Models – Repositories of Knowledge
(Proceedings ModelCARE2011 held at Leipzig, Germany, in September 2011) (IAHS Publ. 355, 2012), 127-132.

Mixed 2D/3D visualization of a large scale groundwater study in a virtual reality centre

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Abstract As part of a project which deals with a large-scale groundwater study aimed at simulating the available groundwater resources in the Upper Mega Aquifer system in the eastern part of Saudi Arabia, an interactive visualization has been created in order to show the simulation results, together with the original borehole data from which the input model was constructed and placed within the context of the geological surroundings in an easily understandable way. The 3D visualization can be run in a stereoscopic visualization centre and is augmented by additional 2D visualizations that help users to orient themselves within the virtual scenery and which also show additional information upon selection of corresponding objects in the 3D scene.

Key words 2D; 3D; groundwater; visualization; virtual reality