**Team Members:**

* Thomas Bock
* Ammar Ahmed
* Tan Hua
* Jan Michael Golez

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**Group Meeting Minutes:**

● Discuss Plans for Altering CNC Laser Machine

● Purchase Additional Parts for Mechanical Parts of CNC Laser Machine

● LCD Screen for Pi3 was purchased and should arrive soon

**Summary of Team Tasks Assigned:**

1. Housing/Ventilation System
   1. Examine Parts Needed for Ventilation System(e.g. cost of materials)
2. Stand Alone Management System(***S.A.M.S.)***
   1. Purchase LCD Raspi Screen for Management System
   2. Attach LCD on RasPi3.
3. Solitary Software System
   1. Research the necessary software package that can be read in RasPi3
   2. Understand how to connect a bridge between the software with the automated camera aspect.
4. Automated/Enhance Camera System
   1. Begin Researching on OpenCV-Python
   2. Research on different microcontrollers that is compatible with OpenCV-Python

**Summary of Team Accomplishments:**

1. Housing/Ventilation System
2. Parts have been examine, a group consent is required to further proceed with the materials
3. Stand Alone Management System
4. Touch Screen LCD shipped.
5. Begin Attaching LCD touchscreen
6. Solitary Software Program
7. Python found most compatible between software, management system, and camera system
8. Begin Transcripting the language into Python
9. Automation/Enhance Camera System
10. Research on OpenCV-Python and installation of the software and libraries needed
11. Raspberry Pi3 was found to be the most compatible for making a connection between camera system and management system

**Tasks Assigned for Next reporting period:**

1. Housing/Ventilation System
2. Proceed discussion with parts and began redesigning enclosure/ventilation system
3. Stand Alone Management System
4. Use LCD touchscreen with conjunction with Open-CV Python
5. Ocotoprint.
6. Solitary Software Program
7. Continue to transcript language into Python
8. Help with bridging management sytem, Camera, and Software
9. Automation/Enhance Camera System
10. Purchase RasPi3
11. Install OpenCV-Python in RasPi3

**Issues:**

**Individual Summary (cont.)**

**Name:** Thomas Bock

**Tasks Assigned for this reporting period:**

1. Examine Parts Needed for Ventilation System(e.g. cost of materials)

**Accomplishments this reporting period:**

1. Parts Examined for enhancement of Prototype CNC Machine

**Issues:**

1. None

**Tasks Assigned for Next reporting period:**

1. First Draft Design of Ventilation/Enclosure

**Individual Summary (cont.)**

**Name:** Jan Michael Golez

**Tasks Assigned for this reporting period:**

1. Purchase LCD Raspi Screen for Management System

2. Attach LCD on RasPi3.

**Accomplishments this reporting period:**

1. Touch Screen LCD shipped.

2. Begin Attaching LCD touchscreen

**Issues:**

1.

2.

**Tasks Assigned for Next reporting period:**

1. Use LCD touchscreen with conjunction with Open-CV Python

2. Ocotoprint.

**Individual Summary (cont.)**

**Name:** Tan Hua

**Tasks Assigned for this reporting period:**

1. Research the necessary software package that can be read in RasPi3
2. Understand how to connect a bridge between the software and the automated camera aspect.

**Accomplishments this reporting period:**

1. Python found most compatible between software, management system, and camera system
2. Begin Transcripting the language into Python

**Issues:**

1. None

**Tasks Assigned for Next reporting period:**

1. Continue to transcript language into Python
2. Help with bridging Management System, Camera, and Software

**Individual Summary (cont.)**

**Name:** Ammar Ahmed

**Tasks Assigned for this reporting period:**

1. Finishing up with installation of the libraries needed
2. Research on Python and start getting familiar with it.

**Accomplishments this reporting period:**

1. Libraries for OpenCV are completely installed
2. Research on Python has began (Duration it would take- 2 weeks)

**Issues:**

1. Rpi3 crashed everytime I tried installing all the libraries. It usually crashed once it reaches 40%to50% of the installation time (1 hr 20 min). However, it was found later that using all four cores of the RPi3 for compiling libraries tends to slow down the processor and causes it crash most of the time. For that reason, only one core was used for compiling the libraries in the last attempt. OpenCV libraries were successfully compiled and the compiling time was around 3 hrs and 20 mins.

**Tasks Assigned for Next reporting period:**

1. Continue researching on using OpenCV in Python.
2. Start interfacing the camera with the RPi3 and testing the compatibility of OpenCV by writing a simple code (edge detection, object detection...etc).