

3DimViewer

is a lightweight 3D viewer of medical DICOM datasets distributed as open source software. The viewer is multiplatform software written in C++ that runs on Windows and Linux systems. Its license allows you to use it for free.

Basic Features

- Truly 3D viewer of volumetric data.
- Multiplanar view (three orthogonal slices through the data).
- Adjustable density window.
- DICOM dataset import.
- Distance and density measuring.
- Volume rendering.
- Tissue segmentation based on thresholding.
- Surface reconstruction of any segmented tissue.
- 3D surface rendering.
- Advanced functions available via loadable plugins.

Basic Controls

Normally, when no special key is pressed, the *trackball mode* is active. In this mode, you can use the mouse to manipulate the scene. Pressing the **Ctrl** key, the mouse is swithed to the *object manipulation mode* (moving slices, etc.). Finally, pressing the **Alt** key switches mouse to the *density window mode* when the density window can be easily adjusted by moving mouse cursor in vertical (width of the window) and horizontal (center of the window) direction.

The default mouse mode, when no modifier key is pressed, can be also changed by pressing toolbar buttons (see the *Mouse Mode Toolbar*). In this case, pressing the *Esc* key returns mouse to the trackball mode.

- **Left mouse button** - scene/camera rotation.
- **Right button** - vertical and horizontal scene translation.
- **Middle button (or mouse wheel)** - scene zoom.
- **Ctrl + left button** - object manipulation.
- **Alt + left button** - density window shifting.
- **Esc** - switches to the trackball mouse mode.

3DimViewer Plugins

The 3DimViewer has been designed to have its functionality extended by plugins. These plugins provide various functions, for example STL model export, advanced segmentation, etc.

Plugins can be purchased from us for a small fee. Please visit 3Dim Laboratory website for further informations. Plugins are supplied in a form of dynamic libraries (dll) which in order to work must be installed to the viewer's **/plugin** directory.

Support and Bug Reports

You can contribute to the development of the viewer in various ways, by sending bug reports or your suggestions. In case of some troubles during the installation process or running the viewer, don't hesitate

to contact us. Any contributions are welcome.

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NOTE: The executable distribution of 3DimViewer provided by the Initial Developer contains some additional plugins based on proprietary code. These plugins are not included in the source distribution!

Used 3rd Party Libraries

- OpenSceneGraph library (<http://www.openscenegraph.org>)
- MDSTk toolkit (<http://mdstk.sourceforge.net/>)
- OpenMesh (<http://www.openmesh.org/>)
- DCMTk toolkit (<http://dicom.offis.de/dcmtdk>)
- The OpenGL Extension Wrangler Library (<http://glew.sourceforge.net/>)
- cURL library (<http://curl.haxx.se/>)
- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)
- Zlib library (<http://www.zlib.net/>)

Many thanks!

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