

IEEE 802.3WG

Opening Plenary Report

IEEE P802.3bj
100 Gb/s Backplane and Copper Cable
Task Force

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Atlanta, GA, USA, Nov 2011

Reflector and Web

- To subscribe to the 100GCU reflector, send an email to:

ListServ@ieee.org

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

*subscribe stds-802-3-100GCU <yourfirstname> <yourlastname>
end*

- Send 100GCU reflector messages to:

STDS-802-3-100GCU@listserv.ieee.org

- Task Force web page URL:

<http://www.ieee802.org/3/bj/index.html>

Project Documentation

- PAR

- http://www.ieee802.org/3/bj/PAR_approved_0911.pdf

- 5 Criteria

- http://www.ieee802.org/3/bj/5C_0911.pdf

- Objectives

- http://www.ieee802.org/3/bj/objectives_0711.pdf

- Adopted Timeline

- http://www.ieee802.org/3/bj/timeline_0911.pdf

Task Force Private Area

- URL: <http://www.ieee802.org/3/bj/private/index.html>
 - Username: XXXXXX
 - Password: XXXXXXXXX
- Write it down...
- Note - The drafts within are posted for your review only, and neither the drafts nor access information should be copied or redistributed to others in violation of document copyrights.

IEEE P802.3bj Task Force Objectives

- Support full-duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum FrameSize of current 802.3 standard
- Support a BER of better than or equal to 10^{-12} at the MAC/PLS service interface
- Define a 4-lane 100 Gb/s backplane PHY for operation over links consistent with copper traces on “improved FR-4” (as defined by IEEE P802.3ap or better materials to be defined by the Task Force) with lengths up to at least 1m.
- Define a 4-lane 100 Gb/s PHY for operation over links consistent with copper twin-axial cables with lengths up to at least 5m.

Activities Since July 2011 Plenary

- **Sept 2011 Interim**
 - Thanks to Steve Carlson and High Speed Design!
 - Task Force Leadership
 - Moi – Confirmed as Chair (Thanks!)
 - Dave Chalupsky – Appointed Secretary
 - Adam Healey – Appointed / Confirmed Task Force Editor
 - 25 Presentations
 - EEE
 - The Channel
 - FEC
 - NRZ / PAM-4
 - Timeline adopted

Sept 11 Interim - EEE Straw Polls

- **Straw Poll #1**: Do you support doing the work to specify EEE for 100G Cu and Backplane IEEE P802.3bj interfaces?
Results: Yes: 43; No: 0; Unsure: 12
- **Straw Poll #2**: I would work on the specification of EEE 100G Cu and Backplane IEEE P802.3bj interfaces.
Results: Yes: 20; No: 8; Unsure: 29
- **Straw Poll #3**: Do you support doing the work to specify EEE for 40G Cu and Backplane IEEE P802.3ba interfaces in addition to the 100G Cu and Backplane IEEE P802.3bj interfaces?
Results: Yes: 14; No: 0; Unsure: 24
- **Straw Poll #4**: I would work on the specification of EEE for 40G Cu and Backplane IEEE P802.3ba interfaces in addition to the 100G Cu and Backplane IEEE P802.3bj interfaces.
Results: Yes: 8; No: 9; Unsure: 23

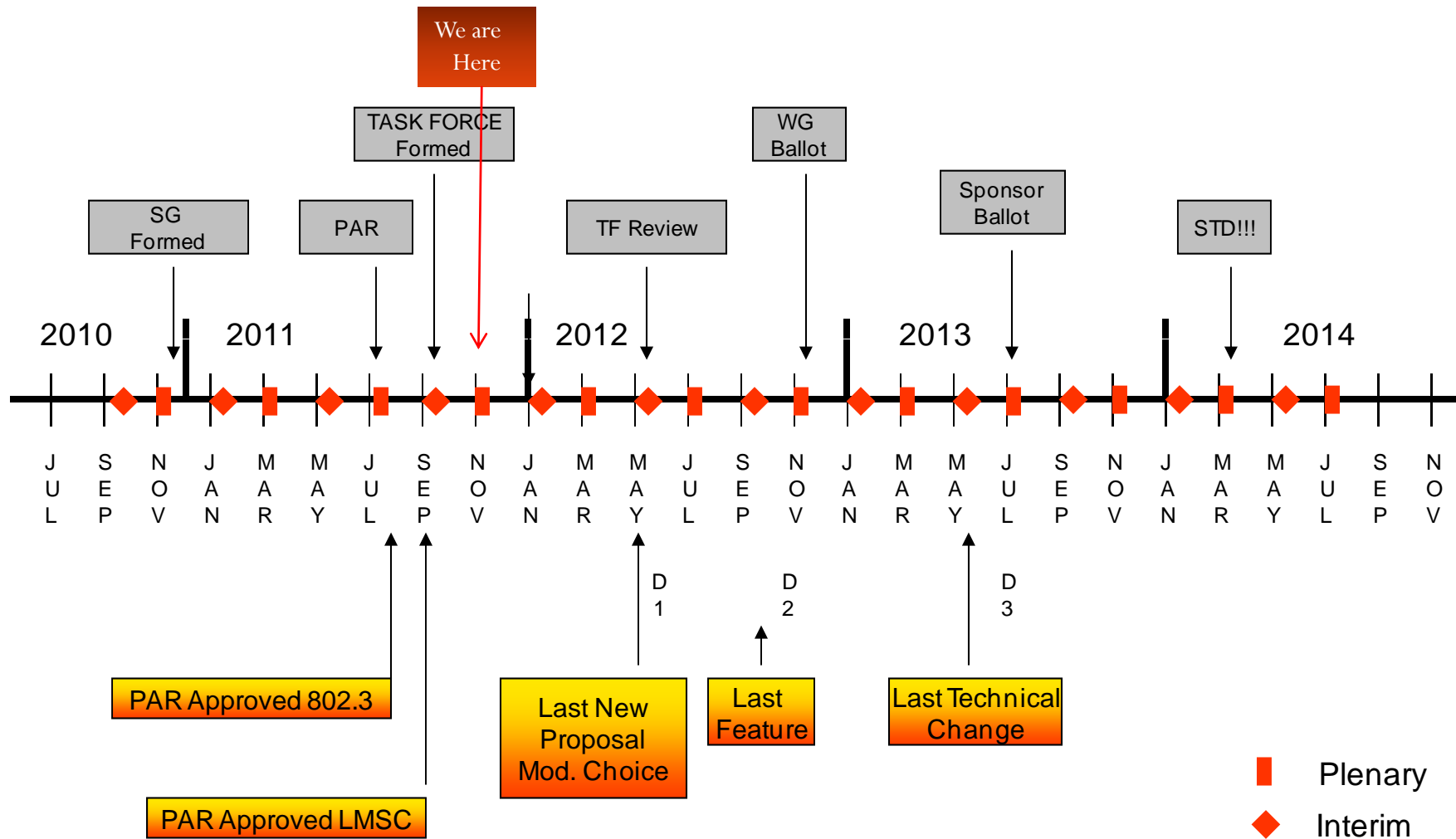
Sept 11 Interim Other Straw Polls

- **The Channel: Straw Poll #5**: Do you support a channel model of at least _____ (Chicago Rules)
 - a) -20dB@7GHz? 13
 - b) -25dB@7GHz? 10
 - c) -30dB@7GHz? 17
 - d) -30dB@12.9GHz? 31
 - e) -35dB@12.9GHz? 27
 - f) -40dB@12.9GHz? 7
- **FEC: Straw Poll #6**: Do you support the use of FEC to meet the project backplane 10^{-12} or better BER objective at 1m?
- Results: Yes: 49; No: 1; Abstain: 3

Sept 11 Interim p Other Straw Polls

- **NRZ / PAM-4: Straw Poll #7**: Do you support the use of _____ to meet the project backplane 10^{-12} or better BER objective for channels up to 1m? (Chicago rules)
- a) NRZ
- b) PAM-4
- c) Both NRZ and PAM-4
- Results: a) 43 b) 7 c) 18

Adopted Timeline



http://www.ieee802.org/3/bj/timeline_0911.pdf

Nov 7 Interim Meeting

- Interim to discuss issues relevant to Task Force and Next Gen 100 GbE Optical Interfaces SG
- Approximately 80 attendees
- Reviewed OIF MLG Liaison
 - No response is necessary
- 7 presentations

Gary Nicholl	Cisco	System OEM design guidelines for chip to module	nicholl_01_1111.pdf
Mark Gustin	Cisco	FEC architectural considerations	gustlin_01_1111.pdf
John D'Ambrosia	Dell	Channel Specifications Discussions	dambrosia_01_1111.pdf
Ali Ghiasi	Broadcom	100GBASE-CR4 Compliance Board and MDI Definition	ghiasi_01_1111.pdf
Nathan Tracy	TE Connectivity	MDI for 4x25G Copper and Fiber Optic I/O	tracy_01_1111.pdf
Mike Dudek	Qlogic	Marrying Copper and Optical.	dudek_01_1111.pdf
Tom Palkert	Molex	Active Optical cable	palkert_01_1111.pdf

Goals for the meeting week

- Hear 24 Technical Presentations
- Informal Communication

- Lay the ground work for the next meeting

Liaisons and Communications

- Interim
 - OIF Liaison: MLG
 - http://www.ieee802.org/3/minutes/nov11/incoming/OIF_IEEE_liaison_27Oct11.pdf
- Plenary
 - Proposed Informal Communication to PICMG
 - http://www.ieee802.org/3/bj/public/nov11/lusted_03_1111.pdf

Thank You!