

## PV-4D: EARTH'S MOST POWERFUL VISUALIZATION ENGINE

The latest generation of Fraunhofer's Visualization Engine PV-4D comes with the most powerful and modern visualization kernels, yet. Thanks to the parallel architecture and the entirely CPU based algorithm of the kernel, it can seamlessly scale by adding more compute nodes and easily render terabytes of volume data in real-time without compromising quality.

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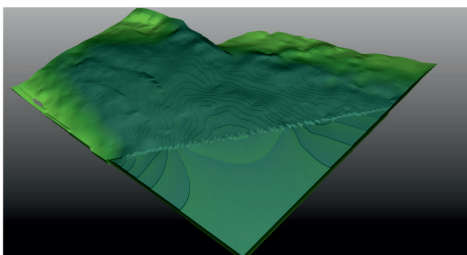
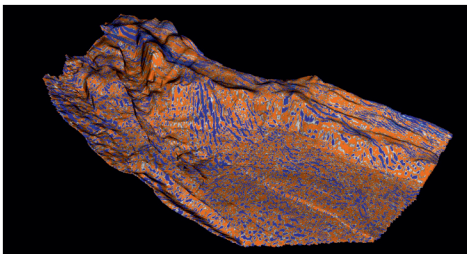
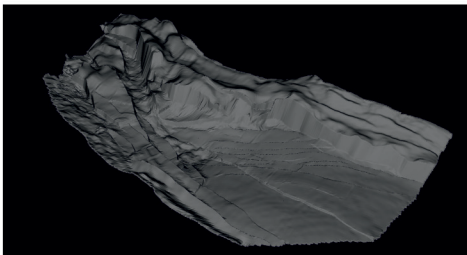
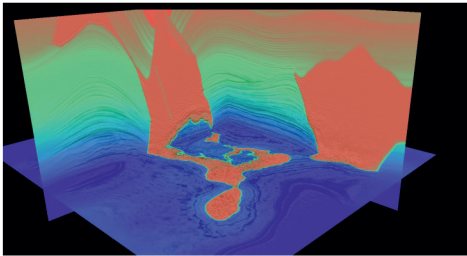
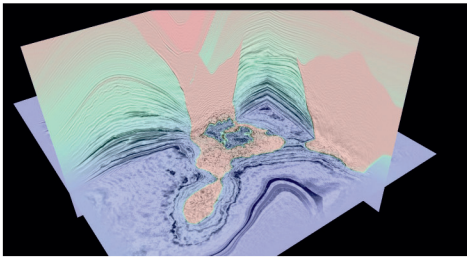
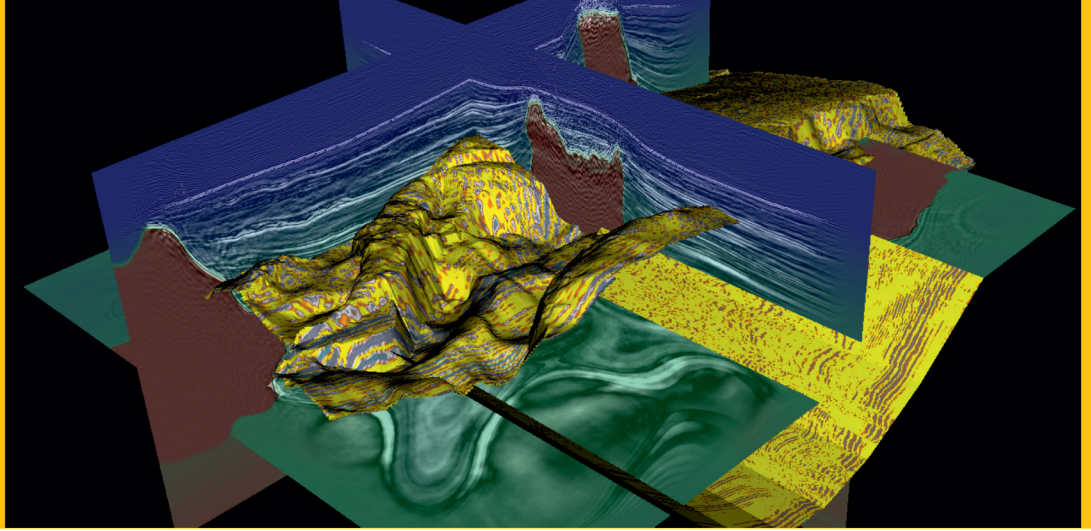
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### Key Features

- Scalable over multiple compute nodes to render terabytes of data
- Support for huge 3D volume data (seismic, velocity models, ...) with full transparency and overblending
- Support for arbitrary and huge 3D surfaces such as horizons with fully flexible texture blending and texture transformation on the surface
- Hexahedron viewer for direct visualization of numerical results from reservoir simulations up to multi-billion polygons (hexahedrons, tetrahedrons).



### Technology under the hood

- State of the art hexahedron / quad intersection detection
- Hybrid acceleration structures with dual multi bounding volume hierarchy
- Real-time primitive compiler
- Up to 1 billion hexahedrons per dual socket server, fully interactive and in HD quality

### Visualization Tools

- High quality display of full real amplitude values (32bit float) in HD quality.
- Easy and gradual overblending of seismic and velocity data.
- Real-time support for full quality zoom, pan and rotate.
- Multiple volume display with transparency or cross-section display
- Parallel and perspective projection for easy orientation and fast, distortion free browsing through large datasets.
- Easy cross-section displays and slicing of x, y and z planes.
- Advanced slicing along i, j, and k hexa-planes with range selection in real-time using a rebuilt multi bounding volume hierarchy.
- Instant read-out of cursor position and amplitude value(s) at any given position.

