A Day Trip Guide to Berne, Basel, and Zurich

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Abstract

The purpose of this project was to use a combination of Google maps, ArcMap, Open Street Map, Adobe Illustrator, and Adobe Photoshop to generate a map of Basel, Berne, and Zurich, Switzerland for a traveler interested in taking a day trip to each city. The intent of these maps is to both provide an accurate representation of an accessible route for a relatively uniformed tourist, as well as to create an aesthetically pleasing cartographic representation of the city.

Methodology

This process was carried out by using Google Maps, Google Earth, ArcMap10, Adobe Illustrator, and Adobe Photoshop.

- The first step of making a day trip map is to decide what places are close in proximity to each other, can be visited in a relatively short amount of time, and reflect and represent the essence of the city. Narrowing these places down is not too difficult. There are many travel websites and open forums where the local museums, parks, and attractions are discussed and ranked. These three maps were designed for personal use, so, catering to the interest of the author, certain places such as flea markets and parks became a priority in attractions to visit.
- After finding the landmarks to visit, they were placed into the Google Maps website, where the program generated directions and the best route options. This data was then saved and exported to Google Earth in a .KML file.
- Once in Google Earth, the file was saved again and opened using the "Kml to layer conversion" tool in ArcMap10. This was done after importing the Switzerland Bing Street Basemap and other reference points from Open Street Map.
- After the route was placed on the basemap, both were exported in an .AI file to Adobe Illustrator. In Adobe Illustrator, the route and basemap were saved as separate layers initially and exported to Adobe Photoshop.
- In Photoshop, using the paintbrush tool, many of the street names had to be extracted, due to the route being placed on top of the names. Once they were erased, the text tool was used to re-write the names and use a font and color that is easily disguised with the existing streets on the map. The paint brush tool was additionally used to fill in the spaces in each city that were water, so that the roads and waterways were not confused.
- After this step, the layers were merged. Then, the color palate tool was used to decide what foreground and background colors were best suited for each map. Then, the photocopy filter was placed on the map, which generated the stylized effect underneath.
- The route was then opened in Photoshop, and then a second layer was added. On that second layer, the brush tool, with a 90% opacity, was used to trace over the existing route. The second layer was then saved. Both the new route layer and the new basemap layer were exported back to Adobe Illustrator.
- In Adobe Illustrator, the two files were placed together and manipulated so the route matched the basemap. Then, using Forte font, the letters were added to pinpoint the location of each stop on the route.
- A scale was procured in ArcMap and then copied into Illustrator, where, by toggling back and forth from page to page, a the correct scale, by kilometers, was established on the new map.
- The file in Adobe Illustrator was, once again, saved and opened in Adobe Photoshop.
- A larger background, with the exact color of the map, was made, and the map was pasted onto the background. A title, using Forte font was written, and a reference column was created that names and gives brief information about each places of interest on the map.

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Introduction

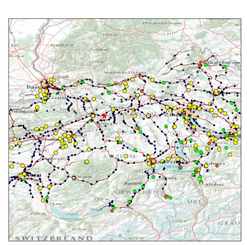
Beginning in July of 2012, I am going to live in a small Swiss village called Däniken, and will be charged with the task being an au pair for two young girls. During this next year, I wish to travel all around Europe on extended trips. Däniken is located within a 30-50 minute train ride from Zurich, Berne, and Basel, thus making it possible for a convenient day trip to each of the cities. While I expect to visit these places more than once, I will initially want to tour the main attractions. The purpose of making these maps was very personal, in that the process of researching the different landmarks made me familiar with the different cities, and I made the choice to be artistically liberal with my representations of the cities and the routes through them. The initial purpose of this project was to create a network analysis using ArcMap10 with data from Open Street Map (Fig. 1) . Open Street Map is a worldwide collaboration of people who input data to create free, accessible maps. The proposed project proved to be too intensive for the limited amount of time, due to extensive train networks and variations in train schedules.

In Mark Monmonier's *How to Lie With Maps,* he discusses map generalization, and comments that "Reality is three-dimensional, rich in detail, and far too factual to allow a complete yet uncluttered two-dimensional graphic scale model. Indeed, a map that did not generalize would be useless" (p. 25). With this in mind, I created what I thought would be an interesting artistic representation of a 3D world. One of the aspects of generalization that Monmonier mentions is selection. Selection involves the decision to omit certain features in a map. For my three city maps, I filtered out different road colors, opted for a basemap that did not have features showing the terrain or landmarks, and smoothed the route lines through the city.

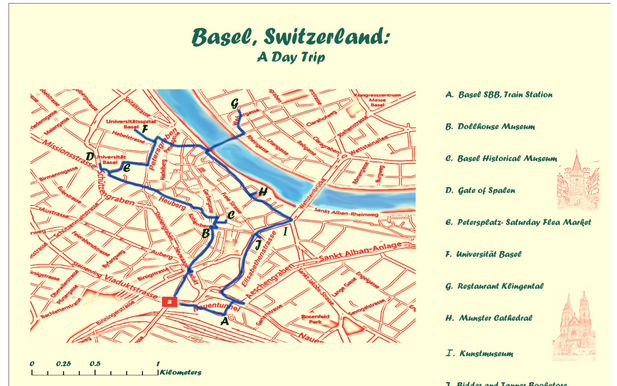
I also decided to create three smaller-scale maps of the city instead of more detailed large-scale maps. This decision was made partially for the benefit of the appearance of each map, and also because I wanted to see a general layout of each of the cities. I made a conscious effort to keep all important street names within the map, because those are a key aspect to navigating around a city. While the routes provide a general idea of the direction a tourist might want to go, they are not informative enough standing alone. In discussing subway and transit systems, Monmonier comments saying, "For some maps, though, geometric accuracy is less important than linkages, adjacency, and relative position" (34).

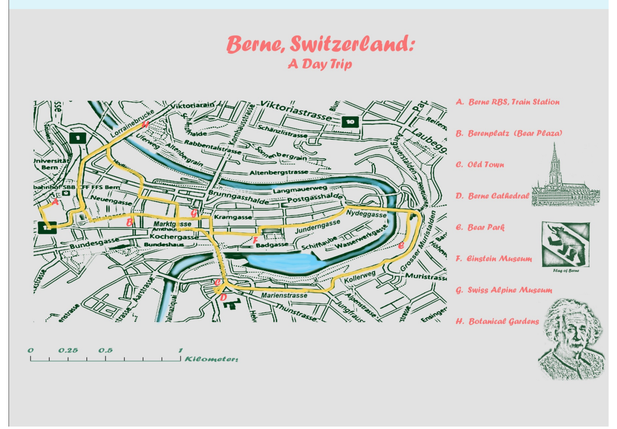
Fig. 1. Initial Open Street Map database manipulation

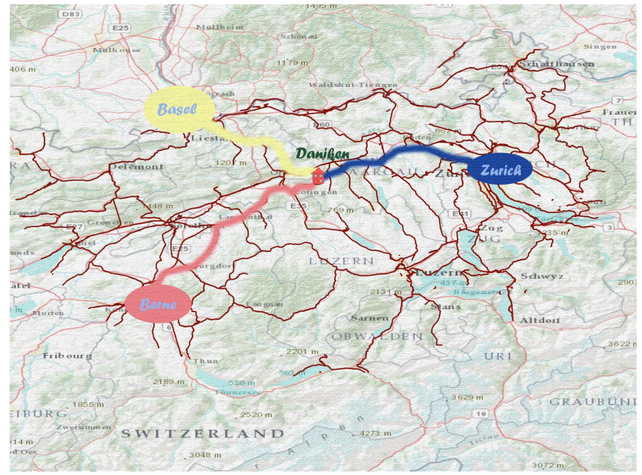
Open Streetmap Switzerland: Destinations for a Young Traveler



Results and Discussion







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Conclusion

I think that the ultimate personal goal of this project has been achieved, which is to learn more about the cities around my future place of residence. I will, however, certainly be using these maps when I visit Basel, Berne, and Zurich for the first time.

This project has also provided a nice link between science and art. In applying different aspects of cartography, using GIS software, and essentially playing with Adobe Photoshop, I've created something that I think is attractive, informative, and useful, and possibly something that I can pass on to friends who are interested in touring these cities.