

Special Session

5G Solutions for Verticals and European Citizens

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| Organizing Project | 5G-Solutions (https://www.5gsolutionsproject.eu/) |
| Structure | 1h30min-2h, 4-6 papers and/or a keynote speaker |
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Background and Motivation

The challenge is to get the European 5G Vision of "5G empowering vertical industries" closer to deployment with innovative digital use cases involving cross industry partnerships. It requires technological and business validation of 5G end to end connectivity and associated management from two perspectives: i) within the set of requirements specific from one application domain; ii) across all sets of heterogeneous requirements stemming from concurrent usages of network resources by different vertical domains. 5G technology and architecture trials are also targeting concurrent usage of resource by multiple verticals, addressing the 3 classes of ITU requirements (eMBB, mMTC, URLLC use cases). In practice, the 5G infrastructure (RAN, back/fronthaul, Core) will be shared among multiple verticals and applications, each asking for independent service guarantees and very different service requirements. Operations of one application in one vertical domain should not affect the performance of other domains/ applications. The 5G architecture and technologies (notably slicing and virtualisation) enabling multi domain management of resources, beyond the ETSI NFV Management and Orchestration (MANO) and with cross domain orchestration capabilities shift urges the research community to come up with novel architectural and design innovations.

Topics of Interest

This special session aims at bringing researchers together to discuss the solutions, opportunities and challenges in the design of multi domain management of resources beyond ETSI NFV MANO and cross domain orchestration in 5G verticals. This event will focus on, but will not be limited to, the following subjects of interest:

- 5G verticals and applications
- Analysis of challenges and requirements for 5G E2E multi, concurrent and cross-domain service management
- End-to-end service provisioning with slicing capabilities

- Cross-domain orchestration and management challenges analysis
- NFV Orchestration
- Zero-touch automation mechanisms for 5G service lifecycle
- Privacy in network slicing
- KPI visualisation system specifications and design
- 5G and network slicing in Smart Energy, Cities, Ports, Media and Entertainment.
- Multi-domain resources management