

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

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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

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

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 2017

One interim meeting and 5 ad hoc meetings have been held

Charlotte, NC, USA Interim <http://www.ieee802.org/3/cd/public/Sept17/>

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

Draft 2.1 generated and sent out for Task Force recirculation

Review Period Aug 10th – Aug 24th

91 comments received (E:25 ER:0 T:36 TR:30) Includes 3 received late

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

Interim TF meeting in Sept 2017, Charlotte

Reviewed 6 presentations

2 Straw Polls, 4 Motions

Approved generation of D2.2

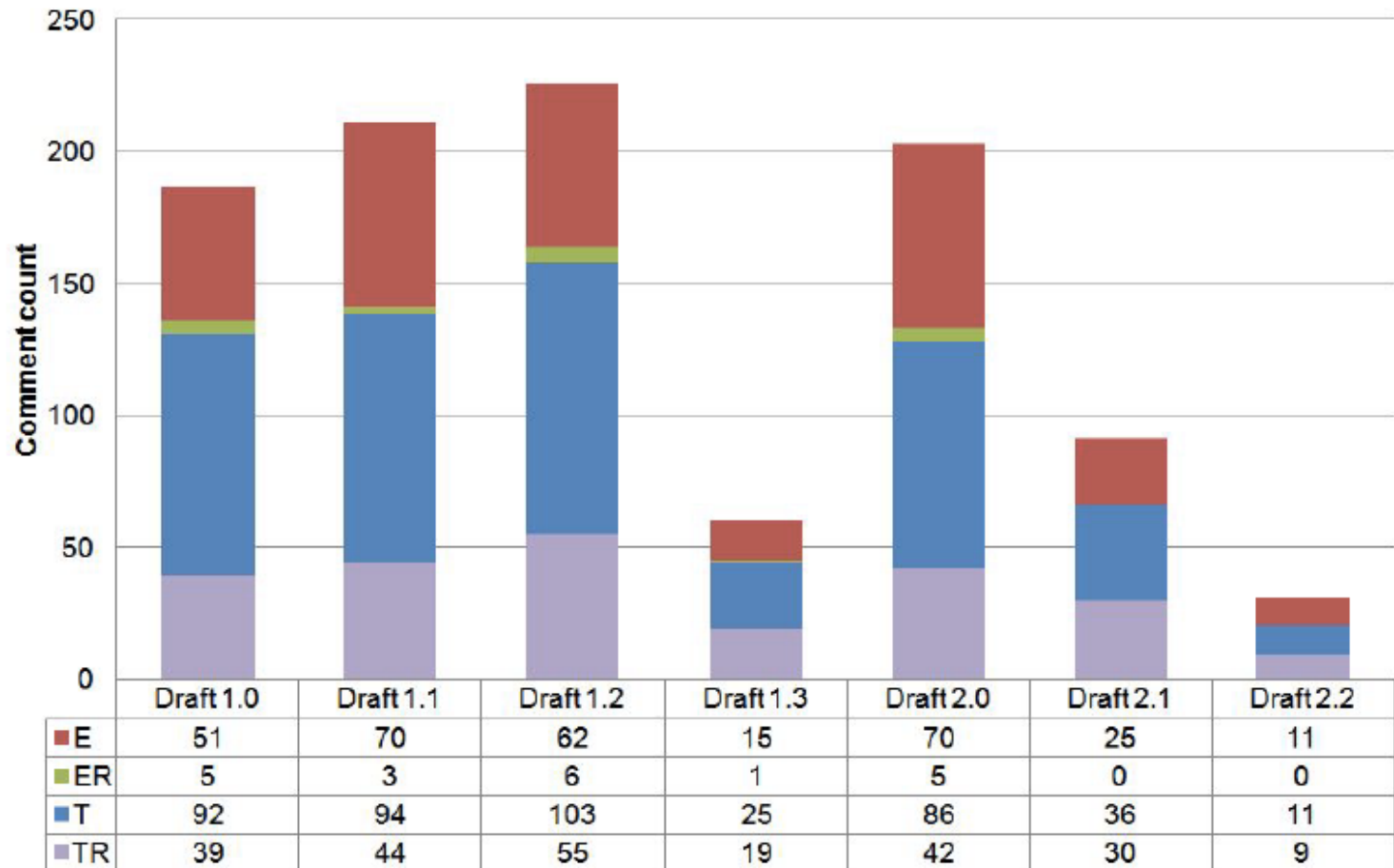
Draft 2.2 generated & sent for Working Group Ballot recirculation

Review Period: Sept 26th-Oct 11th, 2017

31 comment received (E:11 ER:0 T:10 TR:10) from 7 reviewers

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

D2.2 Task Force Status



E/ER = editorial, T/TR = technical

P802.3cd Task Force Meeting: week plan

Meeting:

Mon (Start @ 2pm) - Grand Sierra D

Tues(all-day): Grand Sierra D

Goals for this week's meeting

Comment Resolution

Review technical presentations

Generate D2.3/3.0

Big ticket items

No new negatives. Ongoing refinement and discussion around copper and optical specs as further experimental data is contributed

In 802.3 WG closing plenary

Request (un)conditional approval to move to sponsor ballot

P802.3cd Contingent Interim

If 802.3 WG provides conditional approval to move to Sponsor Ballot this week, a contingent interim will be held:

- Wed Dec 6th, 7- 9AM PT
- Teleconference-only

Agenda will be to review comments against D2.3 and generate D3.0 to initiate Sponsor Ballot

Questions?

Thank you!