1 Program 3dTcat

1.1 Purpose

Concatenate sub-bricks from input datasets into one big 3D+time dataset.

1.2 Usage

3dTcat options

1.3 Options

-prefix pname
OR
-output pname = Use 'pname' for the output dataset prefix name. [default='tcat']

-session dir = Use 'dir' for the output dataset session directory. [default='./'=current working directory]

-glueto fname = Append bricks to the end of the 'fname' dataset. This command is an alternative to the -prefix and -session commands.

-dry = Execute a 'dry run'; that is, only print out what would be done. This is useful when combining sub-bricks from multiple inputs.

-verb = Print out some verbose output as the program proceeds (-dry implies -verb). Using -verb twice results in quite lengthy output.

-rlt = Remove linear trends in each voxel time series loaded from each input dataset, SEPARATELY. That is, the data from each dataset is detrended separately. At least 3 sub-bricks from a dataset must be input for this option to apply.

Command line arguments after the above are taken as input datasets. A dataset is specified using one of these forms:

'prefix+view', 'prefix+view.HEAD', or 'prefix+view.BRIK'.

1.4 Sub-brick selection

You can also add a sub-brick selection list after the end of the dataset name. This allows only a subset of the sub-bricks to be included into the output (by default, all of the input dataset is copied into the output). A sub-brick selection list looks like one of the following forms:

fred+orig[5]	==>	use only sub-brick #5
fred+orig[5,9,12]	==>	use #5, #9, and #12
fred+orig[5..8] or [5-8]	==>	use #5, #6, #7, and #8
fred+orig[5..13(2)] or [5-13(2)]	==>	use #5, #7, #9, #11, and #13

Sub-brick indexes start at 0. You can use the character '$' to indicate the last sub-brick in a dataset; for example, you can select every third sub-brick by using the selection list:
fred+orig[0..$(3)]

1.5 Notes

- The TR and other time-axis properties are taken from the first input dataset that is itself 3D+time. If no input datasets contain such information, then TR is set to 1.0. This can be altered using the 3drefit program.
- The sub-bricks are output in the order specified, which may not be the order in the original datasets. For example, using

  fred+orig[0..$(2),1..$(2)]

  will cause the sub-bricks in fred+orig to be output into the new dataset in an interleaved fashion. Using

  fred+orig[$..0]

  will reverse the order of the sub-bricks in the output. If the -rlt option is used, the sub-bricks selected from each input dataset will be re-ordered into the output dataset, and then this sequence will be detrended.
- You can use the '3dinfo' program to see how many sub-bricks a 3D+time or a bucket dataset contains.
- The '$', '(', ')', '[', and ']' characters are special to the shell, so you will have to escape them. This is most easily done by putting the entire dataset plus selection list inside single quotes, as in 'fred+orig[5..7,9]'.
- You may wish to use the 3drefit program on the output dataset to modify some of the .HEAD file parameters.