

## Exercise 34 : Object Extractor Extracting Multiple Objects

The Object Extractor module supports the creation of multi-object object maps. This exercise will demonstrate how to achieve this.

1. Load the **CT\_Lungs.avw** 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 [A] 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 [B]. 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).

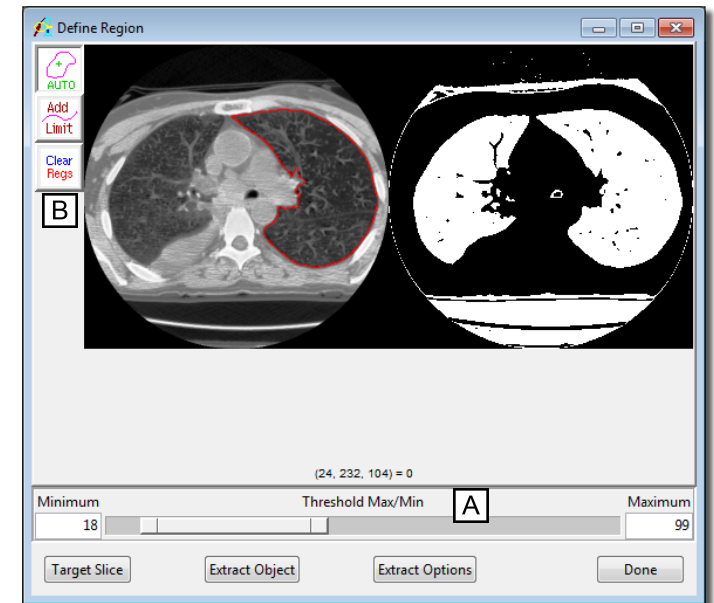


Figure 1

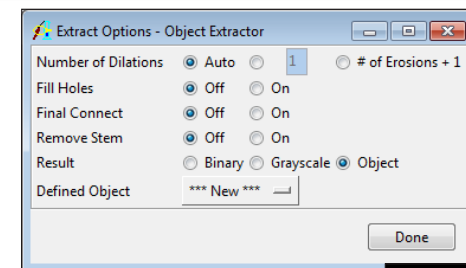


Figure 2

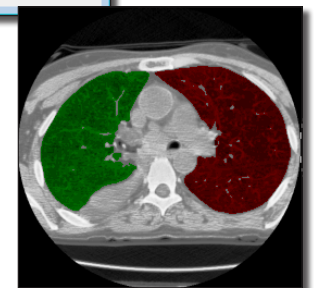


Figure 3

## Exercise 34 : Object Extractor - Extracting Multiple Objects

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.

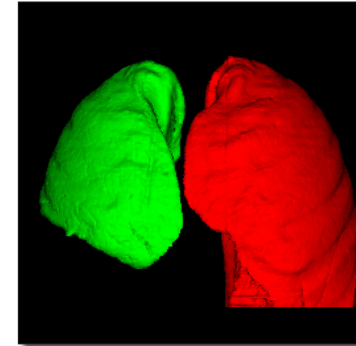


Figure 4

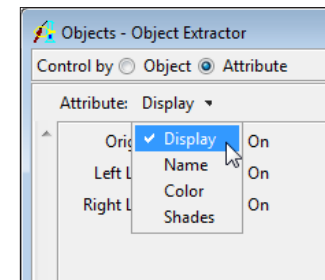


Figure 5