

Feature highlights:

- High Definition Volume Rendering®
- Tools for 3D measurement and fusion with polygonal models
- Interactive modification of all rendering parameters
- Instant point-and-click segmentation
- Instant free-hand-cut segmentation
- Classification of voxels with identical scalar values to different transfer functions
- Toggle lighting function for any transfer function segment
- Interactive fly-through auto-navigation
- Interactive arbitrary cut planes
- Unified slab thickness
- User-defined adaptive control of speed vs. quality
- Instant point-and-click measurement with subvoxel precision
- Support of stereoscopic mode
- Gradient modulation control
- Non-blocking/blocking execution
- Network data compression: JPEG lossy/lossless 8/12/16
- Volumetric shadowing

Performance highlights:

- Superior interactive supersampling performance
- Interactive supersampling of the entire dataset
- No downsampling or sub-volume resampling
- Interactive modification of transfer functions
- Rendering is performed upon the original data without modification
- No preprocessing

Scalability highlights:

- No video card required
- No specialized hardware (ASIC) required
- True software-only solution
- Works with off-the-shelf PCs and laptops
- Client/server architecture
- Clustering support
- Efficiently scales with larger projection planes
- Efficiently scales with larger datasets
- Efficiently scales with multiple CPUs/cores

Rendering types:

- Parallel volume rendering
- Perspective volume rendering
- MIP and Fading MIP
- MPR/Curved MPR
- RaySum/MinIP

OS support:

- Server:
 - Microsoft Windows 2000/XP/2003/Vista
 - RedHat Linux
 - Macintosh OS X (Intel-based)
- Client:
 - Microsoft Windows 2000/XP/2003/Vista
 - RedHat Linux
 - Macintosh OS X (PowerPC and Intel)

Hardware optimization:

- Requires Intel/AMD CPU with SSE2 support
- Optimized for SMP (2-32 CPUs/cores)
- Optimized for Hyper-Threading
- Optimized for SSE2
- Minimized CPU <--> memory bandwidth requirements

RAD support:

- Rendering Java controls
- Transfer Function Editor control
- Ready-to-use Java controls for modification of rendering pipeline
- Integrated extendable user input handling
- Support for DICOM 3.0 datasets
- Direct access to rendering engine

Data format:

- Input: DICOM 3.0 compliant data or raw data
 - X, Y, and Z dimensions may be any number from 65 to 4096 and none are required to be identical to each other
 - From 2 bits up to 16 bits signed and unsigned data
 - Shared memory initialization is supported to enable rendering of images in out of process server module with zero memory duplication

*Note: The 32-bit version can render interactively a 512x512x4096 dataset with 3GB RAM. The 64-bit version may render up to 4096*4096*4096.*

- Output: Arbitrary size of the projection plane, up to 4096x4096