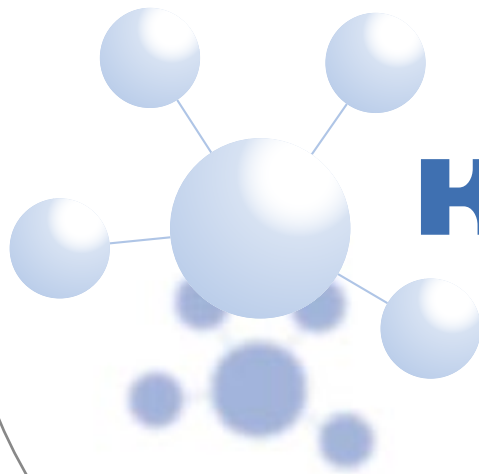




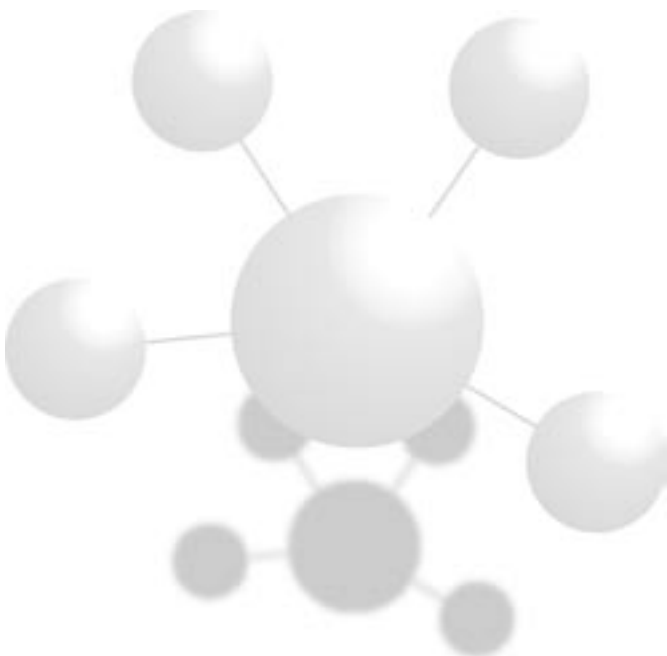
**KB-Vol3D** :: An In-depth Look

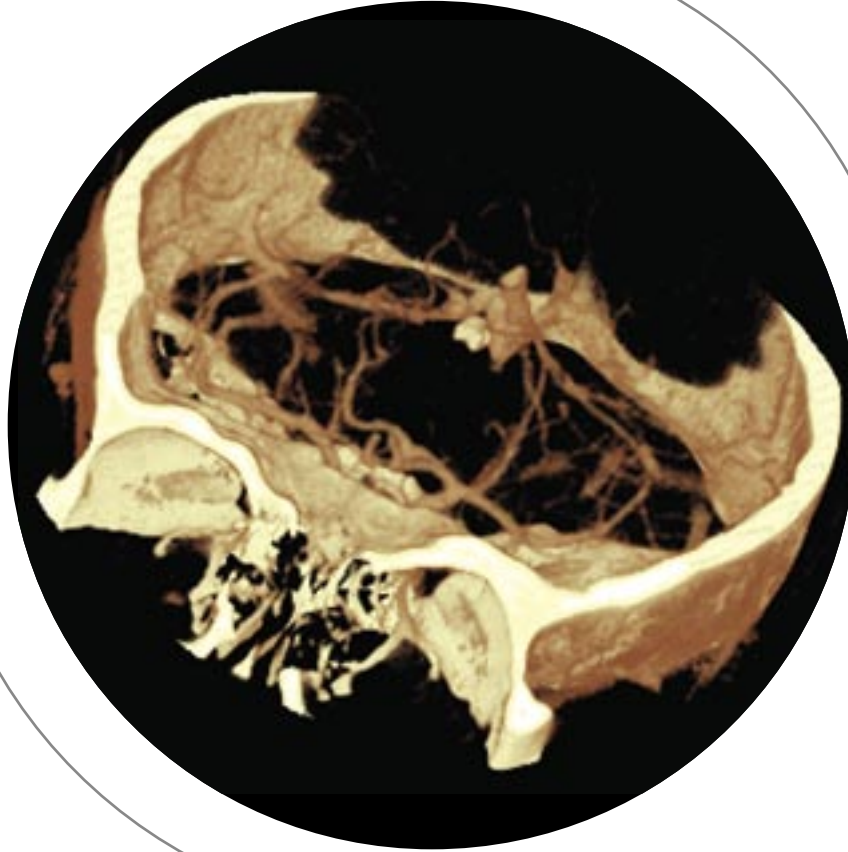




## **KB-VIS** We Work In-Depth

**KB-Vol3D** offers 3D visualisation for CT & MRI Volume Imaging for Windows-based computers. A rich suite of medical imaging tools normally found on high-end workstations (such as fast 3D Volume Rendering), is provided at a very low cost.





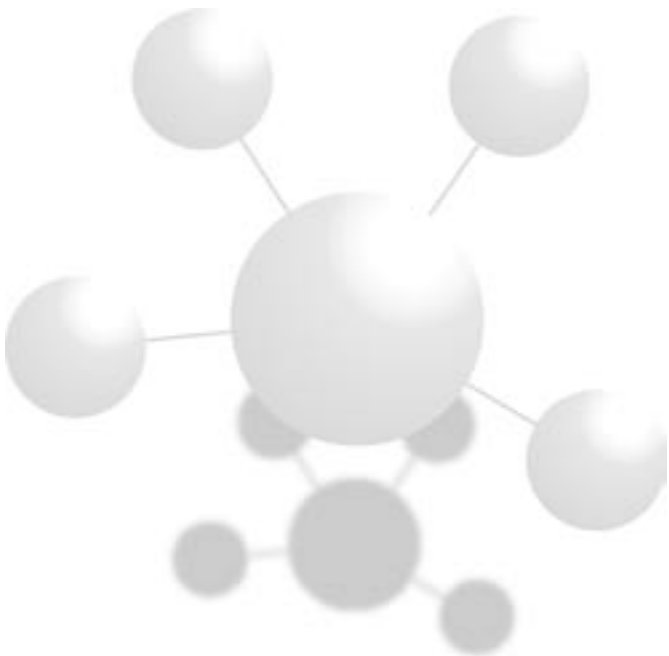
**KB-Vol3D includes the following features:**

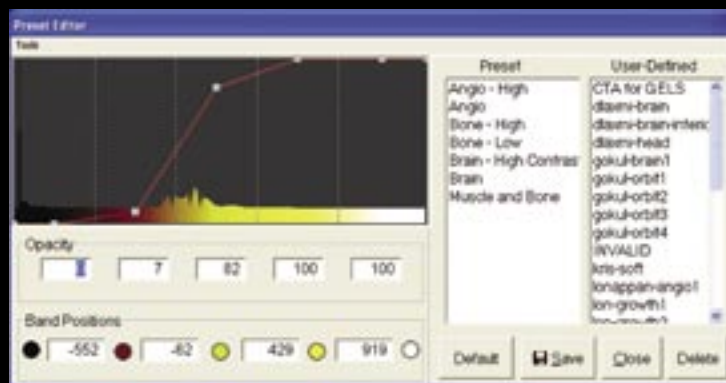
- DICOM Input (CT and MR)
- Fast Colour Volume - Rendering
- Shaded Surface Display with Volume - Overlay
- MIP rendering (Maximum Intensity Projection)
- MIP Radials
- MPR (Multi - Planar Reformatting) with Oblique & Double - Oblique Sectioning
- Multi-MPR and Slabs (Average / MIP / MinIP)
- MPR-3D Correlation for ease of use
- Curved MPR
- Greyscale Window - Levelling
- Colour & Opacity Presets with Editor
- Region-Segmentation with Volume Measurements
- Volume Sculpting
- Cutaway Viewing and Interactive VOI (Volume - of - Interest)
- Volume Preview and Subset
- Image Capture to DICOM and other common image formats
- Movie Capture to AVI



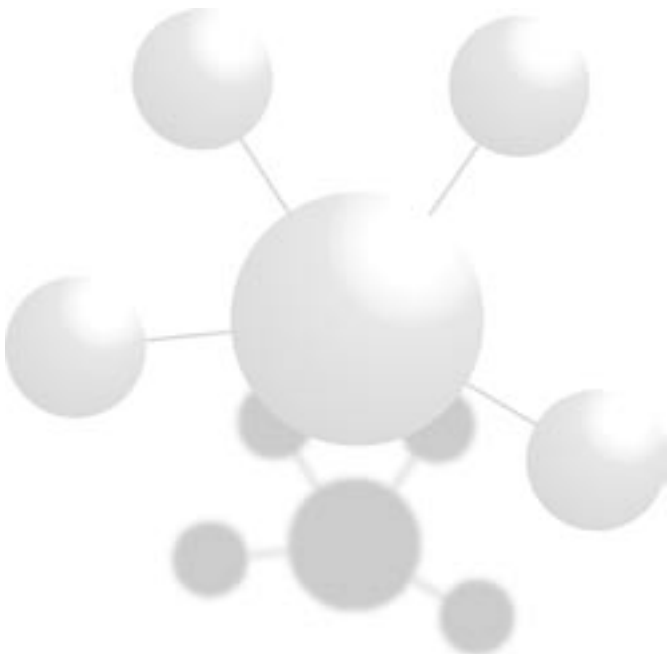
KB-Vol3D provides fast high-quality volume rendering.

Volume rendering algorithms include **Colour, Greyscale and Maximum-Intensity Projection**. Volumes may be viewed and manipulated using a highly interactive user-interface.

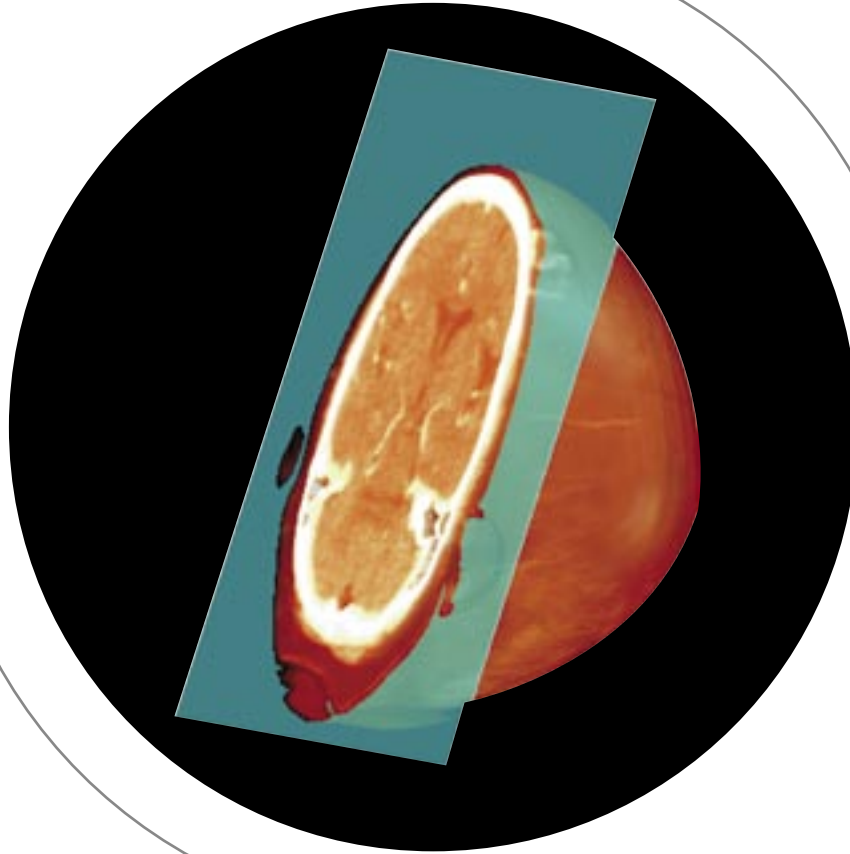




The appearance of the volume is interactively controlled using the **Colour & Opacity Editor**. An extensive list of commonly used Colour & Opacity Presets is provided. These may be fine-tuned using the editor; and stored for subsequent use.

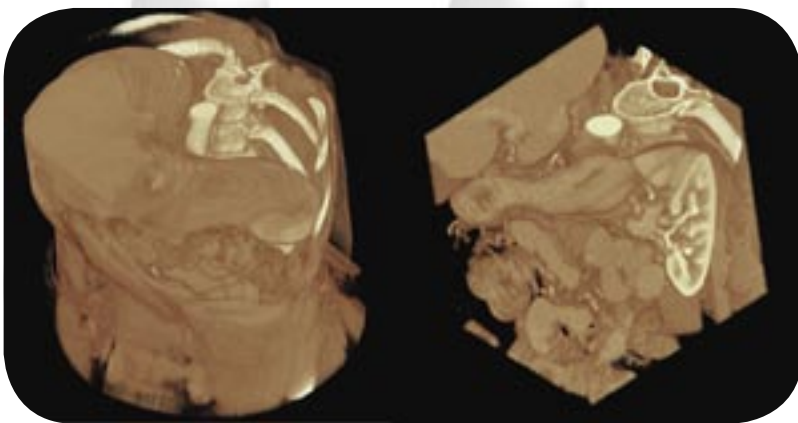


## CUTAWAY VIEWING

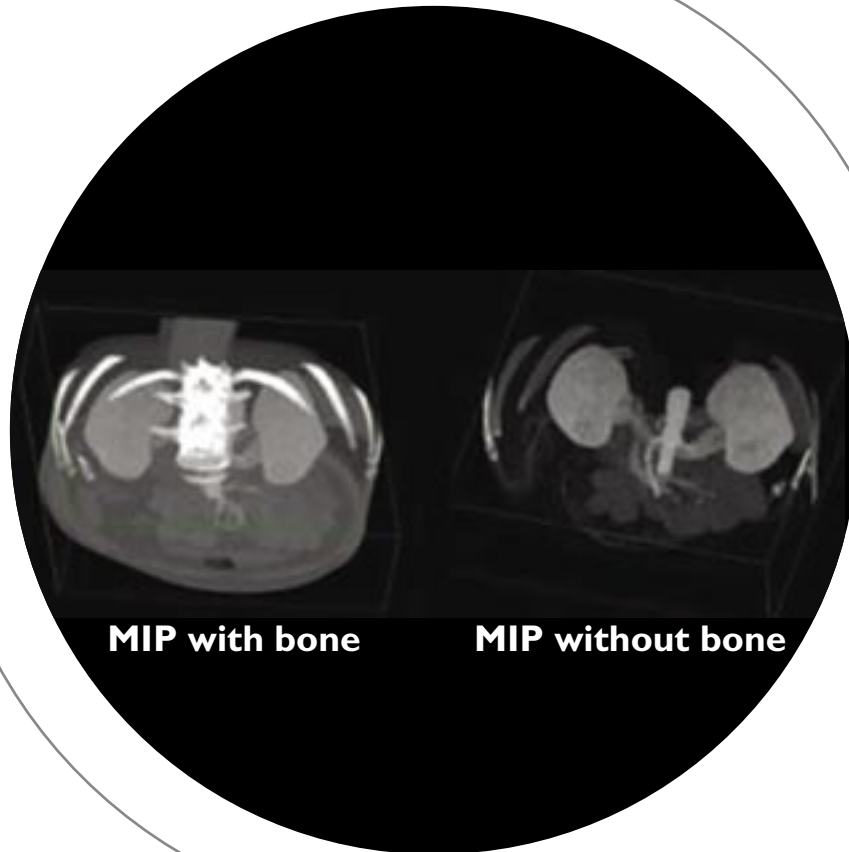


Volume-interiors are easily visualised using the **Cutaway-Viewing** tool. A Cut-Plane is used to slice through the volume, revealing the interior regions. The cut-plane is easily positioned and oriented using the mouse.

The **VOI (Volume-of-Interest)** tool allows interactive, real-time Volume-of-Interest display. The user can isolate and view sub-volumes of interest very easily and in real-time, using easy click-and-drag mouse operations.

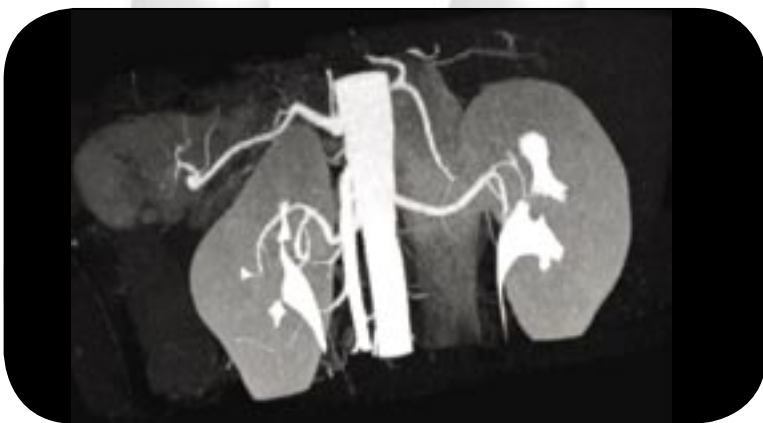


## MAXIMUM INTENSITY PROJECTION



KB-Vol3D's **MIP module** includes:

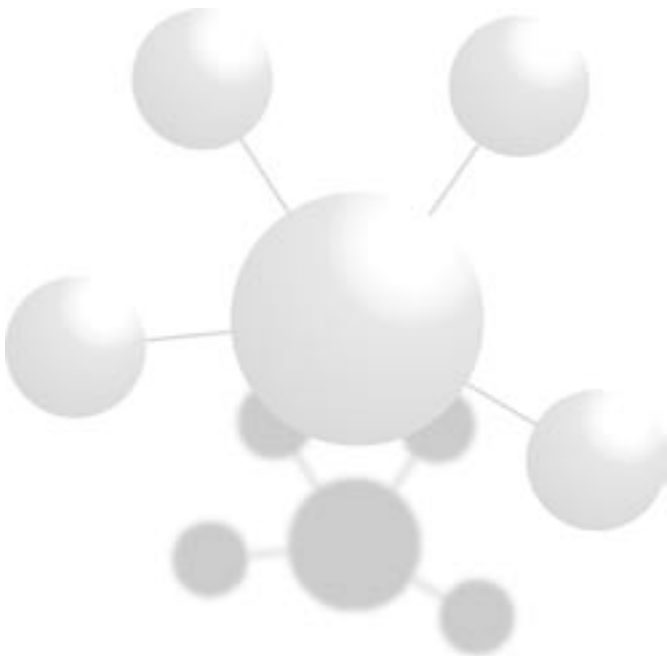
- Fast high-quality MIP display.
- Thresholding to exclude unwanted intensities
- MIP-Radials for incremental rotated MIPs



## SHADED SURFACE DISPLAY



KB-Vol3D's **Shaded-Surface module** allows easy visualisation of surfaces in the volume. Surfaces may be created by **intensity-based Thresholding**. Alternatively, the Seeding option allows selection of specific connected structures of interest.



## REGION-SEGMENTATION

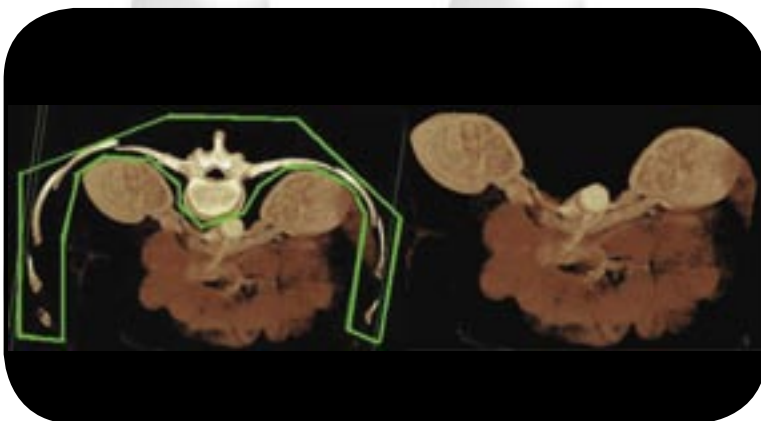


Centroid = [ 281.5, 229.5, 2.9]  
Area = 532.25 square mm  
Volume = 255.16 cubic mm  
0.47mm X 0.47mm X 1.00mm

### Region-Growing

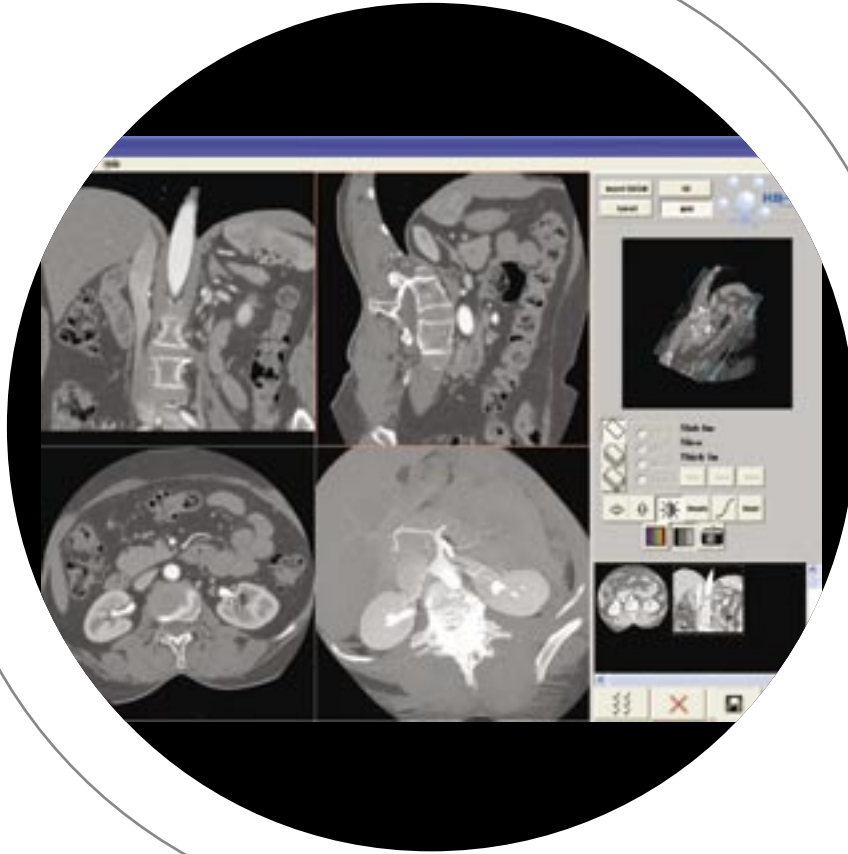
Regions within the volume may be defined by pointing and clicking in the 3D or MPR displays. Volume measurements are displayed for the selected region.

Regions may be deleted from the volume.



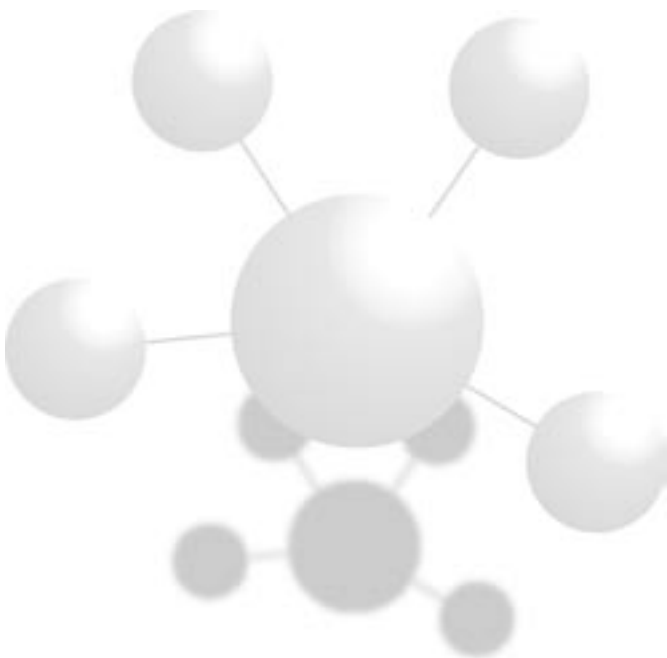
**ROI-Delete:** Mark a region and delete it

## MULTI-PLANAR REFORMAT - MPR



The **MPR Module** includes a powerful suite of tools for generating MPR sections:

- *Oblique and Double-Oblique Sections*, through a simple click-and-drag mouse interface.
- *3D Correlation Volume Display*, providing a highly intuitive visual cue that facilitates quick and accurate MPR sectioning.
- *Multi-MPR Tool*, for generation of multiple sections along a chosen orientation.
- *MPR-Slab Tool*, for visualisation of slab-sections of desired thickness.
- *Blending, Maximum-Intensity-Projection, and Minimum-Intensity-Projection* slab modes.

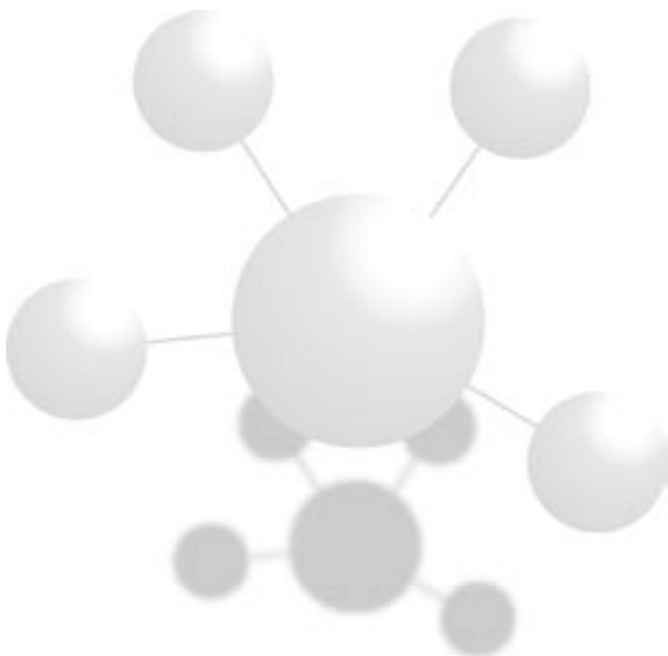


## IMAGE AND MOVIE CAPTURE



Images displayed by KB-Vol3D can be captured to various image formats (including DICOM, JPEG, BMP etc.).

Visualisation operations can also be captured to an AVI movie file and played on Windows Media Player, Quicktime, Real Player etc.





### **System Requirements**

- KB-Vol3D is available for PCs running Windows.
- The minimum recommended configuration is a Pentium III, 512 MB RAM.
- An NVIDIA GeForce6, GeForce5, GeForce4 (Ti series only), or Quadro AGP graphics card is required for fast volume-visualisation. GeForce3 AGP cards are also supported, though not recommended.

For more information e-mail [3d@kbvis.com](mailto:3d@kbvis.com)  
For a free evaluation copy of KB-Vol3D visit [www.kbvis.com](http://www.kbvis.com)