Data Visualization (COM-480) - Milestone 2

One map to view them all

Map of the Third Age of the Middle-earth displaying mountains, peaks, forests, lakes, roads, cities and fortresses. Current map implementation use wheel scroll to zoom. Search bar (aka Google maps), zoom buttons and possibility to show waypath of characters can be added. Map is visualized purely in d3, turf and jquery. Lecture about maps will be used.
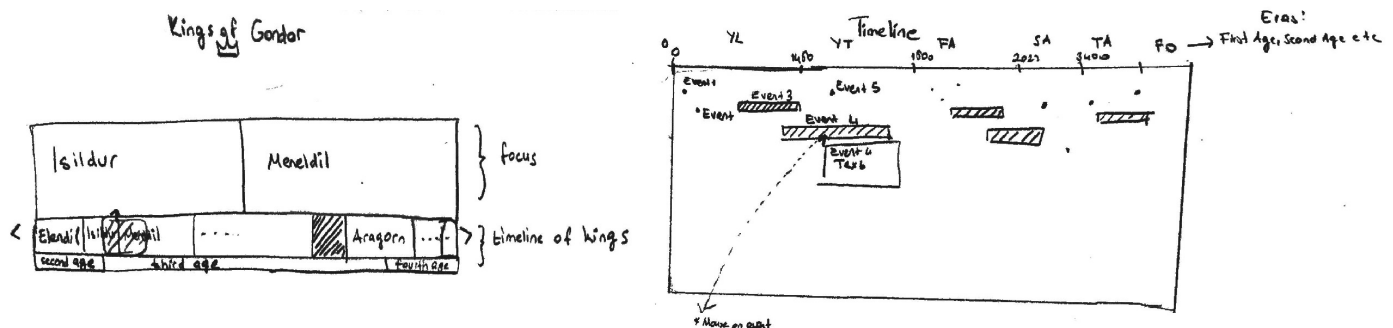

Interactive Timelines

For this part we are planning to visualize the major events in the history of Middle-Earth, and timeline of the kings of Gondor. The lectures on the subject data and interactivity will be used, and we will be using d3/typescript for the visualizations.

- **Kings of Gondor:** There will be a single continuous time bar where each stack's length represents the rule time of the respected king. Also by using d3 brush/focus to make it interactive.
- **Events in Middle-Earth:** We are planning to visualize all of the major events in Middle-Earth. Since, event descriptions can be very long, we will show only some part of the text. However, if the user clicks on the event he/she can see the details of that event. Again, for this part we are planning to use d3.

Extra ideas: For the events part we can add search for the main characters and visualize the events related to that character, we can put vertical timeline next to character's image/pixel art etc. Also similar logic may apply to regions, we can show events happened at a certain region by clicking that region on the map.

Chord diagram for movies

The chord diagram is displaying the main characters and their appearances in three movies. We used d3.js circles and paths for the main visualization. We are planning to extend this visualization with the followigs:

- **Character Panel:** When the character chord is hovered/clicked, new panel in the top right will be appeared. It will be divided into two parts.
  - *Character info:* Left part will show general character information - name, race, gender, pixel art image, timeline for the character, and the movies it appeared.
  - *Relationship with others:* Right part will display the graphical relationship information for the character with others. We am planning to use d3.js force directed graph.

- **Movie Panel:** When the movie bubble is hovered/clicked, new panel in the bottom right will be appeared. It will also be divied into two parts.
  - *Main characters* Left part will display the main characters with bubble visualization, where size of bubble will show number of lines for the character in the movie, and the background of the bubble will be the image for the character.
  - *Character relationships* Right part wil show the character interaction graph. We will use force directed graph here as well. The color of the node will the respective race. And the thickness of the edge will show the number of dialogues for two characters.