

Use Case

Visual Mapper

The visualization and traversing of semantic knowledge graphs supported by speech recognition is a very innovative solution approach for working with knowledge assets. It can significantly improve e-learning systems. The PoolParty application "Visual Mapper" demonstrates how learning of the future can look like. The Visual Mapper is a JavaScript library offering an easy to configure graph displaying data relations in a user-friendly way. Combined with Google Chrome's Web Speech API, it allows you to browse through semantic data by voice.

The challenge

Finding a graph type capable of interactively browsing through a SKOS thesaurus was a very unsatisfying task. The graphs were either confusing and really complicated to use or not able to display the complex data relations in a reasonable way. The graph closest to our needs was the Relation Browser created by Moritz Stefaner. As it is Flash-based, lacks configuration, is difficult to style and requires all data as an XML-file instead of loading required data on the fly, this isn't a future-proof solution. A more flexible and configurable technology solution was in demand in order to build a foundation for innovative end-user applications.

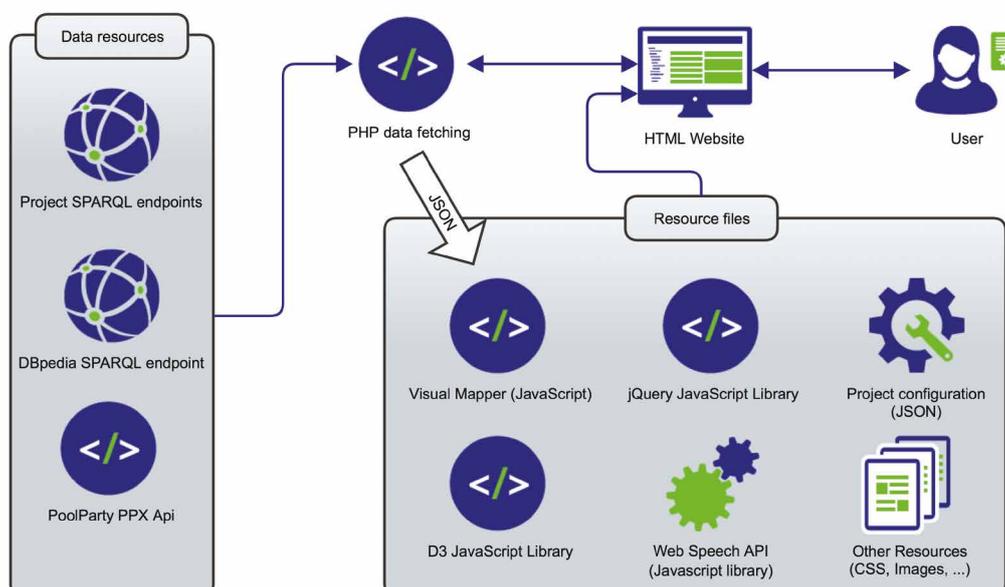
The solution

The solution is a circle based graph type, where all the related concepts of the currently displayed URIs are grouped by their relation types. Each of these groups are ordered by the complexity of their concepts. The relation types of each of the concepts and

their percentage distribution are also visible without any additional operation required by the user. Every click on a concept loads its data on the fly from a specified data source and displays and replaces the current chart data with the returned JSON data.

The results

The Visual Mapper is not only capable of displaying SKOS thesauri but any form relationship data, as long as every data point has its unique identifier. The Visual Mapper offers listeners for most of the actions happening inside the graph, a set of methods to control the graph through your own JavaScript code and a wide variety of configuration parameters to make the graph work and look like you want it to. The integration of speech recognition provided by Google Chrome into the Visual Mapper is currently still a at the start, but the faster and more powerful the Web Speech API gets, the more possibilities we have to make it interactively browse through datasets.



Visual Mapper architecture

Project insights

How to develop semantic intelligence

STEP 1: DATA RESOURCES

Use an existing dataset (e.g. DBpedia) or create your own project using PoolParty Thesaurus Server.

STEP 2: PHP DATA FETCHING

Offer an endpoint providing the Visual Mapper with all the data it needs in the correct JSON format. Additional properties are allowed and make it possible for you to add any additional behavior to the Visual Mapper using one of the provided JavaScript listeners.

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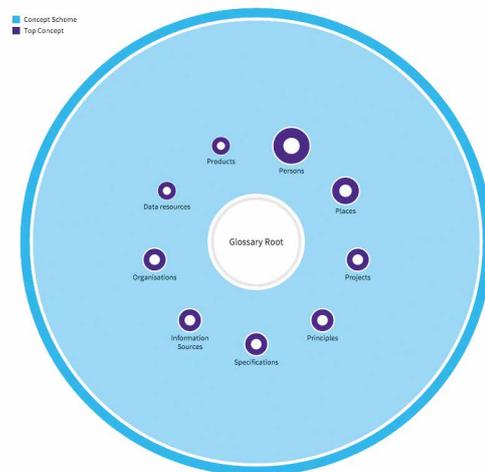
```

STEP 3: VISUAL MAPPER

Create an HTML website for your project presentation, include all the required libraries and configure a new Visual Mapper instance for your needs.

TAKE A LOOK

<http://visual.poolparty.biz>



REACH OUT TO US

Do you want to know more? Contact us!



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