About

ADROIT6G is an SNS JU project supporting the EC's 6G policy by implementing the first phase of the 6G SNS roadmap towards the evolution of a 6G architecture. ADROIT6G proposes disruptive innovations in the architecture of emerging 6G mobile networks that will make fundamental changes to the way networks are designed, implemented, operated, and maintained. ADROIT6G innovations, functionalities and performance will be validated through 3 representatives extreme 6G use cases (i.e., holographic telepresence, Industrial IoT, collaborative robots/drones) in corresponding PoCs over five well-established 5G testbeds, which will be upgraded to support ADROIT6G innovations and architectural elements.

Consortium

- ATHENA iSI
- CYENS Centre of Excellence
- cnit consorzio nazionale interuniversitario per le telecomunicazioni
- EURECOM
- University of Oulu
- NVIDIA
- NOVA
- SIEMENS
- orange
- CAFA
- eBOS Engineered for Excellence Driven by Passion for Innovation
- iq
- NEXTWORKS Heading the Future

in ADROIT6G

ADROIT6G

Conduct information

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ADROIT6G

Distributed Artificial Intelligence-Driven Open & ProgrammableArchitecture for 6G Networks

01/01
2023

36
Months

Project coordinator: Dr. Christos Verikoukis

Co-funded by the European Union

ADROIT6G project has received funding from the Smart Networks and Services Joint Undertaking (SNS JU) under the European Union's Horizon Europe research and innovation programme under Grand Agreement No 101095363.

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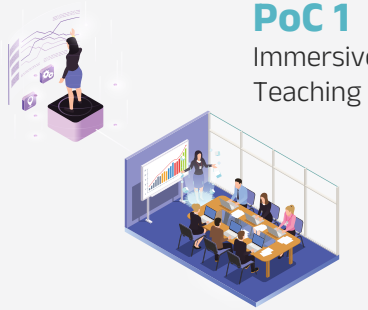
Major Innovations

- Crowdourcing AI to minimize carbon footprint and enable efficient AI/ML in distributed systems.
- Zero-Touch management enabling AI-driven dynamic slice reconfiguration.
- UEs as Virtual Base Station. computing concept.
- Decentralized AI framework for D2D communication based on BDI Agents.
- Sustainable data, through learning representations at the edge and the far edge.
- Closed-loop orchestration in multi-layer and inter-computing scenarios with multiple cooperating stakeholders.

Objectives

1. Implementing AI-Driven 6G Architecture
2. AI driven Management & Orchestration for 6G Networks
3. Distributed and secure CrowdSourcing AI
4. Energy-aware models for multimodal Representation Learning
5. Advancing Cellular Infrastructure for 6G Deep-Edge Functions
6. Non-Terrestrial Connectivity for Reliable 6G IoT Services
7. Decentralized AI for Device-to-Device 6G Communications
8. Supporting data plane acceleration
9. Demonstrating the value of 6G through relevant Proofs of Concepts
10. Maximize the project's impact
11. Contributing to Emerging 6G Standards and relevant communities
12. Contributing to the establishment of a globally accepted set of KVIs

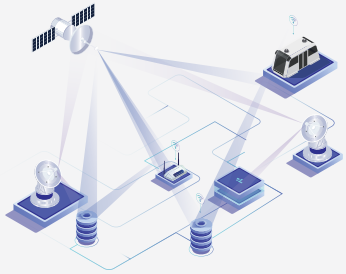
Proofs of Concepts

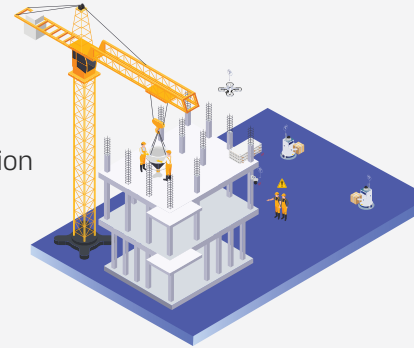


PoC 1
Immersive XR - Holographic Teaching

PoC 2
Industrial IoT (IIoT)

PoC 2.1:
Terrestrial 6G IIoT



PoC 2.2:
NTN for low-bitrate IIoT

PoC 3
Collaborative robots (cobots) in construction