

Lenticular Creation of Thematic Multi-Layer-Models

Three-dimensional visualisations are well-established for the presentation of maps or landscape models. Today, the need to present three-dimensional (3D) cartographic content on computer monitors is growing and the possibilities for these presentations are increasing. Different autostereoscopic display techniques have been tested during the last years but mostly to visualise the relief. Because of the lack of thematic presentations in three-dimensional maps the Institute for Cartography of the Dresden University of Technology and the Department of Geography of the Ruhr University in Bochum started a cooperation to study the potential of autostereoscopic display techniques for thematic maps in the scope of a project of the German Research Foundation. The project partners concentrate on the use of the lenticular foil technique, which experiences a renaissance in presenting 3D-content. This principle has been used for decades for flip image visualisations. There also exists a reinforced interest in the research of specific benefits of lenticular images. So, it is obvious that the lenticular technique, which is today mainly used for commercial arts, has already aroused the interest of the scientific cartography for several years.

The aim of the project is to find out, how useful the autostereoscopic display techniques are for thematic map use. During this process the partners want to figure out which cartographic visualisation methods (e.g. choropleth maps, isoline maps, diagram maps) could be the most effective ones for the map use and derive guidelines for the adaption of the cartographic design elements (e.g. minimal sizes of elements, colours, diagrams). This is necessary, because there surely will exist differences between requirements for digital maps and maps displayed on an autostereoscopic display. To get this information the project partners work out questionnaires and prepare test patterns for empirical studies. The groups of the test persons shall be homogeneous and consist of professional and non-professional map users. The project partners are certain to showcase well founded guidelines for creating legible and aesthetic designs of thematic maps presented on autostereoscopic displays.

The project partners want to showcase their project and the lenticular foil technique in the form of a poster at the “GeoViz 2011 Hamburg”.

References:

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