

Cumucore Successfully Demonstrates Local Breakout Roaming API for 6G Non-Public Networks

EU-funded ORIGAMI project validates secure, standards-compliant local roaming architecture for next-generation private and non-public mobile networks.

ESPOO, UUSIMAA, FINLAND, August 4, 2026 /EINPresswire.com/ -- [Cumucore](#) has successfully demonstrated a local breakout roaming API as part of the EU-funded ORIGAMI project, advancing research into future 6G network architectures for private and non-public mobile networks.



ORIGAMI — Optimized Resource Integration and Global Architecture for Mobile Infrastructure for 6G — is researching architectural opportunities for next-generation mobile networks. As 6G evolves, network architectures are expected to address two distinct solution areas: traditional public mobile networks and [non-public networks](#), each with different operational and performance requirements.

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Jose Costa-Requena, CEO of Cumucore

In non-public mobile networks, roaming between different networks can be managed without routing traffic from the visited network back to the home network. Cumucore, together with ORIGAMI project partners, has designed and successfully demonstrated [local breakout functionality for this non-public mobile network](#) use case.

“Using NEF and SEPP functionality together with network slicing structures, we have managed to provide a roaming scenario that is fully managed and secured locally while remaining standards compliant,” said Jose Costa-Requena, CEO of Cumucore. “As we move toward 6G, we expect to

see architectures where the Radio Access Network and Core are more tightly integrated, enabling stronger control mechanisms to differentiate services in non-public mobile networks.”

“The ORIGAMI project has been running for more than 30 months, generating research results for 6G architecture work across more than 30 use cases. Non-public mobile networks are recognized as a new and rapidly growing way to build communication services, with a unique set of requirements,” said Andres Garcia-Saavedra, Principal Research Scientist at NEC Laboratories Europe

“Keeping roaming traffic local while staying standards-compliant gives operators and enterprises a genuine choice in how they build and control their networks while evolving them towards global platforms. This is what ORIGAMI set out to prove from the start: that 6G architecture can be flexible towards enabling new operational models,” said Andra Lutu, Principal Researcher at Telefónica.

About Cumucore

Cumucore is a Finnish provider of cloud-native private mobile network software, delivering secure and flexible 4G and 5G core network solutions for enterprise, industrial, research, and mission-critical applications. Since its founding in 2014, Cumucore has deployed approximately 100 private mobile networks worldwide across industries including manufacturing, mining, logistics, public safety, broadcasting, research, and smart infrastructure. The company’s mission is to make private mobile networks as easy to deploy, operate, and integrate as enterprise IT infrastructure, enabling organizations to unlock the full potential of industrial automation, AI, robotics, and mission-critical communications.

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About NEC Laboratories Europe

NEC Laboratories Europe is NEC’s European research and development center. As a world leader in core and applied research, NEC Laboratories Europe is helping transform science and technology in the areas of AI, security and privacy, information and communications technology (ICT) and digital health. These technologies promote NEC Group solutions for safer cities, public services and communication infrastructure.

The transition from 5G to 6G technology opens mobile networks to new vertical industry applications and services that are beyond the traditional domain of telecommunications.

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About Telefónica

Telefónica is one of the world's leading telecommunications service providers. The Company is committed to tackling the undeniable challenge of providing citizens, businesses and public administrations with the best way to access digital technologies, helping to drive economic and social development in the countries where it operates. Telefónica offers fixed and mobile connectivity, as well as a wide range of digital services for both residential and business customers. With 299,8 million customers, Telefónica is focused on four key markets: Spain, Brazil, Germany, and the UK.

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About ORIGAMI

The ORIGAMI project brings together leading players from industry and academia in Europe's mobile telecommunications ecosystem. Funded by the European Commission as part of the 6G Smart Networks and Services Joint Undertaking, the ORIGAMI consortium worked during the 2024–2026 period to advance architectural models for next-generation mobile networks and remove important barriers to successful 6G technologies.

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