



VISUAL3D – An EIT network on visualization of geomodels

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When it comes to interpretation of data and understanding of deep geological structures and bodies at different scales then modelling tools and modelling experience is vital for deep exploration. Geomodelling provides a platform for integration of different types of data, including new kinds of information (e.g., new improved measuring methods).

EIT Raw Materials, initiated by the EIT (European Institute of Innovation and Technology) and funded by the European Commission, is the largest and strongest consortium in the raw materials sector worldwide. The VISUAL3D network of infrastructure is an initiative by EIT Raw Materials and aims at bringing together partners with 3D-4D-visualisation infrastructure and 3D-4D-modelling experience. The recently formed network collaboration interlinks hardware, software and expert knowledge in modelling visualization and output. A special focus will be the linking of research, education and industry and integrating multi-disciplinary data and to visualize the data in three and four dimensions. By aiding network collaborations we aim at improving the combination of geomodels with differing file formats and data characteristics. This will create an increased competency in modelling visualization and the ability to interchange and communicate models more easily. By combining knowledge and experience in geomodelling with expertise in Virtual Reality visualization partners of EIT Raw Materials but also external parties will have the possibility to visualize, analyze and validate their geomodels in immersive VR-environments.

The current network combines partners from universities, research institutes, geological surveys and industry with a strong background in geological 3D-modelling and 3D visualization and comprises: Luleå University of Technology, Geological Survey of Finland, Geological Survey of Denmark and Greenland, TUBA Freiberg, Uppsala University, Geological Survey of France, RWTH Aachen, DMT, KGHM Cuprum, Boliden, Montan Universität Leoben, Slovenian National Building and Civil Engineering Institute, Tallinn University of Technology and Turku University.

The infrastructure within the network comprises different types of capturing and visualization hardware, ranging from high resolution cubes, VR walls, VR goggle solutions, high resolution photogrammetry, UAVs, lidar-scanners, and many more.