
Immersive Environments in Oil and Gas Exploration

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The application of immersive environments in oil and gas exploration is broad and it is expanding every day. Recent developments in Virtual Reality systems (VR) and Augmented Reality systems (AR) and Mixed Reality (MR) supported by the advances in geospatial databases and distributed systems has provided a benefit to the user community. Many sectors including oil and gas began to use these technologies. As a result, considerable cost saving in terms of time and effort was unmistakable. The realistic virtual views of complex and sophisticated operations whether it be simple modeling and simulation linked to three dimensional visualization, or planning and monitoring for complex directional drilling helped with achieving more operational safety. This talk will highlight the history of spatial modeling and simulation, the capabilities, functionalities and processes involved in design and implementation of immersive environments. The talk will provide a brief account of future trends in this technology.

Biography:

Dr. Rifaat Abdalla is Associate Professor in the Department of Earth Sciences, College of Science, Sultan Qaboos University. He is specialized in GeoInformatics. Dr. Rifaat Abdalla is a Certified GIS Professional (GISP) and Professional Geoscientist (P.Ge.) from Ontario, Canada. Dr. Abdalla worked in Oil Industry in Qatar and in UK and was teaching at York University and Ryerson University in Canada. His research interests include Hydrography and Marine Applications for GIS; Modeling and Simulation; and Disaster Management and Emergency Response Mapping. He is a recipient of several prestigious international awards, including the ASPRS, ESRI Best Scientific Paper.