Capstone Design

Team 13

20165729 Park Sangwoo
20161344 Heo JeongWoo
20161090 Lee ChaeMin

Contents

1.

Project & Team Information

Project Title

SDI

“SDI” is a Smart Doorlock Improver,
Inspired by Samsung SDI, We choose the title of this project.

Team 13 – TriStar

Team Members – Park Sangwoo, Heo JeongWoo, Lee Chaemin
Likewise, We choose the team name.

2.

Introduction & Motivation

SDI

We are going to develop some door lock control applications and auxiliary devices.

Users can use our application to see if the door is closed correctly.

Introduction

We’ll attach an auxiliary device to the door lock

Motivation

Existing smart door locks only can control doors at home.

We can't just exchange door lock in a rented room.

To check the main gate of a multi-storey building without Wi-Fi, you have to go and check it yourself.

3.

Goal

Goal

1. Compatible with over 95% door locks
2. Minimize program errors

Our goal is to be able to check, open, and close door locks anywhere in a non-WiFi environment. We create a general auxiliary device that can be used in almost any door lock.

4.

Development & Implementation Contents

Development & Implementation Contents

Application

- This application connects to the auxiliary devices through a repeater or direct.
- We check the condition of the door lock and design to open and close the door with the application.
- We need to check the user is authenticated because the device can be installed in the common entrance door lock.

Development & Implementation Contents

Repeater

- We make repeater for signal off the door lock.
- We will decide signal transmission by considering power consumption and ease of connection with smartphones among BLE, WiFi, and LPWAN.
- This device is installed even if it is not connected to the Internet, so you have to repeat the signal from the device to the place where the Internet is connected.

Development & Implementation Contents

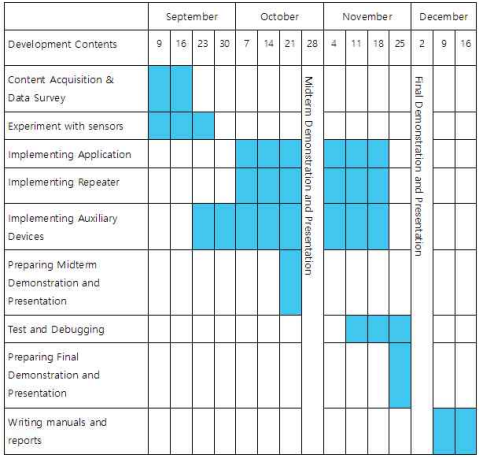
Auxiliary Devices

- The device can open or close the door with your smartphone.
- It should be compatible with most existing door locks, so we make this attachable.
- We experiment with sensors that we need to check whether the door is open or closed.

5.

Project Schedule & Roles

Project Schedule



Roles

Park Sangwoo

Data collection and survey
Experiment with sensors
Implementing Application
Test

Heo JeongWoo

Data collection and survey
Experiment with sensors
Implementing Application
Test

Lee Chaemin

Data collection and survey
Experiment with sensors
Implementing Auxiliary Devices
Test

6.

Q&A