IEEE CloudNet
Third IEEE International Conference on Cloud Networking
Luxembourg • October 8-10, 2014
IEEE
IEEE COMMUNICATIONS SOCIETY
IEEE CLOUD COMPUTING

IEEE CloudNet'14
Special Session

SS1: Network Virtualization and QoE in Future Mobile Cellular Networks

Call for Papers

Future mobile cellular networks will have to topologically encompass an increased number of smaller heterogeneous cells (micro, pico, femto), in order to support the ever increasing requirements on data rates from mobile users they. Pushing the cells closer together leads to an inevitable increase in the co-channel interference which can have a deleterious effect in the network performance if not combated adequately. To this end, it is envisioned that the complexity of network operation and management will significantly increase, posing critical threads on the performance of these emerging cellular networks. At the same time, network sustainability push the use of sharing access network infrastructure between various operators, using advanced network virtualization techniques which have to be developed based on the special characteristics of these wireless networks. Network virtualization is now emerging as one of the key technologies to allow the co-existence of multiple operators over the same infrastructure; this is a significant evolution from current network operation, but with no clear roadmap on how it will evolve over time and the way that will be applied in the scope networks. These two emerging and inter-related trends bring a set of new challenges in terms of network management. What also needs to be added is the performance of the network not only in terms of Quality of Service (QoS) that can support, but together with the overall experience that can provide to the users, the so-called Quality of Experience (QoE), including therefore human and subjective methods in the understanding of the network performance.

In this new situation, the aim of the special session is to reveal critical open issues and provide solutions towards fully virtualized and dynamic mobile cellular networks towards improved QoE. The contributions requested include but are not limited to:

- Architectural aspects for enabling dynamic network sharing via network virtualization.
- Protocols and advanced algorithms for dynamic network virtualization.
- Near optimal utilization of the available spectrum (cognition, self-organization, etc.).
- Network interference mitigation and avoidance in conjunction with QoS considerations.
- Decentralized self-organization of heterogeneous networks.
- Bridging the gap between QoE and QoS.

The session is organized by the FP7 Marie Curie Initial Training Network CROSSFIRE (MITN 317126).

Important dates

Paper Submission: July 3, 2014 (Extended)
Notification of Acceptance: August 1, 2014
Final Paper: August 15, 2014

Submit online at EDAS website »

Session organizers

Nikos Passas
Dept. of Informatics and Telecommunications
University of Athens
Athens, Greece
Email: passas@di.uoa.gr

Ferran Adelantado
Multimedia and Telecom Department
Open University of Catalonia
Barcelona, Spain
Email: ferranadelantado@uoc.edu