
Residential Ethernet Study Group Agenda and General Information

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Agenda

- **Welcome and Introductions**
- **Appoint/Volunteer Recording Secretary**
- **Goals for this Meeting**
- **Reflector and Web**
- **Ground Rules**
- **IEEE**
 - **Structure**
 - **Bylaws and Rules**
 - **Call for Patents**
 - **IEEE Standards Process**
- **Presentations**
- **Future Meetings**
- **Motion Madness**

Goals for this Meeting

- **To go over IEEE process and general RESG information**
 - Email reflectors, Web page, Plenary and Interim meetings, voting
 - What is the IEEE SA standards process?
 - Study Groups
 - PAR
 - Five Criteria
 - Goals and Objectives
- **To hear presentations**
 - Scope of the Residential Ethernet project
 - Objectives of the Residential Ethernet project
- **To build consensus**
 - Goals and Objectives

Reflector and Web

To subscribe to the Residential Ethernet Study Group send an email containing the following text in the body of the message to:

`subscribe stds-802-3-re <yourfirstname> <yourlastname>`

to

ListServ@ieee.org

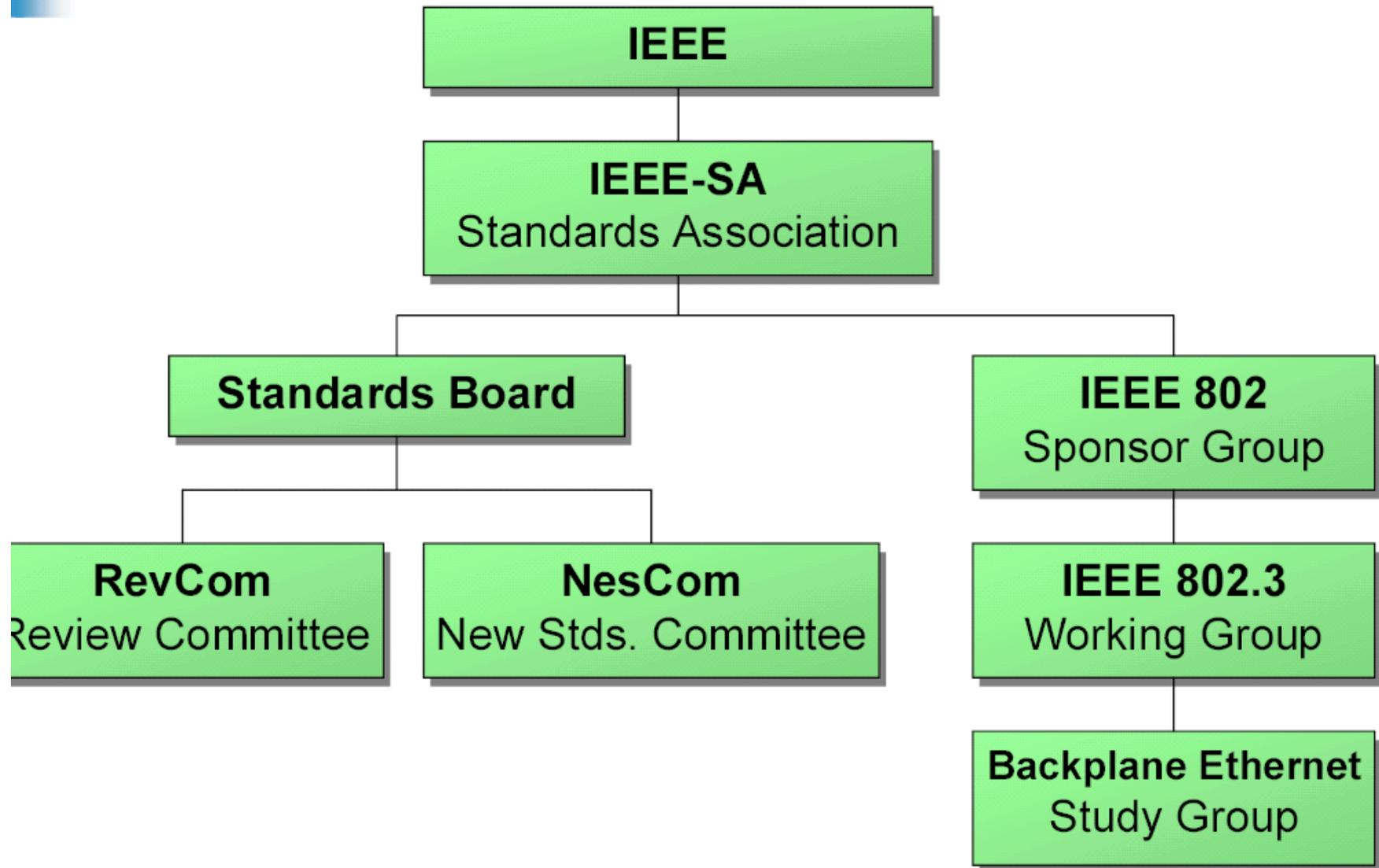
Residential Ethernet Study Group web page URL:

http://www.ieee802.org/3/re_study/

Ground rules

- **802.3 Rules apply**
 - 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

IEEE Standards Structure



Bylaws and Rules

- **Bylaws of the IEEE Standards Association (IEEE-SA):**
- <http://standards.ieee.org/sa/sa-bylaws.pdf>
- **Bylaws of the IEEE-SA Standards Board:**
- <http://standards.ieee.org/guides/bylaws/sb-bylaws.pdf>
- **IEEE LAN/MAN Standards Committee (LMSC)**
- **Operating Rules:**
- <http://www.ieee802.org/rules.pdf>
- **IEEE 802.3 Working Group Operating Rules:**
- <http://www.ieee802.org/3/rules/>

IEEE IEEE-SA Standards Board Bylaws on Patents in SA Standards Board Bylaws on Patents in Standards

6. Patents

IEEE standards may include the known use of patent(s), including patent applications, provided the IEEE receives assurance from the patent holder or applicant with respect to patents essential for compliance with both mandatory and optional portions of the standard. This assurance shall be provided without coercion and prior to approval of the standard (or reaffirmation when a patent becomes known after initial approval of the standard). This assurance shall be a letter that is in the form of 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 the proposed IEEE standard against any person or entity using the patent(s) to comply with the standard or
- b) A statement that a license 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 shall apply, at a minimum, from the date of the standard's approval to the date of the standard's withdrawal and is irrevocable during that period.

Approved by IEEE-SA Standards Board – December 2002

Inappropriate Topics for IEEE WG Meetings

Inappropriate Topics for IEEE WG

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

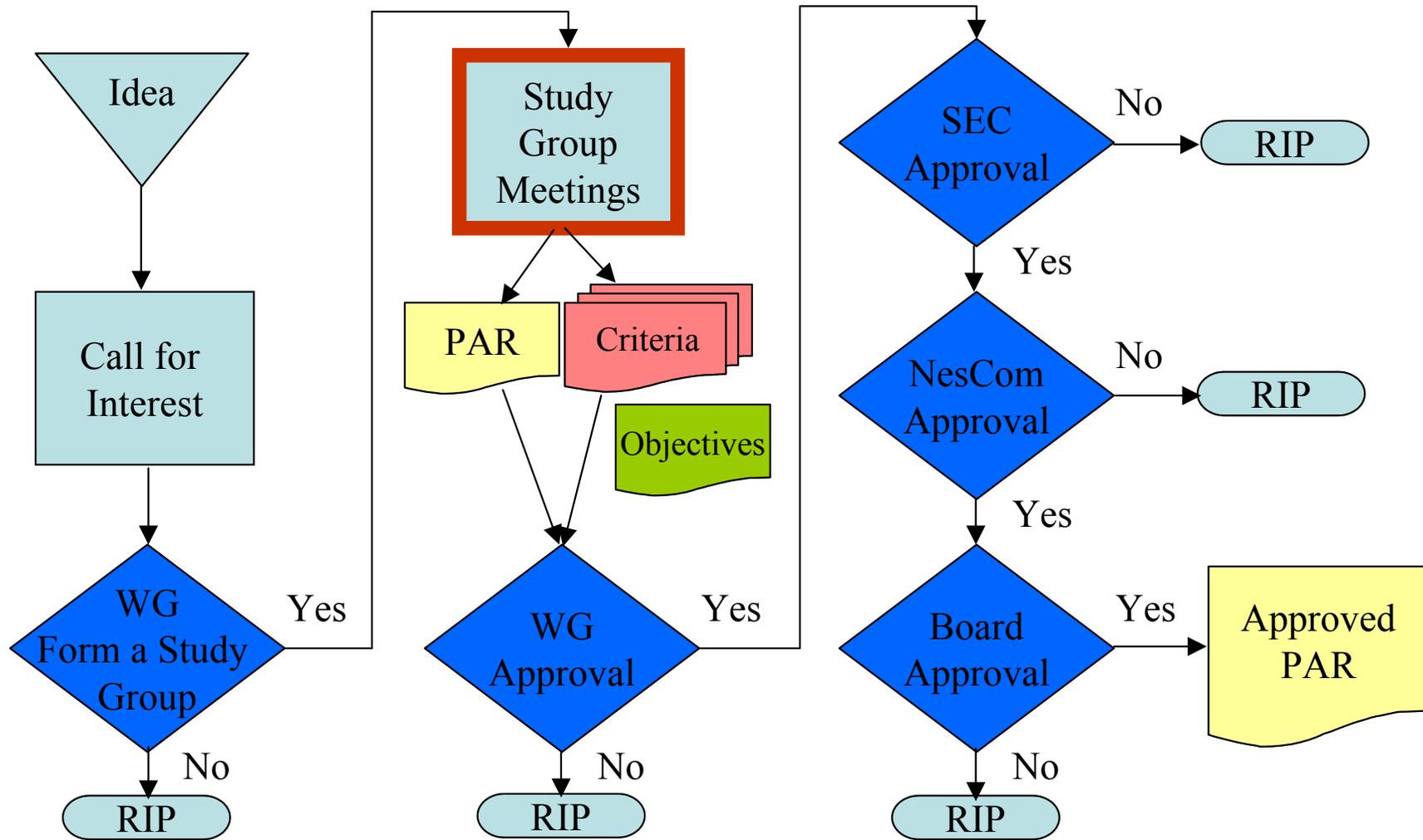
Don't be silent if inappropriate topics are discussed... do formally object.

If you have questions, contact the IEEE Patent Committee

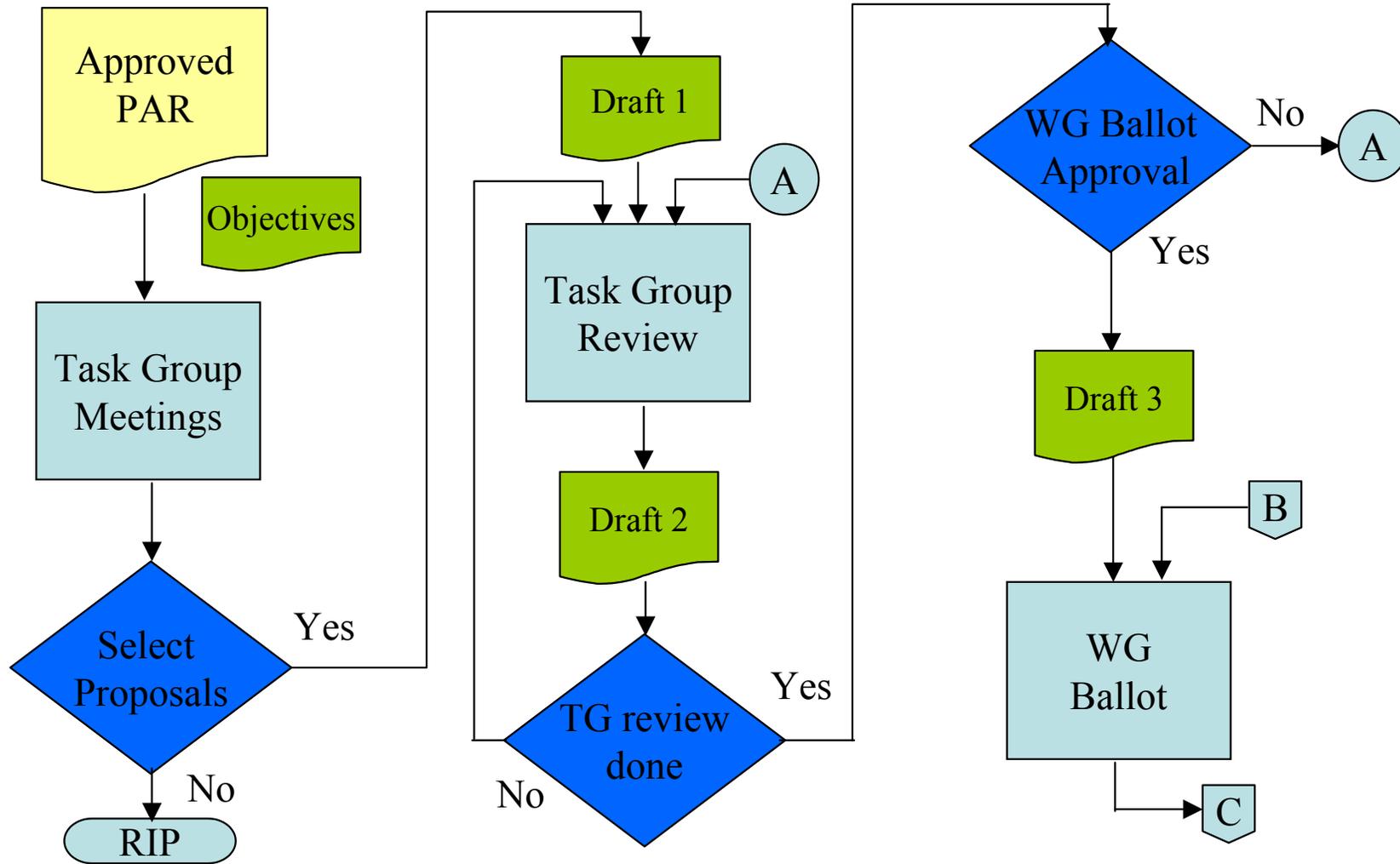
Administrator at patcom@ieee.org

Approved by IEEE-SA Standards Board – December 2002

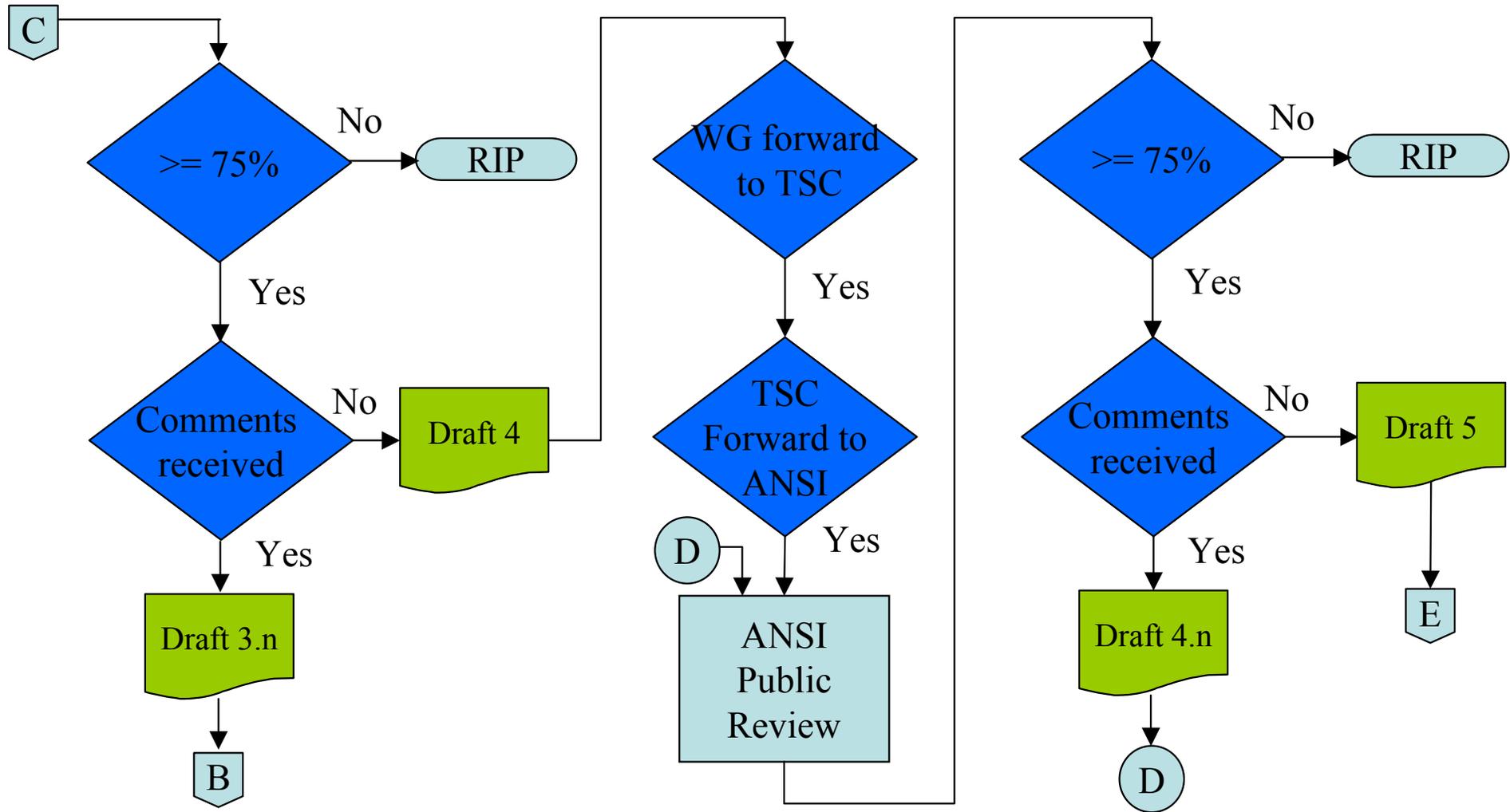
Standards Process



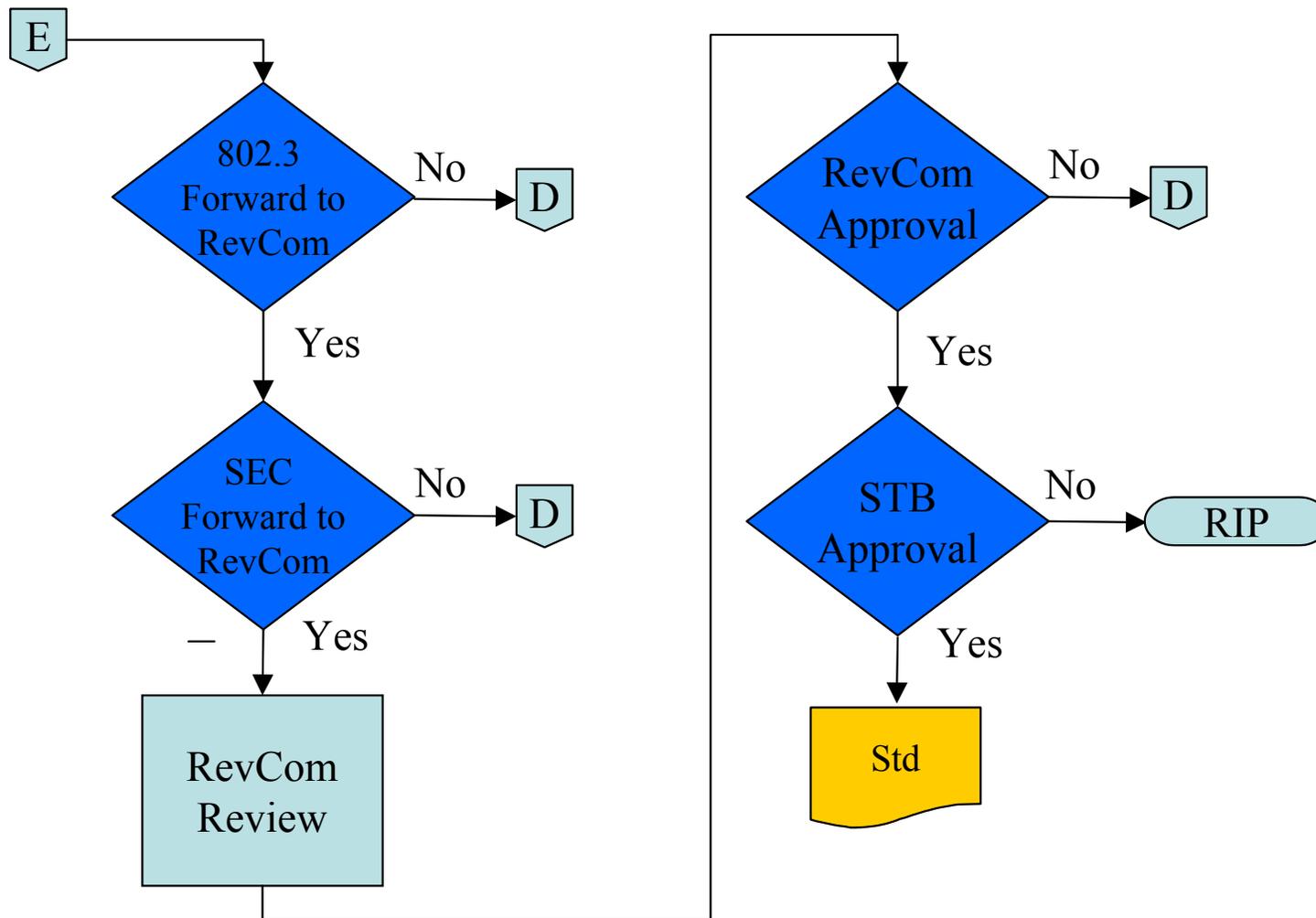
Standards Process



Standards Process



Standards Process



Study Group

- Function is to draft a PAR and 5 criteria and objectives
- Gain approval at WG 802.3, 802 SEC, IEEE NesCom and IEEE Stds. 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
- Developing consensus
 - Education helps build consensus
 - Consensus (> 75%) required to move forward

Study Group

- Study Group NON-FUNCTION: Chose a solution

SCOPE from CFI (as of 5/12/04)

Residential *synchronous* Ethernet provides time-sensitive delivery between non-disruptive plug-and-play **synchronized end points** over reliable point-to-point full-duplex cable media.

Time-sensitive data transmissions use admission control negotiations to guarantee bandwidth allocations with predictable latency and low-jitter delivery. Device-clock synchronization is also supported.

Ensuring real-time services through routers, data security, wireless media, and developing new PMDs are beyond the scope of this project.

Project Authorization Request (PAR)

- Title
 - What we are calling this
- Scope
 - Focus: Ethernet as a ??
- Purpose
 - Why do we want to do this

The 5 Criteria

- Broad set(s) of applications
 - Multiple vendors, multiple users
 - Balanced cost (LAN vs. attached stations)
- Compatibility with IEEE Std. 802.3
 - Conformance with CSMA/CD MAC, PLS
 - Conformance with 802.2
 - Conformance with 802 Functional Requirements
- Distinct Identity
 - Substantially different from other 802.3 specifications
 - One unique solution for problem
 - Easy for document reader to select relevant spec

The 5 Criteria

- Technical Feasibility
 - Demonstrated system feasibility
 - Proven technology, reasonable testing
 - Confidence in reliability
- Economic Feasibility
 - Cost factors known, reliable data
 - Reasonable cost for performance
 - Total installation costs considered

Presentations

- “Application Objectives,” Dennis Lou, Pioneer
- “MaGIC experience,” Alexei Beliaev, Gibson Labs
- “Bridging 1394: a requirement for Residential Ethernet,” Michael Johas Teener, Plumblinks
- “Technical and economic feasibility for millisecond deterministic delay in Residential Ethernet,” Michael Johas Teener, Plumblinks
- “Residential Ethernet: 2 Criteria,” Mike McCormack, 3Com
- “Some Issues and Considerations for RE,” Jae Hun Cho, Chong Ho Yoon, Samsung Electronics

Draft Objectives 9/30/2004

- Plug and Play
 - No user setup required (i.e. Auto MDI-X, auto-config)
- Large aggregate bandwidth (greater than or equal to 1G)
- Isochronous traffic only supported over 100Mb or greater full-duplex
- At least 75% of aggregate bandwidth available for isochronous traffic
- At least 10% of aggregate bandwidth is reserved for best-effort traffic
- Low jitter and zero wander
- Low delay (500uS maximum through 1 hop)
- Isochronous bridging to 802.11
- Isochronous bridging to IEEE1394
- Network provides “house” clock
- No packet loss in isochronous mode, bandwidth is reserved
- Low cost

Draft Objectives 9/30/2004

- No new PHY(s)
- Network will automatically reclaim allocated but unused resources
- Compatible with IEEE802.3 Clause 33
- Isochronous traffic is not disrupted when any station is removed from the network
- Isochronous traffic is not disrupted when a station or session is added to the network
- A mechanism to request/grant/assign resources and the default rule(s) for managing the resources
- The default policy is first-come, first-served by request
- Supports 802.1q traffic (isochronous)
- Support arbitrary topologies within reasonable limits (we will define what this means)

Motions

- That the SG Chair sort the objectives into a more logical order and that the RESG adopt the objectives in the document. (resg_objectives_0904_1.pdf)
- Moved: M. Johas Teener
- Second: D. Paulson
- Technical 75% required:
- Y: 21 N: 0 A: 0
- All voters
- October 1, 2004 09:15

Work towards November Plenary

- Presentations addressing the objectives and the 5 criteria
- Prepare PAR and 5 Criteria
- Determine 802.3 / 802.1 content
- Create ad hocs:
 - Isochronous: Michael Johas Teener
 - Plug and Play: Tom Dineen
 - PoE: Daniel Feldman

Future Meetings

- IEEE 802 Plenary Meeting, November 14 – 18, San Antonio, TX
 - 802.3 Plenary Monday 1PM – 6PM
 - RESG Tuesday – Wednesday 8AM – 6PM
 - RESG Thursday 8AM – 12AM
 - 802.3 Plenary Thursday 1PM – 6PM
- IEEE 802.3 Interim Meeting, January 24 – 28, 2005, Vancouver, CA (Tentative)