

Development of AI-based Open 6G NTN RAN Technology

☐ **Concept:** (TRL: 3~5)

To realize an AI-based Open 6G Non-Terrestrial Network (NTN) Radio Access Network (RAN), this project aims to extend O-RAN principles including open interfaces, multi-vendor interoperability, and RIC (RAN Intelligent Controller)-based intelligent control to NTN components such as satellites, HAPS (High Altitude Platform Stations), and UAVs (Unmanned Aerial Vehicles).

☐ **Research objective:**

Design an AI-based open 6G NTN RAN architecture to secure intelligent control and interoperability in an integrated terrestrial-satellite-aerial network. Develop optimization technologies for resource allocation, routing, and control through distributed learning/inference and semantic communications.

☐ **Research Contents:**

- Design of AI-based Open 6G NTN RAN Architecture
- AI-Based Optimization for Wireless Transmission, Access, and Resource Management in NTN/TN
- Distributed Intelligence for Satellite-Terrestrial-Aerial Operations
- LEO-UAV Cooperative Control

☐ **Budget:**

- Year 1('26.07-'26.12) – 236 million KRW for Korean PI, EUR € 139,100 for Finnish PI
- Year 2('27.01-'27.12) – 472 million KRW for Korean PI, EUR € 278,180 for Finnish PI
- Year 3('28.01-'28.12) – 472 million KRW for Korean PI, EUR € 278,180 for Finnish PI

☐ **Eligibility:**

- KOR side: Application is open to any organization.
- Finnish side: Company or University/Research Institutions(with at least 3 companies supporting financially)

☐ **Timeline:**

- * January 2026 – Publish call for papers (**latest by mid-January, e.g., Monday, January 12**)
- * April 2026 – Full proposals are due (**latest by mid-April, e.g., Sunday, April 12**)
- ※ KOR: call has to be open for 90 days
- * April-June 2026 – Selection process
- * June 2026 – Publish results of selection
- * July 2026 – Project start