



PRESS RELEASE

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Brand new EU Smart Network Services Project: ETHER Kicks Off

On January 19-20, 2023, the activities of the newly funded EU Smart Network Services (SNS) project ETHER kicked off in Luxembourg.

ETHER, which stands for – **s**elf-evolving terrestrial/non-**T**errestrial **H**ybrid **n**etworks, is going to provide a framework for the 6G terrestrial/non-terrestrial network ecosystem that involves an efficient and zero-touch resource management, provides solutions for key radio access network (RAN) challenges, and identifies the business opportunities for potential stakeholders.

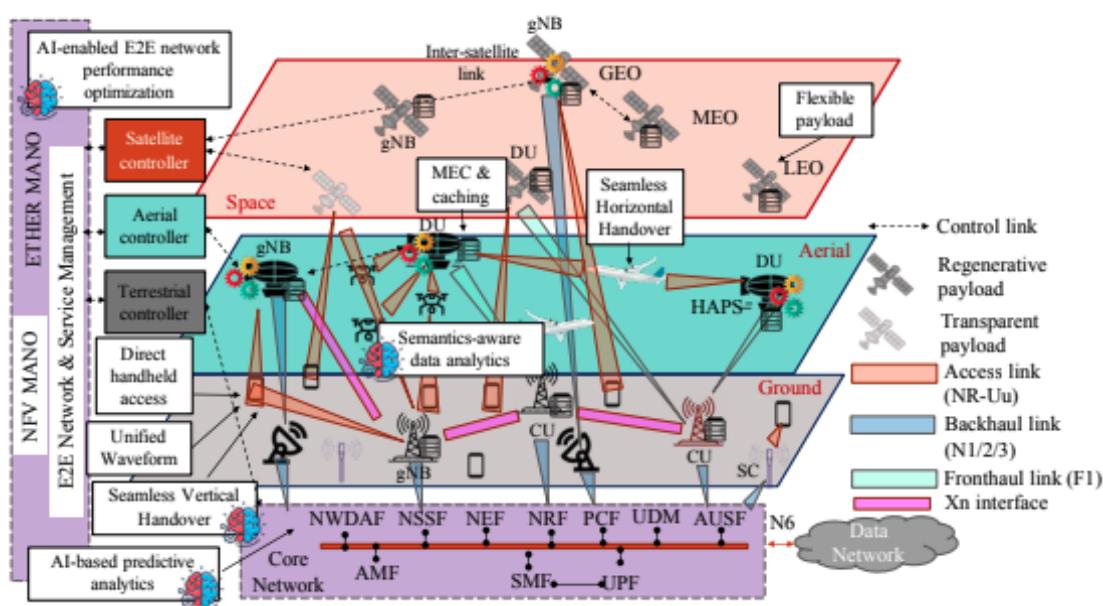
ETHER relies on the following innovations:

- Unified RAN advancements that enable broadband connectivity from every corner of the world even with handheld devices.
- Intelligent management of the 3D network resources for meeting predefined KPIs, allowing the network to self-adapt to rapidly evolving traffic conditions and situations on the ground without human intervention.
- A distributed 3D computing and caching medium enabling the reduction of response delays by alleviating congestions towards cloud data center.

To realize this novel system concept, ETHER relies on a multi-layered and unified space-aerial-terrestrial architecture, leveraging the benefits of Artificial Intelligence/ Machine Learning (AI/ML) for the optimization of the

highly complex and heterogeneous “network of networks” and optimized by means of:

- A collection and processing of a massive amount of data that spans the terrestrial, aerial, and space networks.
- AI/ML advances for self-evolving network capability
- Full-scale softwarization across the network layers
- Direct handheld device access at the Ka band and unified waveform design together with seamless horizontal/vertical handovers
- Edge computing and caching capabilities



The figure above shows the 3D multi layered architecture of ETHER.

The Consortium

The ETHER consortium consists of 13 partners from 10 countries (Cyprus, Greece, Ireland, Luxembourg, Poland, Portugal, Spain, Sweden, Switzerland, United Kingdom) with strong and complementary skills, including experienced industrial partners ([Collins Aerospace](#), [Orange Polska](#), [Avanti Communications](#)), Academic partners ([University of Luxembourg](#), [Aristotle University of Thessaloniki](#), [Linköping Universitet](#)), Research Organisations ([i2CAT](#), [National Center for Scientific Research Demokritos](#)), and SMEs ([SatelloT Services](#), [Ubiwhere](#), [Nearby Computing](#), [Net Ai Tech](#), [Martel Innovate](#)). All partners are strongly experienced and committed players in

the R&D&I arena and bring to ETHER unique combination of skills required to achieve project goals.

The partners look forward to cooperating and bringing forward the 6G SNS ambition and increasing European industrial leadership in the field.

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