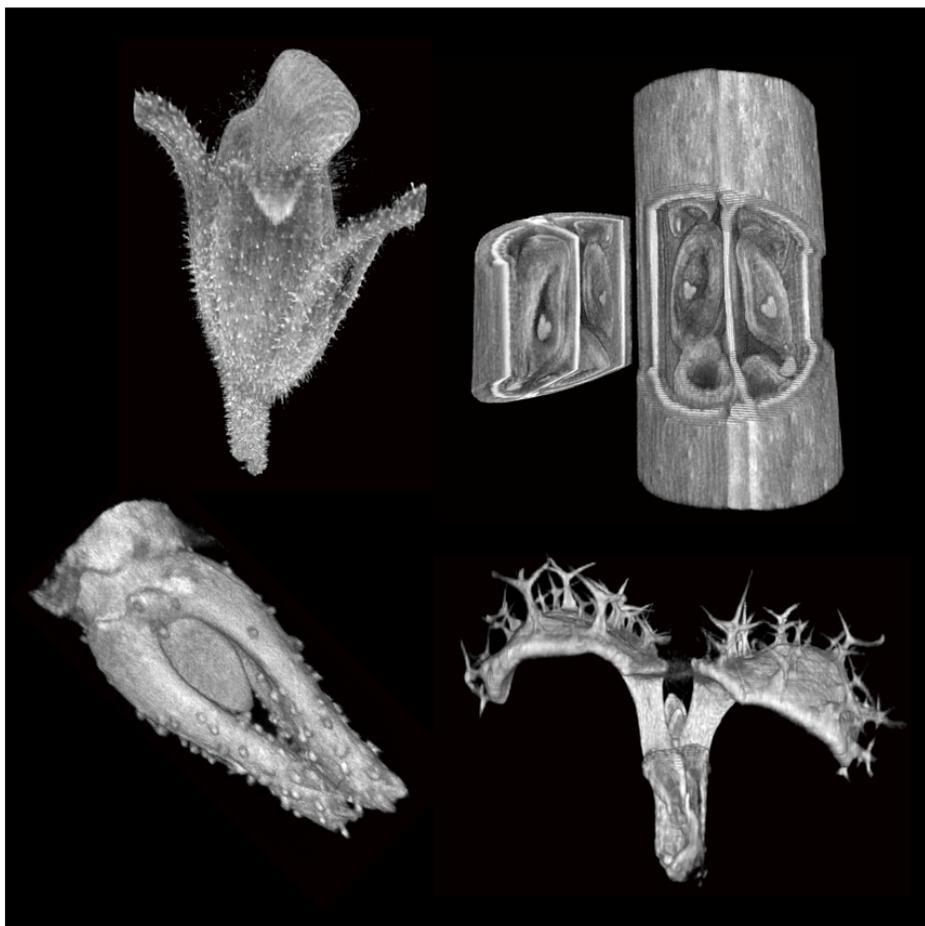


QtVolView lite



User manual

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1.0 Overview:

QtVolViewLITE is an application to allow for the interactive visualisation of Optical Projection Tomography volume data using the OpenGL graphics library. The application was implemented as a joint project between the John Innes Centre and University of East Anglia, Norwich, UK.

The full version of QtVolView is available upon request. If you are interested in using QtVolView for your own volumetric data please contact:

Mr. Jerome Avondo
Email: j.avondo@uea.ac.uk

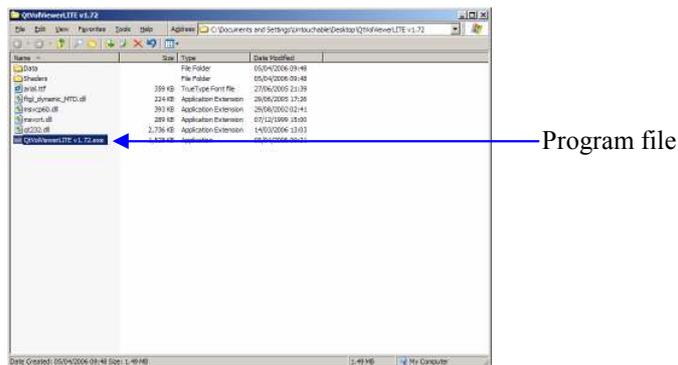
2.0 System Requirements:

QtVolViewLITE requires an OpenGL compatible graphics card, capable of using 3D Textures. The recommended system requirements are as follows:

3.2Ghz CPU
1Gb RAM
128Mb 3D Graphic Card (>ATI 9xxx or >Nvidia 5xxxx)

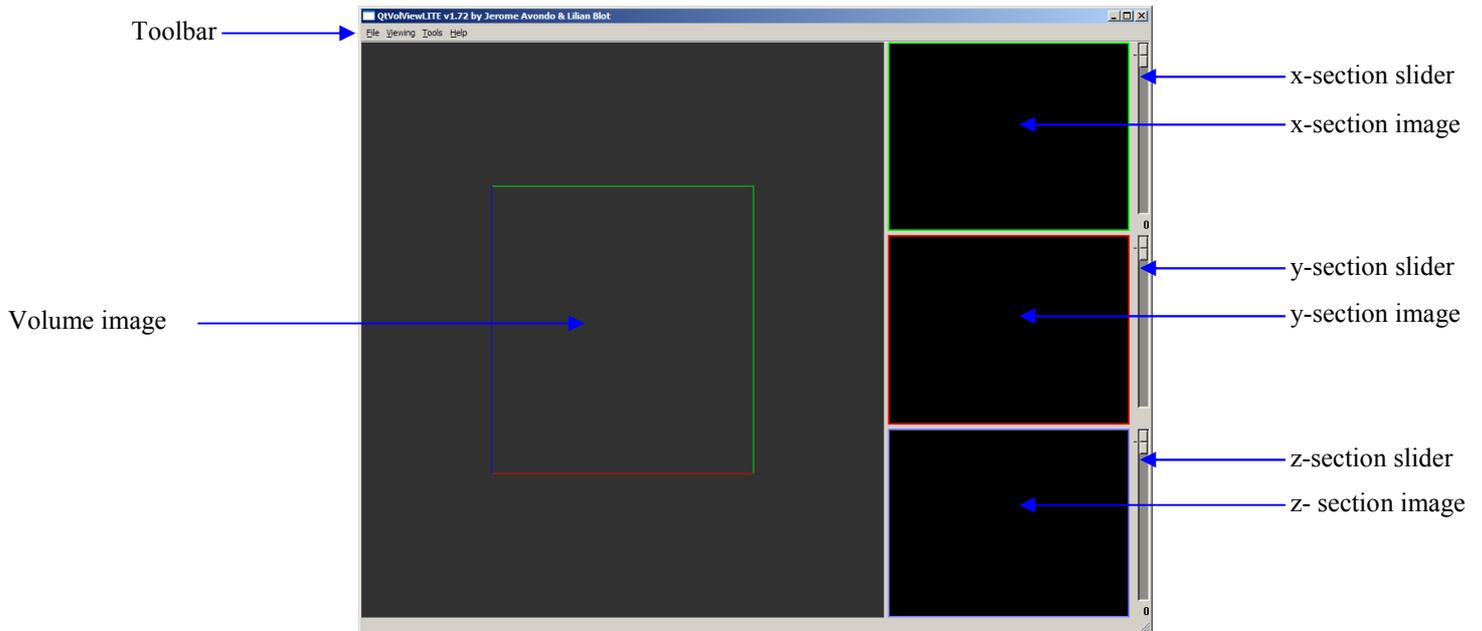
3.0 Running QtVolViewLITE:

To run QtVolViewLITE double click on the program file (QtVolViewLite v1.72.exe).



4.0 QtVolViewLITE Main Screen:

When the program is run, the QtVolViewLite main screen will appear. Below is a short description of the main parts of the main screen.



Toolbar:

Main application toolbar.

Volume image:

Rendered image where the volume is displayed.

x-section slider:

Slider controlling the x value for the x-section image.

x-section image:

Resulting section image corresponding to the x slider value.

y-section slider:

Slider controlling the y value for the y-section image.

y-section image:

Resulting section image corresponding to the y slider value.

z-section slider:

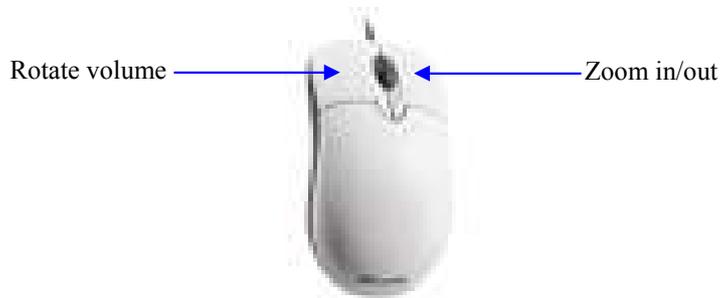
Slider controlling the z value for the z-section image.

z-section image:

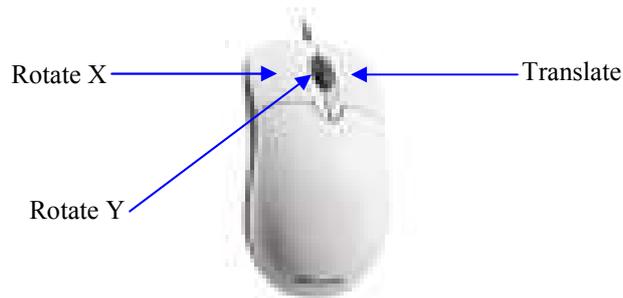
Resulting section image corresponding to the z slider value.

5.0 Keyboard & Mouse:

Whilst the mouse is over the VOLUME IMAGE, the following actions are mapped to the mouse buttons. To perform the selected action simply *click + drag* the desired button.



Whilst the user has selected a CLIPPING PLANE, the following actions are mapped to the mouse buttons. To perform the selected action simply *click + drag up/down* the desired button.



The following general keyboard shortcuts to speed up usability are available:

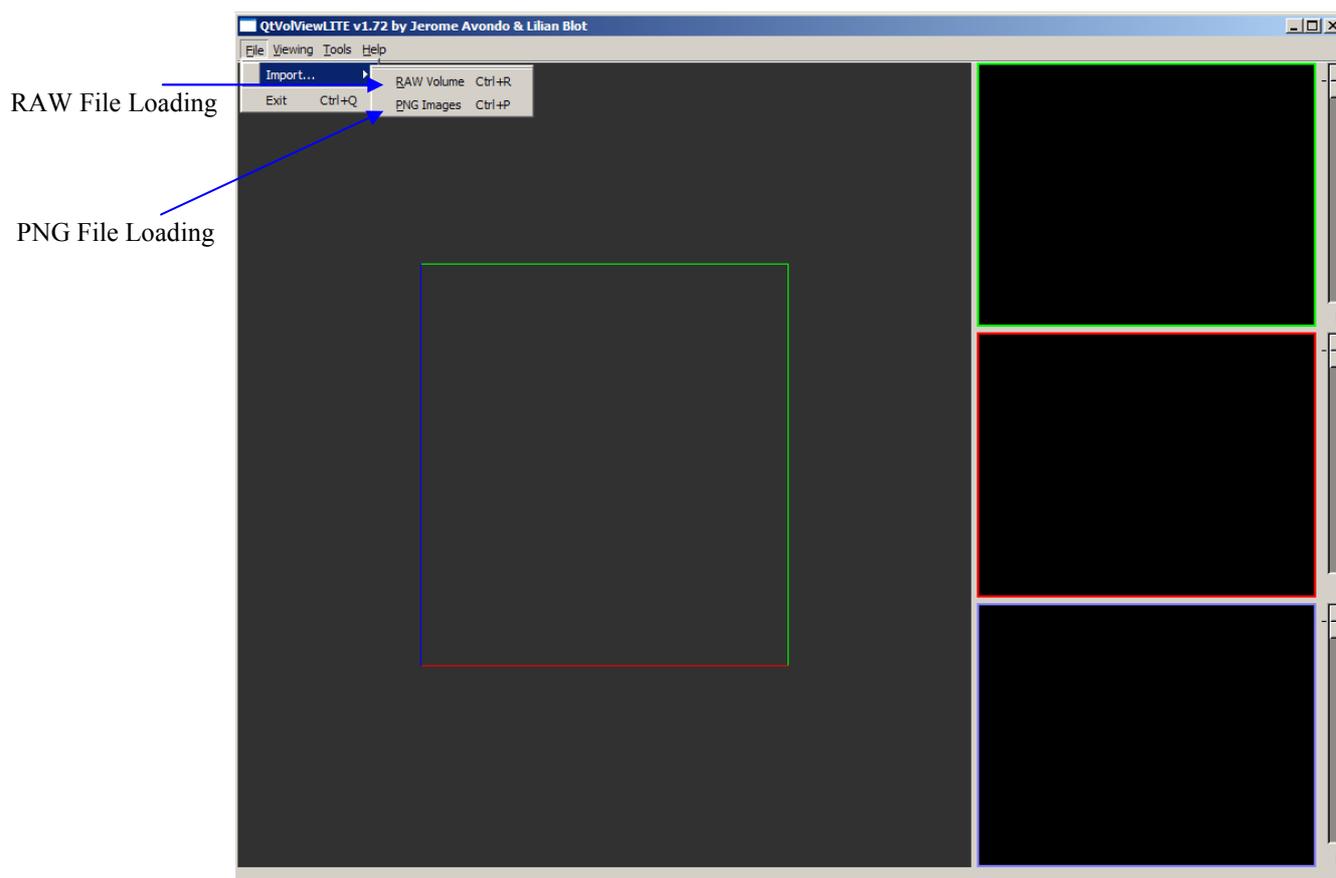
CTRL+P	Load PNG.
CTRL+C	Open Clipping Editor.

6.0 Features:

6.1 FILE MENU

6.1.1 *Opening a volume.*

Volumes are stored as a series of z slice PNG images OR as a binary RAW file.



6.1.1.1 *PNG Volumes*

To load a PNG volume, simply select from the *main toolbar*:

FILE -> IMPORT -> PNG IMAGES.

Or alternatively for a quicker method use the keyboard shortcut CTRL+P.

6.1.1.2 *RAW Volumes*

To load a RAW volume, simply select from the *main toolbar*:

FILE -> IMPORT -> RAW VOLUME.

Or alternatively for a quicker method use the keyboard shortcut CTRL+R.

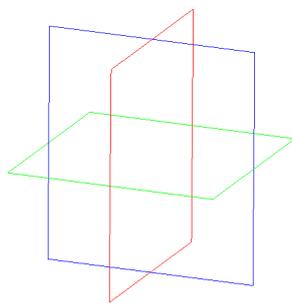
6.2 VIEW MENU

6.2.1 Rendering mode.

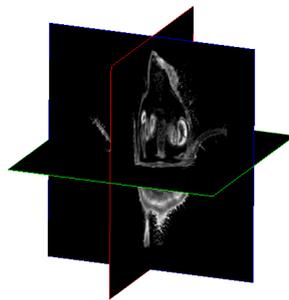
It is possible to change the rendering approach for the volume image. This should be left as it is in 3D TEXTURE MAP. However on older graphics hardware user will see a rendering speedup when using the 2D TEXTURE MAP approach; however this will introduce an image quality penalty.

Slice mode.

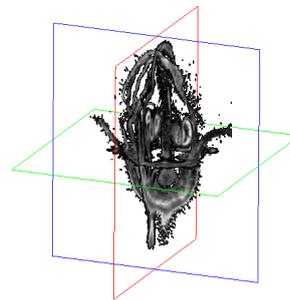
Toggles the slice/section visualisation mode.



Wireframe



Solid



Alpha masked

View From.

Allows users to quickly change the view orientation for the volume image.

Background Colour.

Allows for changing the background colour in the volume image.

Volume.

Toggles the volume image on and off. This is useful for when a user wants to have a better look at the section images in 3D.

6.3 TOOLS MENU

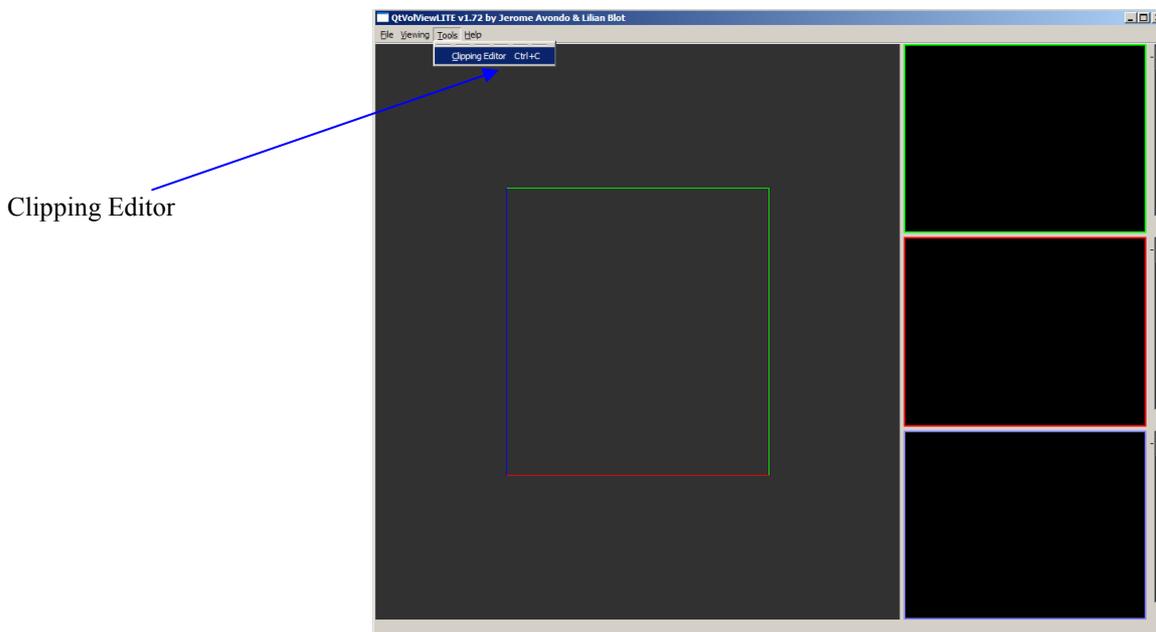
6.3.1 Clipping Editor.

The clipping editor allows user control of the 6 clipping planes in order to cut away parts of the volume.

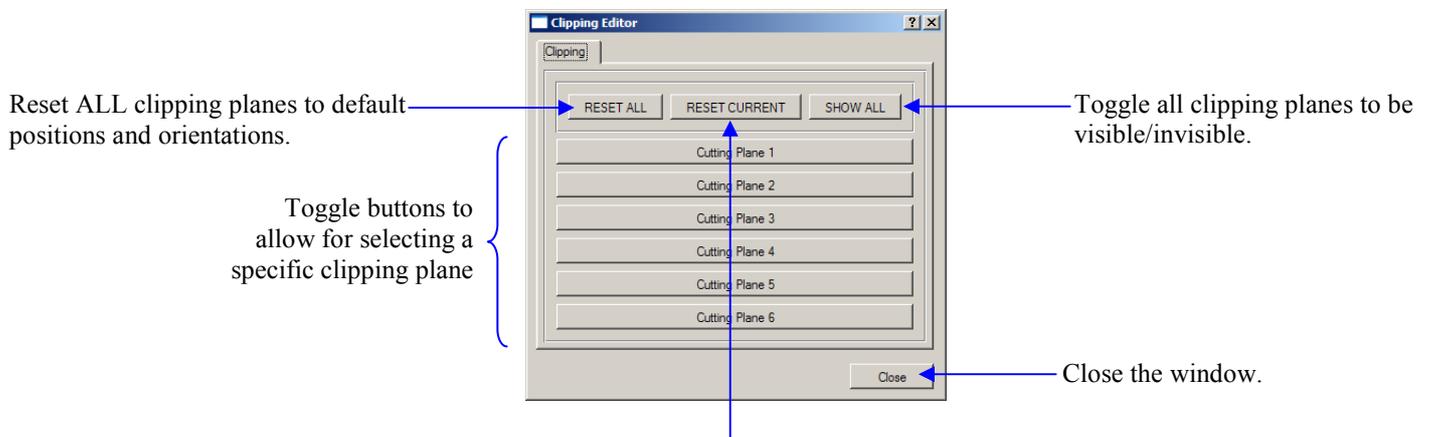
To open the Clipping Editor, simply select from the *main toolbar*:

TOOLS -> CLIPPING EDITOR

Or alternatively for a quicker method use the keyboard shortcut CTRL+C.



The following window will then popup, please refer to section 5.0 to see the available mouse actions whilst a specific clipping plane is selected.



Reset the currently selected clipping plane to its default position and orientation.

6.4 HELP MENU

6.4.1 About.

Displays information about the application.