INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR

STUDY PERIOD 2022-2024

SG15-LS88
STUDY GROUP 15

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LS

Source:	ITU-T Study Group 15
Title:	LS on B400G work and EVM

LIAISON STATEMENT

For action to:	IEEE 802.3	
For information to:	-	
Approval:	ITU-T SG15 (Geneva, 1 December 2023)	
Deadline:	31 March 2024	
Contact:	Fabio Cavaliere Rapporteur Q6/15	Tel: ▮▮▮▮▮▮▮▮ E-mail: ▮▮▮▮▮▮▮▮

Abstract: This liaison announces the start of B400G work .

ITU-T SG15 wishes to inform IEEE 802.3 that in this meeting we approved a new Q6 work item to add 800G DWDM application codes to Rec. ITU-T G.698.2. It is possible that at least one of these application code will specify 16QAM as a modulation format.

For 100G DP-DQPSK codes in the in force version of the Recommendation we specify a maximum value for the Error Vector Magnitude (EVM) of the transmitter signal. Q6 is investigating whether EVM may also be suitable as a transmitter metric for 16QAM signals.

The EVM algorithm specified in Rec. ITU-T G.698.2, and Matlab scripts that implement it were developed in Q6. We understand that subsequently the scripts were contributed to IEEE 802.3 and OIF.

We believe that projects in IEEE 802.3 are also investigating the use of EVM as a means of characterizing 16QAM transmitters and would appreciate any updates you can provide on the progress of that activity:

- Have the algorithm and scripts been modified from the original versions?
- Has any experimental work to confirm the viability of EVM as a metric to characterize 16QAM transmitters been contributed to IEEE 802.3?
- Are the current versions of the algorithm and scripts publicly available?

We would very much appreciate it if IEEE 802.3 were able to share the current 16QAM EVM algorithms and, if possible the scripts, with ITU-T. We would like to pursue a common approach to transmitter characterization across multiple SDOs.

We look forward to continued collaboration with IEEE 802.3 on topics of mutual interest. As Q6 progresses its work on future revisions of Recommendation ITU-T G.698.2 to include 800G application codes, and on EVM in connection with that, we will keep you informed.

The next meeting of ITU-T SG15 Question 6 is planned for Berlin, Germany in April 2024.