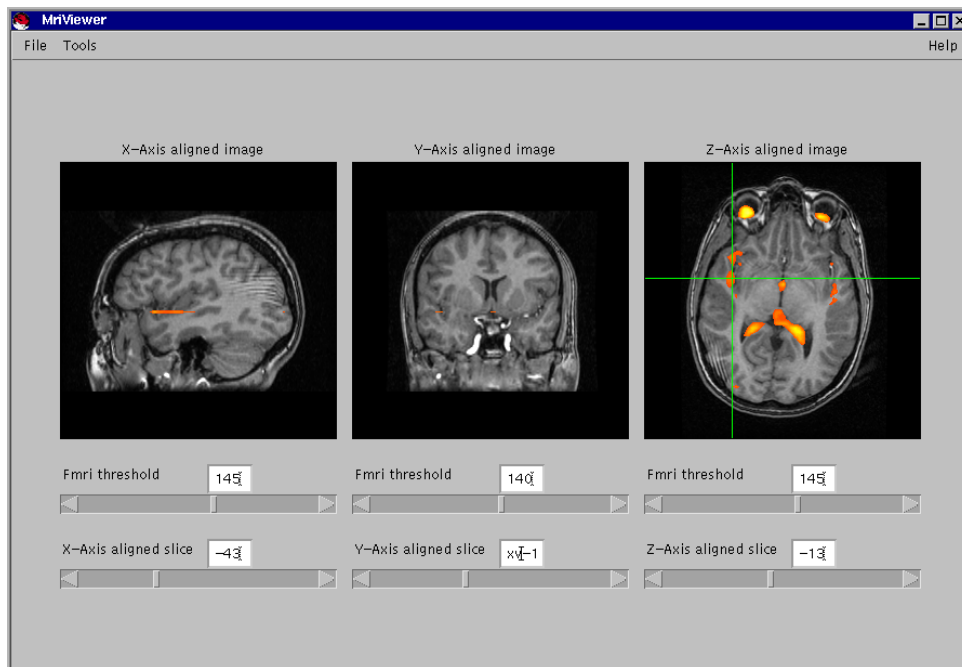


fMRIViewer

Manual



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Instructions:

**How to start and to use the MRIViewer
to display accurately merged SPGR and functional
magnetic resonance imaging data**

OVERVIEW OF PROCESS:

Start the program
Select the SPGR data
Select the fMRI data
Merge the data
Save your merged data.

SPECIFIC INSTRUCTIONS:

Insert the CD into your computer.

Start Windows Explorer

Copy all files into Folder /Directory on your computer

FROM WINDOWS, START MS-DOS. Go to Start Menu

Start→Programs→MS-DOS Prompt

1. At the MS-DOS prompt, navigate to the directory in which the fMRI program resides.

TO START THE PROGRAM

2. Type **mri** to start the program running. A MriViewer window will appear on the screen with three (XYZ) viewpanels.
3. Go to the *Tools Menu* and pull it down to see "Data Set Creator"
left mouseclick on "Data Set Creator."

A new window will appear called "Data Set Creator".

4. Go to the *File Menu* and pull it down to see "Open SPGR" and left click on "Open SPGR." A Navigator box [called Select Directory] will appear. Within this box, navigate to the directory in which your SPGR data files (GE files-ExxSxxIxx.MR with the .MR suffix) reside.

TO SELECT THE SPGR DATA SET

5. To select your SPGR data set, click once on the first file, then double-click on the first file,

or

high-light the first image file and click "OPEN" and all the SPGR image files in that directory will be read into the program.

You can see their progress in the window to the lower left of the Data Set Creator window.

TO SELECT EACH OF THE FMRI DATA SETS

6. Next, go to the *FILE MENU* and pull it down to see "Open FMRI" and click on Open FMRI. A Navigator box [Select Directory] appears. Navigate to the directory in which your FMRI data files (files with the .NIH suffix) reside.
7. Double-click on the first file, or high-light the first image file and click "OPEN" and the FMRI image files will be read into the program. You can see their progress in the window to the lower left of the Data Set Creator window.

Hint: If you place your MS-DOS window to the left lower

corner of your screen you will be able to see the program accessing each of the data sets and watch the progress.

TO SET THE PARAMETERS FOR EACH OF THE DATA SETS

8. In the upper left hand window of the Data Set Creator, you will see the file names for the SPGR files and the fMRI files. First, highlight the SPGR files by single clicking on it and then, while it is highlighted, set each of the various co-registration parameters:

Do this, starting with the SPGR and progress to all of the fMRI slices.

- A. Press the radio button for **each** slice orientation:
 * Axial * Coronal *
 Sagittal
- B. Set (enter) the Left Offset in mm. (negative numbers are right offsets)
- C. Set (enter) the Anterior Offset in mm. (negative numbers are Posterior offsets)
- D. Set (enter) the Superior Offset in mm. (negative numbers are Inferior offsets).
- E. Set (enter) the Tilt angle of the slice
- F. Set (enter) the Horizontal FOV (cm)
- G. Set (enter) the Vertical FOV (cm)
- H. Set (enter) the Slice Spacing (mm).

Repeat this process **for each fMRI series**.

Do this for each of the data series that need to be merged.

If you have made any mistakes, correct them. when you are satisfied that your information is correct

Press the **APPLY** button with the left mouse click.

TO MATHEMATICALLY MERGE THE MULTIPLE DATA SETS

9. Go to the menu item *Sequence Options* and pull down and click on **Multiple selection**.
10. Starting at the bottom of the list of image data sets that you want to merge with the SPGR data, click each one in turn, clicking on the SPGR data set LAST.
11. Go to the menu item *Sequence Options* and pull down and click on **Combine data sets**.