

DEC15-04

Senior Design 491 - Weekly Report - DEC15-04 Fall 2015 Week 15 (8/24/15 - 8/31/15)

Advisor: Suraj Kothari
Project: Future Wearables
Client: Ted Krepos (*"Krepos Physical Therapy and Performance"*)
Ensoft - Jeremías Saucedá
Members: Aaron Reyes - Team Leader
Nick Plutt - Webmaster
William Park - Communication Leader
Josh Cline - Key Concept Holder #1
Nick Gonner - Key Concept Holder #2

Weekly Recap:

With the start of this semester, we have not been able to figure a time to meet as a full team. We have met with our respective teams (Hardware and Software) to plan out our goals for the upcoming weeks.

Meeting Overview:

August 24 2015 - **Meeting-22**

Duration: 1.5 Hours

Attendance - **22**

William Park	Present
Nick Plutt	Class
Aaron Reyes	Present
Josh Cline	Present
Nick Gonner	Class

1. This meeting was a recap of what needs to happen for our project to be a success. We planned out future goals for the upcoming weeks before our initial meeting with our clients (Jeremías and Ted).

Hardware

1. Hardware team has evaluated the necessary parts of the device in order for the device to work. These evaluations are listed below:
 - a. Order the correct microcontroller to fit our desired needs.
 - b. Figure out if the EMG we currently have is efficient and reliable. If it is not, we must figure out a replacement EMG that fits these standards.
 - i. Order Conductive fabric to see if works well with the EMG

Software

1. Setup the application so that it connects with the device via bluetooth.
 - a. Receive data from the device, and display it on the phone.
2. Research Graphing API of Android.
 - a. Create a responsive and real-time graph from the data that is received from the device.

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2. We have discussed times to meet with our Clients, our Advisor (Kothari), and our meeting time with this semester Senior Design proctor.

August 24 2015 - **Meeting-23**

Duration: 1 Hours

Attendance - **23**

William Park	Class
Nick Plutt	Present
Aaron Reyes	Present
Josh Cline	Present
Nick Gonner	Present

1. This meeting was a recap for Nick G. as he was not available for the first in person meeting. The team discussed when would be an appropriate time to meet with Ensoft.

Accomplishments this week:

1. Met for the first time for this summer
2. Set up plans for the upcoming two weeks.

Pending Issues:

1. Our EMG sensor is collecting data that is not strong enough for our therapist to read. We need to research and figure out a solution to solve this problem.
(continued)
2. Software application needs to be pushed within the next two weeks. The application needs to be able to receive and display data on the phone.
3. PCB and Battery solution for the hardware team (continued)
4. Create an actual wearable device by purchasing the last pieces to complete a working prototype. (continued)
5. Our microcontroller is not suitable enough for the amount of IMU's (4). We need to research and find a new microcontroller that fits our designs specifications. (continued)
6. Find a meeting time that fits within our groups schedules for the Fall 2015 semester.

Planning:

- i. Getting the design for the PCB finished.
- ii. Assembling the first prototype.
- iii. Software Team needs to push out a prototype application within the next two weeks that actively works around receiving and displaying data.
- iv. EMG solution needs to be researched.
- v. Need to find a replacement microcontroller for the Pro Micro.

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Individual Contributions

Aaron : -- (2.5 hr)

- i. meetings

William: -- (7.5 hr)

- i. Weekly Report
- ii. Meetings
- iii. Android API coding. Bluetooth Connectivity. Receive and Display Data

Josh: -- (2.5 hr)

- i. Meetings

Nick P.: -- (6.5 hrs)

- i. Meetings
- ii. Website organization
- iii. Android Graph API

Nick G.: -- (1.5 hr)

- i. Meeting
- ii. Evaluation of the microcontroller

Total Contribution for the Project:

Aaron Reyes (51.7 hrs)

William Park (48 hrs)

Josh Cline (68.7 hrs)

Nick Plutt (55.5 hrs)

Nick Gonner(56.6 hrs)