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MINISTERIO
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R Plan de Recuperación,
Transformación
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uc3m

6G-CLARION (NFD/OR/SI/OE) Entregable E1 Management and Dissemination of the project results

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Historial

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Descargo de responsabilidad

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Resumen ejecutivo

Este documento presenta un informe completo sobre las actividades y logros de los subproyectos de 6G-CLARION en 2022 en relación con la comunicación y la difusión. Como los subproyectos están interrelacionados, se decidió combinar los informes individuales de cada subproyecto en un solo documento.

En 2022, experimentamos algunos retrasos en la puesta en marcha de todas las actividades debido al proceso de licitación. A pesar de esto, hemos logrado un progreso significativo, que incluye una contribución de artículo y una tesis doctoral en curso.



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Abstract

This document presents a comprehensive report on the activities and accomplishments of the 6G-CLARION subprojects in 2022 in relation to communication and dissemination. As the subprojects are interrelated, it was decided to combine the individual reports of each subproject into a single document. In 2022, we experienced some delays in bootstrapping all activities due to the tender process. Despite this, we have achieved significant progress, which includes one paper contribution and an ongoing PhD thesis.

1. Introduction

While innovative paradigms have already been adopted in the cloud computing environment such as the serverless computing and function as a service, the world of telecommunications is still lagging behind.

It is therefore critical to ensure that the virtual network functions that will make up 6G are truly cloud-native and exploit the full potential of virtualization and softwarization.

6G-CLARION will study this ecosystem by finding new solutions for (i) Cloud-native VNF for 6G, especially in access (where the potential of the new software paradigm is largely unexplored), that are standards-compliant (ii) Novel orchestration solutions, based on Machine Learning, that can handle the increased complexity of softwarized network architectures, (iii) Provide implementations for such solutions..



2. Communication activities

At the start of the project, a website was established and is accessible via the URL [6G-CLARION – UNICA 6G \(uc3m.es\)](https://6g-clarion-unica6g.uc3m.es). The landing page for the website is depicted below.



A global ecosystem for cloud-native network functions for 6G networks

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Project manager



ALBERT BANCHS

UNIVERSITY CARLOS III OF MADRID (UC3M)





3. Dissemination activities

The integrated 6G-CLARION project has been officially acknowledged in the following papers, which have been accepted for publication in 2022.

- Gramaglia, M, Kajo, M, Mannweiler, C, Bulakci, Ö, Wei, Q. A unified service-based capability exposure framework for closed-loop network automation. Trans Emerging Tel Tech. 2022; 33(11):e4598. doi:10.1002/ett.4598.
- N. Apostolakis, M. Gramaglia and P. Serrano, "Design and Validation of an Open Source Cloud Native Mobile Network," in IEEE Communications Magazine, vol. 60, no. 11, pp. 66-72, November 2022, doi: 10.1109/MCOM.003.2200195.

The following PhD theses related to the project are currently in progress.

- "AI/ML empowered cloud native network functions". Nikolaos Apostolakis Expected Finalization date: Sep 2025