Notice of dissertation defense 05.03.2018

Unmanned Aerial Vehicle-based IoT services

Title
An Efficient System Orchestrator and a Novel Internet of Things Platform for Unmanned Aerial Systems

Content
Unmanned Aerial Vehicles (UAVs) known as Drones have the potential to offer Internet of Thing (IoT) services such as video streaming and temperature sensing from the sky. In fact, selecting the right set of UAVs from the widespread network of flying UAVs and enabling them to deliver diverse IoT services are challenging issues.

This thesis defines a communication architecture and new IoT platform applicable for the UAVs, presents a powerful UAV selection mechanism to select a set of UAVs to perform IoT tasks, proposes a connection steering mechanism between different mobile networks to provide reliable communications for the UAVs, and suggests offloading the data computations to mobile edge nodes, in UAV’s heavy computations.

Using the developed mechanisms enables energy efficient solutions for UAV operations and provides reliable communications for the UAVs mainly in the area of IoT.

Field of research
Networking Technology

Doctoral candidate
Naser Hossein Motlagh, MSc. (Tech.), Born in Iran, 1976.

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Aalto University School of Electrical Engineering, hall AS2, TUAS building, Maarintie 8, Espoo

Opponent
Prof. Mika Ylianttila, University of Oulu, Oulun Yliopisto

Supervisor
Prof. Tarik Taleb, Aalto University School of Electrical Engineering, Department of Communications and Networking.

Dissertation website
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Contact information
Naser Hossein Motlagh, +358451707064, naser.hossein.motlagh@aalto.fi
P.O. Box 15500, FI-00076, Aalto University, Finland

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