

02.3-2022/Cor 2 (IEEE 802.3dr) D2.0 Optical Automotive Ethernet TDFOM Initial Working Group ballot cc

CI FM SC FM P1 L28 # 1

Ran, Adee Cisco Systems

Comment Type E Comment Status D

"Draft D2.0 is prepared for initial Task Force review"

This draft is for Working Group ballot.

The next draft (D2.1) will be for first recirculation but typically "recirculation" is not added in this paragraph.

SuggestedRemedy

Change "Draft D2.0 is prepared for initial Task Force review" to "Draft D2.1 is prepared for Working Group ballot".

Proposed Response Response Status W

PROPOSED ACCEPT IN PRINCIPLE.

Suggested remedy implies the decision of the TF to recirculate the modified D2.0.

Another option may be propose WG to move the modified D2.0 to initial SA ballot. If approved by TF, the change will be:

Change "Draft D2.0 is prepared for initial Task Force review" to "Draft D3.0 is prepared for initial Standard Association ballot".

CI FM SC FM P7 L13 # 2

Ran, Adee Cisco Systems

Comment Type E Comment Status D

The list of 802.3 members at the beginning of the working group ballot is known.

SuggestedRemedy

Populate the list.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI FM SC FM P11 L9 # 3

Ran, Adee Cisco Systems

Comment Type E Comment Status D

A section describing 802.3dr (this document) should be included, as in all amendmends and corrigenda.

See IEEE Std 802.3™-2022/Cor 1-2024 page 12 for an example.

SuggestedRemedy

Add a section per the comment.

Proposed Response Response Status W

PROPOSED ACCEPT.

CI Introdu SC Introduction P12 L5 # 4

Simms, William NVIDIA

Comment Type E Comment Status D

space missing between 166.6 and Physical Medium Dependent (etc). Line 6 and 8 have similar lack of spacing

SuggestedRemedy

Add space or tab

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 166 SC 166.6.4.8.6 P14 L30 # 5

Spruit, Hans TRUMPF

Comment Type E Comment Status D

The value 3.9 has less digits as the other requirements

SuggestedRemedy

Change 3.9 in 3.90

Proposed Response Response Status W

PROPOSED ACCEPT.

CI 166 SC 166.6.4.8.6 P14 L30 # 6

Dawe, Piers

NVIDIA

Comment Type TR Comment Status D

This draft proposes changing the value of TDFOM_0 by 0.2 dB or less in about 3 or 4 dB. Torres_3dr_01_280725 provides technical background, with an intention that "TDFOM0 is defined to obtain TDFOM = 0 dB when measuring a transmitter generating a perfect squared signal ("perfect transmitter")".

The PAR, 5.5, Need for the Project, says:

"The normalization factors in Table 166–16 are intended to yield Transmitter Distortion Figure of Merit (TDFOM) equal to 0 dB in Equation (166–16) for an ideal transmitter. However, the current values of the normalization factors in Table 166–16 do not achieve this result and need to be corrected." We assume that "the normalization factors" means the values of TDFOM_0.

However, the standard in force does not say what the intention for TDFOM_0 is, nor does it give any explanation of it, nor does it need to. These are just numbers in a table that the implementer must follow. They are not obviously unreasonable values. Other similar metrics such as TWDP and TDECQ have similar "zero offsets": those metrics of a perfect squared signal are not exactly zero either. This can be annoying but it is not a technical error - not even if the offset is different for different PHY types. It does not "need" to be corrected.

It is not apparent to me that the procedural cost to implementers and users of such small but technical changes are justified by better cost, yield, power or some such (maybe such a case was made and I missed it) but that is not the focus of this comment.

The standard is in force and stable. It was voted forward with these numbers. I voted approve myself.

The IEEE SA SB ops manual says that a corrigendum is:

"A document that only corrects editorial errors, technical errors, or ambiguities in an existing IEEE standard."

These numbers are not technical errors in the existing standard. Any errors were in the preparation of the numbers that went into it, and the result is that the standard in force does not represent the intention of some participants; but it is complete and clear, and similar to TWDP and TDECQ. As the standard is not in error, the proposed changes are not appropriate to a corrigendum.

Suggested Remedy

Withdraw this project. If it is thought worthwhile, propose the same changes as an amendment, or part of another amendment project.

Proposed Response Response Status W

PROPOSED REJECT.

References [1] (slide 17) and [2] (slide 8) in Torres_3dr_01_280725 stated that "TDFOM0 is calculated to get TDFOM = 0 dB when an ideal transmitter (square pulse) is connected to the reference receiver".

The IEEE 802.3cz TF approved to "Change method to be consistent with perezaranda_3cz_01_2205_TDFOM_Simpler.pdf" (ref [2])(see https://www.ieee802.org/3/cz/comments/Comments_3cz_D2p0_With_Resolution_30_may_v2.pdf, response to comment #160, page 44).

The objective of this corrigendum project is to align with the aforementioned IEEE 802.3cz TF approved resolution, which stipulates that "TDFOM0 is calculated to get TDFOM = 0 dB when an ideal transmitter (square pulse) is connected to the reference receiver". This approach maintains the meaning of the TDFOM metric as a power penalty due to the distortion relative to an ideal transmitter.

Failing to change the TDFOM_0 values would mean losing the sense behind the TDFOM metric, including an error which may be relevant in certain cases.

Furthermore, the suggested remedy provided by the commenter is not feasible through the implementation of a draft modification and this TF lacks the necessary competencies to execute it.

[1] perezaranda_3cz_01c_080222_TDFOM.pdf

[2] perezaranda_3cz_01a_0522_TDFOM_Simpler.pdf