Interactive and Scalable Subsurface Data Visualization Framework

NVIDIA Advanced Rendering Center

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Advanced Rendering Center

The “Center of Gravity” for Advanced Rendering and Professional Graphics
Located in Berlin-Germany
NVIDIA ARC: Rendering Options

- NVIDIA mental ray®
  - For Film Production needs

- NVIDIA iray®
  - Interactive and Scalable Software Kit for Design Visualization

- NVIDIA index
  - Interactive and Scalable Subsurface Data Visualization Framework
NVIDIA mental ray®
NVIDIA index
NVIDIA index

- Primary states of the seismic data interpretation workflow

- Data acquisition
- Feature extraction
- Visual interpretation
NVIDIA index

- Product scope in the seismic data interpretation workflow
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- The software product components:
  - Geospatial Library....
  - DiCE Library....
  - Extended Features
NVIDIA index - DiCE Library

- Distributed Computational Environment
  - Data distribution on a Cluster - CPU and GPU
  - Fail safety framework
  - Sophisticated C++ API
NVIDIA index - Geospatial Library

- **High Quality Visualization on GPUs**
  - 3D Volume ray-casting
  - Horizon ray-tracing
  - Primitive rasterization

- **Image Compositing on CPUs**
  - Parallel image compositing
  - Front-to-back compositing of cropped intermediate rendering results
NVIDIA index - Extended Features

- Remote Visualization
  - Support of public and private clouds
  - Support of mobile thin-clients (e.g. Android based Tablets)
  - Browser Based Application

- Support of Multiple Users
  - Collaboration world wide

- Video streaming
  - Support of H264
NVIDIA index Remote - Demo
NVIDIA index

Thank You: Q & A