

Exercise 53 : ITK Filters

The ITK Filters module enables the application of ITK smoothing, edge-detection, and feature-extraction filters to image data. This exercise will demonstrate how to apply a filter in the ITK Filters module to your data.

1. Load the **MRI_3D_Head.avw** data set from the **\$(\BIR)\images\TutorialData** directory.
2. Open the **ITK Filters** module (**ITK > Filter**).
3. Open the **Preview Options** window (**Generate > Preview Options**).
4. Select the **Loaded and Preview Volumes** option. This will preview the original data set and a copy of the data set with any filter applied, side-by-side.
5. Open the **Filters** window (**Generate > Filters**).
6. In the Filters window, select the **Bilateral** filter (figure 1).
7. Use the **Slice** slider bar to determine which slice you would like to preview the filter on; set to **Slice 128**.
8. Now, click **Preview**. The main module window will display the filtered slice on the left and original slice on the right (figure 2)
9. Preview several other filters, noting the effect of each.
10. To apply a filter to the data set, simply click **Filter** in the Filters window. A dialog box will be returned stating that the action modifies the loaded volume, click **Change a Copy of the Loaded Volume**.
11. A filtered copy of your volume will be saved to the Analyze workspace.
12. Close the ITK Filters module before proceeding to the next exercise.

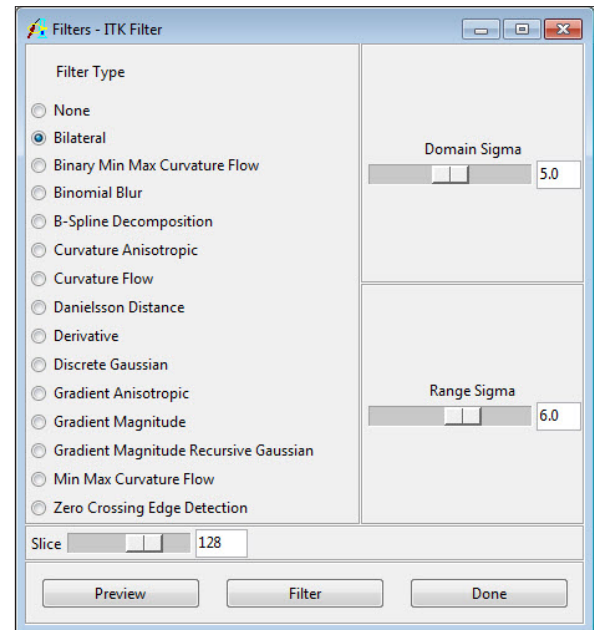


Figure 1

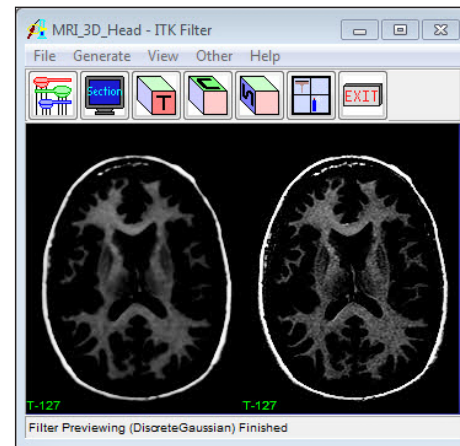


Figure 2