Week 7 – Progress Report

Project: Design an Autonomous Robot

Task: To design an autonomous robot that is capable of navigating to a predetermined position while avoiding obstacles and firing objects at two targets. This is to be done in the shortest time possible.

Document Version Number: 1

Date: April 10th, 2015

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# Gantt Chart

Refer to GanttChart Update under GanttChart folder in Week7.

# Documentation

All the testing have at least one version documented. The requirements documents have been updated again as the client got have decided to change their requirements. The formatting of all the documentation has been unified. Proper table of contents have been added to all the documents.

# Poster Project

The Software FlowChart has been implemented to the poster and the hardware/software components of the poster has been implemented also. The poster is also printed and ready for the presentation.

# Mechanical Design

Changes have been made to the robot 1 hour prior to the competition’s 2nd run as the back wheel got stuck into the intersections between gridlines. An improved caster wheel has been implemented. Please refer to Mechanical Update under Mechanical Department of week 7.

# Software Design

The robot’s optimal speed has been changed from 200 degrees/s to 300 degrees/s. Please refer to Speed Test under Tests in Week 7 for the reasoning behind it. Thus, the robot can now drive much faster than it used to. It has also been shown that the robot is able to complete 2/3 of the course in 2 minutes. The robot should be in good shape for the competition.

# Testing

The testing of the current version of the robot is mostly completed. The integration test and the speed test have been done. The results were positive for the integration test. The speed test have also been confirmed that the robot can now run to a better speed. The battery test have also confirmed that the robot cannot run under 80%. ( Refer to Battery vs Performance test under Tests in week 6).

# Plans for the following week

Only the final report is left, organizing the weekly folders and providing a project summary folder.