INTERNATIONAL TELECOMMUNICATION UNION
TELECOMMUNICATION STANDARDIZATION SECTOR
STUDY PERIOD 2025-2028

SG15-LS9
STUDY GROUP 15
Original: English

Question(s): 5/15 Geneva, 17- 28 March 2025

LS

Source: ITU-T Study Group 15

Title: LS/i on information on new work items on weakly-coupled multi-core fibre (WC-MCF) standards in Q5/15

LIAISON STATEMENT

For action to: IEEE 802.3 Ethernet WG

For information to:

Approval: ITU-T SG15 meeting (Geneva, 28 March 2025)

Deadline: 25 September 2025

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Abstract: This liaison statement replies to IEEE802.3EthernetWG-LS-140, LS-141, and LS143. ITU-T Q5/15 thanked IEEE 802.3 Ethernet WG for their kind information on the latest draft on "Media Access Control Parameters for 1.6 Tb/s and Physical Layers and Management Parameters for 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s operation. ITU-T Q5/15 would like to inform IEEE 802.3 of the recent progress on a weakly-coupled multi-core fibre (WC-MCF) standard in March 2025 meeting and request feedback with respect to short reach WC-MCF applications. ITU-T Q5/15 appreciates continuous harmonization with IEEE 802.3 Ethernet WG.

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ITU-T Q5/15 would like to inform IEEE 802.3 Ethernet WG that ITU-T Q5/15 agreed with a new supplement G.Suppl.G65x in March 2025 SG15 meeting. For your convenience, ITU-T Q5/15 attaches the agreed upon new supplement to this liaison statement. ITU-T Q5/15 would also like to inform IEEE 802.3 that we agreed with two work items: new Recommendation G.smmcf "Characteristics a single-mode weakly-coupled multi-core optical fibre and cable," and on revised Recommendation G.650.2 "Definitions and test methods for statistical and non-linear related attributes of single-mode fibre and cable." A WC-MCF is expected to have a 125 μm cladding diameter and optical backward compatibility to existing G.65x single-mode fibre(s). The focused application area of this initial WC-MCF is the long-haul submarine network. Revision of Recommendation G.650.2 aims to support definitions and test methods for inter-core crosstalk (XT) in a WC-MCF.

Q5/15 would like to identify the applicability of WC-MCF technology to short reach and data centre networks. ITU-T Q5/15 appreciates continuous harmonized discussion with IEEE 802.3 Ethernet WG

to lead new standardization technology as well as the applicable requirements for a WC-MCF, for example inter-core XT and polarization mode dispersion particularly in a short link.

Attachment TD20R1/P