A Collaborative Cultural City Map of Dresden for International Women

by **Shweta Naik**

This master's thesis focuses on developing a map design framework for an illustrated & subjective cultural city map of Dresden for international women.

The first goal is to understand the subjective views of international women through a subjective mental map drawing activity coupled with personal interviews. The second goal is to form a generic framework for an illustrated & subjective map design. The framework in this thesis is entirely based on digital tools and workflow in GIS plus vector-editing software to achieve an artistic outcome.

BACKGROUND

The Montagscafé at the Staatsschauspiel Dresden is a cultural meeting point and forum for exchange, which offers workshops and invites artists at the interface of migration and art. In 2021, a mapping project with women attending of Montagscafé took place. The master's thesis supported the planning and implementation of the event.

SUBJECTIVE MENTAL MAPS

The first objective was achieved by the combination of participant interviews and subjective mental map drawing. The data was stored in Google Earth categorized as POIs, streets/paths & areas. Transcripts of interviews were generated.

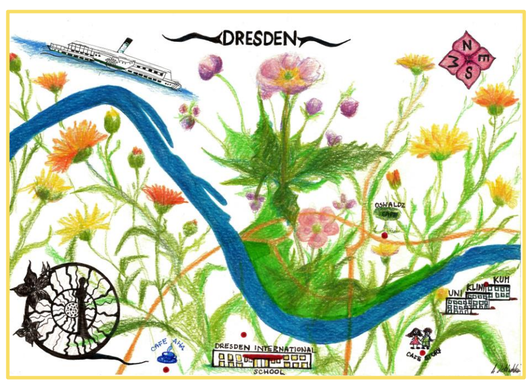

Fig. 1 A subjective mental map drawn by a participant from Europe

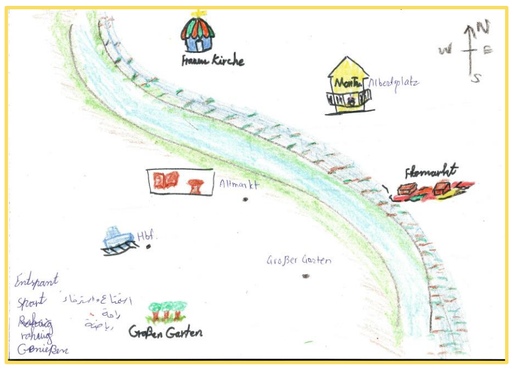

Fig. 2: A subjective mental map drawn by a participant from Asia

ILLUSTRATED MAPS

Many illustrated maps are not necessarily geographically accurate or to-the-scale. They invite the map reader to explore instead of giving them a conventional cartographic representation [1]. However, a balance between aesthetical *form* versus *functionality* can be addressed by such maps. The maps have such dual role to play and it is important that over-emphasis on an artistic design may result in a misleading or disorderly map [1].

MAP DESIGN PROCESS

The second objective focuses on the stepwise design process that can be generically implemented. It is based on the following factors

- Uniform data format
- Scalability of the final product
- Number of updates/changes required in future
- Ability to prepare data for different types of print or online media

CHOICE OF PURELY VECTOR-BASED DESIGN

The available literature on designing illustrated maps includes the design processes that involve working with raster, or a combination of raster & vector data formats[2, 3, 4]. Using rasterized or pixel-based formats has its limitations. Thus, it was decided to develop a purely vector-based and a straightforward map design process.

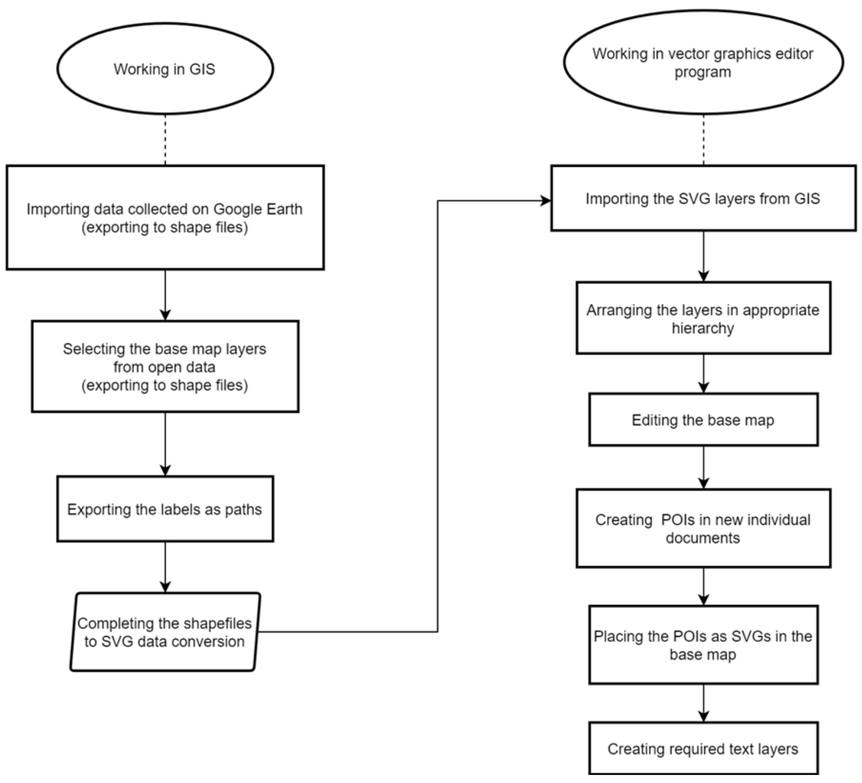

Fig. 3: Proposed framework for the creation of vector-based illustrated map

PROPOSED FRAMEWORK

The proposed map design framework consists of two main workflows: GIS and vector-editing software. In this work, QGIS and Affinity Designer were used. The GIS workflow ensures SVG output of all the base map layers. This SVG output is then imported in vector-editing software to further edit it artistically. Since all the base map layers are individually available as lines/curves in the vector editing software, they can be edited with the brush tool to get an effect of a brushstroke and also, masking can further add texture into polygons without the need of creating pixel-based textures.

CONCLUSION

An artistic map design of subjective nature was created using the proposed framework. Such framework may ease the artistic map creation compared to the other hand drawn or mixed techniques when a large map extent is desired. Also, it offers the basic geographic accuracy and scale and is hence effectively attains the balance between aesthetics and functionality.

Additionally, it is important to understand that the subjective map design may graphically differ from conventional cartographic representations. Therefore, while designing, instead of following the conventional graphic rules, the final map visualizes how the participants expressed their views verbally, graphically and textually.

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KEYWORDS

Illustrated map, subjective mental maps, map design, vector-based illustration

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