




# IEEE P802.3ba 40Gb/s and 100Gb/s Ethernet

## Closing Plenary Report

San Francisco, CA, USA  
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# IEEE P802.3ba Task Force Officers and Editors

<a href="#"><u>John D'Ambrosia</u></a>	Task Force Chair
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<a href="#"><u>Mark Gustlin</u></a>	Chair, “Logic” Sub-task Force Editor – Clauses 81, 82
<a href="#"><u>Chris DiMinico</u></a>	Chair, “Cu” Sub-task Force Editor – Clause 85
<a href="#"><u>Pete Anslow</u></a>	Chair, “Optical” Sub-task Force Editor – Clause 88
<a href="#"><u>Hugh Barrass</u></a>	Editor – Clauses 30, 45
<a href="#"><u>Jonathan King</u></a>	Editor – Clause 87
<a href="#"><u>Arthur Marris</u></a>	Editor – Clauses 69, 73, 74, 84, Annexes 69A, 69B
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<a href="#"><u>John Petrilla</u></a>	Co-chair - Extended Reach Parallel MMF Ad Hoc
<a href="#"><u>George Oulundsen</u></a>	Task Force Secretary
<a href="#"><u>Frank Chang</u></a>	Task Force Web Master

# Reflector and Web

- To subscribe to the IEEE P802.3ba 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-hssg <yourfirstname> <yourlastname>  
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- Send IEEE P802.3ba Task Force reflector messages to:

***STDS-802-3-HSSG@listserv.ieee.org***

- Task Force web page URL:

***http://www.ieee802.org/3/ba/***

# IEEE P802.3ba Private Area

- URL: <http://www.ieee802.org/3/ba/private/>
  - Username: 802.3ba
  - Password: xxxxxxxx
  - Password is case sensitive
- Write it down...
- Note - The draft is posted for your review only, and neither the draft nor access information should be copied or redistributed to others in violation of document copyrights.

# Task Force Approved Project Documents

- **PAR**

- [http://ieee802.org/3/ba/PAR/par\\_0308.pdf](http://ieee802.org/3/ba/PAR/par_0308.pdf)

- **5 Criteria**

- [http://ieee802.org/3/ba/PAR/P802.3ba\\_5C\\_0908.pdf](http://ieee802.org/3/ba/PAR/P802.3ba_5C_0908.pdf)

- **Objectives**

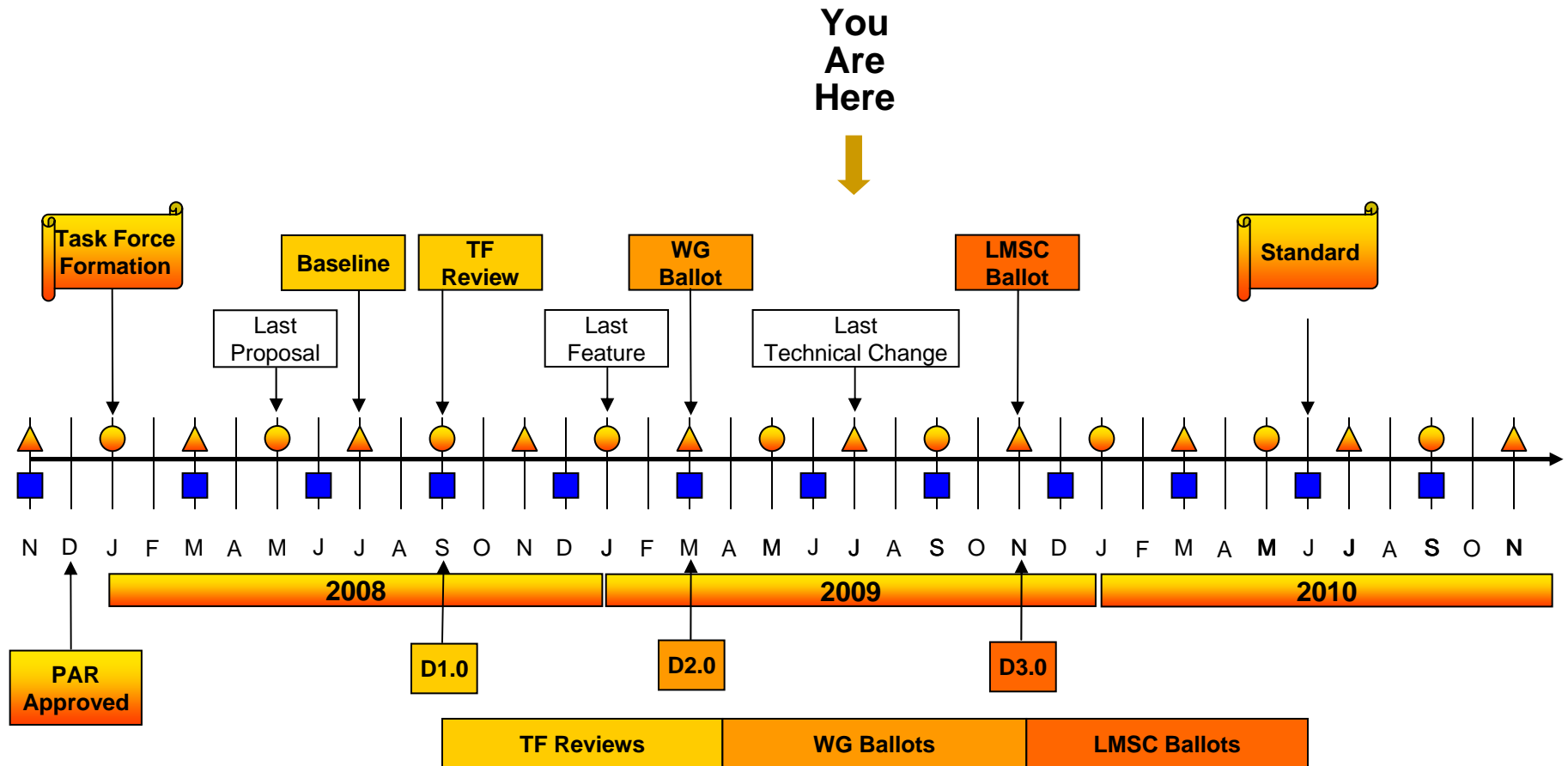
- [http://ieee802.org/3/ba/PAR/P802.3ba\\_Objectives\\_0308.pdf](http://ieee802.org/3/ba/PAR/P802.3ba_Objectives_0308.pdf)

# 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 better than or equal to  $10^{-12}$  at the MAC/PLS service interface
- Provide appropriate support for OTN
- Support a MAC data rate of 40 Gb/s
- Provide Physical Layer specifications which support 40 Gb/s operation over:
  - at least 10km on SMF
  - at least 100m on OM3 MMF
  - at least 10m over a copper cable assembly
  - at least 1m over a backplane
- Support a MAC data rate of 100 Gb/s
- Provide Physical Layer specifications which support 100 Gb/s operation over:
  - at least 40km on SMF
  - at least 10km on SMF
  - at least 100m on OM3 MMF
  - at least 10m over a copper cable assembly

Adopted by IEEE P802.3ba and approved by 802.3 at Mar 2008 Plenary

# IEEE P802.3ba Task Force Timeline



\* Adopted by IEEE P802.3ba TF at March 08 Plenary

Legend	
▲	IEEE 802 Plenary
●	IEEE 802.3 Interim
■	IEEE-SA Standards Board

# D2.1 Comments report

Description	Editor	Clause	TR	T	ER	E	Total
Front matter, MAC, 40G & 100G Intro	Ilango Ganga	99, 00, 01, A, 4, 4A, 31B, 80	13	4	7	15	39
Management	Hugh Barrass	30, 45	6	9	2	8	25
RS/MII and PCS	Mark Gustlin	81, 82	7	22	1	21	51
PMA	Steve Trowbridge	83, 83C	10	4	4	9	27
XLAUI/CAUI	Ryan Latchman	83A, 83B	24	4	10	4	42
Backplane KR4 related	Arthur Marris	69, 69A, 69B, 73, 74, 84	4	1	0	6	11
Copper CR4 & CR10	Chris Di Minico	85, 85A	58	42	12	12	124
Optical SR4 & SR10, and Cls. 52	Piers Dawe	86, 86A, 52	21	23	7	20	71
Optical 40G LR4	Jonathan King	87	1	16	2	6	25
Optical 100G LR4 & ER4	Pete Anslow	88	4	4	2	2	12
Total comments			148	129	47	103	427



# Accomplishments for the Week

- 113 Attendees
- Completed comment resolution
  - Reviewed all T (129), TR(148), and ER (47) received on D2.1
  - 25 technical presentations in support of comments
- Informal Communications
  - ITU-T SG15: Communication of Draft 2.2
- Liaison - ISO/IEC JTC 1/SC 25/WG 3 to IEEE 802.3 regarding optical fibre terminology
  - Addressed comments submitted by Alan Flatman regarding terminology

# Big Ticket Item: Cu Objective

## ■ Motion #1

- Move that the IEEE P802.3ba Task Force modify the following Physical Layer Specification objective for 40 Gb/s and 100 Gb/s operation from “at least 10m over a copper cable assembly” to “at least 7m over a copper cable assembly”
- Results: All (y/n/a): 53/0/4                      802.3 (y/n/a): 45/0/3

## ■ Motion #3

- Move that the IEEE 802.3ba Task Force submit the modified copper cable reach objectives as agreed in Motion #1 to the 802.3 Working Group for approval
- Results: All (y/n/a): 71/0/3                      802.3 (y/n/a): 61/0/0

# Big Ticket Item - Nomenclature

- Agreement to replace text in 80.1.4 which has letter indicating port type. Adding table (similar to Table 52-1) that equates PHY string to port type including reach
- There was no agreement to change the nomenclature (see straw poll below)
  - Straw Poll: The Task force was asked to indicate a preference between the options:
    - Leave the nomenclature unchanged
    - change the nomenclature to one of 100GBASE-LRE4, 100GBASE-LR4E, 100GBASE-LR4-E
  - Results:
    - All (unchanged / changed): 25 / 25
    - 802.3 (unchanged / changed): 26 / 26

# Other Motions

## ■ **Motion #2**

- Move that the task force:
  - Accepts comment resolutions from D2.1 as recorded in the comment database, P8023ba-D21-Final\_Responses\_byClisa.pdf
  - Directs the IEEE P802.3ba editorial team to generate Draft 2.2, based on Draft 2.1 and the resolution of comments against Draft 2.1
  - Requests Working Group Chair to Conduct an IEEE 802.3 WG recirculation ballot for P802.3ba/D2.2
- Results: All (y/n/a): 72 / 0 / 1

## ■ **Motion #4**

- Move that 802.3ba approve the text in trowbridge\_02\_0709.pdf, attaching IEEE P802.3ba Draft 2.2, with editorial license granted to the Chair (or his appointed agent) as an informal communication by the Chair to ITU-T Study Group 15
- Results: All Passed by voice vote without opposition

# Next Steps

- 802.3 WG 2<sup>nd</sup> Recirculation Ballot
  - WG Ballot to open Aug 18, 2009
  - WG Ballot to close Sept 3, 2009
- Between meetings – “Cu” Subtask Force work
  - Conference calls for further review on Clause 85
- Sept Interim - Comment Response to WG Ballot on Draft 2.2

# Updated IEEE P802.3ba 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 better than or equal to  $10^{-12}$  at the MAC/PLS service interface
- Provide appropriate support for OTN
- Support a MAC data rate of 40 Gb/s
- Provide Physical Layer specifications which support 40 Gb/s operation over:
  - at least 10km on SMF
  - at least 100m on OM3 MMF
  - **at least 7m over a copper cable assembly**
  - at least 1m over a backplane
- Support a MAC data rate of 100 Gb/s
- Provide Physical Layer specifications which support 100 Gb/s operation over:
  - at least 40km on SMF
  - at least 10km on SMF
  - at least 100m on OM3 MMF
  - **at least 7m over a copper cable assembly**

# Motion (WG)

- Move that 802.3 approve the proposed revision to IEEE P802.3ba Task Force objectives, as per 0709\_ba\_close\_report.pdf
- Technical ( $\geq 75\%$ )
- Moved by: John D'Ambrosia
- Second by: Shimon Muller
- 802.3 Voters (Y/N/A): 88 / 0 / 2
- Motion Passes

# Future Meetings

- Future Meeting information at:
  - <http://ieee802.org/3/interims/index.html>
- Sept 2009 IEEE 802.3 Interim
  - Sept 21 - 25
  - Chicago, IL, USA
- Nov 2009 IEEE 802 Plenary
  - Nov 15 – 20
  - Hyatt Regency Atlanta
  - Atlanta, GA, USA
- Jan 2010 IEEE 802.3 Interim
  - To be announced
- March 2010 IEEE 802 Plenary
  - March 14 - 19
  - Caribe Royale Orlando All Suites Resort and Convention Center
  - Orlando, FL, USA





Thank You!

