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Visualization of 3D Geological Data using COLLADA and KML

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This study presents a method to visualize 3D geological data using COLLAborative Design Activity(COLLADA, an open standard XML schema for establishing interactive 3D applications) and Keyhole Markup Language(KML, the XML-based scripting language of Google Earth).We used COLLADA files to represent different 3D geological data such as borehole, fence section, surface-based 3D volume and 3D grid by triangle meshes(a set of triangles connected by their common edges or corners). The COLLADA files were imported into the 3D render window of Google Earth using KML codes. An application to the Grosmont formation in Alberta, Canada showed that the combination of COLLADA and KML enables Google Earth to visualize 3D geological structures and properties.