

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

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Rosemont, IL
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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 ≤ 30 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 ≤ 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

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 ≤ 30 dB at 13.28125 GHz.

Define 200 Gb/s PHYs for operation over MMF with lengths up to at least 100m

Activities since Nov 2017

One interim meeting and 8 ad hoc meetings have been held

Geneva, CH Interim <http://www.ieee802.org/3/cd/public/Jan18/>

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

Draft 3.0 generated and sent out for Sponsor Ballot

Review Period: Nov 15th- Dec 15th, 2017

175 comment received (E:67 ER:4 T:38 TR:66)

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

Interim TF meeting in Jan 2018, Geneva

Reviewed 12 presentations

8 Straw Polls, 4 Motions

Approved generation of D3.1

Draft 3.1 generated & sent for Sponsor Ballot recirculation

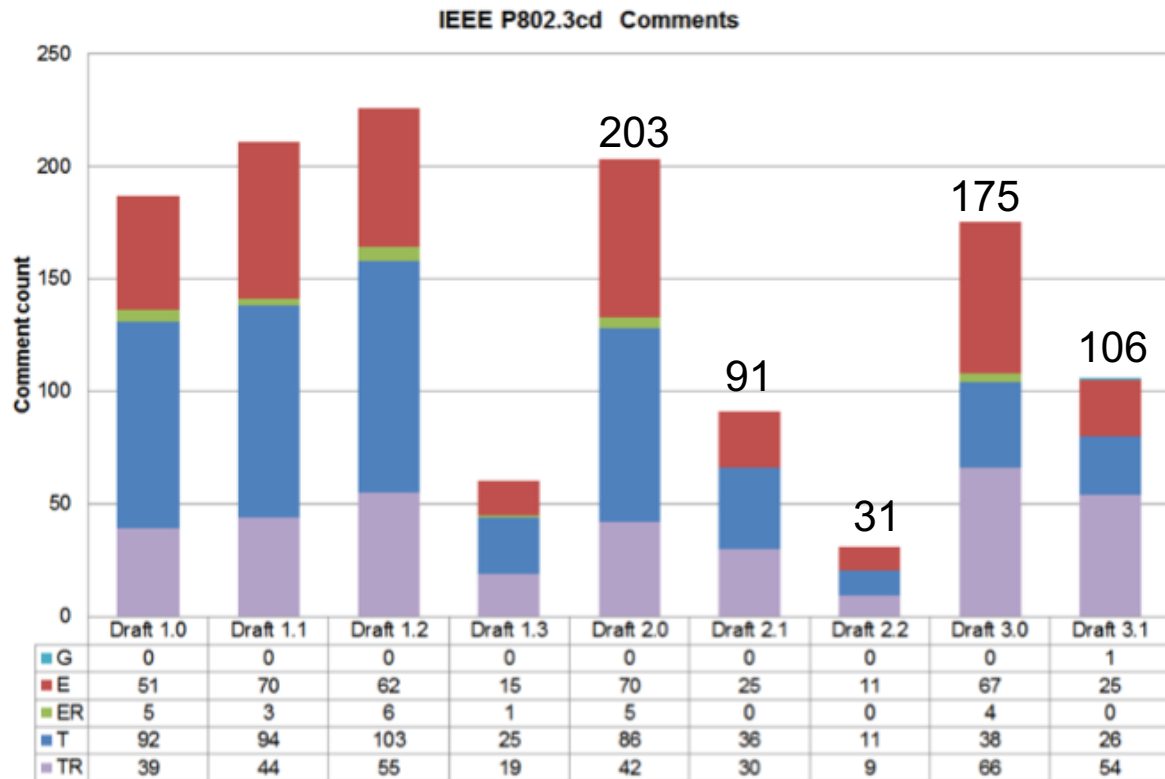
Review Period: Feb 7th- Feb 22nd 2018

106 comment received (G:1 E:25 ER:0 T:26 TR:54)

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

P802.3cd Ballot Progress

Comment Summary by Draft



P802.3cd Task Force Meeting: week plan

Meeting:

Mon (Started already @ 8 am today, continues @ 1pm) - Grand Ballroom GH

2nd track starting @ 1pm in O'Hare BC

Tues(all-day): Same as above. Both tracks running. Start @ 8am

Goals for this week's meeting

Comment Resolution

Review technical presentations

Generate D3.2

Big ticket items

Electrical Track – resolve comments around Effective Return Loss

Optical Track – resolve comments around TDECQ measurement methodology

In 802.3 WG closing plenary

No approvals planned

Questions?

Thank you!