**ENGINEERING JOURNAL TEMPLATE**

# Date

* 05/12/2019

# Tasks

* Worked on main Qt GUI window for my project, This window will have a Qt painter widget in it to paint the map. In its first iteration it will work quite like the example projects I have been working on where the mouse position will be used to paint on the widget until I get the logic figured out for processing the data coming from the LIDAR sensor.
* After getting a hold of the A1M8 RPLIDAR module I downloaded the SDK for it which included the scanner drivers and 2 example applications using the scanner. The software and documentation for it are pretty badly written. The examples were given in the form of a Microsoft Visual studio project containing them and the driver files, the project would not compile so there were a few issues I had to sort out to get it to run.

# Reflection

* The software documentation for the driver and examples are pretty bad, but I expected that from user reviews I read before I ordered the product. I plan on writing a simple program that can get the motor running and the LIDAR measurements read from the sensor next, along with the GUI window.

# Issues:

*Hardware:*

1. The next problem to tackle with the LIDAR scanner now that I have it, is how it outputs data and how to read it, drivers have been included with its SDK in the form of a IDE workspace, I need to figure out weather I should rewrite the driver or try to port it into my project.

*Software:*

* I am currently working on getting a main window project to compile for the Qt GUI that I will use to display the measurement data on a map. I am currently having issues with pointers for my events, mouse pressed, mouse released, and paint events are throwing errors I am currently working to get past.

# Solutions

*Hardware:*

* Referring to the hardware issues in my 2 previous journal entries I have finally managed to get the LIDAR scanner, so I can start solving problems and making progress on the hardware side of this project.

*Software:*

* I have started coding the main window application and have a good amount coded, I just need to put another hour or two into it and I’m sure I can get it to compile.