

ETSI releases first Report on Reconfigurable Intelligent Surfaces communication and channel models

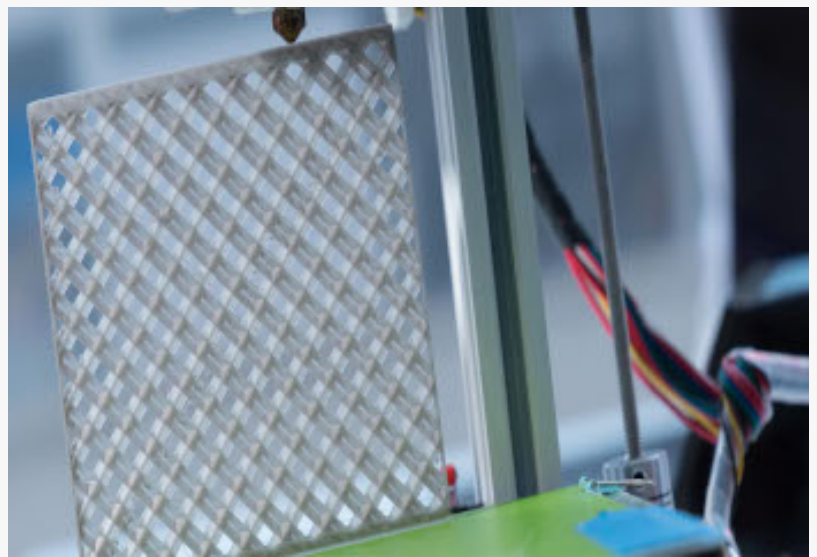
SOPHIA , ANTIPOLIS, FRANCE , July 20, 2023 /EINPresswire.com/ -- ETSI unveils a new Report developed by its Reconfigurable Intelligent Surfaces group (ISG RIS). [ETSI GR RIS-003](#) explores communication models that offer a trade-off between electromagnetic accuracy and simplicity for performance evaluation and optimization. It also analyses channel models that include path-loss and multipath propagation effects, as well as the impact of interference. The last part of the Report investigates KPIs and the methodology for evaluating the performance of RIS for application to wireless communications – including the coexistence between different network operators – and for comparing transmission techniques, communication protocols and network deployments.



“RIS is an emerging topological solution being targeted at future wireless systems including 6G. Developing channel models and evaluation frameworks for RIS is instrumental in assessing this new technology, and identifying requirements for specifications. This Report takes an important step in this direction by summarizing ISG RIS views on frameworks for modelling and studying of RIS-integrated systems” said Arman Shojaeifard, Chair of ETSI ISG RIS.

Reconfigurable Intelligent Surface is a new type of network node that leverages smart radio surfaces with many unit-cells to dynamically control the electromagnetic waves, for example through signal reflections, refractions, focusing, collimation, modulation, and any combination of these.

RIS technology will effectively turn the wireless environment into a service, inspiring a host of new use cases. These include enhancing Key Performance Indicators for various systems such as coverage and capacity, as well as enabling new applications such as localization and sensing. Thanks to its associated characteristics, RIS is considered a key technology in future wireless systems, including 5G-Adv and 6G.



ETSI's Industry Specification Group on Reconfigurable Intelligent Surfaces (ISG RIS) gives ETSI members the opportunity to coordinate their pre-standardization research efforts into RIS technology across various EU collaborative projects, together with global initiatives, paving the way for future standardization of the technology.

Since the launch of the group in September 2021, the group has focused on identification and description of RIS-related use cases and deployment scenarios. It has also outlined system requirements and technological challenges in several areas including fixed and mobile wireless access, fronthaul and backhaul, sensing and positioning, energy and EMF exposure limits, security and privacy.

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