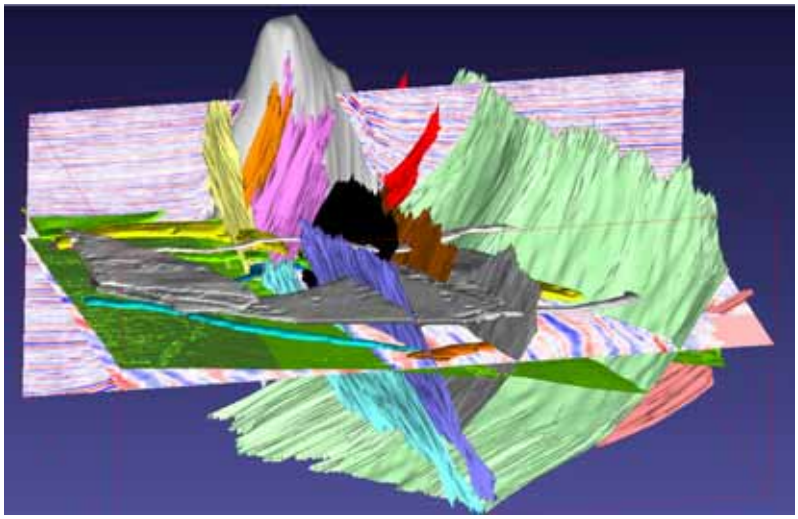
Society of Exploration Geophysicists (SEG), San Antonio 2007



TerraSpark's Computer Aided Stratigraphic Interpretation – CASI[1]

Forum presentations revealed that unconventional will mean serious geophysical activity over tight sands/shale gas plays. **Chesapeake** is showing the way with a $160 million investment in 3D seismic surveys on unconventional plays throughout the US. Both **Paradigm** and the University of Colorado spin-out **TerraSpark** are offering new approaches to seismic interpretation by transforming a present day seismic image back to its depositional setting. The idea is that this allows easier interpretation of sedimentary bodies that can then be re-transformed back to their present day state. A more conventional, but nonetheless spectacular development is the appearance of a seismic 'probe' in **Petrel**. Seismic modeling has also seen some interesting developments with the acquisition of GeoSmith's Shapes 3D topology engine by **Landmark**. Demand for seismic processing is 'going through the roof', driven especially by the high end 3D wave equation market and esoteric acquisition techniques such as wide azimuth. The problem set that this presents – spanning storage, multi core CPUs, networking was the subject of several **high performance computing** presentations. The open source **JavaSeis** environment, with its 'in situ' storage model has received support from ConocoPhillips and Landmark. A presentation by **Total** suggests that the graphics processing unit (GPU) is likely to have a considerable impact on HPC. The **NVIDIA Tesla** boxes, quite ubiquitous at the show, herald what has been described as a 'tipping point' in GPU-based number crunching. HPC involves an interplay between hardware and software – particularly in the field of parallel processing across complex arrangements of clusters and disk storage. This has resulted in bundled offerings such as **Fraunhofer**'s PreStackPro and high performance filesystem and Paradigm's GeoDepth bundle on Panasys storage. **Dynamic Graphics**' CoViz has been re-vamped to include real time data feeds so the platform now offers a credible overview of a multiplicity of data sources (including production) and third party applications.

Highlights

[1] *Image courtesy TerraSpark – www.terraspark.com.*

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