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# **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**
  - 802.3 Content of the Residential Ethernet Project
  - Refine Objectives of the Residential Ethernet project
  - Work on Five Criteria
- **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](mailto:ListServ@ieee.org)

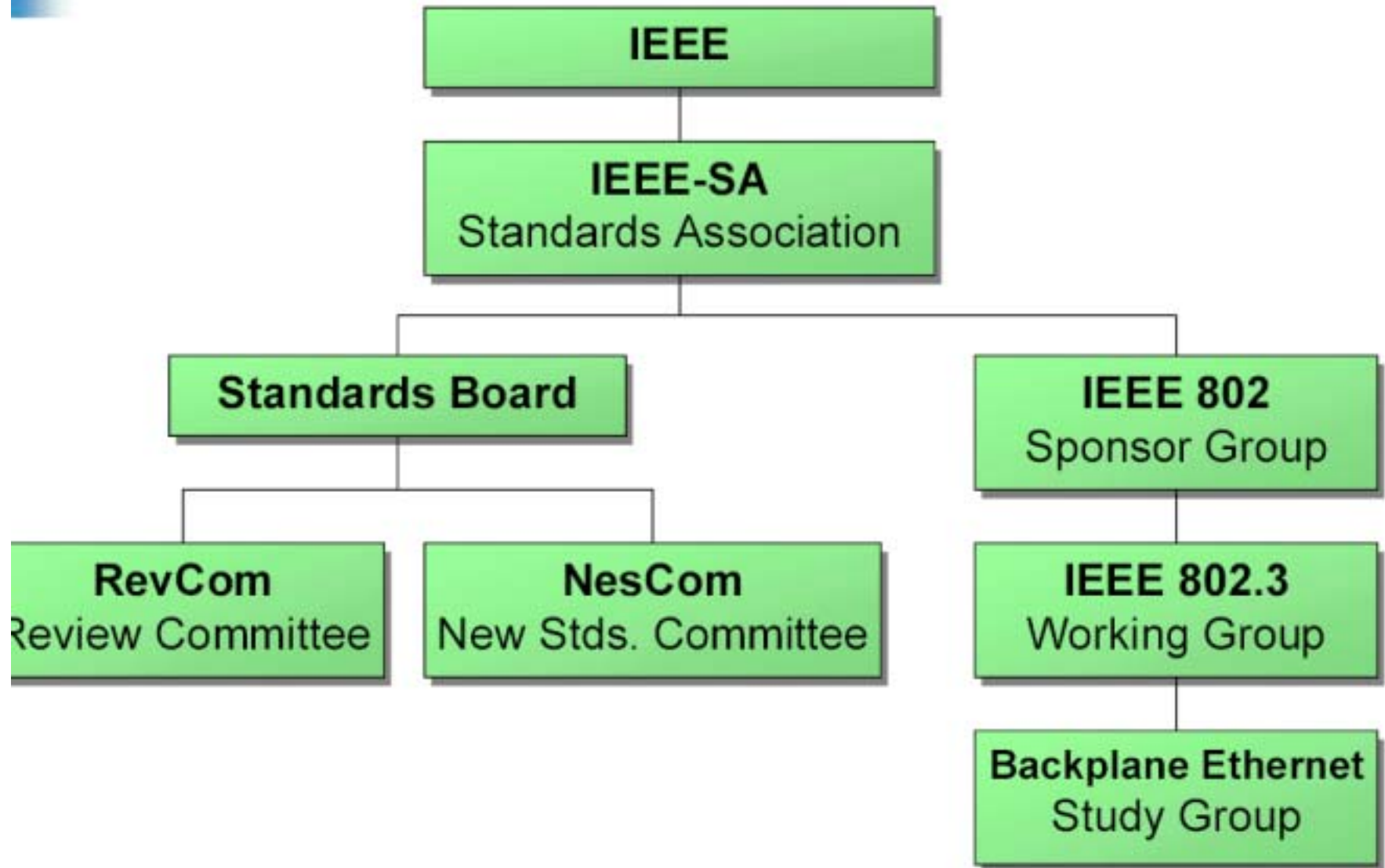
Residential Ethernet Study Group web page URL:

[http://www.ieee802.org/3/re\\_study/](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

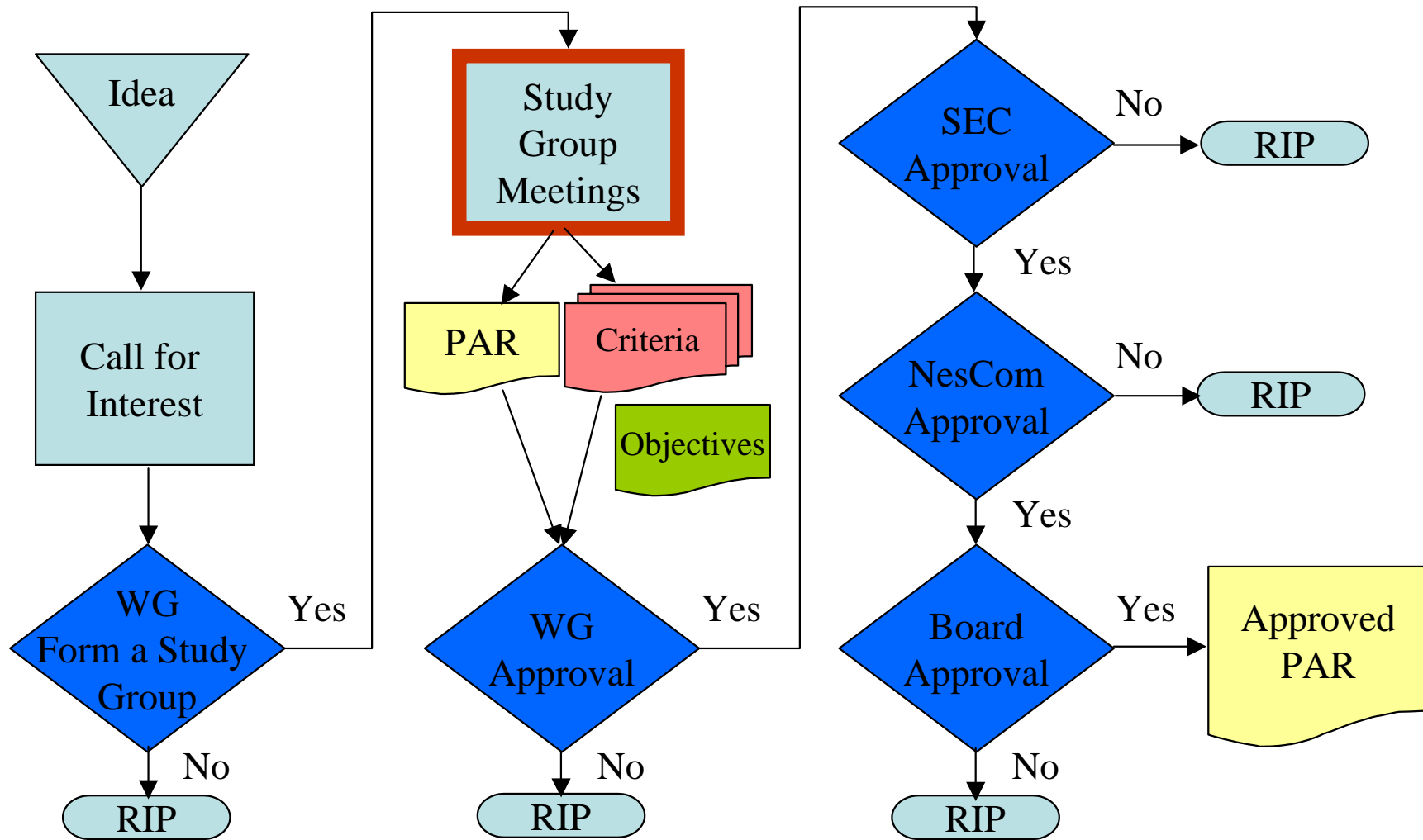
Don't be silent if inappropriate topics are discussed... do formally object.

If you have questions, contact the IEEE Patent Committee

Administrator at [patcom@ieee.org](mailto:patcom@ieee.org)

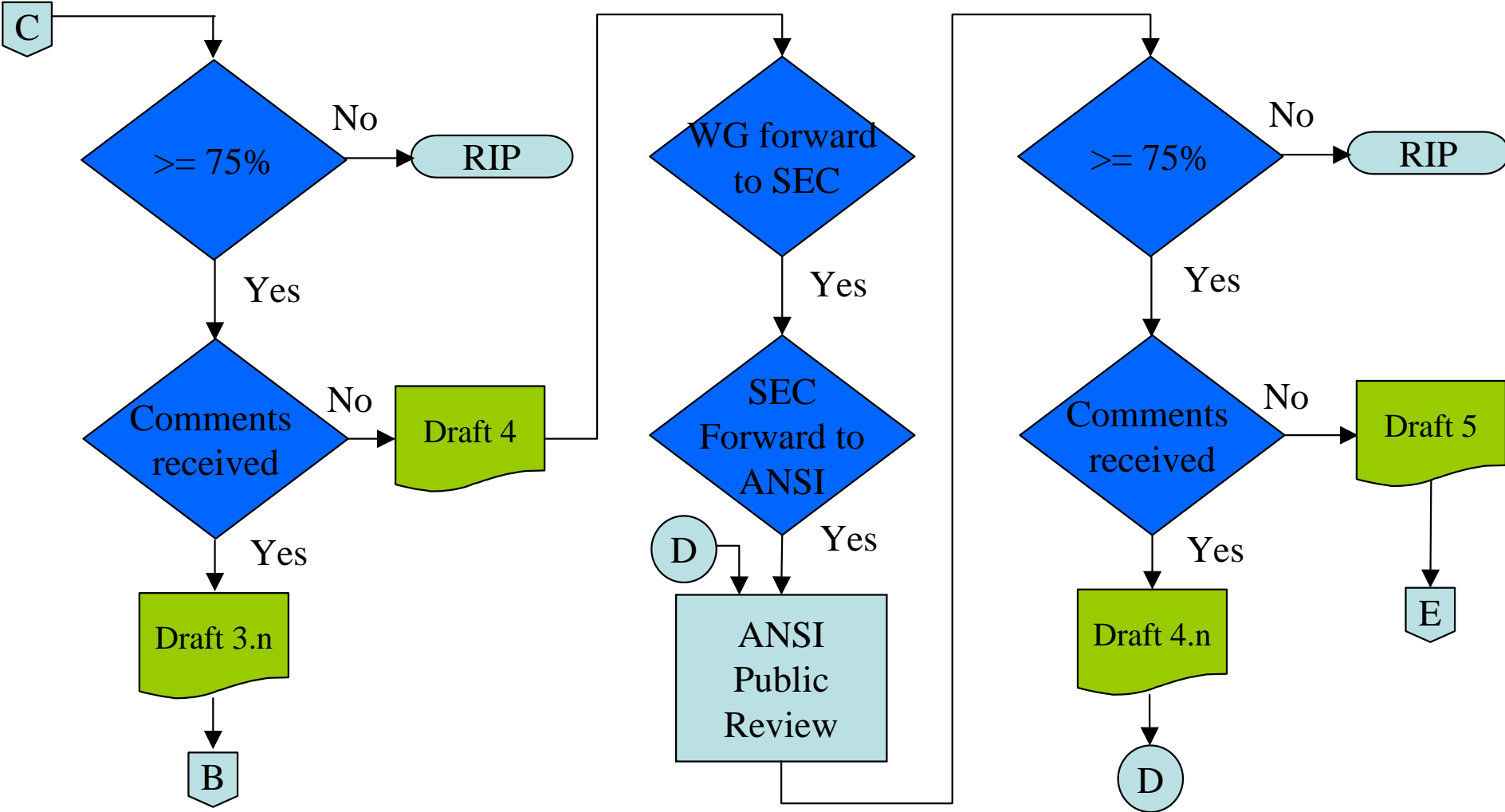
Approved by IEEE-SA Standards Board – December 2002

# Standards Process

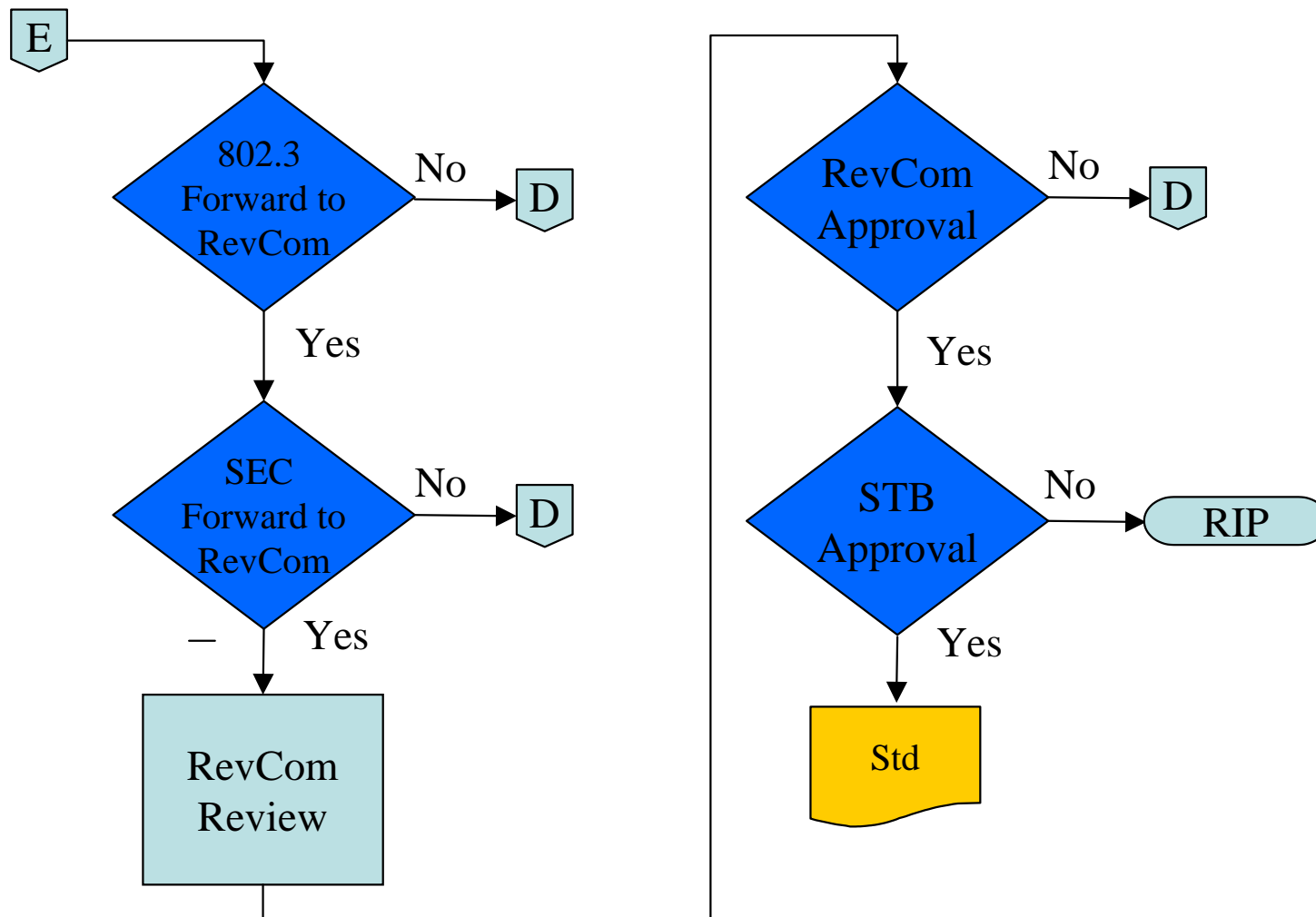




# Standards Process



# 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

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- 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)

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- 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

- “Range of application for Residential Ethernet,” Eric HS Ryu, Samsung Electronics
- “Residential Ethernet (access control considerations),” Alexei Beliaev, Gibson Labs; Geroge Claseman, Micrel; Thomas Dineen, Dineen Consulting; David V. James, JGG; Michael Johas Tenner, Plumblinks
- “MPCP model for ResE,” Onn Haran, Passave; Glenn Algie, Nortel

# Objectives 11/7/2004

- Auto-configuration of MAC/PHY e.g., auto-negotiation, Auto MDI
- A mechanism to request/grant/assign resources and the default rule(s) for managing the resources (e.g., 802.3ah MPCP)
- Support both isochronous and best-effort traffic simultaneously, with some bandwidth reserved for best-effort traffic.
- Isochronous traffic only supported over 100Mb or greater full-duplex
- Isochronous traffic is not disrupted when any station/session is added or removed from the network
- Bounded maximum delay isochronous traffic (2ms end-to-end through network; 250us maximum through 1 hop; values to be validated in TF)
- Low jitter and approaching zero wander
- Network provides “house” clock for application synchronization within 5us.
- Based on existing 802.3 PHY(s)
- Supports IEEE 802.3 Power Over Ethernet

# Objectives 11/7/2004

Adopted by RESG straw poll November 17, 2004 (4:27pm)

Y: 25      N: 0      A: 4

NOTE: Following items are deemed desirable, but are out of scope for 802.3.

- Isochronous bridging to 802.11
  - Isochronous bridging to 802.15.3
- Isochronous bridging to IEEE1394
- Compatible with 802.1q
- No isochronous frames dropped, bandwidth is reserved
- The default policy is first-come, first-served by request
- Network will automatically reclaim allocated but unused resources
- Support arbitrary topologies within reasonable limits (802.1D)

# MOTION

- Move to accept the PAR (re\_par012505.pdf), the 5 Criteria (re\_critters012505.pdf), and objectives (re\_objectives012505.pdf)
- Moved :T. Dineen
- Second: R. Brand
- Y 17 N 0 A 1
- Technical 75%
- PASSES January 25,2005 5:00PM

# MOTION

- Move that the RESG hold a one-day Interim meeting on Sunday, March 13, 2005 (11:00AM – 5:30PM) prior to the March 802 Plenary meeting in Atlanta, GA.
- Moved :T. Dineen
- Second: J. Battaglia
- Y 13 N 2 A 4
- Proc 50%
- PASSES January 25,2005 5:25PM



# MOTION

- Move that the Chair of 802.3 pre-submit the RESG PAR and 5 Criteria to the 802 SEC for consideration at the March 2005 802 Plenary.
- Moved :R. Brand
- Second: D. Lou
- Y 16 N 1 A 2
- Tech 75%
- PASSES January 25,2005 5:25PM

# Work towards March Plenary

- Presentations addressing the objectives and the 5 criteria
- Prepare PAR and 5 Criteria
- Determine 802.3 / 802.1 content
- Ad hocs

# Future Meetings

- IEEE 802 Plenary Meeting, March 14 – 18, Atlanta, GA
  - 802.3 Plenary Monday 1PM – 6PM
  - RESG Tuesday – Wednesday 8AM – 6PM
  - RESG Thursday 8AM – 12PM
  - 802.3 Plenary Thursday 1PM – 6PM
  - Interim Meeting on Sunday, March 13, 11AM – 5:30PM
- IEEE 802.3 Interim Meeting, May 2005, Location TBD