3D Portrayal Interoperability Experiment Completed

The Open Geospatial Consortium (OGC, USA) has completed the 3D Portrayal Interoperability Experiment (3DPIE). This project was designed to test and demonstrate different approaches for service-based 3D mapping and visualisation using the candidate OGC standards for 3D portrayal: the OGC Web 3D Service (W3DS) and Web View Service (WVS) Interface standards.

Results have been published as an OGC Public Engineering Report, providing the basis for further standardisation efforts in service-based 3D portrayal.

The OGC members participating in the 3DPIE worked to identify, test and further develop technology standards and workflows for spatial data infrastructure that supports rapid visualisation of very large and complex 3D geospatial data sets. The objective of the candidate W3DS and the WVS standards is to make it as easy to integrate and visualise 3D urban and landscape models in web applications as it is easy to integrate 2D maps in web applications. The 3DPIE clarified specifics of 3D portrayal services and provided a proof of concept as well as best practices and guidelines for the candidate standards' implementation, integration, and use. The experiments demonstrated the feasibility of 3D portrayal services using massive real-world 3D data, including a complete textured 3D city model of Paris.

New image- and vector-based streaming and visualisation methods have been integrated into established software products and research prototypes. By linking various solutions for serving geospatial 3D assets with web and mobile applications using the 3D portrayal services, interoperability was successfully demonstrated. Of particular interest is the Extensible 3D (X3D) Graphics International Standard, which is the open standard for real-time 3D communication developed and administered by the non-profit Web3D Consortium. Also, the upcoming HTML5 web standard was addressed by using WebGL and declarative X3DOM technology for directly embedding 3D spatial data in modern web browsers.

Members of the Web3D Consortium worked to help identify key technological issues and develop common integration strategies.