

ECE 416- Updated Project Description and Schedule

Date: 02/05/2019

Team #: 33

Project Title last semester: Smart Door Intelligent system

Project Title this semester: Anti-theft Package Security Home System (APSHS)

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1. Describe changes in the project if different from the proposal

ANTI-THEFT PACKAGE SECURITY SYSTEM - SENIOR PROJECT ECE 416

Group 33 | January 28, 2019

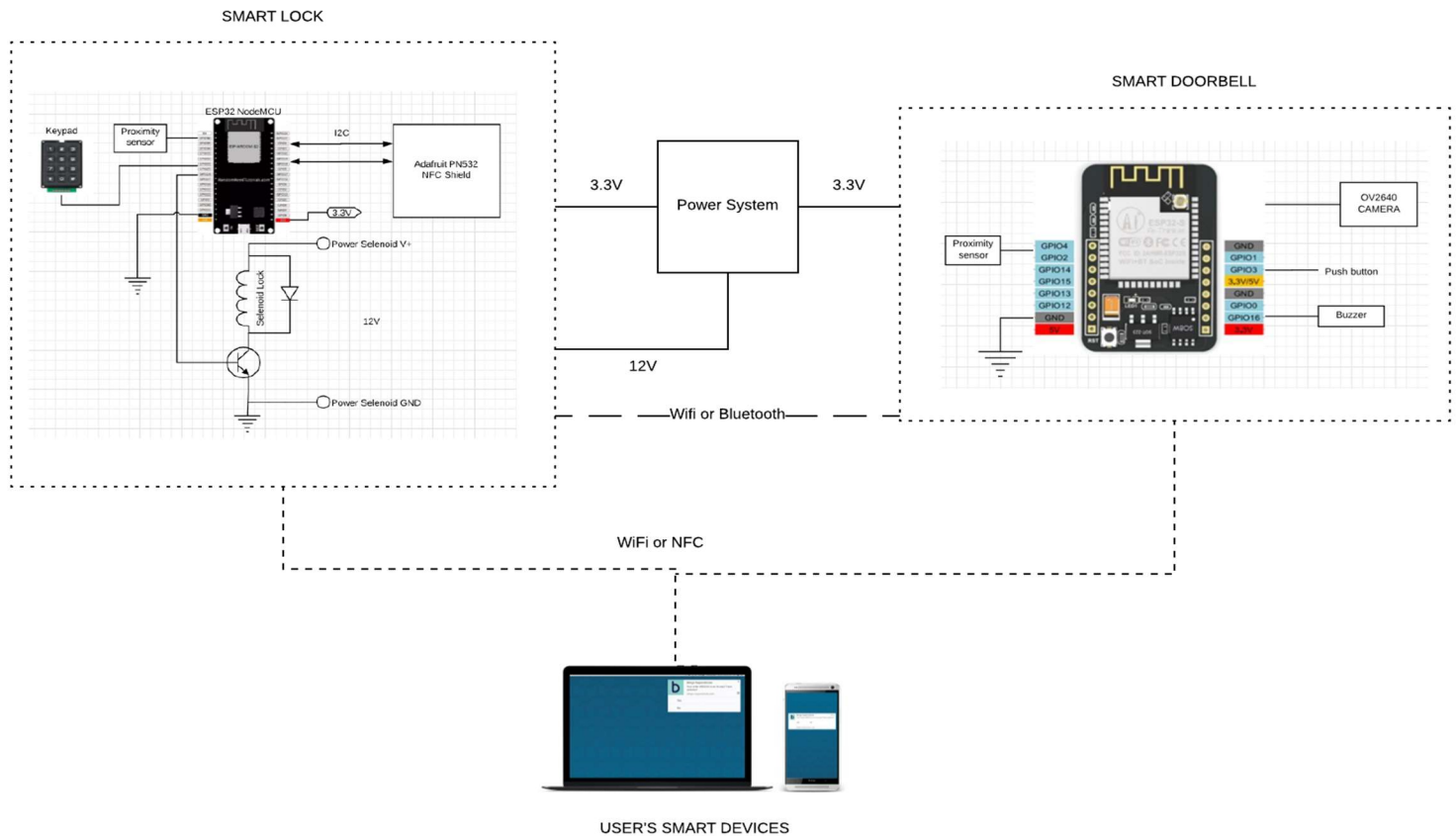


Figure 1 Block Diagram Group 33

For our project we have added some components to make it more interesting. The major change we made was adding the Smart Doorbell module to the project. The Smart Doorbell consists of a Wi-Fi camera module that will use face recognition to alert the user when someone is at the door trying to pick a delivered package. There will be two proximity sensors to detect when someone is at the door. One proximity sensor will be on the Smart Lock module and the other one on the Smart Doorbell module. The camera module will turn on when someone is in range of both the sensors. Once the camera senses who is there will be a signal sent to the person to notify that someone is at the door. There will be a list of parameters to indicate if someone should or shouldn't be at the door. If someone isn't supposed to be at the door a notification will be sent to the user and a buzzer will go off. The Smart Doorbell circuit though is tentative, and we are not sure if this is the final product. We are also currently working on a emergency power system for our project in the event that a power outage were to occur.

2. Work performed and milestone achieved since the approval of the proposal in ECE 414

We removed the Arduino MCU due to its lack of Wi-Fi interface 01/15/19

We ordered main components for Smart Lock module 01/16/19

We selected ESP32 as our main MCU 01/20/19

We decided to remove the linear actuator 01/22/19

Designed preliminary schematic for Smart Doorbell Module that will use face recognition
01/28/19

Android App login screen was developed on 01/29/2019

We decided to add the DC-DC converter to step up the voltage because of the amp draw of the solenoid lock 02/01/19

3. List major parts and components (microcontrollers, sensors, actuators). Indicate if delivered or still need to be obtained.

4. Updated Project Schedule *(to be used for monitoring project progress)*

<u>Task or Milestone</u>	<u>Semester week</u>
We are adding an emergency power system (schematic)	4
Implement Wi-Fi bridge between ESP32 and computer	4
Program ESP32 to trigger solenoid using NFC shield.	4
Order power system components	4
Finalize schematic for Smart Doorbell	5
Program UI for monitoring people traffic through the door	5
Test power system circuit (emergency as well)	5
Establish communication with Android app and ESP32	6
Work on face recognition algorithm	6
Implement proximity sensor (algorithm and hardware)	6
Implement Wi-Fi communication between ESP32 and ESP32-CAM	7
Keep working on face recognition algorithm	7
Implement profile database support for Android app to have multiple users	7
Implement IoT platform to unlock Smart Lock using phone through Wi-Fi	8
Test face recognition algorithm	9

Note: Schedule will be updated on week 6 with further information.