

ETSI launches a new group on Terahertz, a candidate technology for 6G

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EINPresswire.com/ -- On 8 December the newly launched ETSI Industry Specification Group on Terahertz (ISG Thz) held its kick-off meeting and decided on work priorities for this candidate technology for 6G.

“ISG THz provides an opportunity for ETSI members to coordinate their pre-standards research efforts on THz technology across various European collaborative projects, extended with relevant global initiatives, a move towards paving the way for future standardization of the technology,” outlines Thomas Kürner, Chair of ISG THz.



The ETSI group will initially focus on two categories of use cases. The first one will include mobile applications with high data rate requirements, such as virtual and augmented reality, applications for in-flight and in-train entertainment, and vehicular and satellite communications. The second category includes applications requiring both communication and sensing functionalities, such as holographic telepresence, and interactive and cooperative robotics.

The ETSI ISG THz, which already comprises 31 participating companies, aims to define the target scenarios and the concrete frequency bands of interest on THz communications. Of major interest to the members of ISG THz will be the analysis of specific radio propagation aspects for THz communications, such as molecular absorption; effect of micro-mobility; specific considerations for scattering, reflections, and diffractions; and considerations for near-field propagation. As a starting point the group will analyse data from the numerous research efforts providing early measurement campaigns that has been published in relevant literature.

To complement this work and fill the gap of missing data, it is expected that the members of ISG THz will perform channel measurements for the selected scenarios and frequency bands. This will enable the group to develop channel models for the selected scenarios and frequency bands and finally establish a baseline for THz technology fundamentals, including antenna assumptions, simulation assumptions, and deployment strategies.

Several European and international initiatives promoting 6G research and development activities anticipate that THz communications will be included in the next generation of cellular networks. The ETSI group will therefore support the future 3GPP standardization work.

To a certain extent, THz communication has similarities and shared challenges with millimetre wave technology. Due to the need line-of-sight or at least obstructed line-of-sight to make use of one reflection or scattering process, Reconfigurable Intelligent Surfaces (RIS) are seen as an enabler for THz communications. This will provide ample opportunities for collaboration and joint undertakings with two other groups in ETSI, one working on millimetre wave (ISG mWT) and the other on Reconfigurable Intelligent Surfaces (ISG RIS).

About ETSI

ETSI provides members with an open and inclusive environment to support the development, ratification and testing of globally applicable standards for ICT systems and services across all sectors of industry and society. We are a non-profit body, with more than 900 member organizations worldwide, drawn from over 60 countries and five continents. The members comprise a diversified pool of large and small private companies, research entities, academia, government, and public organizations. ETSI is officially recognized by the EU as a European Standardization Organization (ESO).

For more information, please visit us at <https://www.etsi.org/>

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