WELCOME TO THE CLOSING SESSION OF

10GBASE-LRM MEETING

16 – 18 NOVEMBER 2004

Task Force Chair: David Cunningham

Proposed Agenda – 10GBASE-LRM

Presenter	Thursday 18 November 2004			
	Closing Plenary and Voting	Length (Minutes)	Start	Finish
All	Introductions		8:30 AM	
David Cunningham	Opening comments			
Nick Weiner	Editors Report			
	Continue comment resolution ?			
	Break		**10:00 AM**	**10:20 AM**
All	Motions			
	Other Business?			
	Meeting Adjourned			**12:00 PM**

AGENDA NOVEMBER 2004

- **Closing information**

- **Reminder, goals for the meeting**

- **Agree agenda**

MOBILE PHONES

PLEASE SWITCH OFF YOUR MOBILE PHONES

THANK YOU

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 802.3 aq Officers

- Task Force Chair: David Cunningham

- Editor: Nick Weiner

- Web Master: Piers Dawe

- Channel Ad hoc Chair: Ian White
  - Task 1 (OM1, OM2, OM3 & connectors) leader: Richard Penty
  - Task 2 (Time variation of channel & MN): Jonathan King
  - Task 3 (Input-output parameters) leader: Lars Thon
  - Task 4 (Launch & Mode Filtering) leader: Yu Sun
  - Task 5 (Validation) leader: Nick Weiner

- TP2 weekly call leader: Tom Lindsay

- TP3 weekly call leader: Mike Lawton

REFLECTOR AND WEB

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- **http://ieee802.org/3/aq**

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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 potions 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.
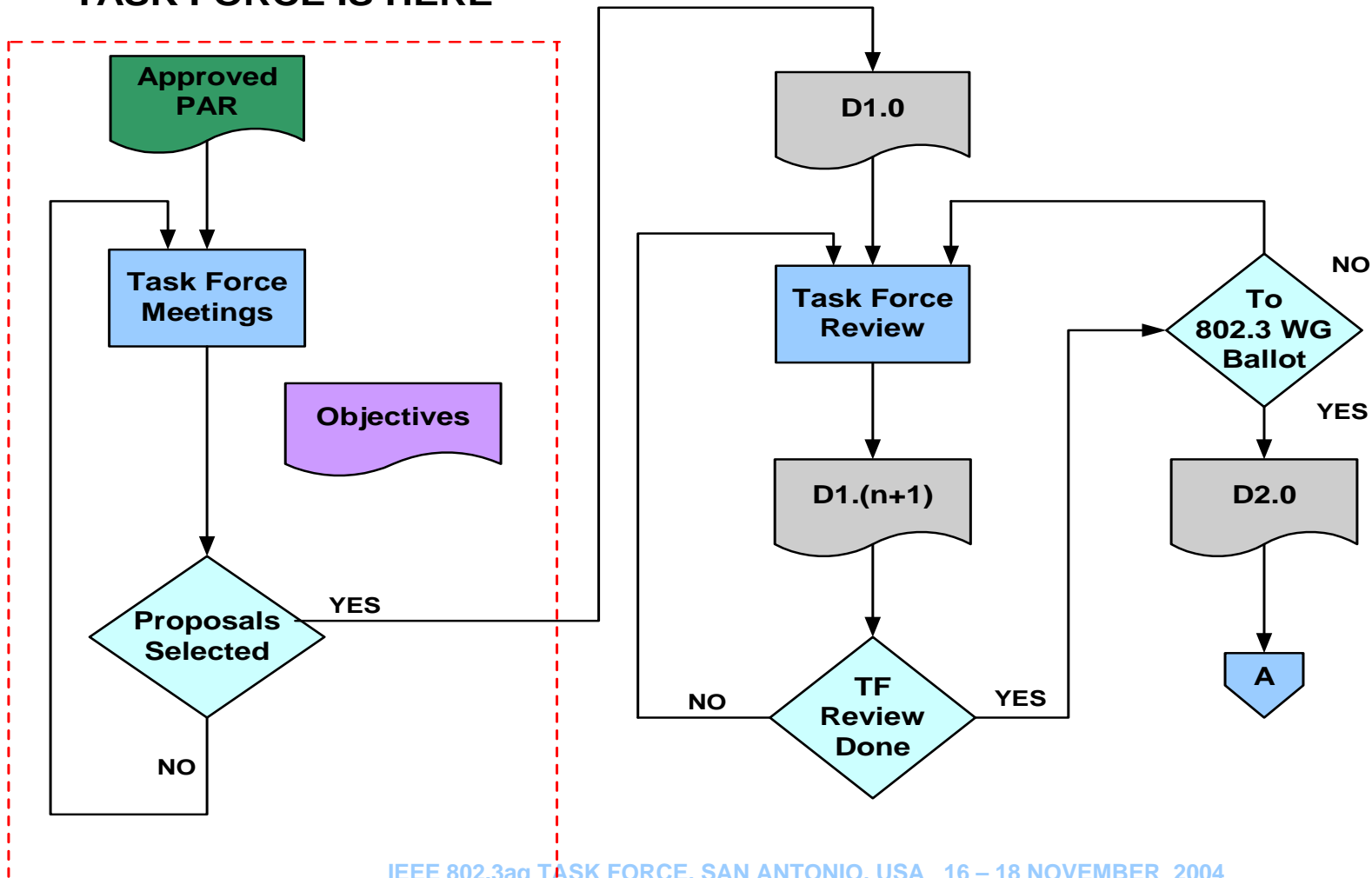
INAPPROPRIATE TOPICS FOR IEEE TASK FORCE MEETINGS

- **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

OUR TASK FORCE JOB: IEEE STANDARDS PROCESS

TASK FORCE IS HERE

Approved PAR

Task Force Meetings

Objectives

Proposals Selected

YES → NO

D1.0

Task Force Review

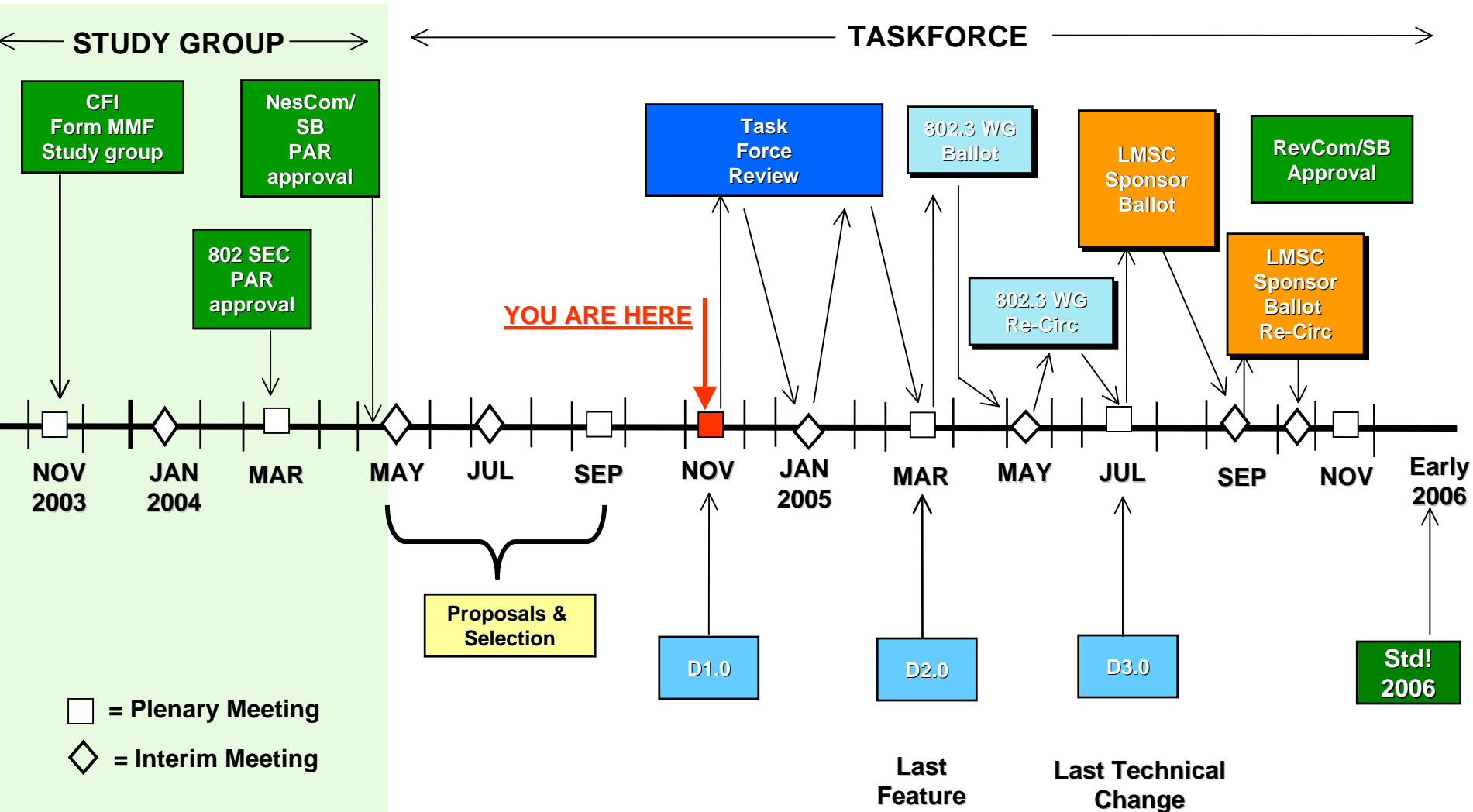D1.(n+1)

TF Review Done

NO / YES

To 802.3 WG Ballot

NO / YES

D2.0

A

OBJECTIVES

- **Use the existing 10GBASE-R PCS**
- **Support a BER of better than or equal to 10^{-12}**
- **Support fiber media selected from IEC 60793-2-10: 2003**

- 62.5μm
    - 160/500 MHz-km (A1b, 60793-2-10:2003)
    - 200/500 MHz-km (A1b, 60793-2-10:2003)
- 50μm
    - 500/500 MHz-km (A1a.1, 60793-2-10:2003)
    - 400/400 MHz-km (A1a.1, 60793-2-10:2003)
    - 1500/500 MHz-km (A1a.2, 60793-2-10:2003)

- **Provide a Physical Layer specification which supports link distances of:**

    - at least 220m on installed 500MHz.km multimode fiber
    - at least 300m on selected multimode fiber

10GBASE-LRM TIMELINE

STUDY GROUP

TASKFORCE

CFI
Form MMF
Study group

NesCom/
SB
PAR
approval

802 SEC
PAR
approval

Task
Force
Review

802.3 WG
Ballot

LMSC
Sponsor
Ballot

RevCom/SB
Approval

YOU ARE HERE

802.3 WG
Re-Circ

LMSC
Sponsor
Ballot
Re-Circ

NOV
2003

JAN
2004

MAR

MAY

JUL

SEP

NOV

JAN
2005

MAR

MAY

JUL

SEP

NOV

Early
2006

Proposals &
Selection

D1.0

D2.0

D3.0

Std!
2006

□ = Plenary Meeting

◇ = Interim Meeting

Last
Feature

Last Technical
Change

IEEE 802.3aq TASK FORCE, SAN ANTONIO, USA   16 – 18 NOVEMBER 2004

GOALS FOR THIS MEETING WEEK

- **To review the draft D0.2 and associated comments (Done).**

- **To consider contributions proposing corrections or additions to the draft (Done).**

- **To adopt the baseline draft with amendments agreed during the interim meeting (Done).**

- **To direct the editor to prepare a draft D1.0 for a 30 day task force review (Done).**

Motion 1 (Was divided see next motion)

To meet the time line of the 802.3aq task force and include the specific target of 300m for OM1 fiber, it is essential to solidify aspects of the channel modeling critical to link estimates.

a. Based on modeling and analysis thus far completed, the task force estimates that channel models which show a PIE-D metric of 5dB or less simulate working links and those which show a PIE-D metric of 5dB or more simulate nonworking links. These bounds may change but will be used for estimating % of working/nonworking links for the January meeting.

b. The task force solicits work from the TP-3 to quantify the gap between ideal equalizer estimates (PIE-D) and the results using finite equalizers, define a common method for calculating PIE-D, and define the PIE-D required to support 300m on installed 500 MHz-km rated MMF.

Moved: John Abbott   Seconded: John George

Motion to divide between 1a and 1b

- Moved: John George; Seconded: John Abbott
- Y: 21;   N: 5;   Ab: 16
- Motion passes

Motion 1a: Technical

To meet the time line of the 802.3aq task force and include the specific target of 300m for OM1 fiber, it is essential to solidify aspects of the channel modeling critical to link estimates.

a. Based on modeling and analysis thus far completed, the task force estimates that channel models which show a PIE-D metric of 5dB or less simulate working links and those which show a PIE-D metric of 5dB or more simulate nonworking links. These bounds may change but will be used for estimating % of working/nonworking links for the January meeting.

Moved: John Abbott   Seconded: John George

TF   Y: 5   N: 30   Ab: 9

Motion not passed

Motion 1b: Technical

b. The task force solicits work from the TP-3 to quantify the gap between ideal infinite equalizer estimates (PIE-D) and the results using ideal finite equalizers, define a common method for calculating PIE-D, and define the PIE-D required to support 300m on installed 500 MHz-km rated MMF.

Request that the channel ad hoc group provide OM2 models to complete this work by Jan interim.

Moved: John Abbott   Seconded: John George

TF   Y: 3   N: 28   Ab: 11

Motion not passed

Motion 2: Technical

- Move that IEEE 802.3aq modify its link length objectives of the 10GBASE-LRM Standard from

  "Provide a Physical Layer specification which supports link distances of:
  - At least 220 meters on installed 500MHz*km multimode fiber
  - At least 300 meter on multimode fiber"

  to

  "Provide a Physical Layer specification which supports link distances of:
  - At least 300 meters on installed 500MHz*km multimode fiber"

Moved: Steve Swanson
Seconded: John Abbott

TF vote Y:3   N: 22   Ab: 17
802.3 vote: Y: 2   N: 11   Ab: 9

Motion not passed.

Motion 3 Technical

- Move that IEEE 802.3aq demonstrate a 10-12 BER over the rated distance on a specified channel (TBD) and show interoperability between PMD's of at least three vendors for 10GBASE-LRM to support technical feasibility prior to sponsor ballot.

Moved: Steve Swanson;   Seconded: John George

TF Y:35 N:1   A:0

Motion Passed

Motion 4: Technical

- Motion:

  - In Table 68-4 (receive characteristics)

    - Adopt 40 MHz for Clock sinusoidal jitter frequency.
    - Adopt 0.05 UI peak-peak for Clock sinusoidal jitter amplitude.

- Moved: Lew Aronson   Second: Piers Dawe
- Y: N: Ab:

Motion tabled until January meeting, see next motion.

Motion 5: Procedural

Motion to table Motion 4 to next meeting (Jan).

Moved: Ali Ghiasi

Seconded: Paul Kolesar

Y:20   N:5   Ab: 7

Motion passed

Motion 6 Technical

- 10GBASE-LRM accepts changes and edits to D0.2 and directs editor to create draft D1.0.

- The editor is given permission to address the comments that were agreed to be editorial.

- D1.0 to be sent for 30 day TF review.

Moved: John Jaeger

Seconded: Tom Lindsay

TF: Y:29   N:0   Ab:0

Motion Passed

Motion7: Procedural

- Motion to adjourn
- Approved by acclamation