

# Senior Design: Weekly Progress Report

Team 3: Micheal Frith, David Larribas, Devin Moore, Benjamin Smith

## 1 GROUP TIME SYNOPSIS

**Current Group Leader:** Benjamin Smith

### 1.1 Team efforts and overall status

THE primary objective of the first week was to solidify our groups societal problem selection. Members of the group voiced concern about a topic we had chosen over the summer. The root concern was lack of interest in the hardware associated with the project idea. In deference to their concern and in consideration of the three other groups researching highway safety we, as a group, chose to switch to health and wellness. This topic has no shortage of peer reviewed sources and will yield opportunities for all group members to show their talents and interests. We have concretely settled on a topic, there will be no issue submitting the problem statement on time.

The other significant expenditure of work hours came from the setup of team document standards and collaborative tools. L<sup>A</sup>T<sub>E</sub>X templates were developed for weekly reports and an IEEE standard report with a title page as described in week twos lecture notes. These templates are maintained in a group Github repository which can be found here.

TABLE 1  
Weekly Team Meetings

Topic	Hours
Monday Morning Planning Session	3.0
Tuesday Lab: discussing the new topic	2.0
Friday: societal issue paper outline	5.0

### 1.2 Monday Morning Planning Session

iiiiii HEAD We discussed an agenda for week two and assessed team member availability and

bandwidth during the week to come.

- Review of weeks assignment
- Review of lecture notes
- Debrief last weeks assignments
- Assign next weeks tasks

Some stuff thats going to happen Monday:

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Some stuff thats going to happen Monday:

~~~~~ Ben's-Section-+team-leader-section

### 1.3 discussing the new topic

Given the gravity of choosing a 9-month long project we sat down as a group and spent some time to make sure we have an understanding of each others expectations. It broke down roughly on the CPE or EEE line. Computer engineers were looking for digital control and FPGA based designs. The electrical engineers were looking for power electronics design and electric control.

### 1.4 Friday: societal issue paper outline

We took a large amount of time to create a proper outline of the problem statement before the week-end. Forming the paper outline gave the group a chance to further synchronize their expectations of the project and what kind of solution we can offer. We began to research issues which effect Health and Wellness in modern society to provide the framework for our paper. The small amount of research gave the group direction and helped them be more efficacious over the weekend.

## 2 INDIVIDUAL ACTIVITY SYNOPSIS

### 2.1 Micheal Frith

#### *Synopsis of past week's work*

This week I researched a new societal problem as we have scrapped the project we had chosen this summer. I contributed articles and research on physical activity and its effect on physical and mental health. I then researched possible solutions to our societal problem. This guided our group to our proposed solution of an electrically assisted bicycle. I aided in the creation of our elevator pitch. I installed and setup our group collaborative tools.

TABLE 2

Micheal Frith: Tasks Assigned - Last Week

| Task                            | Hours Worked | Status |
|---------------------------------|--------------|--------|
| Societal Problem Research       | 9.0          | 100%   |
| Writing Problem Statement paper | 2.0          | 90%    |
| Decide Problem Topic            | 5.0          | 100%   |
| Weekly Report Writeup           | 3.0          | 100%   |
| Setup Group Collaborative tools | 2.0          | 100%   |
| Elevator Pitch Creation         | 1.0          | 100%   |

TABLE 3

Micheal Frith: Tasks Assigned - Next Week

| Task                          | Hours Worked | Status |
|-------------------------------|--------------|--------|
| Researching Solutions         | 3.0          | 100%   |
| Researching Chosen Solution   | 5.0          | 100%   |
| Creating Feature List         | 4.0          | 100%   |
| Researching Implementation    | 2.0          | 20%    |
| Setting up Schedule/TeamGantt | 2.0          | 100%   |
| Creating Design Contract      | 4.0          | 100%   |

#### *Special Problems or other reporting*

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## 2.2 David Larribas

### *Synopsis of past week's work*

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TABLE 4

David Larribas: Tasks Assigned - Last Week

| Task                                     | Hours Worked | Status |
|------------------------------------------|--------------|--------|
| Decide Problem Topic                     | 5.0          | 100%   |
| Become Familiar With Collaborative Tools | 2.0          | 100%   |
| Problem Statement Research               | 14.0         | 100%   |
| Writing Problem Statement Paper          | 5.0          | 90%    |
| Writing Weekly Report                    | 2.0          | 100%   |

TABLE 5

David Larribas: Tasks Assigned - Next Week

| Task                  | Hours Worked | Status |
|-----------------------|--------------|--------|
| Research E-Bike Parts | 4            | 40%    |
| Design Idea Contract  | 12           | 100%   |

### *Special Problems or other reporting*

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## 2.3 Devin Moore

### *Synopsis of past week's work*

I started off the week discussing possible societal problems with the group while I researched different possible problems and potential solutions. After arriving at an accepted societal problem, I began searching for articles with relevant research. I spent a fair amount of time setting up L<sup>A</sup>T<sub>E</sub>X and associated templates. I helped set up GitHub for keeping track of changes and easy collaboration through repositories. I helped set up our Gantt chart on the TeamGantt website. I wrote down rough body paragraphs for the Societal Problem assignment.

TABLE 6  
Devin Moore: Tasks Assigned - Last Week

| Task                            | Hours Worked | Status |
|---------------------------------|--------------|--------|
| Decide Problem Topic            | 5.0          | 100%   |
| Set up Collaborative Tools      | 2.0          | 100%   |
| Problem Statement Research      | 14.0         | 100%   |
| Writing Problem Statement Paper | 5.0          | 90%    |
| Writing Weekly Report           | 2.0          | 100%   |

TABLE 7  
Devin Moore: Tasks Assigned - Next Week

| Task                          | Hours Worked | Status |
|-------------------------------|--------------|--------|
| Researching Solutions         | 2.0          | 20%    |
| Researching Chosen Solution   | 2.0          | 20%    |
| Creating Feature List         | 2.0          | 20%    |
| Researching Implementation    | 2.0          | 20%    |
| Setting up Schedule/TeamGantt | 2.0          | 20%    |
| Creating Design Contract      | 2.0          | 20%    |

### *Special Problems or other reporting*

I spent a lot of time this week getting familiar with the programs and services we will be using throughout the project. I set up multiple Google Docs for collaborating with brainstorming and writing rough drafts. I installed Mumble, a voice chat software, for easy communication with the team. Familiarized myself with the

## 2.4 Ben Smith

### *Synopsis of past week's work*

I spent a large amount of time developing the procedures that would allow the group to work together effectively. The procedures the group decided upon leverage the  $\text{\LaTeX}$  typesetting language and GitHub for revision control. I developed two Latex templates for the group to use; one for weekly reports and another for large documents that includes a title page. Both of these documents adhere to the IEEE standard.

The other significant time expenditure came from the Societal Problem assignment. The research

TABLE 8  
Ben Smith: Tasks Assigned - Last Week

| Task                       | Hours Worked | Status |
|----------------------------|--------------|--------|
| $\text{\LaTeX}$ Templates  | 5.0          | 100%   |
| GitHub Repository          | 2.0          | 100%   |
| Problem Statement Research | 15.0         | 100%   |
| Writing Problem Statement  | 5.0          | 90 %   |
| Decide problem topic       | 5.0          | 100%   |
| Setup collaborative tools  | 2.0          | 100%   |

TABLE 9  
Ben Smith: Tasks Assigned - Next Week

| Task                 | Hours Planned | Status |
|----------------------|---------------|--------|
| Design Idea Contract | 20            | 0%     |
| Team Weekly Report   | 2.0           | 0%     |
| Refresh resume       | 2.0           | 0%     |

### *Special Problems or other reporting*

The group spent a significant amount of time in the first week preparing collaborative tools. I feel this time was well spent; we will be able to take on new tasks in an organized and efficient manner.