

Object Extractor: Extracting Multiple Objects

The Object Extractor module supports the creation of multi-object object maps. This exercise will demonstrate the segmentation and separation of the lungs.

1. Load the **CT_Lungs.awv** data set from the **\$(\BIR\images\TutorialData** directory.
2. Open the **Object Extractor** module (**Segment > Object Extractor**).
3. Open the **Define Region** window (**Generate > Define Region**) to begin the segmentation process.
4. To define an auto trace on any slice of the volume, first specify a starting slice using the 'Slice' slider bar. Slice **104** is the default slice, and it is a good starting point for this data set.
5. Position the cursor near the center of the left lung and click to set a seed point.
6. The Define Region window will automatically update (figure 1) to display auto trace parameters. Use the double-ended slider bar now available to set the **Threshold Minimum to 18** and the **Maximum to 99**.
7. Click the **Extract Options** button, and set the **Result to Object** (figure 2), select **Yes** in the window returned.
8. In the Define Regions window, click **Extract Object** to start the object extraction process. The left lung will be extracted and saved as the object called 'Extracted'. The object will appear red.
9. Open the Define Regions window again, when opened click the **Clear Regions** button. Next, click in the right lung to set a seed point, set the **Threshold Minimum to 18** and the **Maximum to 104**.
10. Click **Extract Object** again. The right lung will be extracted and saved as the object called Extracted (2), the object will appear green. In the main Object Extractor module you will see both lungs (figure 3).

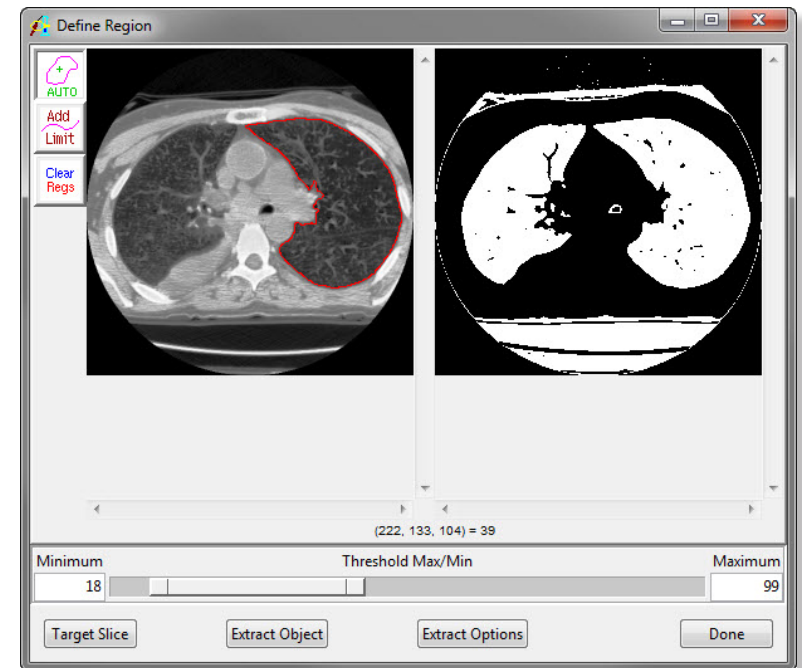


Figure 1

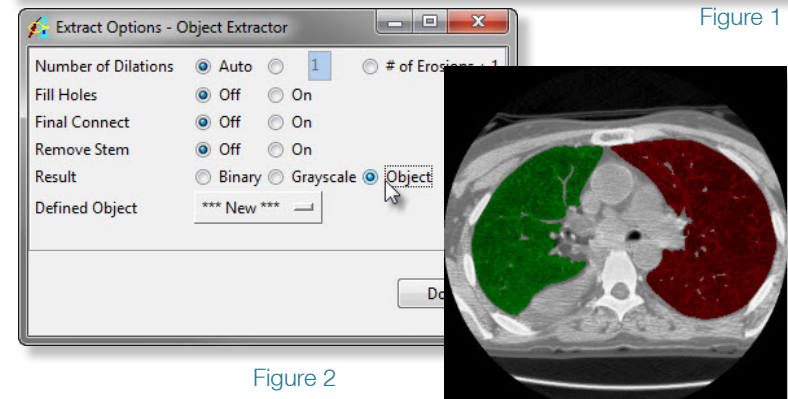


Figure 2

Figure 3

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11. The render window will now display both lungs in 3D (figure 4).
12. To change the name and color of each object, go to the **Objects** window (**View > Objects**). Set **Control By** to **Attribute**, and from the drop down menu select the **Name** and **Color** attribute options (figure 5).
13. To save the object map for use in other modules, select **File > Save Object Map**.
14. Close all windows related to the Object Extractor module before proceeding to the next exercise.

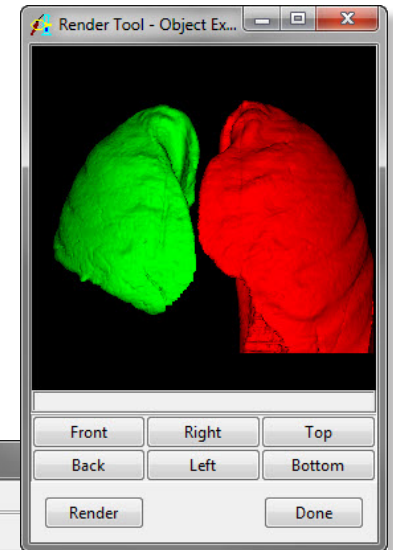


Figure 4

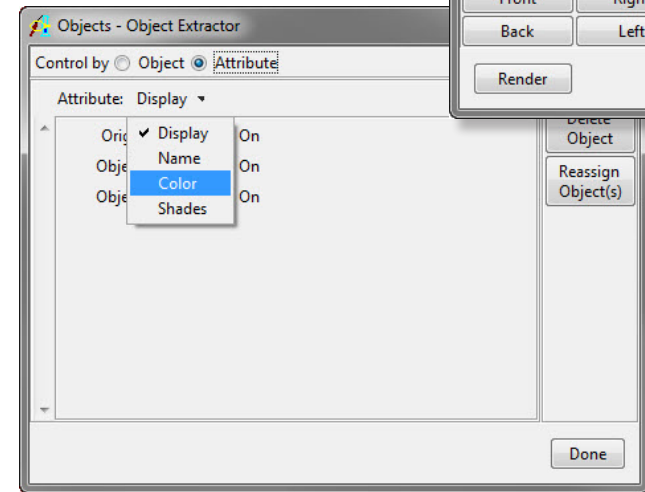


Figure 5