

# Closing Report

IEEE 802.3 25GBASE-T Study Group

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# IEEE 802.3 25GBASE-T Study Group Project Information

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- Study Group charter
  - Develop PAR and CSD modifications to P802.3bq to add 25GBASE-T to that project
    - Motion passed November 2014 in 802.3 closing plenary
- Study Group web and reflector information
  - Reflector information: <http://ieee802.org/3/NGBASET/reflector.html>
    - Shares reflector with P802.3bq and NGEABT study group
  - Home page: <http://ieee802.org/3/25GBASET/index.html>
  - Draft PAR modification to P802.3bq (updated)  
[http://www.ieee802.org/3/25GBASET/draft\\_P802\\_3bq\\_PAR\\_150715.pdf](http://www.ieee802.org/3/25GBASET/draft_P802_3bq_PAR_150715.pdf)
  - Draft CSD modification to P802.3bq  
[http://www.ieee802.org/3/25GBASET/draft\\_P802.3bq\\_modified\\_CSD.pdf](http://www.ieee802.org/3/25GBASET/draft_P802.3bq_modified_CSD.pdf)
  - Draft Objectives modification to P802.3bq  
[http://www.ieee802.org/3/25GBASET/draft\\_P802.3bq\\_modified\\_objectives.pdf](http://www.ieee802.org/3/25GBASET/draft_P802.3bq_modified_objectives.pdf)
    - Objective modifications approved by 802.3 March'15

# Activities This Week

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- **2.5-day joint meeting with P802.3bq, interleaved with P802.3bz**
- **~47 attendees.                      25GBASE-T activity ~1/2 day**
  
- **Updated P802.3bq draft PAR modification based upon one comment received.**
  - Simple editorial fix
  
- **Passed 2 motions**
- **Heard 3 presentations related to cabling support for 25GBASE-T**

# PAR Modification Modification

Old version

## 7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

**8.1 Additional Explanatory Notes (Item Number and Explanation):** Additional Explanatory Notes (Item Number and Explanation): Item #2.1, item #5.2.b. and item #5.5: Since the IEEE P802.3bq 40GBASE-T PAR for a project supporting 40 Gb/s Ethernet operation over twisted-pair cabling was originally approved, 25 Gb/s has emerged as another speed of operation for Ethernet in the Data Centre, and hence there is a need to support 25 Gb/s Ethernet over twisted-pair cabling. Technical studies have shown that the technology in the 40GBASE-T draft specification currently under development could be easily adapted to support 25 Gb/s Ethernet operation over twisted-pair cabling

Fixed version

7.1 Are there other standards or projects with a similar scope?: No

## 7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

**8.1 Additional Explanatory Notes (Item Number and Explanation):** Item #2.1, item #5.2.b. and item #5.5: Since the IEEE P802.3bq 40GBASE-T PAR for a project supporting 40 Gb/s Ethernet operation over twisted-pair cabling was originally approved, 25 Gb/s has emerged as another speed of operation for Ethernet in the Data Centre, and hence there is a need to support 25 Gb/s Ethernet over twisted-pair cabling. Technical studies have shown that the technology in the 40GBASE-T draft specification currently under development could be easily adapted to support 25 Gb/s Ethernet operation over twisted-pair cabling (25GBASE-T), such as by reducing the signalling speed used. This PAR modification request adds 25Gb/s operation to the project scope (item #5.2.b). It also adds 25Gb/s operation and 25GBASE-T to the title (item

# 25GBASE-T SG Motion #6

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- **Adopt the modified PAR text in draft\_P802\_3bq\_PAR\_150715.pdf**
- **M: Paul Vanderlaan    S: Theo Brillhart**
- **(Technical  $\geq 75\%$ )**
- **Y: 40    N: 0    A: 0**
- **MOTION PASSES at 10:38 AM**

# WG Motion #

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- **Move that 802.3 approve the modified P802.3bq PAR text in draft\_P802\_3bq\_PAR\_150715.pdf**
- **M: David Chalupsky on behalf of the task force**
- **(Technical  $\geq 75\%$ )**
- **Y:    N:    A:**
- **MOTION PASSES/FAILS**

# 25GBASE-T SG Motion #7

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- **Request 802.3 to provide an extension of the 25GBASE-T Study Group.**
- **M: Peter Jones S: Jon Lewis**
- **(Procedural  $\geq 50\%$ )**
- **Y: 36 N: 0 A: 1**
- **MOTION PASSES at 4:28 PM**

# WG Motion #

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## **Request 802.3 to provide an extension of the 25GBASE-T Study Group**

- M: David Chalupsky on behalf of the study group
- By rule >50%
  - Y:    N:    A:
- Motion passes/fails

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# Thank You!

## 802.3 Adopted Modified P802.3bq 25G/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
- ❖ Support a data rate of 25 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
- ❖ Define a single 25 Gb/s PHY supporting operation on the link segment

❖ Adopted by 802.3, March, 2015