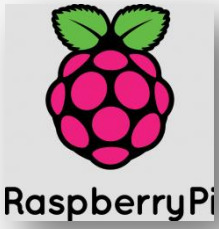
Hochschule Augsburg
University of Applied Sciences
Fakultät für Informatik
Prof. Dr. Alexander von Bodisco

Thesis (B.Sc./M.Sc.)

Secure Ad hoc Network for Monitoring Applications

Description



Recently, more and more hardware manufactures sell cheap low power platforms which are suitable for many different (simple) tasks such as FTP or HTTP servers, network storage, backup systems, multimedia stations or smart home applications. In order to perform more complex tasks, the devices need to communicate with each other. However, just setting up a one hop wireless network is not sufficient. Distributed tasks require a reliable and secure multi-hop network.

Tasks

In this thesis you built such a network consisting of several Raspberry PI's. Some of the PI's will be equipped with sensors (GPS, video, temperature, current,…) The information should be transmitted over the wireless network to a central unit which will store and evaluate the data. Furthermore, you will evaluate the performance of the wireless network.

Requirements

Basic knowledge of computer networks

Programming skills in C, C++ or Java are recommended

Keywords

Implementation, Networks, Linux, Measurement

Complexity

Depending on the type of the thesis (BA or MA) the complexity will be adjusted.

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