

**Prof. Mikael Jern**

Founder and manager of NCVA – National Center for Visual Analytics, ITN, Linköping University, Sweden



During 1970-1976, Prof Jern worked with Professor Hertz at the University of Lund. Together they invented the Colour Graphics System based on the first ink jet plotter for raster based visualization software in the world. In 1980 he founded UNIRAS to address the industry with a more general-purpose raster graphics approach. UNIRAS became a world leading supplier of Visual Data Analysis and Presentation graphics software for scientists and engineers.

Prof Jern has coordinated several large EC funded projects in the domain of knowledge-based information visualization and also consulted with the EC Commission as a technical expert. He has published more than 200 technical papers and several books in visual computing and visualization application areas. At SIGGRAPH 93, he was elected "pioneer of computer graphics" based on his breaking new ground research together with professor Hertz in raster graphics. In Sept 1999, he was appointed professor in information visualization at Linköping University. His latest research interest includes cutting-edge explorative geovisual analytics methods for Internet. In May 2008, he founded Swedish National Centre for Visual Analytics (NCVA). Their development of "eXplorer" for OECD's web site resulted in NCVA becoming an associated partner to OECD in December 2008 engaged in the global Wikiprogress project.

**Collaborative Web-enabled Geovisual Analytics applied to OECD Regional Data**

Abstract:

Geovisualization research has in the past decade focused on explorative spatial visual analysis. Collaborative visual communication tools are needed that are a natural complement to and an extension of the Geovisual Analytics process that facilitate streamline the reporting process; improve the overall credibility of the results and save valuable time for the analyst.

Geovisual Analytics tools are introduced that help establish progress initiatives aimed at measuring and collaborating, through statistical indicators, economic, social and environmental developments and to engage both statisticians and the public in such activities. Novel means can help domain experts to share their understanding of unfolding events and follow the author's reasoning process. OECD eXplorer is a dynamic web-enabled Geovisual Analytics tool that enables statisticians to explore geospatial, temporal and multivariate indicators, discover interesting relationships, share their incremental discoveries with colleagues and finally communicate selected relevant knowledge to the public. These discoveries often emerge through the diverse backgrounds and experiences of expert domains and are precious in a creative analytics reasoning process.

To achieve a collaborative GeoAnalytics platform, we have developed an object-oriented architecture that supports the capture, re-use and share of task-related explorative events through memorized interactive visualization views (so called "storytelling") based on a snapshot mechanism. The overall goal is to bring the entire explorative scenario through the snapshot mechanism into easy accessible XML files or web-enabled report formats and share the results from this analytical process. The

content of a static web report is extended with embedded interactive visualization components, target data, snapshots or even a continuous story of snapshots and integrated into, for example, a HTML document structure. Given this global dimension of such a task, the “dream” of building a repository of progress indicators, where experts and public users can use GeoAnalytics tools to compare situations for two or more countries, regions or local communities, could be accomplished in close collaboration with our research partner OECD.