

Defining ROIs for Fiber Tractography on High Resolution Structural MRI



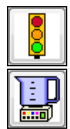
1. Load the high resolution MRI into the Region of Interest and define the desired ROIs as objects. Choose **File > Save Object Map** to save the Object Map before exiting the module.

2. In the Analyze Workspace select the **DTI b0 volume** (or 4D multivolume), then hold **<Ctrl>** and select the **high resolution MRI**.



3. Open the **3D Voxel Registration** module (**Register > 3D Voxel**). The DTI b0 volume should be displayed as the “Base” volume and the high resolution MRI as the “Match” volume.

4. Choose **File > Load Match Object Map** and load the Object Map file saved in step 1 (Figure 1).



5. Register the high resolution MRI to the DTI b0 volume. It may be necessary to change the **Blend** type (**Generate > Blend**). The Blend provides different settings in the “Fused” column to help visually evaluate the registration.

6. Once the two volumes are coregistered, choose **File > Save Transformed Object Map**. Save the new object map. This will resample the Object Map you loaded in step 4 at the resolution of the DTI data.

7. Proceed to process your DTI data into the DTI module. Once you have reached the “Fiber Tracking” tab and have computed fibers, click the **‘Load Object Map’** button and choose the resampled Object Map file saved out of the 3D Voxel Registration module in step 6.

8. Hit **‘Display Fibers’** to visualize fibers passing through the ROIs originally defined on the high resolution structural MRI (Figure 2).

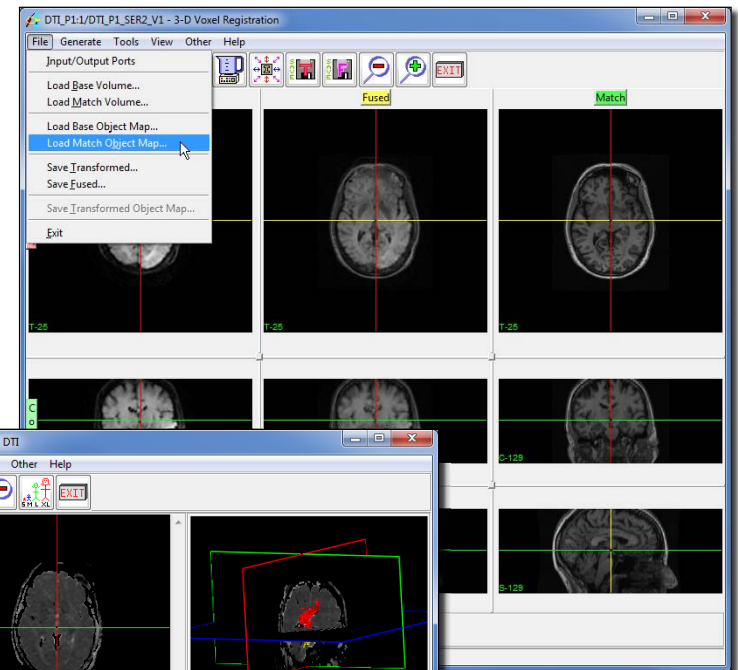


Figure 1

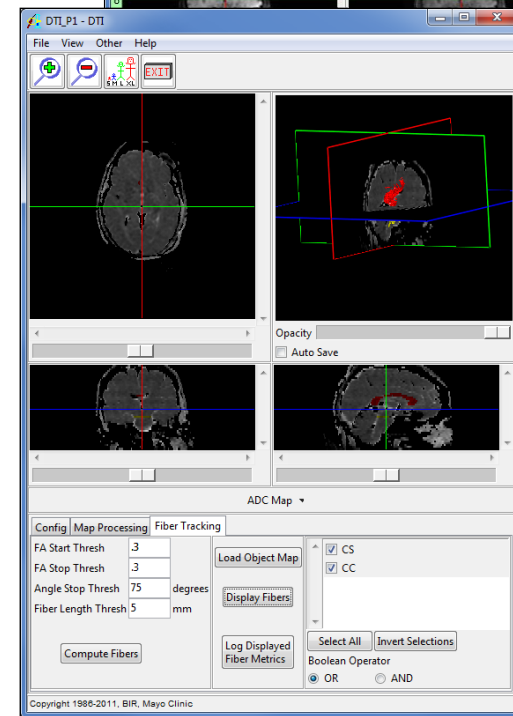


Figure 2