

Some ideas on SimCSS online interface:

There are two libraries worthy of considerations:

D3.js (<https://d3js.org>) is a JavaScript library for manipulating documents based on data. Some examples: <https://github.com/d3/d3/wiki/Gallery>

Leaflet (<https://leafletjs.com>) is the leading open-source JavaScript library for mobile-friendly interactive maps. Some examples: <https://leafletjs.com/examples.html>

D3.js will create an interface very similar to desktop client. On the other hand, Leaflet will put everything on the map interface, it is easy to support the scenarios on different geographic locations.

Suggestions: try D3.js first, or divide into two teams, one works on D3.js, the other on Leaflet.

Data: PEARC Hackathon/Business_CCUS/Scenarios/S1R42

Sources/**Sources.txt** and Sinks/**Sinks.txt** have been formatted as GeoJSON;

GeoJSON is a format for encoding a variety of geographic data structures in JSON.

Sources.geojson

```
{ "type": "FeatureCollection",
  "crs": { "type": "name", "properties": { "name":
    "urn:ogc:def:crs:OGC:1.3:CRS84" } },
  "features": [
    { "type": "Feature", "properties": { "ID": 1, "costFix ($m)": 0.0,
      "fixO&M ($m/y)": 0.0, "varO&M ($/tCO2)": 65.0, "capMax (MtCO2/y)":
      15.0, "capFctr": 1.0, "LON": -87.7659, "LAT": 38.3689, "NAME": 1,
      "CREDIT": 0.0, "#GenUnts": 1, "ID_1": 1, "ID_2": 1 }, "geometry": {
      "type": "Point", "coordinates": [ -87.7659, 38.3689 ] } }
  ] }
```

Sinks.txt

```
{ "type": "FeatureCollection",
  "crs": { "type": "name", "properties": { "name":
    "urn:ogc:def:crs:OGC:1.3:CRS84" } },
  "features": [
    { "type": "Feature", "properties": { "field_1": 1, "field_2": 1, "field_3":
      88.49, "field_4": 0.0, "field_5": 0.0, "field_6": 88.493, "field_7": 0.0,
      "field_8": 0.0, "field_9": -6.72, "field_10": 0, "LON": -88.3261, "LAT":
      38.5645, "field_13": 0, "field_14": 0, "field_15": 0, "field_16": 0,
    } }
```

```
"field_17": "Clay City Consol.", "ID": 3, "field_19": 384466, "field_20": 4269288, "field_21": -6.72, "field_22": -1.09, "field_23": 18.32, "field_24": 88.49, "field_25": 57.08, "field_26": 25.66 }, "geometry": { "type": "Point", "coordinates": [ -88.3261, 38.5645 ] } }, ...
```

GeoJSON support reference: **d3-geo** (<https://github.com/d3/d3-geo>), GeoJSON on leaflet (<https://leafletjs.com/examples/geojson/>)

Scenarios/S1R42/Results/PEARC_Hackathon.1531846206038/shapeFiles/Networks.shp is also converted into **Network.geojson**

Networks: PEARC Hackathon/Business_CCUS/Scenarios/S1R42/Network
Delaunay Network is defined in **DelaunayPaths.txt**

```
# Selected node pairs
SINK 20 SINK 17 29329 32623
SINK 40 SINK 37 26944 32449
SINK 13 SINK 41 24231 24922
SINK 25 SINK 41 24488 24922
SINK 19 SINK 37 22341 32449
SINK 10 SINK 2 13502 19017
SINK 35 SINK 20 28024 29329
SINK 5 SINK 9 30187 31519
SINK 34 SINK 17 32416 32623
SINK 32 SINK 23 21356 32165
SINK 25 SINK 8 24488 24937
SINK 32 SINK 13 21356 24231
SINK 23 SINK 17 32165 32623
SINK 12 SINK 9 28661 31519
SINK 4 SINK 18 9275 14809
SINK 7 SINK 41 22715 24922
SINK 23 SINK 39 32165 35954
SINK 35 SINK 34 28024 32416
SINK 33 SINK 30 17680 20752
SINK 26 SINK 23 18045 32165
SINK 16 SOURCE 1 18380 19031
```

Sink ID is defined in Sinks.geojson, you will be able to get coordinates and draw a line to connect two points.