Progress Report 3

Group 23: Respiratory GPS Tracker

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Progress Report

Date	Hours	Description
October 18th - 26th, 2017	8	Alex found a highly rated series of videos/tutorials on how to program in Swift. Swift is a language used to develop application in iOS the operating system of all iPhones. The iPhone application is what the clients requested to be the user interface and the software used to communicate with the raspberry pies. Youtube Series
October 20th - 23rd, 2017	2+	Powering the pie is the only part of this project I am currnetly up happy with. Our clients did not want us to pull power from the equipment, which is the most integrated, permenant, and clean solution. The bandaid to the problem is of course external batteries, which are ugly, unfinished, and consumable. Instead, you could uses and much larger battery power supply in the neighborhood of 10,000 mAh that will last a long time and be rechargable. Thiw would look slightly better but nonetheless is still a hassle for the end user that does not need to be there. Especially in the case of the nurses we spoke with who stressed many times that this has to help without adding any steps to there current way of using the equipment. Some how the idea of locating equipment that now needs to be charged doesn't really do that. I would like to reach out to the client and see if the limitation of integrating power is set in stone and if it is my final idea for now is solar. A small panel on the outside of the enclosure that provides the low amps needed by the pie as well as a pie that is in an off state when it is obivous it wont be tracked.
October 23rd, 2017	Under 1	Alex began to look for enclosures for the raspberry pie. The reason we have waited so long to do this is because of a couple requirements. We wanted to first determine whether or not we would need an external switch on the enclosure for determining in-use/not-use state or a change in temperature from the equipment. We decided on a switch after now starting for two reasons. One the change in temperature method assumes that all equipment to be tracked have a large enough delta and there is the added sensor expense on every tracker. This all to say we now know we need an enclosure that will incorperate a push-button.

Total Hours Since Last Update: 10
Total Hours: 35

Comments

So far we have spent basically all of our time on the specifics of how to triangulate the necessary hospital equipment and while we definitely have settled on a good idea it was time to shift our focus. Both of my group members and I began to learn how to program in Swift from tutorial videos found by Alex. I too watched these videos and spent some time in XCode practicing as well as translating our idea into software. However another area that needs some attention is power. Dr. Johnsen asked a good question during our presentation about how a battery is a fairly temporary answer to the problem. However, being that our clients do not want us to pull power from the equipment itself we are left with a big problem. Ontop of software I am spending time looking for a more convient and permenant solution to the power problem.

Design Notebook Link

Link