Using Technology to Measure Adherence of Complicated Medication Regimens

Progress Report 8

Client
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Advisor
Professor William L. Murphy Ph.D

Team Members
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Problem Statement
According to a recent study, almost 75% of patients, especially the elderly, do not adhere to their medication regimens for various reasons. This lack of adherence can prevent a patient’s recovery. Additionally, the present state of affairs is such that if a patient reports no improvement, a physician does not definitively know whether to try a different medication or whether the patient is simply not taking the medication regularly. To improve general health of patients assigned complicated medication regimens, we are to make a device that keeps a record of when a patient takes their medication.

Summary of Team Accomplishments
• Formed team and assigned individual roles
• Met with client and obtained project supplies
• Formulated problem statement
• Brainstormed possible designs
• Compile team members’ parts of the PDS and edit
• Create project website
• Meet with Professor Morrow to discuss possible solutions
• Research processors
• Obtained a microcontroller and corresponding development kit
- Narrowing down designs and design specifics
- Figured out concept of a switch matrix
- Work on mid-semester presentation
- Research specifics about a switch matrix

**Current Week’s Goals**

- Research
- Figure out details about how to use the micro-controller
- Research various switches that could be used

**Project Schedule/Important Dates**

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- Select a Project
- Client Meeting
- Literature Research
- Rough Draft of PDS
- Brainstorm designs
- Decide on Design Alts.
- Prepare for Mid-sem. Pres.
- Mid-sem. Pres. (Oct 20)
- Decide of Final Design
- Work on Prototype
- Poster Pres. (Dec 8)
- Advisor Meeting (Dec 15)
**Difficulties:** None to date.

### Activities

#### Sujan
- Group Meeting: 2 hrs
- Group Meeting: 1 hr
- Notebook Update: 1.5 hrs
- Communications: 0.5 hr
- Research: 1.5 hr
- Presentation: 2.5 hrs

**Total:** 9 hrs

#### Cara
- Presentation Prep: 1.5 hr
- Presentation: 2.5 hrs
- Group Meeting: 2 hrs
- Group Meeting: 1 hr
- Laptop: 0.5 hr
- Notebook Update: 1.5 hr
- Research: 4 hrs

**Total:** 12.5 hrs

#### Farshad
- Presentation Prep: 2 hrs
- Notebook Update: 2 hrs
- Group Meeting: 2 hrs
- Research: 1.5 hrs
- Presentation: 2.5 hrs

**Total:** 10 hrs

#### Nipun
- Presentation Prep: 2.5 hrs
- Presentation: 2.5 hrs
- Group Meeting: 2 hrs
- Group Meeting: 1 hr
- Notebook Update: 2 hrs
- Research: 4 hrs
- Laptop: 0.25 hr
- Progress report: 0.25 hr

**Total:** 14.5 hrs

### Team Total Hours for this Week: 46 hrs
Cumulative Team Hours to Date: 137.25 hrs

**Expenses**: None to date.