

# **Editorial Update**

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IEEE P802.3cu Task Force, Salt Lake City, May 2019

# Adopted Objectives (March 2019)

- Support a MAC data rate of 100 Gb/s
- Support a MAC data rate of 400 Gb/s
- 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
- Provide appropriate support for OTN
- Support a BER of better than or equal to  $10^{-12}$  at the MAC/PLS service interface (or the frame loss ratio equivalent) for 100 Gb/s operation
- Support a BER of better than or equal to  $10^{-13}$  at the MAC/PLS service interface (or the frame loss ratio equivalent) for 400 Gb/s operation
- Define a single-wavelength 100 Gb/s PHY for operation over SMF with lengths up to at least 2 km
- Define a single-wavelength 100 Gb/s PHY for operation over SMF with lengths up to at least 10 km
- Define a four-wavelength 400 Gb/s PHY for operation over SMF with lengths up to at least 2 km
- Define a four-wavelength 400 Gb/s PHY for operation over SMF with lengths up to at least 10 km

[http://www.ieee802.org/3/cu/Objectives\\_Approved\\_Mar\\_2019.pdf](http://www.ieee802.org/3/cu/Objectives_Approved_Mar_2019.pdf)

# Assumptions

- Reuse existing 100GbE and 400GbE logical and AUI clauses:
  - no changes anticipated for P802.3cu
  - see jackson\_3cu\_02\_0519
- P802.3cu project is anticipated to add the following four new PHY types:
  - 100GBASE-FR
  - 100GBASE-LR
  - 400GBASE-FR4
  - 400GBASE-LR4

# Baseline Proposals

- Required:
  - 100GBASE-FR
  - 100GBASE-LR
  - 400GBASE-FR4
  - 400GBASE-LR4
- Adopted:
  - None

# Amended Clauses

Clause #	Clause Topic	Amendments
0	Front matter	
1	Definitions, abbreviations, etc.	New defs., abbrs., etc.
30	Management Objects	Add new 100G/400G PHY types
45	MDIO	Add new 100G/400G PHY types
78	EEE	Add new 100G/400G PHY types (optional fast wake EEE)
80	40GE/100GE introduction	Add new 100G PHYs to list
91	RS-FEC Sublayer	Add new 100G PHY types
116	400GE/200GE introduction	Add new 400G PHYs to list
140	100GBASE-DR, FR and LR PMD	Add new 100GBASE-FR and 100GBASE-LR PMDs

# New Clauses

Clause #	Clause Topic	Potential Source
200 †	400GBASE-FR4 and 400GBASE-LR4 PMDs	Clause 122 (200GBASE-FR4/LR4) and Clause 140 (100GBASE-DR4)

† Clause number 200 is a placeholder until official clause number is assigned.

# Status

- The editors continue to refine a P802.3cu D0.1 working draft, created to establish the document structure and expected level of technical changes. Reviewing with interested people for feedback.
  - If you would like to review the draft and provide feedback, please contact me.
- The D0.1 draft has placeholders (blanks) for the technical details at this point in time, and these will be filled in as we start adopting baseline proposals in Task Force.
  - Intent is for the editorial team to be ready to quickly generate a D1.0 document as soon all the baselines are adopted.

# Goals for this meeting

- Adopt PMD nomenclature
  - jackson\_3cu\_01\_0519
- Adopt the physical layer clauses associated with the proposed new PHYs
  - jackson\_3cu\_02\_0519
- Review (and potentially adopt) PMD baseline proposals

# Next Steps

- Work towards generating D1.0 with adopted baselines

# P802.3cu Editorial Team

Editor	Duties
Gary Nicholl	Chief Editor and editor for clauses FM, 1, 30, 45, 78, 80, 91 and 116
David Lewis	Editor for optical clauses; Clause 140 (100GBASE-FR, 100GBASE-LR) and Clause 200* (400GBASE-FR4, 400GBASE-LR4)
Mark Kimber	Advisor and reviewer for optical clauses

\* Clause number 200 is a placeholder until official clause number is assigned

# Thanks!