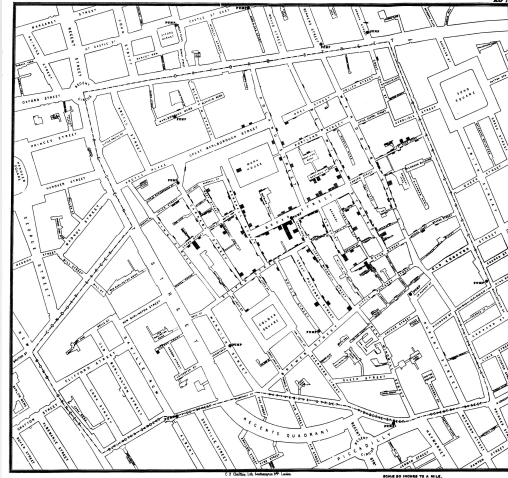
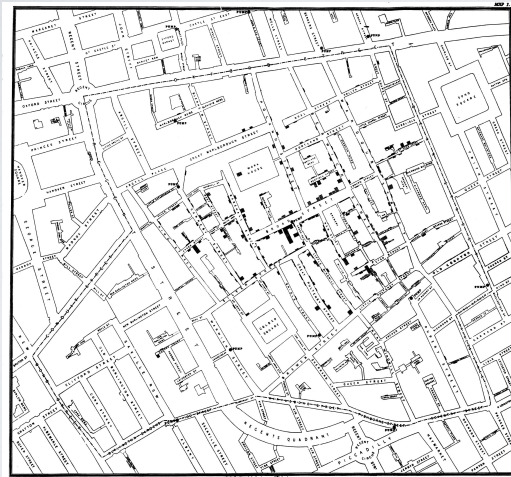


MAPS



Snow - Cholera Map

SNOW MAP



London - Cholera Outbreak

John Snow

1854

SNOW MAP



SNOW MAP



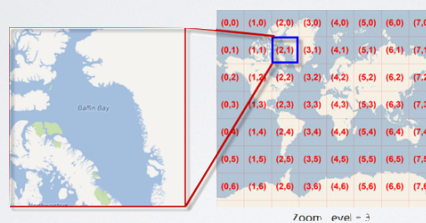
SNOW MAP



Broad Street Water Pump

GEO TOOLKITS

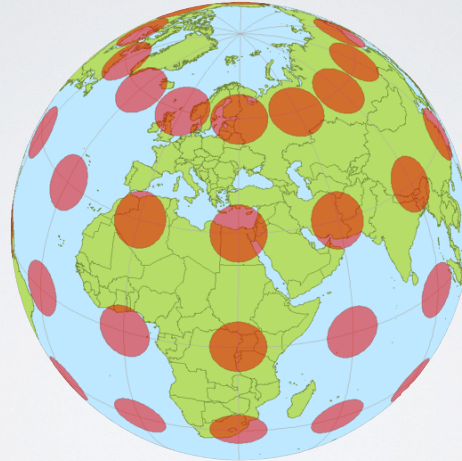
- Leaflet.js (namespace is L)
 - The leading open-source toolkit for interactive maps
 - Google, Bing, etc. have map engines but Leaflet.js is *free!*
 - Leaflet.js is just the engine - you provide the data (tilesets, GeoJSON, lat/lon pairs, etc.)
 - Tilesets are underlying images of a map (512x512)



- turf.js (namespace is turf)
 - An advanced geospatial Javascript library that allows you to perform spatial operations in the browser

GEOGRAPHIC PROJECTS

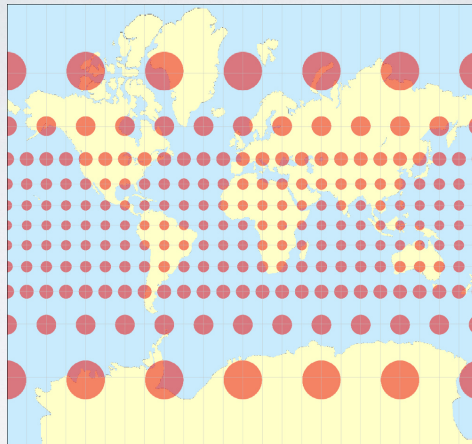
3D Sphere Rendering



[By Stefan Kühn - Own work, CC BY-SA 3.0](#)

GEOGRAPHIC PROJECTS

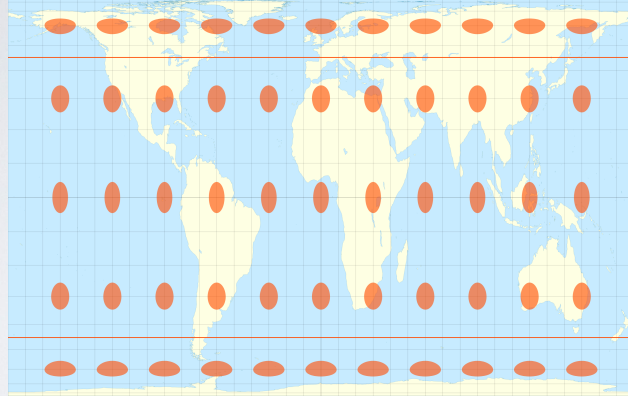
Spherical Mercator (Google/OSM Projection)



map-projections.net

GEOGRAPHIC PROJECTS

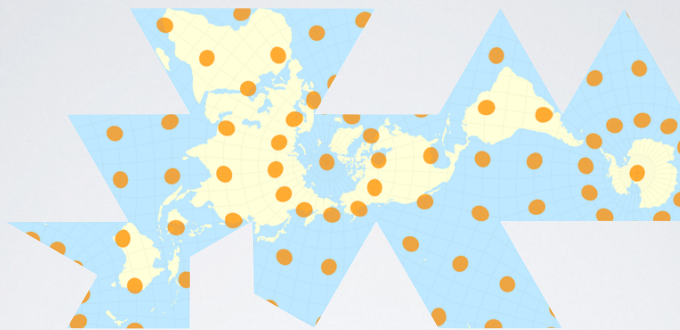
Galls-Peter (equal area)



By Eric Gaba - Own workData : U.S. NGDC World Coast Line

GEOGRAPHIC PROJECTS

Fuller (icosahedron)

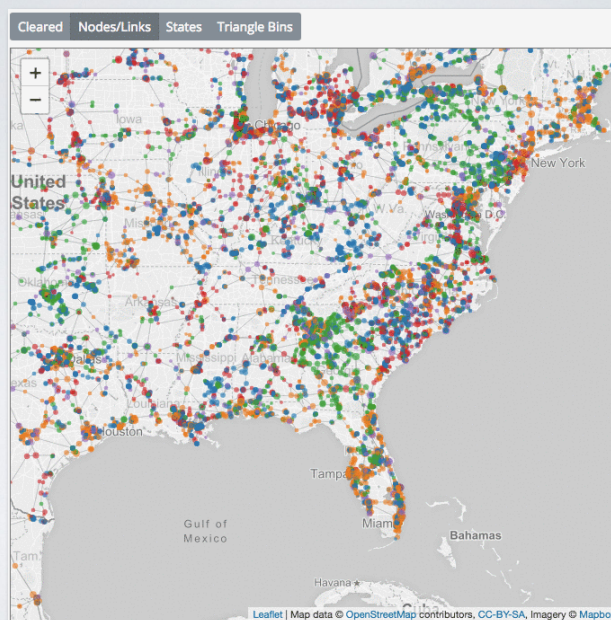


wikiwand.com

D3-GEO

- Support for different projections (e.g. AlbersUSA)
- d3.geoPath supports drawing geo-shapes
 - Point - a single position
 - LineString - an array of positions forming a continuous line
 - Polygon - an array of array forming a polygon (possibly with holes)
 - Feature - a feature containing any of the above geometry objects
 - FeatureCollection - an array of feature objects
- Also contains some basic spatial operations (but turf.js is better)
- GeoJSON
 - JSON format for geo-shapes
- TopoJSON
 - Minified GeoJSON that is useful for the web

TODAY'S ACTIVITY



LAB PROCEDURE

Before Class

- Read Chapter 10 in Interactive Data Visualization for the Web by S. Murray
- *Git pull* example code (<https://github.gatech.edu/CS-4460/Labs.git>)

In-Class

- Open Lab 10 page (<https://github.gatech.edu/CS-4460/Labs/wiki>)
- Work through activities
- First things first, start an http server with python at 10_lab directory

After Class

- Submit “main.js” to the “Lab 10” T-Square assignment
 - Only submit that one file - Deadline is **1:15 PM Today**
- P5 Deadline - **11:00 PM Tonight (no extensions)**