ELET 4780 – Senior Project 1 – FALL 2015

To: Elias Kougianos

From: George Dunson

CC: Chris Harris

Date: 10/25/2015

Re: Senior Design Weekly Report – TEAM 1

# Overview

We have decided not to use an IDE (Eclipse) to write the firmware for the Edison. This decision was based on our inexperience using such complex coding environments compared to our ability to write the C code and Assembly Language if needed. We will compile the code on the Edison and use the GNU Debugger in the terminal. Granted, this approach is not as sexy or commonplace as the use of a graphic user interface based development environment however, it does get the job done without the added hassle and frustration of setting up an environment we are not familiar with. We feel that the approach we are taking shows our ability to get down as close as possible to the metal while writing the code, giving the project a gritty feel. Using Assembly Language in the project will allow us to work as close as possible with the metal resulting in much more efficient and effective code and also allows us to showcase our ability to get extremely familiar with a piece of hardware and display our comprehension of the processors low level processes.

# Completed Tasks

* Assembled the breakout boards.
* Designed and 3D printed a prototyping jig
  + See attached Images 1-4

# Ongoing Tasks

* Continue work on the thingspeak interface
* Read datasheets and reference

# Next Week’s Tasks

* Getting familiar with existing C libraries on the Edison
* Create block diagram of program flow and start writing some pseudocode

# Interaction with the other team members

* Met with Chris for 1 hour on 10/21/2015 to discuss pros and cons of using an IDE vs compiling in the terminal on the Edison.
* Got together each day in spare time between classes to brainstorm about how the program flow will look and discus what we had learned about the Edison during our independent research.

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| *Image 1: Print cooling on print-bed* | *Image 2: Jig with breadboard and components on-board* |
| *Image 3: Back of Edison has female headers for jumping signals to the breadboard* | *Image 4: Finished Jig with rubber feet and raised lettering painted* |