

True-3D Goes Operational – Recent Trends in Autostereoscopic Geovisualisation

Claudia Knust and Manfred Buchroithner

Abstract— In recent years, and in particular since 2010, the term “3D” increasingly appears in the media, mostly in connection with TV screens. The 3D technology irresistibly finds its way into the world of television and home cinema. While in cinemas 3D movies are visualised with the polarisation technique, for the spatial impression on television sets shutter glasses are used. These techniques give the viewer a truly three-dimensional impression, however, therefore additional viewing means are necessary. If the viewer perceives an object spontaneously three-dimensionally and without any further viewing aids the authors talk about autostereoscopic true-3D visualisations. Up to now, these are not yet suitable for cinema or home entertainment. Albeit, for cartographic purposes they are definitely very useful as demonstrated by various products of the Institute for Cartography at the Dresden University of Technology, Germany. For about fifteen years their 3D Visualisation Group has been working with various autostereoscopic visualisation techniques that allow the user to perceive a spatial impression of the geovisualisations or that enable to see multi-view effects combined in one single map. In a current research project, a cooperation between the Institute for Geography of the Ruhr University in Bochum, Germany, and the Institute for Cartography at the Dresden University of Technology, the project partners are studying the potential of autostereoscopic display techniques, especially the lenticular foil technique, for thematic geovisualisations. Detailed information about this project will be given by the project partners at the “GeoViz 2011 Hamburg” in the form of a poster.

In this paper the authors want to give a short overview about cutting-edge autostereoscopic imaging techniques. By means of some selected projects from the Institute for Cartography at the Dresden University of Technology, they will show how these techniques can be used for cartographic geovisualisations.

Index Terms— cartography, three-dimensionality, true-3D, autostereoscopy, geovisualisation.



-
- *Claudia Knust, Institute for Cartography, Dresden University of Technology, Germany, E-mail: claudia.knust@tu-dresden.de.*
 - *Prof. Manfred Buchroithner, Institute for Cartography, Dresden University of Technology, Germany, E-mail: manfred.buchroithner@tu-dresden.de.*