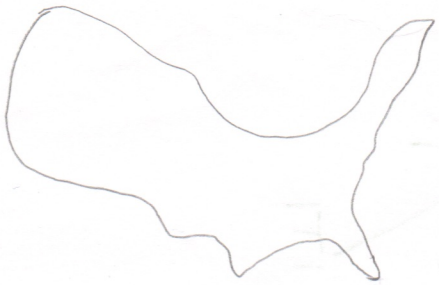
BMI 706 Visualization Project / Five Design Sheet Methodology

By Chen Dong

Ideas

① US Map.



② Distribution for each pollutant

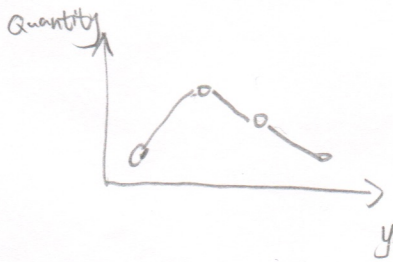
Graph by State

County

Filtered by Pollutant

year

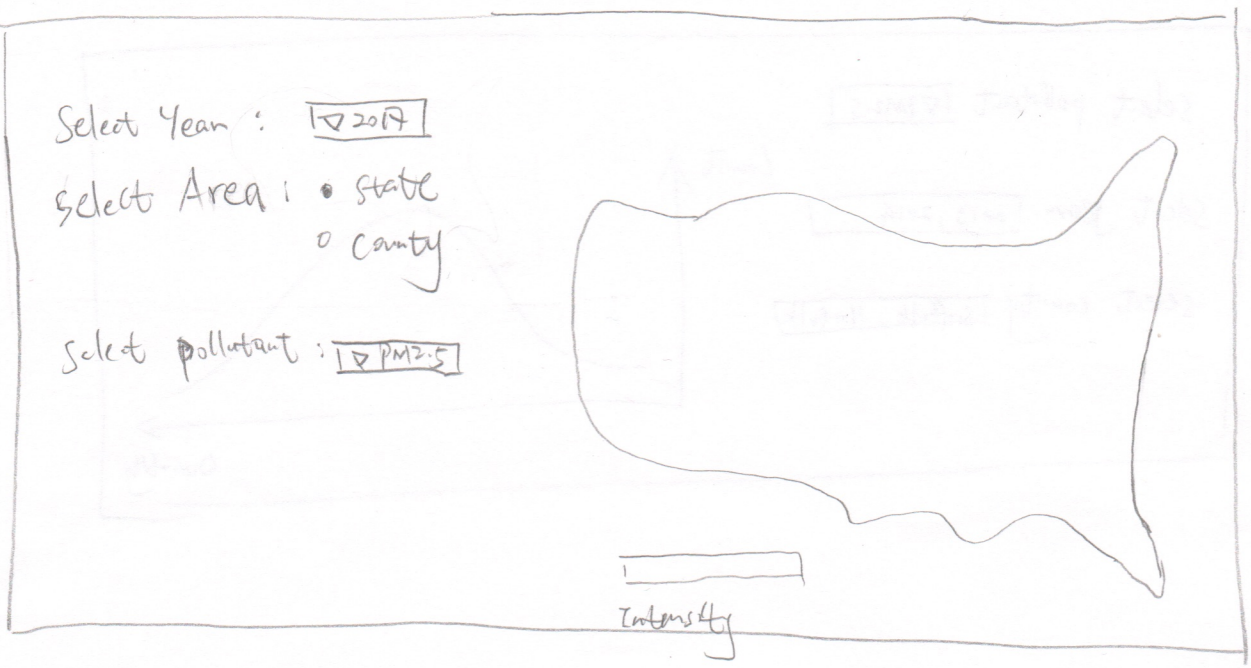
③ Time series line plot for each pollutant



Use Multiple Select

Design 1

Layout



Task

- View US map of specific pollutant in certain year in region of choice

Operations

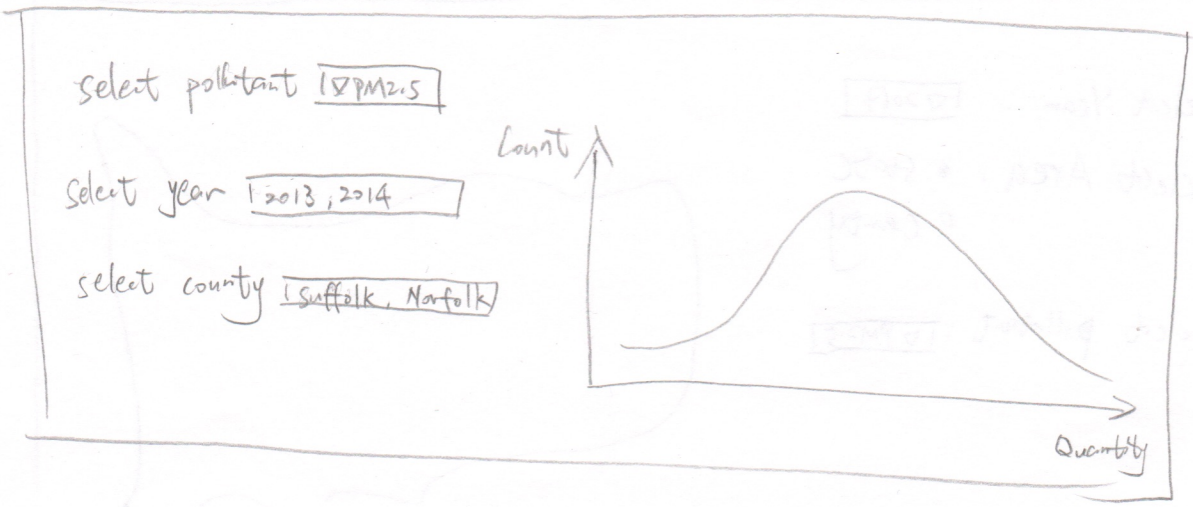
- select year, region and pollutant.
- mouse hover to see value

+ : - clear map view

— : - no trend view

Design II

Layout:



Task

- view individual pollutant's distribution by year and county

Operation

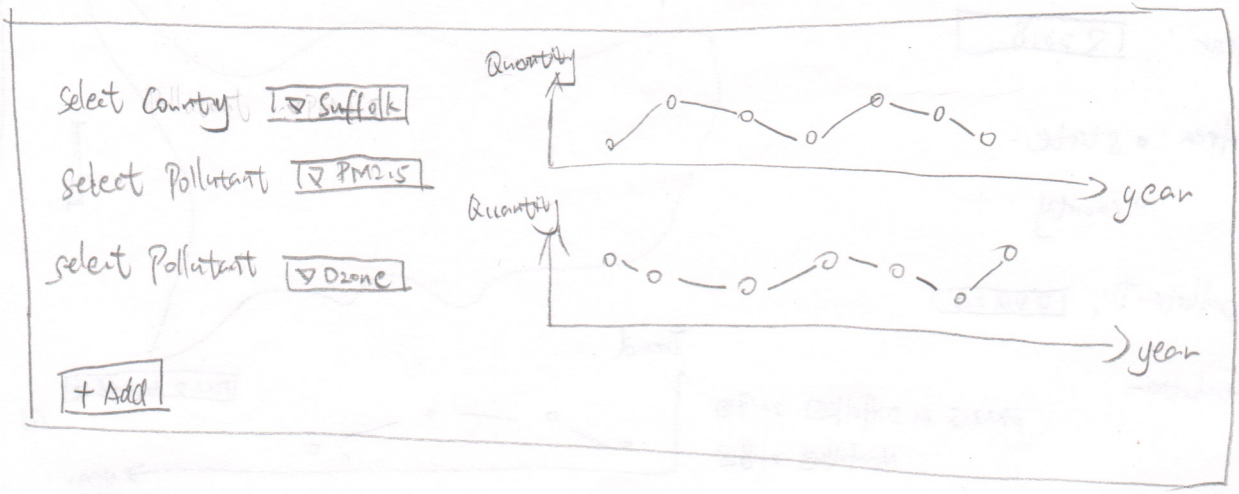
- select pollutant, year, county
- hover mouse to see specific value

t: - clear distribution of pollutant of multiple years and countries

-: - no comparision of years or countries

Design III

Layout



Task

- View pollutant trend across years of specific county

Operation:

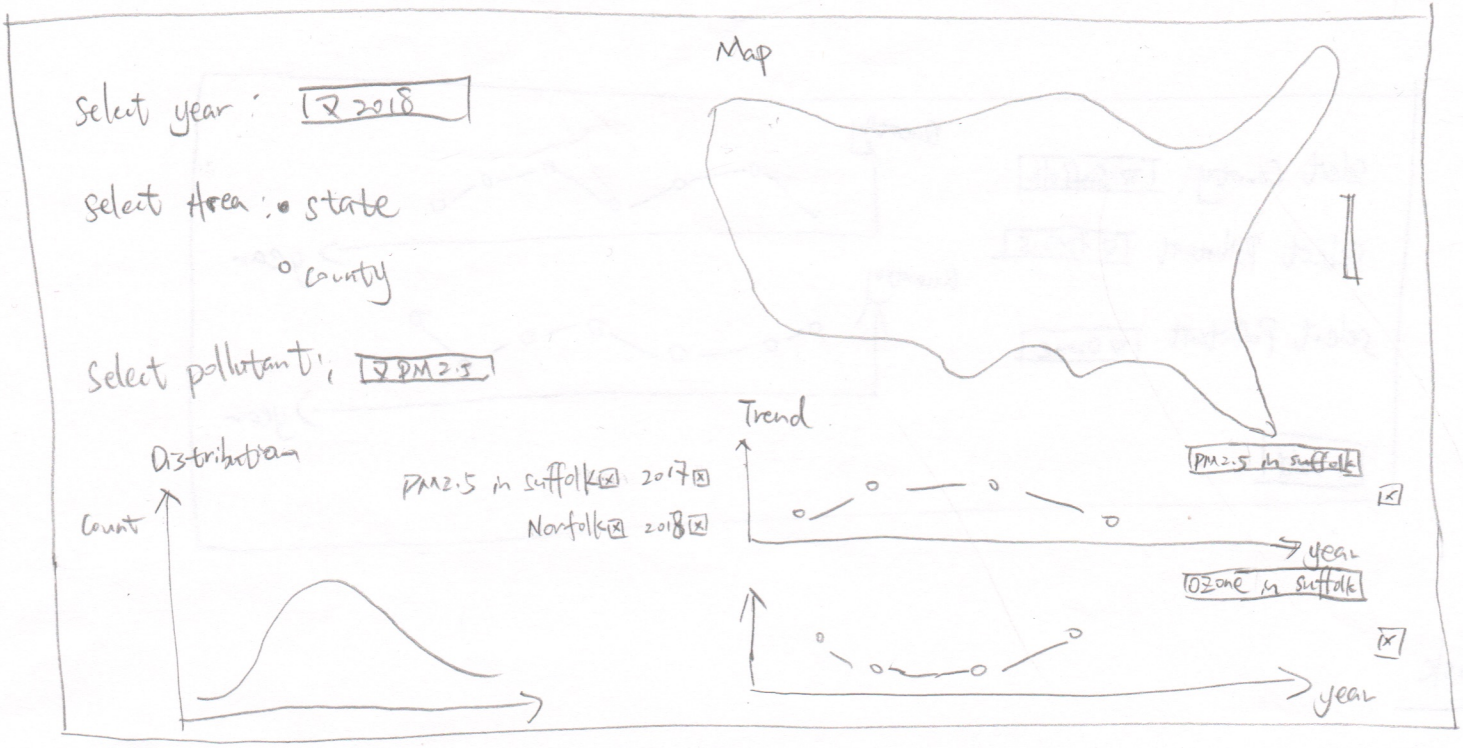
- select pollutant, county
- add another trend line plot
- mouse hover to see specific value

t: - compare trends of different pollutants

=: - no view of multiple counties

Realization

Layout



Details

- combine previous three designs
- mouse hover on the map to show distribution of the pollutant in that region
- mouse click to lock in distribution and add a trend plot of that pollutant across years in the region
- clicking multiple regions or years of the same pollutant adds the distribution to previous distribution
- subtract the distribution by clicking [x]