SEES PROJECT

**Spatial Echolocation Enhancement System**

**Work Log and Milestone**

University of Victoria

CENG/ELEC/SENG 499 Summer 2015

Design Team 27

Supervisor : Dr. Gebali

Daniel Faulkner - V00778450 - SENG

Jason Lim - V00785426 - SENG

Rajpal Chauhan - V00762290 - ELEC

John Delorme - V00733268 - ELEC

Ian Brown - V00730581 - SENG

## Milestone Summary

The objective of this milestone was to prepare a usable software and hardware prototype for the project. Progress was made on both these prototypes, but neither part managed to make it to full completion.

On the software side, significant progress was made in setting up an android phone for receiving a signal from a Kinect, but due to documentation and compatibility issues, this has fallen a week behind schedule. With regards to the actual system software, various signalling and analysis models have been considered thus far for both image processing and actual audio signal generation. While incomplete, it is expected that these systems be iterated upon further in milestone 3.

For hardware, we are currently working on salvaging parts of a Microsoft Kinect. Due to the ongoing camera unit salvage we have been unable to start building a headset base frame to the camera unit. The camera parts in the Kinect, specifically the circuit boards are larger than expected. This increased size will result in a larger initial prototype for the headset design.

|  |  |
| --- | --- |
| **Milestone 2: System Development** | |
| Build Headset Base Frame | |
| Salvage Camera Unit | |
| Get Camera Unit Working in Software | |
| Establish Audio Signalling Model | |
| **Milestone Deliverables:** | |
| Usable Software & Hardware Prototype | |

## Work Log

**Daniel Faulkner**

|  |  |  |
| --- | --- | --- |
| ***Date*** | ***Time (Hrs)*** | ***Description of Task*** |
| 02-JUN-2015 | 1.5 | Group planning meeting and report review |
| 04-JUN-2015 | 2.0 | Elevator pitch preparation |
| 07-JUN-2015 | 0.5 | OpenNI research |
| 09-JUN-2015 | 1.0 | Group planning meeting |
| 11-JUN-2015 | 0.5 | Group planning meeting |
| 13-JUN-2015 | 12 | OpenNI work - building OpenNI for android; unlocking bootloader on phone; flashing new recovery, OS, and radio; copying OpenNI files over |
| 16-JUN-2015 | 2.0 | Meeting with supervisor, group planning meeting |

**Jason Lim**

|  |  |  |
| --- | --- | --- |
| ***Date*** | ***Time (Hrs)*** | ***Description of Task*** |
| 02-JUN-2015 | 1.5 | Group planning meeting and report review |
| 04-JUN-2015 | 2.0 | Elevator pitch presentation |
| 09-JUN-2015 | 1.0 | Group planning meeting |
| 11-JUN-2015 | 0.5 | Group planning meeting |
| 12-JUN-2015 | 1.0 | Intel RealSense depth camera solicitation |
| 14-JUN-2015 | 3.0 | Kinect / software prototype integration |

**Rajpal Chauhan**

|  |  |  |
| --- | --- | --- |
| ***Date*** | ***Time (Hrs)*** | ***Description of Task*** |
| 02-JUN-2015 | 1.5 | Group Meeting and Report review |
| 04-JUN-2015 | 2.0 | Elevator pitch practice & presentation |
| 11-JUN-2015 | 0.5 | Group Meeting |
| 14-JUN-2015 | 1.0 | Kinetic Research |
| 16-JUN-2015 | 2.0 | Meeting with Supervisor & Group Meeting |

**John Delorme**

|  |  |  |
| --- | --- | --- |
| ***Date*** | ***Time (Hrs)*** | ***Description of Task*** |
| 02-JUN-2015 | 1.5 | Group Meeting and Report review |
| 03-JUN-2015 | 0.5 | 399 Project Research |
| 04-JUN-2015 | 2.0 | Elevator pitch practice & presentation |
| 09-JUN-2015 | 1.0 | Group Meeting |
| 14-JUN-2015 | 2.0 | Kinect Research |
| 15-JUN-2015 | 0.5 | Kinect teardown |
| 16-JUN-2015 | 2.0 | Meeting with Supervisor & Group Meeting |

**Ian Brown**

|  |  |  |
| --- | --- | --- |
| ***Date*** | ***Time (Hrs)*** | ***Description of Task*** |
| 02-JUN-2015 | 1.5 | Group Meeting and Report review |
| 04-JUN-2015 | 2.0 | Elevator pitch practice & presentation |
| 11-JUN-2015 | 0.5 | Group meeting |
| 13-JUN-2015 | 3.0 | FFTW Android development |
| 15-JUN-2015 | 2.0 | FFTW Android development |
|  |  |  |
|  |  |  |