Value from Visualisation
A Service Provider’s Perspective

BILL SHEA¹, TROND BERGØ²

1 KIDRA AS, Stavanger, Norway - Director Data Analysis Services
2 KIDRA AS, Stavanger, Norway

Abstract
Despite continuous technological advances, graphic-intensive 3D visualisation remains expensive. New visual computing investments consume a large share of IT departments’ CAPEX budgets in upstream oil and gas companies, and depreciate as quickly as desktop PCs. Kidra - Hub of the Visual Universe, was established in Stavanger with the aim of helping companies manage their visual computing costs by providing universal access to a shared computing resource and specialist technical staff. While conceptually appealing, the shared-resource model has not yet proven commercially profitable for Kidra. This presentation offers an objective look at the hurdles Kidra has faced in attempting to establish a viable visualisation service business.

Companies who integrate visualisation technologies directly into their exploration and production workflows obtain significant bottom-line benefits. Viewing diverse data objects in a large-screen environment is valuable in itself, but even greater returns are achieved by carrying out core tasks (seismic interpretation, reserve estimation, well targeting) using immersive 3D tools. The growing acceptance of visualisation as core technology is ultimately good for hardware and software vendors, but problematic for providers of visual computing services. Potential customers today are much more likely to invest in their own 3D solutions, rather than outsource services that they consider “core”. To capture customers, visualisation centers must compete on price, convenience, and quality of specialist expertise – at the same time. New collaboration technologies are making it possible for oil companies to analyze large and complex data models on remotely located commercial computers. However, these visual networks will not create viable new IT outsourcing opportunities until oil companies can economically connect to remote data “hosting” centers using high-bandwidth telecom networks. The technology for delivering high-end visualisation-on-demand exists today in Norway, but not at an acceptable price.

Until remote “visual area networking” gains market acceptance, visualisation service providers must use their own technology to provide new and effective 3D data analysis consulting services to customers. Kidra has worked together with its hardware and software partners to develop specialist seismic interpretation services that exploit the powerful capabilities of high-end volume interpretation systems. Services include (1) efficient, fast-track interpretation of very large regional 3D surveys and merged 3Ds, (2) structural analysis and fault mapping using multiple 3D structural attribute volumes, and (3) imaging and detection of heterogeneous reservoir systems at exploration, appraisal, and field exploitation scales. These services exploit real-time volume rendering, multi-volume displays, sculpting, and other powerful features of high-end visualisation tools. Technical results from several client studies will be highlighted, and business implications discussed. The unequivocal answer is yes! Beyond the ‘wow’ factor of 3D stereo in a big room are the bottom-line real values that 3D visualisation delivers today. How so? This presentation will present several examples from petroleum companies on how 3D Visualisation contributed to their success and reduced their costs. It is not just about seeing more data in bigger rooms.