batmetrics

retail intelligence

Make a difference - help us revolutionize the retail industry

Master Thesis: Precision based localization of products in physical stores

Introduction

The goal of this master thesis work is to build an initial IoT-prototype of a completely new product concept within Batmetrics AB. The concept enables precision based location capabilities to measure with better accuracy. As known today different technologies have different limitations but what happens if you combine them? Batmetrics is a fast growing company that works with global brands in the retail industry, we measure real-time data in physical stores.

Objectives

Build an IoT-prototype as “proof of concept”. The work includes parts of our already existing software needed to implement the concept above. Hardware development might be necessary since we explore in unknown domains. The scope of the prototype may be adapted for one or two students and can be adjusted depending on interests. The prototype comprises:

• Development of a back-end user application in Java SE or ME to support the use case in hand. The back-end will interface APIs toward the front-end which is a web based GUI. Development of the GUI is not in the scope. Although we are open minded regarding this point.

• Definition of a low level communication protocol and firmware development for different devices used to enhance the precision in the IoT-prototype. Can be e.g. camera, IR sensor, RFID. Feasibility studies of different supplementary technologies and sensors must be performed.

• Implement and support selected supplementary technologies and sensors to the IoT-prototype. This is done in Java SE or ME.

The development environment will be based on Linux. The prototype development will require the whole chain of development that is: analysis, requirement definition, development, testing and prototype evaluation.

Measurements

In addition to the IoT-prototype development some measurements and analysis are required to supplement as “proof of concept".

• Analyze the usability of implemented use-case and suggest improvements based on the studies of supplementary technologies and sensors.

• Measure important performance properties like; product interactions, interaction time accuracy, movement certainty and reliability. Propose improvements for final implementation.

Location

The work will be conducted at Batmetrics AB, Anckargripsgatan 3 in Malmö (MINC building).

Compensation

A regular fee for master thesis work within Batmetrics AB will be paid.

Time Start

Spring 2016 / Duration: 20 weeks

Contact

Thomas Droben
thomas.droben@batmetrics.com
0733-291 222