IEEE International Mediterranean Conference on Communications and Networking
5-8 July 2021 // Athens, Greece

Workshop on 5G experimentation facilities, vertical trials and cross-testbed service orchestration

Organizing Projects	5GMediaHUB (https://www.5gmediahub.eu/) 5G EPICENTRE (https://www.5gepicentre.eu/)
Structure	2 h, 6 papers
Organizers	George Margetis, gmarget@ics.forth.gr (5G MediaHUB) Kostantinos Apostolakis, kapostol@ics.forth.gr (5G EPICENTRE)

Background and Motivation

As a result of almost a decade of research, 5G services are gradually being rolled out while facilities for 5G experimentation have come in various shapes and sizes. Such developments have opened up new possibilities for a broad range of vertical sectors, delivering transformative impact in terms of ultra-high-speed connectivity. Moving forward, the federation of constituent 5G testbed platforms will enable infrastructure owners to greatly reduce complexity, particularly for SMEs in the targeted vertical industries, by enabling cross-testbed and cross-site management and orchestration via carefully defined software interfaces. Such interfaces should ideally allow testbeds to federate without losing control of their individual resources; enable the calibration of individual testbed components from a singular control point; allow experimenters to combine the available resources to achieve different 5G experimentation conditions of varying scale and diversity; and ensure these configurations are easily repeatable by supporting reproducible experimentation conditions.

Topics of Interest

This workshop represents a coordinated initiative by 5G-PPP ICT-41 projects 5GMediaHUB and 5G-EPICENTRE, which will enable stakeholders in the 5G ecosystem to understand existing and future challenges in cross-site 5G testbed unification, identify key tasks ahead and evaluate the current state of the art in the specific domain. The workshop will thus facilitate timely collection of related work as well as latest updates toward the benefit of telecommunications and networking researchers and practitioners, encouraging the contribution of both original research work and survey papers addressing the topics discussed.

- Federated 5G architectures for experimentation and KPI validation
- APIs for 5G testbed federation

- Use cases for testbed federation
- Cross-testbed / cross-site experimentation
- ML/AI tools for KPI analysis and validation
- Vertical NetApp design and deployment
- Combining underlying testbed hardware and software components
- Cross-testbed MANO APIs
- Reproducible experimentation conditions for 5G experimentation