



# REQUIREMENTS FOR HIGHER SPEED BIDI PTP OPTICAL ACCESS

IEEE 802.3 GREATER THAN 50 GB/S BIDIRECTIONAL OPTICAL ACCESS PHYS STUDY GROUP

14 SEPTEMBER 2022

JUN SHAN WEY, VERIZON, USA

HIROTAKE NAKAMURA, NTT, JAPAN

FABRICE BOURGART, ORANGE, FRANCE

# Background

- IEEE 802.3cp Task Force completed BiDi PtP specifications in 2021:
  - 10 Gb/s, 25 Gb/s, and 50 Gb/s
  - 10/20/40km distance
  - PHY and MAC layers
- ITU-T Q2/SG15 completed a series of higher speed BiDi PtP Recommendations:
  - 10 Gb/s (G.9806), 25 Gb/s (G.9806Am1), 50Gb/s (G.9806Am2)
  - 20/40km distance
  - PMD layer aligned with IEEE 802.3cp specifications
  - TC layer, service requirements, OAM
- ITU-T Q2/SG15 G.9806Am3 project started in 2021
  - BiDi PtP at 100 Gb/s
  - 20/40 km distance

# Recent BiDi PtP standardization activities outside IEEE802.3

- In the readout of FSAN August meetings and in a joint contribution to ITU-T SG15 plenary (T22-SG15-C-0159), the following opinion was expressed:  
*“Some operators see a fast growing market for 100 Gb/s at 10-40km. They expect demand in the future for 400 Gb/s; however, they have no/little interest for 200 Gb/s. Other operators expressed no opinion on the matter. Although an alignment with IEEE 802.3 standard is desired, FSAN operators believe it should not delay the progress of G.9806Am3 (100 Gb/s), which is targeting consent in 2023.”*
- ITU-T Q2/15 formed an adhoc group to progress G.9806Am3
  - Kick-off meeting was held on 9 Sept. Participating companies include NTT, Orange, Verizon, Broadcom, Futurewei, Huawei, Nokia, Tibit
  - Monthly meeting is planned
  - Target to complete in time for consent in the June 2023 ITU-T SG15 plenary

# Summary

- We propose that the new IEEE 802.3 BiDi PtP project should focus on 100 Gb/s in the near term and 400 Gb/s for later
- Immediate development of 100 Gb/s would benefit from the synergy with the ongoing ITU-T G.9806Am3 project
- IEEE members are invited to join the ITU-T 100G BiDi PtP adhoc group
  - Contact Dr. Hirotaka Nakamura [hirotaka.nakamura.by@hco.ntt.co.jp](mailto:hirotaka.nakamura.by@hco.ntt.co.jp) to join

The image features a blue gradient background that transitions from a lighter shade at the top to a darker shade at the bottom. In the four corners, there are white, stylized circuit board patterns consisting of lines and small circles, resembling electronic components or data paths.

THANK YOU