**ENGINEERING JOURNAL TEMPLATE**

# Date

* 15/2/2020

# Tasks

* Finding out how to map from range 0 – 12,000mm to 0 – widget size in pixels.

# Reflection

* After some further research into the mapping problem for the paintPoint function I found the equation “widgetWidth-(pointXmm / maxScanRadius \* widgetWidth) for the X point, where pointXmm is the result of the “distance\*sin(θ)”, maxScanRadius is 12,000mm and widgetWidth is the current width of the window in pixles, this equation has to be done twice, once for the X point and once for the Y point (the only difference with point Y is it will use pointYmm and widget height). This maps from the range 0 – 12,000mm to say 0 – 600 pixels if the window is 600 x 600 pixels. I then use the Qpainter to draw an eclipse at Point(X result, Y result).

# Issues:

*Software:*

* Although I have made some serious progress on the front end of things, in order to test if this works I need to get the front end working with the back end, this means I have to go back to the solution I was previously working on with both the GUI project and the LIDAR driver project in the same solution and figure out how to get them working together.

# Solutions

*Software:*

* Figured out how to map from distance in mm to the pixel width and height in the window.