

The digital butler

Prerequisites: - Good knowledge of embedded programming
(as from Internet of Things Module)

Level: This topic is appropriate for Master Students

Language: German or English

INTRODUCTION

In a larger house, it sometimes becomes a nuisance to call upon some family members for dinner, since they simply do not hear. This project targets to implement a user-friendly and configurable digital butler.

It consists of two parts: the calling device and the alarm device. The calling device consists pretty much of a button, which, when pushed, activates the alarm on the alarm device via the home WiFi. The alarm device should have a proper light and sound, comparable to a fire alarm (bright blinking red light and loud sound). Both devices should rely on wall power (but in different rooms). It is important to make the butler easily configurable with the home WiFi (not need to re-program the devices or to open them up).

PROJECT DESCRIPTION

The following steps are recommended:

- Design the complete system with all hardware and software components required. Make a list of required hardware, make sure it is compatible with each other and complete.
- Implement the system with a fixed WiFi network (e.g. an access point from your phone) and test it.
- Implement a user-friendly WiFi connection setup and test it.
- Use the ComNets 3D printer to print cases for both devices. Solder the devices and make sure they are stable for daily use (no loose connections).
- Document all steps and their results.

CONTACT

If you are interested in this work, please contact us via mail: projects@comnets.uni-bremen.de