

Visual preparation of hydrological models

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Abstract In this paper we demonstrate the functionality of the OpenGeoSys framework for visualisation of simulation-related data. Complex hydrological models are based on a large number of heterogeneous input data sets. In addition to any geo-scientific information such models also include finite element meshes, initial- and boundary conditions, and other data necessary for the simulation of hydrological processes. The visual assessment of this information in 3D space in the process of creating models has proven to be helpful for experts to attain a deeper understanding of the interrelation of data sets and the detection of possible problems or errors. The presented visualisation techniques are applied to a model region at the western Dead Sea escarpment for a simulation of groundwater recharge in an arid region.

Key words visualisation; hydrology; simulation; groundwater flow