



Integrated web system of geospatial data services for climate research

Igor Okladnikov (1,2), Evgeny Gordov (1,2,3), Alexander Titov (1,2)

(1) IMCES SB RAS, Tomsk, Russian Federation, (2) TB ICT SB RAS, Tomsk, Russian Federation, (3) Tomsk State University, Tomsk, Russian Federation

Georeferenced datasets are currently actively used for modeling, interpretation and forecasting of climatic and ecosystem changes on different spatial and temporal scales. Due to inherent heterogeneity of environmental datasets as well as their huge size (up to tens terabytes for a single dataset) a special software supporting studies in the climate and environmental change areas is required.

An approach for integrated analysis of georeferenced climatological data sets based on combination of web and GIS technologies in the framework of spatial data infrastructure paradigm is presented. According to this approach a dedicated data-processing web system for integrated analysis of heterogeneous georeferenced climatological and meteorological data is being developed. It is based on Open Geospatial Consortium (OGC) standards and involves many modern solutions such as object-oriented programming model, modular composition, and JavaScript libraries based on GeoExt library, ExtJS Framework and OpenLayers software.

This work is supported by the Ministry of Education and Science of the Russian Federation, Agreement #14.613.21.0037.