Final Presentation

One World Selter

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Intro to Project (1/2)

- Goal
  - From our perspective
    - Create visualizations to show how much our community partner has contributed to the improvement of shelter conditions for children around the world
  - From our client's perspective
    - Attract more donors, using our visualization

Intro to Project (2/2)

- What we have tried so far
  - Create visualizations in Tableau
    - But, this was not exactly what the community partner expected us to do...
  - Create visualizations in D3
    - From draft
      - Threw away the visualizations above, but kept the idea (i.e., combine different charts into one)

Approach

- Combine Geomap with other charts
  - Use the map as the UI
    - Click countries (= zoom-in), then show details
  - Work well if …
    - Enough data is available
      - Easy to see in which something happens at a glance
    - Data and the visualization will be updated
      - Easy to associate data with new countries
      - Relatively easy to change chart types
        - Since charts are independent from the UI

Demo

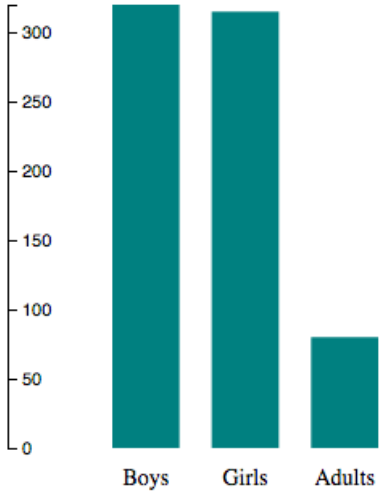
- Demo time!

Methodology (1/3) - Things implemented

1. Map (to show partners in different countries)
    - Possible alternative: List
        - Pros: Easy to implement (since only use text)
        - Cons: More data = May need a page navigator
    - Implemented
        - Tooltip to show an overview, Zoom-In, Zoom-out
    - Not implemented
        - Place barcharts in a country, not right side
            - Some countries are too small to show charts

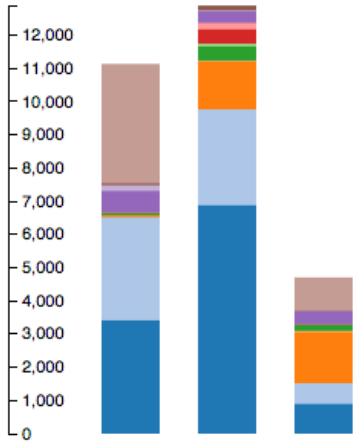
Methodology (2/3)

2. Bar charts
   - Alternatives: n/a (...?)
     - If values had been ordered by time, we would have used a line chart
   - Implemented
     - Vertical Bar charts
   - Not Implemented
     - Horizontal Bar charts
       - In order to show the map (UI) bigger



Methodology (3/3)

3. Stacked Bar Charts
   - Alternative: Grouped bar charts, multiple bar charts
     - Pros: Easy to compare each value
     - Cons: Difficult to fit in a limited space
   - Implemented
     - Vertical Stacked Bar Charts
   - Not Implemented
     - Horizontal Stacked Bar Charts
       - Same reason as bar charts

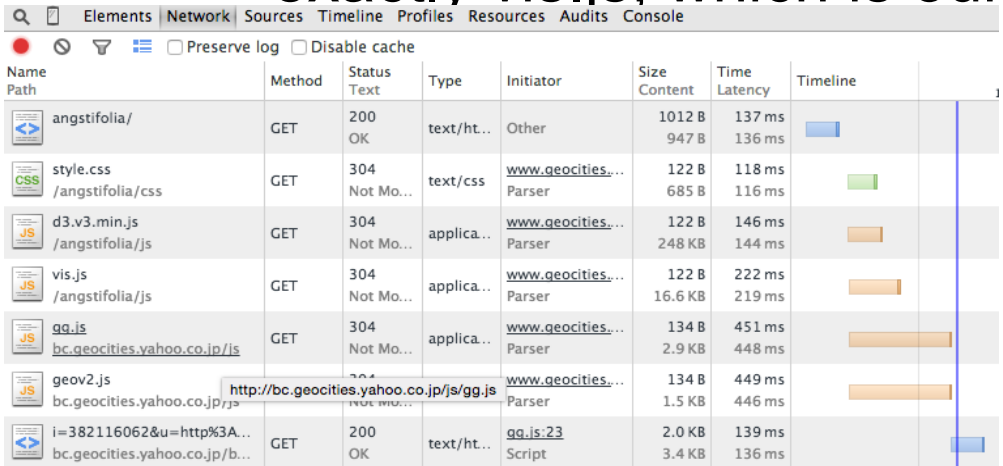


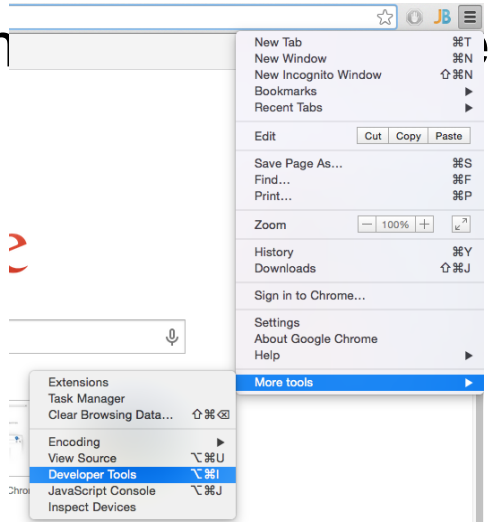
Result

- Success = how much the community partner is satisfied
  - Good Feedback from it:
    - **“this is wonderful to see. I love the map and the bar chart at the side.”**
      - Better than expected!
    - Still, a few points are being fixed (e.g. reduce the number of categories to show)

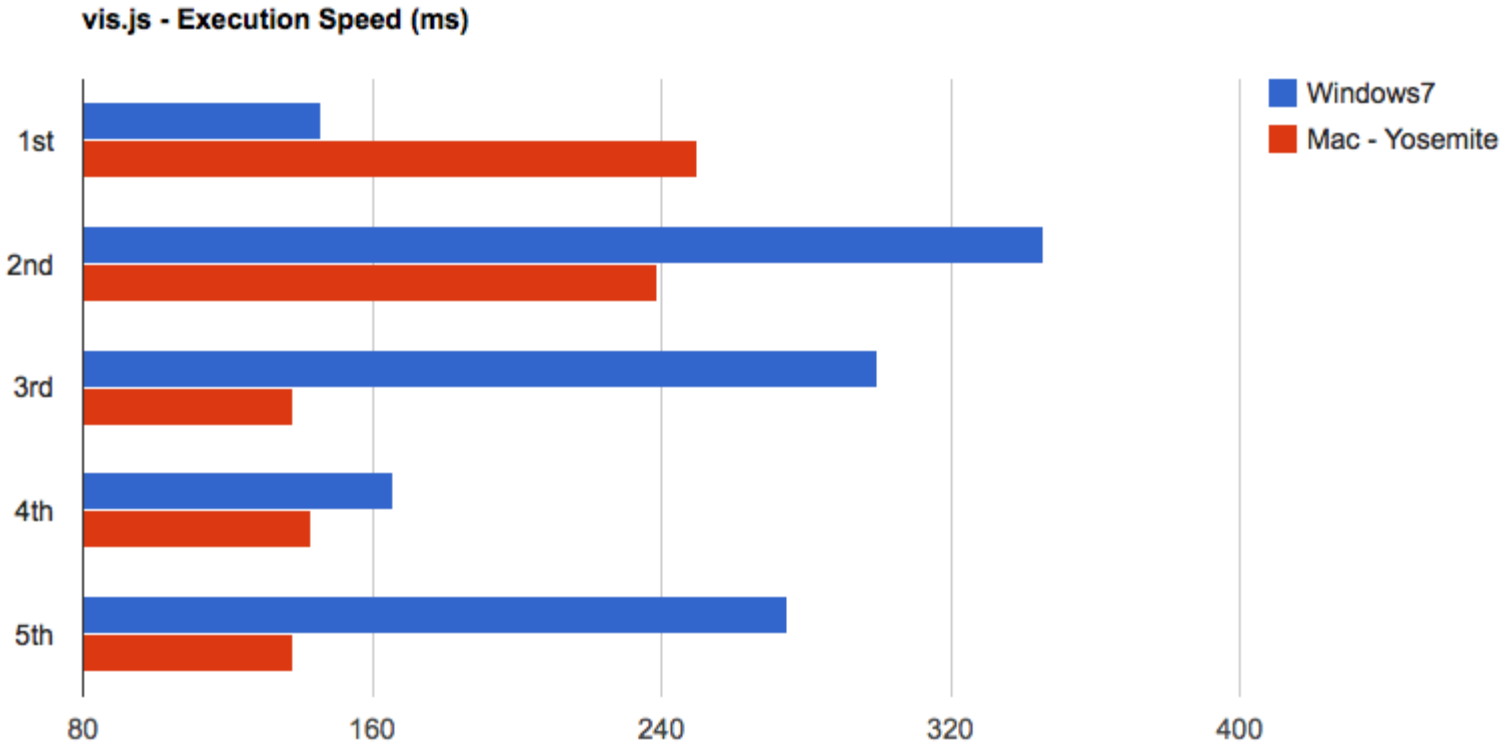
Experiments (1/3)

- Experiment on Performance
  - Used the latest Chrome and Chrome Developer Tool
  - Timed how many seconds our visualization (more exactly vis.js, which is our m) takes





Experiments (2/3)



Experiments (3/3)

- What those results mean?
  - All less than 0.4ms, fast enough
  - Since our implementation relies on vis.js to add/manipulate DOM elements and show visualizations, the performance speed will be high
  - Probably, the size of the data contributes to the performance (i.e., small data does not take much time)
  - Yet, additional optimization is possible

Discussion (1/3)

- Is our visualization promising?
  - We hope so, but it is not clear unless real users evaluate it
- Possible better or different approaches…?
  - Bigger Map, incorporating charts totally into it
  - Multiple charts, instead of the integrated one that we made

Discussion (2/3)

- What we learned from this project
  - Should not assume something about our client
    - The client is not necessarily familiar with the computer and programming
      - It's probably best to avoid use of technical terms when to ask about the project, and report the progress
  - Should think about how our visualization will be used
    - Is the design flexible enough to match with different web pages?

Discussion (3/3)

- If we could start the project again, we would have some samples (written on paper or in D3) to show to the community partner
  - So, we would be able to delineate what it exactly wanted

Conclusion

- Communication with the client can be more important than coding
  - Miscommunication can happen
  - Ask before coding
    - this can save your time

Thanks!

Questions?