

Report of the 2nd multimedia project

Too much history walk in Vienna using D3

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Task

Create a digital version of the „Too much history“ walk published in the USE-IT Map Vienna. The walk should be visualized on a interactive map and described with text.

Data

For the basemap we downloaded the data from the official website of Vienna:

<http://data.wien.gv.at/katalog/geographie/index.html>

Firstly, we have shapefiles of buildings, parks and rivers. Then these shapefiles were clipped in ArcGIS because they covered too large area that is not needed and more over it took long time to load the data. Secondly, we have vectorized the 'too much history walk' from USE-IT Vienna (<http://www.jugendinfowien.at/freizeit-engagement/use-it/>) to get a line shapefile and a point shapefile with the stops (POIs) on the walk. Each POIs has a name (for instance: A, B, C,...) that we can display later in our map. Then, we copied the description of the POIs (can be found in the end of this report). Finally all shapefiles were converted into .geojson format using Quantum GIS.

D3 tutorials

Firstly, we went through the tutorials for D3 available on youtube.com

<http://www.youtube.com/user/d3Vienno?feature=watch>

The most useful was the 10th and 20th tutorial about loading external data and creating a map. Furthermore we used other tutorials to learn about zooming and panning the map:

<http://bl.ocks.org/mbostock/2206529>

<http://bl.ocks.org/mbostock/2206590>

<http://bl.ocks.org/d3noob/5193723>

<http://www.d3noob.org/2013/03/a-simple-d3js-map-explained.html>

<http://bost.ocks.org/mike/map/>

Finally, we used the books 'D3 Tips and Tricks: Interactive Data Visualization in a Web Browser' by Malcolm Maclean (freely available at <https://leanpub.com/D3-Tips-and-Tricks>) and 'Getting started with D3' by Mike Dewar.

Functions of the interactive map

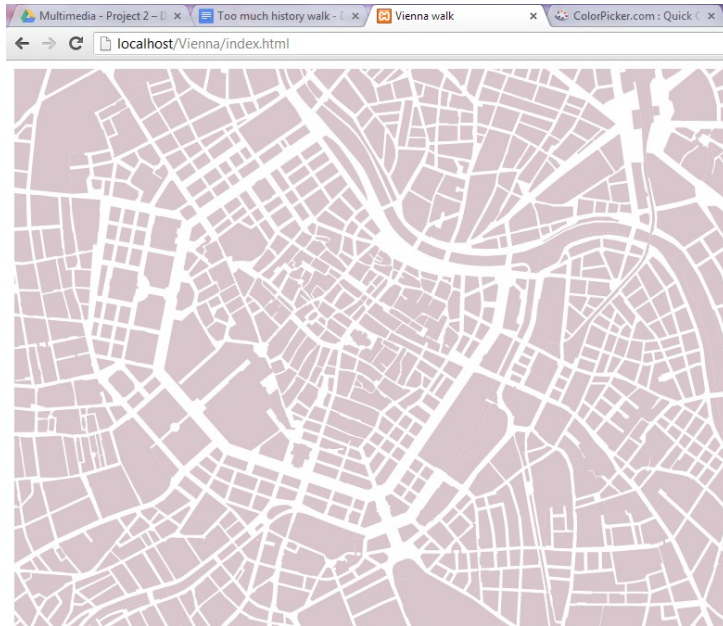
Our interactive map has following functions:

- load map :)
- pan and zoom
- when **hover** a poi it gets bigger
- when **click** a poi a window shows the text description

Work progress

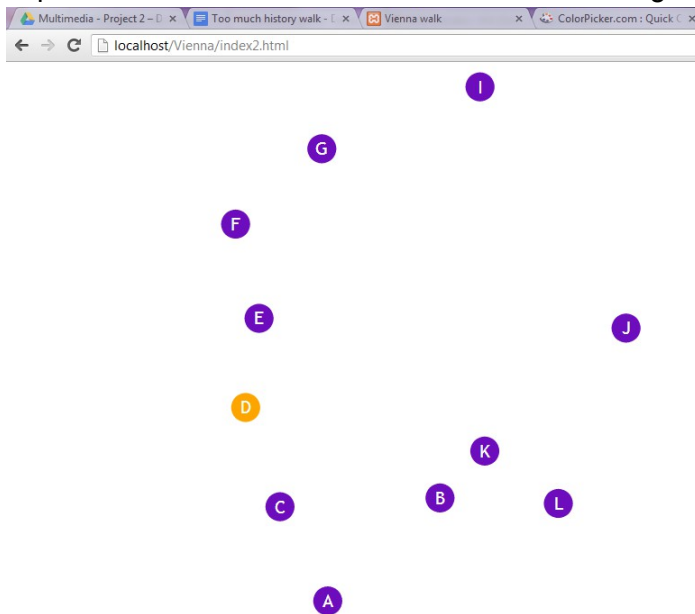
First map

The first step was to display a map using D3 and the previously created geojson files.



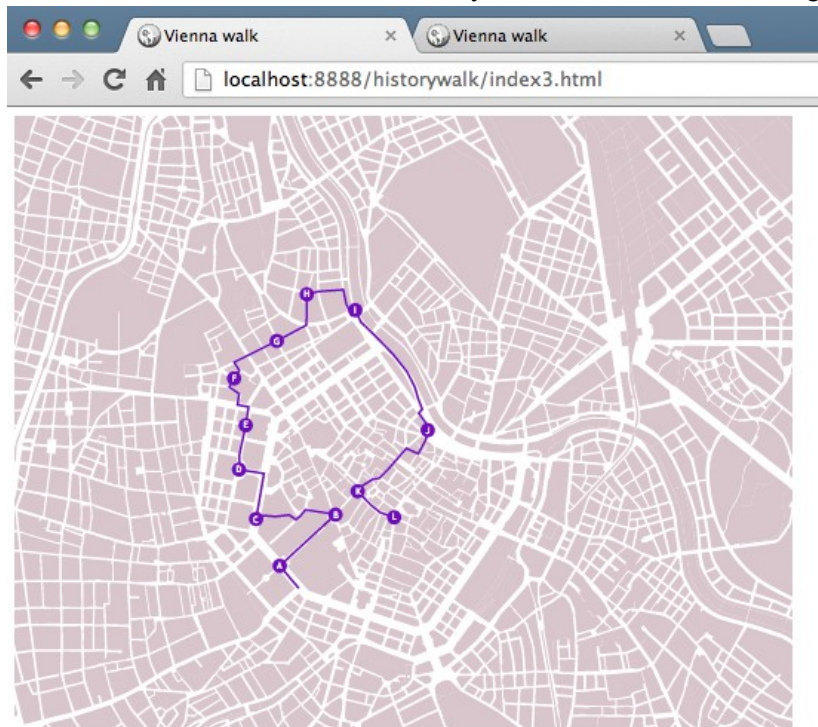
Displaying POIs

In a similar way the POIs are displayed, dynamically adding one of their properties as label (A,B,C...). Additionally the objects are styled in CSS (size, color, font) and a function is implemented that reacts on mouse click and changes the color of the active poi.



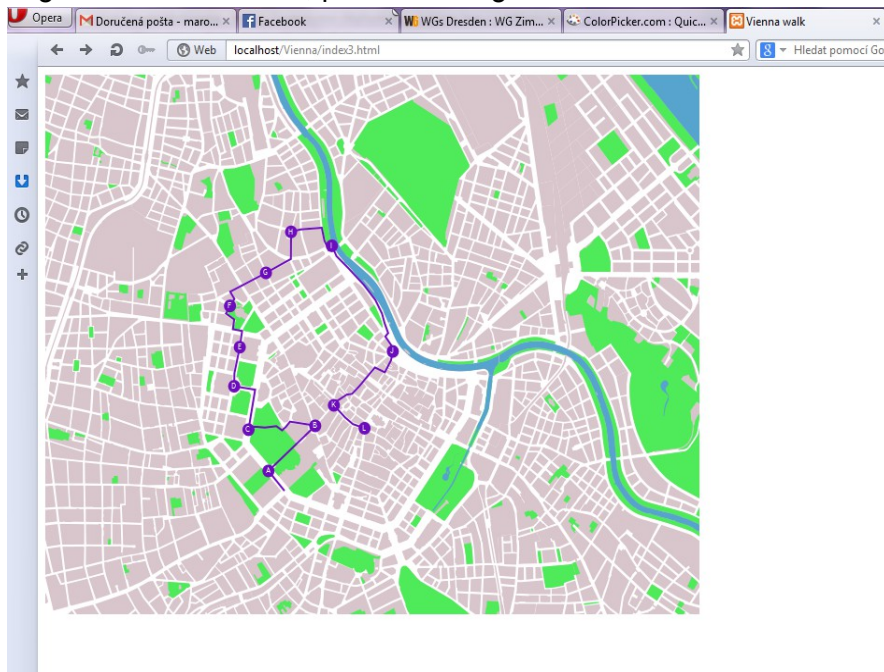
Show the information on top of the map

Both layers are combined on top of each other. Here it was tricky to figure that the upper layers have to be called within the lower layer, to show them in the right order.



Improve basemap

The basemap was improved by adding natural features, vegetation and water. For the future we might add streetnames, public buildings and other information relevant for tourists.



Interactivity

A tooltip gives the user information about a poi (mouseover event). When clicking a poi the focus zooms on it and the color changes to orange.



Page layout/design

The design plays with the contrast of history and modern art/graffiti. History seems boring for young travelers and is therefore wrapped in a more appealing framework ;)

Secondary elements

The map is surrounded by a title and boxes containing additional text.

The box 'description' is supposed to contain the description of the places, maybe also showing some pictures.

The connection between active poi and box content is under construction.

Future further improvements:

We are aware of the fact that there is a lot of space for improvements in our map. But this was the first time we worked with D3 thought everything was time consuming. In the list below you can see our ideas for further improvements:

- play button that goes through the tour step by step (poi by poi)
- functionality of the next and back buttons == active poi
- insert pictures of the area in the description
- insert text of description dynamically in div when poi is active or clicked



Description of POIs

A

The massive RINGSTRASSE in front of you is built on the former city ramparts and fortifies the first district - back then with stones, now with cars. By the way, despite the very diverse architecture, all the monumental buildings around the Ring are from the same period end of 19th century.

To your left you'll see the two biggest museums of Vienna. The MUSEUM OF ART HISTORY hosts one of the biggest art collections in the world. If you are into big fossil spiders, 2m long tapeworms that once lived in humans or the biggest collection of meteoroids., then the MUSEUM OF NATURAL HISTORY is for you. In any case you should bring enough time to loose yourself. Across the street lies the impressive HELDENPLATZ (Heroe's square). If you are too lazy to walk, just gaze at all monuments around Ringstrasse from here.

B

Through the passage and past the Spanish horse riding school, at MICHAELERPLATZ you'll encounter the ruins of the Roman legion Vindobona, the origin of Vienna.

C

Along the romantic winding path in VOLKSGARTEN you arrive on Ringstrasse again and stare at the PARLIAMENT. The placement of the Pallas Athena, the goddess of wisdom, has been the subject of mockery: Turning her back to the building could only mean that wisdom is not dwelling in the parliament.

D

Pass by the BURGTHEATER on your right and the CITY HALL on your left.

E

If you need a rest from all the cars and noise, you might want to check out the MAIN UNIVERSITY. In the cloister-like, calm and intellectually inspiring courtyard you can have a chat with students or simply relax in one of the deck chairs.

F

The Neo-Gothic VOTIVKIRCHE in front of you was built as a memorial to the attempted assassination of Emperor Franz Joseph I. At the park across the church students are hanging out in deck chairs and sip coffee from the KAFFEEKÜCHE at the underground tram station across the street.

G

In BERGGASSE lies the former home and now museum (for hardcore fans) of the inventor of psychoanalysis Sigmund Freud.

H

Wandering through Servitengasse to the SERVITENPLATZ makes you wonder about the cosy village-like atmosphere in the bourgeois 9th district. Around here are many small shops, bars, and restaurants, like SUPPENWIRTSCHAFT (Servitengasse 6).

I

Down at the DANUBE CANAL enjoy the waterfront, graffiti art and people flaneuring or taking a bike ride.

J

Up again at MORZINPLATZ/SCHWEDENPLATZ the memorial reminds you of the Hotel Metropol that was located here and was used by the Gestapo as their headquarters and prison. Go up the stairs and pass by the RUPRECHTSKIRCHE, which is the oldest church in Vienna (built in 740). Turn right into Sterngasse and go towards the JUDENPLATZ, the former centre of the Jewish community. Nowadays a memorial commemorates the displacement of all the Jewish residents in 1421 and the Holocaust.

K

Exhausted from the heavy history, just let yourself float through one of the world's most exclusive streets: GRABEN. Already back in the Middle Ages people were promenading here, among them the so called 'Grabennymphs' who were looking for the customers. If you have to take a leak, you are privileged to do that now in the world's oldest ART-NOUVEAU UNDERGROUND TOILET, built by the famous Viennese architect Adolf Loos.

L

At last you arrive at the STEFL, which is how we lovingly call Vienna's landmark and the most impressive Gothic Church, the Stephansdom (dating back to 1137). According to the legend a whole year's wine harvest had been used as a mortar binder for the never finished north tower. What a waste!