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Use Models like Maps in a 3D SDI

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Digital geological applications have become 3D up to 4D modelling of the underground. The modellers are working very heterogeneously in terms of its applied software systems. On the other hand the 3D/4D modelling of the subsurface has become part of the geological surveys all around the world. This implies a wide spread group of users working in different institutions aiming to work together on one subsurface model.

Established 3D/4D-modelling software systems mainly use a file based approach to store data, which is in a high contrast to the needs of a central administrated and network based data transfer approach. At the department of geophysics and geo information sciences at the Technical University Bergakademie Freiberg, the GST system for managing 3D and 4D geosciences data in a databases system was developed and is now continued by the company GiGa infosystems. The GST-Framework includes a storage engine, a web service for sharing and a number of client software including a browser based client interface for visualising, accessing and manipulating geological CAD data. Including a check out system GST supports multi user editing on huge models, designed to manage seamless high resolution models of the subsurface.

While working on complex projects various software is used for the creation of the model, the prediction of properties and final simulation. A problem rising from the use of several software is the interoperability of the models. Due to conversion errors different working groups use mainly different raw data. This results in different models, which have to be corrected with additional effort.

One platform sharing the models is strongly demanded. One high potential solution is a centralized and software independent storage, which will be presented.