



IEEE P802.3ap

Backplane Ethernet Task Force

Agenda and General Information

Austin, TX
May 16, 2005



Agenda

- Welcome and Introductions
- Approve Agenda
- Approve Meeting Minutes
- Goals for this Meeting
- Task Force Organization
- Reflector and Web
- Ground Rules
- IEEE
 - Structure
 - Bylaws and Rules
 - Call for Patents
 - IEEE Standards Process
- Review Task Force Status
- Presentations
- Closing Business
- Future Meetings



Presentation Agenda (5/16)

8:30 AM		Agenda and General Information	0:30
9:00 AM	van Doorn	Editor's Report	0:15
9:15 AM	Moore	Channel Model Ad Hoc Report	0:15
9:30 AM	Peters	Improved HVM ATCA Models Update	0:30
10:00 AM		Break	0:20
10:20 AM	D'Ambrosia	Informative Model Methodology Update	0:20
10:40 AM	Mellitz	Channel Model Correlation Update and Trends	0:35
11:15 AM	D'Ambrosia	KX & KX4 Informative Channel Models	0:20
11:35 AM	Moore	Root Power Sum of Energy Integrals	0:25
12:00 PM		Lunch	1:30
1:30 PM	Szczepanek	AN Data Detect timer values	0:15
1:45 PM	Mellitz	An Eye on Return Loss: The Mathematical and Real Implications of RL Specs.	0:20
2:05 PM	Gao	Improved ATCA channel equalization analysis with package impacts	0:25
2:30 PM	Szczepanek	Bit error distribution on a DC-Coupled Backplane channel	0:30
3:00 PM		Break	0:20
3:20 PM	Szczepanek	DFE Error Propagation Spreadsheet Introduction	0:30
3:50 PM	Szczepanek	Simulated DFE Error Propagation results for Intel channels	0:30
4:20 PM	Szczepanek	DFE Coefficient Constraints	0:15
4:35 PM	Abler	Receiver Interoperability Testing	0:30
5:05 PM	Thaler	Digital Signal Detect	0:30
5:35 PM		Break	



Presentation Agenda (5/17)

8:30 AM	Gaither	Transmitter Compliance criteria	0:45
9:15 AM	Healey	10GBASE-KR Transmit Equalizer Requirements	0:30
9:45 AM		Break	0:20
10:05 AM	Brink	10GBASE-KR Transmitter Compliance Methodology Proposal	0:20
10:25 AM	Brink	Proposal for Enhancements to the 10GBASE-KR Start-Up Protocol	0:20
10:45 AM		Comment Resolution	1:15
12:00 PM		Lunch	1:30
1:30 PM		Comment Resolution	1:30
3:00 PM		Break	0:20
3:20 PM		Comment Resolution	2:10
5:30 PM		Break	



Goals for this Meeting

- Work toward a “technically complete” draft of IEEE P802.3ap.
 - Fill in TBD’s with specification values.
 - Fill in placeholders with specification text.
- “Big Ticket” Items
 - Backplane channel specifications
 - 10GBASE-KR transmitter specifications
 - Compliance test methodologies (receiver testing)
- Hear presentations.
 - 19 technical presentations on the agenda for this week.
- Resolve comments against Draft 0.9.



Task Force Organization

- Task Force Chair
 - Adam Healey (ahealey@agere.com)
- Task Force Secretary
 - John D'Ambrosia (john.dambrosia@tycoelectronics.com)
- Chief Editor
 - Schelto van Doorn (schelto.vandoorn@intel.com)
- Channel Model Ad Hoc Chair
 - Charles Moore ([charles moore@agilent.com](mailto:charles_moore@agilent.com))
- Signaling Ad Hoc (inactive) Chair
 - Mike Altmann (michael.w.altmann@intel.com)



Reflector and Web

- To subscribe to the IEEE P802.3ap Backplane Ethernet Task Force reflector send an email to:
listserv@ieee.org

with the following in the body of the message (do not include “<>”):
subscribe stds-802-3-blade <yourfirstname> <yourlastname>

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

<http://ieee802.org/3/ap/reflector.html>

- IEEE P802.3ap Task Force web page:
<http://www.ieee802.org/3/ap/>
- Channel Model Ad Hoc web page:
http://www.ieee802.org/3/ap/public/channel_adhoc
- Signaling Ad Hoc web page:
http://www.ieee802.org/3/ap/public/signal_adhoc



IEEE P802.3ap Draft Repository

- IEEE P802.3ap Private Area:

- <http://ieee802.org/3/ap/private/index.html>

- Username: 802.3ap

- Password: ●●●●●●

- Write it down...

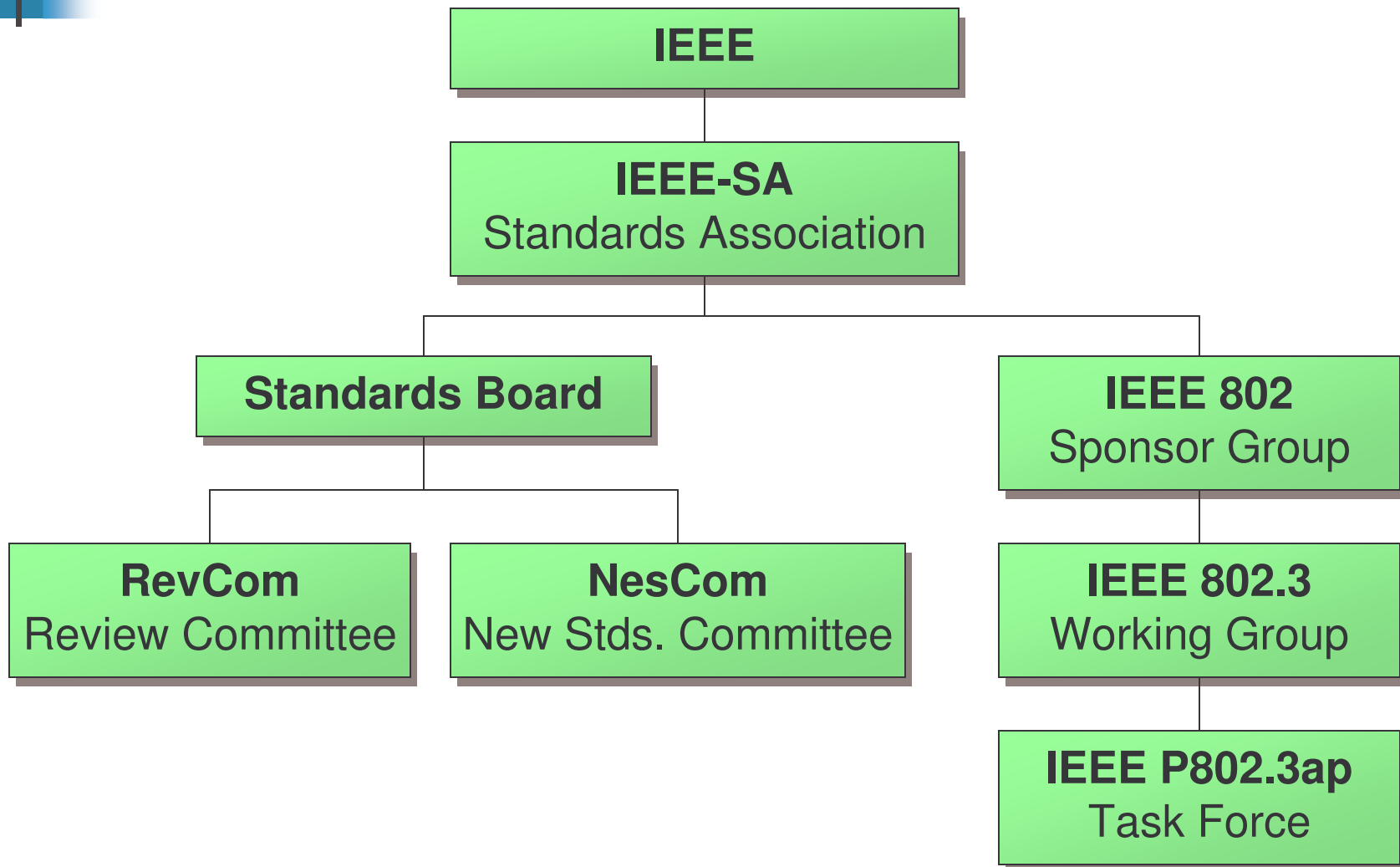


Ground Rules

- 802.3 Rules apply...
 - Foundation based upon Robert's Rules of Order
- ...with the following exceptions:
 - 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 Structure





References

- 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



Additional References

- IEEE-SA Operations Manual:
<http://standards.ieee.org/sa/sa-om-main.html>
- IEEE Standards Association (IEEE-SA) Standards Board Bylaws:
<http://standards.ieee.org/guides/bylaws/index.html>
- Overview and Guide to LMSC:
<http://ieee802.org/802%20overview.pdf>



IEEE Patent Policy

- The IEEE's patent policy is consistent with the ANSI patent policy and is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*
- Early disclosure of patents which may be essential for the use of standards under development is encouraged
- Disclosures made of such patents may not be exhaustive of all patents that may be essential for the use of standards under development, and that neither the IEEE, the WG, nor the WG Chairman ensure the accuracy or completeness of any disclosure or whether any disclosure is of a patent that, in fact, may be essential for the use of standards under development.



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 and prior to approval of the standard (or reaffirmation when a patent or patent application 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 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 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 – March 2003 (Revised December 2004)



Inappropriate Topics for IEEE WG Meetings

- 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>

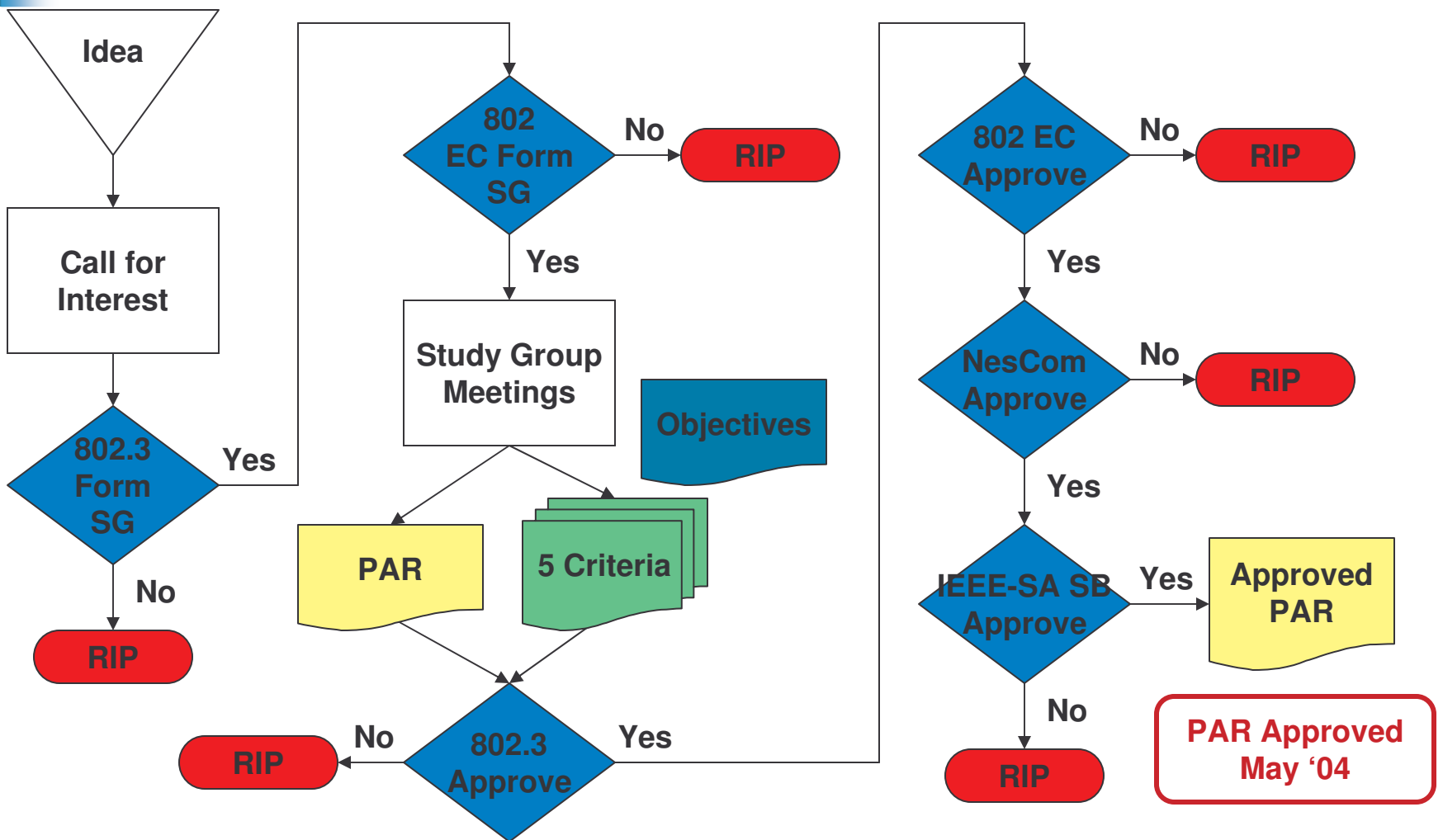
Approved by IEEE-SA Standards Board – March 2003 (Revised December 2004)



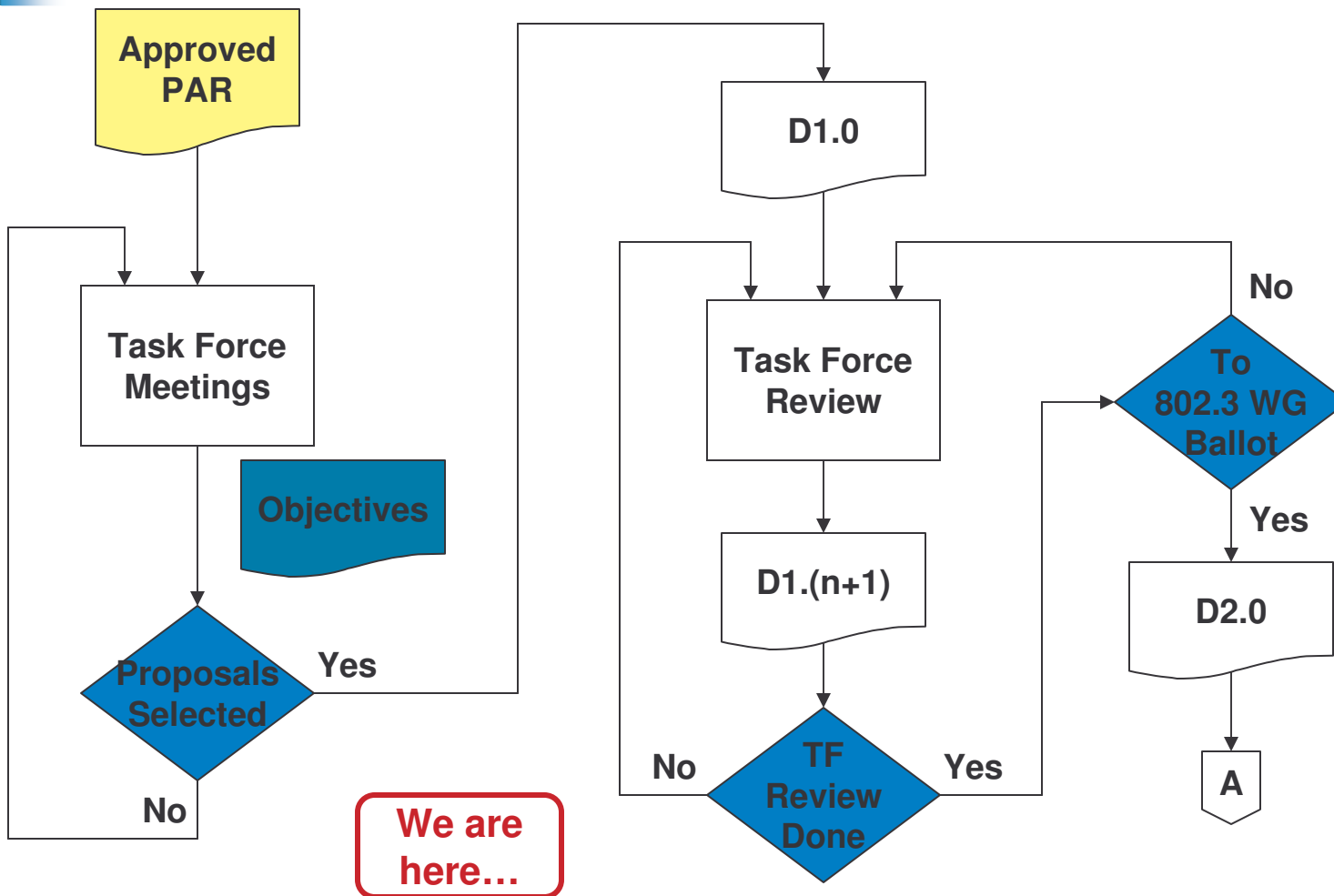
Process Overview

- Adopt proposals for the formation of a baseline
- Baseline is used to create draft document
- Draft is reviewed by the Task Force
 - Comments on the draft are generated and resolved
 - Multiple iterations
 - When Task Force review is completed and the draft is technically complete...
- ...ask the 802.3 working group to authorize a working group ballot (Draft 2.0)...

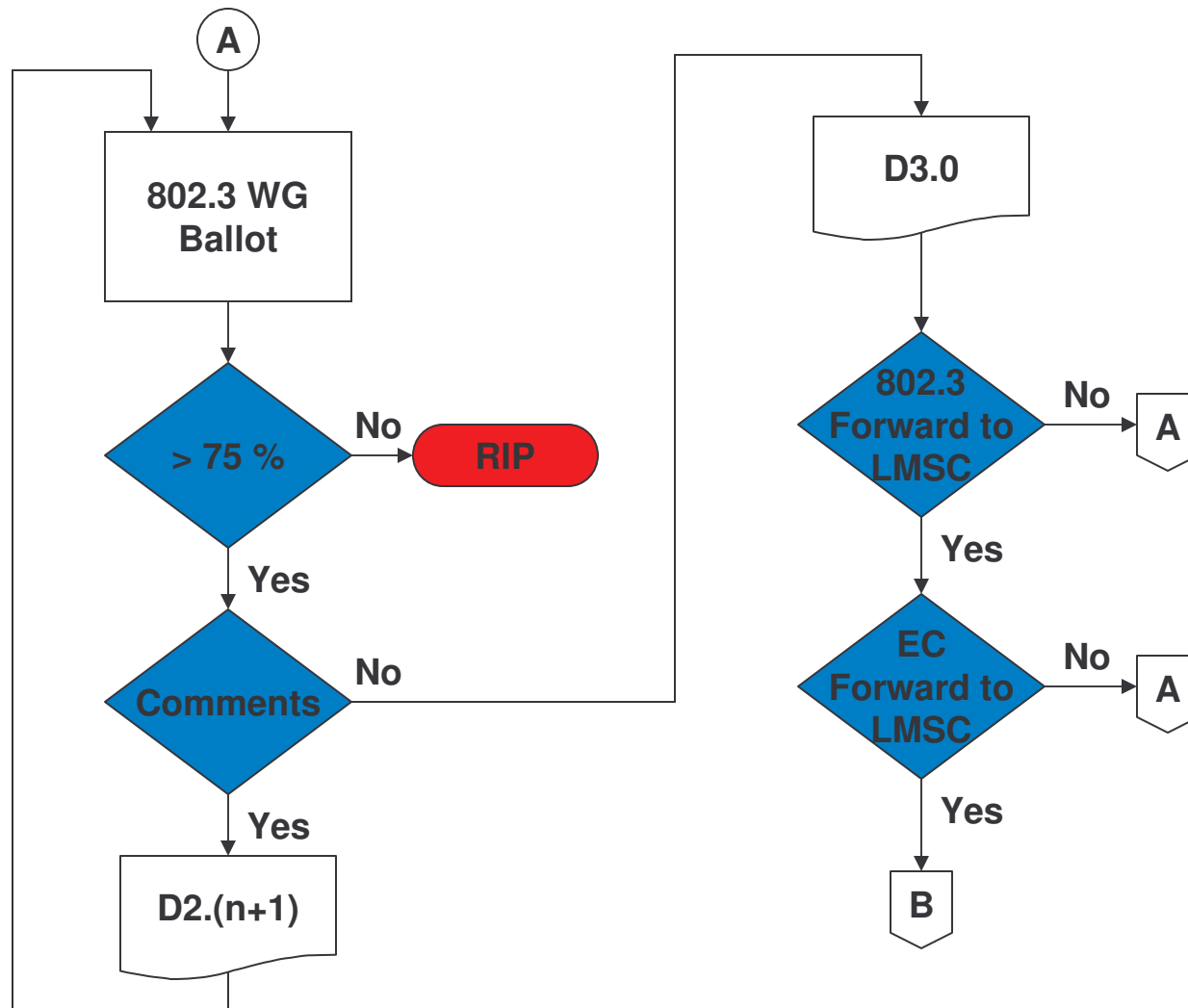
IEEE Standards Process



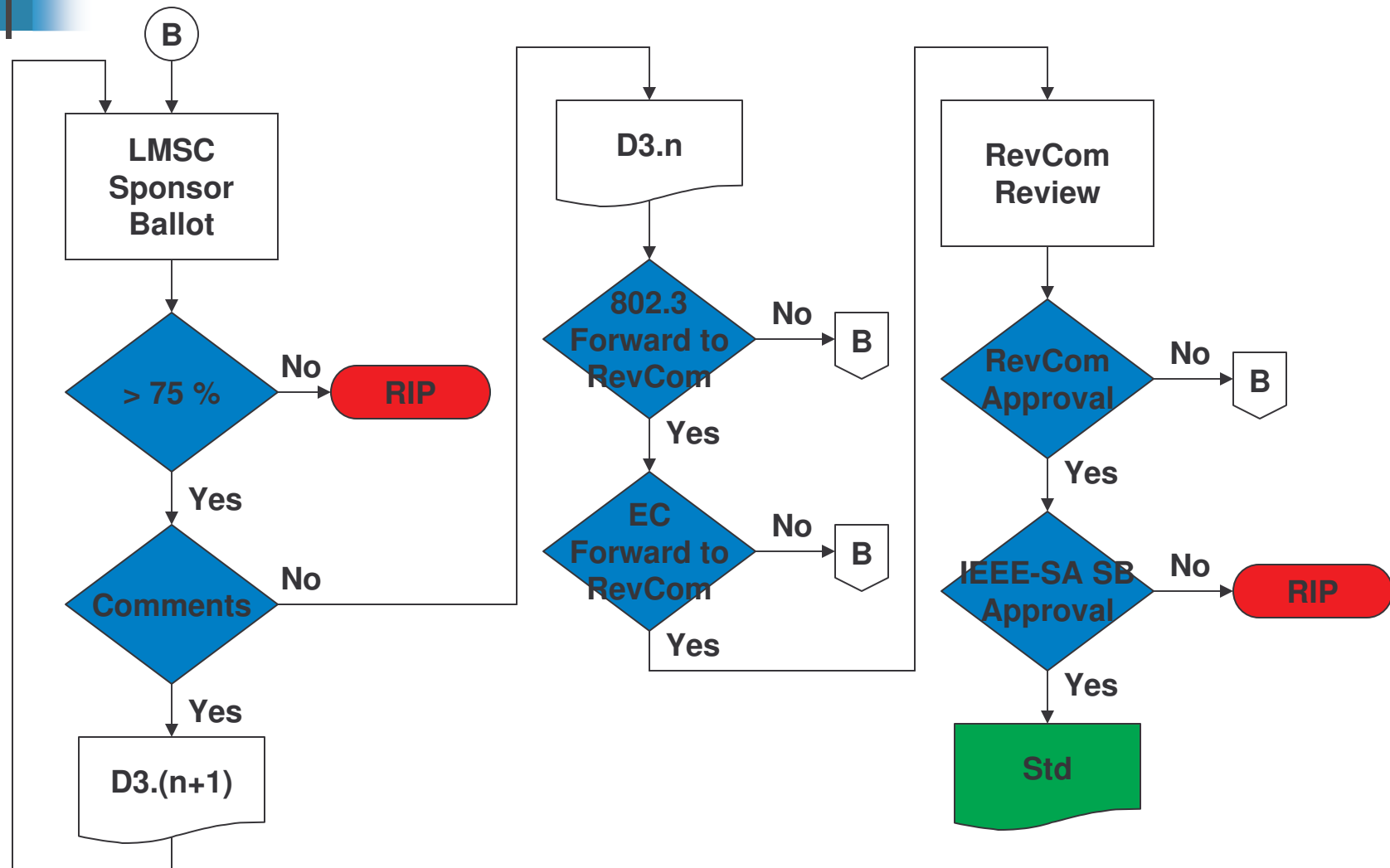
IEEE Standards Process (cont.)



IEEE Standards Process (cont.)



IEEE Standards Process (cont.)





IEEE P802.3ap Task Force Documents

- Approved PAR

<http://standards.ieee.org/board/nas/projects/802-3ap.pdf>

- 5 Criteria

http://ieee802.org/3/ap/802_3_ap_5criteria.pdf

- Objectives

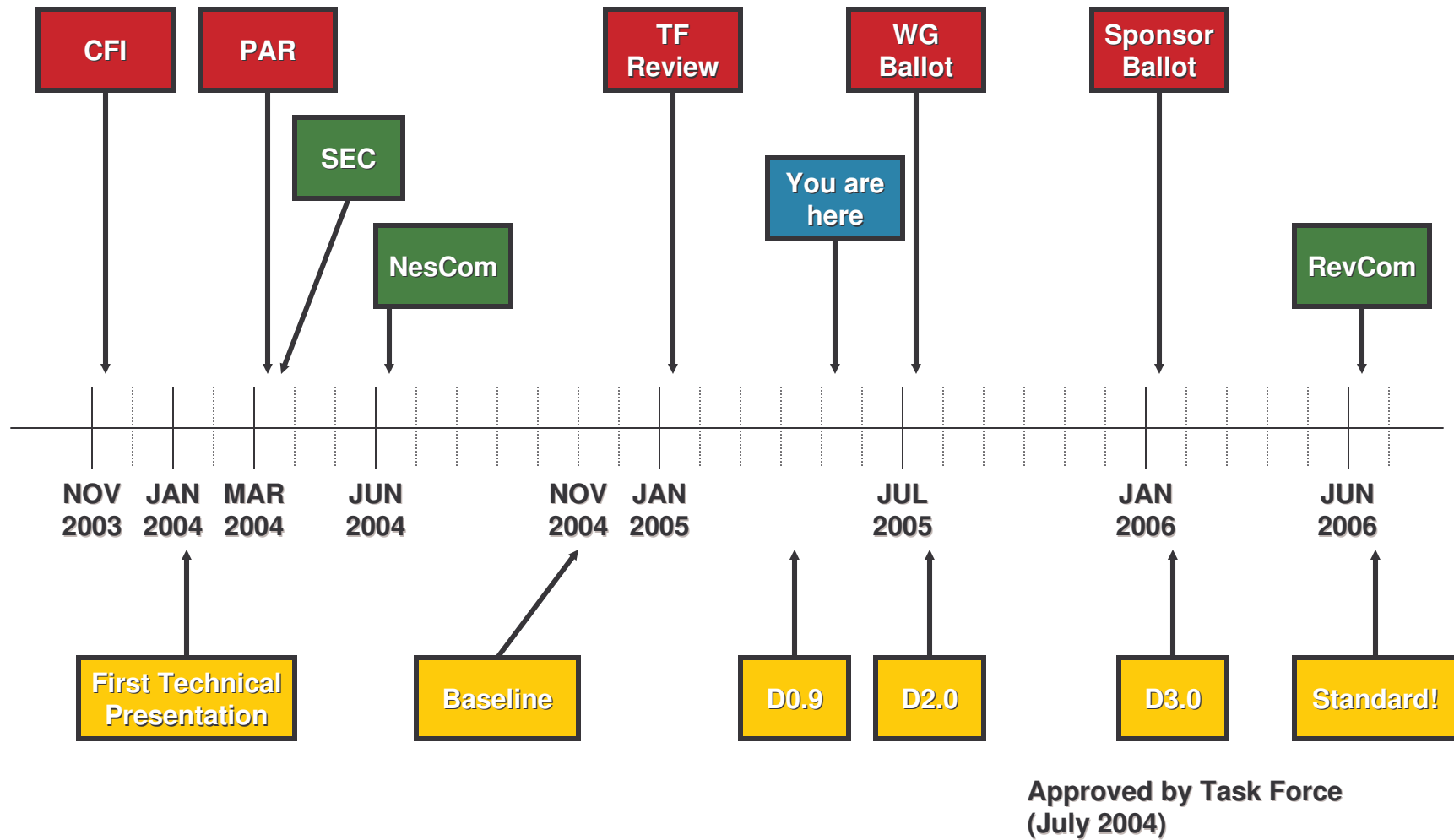
http://ieee802.org/3/ap/802_3_ap_objectives.pdf



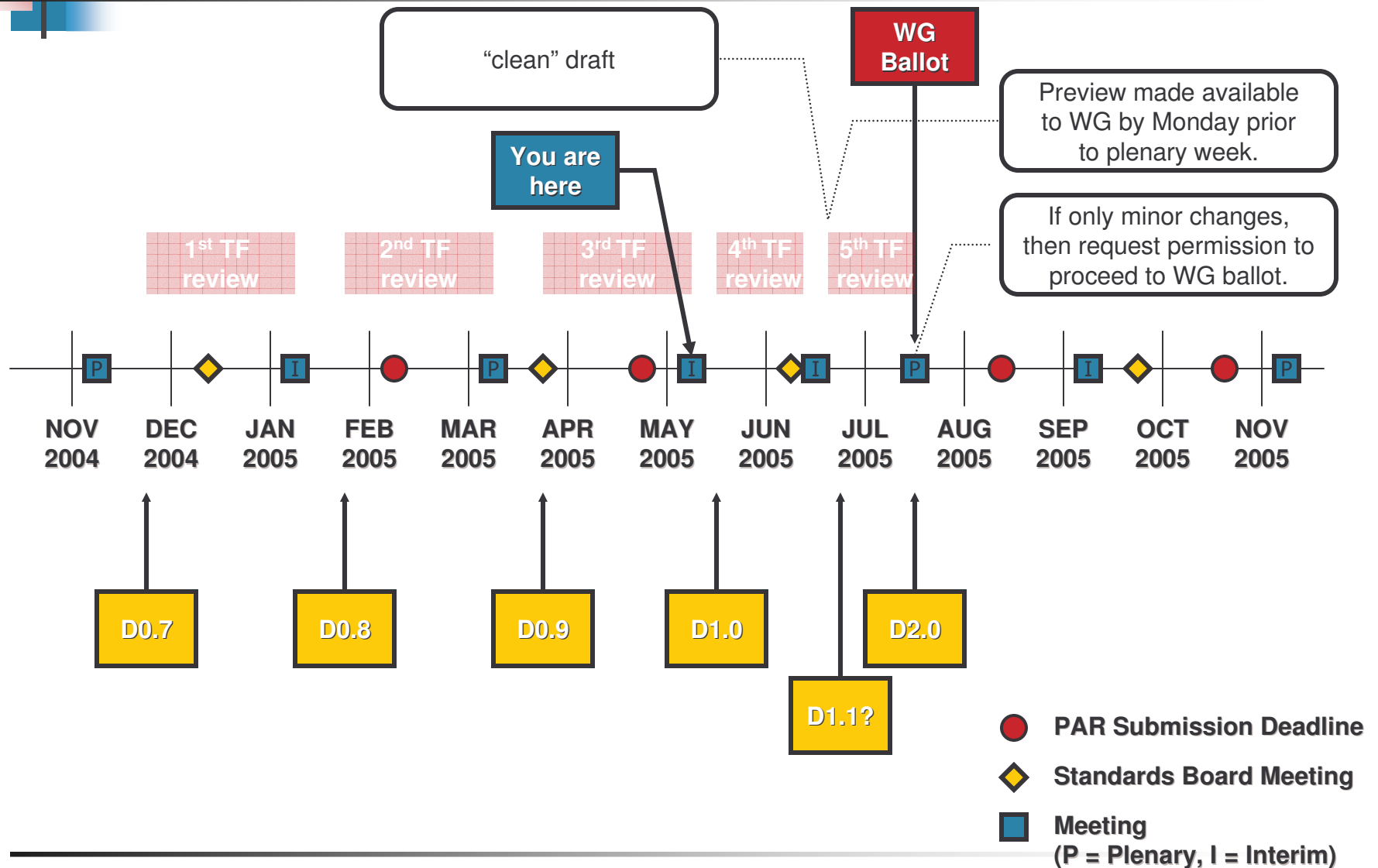
IEEE P802.3ap Objectives

- **Preserve the 802.3/Ethernet frame format at the MAC Client service interface.**
- **Preserve min. and max. frame size of current 802.3 Std.**
- **Support existing media independent interfaces.**
- **Support operation over a single lane across 2 connectors over copper traces on improved FR-4 for links consistent with lengths up to at least 1m.**
 - **Define a 1 Gb/s PHY**
 - **Define a 10 Gb/s PHY**
- **Define a 4-lane 10Gb/s PHY for operation over the 802.3ap channel model.**
- **Consider auto-negotiation.**
- **Support BER of 10^{-12} or better.**
- **Meet CISPR/FCC Class A.**

IEEE P802.3ap Timeline



Timeline Detail (Target)





Presentations...



Closing Business...



Channel Ad Hoc Meeting Schedule

- Proposed Date(s)
 - June 1
 - June 15 (if necessary)
- Objectives
 - Discuss numbers for informative channel specifications
 - Discuss linkage to receiver compliance test methodology



Draft Status

- Focus on completion of “big ticket” items
- Create interim “Draft 0.91” based on comment resolutions agreed upon at this meeting
 - Interim draft used to help identify remaining gaps
 - Expected to be available June 6.



Remaining “Big Ticket” Items

- Receiver compliance testing
 - Reflection generator parameters (-KX, -KX4, -KR)
 - Interferer amplitude (-KX, -KX4, -KR)
- Informative channel specification
 - ILD limits
 - Crosstalk limits
- 10GBASE-KR transmitter compliance testing
 - Implement concepts adopted this week
- Environmental specifications (e.g. subclause 70.10).
 - Currently only placeholders
- Error susceptibility of the 10GBASE-KR training frame control channel.



Future Meetings

- June 2005 Interim
 - Date: June 21 – June 23
 - Location: Embassy Suites (Airport), Minneapolis

- July 2005 Plenary
 - Date: Week of July 17
 - Location: Hyatt Regency, San Francisco



Motion #13

- Accept proposed comment resolutions (with editorial comments to be addressed by the editor) and integrate into interim Draft 0.91.
 - Moved: Fulvio Spagna
 - Seconded: Charles Moore
 - Technical ($\geq 75\%$)
 - (All) Y: 33, N: 0, A: 1
 - Motion Passes



Adjourn

Thank You!