II-Ambient Intelligence: Low Power Embedded Communication
2016-2017

Project Axela: The Documentation

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Project Overview

The goal of this course is creating a Low Power Communication System using a Raspberry Pi 3 ??. On this Raspberry Pi, we're running an instance of Debian Jessie. Different packages will be installed to complete our project successfully, including OpenHAB ??.

OpenHAB is a software for integrating different home automation systems and technologies into one single solution that allows over-arching automation rules and that offers uniform user interfaces.

Work plan including time table

The following table gives a detailed view on how we progressed with our project. The first weeks of the semester are meant testing. We have used different sensors on a STM32Nucleo Board which would be implemented during the project.

Week (2017)	Deadline	Deadline info
13-03	Info Received	I get my official project subject and tasks
20-03	Info Processed	I understand the project
27-03	Stage 1 completed	I know how the car works with all the sensors and how it is remotely controlled
03-04	Stage 2 Start	The car needs to know it's location
10-04	Stage 2 continued	Follow the lectures to continue my research
24-04	Stage 2 completed	Finishing touches on stage 2 and starting stage 3
01-05	Stage 3 started	creating PID controller for car
22-05	Stage 3 Finished	created PID controller, basic self-driving car is finished
07-06	Present Project	Project needs to be finished and presented

Table 1: Time Table

Load Balancing

Project Details

Overall this bachelor project won't be anything new to someone who has studied software engineering. This is a project around the basics of self-driving cars for students who are interested and want to learn something new in practice. This project is the perfect balance between electronics (using sensors) and writing software (the 'AI'). For me, as a student, this is perfect. I get to learn new things

and not just the theory behind everything, I also get the practical background
which is always preferable.

References