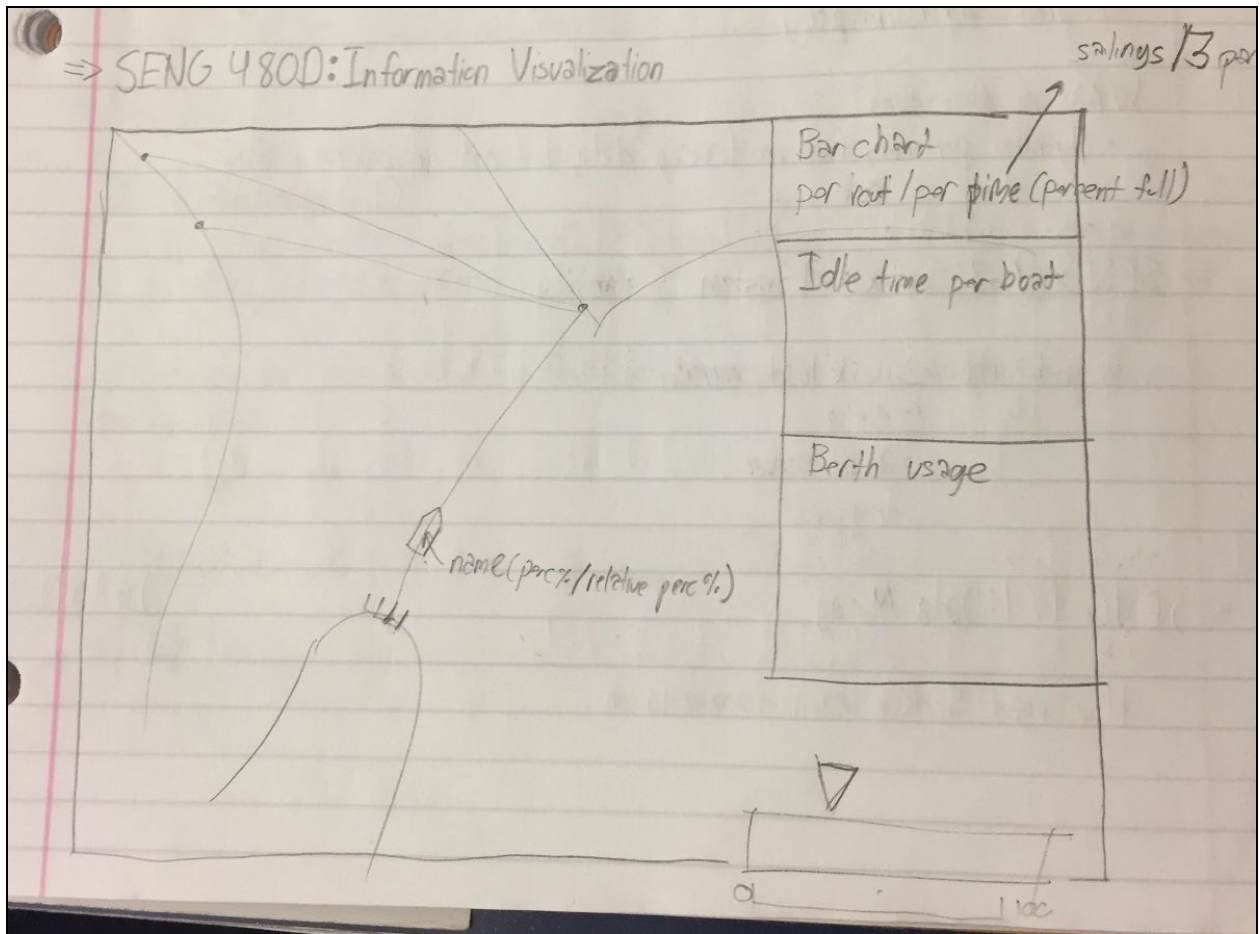# Group Activity #2

The visualization for this activity is produced to allow Seaspan to view the activity of its vessels and their load at any given moment. The above image is a mock up of how our visualization could look. We are imagining a map-view that shows where each boat is at a given time. The tool is interactive, and users can slide a slider on the bottom right that ranges between Sunday 00:00 to Saturday 23:59. It is to select the time of the week to view. Boats will be colored from red to green based on how full they are relative to capacity. On the right side of our visualization there will be extra statistics about the data.

Assumptions

For this visualization we are making a few assumptions. First is that the idle time and berth usage would be valuable to Seaspan. Another assumption is that the tool will be able to be provided real time data and update accordingly.

What-Why-How

What
This visualization is using tables as the datatype. The availability of our dataset is both static and dynamic. The static portion would be the schedule and the dynamic portion would be the boat data. Our attribute types are categorical for boats and quantitative for load.

Why
The purpose of this visualization is mostly to discover and present. The user will search for information either with a target known or unknown but the location will be known. That is, the user may want to find boats with small loads (target unknown) or to see the load of a specific boat at a given time (target known). The purpose of the query is to identify, compare and summarize. The visualization will be used to discover trends and also to recognize outliers.

How
The visualization will be arranged by using a map. Data will be aligned on the right side. Color and hue will be used to indicate the load of a given boat with red being small load and green being full load. Bar graphs that sit on top of the boats could also be used to indicate the distribution of the load between cars and people. The person viewing the tool can manipulate it by sliding the time slider on the bottom right. Boat information will be aggregated and displayed in the data on the right side.

Design Study Methodology

The design study methodology would give us a structured way to approach the problem, so we can create the best visualization for Seaspan. This process would help us to better understand the evolving problem that Seaspan is trying to solve with scheduling. We could then make some different visualizations and have a process to evaluate each one and choose the best one to suit the current needs.

Pitfalls

Possible pitfalls that should be considered are as follows:

PF-4: No real data available

Since this is just a mockup we have no idea what the actual data for this project is yet and have to work with assumptions.

PF-6: No need for visualization
It may be possible for an algorithm to be developed that could optimize the cost-efficiency of Seaspan's boat scheduling problem. However, we believe the visualization will be useful for identifying whether this algorithm should be developed or not.

PF-20: Premature design commitment; consideration space too small
It may be too early to make some of the assumptions about the data being provided. Extra clarification could change the requirements of the sort of visualization that Seaspan wants.