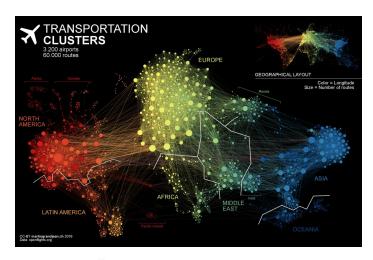
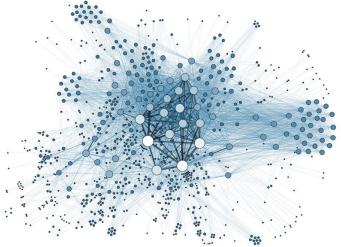
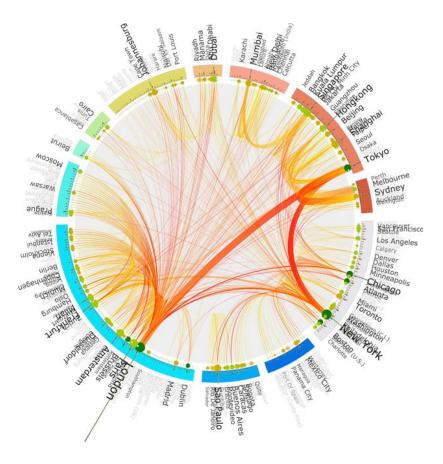
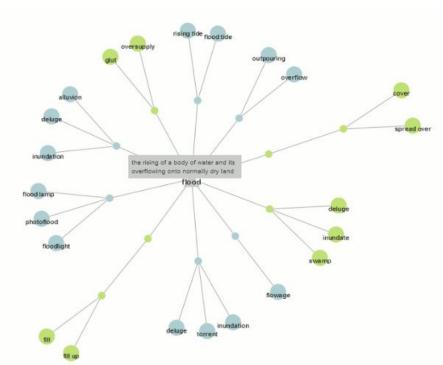
Ideation process

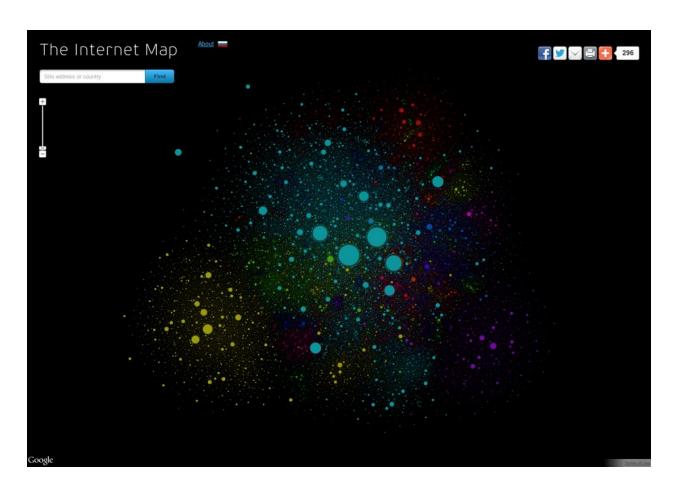
Before we get started, we did research on the existing visualisations of vocabulary/synonyms and words. These visualisations inspired us to the solutions which we present in sketches and brought our minds into some ideas. Also, we used some specific features from visualisations which we have found and implemented them in our final solution. For example, the path of the explored words. Several examples from our research process are:



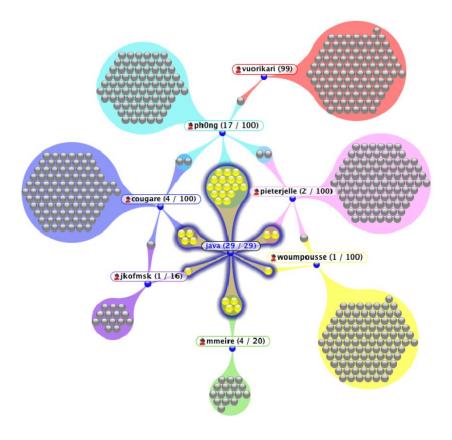


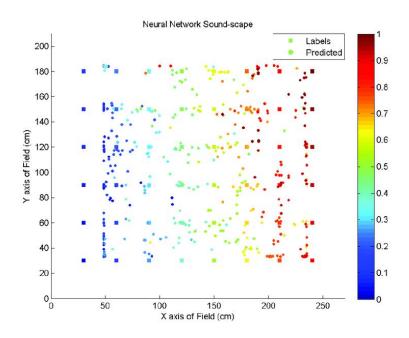






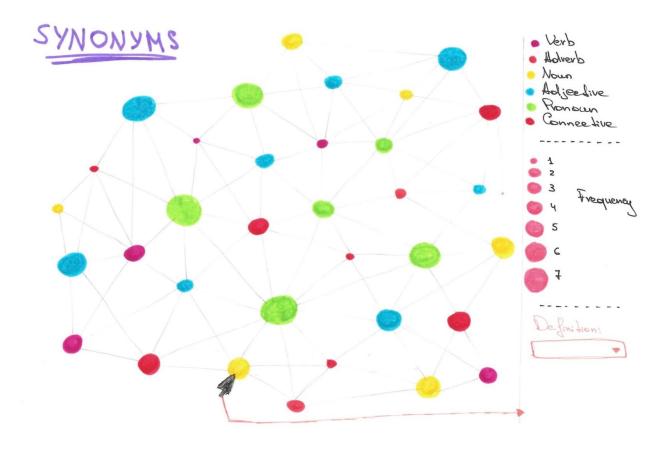




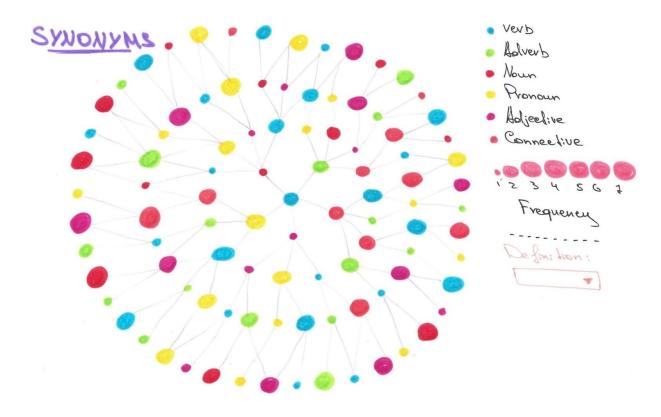


Sketches

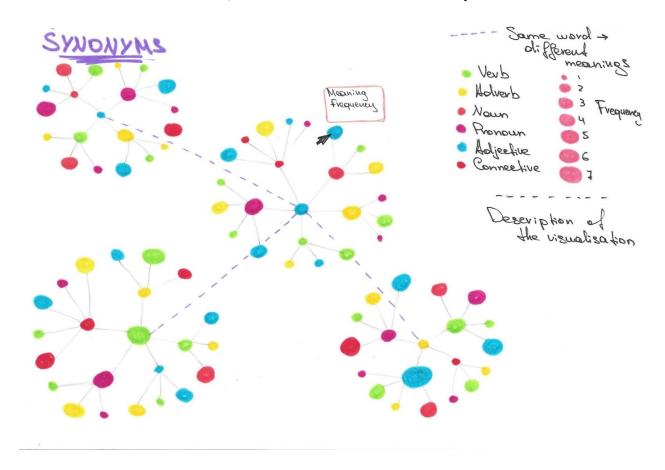
In the beginning, we thought that the best way to represent our data would be a network with all words on the screen. The user might start exploring the visualisation by clicking on the nodes or moving them around. All words will be connected to each other according to the similarity level. However, the issue with that solution was that it might be impossible to read words in the network as they may overlap each other. These thoughts brought us to other solutions.



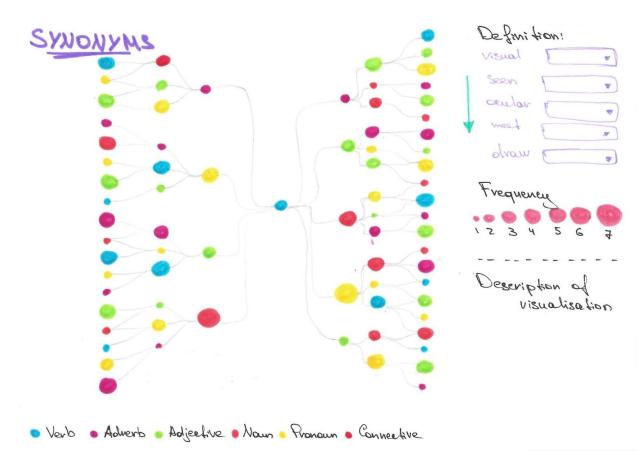
The second idea was to start from the one word instead of showing all words together and expand nodes in a circle shape. It makes visualisation clearer and easier to read. However, it's not clear and obvious when we should stop in expanding the network, at which level of synonyms we should stop in order not to make it too complicated to read? There is no answer to this question. So, we decided to think about different solutions.



This solution complements the previous one, but the main difference here is that it shows at the same time all meaning of the one word. But after scanning our dataset we found that a lot of words have more than six different definitions. In this case, the visualisation will start to look messy and unreadable.



This sketch was made in order to solve the problem of the illegitimacy of the visualisation. It seemed to us that creating a strict structure of the page and visualisation will solve the majority of the problems. However, in this case, we faced the problem which we had in our solution two. When should we stop in expanding the nodes?



All these solutions and thoughts brought us to the final decision which we have implemented. We decided to keep the idea from solution two and start with the one word. However, instead of expanding all synonyms of the synonyms, we agreed on expanding synonyms only of the one word. But if the user wants to learn about a different word or explore a synonym of the initial word, by clicking on the node or searching in the search bar he or she will be able to do it. This solution seems to us the most readable and clearest in terms of understanding and ability to work with it.

