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Springer Multimedia Tools and Applications

Special Issue on

Multimedia-Aware IoT System Design

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Overview

The Internet of things (IoT) enables a number of physical devices around us to interact and cooperate with each other, and thus has a great potential to cover almost every industry and application. In essence, IoT system is expected to support a wide array of IoT applications where the devices produce various types of Internet traffic from conventional periodic scalar data such as light, temperature, humidity, etc. to bulky multimedia content such as audio, video, image, etc. However, the multimedia acquisition and communication by current IoT computing techniques is not realizable, because they mainly consider the former's scalar data-inducing applications which demand a simple processing capability and a lower data rate at the sensing device, and do not solve the challenges posed by multimedia data. In this regard, the production/delivery of multimedia data over IoT system essentially requires a novel research on its computing techniques and system design that involve heterogeneity of multimedia devices, multimedia sensing, multimedia-aware cloud, multimedia data analytics/processing, and other issues to make multimedia IoT applications realizable.

In this context, this special issue aims to solicit the state-of-the-art research on multimedia-aware IoT computing techniques and system design especially considering the requirements/challenges posed by bulky multimedia IoT data communication. This special issue invites various types of research activities such as the security issues, design, development, analysis, standardization, and application/service models.

Topics

The topics of interest include, but are not limited to:

- Multimedia-aware IoT system architecture
- Multimedia-aware IoT communication stack and protocol
- Multimedia streaming and encoding for IoT system
- QoS, QoE, mobility, security technique for multimedia-aware IoT system
- Multimedia-support embedded IoT device and forensics issues
- Cloud computing and data analytics for multimedia-aware IoT system
- Multimedia-aware IoT system modeling and simulation techniques
- Multimedia-aware and various IoT service platform security
- Prototypes, test-beds, field trials for multimedia-aware IoT system
- Standardization and open source development for multimedia-aware IoT system

Important Dates

- **Manuscript submission deadline: 31 July 2017**
- **Notification of acceptance: 30 Oct 2017**
- **Submission of final revised manuscript due: 30 Nov 2017**
- **Publication of special issue: TBD 3Q/4Q 2018**

Submission Procedure

All the papers should be full journal length versions and follow the guidelines set out by Multimedia Tools and Applications (<http://www.springer.com/computer/information+systems/journal/11042>).

Manuscripts should be submitted online at <http://mtap.editorialmanager.com> choosing “1071 - Multimedia-Aware IoT System Design as article type, no later than 31 July, 2017. All the papers will be peer-reviewed following the MTAP reviewing procedures.

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