg/>

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, Average Sales Prices (ASP), etc. no matter what the currency
- NO restrictive notices

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

IEEE-SA Standards Board Bylaws on Patents in Standards

6. Patents

IEEE standards may include the known use of essential patents and patent applications provided the IEEE receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard [essential patents]. This assurance shall be provided without coercion. The patent holder or applicant should provide this assurance as soon as reasonably feasible in the standards development process. This assurance shall be provided no later than the approval of the standard (or reaffirmation when a patent or patent application becomes known after initial approval of the standard). This assurance shall be either:

- a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement either mandatory or optional portions of the proposed IEEE standard against any person or entity complying with the standard; or
- b) A statement that a license for such implementation will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination.

This assurance is irrevocable once submitted and accepted and shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal.

Approved by IEEE-SA Standards Board – March 2003 (Revised February 2006)

IEEE-SA Standards Board Bylaws on Patents in Standards

- Be aware that there is a change coming
 - See <http://standards.ieee.org/board/pat/pat-slideset.ppt> for approved slides
 - New slide scheduled April 30, 2007

Approved by IEEE-SA Standards Board – March 2003 (Revised February 2006)

Inappropriate Topics for IEEE WG Meetings

- Don't discuss the validity/essentiality of patents/patent claims
- Don't discuss the cost of specific patent use
- Don't discuss licensing terms or conditions
- Don't discuss product pricing, territorial restrictions, or market share
- Don't discuss ongoing litigation 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/board/pat/index.html>

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

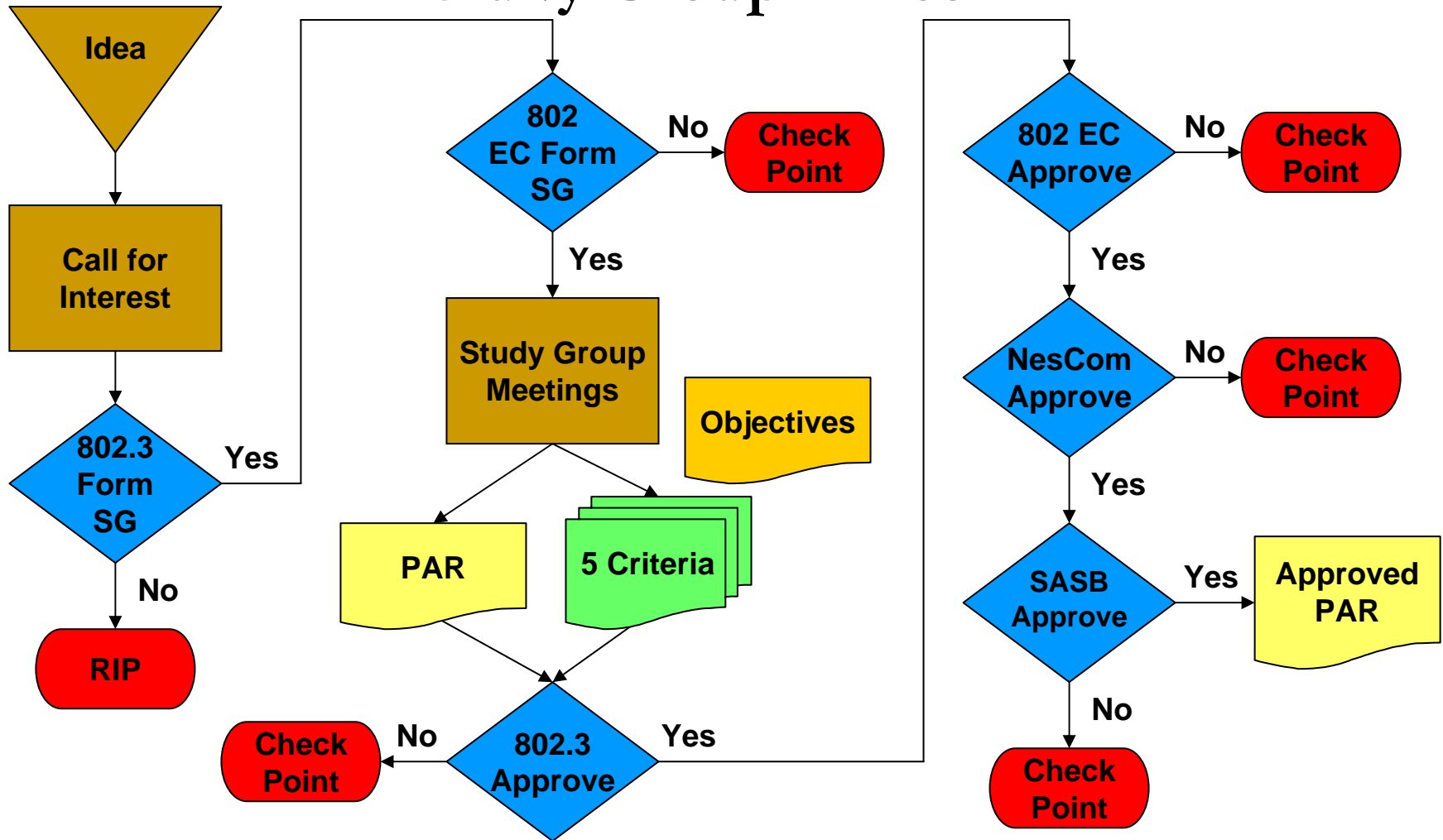
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Overview of IEEE 802.3 Standards Process (1/5)

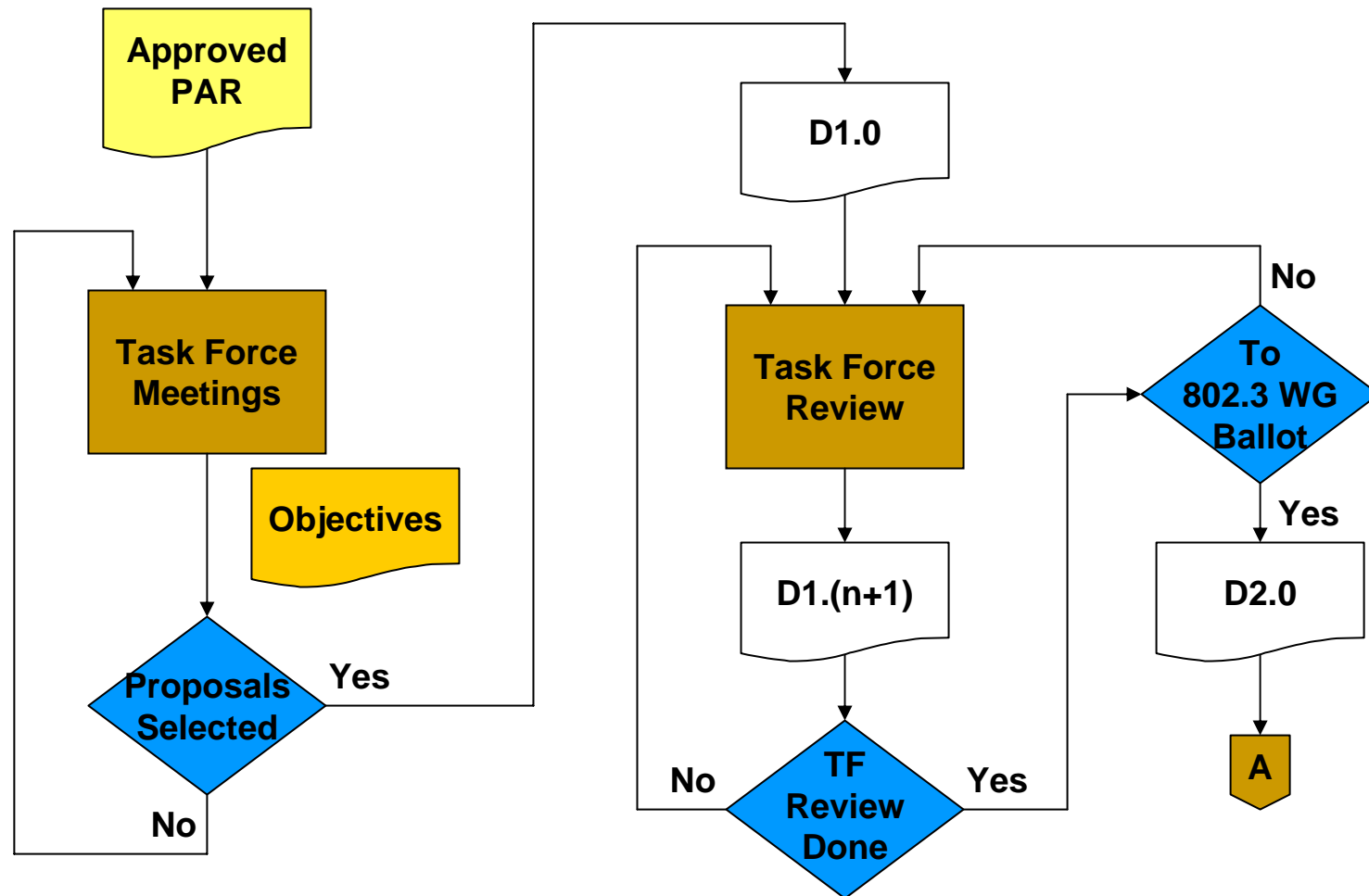
Study Group Phase



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

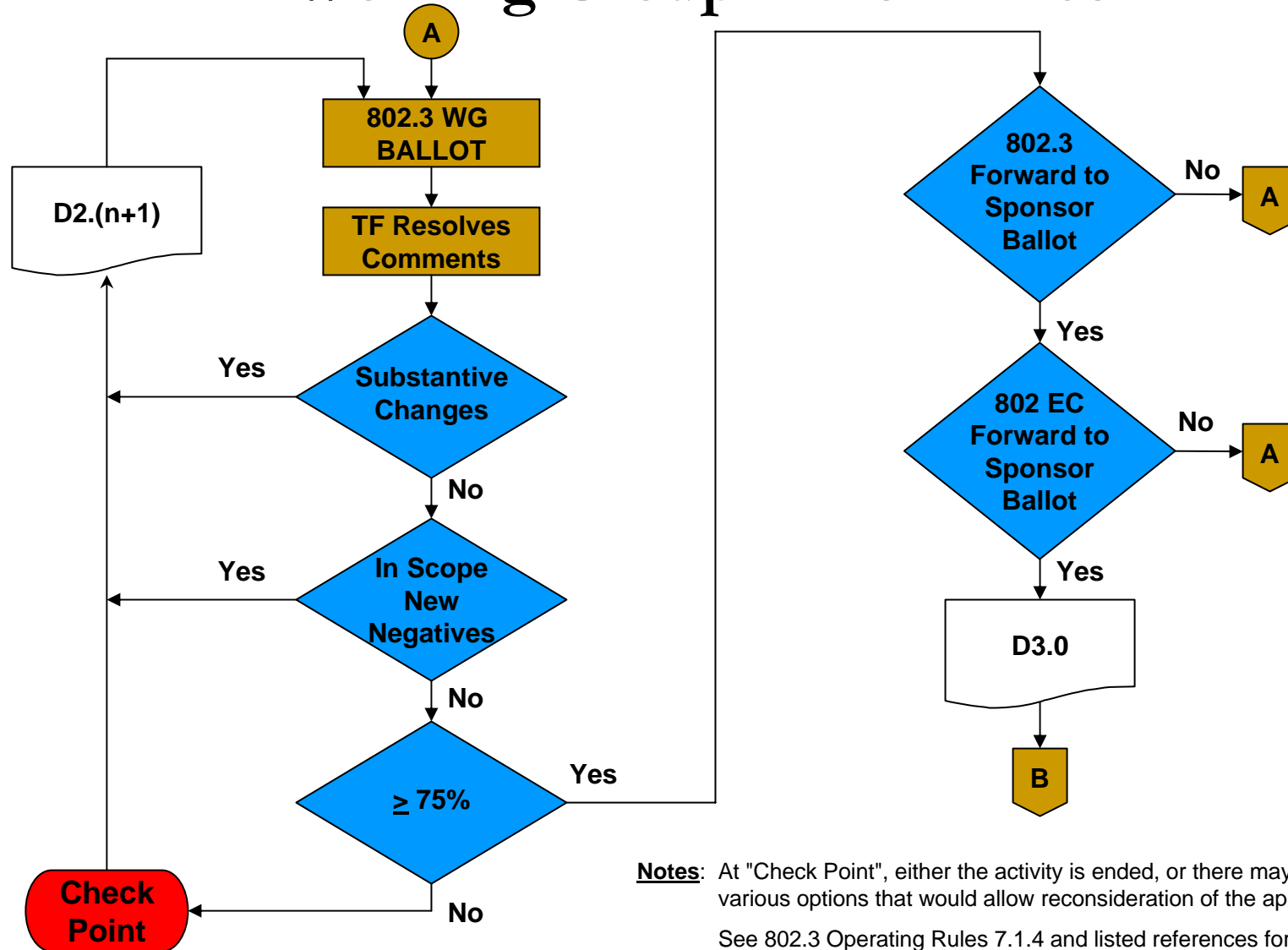
Overview of IEEE 802.3 Standards Process (2/5)

Task Force Comment Phase



Overview of IEEE 802.3 Standards Process (3/5)

Working Group Ballot Phase

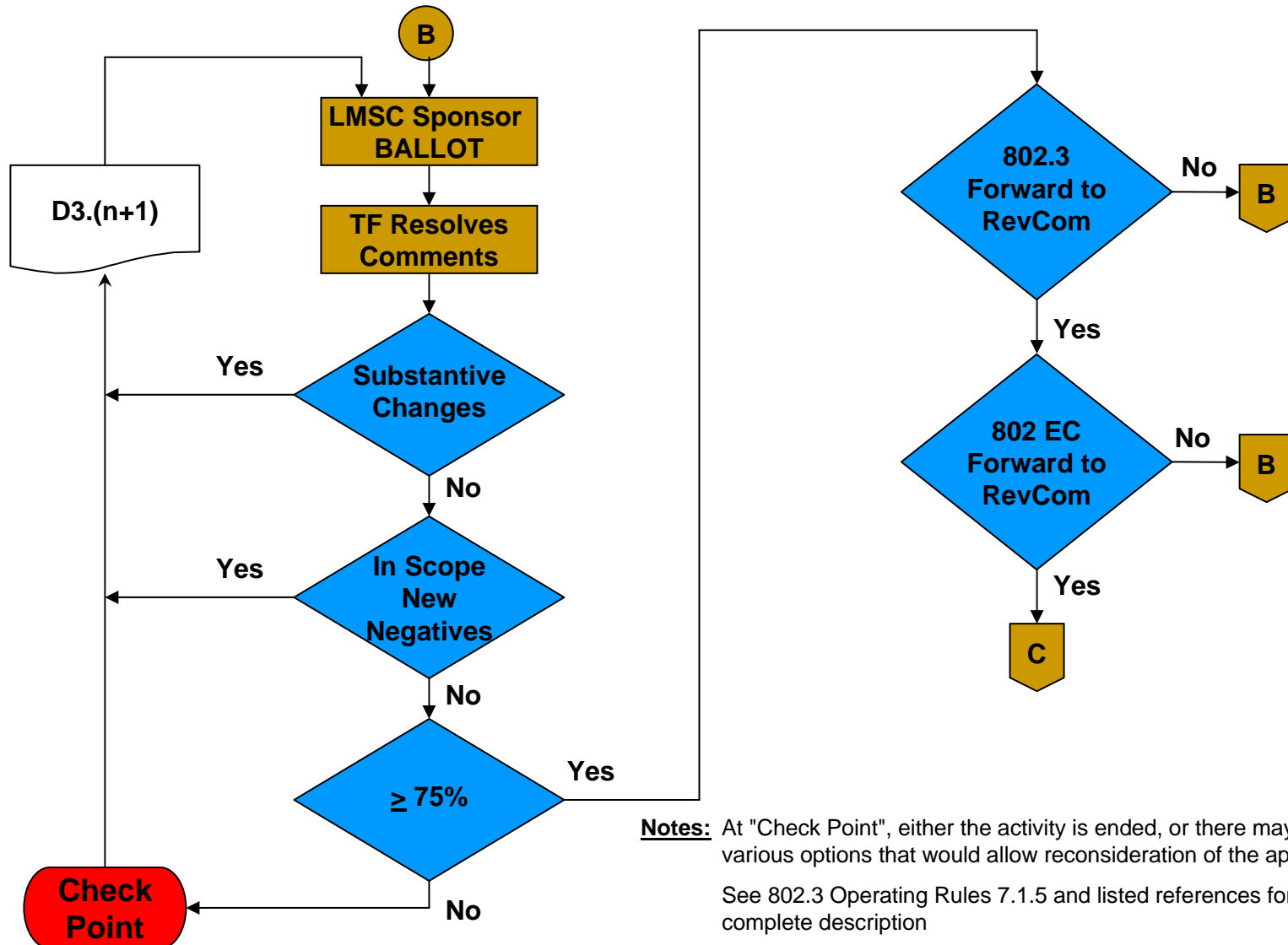


Notes: At "Check Point", either the activity is ended, or there may be various options that would allow reconsideration of the approval.

See 802.3 Operating Rules 7.1.4 and listed references for complete description

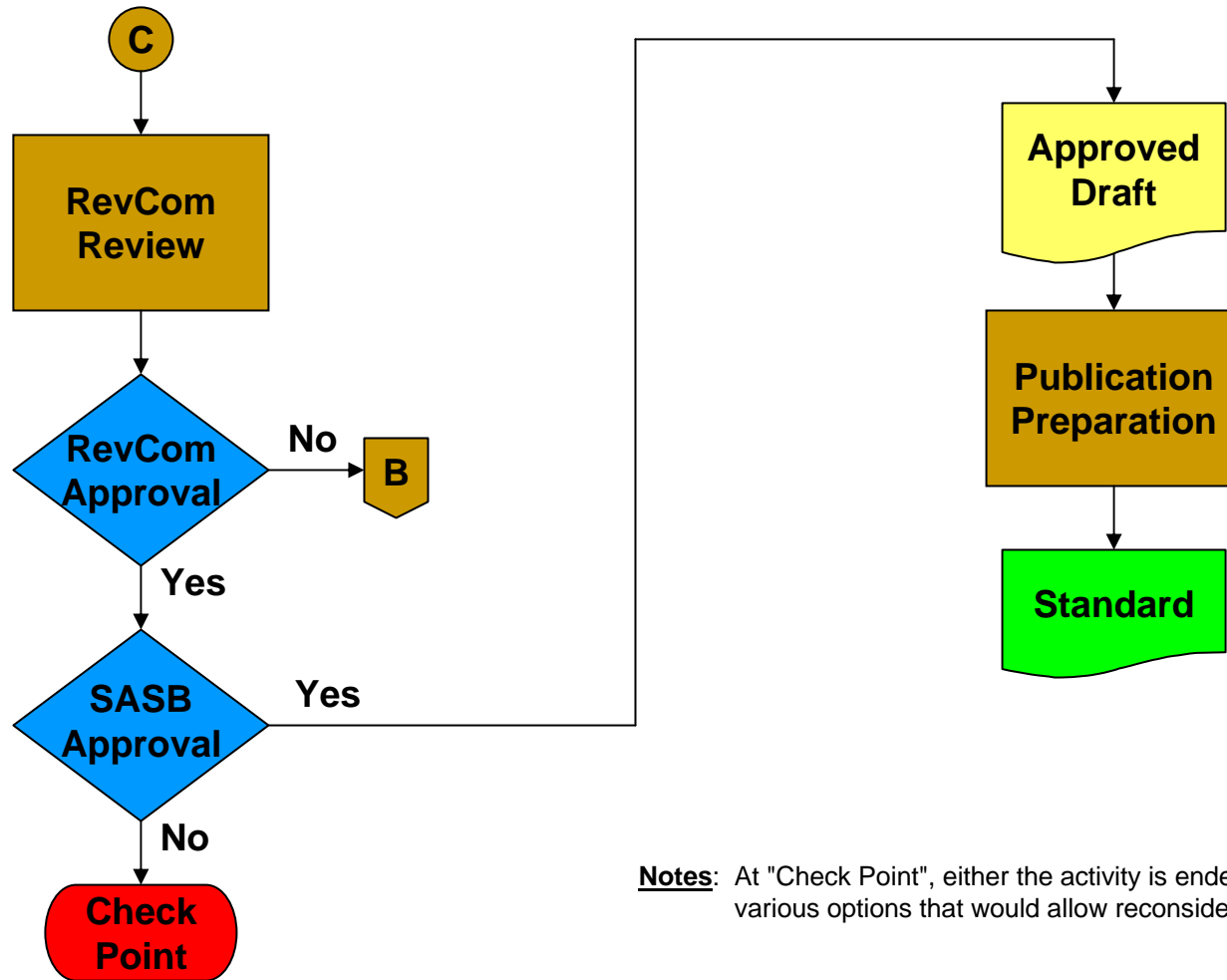
Overview of IEEE 802.3 Standards Process (4/5)

Sponsor Ballot Phase



Overview of IEEE 802.3 Standards Process (5/5)

Final Approvals and Standard Release



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

The Study Group

- Normal function is to draft a complete PAR and Five Criteria
- Provide a plenary week tutorial to the LMSC.
- Gain approval at the WG 802.3, 802 SEC, IEEE NesCom and IEEE-SA Standards Board.
- SG only exists for 6 months
 - Extensions can be requested, voted on by 802.3, ratified by SEC
- Development of Objectives helps set the goals for the Task Force
- Consensus (>75%) required to move forward

- Not a goal – choosing a solution.

Request for Formation of EEESG (as per November '06 Plenary Motion)

Move that the IEEE 802.3 working group request formation of an *Energy Efficient Ethernet* IEEE 802.3 study group to evaluate methods to reduce energy use by reduction of link speed during periods of low link utilization

Our job is to:

- Determine the objectives
 - Based on the 5 criteria
- Produce a Project Authorization Request (PAR)

PAR

- Title

- What are we calling this

- Scope

- The Focus – Energy Efficient Ethernet

- Purpose

- Why do we want to do this

5 Criteria (IEEE 802)

■ Broad Market Potential

- ❑ Broad sets of applicability.
- ❑ Multiple vendors, numerous users
- ❑ Balanced cost (LAN vs. attached stations)

■ Compatibility

- ❑ IEEE 802 defines a family of standards. All standards shall be in conformance with the IEEE 802.1 Architecture, Management, and Inter-working documents as follows: 802. Overview and Architecture, 802.1D, 802.1Q, and parts of 802.1f. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with 802.
- ❑ Each standard in the IEEE 802 family of standards shall include a definition of managed objects that are compatible with systems management standards.

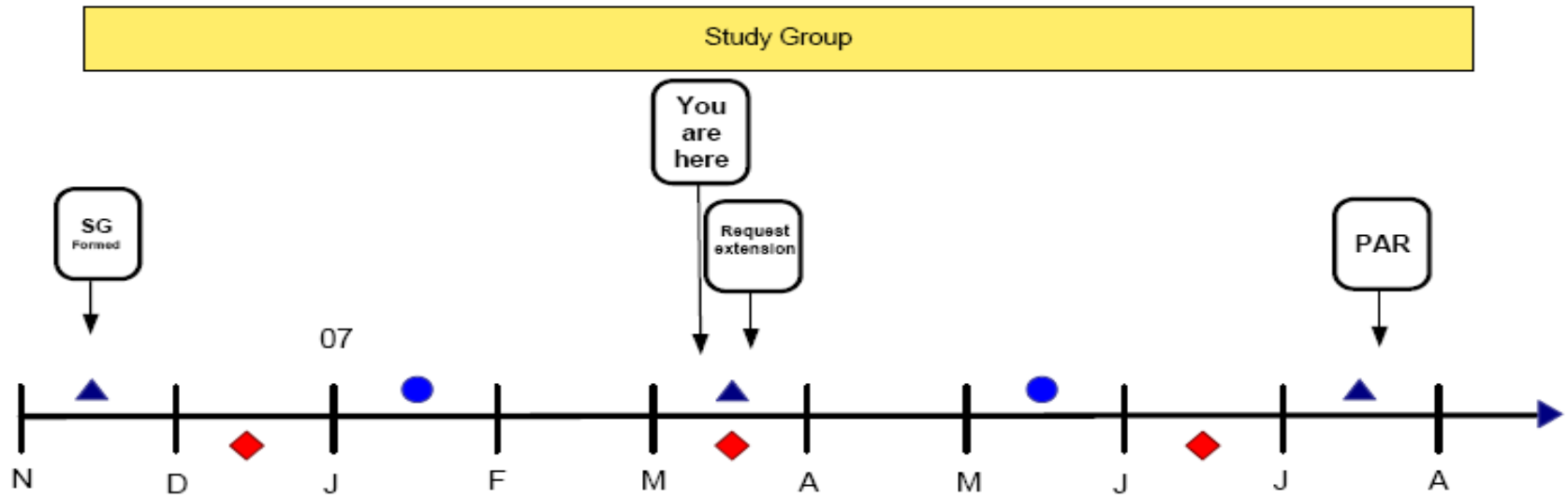
5 Criteria (IEEE 802)

- Distinct Identity
 - ❑ Substantially different from other 802 standards
 - ❑ One unique solution per problem (not two solutions to a problem)
 - ❑ Easy for document reader to select relevant spec

- Technical Feasibility
 - ❑ Demonstrated system feasibility
 - ❑ Proven technology, reasonable testing
 - ❑ Confidence in reliability

- Economic Feasibility
 - ❑ Known cost factors, reliable data
 - ❑ Reasonable cost for performance
 - ❑ Consideration of installation costs

A possible timeline to PAR



Legend

- ▲ IEEE 802 Plenary
- IEEE 802 Interim
- ◆ IEEE-SA Standards Board

Presentations and Discussion

Tuesday

Time	Title	File name	Presenter	Affiliation	Duration
9:00 AM	Agenda and General Information	agenda_01_0307.pdf	Mike Bennett	LBNL	0:35
9:35 AM	Rapid PHY Selection (RPS) Emulation and Experiments Using PAUSE	christensen_01_0307.pdf	Ken Christensen	USF	0:30
10:05 AM	Server Bandwidth Utilization Plots	bennett_01_0307.pdf	Mike Bennett	LBNL	0:15
10:20 AM	Break				0:25
10:45 AM	10GBASE-T Power Budget Summary	kohl_01_0307.pdf	Mike Bennett (for Blaine Kohl)	Tehuti Networks	0:15
11:00 AM	End Station Requirements for EEE and proposal for EEE objectives	ganga_01_0307.pdf	Ilango Ganga / David Chalupsky	Intel	0:25
11:25 AM	System Power Management architecture - A tutorial	chalupsky_01_0307	David Chalupsky / Ilango Ganga	Intel	0:30
11:55 AM	Lunch				1:30
1:25 PM	Considerations for Technical Feasibility of EEE with 10GBASE-T	zimmerman_01_0307.pdf	George Zimmerman	SolarFlare	0:30
1:55 PM	Observations and Thoughts on Rate Switching	mccconnell_01_0307	Mike McConnell	KeyEye	0:20
2:15 PM	Break				0:30
2:45 PM	10GEEE - Time to Switch	woodruff_01_0307.pdf	Bill Woodruff	Aquantia	0:20
3:05 PM	EEE for Backplane PHYs in a Blade Server Environment	koenen_01_0307.pdf	David Koenan	HP	0:20
3:25 PM	Energy Efficient Ethernet Setting the bar	barrass_01_0107.pdf	Hugh Barrass	Cisco	0:30
3:55 PM	Energy Efficient Ethernet: Outstanding Questions - Update: March 2007	nordman_01_0107.pdf	Ken Christensen	USF	0:15
4:10 PM	Discussion and straw polls		All		0:50
5:00 PM					

Wednesday

Time	Title	File name	Presenter	Affiliation	Duration
9:00 AM	Opening remarks		Mike Bennett	LBNL	0:15
9:15 AM	Discussion and straw polls		All		0:45
10:00 AM	Break				0:30
10:30 AM	Discussion and straw polls		All		1:30
12:00 PM	Lunch				1:30
1:30 PM	Discussion and Motions		All		1:00
2:30 PM	Break				0:30
3:00 PM	Discussion and Motions (Continued)		All		2:00
5:00 PM					

Thursday

Time	Title	File name	Presenter	Affiliation	Duration
9:00 AM	Opening remarks		Mike Bennett		0:15
9:15 AM	Discussion and Motions		All		1:15
10:30 AM	Break				0:30
11:00 AM	Discussion and Motions (Continued)		All		1:00
12:00 PM	Adjourn				

Future Meetings

- May 2007 Interim
 - Week of May 28
 - ITU
 - Geneva, Switzerland
 - For more info: <http://www.ieee802.org/1/files/public/docs2006/meetings-may07-interim+workshop-1106.pdf>

- July 2007 Plenary
 - Week of July 16
 - Hyatt Regency
 - San Francisco, CA

- Future meeting information at:
 - <http://www.ieee802.org/meeting/index.html>

Thank You!