

Special Issue Proposal for *IEEE MultiMedia*

Advancing Multimedia Distribution with SDN/NFV-based Systems

Submission deadline: September 1, 2016

Publication: July-September, 2017

Recently, software-enabled appliances that support network virtualization have seen wide adoption by data centers and service providers. The main advantage of Software Defined Networking (SDN) is that the control plane is separated from the data plane, thereby allowing for network visibility, dynamic resource provisioning, and flexible service deployments. Complementary to SDN, Network Function Virtualization (NFV) focuses on virtualization of software-based network node functions, such as firewalls and intrusion detection. The increased agility and flexibility in the SDN/NFV-based network infrastructure opens up endless possibilities for multimedia content delivery and distribution. For example, virtual content delivery nodes can be dynamically deployed at the edge of the network in an on-demand fashion, potentially reducing energy costs and improving user satisfaction. This special issue aims to showcase and disseminate original research works that explore how multimedia content distribution can be supported and enhanced over SDN/NFV-based networks. Topics of interest for this special issue include, but are not limited to:

- SDN/NFV-related architectures for next generation multimedia networks and services
- Dynamic resource provisioning and management for SDN/NFV-based multimedia systems
- QoE assessment for multimedia delivery over SDN/NFV-based multimedia systems
- QoE management with dynamic policy deployments over SDN/NFV-enabled networks
- Algorithms for live analysis and monitoring of audiovisual streaming quality in that correlates with network events in SDN or NFV-based multimedia systems
- Real-time video adaptation algorithms over SDN/NFV-enabled networks
- HTTP-based adaptive video streaming over SDN/NFV-enabled networks
- Interactions between SDN/NFV architectures with content delivery networks (CDNs)
- Applicability of SDN/NFV in mobile networks for multimedia provision
- Integration of SDN/NFV-enabled mobile and fixed networks for multimedia services
- Composition and deployment of Service Function Chains (SFCs) of video and/or VoIP services

Submission Guidelines

See <https://www.computer.org/web/peer-review/magazines> for general author guidelines. Submissions should not exceed 6,500 words, including all text, the abstract, keywords, bibliography, biographies, and table text. Each table and figure counts for 200 words.

Manuscripts should be submitted electronically (<https://mc.manuscriptcentral.com/mm-cs>), selecting this special issue option.

Guest editors

Xiaoqing Zhu, xiaoqzhu@cisco.com, *Cisco Systems Inc., USA*

Harilaos Koumaras, koumaras@iit.demokritos.gr, *NCSR Demokritos, Greece*

Mea Wang, meawang@ucalgary.ca, *University of Calgary, Canada*

David Hausheer, hausheer@ps.tu-darmstadt.de *Technische Universitaet Darmstadt, Germany*