ImageVis3D

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ImageVis3D

- Lightweight Application
- Interactive
- Large Dataset Support
- Flexible UI
- Support a Wide range of Software & Hardware
- Foundation for other Apps
- Foundation for Research Projects
- MIT License

Lightweight Application

- ImageVis3D is less then a megabyte in size
- No 3rd party dependencies except for QT
- (Hopefully) Easy to use
- Easy to compile yourself

```
svn https://..../svn/ImageVis3D
qmake
make
```

Large-Scale Volume Rendering

What is "LARGE"?

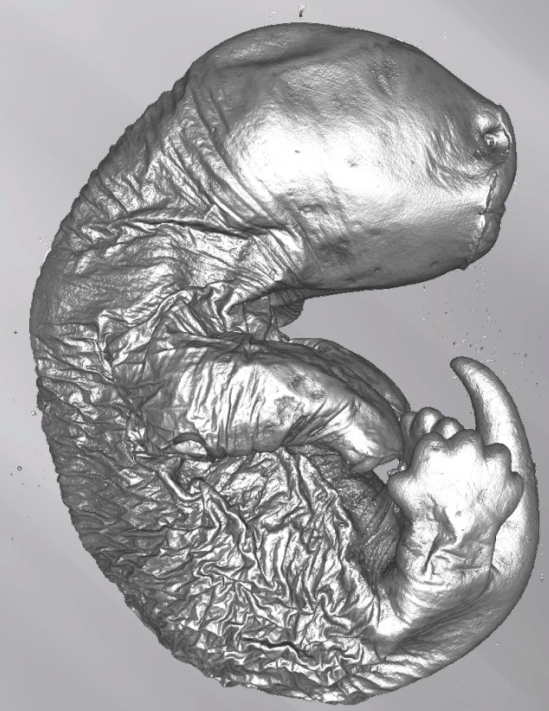
About largeness …

"Large" may be something that does not fit

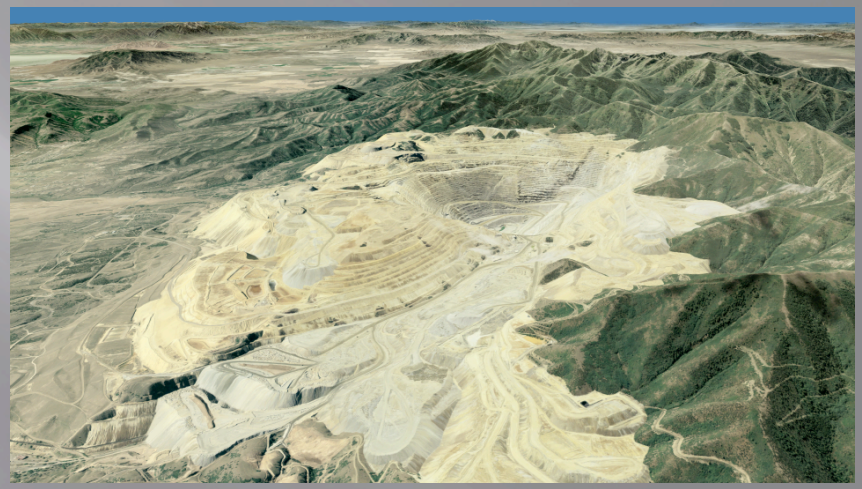
- into GPU memory (> 126 MB – 4 GB)
- into main memory (>2 GB – 64 GB)
- onto the local drive (>0.5 TB – 10 TB)

- into 32 bit address space (>4 GB)
- into 64 bit address space (>16 EB)
- …

Large Data Visualization



12 GB



600 GB

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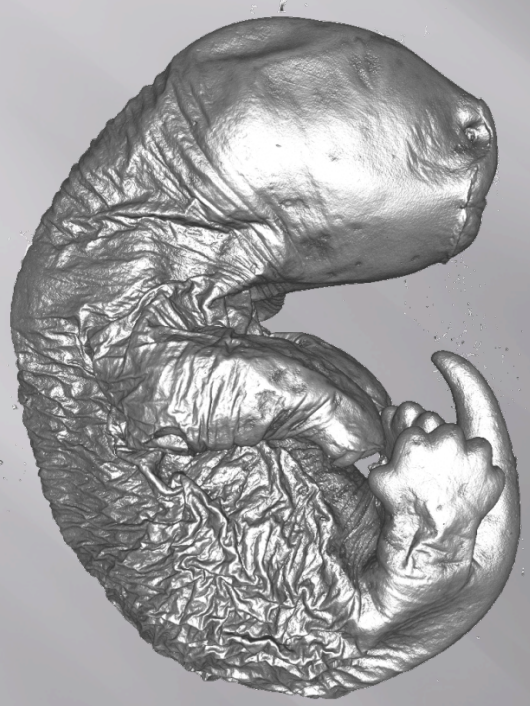
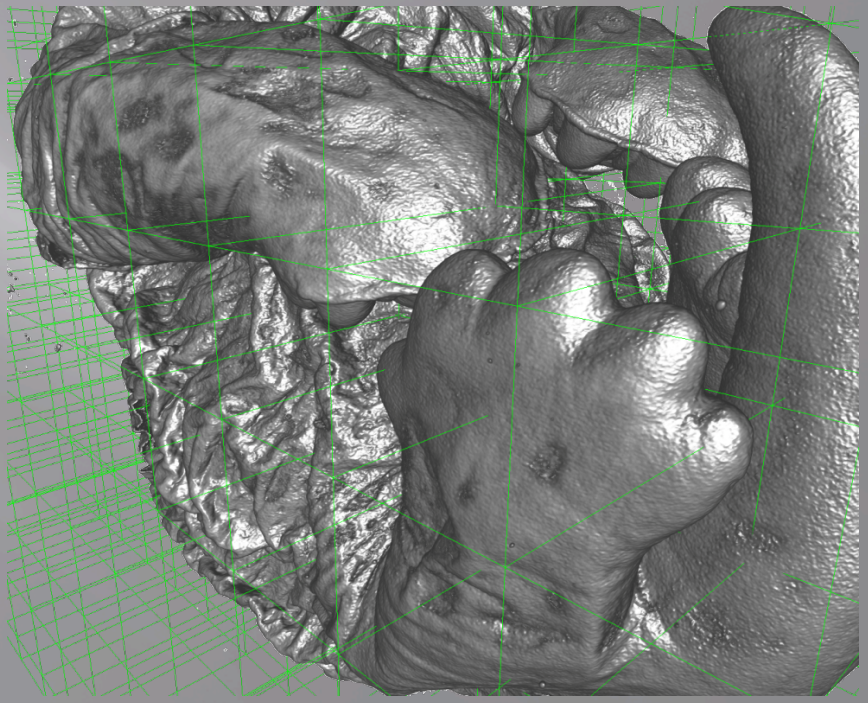
Large-Scale Volume Rendering





12 GB

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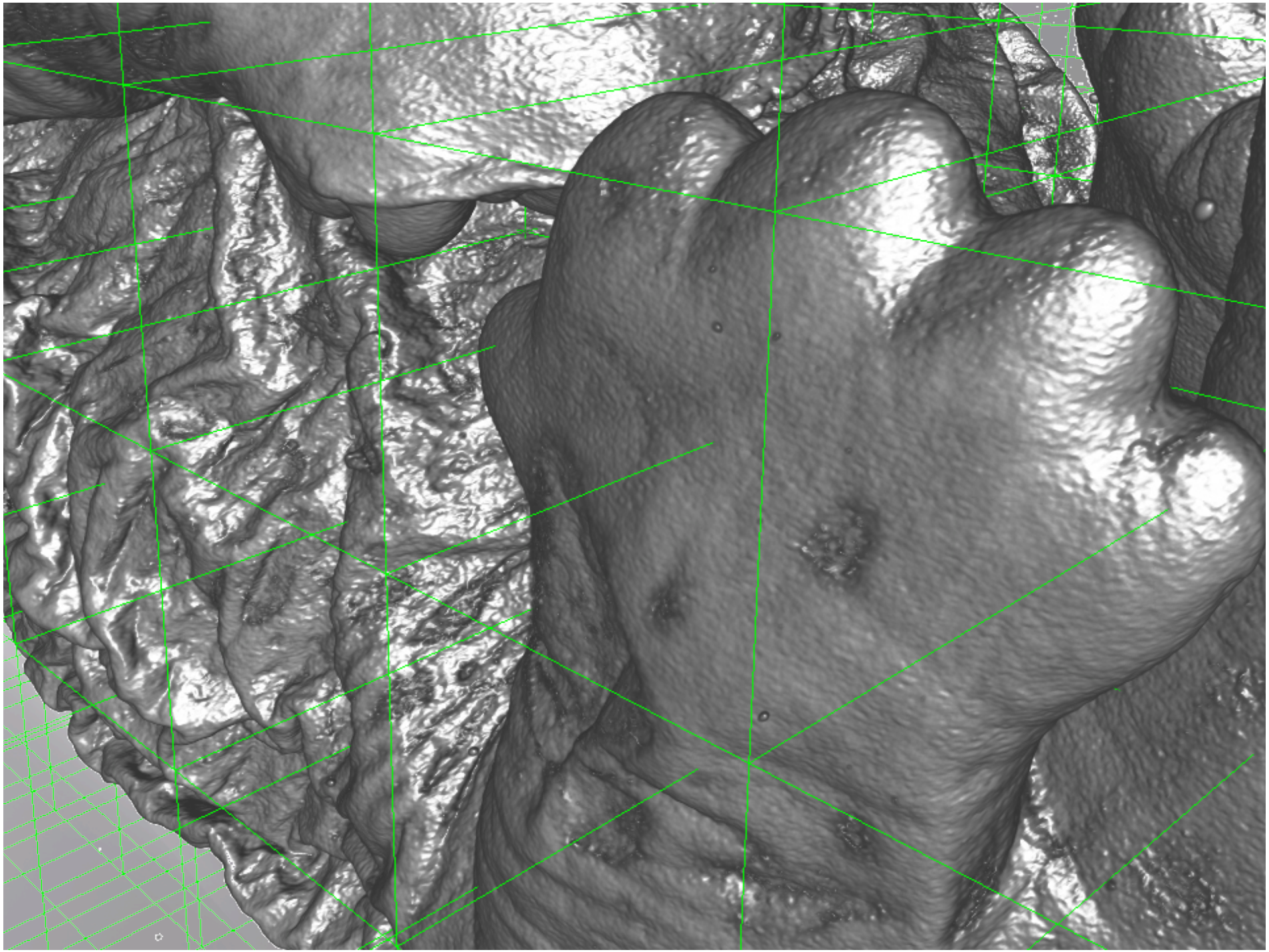
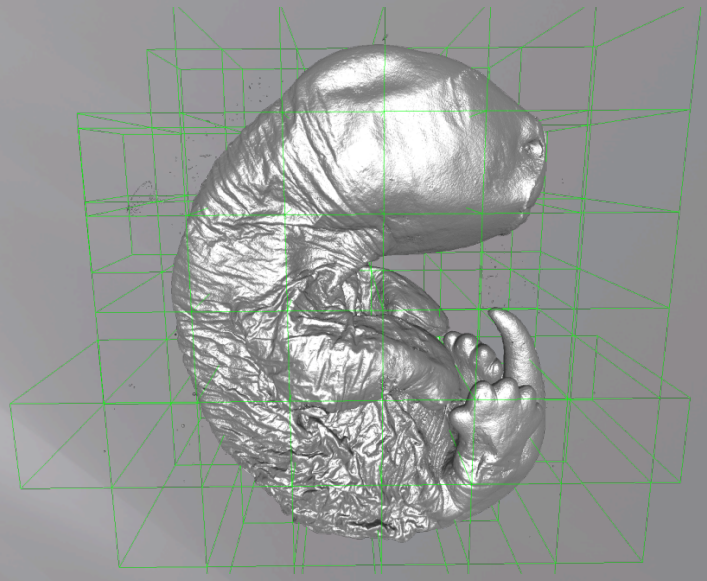
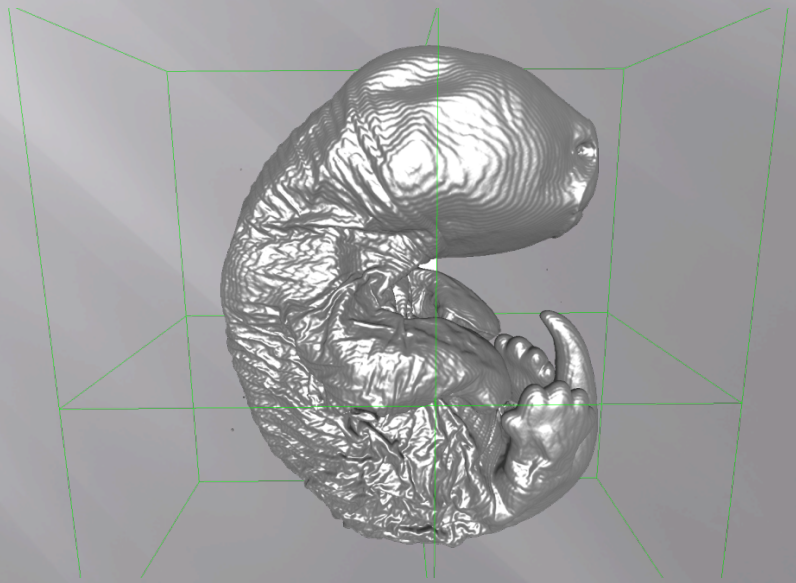


Techniques

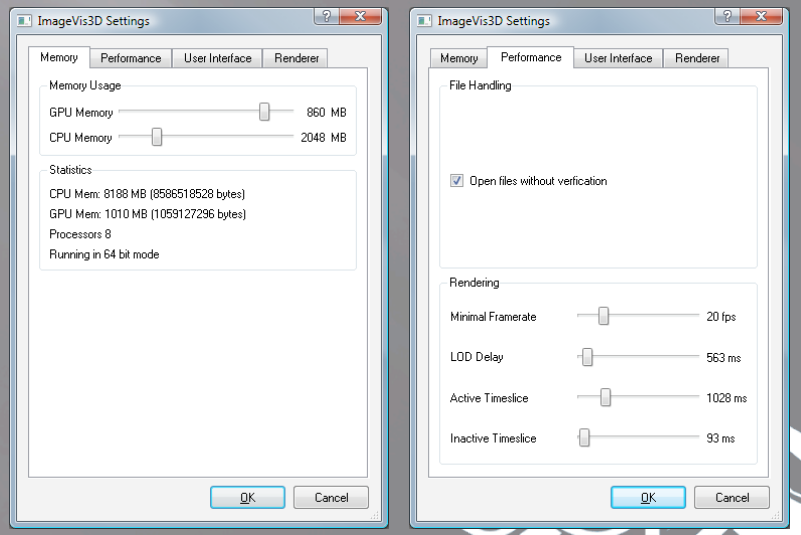
- Out of core
- Bricking
- LOD
- Culling

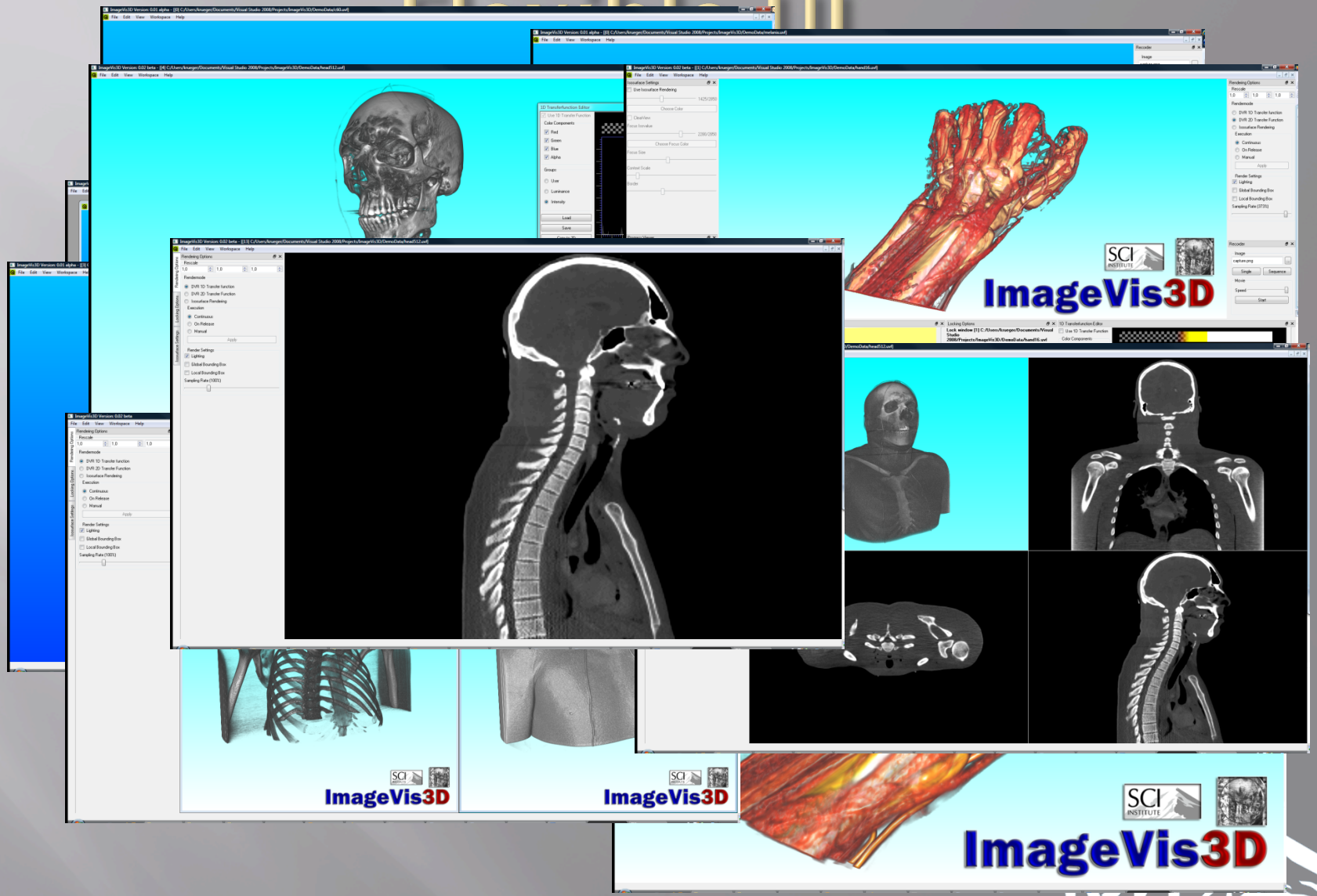




Interactive Large Dataset Support

- Works with any dataset that fits on a hard disk or in 64bit memory space, whatever is less
  (please let me know where the second condition becomes the limitation ☺)
- LOD system allows for interactive exploration regardless of the dataset size
- Implements its own multitasking system and allows for fine grain control





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Support a Wide range of Software & Hardware

Software:

- Windows XP & Vista (both 32 & 64bit)
- Mac OS 10.4 & 10.4
- *nix

Hardware:

- GPU capable of
  - OpenGL 1.2 + GLSL or OpenGL 2.0

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State of ImageVis3D

- Currently in semi-public beta can be downloaded from

http://software.sci.utah.edu/devbuilds/imagevis3d

- Version 1.0 is planned for early 2009

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