1 Program 3drefit

1.1 Purpose

Changes some of the information inside a 3D dataset's header. Note that this program does NOT change the .BRIK file at all; the main purpose of `3drefit` is to fix up errors made when using to3d. To see the current values stored in a .HEAD file, use the command '3dinfo dataset'. Using `3dinfo` both before and after `3drefit` is a good idea to make sure the changes have been made correctly!

1.2 Usage

3drefit [options] dataset ...

1.3 Options

-orient code

Sets the orientation of the 3D volume(s) in the .BRIK. The code must be 3 letters, one each from the pairs {R,L} {A,P} {I,S}. The first letter gives the orientation of the x-axis, the second the orientation of the y-axis, the third the z-axis:

R	= right-to-left	L	= left-to-right
A	= anterior-to-posterior	P	= posterior-to-anterior
I	= inferior-to-superior	S	= superior-to-inferior

** WARNING: when changing the orientation, you must be sure to check the origins as well, to make sure that the volume is positioned correctly in space.

-xorigin distx
-yorigin disty
-zorigin distz

Puts the center of the edge voxel off at the given distance, for the given axis (x,y,z); distances in mm. (x=first axis, y=second axis, z=third axis). Usually, only -zorigin makes sense. Note that this distance is in the direction given by the corresponding letter in the -orient code. For example, '-orient RAI' would mean that '-zorigin 30' sets the center of the first slice at 30 mm Inferior. See the to3d manual for more explanations of axes origins.

** SPECIAL CASE: you can use the string 'cen' in place of a distance to force that axis to be re-centered.

-xdel dimx
-ydel dimy
-zdel dimz

Makes the size of the voxel the given dimension, for the given axis (x,y,z); dimensions in mm.

** WARNING: if you change a voxel dimension, you will probably have to change the origin as well.

-TR time

Changes the TR time to a new value (see 'to3d -help').

** WARNING: this only applies to 3D+time datasets.

-newid

Changes the ID code of this dataset as well.

-nowarp

Removes all warping information from dataset.

-statpar v ...

Changes the statistical parameters stored in this dataset. See 'to3d -help' for more details.

-markers

Adds an empty set of AC-PC markers to the dataset, if it can handle them (is anatomical, is in the +orig view, and isn't 3D+time).

** WARNING: this will erase any markers that already exist!

-view code

Changes the 'view' to be 'code', where the string 'code' is one of 'orig', 'acpc', or 'tlrc'.

** WARNING: The program will also change the .HEAD and .BRIK filenames to match. If the dataset filenames already exist in the '+code' view, then this option will fail. You will have to rename the dataset files before trying to use '-view'. If you copy the files and then use '-view', don't forget to use '-newid' as well!

-byteorder bbb

Sets the byte order string in the header. Allowable values for 'bbb' are:

LSB_FIRST MSB_FIRST NATIVE_ORDER

Note that this does not change the .BRIK file! This is done by programs 2swap and 4swap.

-appkey ll

Appends the string 'll' to the keyword list for the whole dataset.

-repkey ll

Replaces the keyword list for the dataset with the string 'll'.

-empkey

Destroys the keyword list for the dataset.

-type

Changes the type of data that is declared for this dataset, where 'type' is chosen from the following:

ANATOMICAL TYPES

spgr	==	Spoiled GRASS	fse	==	Fast Spin Echo
epan	==	Echo Planar	anat	==	MRI Anatomy
ct	==	CT Scan	spct	==	SPECT Anatomy
pet	==	PET Anatomy	mra	==	MR Angiography
bmap	==	B-field Map	diff	==	Diffusion Map
omri	==	Other MRI	abuc	==	Anat Bucket

FUNCTIONAL TYPES

fim	==	Intensity	fith	==	Inten+Thr
fico	==	Inten+Cor	fitt	==	Inten+Ttest
fift	==	Inten+Ftest	fizt	==	Inten+Ztest
fict	==	Inten+ChiSq	fibt	==	Inten+Beta
fibn	==	Inten+Binom	figt	==	Inten+Gamma
fipt	==	Inten+Poisson	fbuc	==	Func-Bucket

The options below allow you to attach auxiliary data to sub-bricks in the dataset. Each option may be used more than once so that multiple sub-bricks can be modified in a single run of 3drefit.

-sublabel	**n**	**ll**	Attach to sub-brick #n the label string 'll'.
-subappkey	**n**	**ll**	Add to sub-brick #n the keyword string 'll'.
-subrepkey	**n**	**ll**	Replace sub-brick #n's keyword string with 'll'.
-subempkey	**n**		Empty out sub-brick #n' keyword string

-substatpar n type v ...

Attach to sub-brick #n the statistical type and the auxiliary parameters given by values 'v ...', where 'type' is one of the following:

type	Description	PARAMETERS
fico	Cor	Samples, Fit-Parameters, Ort-Parameters
fitt	Ttest	Degrees-of-Freedom
fift	Ftest	Numerator and Denominator Degrees-of-Freedom
fizt	Ztest	N/A
fict	ChiSq	Degrees-of-Freedom
fibt	Beta	Alpha and Beta (exponenents)
fibn	Binom	Number-of-Trials and Probability-per-Trial
figt	Gamma	Shape and Scale
fipt	Poisson	Mean