

Volume Render: High Def Volume Rendering

The Volume Render module allows for the generation of High Definition Volume Renderings. This exercise will demonstrate how to generate a high definition volume rendering using a CT data set with a Volume Composite with a tissue map overlay. Note the high definition volume renders can be generated with any of the rendering algorithms available in the Volume Render module.



1. Load the **CT_Heart.aww** data set from the **\$(\BIR\images\TutorialData** directory.
2. Open the **Volume Render** module (**Display > Volume Render**).
3. Open the **Render Size** option from the **Generate** menu and change the **Width** and **Height** of the **Render size** to **2000x2000**. Then click **Apply** (figure 1).
4. Open the **Render Type** window from the **Generate** menu and select **Volumetric Compositing**, check the **Interpolated Rays** option (figure 2).
5. Click the **Tissue Map** button to open the **Tissue Map** tool. Right-click on the main tissue map panel and select **Default Tissue Maps**, choose the **CT 2** default tissue map.
6. Now open the **Perspective Rendering** tool (**Tools > Display > Perspective**) and then click the **Perspective Render** button (figure 3). In **Perspective** mode, a ray is cast for every output pixel in the rendering. In this case 4 million (2000x2000) rays are cast through the current field of view (FOV) for the perspective geometry.
7. Note the **Render Size** controls the number of rays, and the **FOV** controls the space in the volume through which that number of rays is cast. It may take a little while to render depending on the volume size.
8. Once the rendering is complete, the **HDVR** will be displayed in the main **Volume Render** window.
9. To save the rendering, Select **File > Save Rendering**. Name the rendering **HDVR** and then click the **Save Last Rendering** button.
10. Close the **Volume Render** module before proceeding to the next exercise.

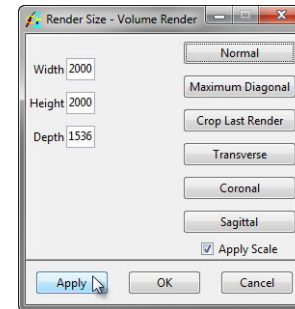


Figure 1

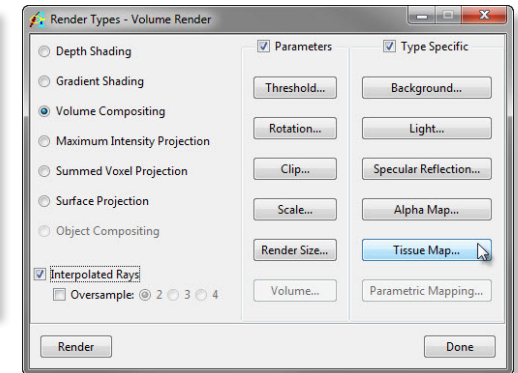


Figure 2

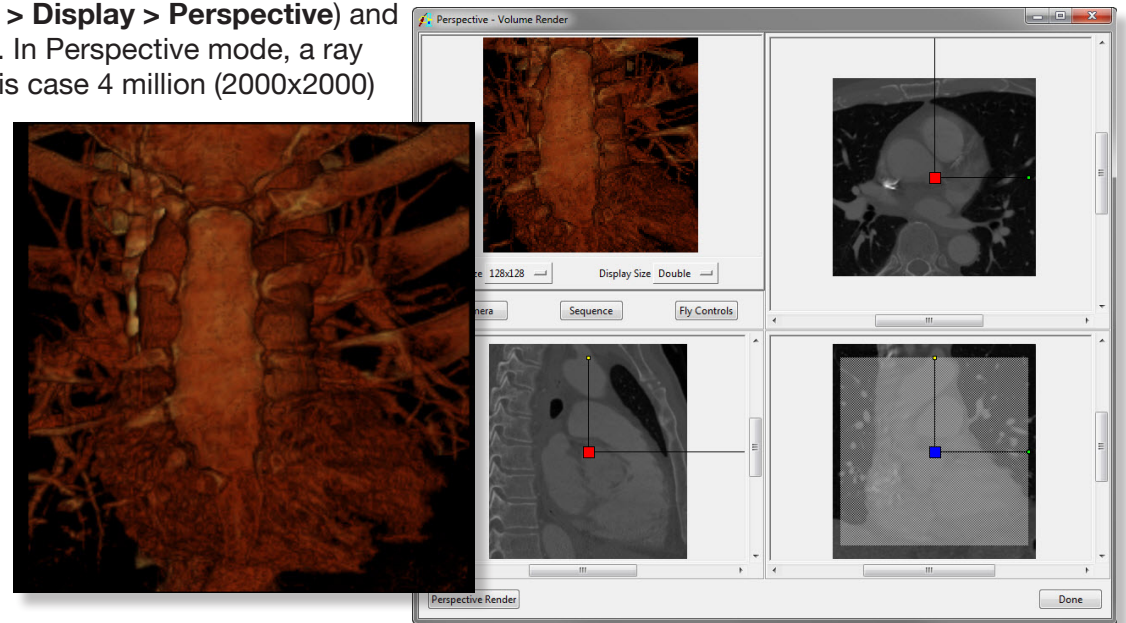


Figure 3