

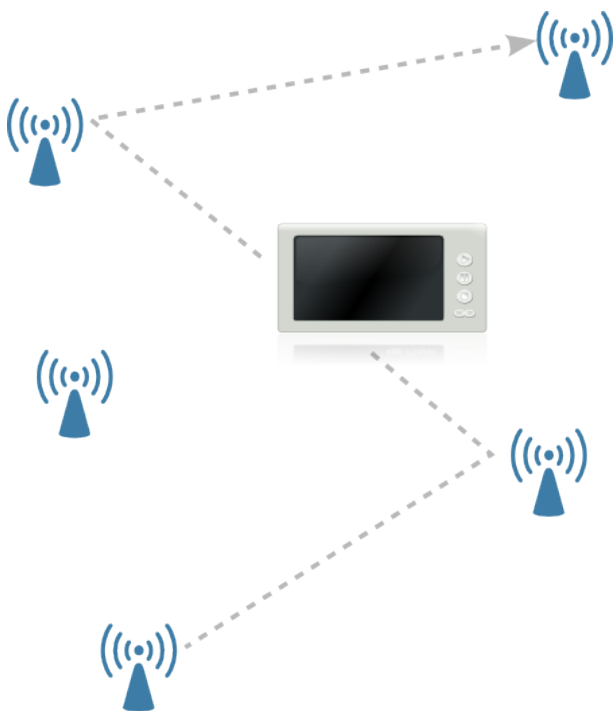
# Master's Thesis

## « Routing Mechanisms for Moving Devices »

### Background

In the project Airport2030 the Institute of Telematics investigates how passenger processes in airport terminals can be optimized using information technology. As an approach the Institute of Telematics develops and assesses a mobile device for digital boarding assistance (DigiBA), which integrates passengers into the IT automation chain in the terminals.

An important part in this scenario is the information exchange with the DigiBA. Passengers can use it to retrieve status information for their flight, get an updated time schedule and to navigate to their destinations. As the airport covers a huge area, wireless coverage is achieved by using many base stations for the communication with the DigiBA. This benefits the total number of users since different base stations handle different DigiBAs, reducing the probability of packet collisions.



Expected communication patterns allow requests from a DigiBA to take some time until a response is available. On the other hand, the backend system is able to push information (e.g. the change of flight data) to a specific DigiBA. Consequently, as passengers move through the airport, different base stations have to be selected in order to route data traffic to the mobile device.

### Work Description

The aim of the work is the design and implementation and evaluation of a routing mechanism which relays data packets to moving devices. The developed routing mechanism shall be simulated using the OMNeT++ (<http://www.omnetpp.org/>) network simulator to prove its functionality.

### Requirements

**Requirements:** Interest in embedded systems and wireless sensor networks, wireless protocol design, C++ or Java

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