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Machine to Machine Communication for Wireless Sensor Networks.

ABSTRACT - Masterthesis

The recent trend of automating logistical systems demands improved and reliable monitoring of supply chains. Tracing of goods and containers has to include information about the current temperature and other environmental conditions. This information is used for prediction of changes in the goods quality and warehouse keeping. The goal of the Intelligent Container Project is to develop an autonomous transport monitoring system for perishable and sensitive goods.

This thesis work focuses an enabling communication between the gateway device inside the container and a remote machine. The remote user can know about the changes inside the container by accessing the gateway device or getting information from the gateway device. The gateway device collects the data from sensors placed inside the container that form a wireless network within the container. Imote2 which is an embedded wireless sensor hardware board is used to set up the wireless sensor network. The work involves programming and configuring Imote2 to set up a wireless sensor network.

The work presents the different standard communication methods used to achieve the goal. Also, techniques to enable communication between the sensors and the gateway, the gateway and a remote device are presented.