**Progress Report**

**ET-Collar**

**Simarjeet Brar (N01149380)**

**Gurpreet Singh (N01190666)**

* Hardware purchase
* Progress in sensors usage
* App progress
* Individual Progress
* Upcoming goals

1. **Hardware**

The ET-Collar project requires three main components that are Light/Lux Sensor (TSL2561), Accelerometer (LIS3DH) and GPS (GP-20U7). The only part available was light sensor, however the other two sensors were ordered and received this week. After the wiring was done, to test the sensors I2C detect command was executed to check if they are working properly and on the right address: the test were successful.

* 1. **Price Listing**

The total budget for the project has changed, in fact other than the PI and the Light sensor that were already available, two more sensors were bought to fit the requirements of the project

Raspberry pi ……………………… $ 99.00

TSL2561………………………………$ 09.99

LIS3DH ……………………………..$ 14.95

GP-20U7……………………………..$ 56.08

Total……………………………………$180.02

**1.2 Progress in the sensor usage**

The Light sensor was already working according to expectations. The Accelerometer was able to display readings on screen but some calculations are still required to get more relevant data for the project. Therefore, calculations are necessary to arrange the sensor data to more clear formact for human reading. The GPS sensor was not able to detect satellite to get approximate position of the device, more testing needs to be done outdoor as more exposure to the sky leads to more accurate readings.

**1.3 PCB Updates**

The PCB has been designed according to expected wiring and the gerber file have been been sent to the prototype lab. Therefore, when it will be ready it can be tasted with sensors attached to them.

1. **Software Progress**

Android Application has been designed properly, except some minimal requirements are missing such as language, getting location updates from DB. The database is up, running and connected to the app.

Moreover, the layout needs some modification to make it user-friendly.

1. **Individual Progress**

The group have divided the work load between hardware and software. Gurpreet Singh is working on the hardware part and Simarjeet Brar is working on the application part.

Gurpreet Singh: has wired the sensors and got the readings from the accelerometer. Moreover, he prepared the PCB part regarding the accelerometer.

Simarjeet Brar: has worked on the android application and started adapting the functionality to the hardware. Furthermore, he prepared the other half of the PCB, wiring the GPS and the Light sensor used by him in CENG317.

1. **Upcoming goals**

The next goals are:

* Work on the accelerometer to get readings related to our usage
* Retrieve GPS location from sensor
* PUSH data to Firebase
* Make the necessary modification to android application