

# Chief Editor's Report

IEEE 802.3

P802.3cz Multi-Gigabit Optical Automotive Ethernet  
Task Force

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# Summary

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- Editorial complexity of 802.3cz project
- Editorial actions
- Current Draft status
- Potential November adoption of baselines e.g., (PCS/PMA Baseline)
- Draft and base standard timelines
- Next steps

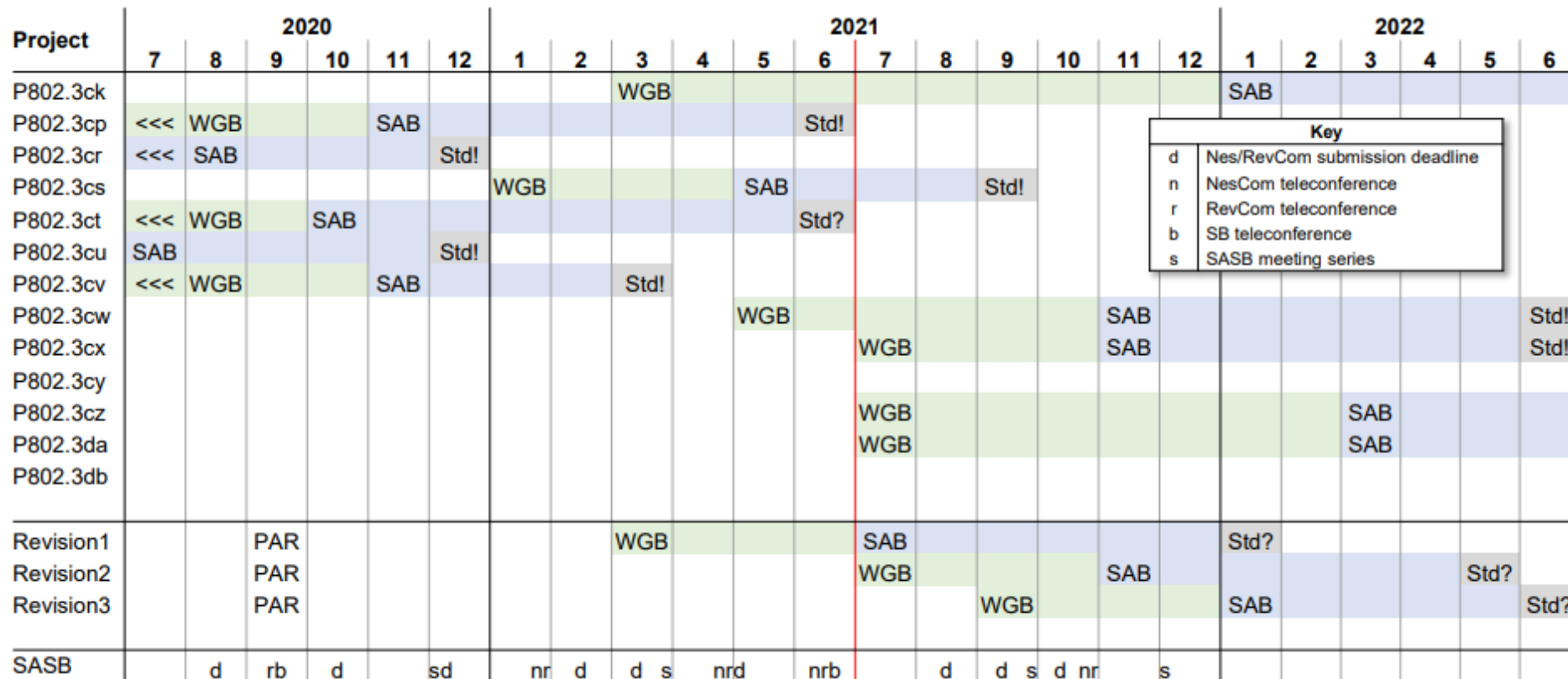
# Editorial complexity of 802.3cz project

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- Five different speeds in our objectives (2.5 Gb/s, 5 Gb/s, 10 Gb/s, 25 Gb/s and 50 Gb/s)
  - Clauses to amend:
    - Clause 44: Introduction to 10 Gb/s baseband network
    - Clause 105: Introduction to 25 Gb/s network
    - Clause 125: Introduction to 2.5 Gb/s and 5 Gb/s network
    - Clause 131: Introduction to 50 Gb/s network
- Energy-Efficient Ethernet support is an objective
  - Clause to amend:
    - Clause 78 Energy-Efficient Ethernet (EEE)
- Definitions, Abbreviations, Management lists (aPhyType, aPhyTypeList, aMAUType), and MDIO Interface Registers
  - Clauses to amend:
    - Clause 1: Introduction
    - Clause 30: Management
    - Clause 45: Management Data Input/Output (MDIO) Interface

# Editorial complexity of 802.3cz project

- P802.3cz will be an amendment to a future 802.3 revision (e.g., IEEE Std 802.3-2022)



From [https://www.ieee802.org/3/maint/public/healey\\_1\\_1120.pdf](https://www.ieee802.org/3/maint/public/healey_1_1120.pdf)

# Editorial Actions

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Objective: Do not add (unnecessary) complexity to a complex draft

- Add a single Clause to specify P802.3cz PCS/PMA/PMD
- Use of reference/pointers to other Clauses when possible
- Reuse of text/tables/figures/state machines from other Clauses with minimum changes when the use of reference/pointers is not possible
- Identify problems that have been previously solved by other projects
  - Multiple speed definitions in P802.3ch
  - Lessons learnt in BASE-SR PHY specifications
  - Automotive optical PHY in 802.3bv

# Current Draft Status

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- Draft 0.1 (placeholder) internally developed
  - Book created in Frame Maker
    - Clauses 1, 30, 44, 45, 78, 105, 125 and 131 added
    - Clause 300 added for P802.3cz PCS/PMA/PMD (this is a placeholder, we do not yet have an assigned clause number)
  - No baseline approved yet, so only obvious changes derived from objectives have been included
    - PHY naming to be decided by the group (See [https://www.ieee802.org/3/cz/public/nov\\_2020/perezaranda\\_3cz\\_02b\\_1120\\_phyname.pdf](https://www.ieee802.org/3/cz/public/nov_2020/perezaranda_3cz_02b_1120_phyname.pdf))

# Adoption of PCS/PMA Baseline

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- A baseline for PCS/PMA covering 2.5/5/10/25 Gb/s was presented Nov 10<sup>th</sup> ([perezaranda\\_3cz\\_01\\_1120\\_baseline.pdf](#))
- If approved, a Draft 1.0 with new technical content may be released and send to the group for review and comments
  - Contents of the presentation Baseline are enough to start writing Clause 300 and Clause 45 PCS/PMA registers
    - PCS 64B/65B encoding based on Clause 55
    - Binary additive scrambler, Physical header data, CRC calculation and PMA state variables, PHY receiver quality assessment and PHY quality monitor based on Clause 115
    - New RS-FEC flavor, but most of the Clause 91 text can be reused
    - OAM channel is reused from Clause 115

# Draft timeline

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- If PCS/PMA Baseline is approved, Draft 1.0 may be available to be distributed to the group by January 8th
- First comment resolution can take place by the beginning of 2021



# Next Steps

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- Propose and adopt baseline for 2.5/5/20/25 Gb/s PMD, MDI and medium
- Propose and adopt baseline for 50 Gb/s PCS/PMA/PMD, MDI and medium
- Propose and adopt P802.3cz extensions to EEE
- Propose and adopt test modes and test cases

Thanks!

Questions?