Analysis of Zonar for Street Vehicles  
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The purpose of this project was to determine how quickly the Zonar data updated and create a system to pull data from Zonar and into GIS for further use.

To determine the refresh rate of the Zonar data, I wrote a script that connected to the Zonar system, then queried all Street vehicles. Each row of the data was then placed into a GIS file. Each loop of gathering the data took around 2.4 seconds, max of 5 seconds, minimum of .8 seconds, and this number fluctuated depending on how many assets were being returned.

Each row contained the Fleet ID, GPS Longitude, GPS Latitude, Heading, Speed, power status, and odometer reading. I took two samples of the street vehicles, one from 1:05PM to 1:20PM and another from 3:00PM to 3:10PM

For each entry, I calculated the difference between it and the last entry in seconds, this create a large amount of 0 values where the script was polling Zonar more frequently than the data updated. I filtered out the 0 values, then averaged them by fleet ID, giving the average observed refresh rate for each of the two samples.



Values are the amount of time in-between updates on the Zonar feed. In this chart a 0 would represent instant updates, where -60 would represent an average of one minute in-between updates.