Using Technology to Measure Adherence of Complicated Medication Regimens

Progress Report 5

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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.

Project Schedule/Important Dates
March 9th  Midsemester Presentation
May 4th  Poster Presentation
May 9th  Final Papers Due

Summary of Team Accomplishments
• Installed bootloader onto new microcontroller
• Setup the interface to send new programs to the microcontroller
• Setup serial communications to and from the microcontroller

Current Difficulties
• For an unknown reason, the bootloader needed to be re-installed once. David Marcovitch tells us that this should not have happened and should not happen in the future.
Activities

Sujan
Meeting with Cara          1.5 hrs
Communications                  0.25 hr
Science Expedition            0.5 hr
Total:  2.25 hrs

Cara
Meeting with Sujan           1.5 hrs
Notebook                      0.5 hr
Research                      0.5 hr
Total:  2.5 hrs

Farshad
Notebook and Web update       0.5 hr
Meeting with Nipun            1.5 hr
Total:  2 hrs

Nipun
Meeting with David Markovitch 1 hrs
Meeting with Farshad          1.5 hr
Programming microcontroller   2 hrs
Ideas about storing data on the microcontroller 0.75 hr
Progress report               0.5 hr
Total:  5.75 hrs

Team Total Hours for this Week:  12.5 hrs
Cumulative Team Hours this semester:  63.75 hrs
Cumulative Team Hours to Date:  509 hrs

Expenses

- Microcontroller (PIC18F4685-I/P-ND) $27.44
- Watch chip (DS1307) $17.58
- USB to serial (TTL) interface (DLP-USB232M) $31.47
- Plexiglas $04.21
- Microcontroller (PIC18F4550) $30.50
Total:  $112.20