

P802.3cd
50 Gb/s, 100 Gb/s and 200 Gb/s Ethernet
Task Force
Opening Report

Mark Nowell
Cisco
San Antonio, Tx
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IEEE P802.3cd Task Force

Project information

Task Force Organization

Mark Nowell, Cisco, TF Chair

Kent Lusted, Intel, TF Recording Secretary

Matt Brown, APM, Editor-in-Chief

Task force web and reflector information

Reflector information: <http://www.ieee802.org/3/50G/reflector.html>

Home page: <http://www.ieee802.org/3/cd/index.html>

Project Documentation

PAR: <http://www.ieee802.org/3/cd/P802.3cd.pdf>

CSD: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0060-02-ACSD-802-3cd.pdf>

Objectives: http://www.ieee802.org/3/cd/P802d3cd_objectives_v4.pdf

*updated

Adopted Objectives (1 of 2)

- Support full-duplex operation only
- Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Support optional Energy-Efficient Ethernet operation
- Provide appropriate support for OTN
- Support a MAC data rate of 50 Gb/s and 100 Gb/s
- Support a BER of better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 50 Gb/s and 100 Gb/s operation
- Support a MAC data rate of 200 Gb/s
- Support a BER of better than or equal to 10^{-13} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 200 Gb/s operation

Adopted Objectives (2 of 2)

50 Gb/s Ethernet PHYs

Define single-lane 50 Gb/s PHYs for operation over
copper twin-axial cables with lengths up to at least 3m.
printed circuit board backplane with a total channel insertion loss of $\leq 30\text{dB}$ at 13.28125 GHz.
MMF with lengths up to at least 100m
SMF with lengths up to at least 2km
SMF with lengths up to at least 10km

100 Gb/s Ethernet PHYs **** new**

Define a two-lane 100 Gb/s PHY for operation over
copper twin-axial cables with lengths up to at least 3m.
printed circuit board backplane with a total channel insertion loss of $\leq 30\text{dB}$ at 13.28125 GHz.
MMF with lengths up to at least 100m

Define a single lane 100 Gb/s PHY for operation over duplex SMF with lengths up to at least 500 m,
consistent with IEEE P802.3bs Clause 124

200 Gb/s Ethernet PHYs

Define four-lane 200 Gb/s PHYs for operation over
copper twin-axial cables with lengths up to at least 3m.
printed circuit board backplane with a total channel insertion loss of $\leq 30\text{dB}$ at 13.28125 GHz.
Define 200 Gb/s PHYs for operation over MMF with lengths up to at least 100m

Activities since July 2016

One interim meeting and 7 ad hoc meetings have been held

Fort Worth Interim <http://www.ieee802.org/3/cd/public/Sept16/>

Ad hocs <http://www.ieee802.org/3/cd/public/adhoc/archive/index.html>

Interim TF meeting in Sept 2016, Fort Worth

Reviewed 22 presentations

5 Straw Polls, 10 Motions

Redefined 100G Objectives: http://www.ieee802.org/3/cd/P802d3cd_objectives_v4.pdf

Define a two-lane 100 Gb/s PHY for operation over:

- *copper twin-axial cables with lengths up to at least 3m.*
- *printed circuit board backplane with a total channel insertion loss of ≤ 30 dB at 13.28125 GHz.*
- *MMF with lengths up to at least 100m*

Define a single lane 100 Gb/s PHY for operation over duplex SMF with lengths up to at least 500 m, consistent with IEEE P802.3bs Clause 124

Adopted and Approved new CSD: <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0060-02-ACSD-802-3cd.pdf> - Approved by EC email ballot since then

Approved generation of D1.0

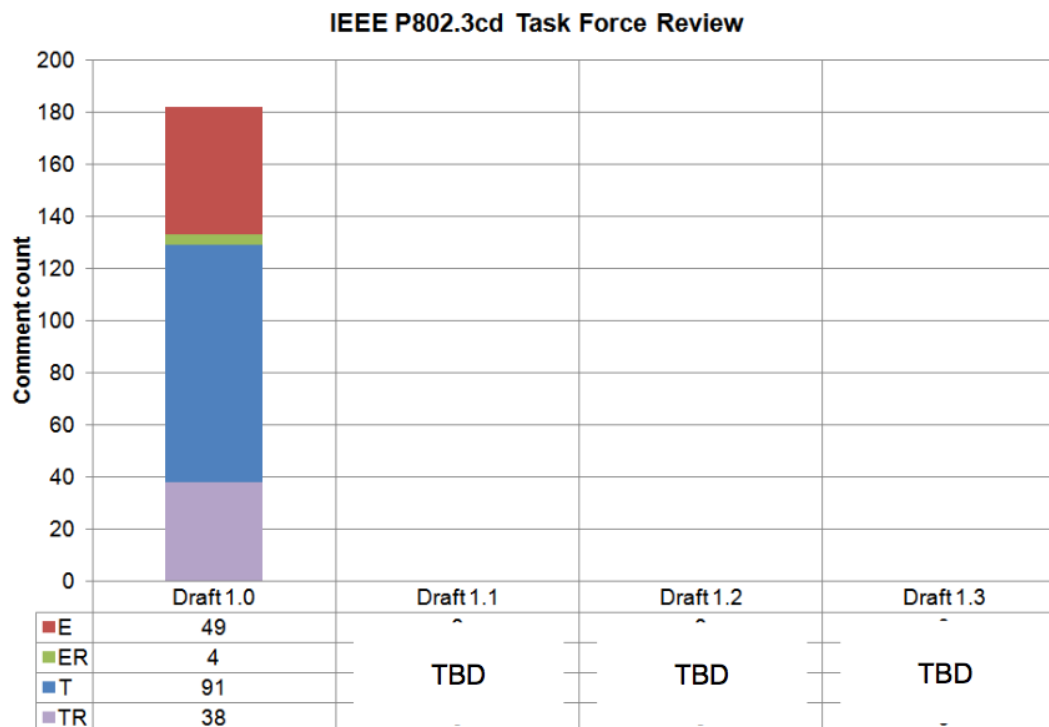
D1.0 Task Force Review

Draft 1.0 generated and sent out for initial Task Force Review:

Review Period Oct 14th – Oct 28th

182 comments received (E:49 ER:4 T:91 TR:38)

Comments and proposed responses: <http://www.ieee802.org/3/cd/comments/index.html>



P802.3cd Task Force Meeting: week plan

Meeting all day Wednesday & Thursday morning

Texas A meeting room

Goals for this week's meeting

Comment Resolution

Review technical presentations

Generate D1.1

Big ticket items

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In 802.3 WG closing plenary

Progress update

Questions?

Thank you!