Multimedia Tools and Applications
Call-for-Papers:
Special Issue on Advances in Wireless Multimedia Sensor Networks (WMSN)

ISSN (Print): 1380-7501 –ISSN (Online): 1573-7721
http://www.springer.com/11042

The recent technological advances in information sensing, advanced data processing with inexpensive and low-power multimedia microprocessor and microcontrollers, and wireless communications with high throughput and sufficient coverage ranges have promoted the development of a powerful and new class of distributed multimedia applications over wireless sensor networks. The developments of miniaturized low-power and inexpensive multimedia sensors have provided powerful platforms to employ Wireless Multimedia Sensor Networks (WMSNs) to retrieve audio and video streams, still images, and scalar sensor data for applications in many civil and military applications.

For example, a large number of audio, video and data sensors connected through WSNs can provide an effective tool for monitoring and forecasting changes in environments such as pollution and flooding, collecting health of buildings and structures such as roads, bridges and towers, and controlling usage of water, fertilizers, and pesticides to improve crop health and quantity.

Recent needs for real-time multimedia monitoring and control of events have highlighted the research on Wireless Multimedia Sensor Networks (WMSNs). WMSN are the type of distributed intelligent sensor systems capable of ubiquitously collecting, processing and distributing the multimedia information in support of large number of both non-real time and real-time multimedia applications. However, satisfying the required quality of multimedia transmissions in a resource-constrained sensor network environment places new challenges in WSNs research, especially in mobile applications.

In this special issue, we solicit contributing articles based on theoretical and practical approaches for the current state of WMSN, current challenges, innovative designs for stationary and mobile applications, network performance, and all other related issues.

Topics of interest in WMSN include but are not limited to:

- Network and System Architecture
- Resource Allocations and Managements
- Network Bandwidth Analysis
- Quality of Service (QoS) Requirements
- Multimedia in-network processing
- Routing Algorithms
- Clustering Protocols
- Localization algorithms
- Cross layer and coupling
- Reliability and Fault-tolerance
- Security and Privacy
- Applications and real case studies
Important Dates
Paper submission: October 15, 2015
Review results to authors: November 15, 2015
Revised paper submission: December 15, 2015
Final acceptance notification: January 15, 2016

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