International Journal of Distributed Sensor Networks

Editorial

International Journal of Distributed Sensor Networks
2018, Vol. 14(3)

DOI: 10.1177/1550147718764140
journals.sagepub.com/home/dsn
SAGE

This special collection features five selected high-quality papers from SMARTOBJECTS 2016, a workshop on experiences with the design and implementation of smart objects, held on 3 October 2016 in New York, USA. It focuses on experiences with the design, implementation, deployment, operation, and evaluation of novel communication approaches and systems for smart objects in the emerging cooperative environments related with the Internet of Things (IoT).

In the first article, "Integration of vehicular network and smartphones to provide real-time visual assistance during overtaking," Subhadeep Patra, Carlos T Calafate, Juan-Carlos Cano, Peter Veelaert, and Wilfried Philips propose affordable Intelligent Transportation Systems that make use of standard smartphones to assist drivers when overtaking. The system autonomously creates a network among the close-by vehicles and provides drivers with a real-time video feed from the one located just ahead. This system seamlessly offers a better view of the road and of any vehicle traveling in the opposite direction, being especially useful when the front view of the driver is blocked by large vehicles.

The second article titled "Flying ad-hoc network application scenarios and mobility models," by Armir Bujari, Carlos T Calafate, Juan-Carlos Cano, Pietro Manzoni, Claudio Enrico Palazzi, and Daniele Ronzani, lists the existing mobility models for flying ad hoc networks and provide guidance to understand whether they could be actually adopted depending on the specific flying ad hoc network application scenarios, while discussing their advantages and disadvantages.

The next article "Adaptive sensing scheme using naive Bayes classification for environment monitoring with drone," by Yao-Hua Ho, Yu-Te Huang, Hao-Hua Chu, and Ling-Jyh Chen, extends the adaptive return-to-home sensing algorithm with a parameter-tuning algorithm that combines naive Bayes classification and binary search to adapt adaptive return-to-home sensing parameters effectively on the fly. The proposed approach is able to (1) optimize the number of sensing attempts, (2) reduce the oscillation of distance for consecutive attempts, and (3) reserve enough power for drone to return-to-home.

In the fourth article titled "A user-centric Internet of Things platform to empower users for managing security and privacy concerns in the Internet of Energy," the authors, Juan A Martínez, José L Hernández-Ramos, Victoria Beltrán, Antonio Skarmeta, and Pedro M Ruiz, present an integrating user-centric platform SMARTIE for efficient but secure dissemination of IoT data in smart cities. This article presents the authors' insights into the application of the IoT-ARM to generate this platform. The main goal of this platform is to empower users to take control of their access control and privacy preferences to govern devices. To this end, SMARTIE, based on the IoT-ARM guidelines on security and scalability, provides architectural artifacts that enable easily and efficiently enforcing user access control policies.

In the last article titled "Interconnection algorithm of a wide range of pervasive devices for the Internet of things," the authors Tao Chi and Ming Chen study the minimum carrier spacing on frequencies for combined RFID/BT/Wi-Fi chips and then develop a mathematical model that captures the amount of interference between overlapping channels for such Network on a Chip (NoC) architectures. The physical channel assignment problem is NP-hard. However, by minimizing channel interference, the authors develop a dynamic channel allocation algorithm for such NoC architecture. They also present time slot assignment with a minimum scheduler model for a multilink shared channel in order to provide a reliable link between two peer medium access control (MAC) entities.

The guest editors are thankful to our reviewers for their effort in reviewing the manuscripts. We also thank the editorial team of International Journal of Distributed Sensor Networks for their supportive guidance during the entire process.

Pietro Manzoni[1] and Claudio E Palazzi[2]
[1]Polytechnic University of Valencia, Valencia, Spain
[2]University of Padova, Italy