

Closing Report

IEEE P802.3bq 40GBASE-T Task Force

David Chalupsky, Intel
Berlin, DE
March 12, 2015

IEEE P802.3bq 40GBASE-T Task Force Project Information

- Task Force Organization
 - David Chalupsky, Chair
 - George Zimmerman, Secretary, Chief Editor, PHY Proposal ad hoc chair
 - Editorial team: Chris DiMinico, Valerie Maguire, Curtis Donahue, Jim Graba
 - Pete Cibula, Chair, Rx CMNR ad hoc
- Task force web and reflector information
 - Reflector information: <http://www.ieee802.org/3/NGBASET/reflector.html>
Home page: <http://ieee802.org/3/bq/index.html>
 - PAR <http://www.ieee802.org/3/bq/P802.3bq.pdf>
 - 5 Criteria <http://www.ieee802.org/3/bq/5Criteria.pdf>
 - Objectives <http://www.ieee802.org/3/bq/Objectives.pdf>
 - Adopted timeline: http://www.ieee802.org/3/bq/adopted_timeline_802.3bq.pdf
 - Private area: <http://ieee802.org/3/bq/private/index.html>
 - Username: XXX
 - Password: xoxox
 - Note: The draft, and any other content, is posted for your review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights

Activities This Week

- **1.5-day joint meeting with NGEABT and 25GBASE-T SG's**
- **Resolve 99 comments on D1.2**
- **Passed motion authorized generation of P802.3bq D2.0**
- **Drafted liaison to IEC SC48B.**

Liaisons and Communications

- Incoming
 - Draft 3.1 of ANSI/TIA-568-C.2-1 received March 4, 2015
 - posted in 802.3bq private area
 - Draft u0.6 of TIA TSB-5019 covering high performance structured cabling use cases for data centers and other premises received March 5, 2015.
 - posted in 802.3bq private area
 - Task Force concurs that no response is necessary
- Drafted outgoing liaison to IEC SC48B.

D2.0 Status

- **Draft 2.0 has been produced from comments on Draft 1.2**
 - Thanks to hard work by George Zimmerman, Valerie Maguire, and some extra consulting by Matt Brown
- **99 Received Comments from 7 individuals**
 - One withdrawn, one added from the floor in response to draft preview
 - 50 from the Editor, mainly typos, references, editorial
 - coordination and cleanup of informative text to align with prior changes
- **70 E or ER: 41 Editorial, 29 Editorial Required**
- **28 T or TR: 19 Technical, 9 Technical Required**

P802.3bq D1.2 resolution Stats

- 47 accepted “EZ or “EZ Check” comments (+ 1 other typo)
 - typos or cross-references or external reference issues
 - Also separately cleaned up technical typo in Cabling equation 113-15
 - Accepted editorial change (in preview draft) of technical typo in RS-FEC proposal
- 4 Removals of informative TBDs by equations
- Deleted most editors notes meant to draw attention in Task Force review
- Simplified Direct Attach NEXT equations with latest TIA specification
- Text clean up:
 - Overview statement that fast retrain is optional (already in the requirements text)
 - Cleaned out hanging text left over from optional loop timing
- Incorporated results of EM/Common -Mode Noise Immunity ad hoc
- 6 “ED-COORD” – (Clause 45 coordination & naming)
 - Editorial style or coordination from Pete Anslow on where registers go
- Cleaned up editing instructions and deleted blank cells tables in Clause 78
- Excluded 40GBASE-T from optical 40G EEE fast wake
- Modified text referring to ISO Class I and Class II cabling support

802.3bq TF Motion #15

- Motion to
 - Generate Draft 2.0 from Draft 1.2 and closed comments
 - Request 802.3 WG Chair to conduct 802.3 Working Group ballot on P802.3bq Draft 2.0
- M: George Zimmerman S: Alan Flatman
- Technical $\geq 75\%$
 - Y: 33
 - N: 4
 - A:4
- **MOTION PASSES**

Working Group Motion

- The IEEE P802.3bq Task Force requests that the IEEE 802.3 Ethernet Working Group send the IEEE P802.3bq draft as presented to Working Group Ballot as IEEE P802.3bq D2.0, and authorize the IEEE P802.3bq Task Force to respond to comments and conduct recirculations as necessary.
- M: David Chalupsky S: George Zimmerman
- Technical ($\geq 75\%$)
- Y: 20+19+9 N: 0+2+0 A: 2+2+0
- MOTION PASSES

(P802.3bq TF) Motion #18

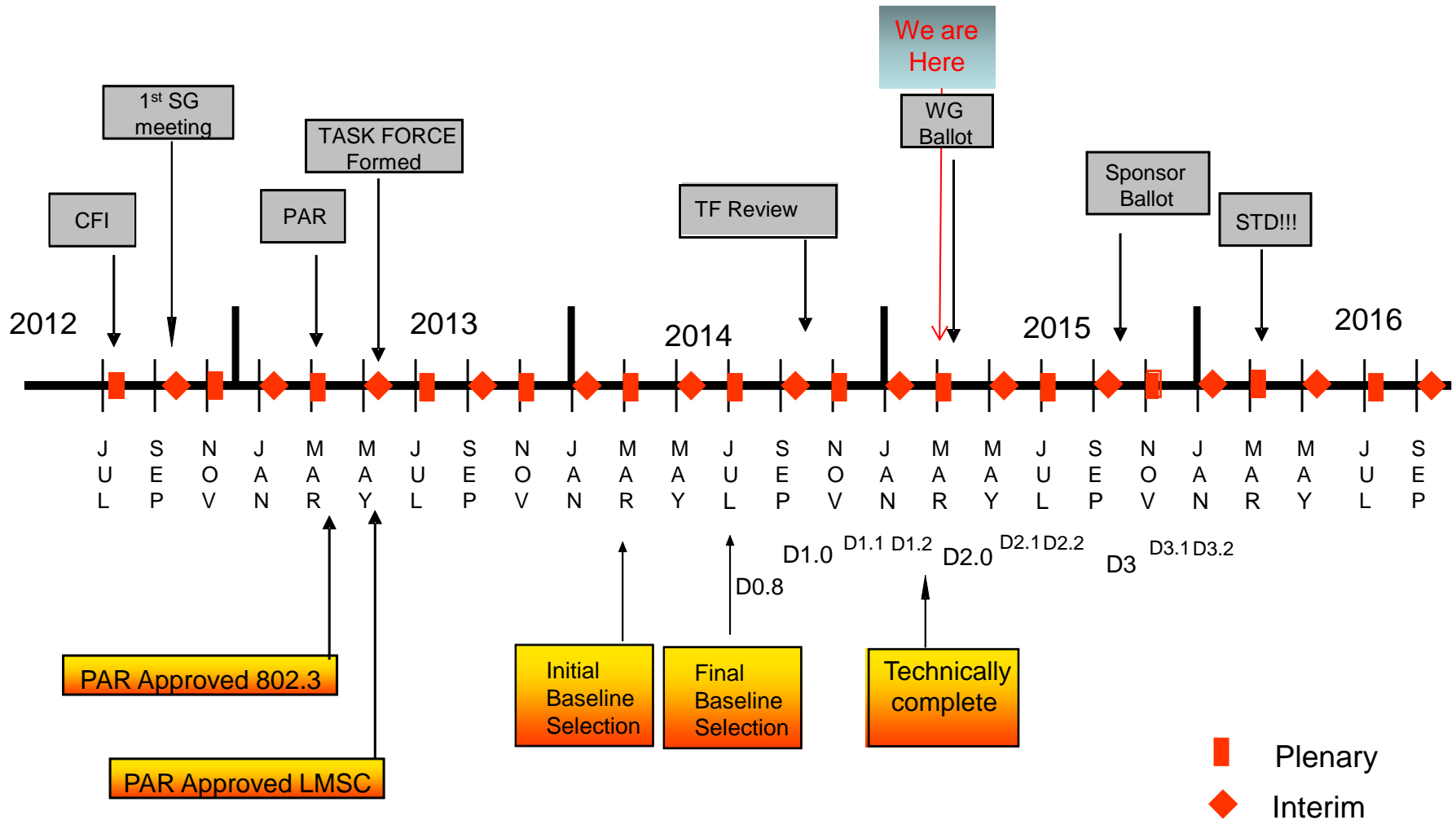
- Move to adopt <ngeabt_to_iecSC48B_0315.pdf>, giving license to the study group chair to format, and that the NGEABT Study Group Chair submit the following motion to the IEEE 802.3 Working Group:
 - Move that IEEE 802.3 approve the text in IEEE_802d3_to_iecsc48b_0315_draft.pdf with editorial license granted to the Chair (or the Chair's appointed agent) as a liaison communication from the IEEE 802.3 Working Group to IEC SC48B.
- M: Chris DiMinico S: George Zimmerman
- Technical $\geq 75\%$
 - Y: 23+17=40 N:0 A:0
- Motion passes

WG Motion

- Move that IEEE 802.3 approve the text in IEEE_802d3_to_iecsc48b_0315_draft.pdf with editorial license granted to the Chair (or the Chair's appointed agent) as a liaison communication from the IEEE 802.3 Working Group to IEC SC48B.
- M: David Chalupsky S: Bob Grow
- Technical $\geq 75\%$
 - Y: N: A:
- Motion passes/fails

Thank You!

IEEE P802.3bq Adopted Project Timeline



IEEE P802.3bq 40GBASE-T Objectives

- Support full duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- Support Auto-Negotiation (Clause 28)
- Support Energy Efficient Ethernet (Clause 78)
- Support local area networks using point-to-point links over structured cabling topologies, including directly connected link segments
- Do not preclude meeting FCC and CISPR EMC requirements
- Support a data rate of 40 Gb/s at the MAC/PLS Service Interface
- Define a link segment based upon copper media specified by ISO/IEC JTC1/SC25/WG3 and TIA TR42.7 meeting the following characteristics:
 - 4-pair, balanced twisted-pair copper cabling
 - up to 2 connectors
 - up to at least 30 m
- Define a single 40 Gb/s PHY supporting operation on the link segment

