Liaison Statement from ETSI ISG THz:

Formation of a new ETSI ISG for Terahertz Communications (THZ)

**Response of IEEE 802**

Paul Nikolich

Chair, IEEE 802 LAN/MAN

Standards Committee

em: IEEE802radioreg@ieee.org

17 March 2023

# 1 Source information

IEEE 802 LAN/MAN Standards Committee (LMSC) respectfully submits these responses Ofcom). IEEE 802 is a committee of the IEEE Standards Association and Technical Activities, two of the Major Organizational Units of the Institute of Electrical and Electronics Engineers (IEEE). IEEE has about 420,000 members in about 190 countries and supports the needs and interests of engineers and scientists broadly. In submitting this document, IEEE 802 acknowledges and respects that other components of IEEE Organizational Units may have perspectives that differ from, or compete with, those of IEEE 802. Therefore, this submission should not be construed as representing the views of IEEE as a whole[[1]](#footnote-1).

###### 2 Discussion

IEEE 802 thanks ETSI for informing IEEE 802 on the formation of ETSI’s new Industry Specification Group on Terahertz Communications (THz) and the encouragement for a continual exchange in the area of THz Communications.

IEEE 802 is working on THz Communications since 2008, when the IEEE 802.15 Interest Group THz was formed, which is now continued as the IEEE 802.15 Standing Committee THZ (SC THz). As a spin-off of the activities of this group IEEE 802 published IEEE Std 802.15.3dTM-2017 in 2017 - an amendment to IEEE Std 802.15.3-2016, which provides physical layer (PHY) at the frequency range between 252 GHz and 325 GHz for switched point-to-point links enabling data rates of up to 100 Gb/s using eight different bandwidths between 2.16 GHz and 69.12 GHz. Applications targeted with this standard comprise wireless backhaul/fronthaul links, wireless links in data centers as well as short-range applications such as kiosk downloading, intra-device and close-proximity communication. In 2022 IEEE 802 initiated a project to revise IEEE Std 802.15.3-2016. IEEE 802.15 TG3mb is in charge of this project.

In the course of the development of IEEE Std 802.15.3dTM-2017 we have published a Channel Modeling Document (CMD) and an Applications Requirements Document (ARD). These documents are accessible under the following links:

<https://mentor.ieee.org/802.15/dcn/14/15-14-0310-19-003d-channel-modeling-document.docx>

<https://mentor.ieee.org/802.15/dcn/14/15-14-0304-16-003d-applications-requirement-document-ard.docx>

Both documents may contain useful information relevant for the initial work items of ETSI ISG THz “On the identification of use cases for THz communication systems” and “Channel Measurements and modelling in THz Bands” mentioned in the liaison statement.

Annex 1 shows the THz Channelization of IEEE Std 802.15.3d-2017. This might be of relevance to your work item on “Identification frequency bands of interests for THz communication systems”. Furthermore, IEEE 802 wants to inform ETSI ISG THz that in the framework of the above mentioned revision project all spectrum between 275 GHz and 450 GHz identified by the World Radio Communications Conference (WRC) 2019 is under consideration. On request IEEE 802 might provide ETSI with the revised channel plan once a stable draft of the revised standard is available.

The planned output of ETSI ISG THz mentioned in the liaison statement is of high interest for IEEE 802. IEEE 802 would like to be kept informed on the progress of ETSI ISG THz and get involved in a dialogue with ETSI ISG THz. IEEE 802 invites ETSI ISG THz to present its activities at the IEEE 802 July 2023 Plenary at Berlin.

Regards,

By: /s/

Paul Nikolich

IEEE 802 LAN/MAN Standards Committee Chairman

em: p.nikolich@ieee.org

**Annex 1: THz PHY channelization of IEEE Std 802.15.3d-2017**

C:\Users\kuerner\Documents\Ablage\IEEE802_Meetings\Draft_TG3d_Standard\Figures\Figure_11b-1.TIF

1. This document solely represents the views of the IEEE 802 LAN/MAN Standards Committee and does not necessarily represent a position of either the IEEE, the IEEE Standards Association or IEEE Technical Activities. [↑](#footnote-ref-1)