IEEE 802.3 Ethernet Working Group
<mark>EC Review Draft</mark> Liaison Communication

Source: IEEE 802.3 Working Group[1]

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From: David Law   Chair, IEEE 802.3 Ethernet Working Group
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Subject: IEEE 802.3 Ethernet Working Group reply to ITU-T SG 5

Approval: Agreed to at IEEE 802.3 plenary teleconference meeting, 22nd July 2021

Dear Ms Shuguang,

The IEEE 802.3 Working Group (WG) would like to thank you for your communication Ref.: SG5-TD1888, approved 20th May 2021. We are disappointed that most of the comments provided by the WG were rejected last cycle as we understand that ITU's reference policies would be in alignment with our comments.

Many of the comments related to references to IEEE Std 802.3™ (-2018 and amendments to date) or clauses, subclauses, and tables in those documents. These were either incorrectly rejected or re-referenced to IEEE Std 802.3 as a whole. This appears contrary to ITU-T Recommendation A.5, clause 6.1, which states that it is preferred that normative references to outside documents refer to specific parts of the referenced document. Resolution of the

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[1] This document solely represents the views of the IEEE 802.3 Working Group and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE 802.

comments could have complied with ITU-T Recommendation A.5 by adding the specific clause, subclause, or table that was being referenced. In most cases, there would be no conflict with other ITU-T recommendations. Even in the case of a reported conflict, a reasonable and common practice indicates that the stricter requirement, where relevant, governs with regards to ITU-T K.147 conformance. In those cases, further discussion is appropriate.

Regarding the specific points in your letter, see our individual item responses below:

In response to the assertion that *"maximum working voltages, maximum currents, data rates and loop resistance"* determine the parameters for protection, we are unable to find the relationships mentioned within ITU-T K.147. Further, some of these, for example data rate, appear unrelated to electrical protection. Additionally, Section 8 makes no references whatsoever to Sections 6 or 7. Sections 6 and 7 are tutorials on the subject rather than a recommendation with specific parametric recommendations. As such, Sections 6 and 7 could be deleted from the document without effect on the technical value of the planned recommendation.

The received liaison letter goes on to state that *"These will determine the protector voltage threshold, capacitance, current threshold, and any series resistance value."* While a protection engineer might determine those values, we are unable to find where ITU-T K.147 provides guidance on these values.

Speaking to the list of drawbacks quoted in the received liaison letter:

Item 1 (that IEEE Std 802.3 is 100MB in size and 500 pages long): This statement ignores the practicality of ITU-T Rec. A.5, section 6.1 where it states: "It is preferred that, rather than making reference to an entire document from an outside organization, reference be made to only the specific section(s) concerned."

Item 2 (that IEEE 802.3 is in conflict with ITU-T test levels and test circuits): Please provide specific references for these conflicts so that they may be evaluated. We cannot properly evaluate this comment or take any action without specific references to the alleged conflicts.

Item 3 (that IEEE 802.3 vocabulary differs from ITU protection vocabulary): The vocabulary of interoperability standards such as IEEE 802.3 is necessarily different from the vocabulary of protection recommendations. Understanding the vocabulary of both would be important and valuable to the practitioner.

Item 4 (that ITU-T removed ITU generated informative figures): Not all are removed. Section 9.3 and Annex B still contain interpretations of IEEE Std 802.3 material which contain errors. Please refer to our original recommendation (SG5-C745-R1) to remove the figures along with the tutorial material.

Item 5 (that IEEE 802.3 was missing important protection information): Circuit protection is an implementation problem and IEEE Std 802.3 does not prescribe implementation, only behaviour with respect to interoperability. Some diagrams may imply implementation, but the designer is free to use any implementation that conforms to the prescribed behaviour necessary to achieve interoperability.

Sections 6 and 7 of ITU-T K.147 will never provide the full requirements in just a few pages of what appears to be tutorial text. A reader of ITU-T K.147 should not be led to believe that they do not need to read the relevant Clauses of IEEE Std 802.3 and rely exclusively on the tutorial material included in these sections of ITU-T K.147.

The IEEE 802.3 WG has reviewed the newest version of ITU-T K.147 (06/20) provided by the IEEE 802.3 liaison officer to ITU-T SG-5. We attach this new markup which provides the pointers to the relevant clauses and to again highlight which parts of ITU-T K.147 are improved by reference to IEEE Std 802.3.

The IEEE 802.3 WG looks forward to working with ITU-T SG5 as needed to progress this contribution.

Best regards,
David Law
Chair, IEEE 802.3 Ethernet Working Group