

IGR204 - M2 PROJECT DESCRIPTION

Groupe M - Télécom ParisTech, Mastère BGD

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Design document

In this project, the data available are related to first names given in France between 1900 and 2016. The data come from two different databases : the first one is based on first names in France, whereas the second one provides the first names for each department. We use the databases (état civil) from this page : <https://www.insee.fr/fr/statistiques/2540004#consulter>.

Our main idea is to get a feeling about the evolution of names through time, or compared to each other, or related to a specific department. This is why we would like to focus on three different types of design ideas.

Comparison of the number of names

The first design (figure 1) we suggest would display on the X-axis the time, and on the Y-axis the number of names. This would allow us to see the evolution of names through time, and see for example if a name becomes more popular or not. Ideally it could be possible to select a few names, for example 5, for men, women or both, and plot simultaneously on the same graph the proportions. The advantage of such a graph is that it is easy to understand, but the drawback is that it is limited in terms of number of names we can select. Otherwise the graph loses its interpretability if too many lines are plotted at the same time, or if the scale of each name is totally different. We could imagine an user interface in a search box giving the options to type down with auto-completion a few names, also we could display a selection of popular names.

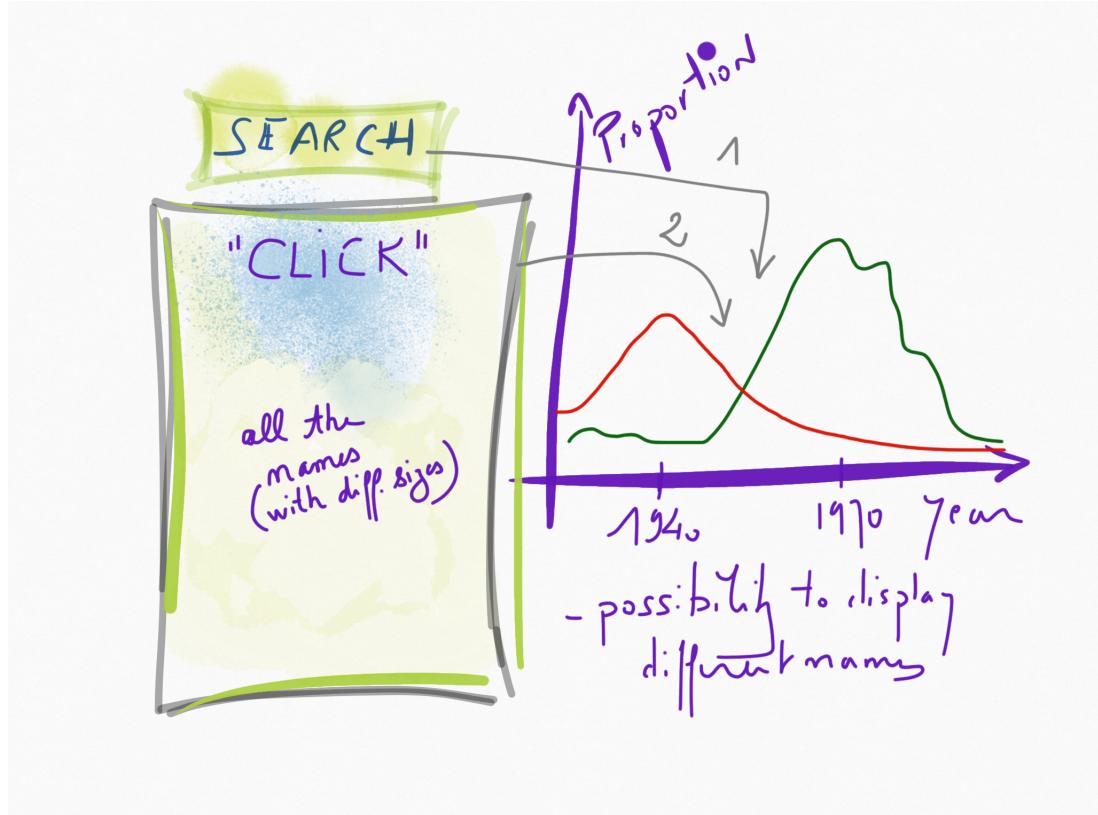


Figure 1: View 1 - Comparison of the number of names

Comparison of proportion of names to each other (Bubbles chart)

The second design idea we suggest (figure 2) is actually based on the a visual comparison of the names compared to each other. The way we think of this is as follows : for a given year, we would plot different bubbles corresponding to a name, where the size of the bubble would be proportional to the proportion of the name. The bigger the bubble, the more frequent the name is this year, and conversely the smaller the bubble, the less frequent the name is. We could add some parameters that we could select : for example, having the option of selecting only the top 100 names, or selecting only the names of men or women, or both... Although we are not as restricted as the precedent graph with the numbers of names we can display: this bubble chart allows us to display more names. We could even imagine that when we move the mouse to a specific name, the actual number of names given this year would appear. Another option would be to add a color that shows the relative increase of the name proportion at the selected date. The advantage we see in such a design is that it is visually convenient to compare proportions to each other. We will add a slider to be able to see the name frequency shift through time. The drawback is that we lose the time dimension as we get only a snapshot for a given year, but we could answer this issue by including a cursor that will enable us to navigate through time by reorganizing the bubbles size within the year.

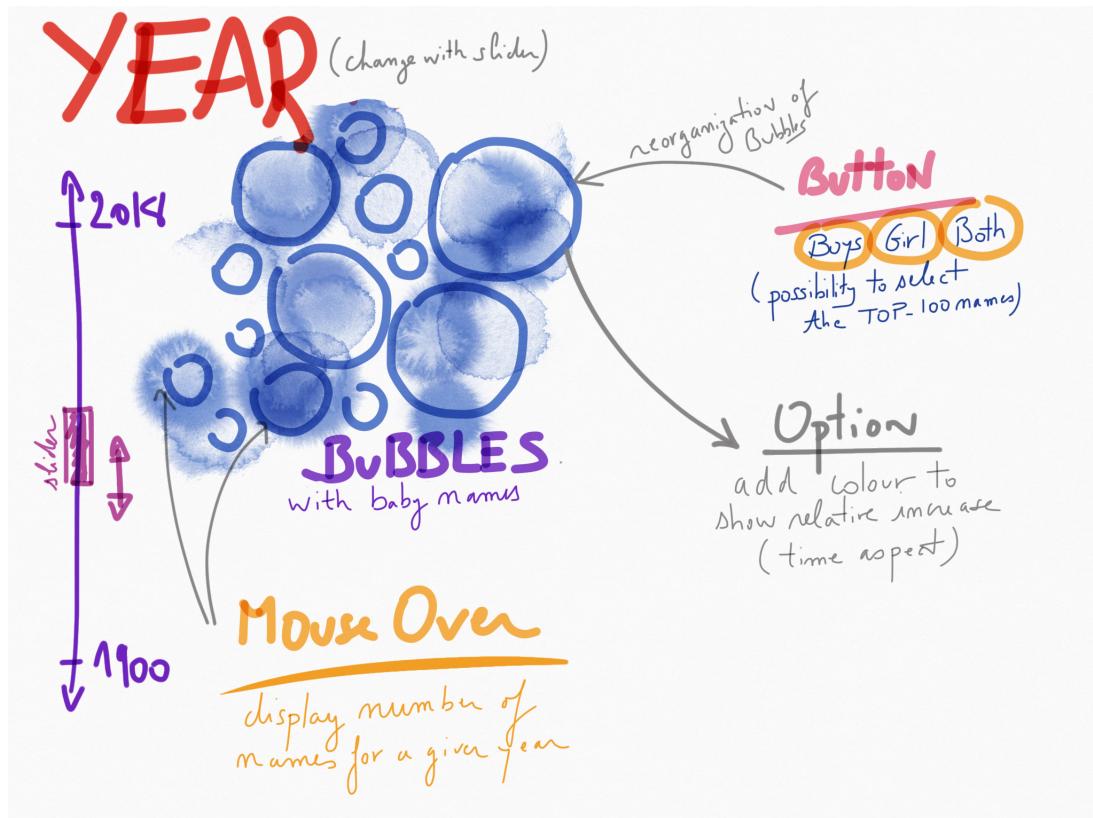


Figure 2: View 2 (bubbles chart) - Comparison of proportion of names to each other

Comparison of the names frequencies on the map of France

For a given year, the user will be able to enter a name and accordingly the map of France will display by color the proportion of this name in the different departments (figure 3). The color could be ranked by proportion, with a color gradient. The advantage is that this graph is easy to understand and provides a very simple comparison between departments. The drawback is that we can not easily compare these proportions from one year to another.

Final design chosen

The final graph (figure 4) we would like to work on is based on the following canvas:

- the bubble chart displaying the names
- when we move the mouse on a specific name, a secondary window would be displayed with the map of France and the corresponding gradient color

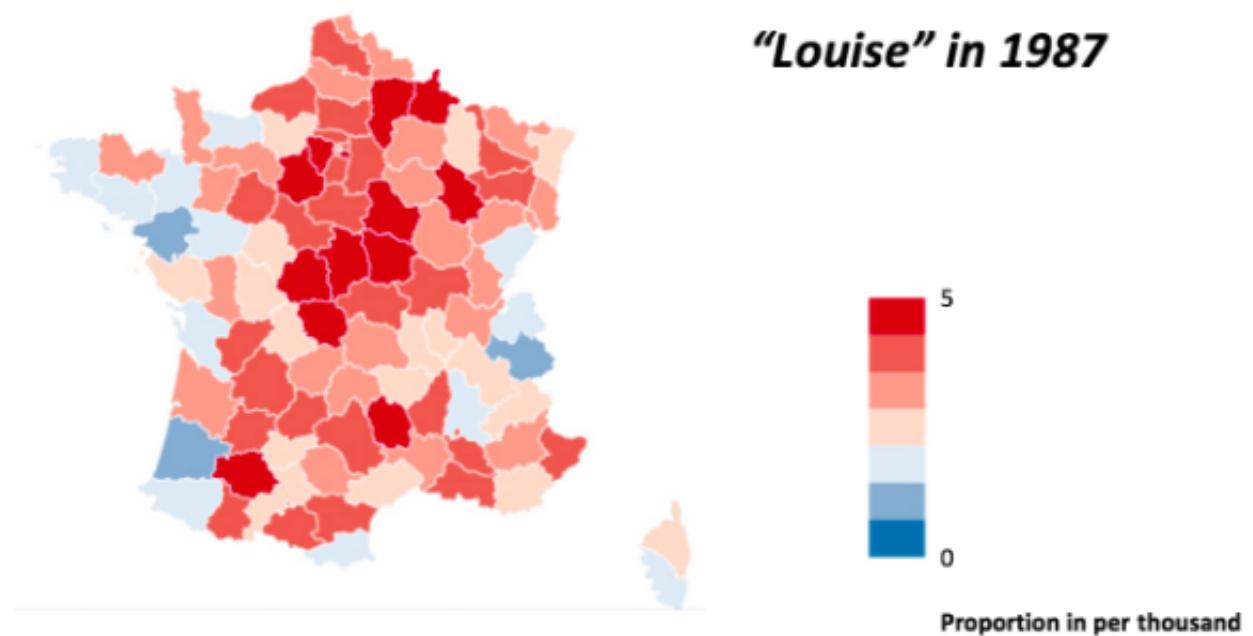


Figure 3: View 3 - Comparison of name frequencies on the map of France

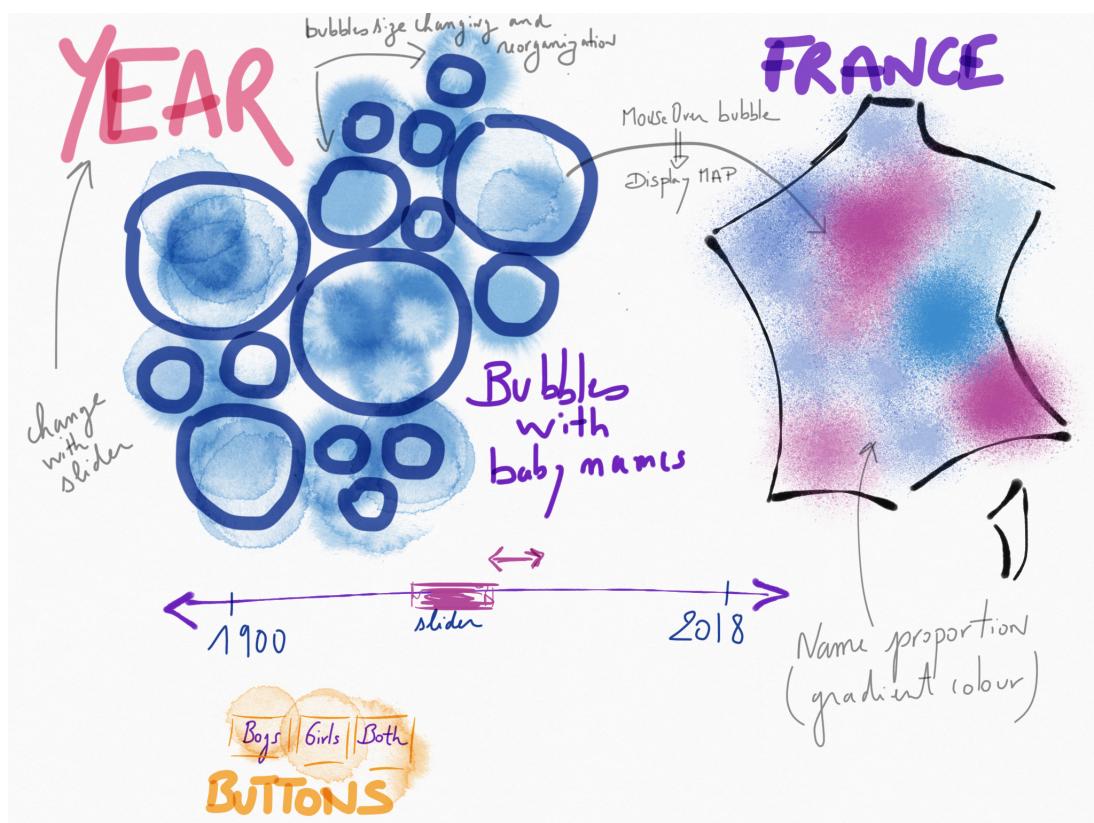


Figure 4: Final View - Final design chosen