



Mobile medication Alert System

Written Progress Report

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Introduction

Over the past two months, *SmartMed Incorporated* was working diligently to complete the development of all individual parts of Mobile Medication Alert System (MMAS), which will physically alert users or their caregivers through an Iphone application when they forgot to take their pills or accidentally take the wrong pills on schedule.

Microprocessor, Sensor and WI-FI Shield

What we have achieved:

1. Detect the sensor signal by microcontroller.
2. Control the corresponding LED by microcontroller in the real time.
3. Connect the WI-FI shield to wireless router.
4. Grab HTML text from the webpage.
5. Post data to the server.
6. Pill dispensing box prototype is finished

Remaining tasks:

1. Integrate the communication with mobile client and server.

Server and Mobile Application

The Iphone App allows the user to view and edit the schedule for when pills are to be taken. The app's user interface should be simple and easy to use and understand even for new users and those unfamiliar with mobile apps.

What we have achieved:

1. Display an alert, on the primary user's app, when they have forgotten to take pills from a specific section on time.
2. Display an alert, on the primary user's app, when the user has removed pills from the wrong section, a section that doesn't correspond to the current time
3. Display an alert, on both the primary user and the caregiver/loved one's app, when communications are lost with the pill dispenser, such as when it has lost its internet connection or been unplugged.
4. Display an alert, on both the primary user and the caregiver/loved one's app,

when there is a communications failure, such as when a request from the app to the server cannot be decoded.

5. Display, on both the primary user and the caregiver/loved one's app, which sections of the pill dispenser currently contain pills.

Remaining tasks:

1. Integrate the server and microcontroller.
2. Synchronize the schedules in the microcontroller and the iPhone App through the server.
3. Pass the sensor data from the microcontroller to the iPhone App through the server.
4. Implement secondary alerts to the caregiver's iPhone.
5. Display chart of pills taken on the doctor's iPhone.

Budget

The development costs of the Mobile Medication Alert System (MMAS) are currently well on schedule. The actual expenditures of *SmartMed Incorporated* are approximately \$340 on WI-FI shield, sensors, LEDs, microcontroller board, and development of iPhone App and server. Our prototype development fund from ESSS covered the cost of these items. The extra cost will be shared among the team members and we will apply for the Winton fund after the termination of the project.

Conclusion

SmartMed Incorporated members have made great progress towards the completion of the Mobile Medication Alert System (MMAS) so far. Currently, everything is on schedule and on budget, and our team will be able to complete our project on time within the initial estimated cost outlines in our proposal. We will continue to work on overall system integration and integrated system testing and debugging in the following month so as to complete the project on time.