Data:

# Overview:

In order to test the accuracy of this algoritm, 3 different sets of data were taken, with points identified as corners marked in blue.

Note that the corners identified on the first and last points in each scan are invalid, due to a bug with the code. This problem can easily be fixed for future usage, but for now these points should be ingored.

# Measurements:

The three scans taken are shown in figures 1-3. Each scan is an array of 360 different sets of values, consisting of magnitude, phase, angle, and a boolean identifying whether or not this angle is a corner. Figure 4 shows two different examples of this data.

Figure 1: A scan taken, with corners identified as blue

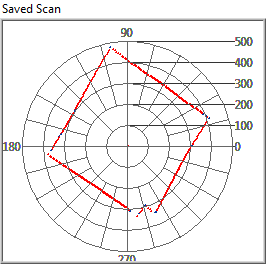


Figure 2: Another scan

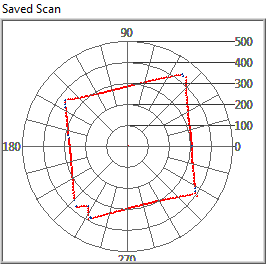


Figure 3: Another scan

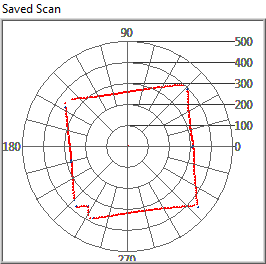
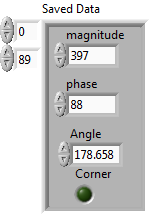
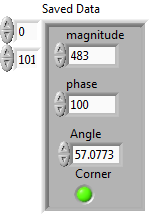


Figure 4: Two different sets of data, one identified as a corner.



# Calcualted Data:

In order to test the robustness of this method, the number of detected corners (not including the start and end points, as detailed in the previous section) will be compared to the actual number of corners (6).

Table 1:

|  |  |  |
| --- | --- | --- |
| Scan | Corners | % error |
| 1 | 8 | 33% |
| 2 | 7 | 16.66% |
| 3 | 7 | 16.66% |