1 Program 3dbucket

1.1 Purpose

Concatenate sub-bricks from input datasets into one big 'bucket' dataset.

1.2 Usage

3dbucket options

1.3 Options

-prefix pname OR

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

-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).

-fbuc = Create a functional bucket.

-abuc = Create an anatomical bucket. If neither of these options is given, the output type is determined from the first input type.

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'.

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)]

1.4 Notes

- 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.

- Bucket datasets have multiple sub-bricks, but do NOT have a time dimension. You can input sub-bricks from a 3D+time dataset into a bucket dataset. 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]'.

1.5 Example

In non-bucket functional datasets (like the 'fico' datasets output by FIM, or the 'fitt' datasets output by 3dttest), sub-brick [0] is the 'intensity' and sub-brick [1] is the statistical parameter used as a threshold. Thus, to create a bucket dataset using the intensity from dataset A and the threshold from dataset B, and calling the output dataset C, you would type

```
3dbucket -prefix C -fbuc 'A+orig[0]' 'B+orig[1]'
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