GMS - Geographical, Musical and Social Data Analysis Tool

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1 Introduction

The project described here was developed on the course of Information Visualization (TNM048) [4] as its Final Project. The developed application provides the user to visually explore and analyze musical preferences and their relations to social, economical and geographical data within Europe. The application was designed taking into account human perception and interaction issues to provide easy access to users with different backgrounds.

2 Aim

The goal of this project was to develop an application which enabled users to get an insight into any kind of data using special visual representations of it. The authors have chosen to find musical data from different sources and relate it to different attributes from European countries. Interactivity and understanding were two important aspects to consider during the development process.

3 Scope

The application was developed using GeoAnalytics Visualization Framework, shortly GAV, a framework developed at VITA Group/LiU [2]. GAV provides developers with basic visualization tools for tailor-made and task-oriented applications development. GMS is one such application. In order to create a very complete and useful tool, this project extended GAV with components such as a multi-window Squarified Treemap [1] [3, 1], a embedded TableLens[2] and descriptive geographically positioned Glyphs[3] [4]. The ease of interaction with user was carefully considered and tested, and the results might be seen in detail on the Project Report.

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[1] visualization method for large hierarchical structures
[2] visualization method for big amounts of tabular data
[3] graphical symbols representing a particular feature

4 Results

The achieved results were good, given the fact that the taken approach was mainly exploratory. It was possible to discover and analyze quickly some trends and outliers using the tool. Moreover, the surveyed users liked the tool and quickly learned how to work with it.

It should also be noticed that the Treemap component was quite successful, and the developers of GAV plan to have it integrated in their framework, to provide next year students the possibility of using it.

References

[1] Panopticon, 2007, Treemaps. In *www.panopticon.com.*

[2] VITA/LiU, GAV Framework. In *http://vita.itn.liu.se.*

[3] Bruls M., Huizing K, Van Wijk J.J., 1999, Squarified Treemaps.

[4] Jern, Mikael, Information Visualization Notes, 2007. In *http://servus.itn.liu.se/courses/TNM048/InfVizCourse.htm.*