

Demonstration Video

Voxler – Part 4

Contours, OrthoImage and ClipPlane

PART 1

1. Introduction
 2. Contours
 3. OrthoImage
 4. ClipPlane
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1. In this part I will demonstrate how to add contour maps, add orthoimage, and use Clipplane.
2. I will start by importing the CT_foot.vdat file, and adding an isosurface and contour map to it.
 - a. Go to File | Load Data, navigate to the Voxler Data folder, select CT_foot.vdat, and click Open.
 - b. Double click on Isosurface in the in the Graphics Output folder in the module library.
 - c. Select the CT_foot.vdat from the network window and double click on Contours in the Graphics Output folder in the module library. This adds contour lines to the current image in the viewer window.
 - d. If the isosurface is invisible you can see the contours better. To set the isosurface to invisible, uncheck the checkbox on the left side of the Isosurface module in the network window.
 - e. Now look at the properties for the contours module by clicking on the module in the network window, and looking at the properties window.
 - f. The level method property changes the method used to compute the contour values. Automatic uses the data limits and the number of contour levels specified to display the contour lines. Min, Max, Count displays the specified number of contour levels with equal spacing from the minimum to the maximum. Min, Max interval displays contour lines with the specified interval ranging from the minimum value to the maximum value. Explicit allows you to enter the contour values you wish to be displayed.
 - g. The number of levels property sets the number of levels to be displayed. The more levels that are displayed the more detailed the image will be. The number of levels property is disabled when using the explicit level method.
 - h. The color map can be changed by clicking on the example of the color and choosing the new color from the pull down menu, and the Legend can be turned on by clicking the checkbox in the Legend row.
 - i. To change the orientation of the cutting plane you can either select one of the standard orientation settings from the pull down box. You can also check the show dragger checkbox in the properties menu and adjust the cutting plane manually. A sphere should appear in the middle of the contour plane in the viewer menu. By

clicking on the sphere and dragging it you can reposition the cutting plane. As the cutting plane is repositioned the contours displayed change along with the object

3. An orthoimage is an orthogonal slice through a 3D lattice or volume and is parallel to either the XY plane, the XZ plane, or the YZ plane.
 - a. An orthoimage can be added by selecting CT_Foot.vdat from the network window and double clicking on Orthoimage in the Graphics Output folder in the module library. I will switch the contours module to invisible so that the orthoslice can be better seen by unchecking the checkbox on the contours module.
 - b. You can change the direction of the slice through the volume by clicking on the drop down menu to the right of Orientation in the properties window and selecting the orientation you want.
 - c. You can then shift the orthoimage up or down through the 3D lattice (or volume) by changing the slice number. To change the slice number you can pull the slider to the left or right or enter the exact slice number by clicking on the number and entering the slice number you wish to use.
4. A clip plane allows you to cut off the image at a user-defined plane.
 - a. Check the check box next to the isosurface module so that it is visible again in the viewer window.
 - b. Select the Isosurface module in the network window and double click on ClipPlane in the Graphics Output folder in the module library.
 - c. In the ClipPlane module properties you can change the orientation of the clip plane by clicking on the drop down menu to the right of Orientation and selecting the orientation you want.
 - d. You also have the option to change the distance of the clip plane from the center of the image, and swap the clip plane direction.