1 Program 3dinfo

1.1 Purpose

Program 3dinfo prints out some useful information from an *AFNI* 3D dataset's header file.

1.2 Usage

The command line format for program 3dinfo is as follows:
3dinfo [-v] dataset [dataset ...]

The -v option means print out verbose information. At present, it just causes the printing of all the statistics for each time in a time-dependent dataset.

For *AFNI* 'bucket' type datasets, 3dinfo prints the label and statistical information for each sub-brick in the dataset.

1.3 Examples

Example 1.

Suppose that the user is uncertain about the contents of *AFNI* data file fred.test02.run35 +tlrc.BRIK. Then, assuming that the .HEAD file is also present, the 3dinfo command line is:

3dinfo fred.test02.run35+tlrc

The program prints the following information to the screen:

Dataset File: fred.test02.run35+tlrc
Identifier Code: MCW_AGKZLWWPCSE
Creation Date: Tue Aug 13 20:17:10 1996
Dataset Type: Inten+Thr (-fith)
Anatomy Parent: [MCW_KDZRUNFMRVF]
Warp Parent: [MCW_YKCFQKMXFVJ]
Data Axes Orientation:
first = Right-to-Left
second = Anterior-to-Posterior
third = Inferior-to-Superior [-orient RAI]

R-to-L extent:	-80.000 [R]	-to- 80.000 [L]	-step- 1.000 mm [161 voxels]
A-to-P extent:	-80.000 [A]	-to- 110.000 [P]	-step- 1.000 mm [191 voxels]
I-to-S extent:	-55.000 [I]	-to- 85.000 [S]	-step- 1.000 mm [141 voxels]

Number of values stored at each pixel = 2

– At sub-brick #0 datum type is short: -2186 to 2717
– At sub-brick #1 datum type is short: -7023 to 8226

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The program lists the Dataset File name, the Identifier Code (this identifier was created by *AFNI* for internal use), the Dataset Type (in this case, an *AFNI* 'fith' dataset, consisting of an intensity sub-brick and a threshold sub-brick), the Anatomy Parent identifier, the Warp Parent identifier, the orientation and size of the Data Axes (in mm. and in voxels), the number of values stored at each voxel (2 in this case, since for each voxel there is one intensity value and one threshold value), and the range of data values stored in each sub-brick.

Example 2.

Program 3dNLfim was used to perform nonlinear regression analysis for the 3d+time dataset freg+orig. The results of the analysis were stored in an *AFNI* 'bucket' type dataset fred.analysis+orig. The command line

3dinfo fred.analysis+orig

produces the following screen output:

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Dataset File:      fred.analysis+orig
Identifier Code:   MCW_ZQEUXZAVNGB
Creation Date:     Fri Dec 26 11:51:57 1997
Dataset Type:      Func-Bucket (-fbuc)
Data Axes Orientation:
  first   (x) =  Anterior-to-Posterior
  second  (y) =  Left-to-Right
  third   (z) =  Superior-to-Inferior   [-orient ALS]
R-to-L extent:  -118.125 [R]  -to-  118.125 [L]  -step-  3.750 mm  [ 64 voxels]
A-to-P extent:  -118.125 [A]  -to-  118.125 [P]  -step-  3.750 mm  [ 64 voxels]
I-to-S extent:   -28.000 [I]  -to-   28.000 [S]  -step-  8.000 mm  [  8 voxels]
Number of values stored at each pixel = 12
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– At sub-brick #0 'constant' datum type is short:	0 to	32767	[internal]
[∗ 0.210506]	0 to	6897.63	[scaled]
– At sub-brick #1 'linear' datum type is short:	−28594 to	32767	[internal]
[∗ 0.000192914]	−5.5162 to	6.32123	[scaled]
– At sub-brick #2 't0' datum type is short:	0 to	32767	[internal]
[∗ 0.00228889]	0 to	75	[scaled]

– At sub-brick #3 'k' datum type is short:		-32766 to	32767	[internal]
	[$*$ 0.0152592]	-499.984 to	500	[scaled]
– At sub-brick #4 'alpha1' datum type is short:		0 to	32767	[internal]
	[$*$ $4.57775e-06$]	0 to	0.149999	[scaled]
– At sub-brick #5 'alpha2' datum type is short:		0 to	32767	[internal]
	[$*$ $1.52592e-05$]	0 to	0.499997	[scaled]

– At sub-brick #6 'Signal TMax' datum type is short:		0 to	32767	[internal]
	[$*$ 0.00424207]	0 to	139	[scaled]
– At sub-brick #7 'Signal SMax' datum type is short:		-32767 to	32635	[internal]
	[$*$ 0.013963]	-457.526 to	455.683	[scaled]
– At sub-brick #8 'Signal % SMax' datum type is short:		-13951 to	32767	[internal]
	[$*$ 0.00295232]	-41.1879 to	96.7388	[scaled]

– At sub-brick #9 'Signal Area' datum type is short:		0 to	32767	[internal]
	[$*$ 1.28015]	0 to	41946.8	[scaled]
– At sub-brick #10 'Signal % Area' datum type is short:		-17719 to	32767	[internal]
	[$*$ 0.00128149]	-22.7067 to	41.9905	[scaled]
– At sub-brick #11 'F-stat Regress' datum type is short:		0 to	32766	[internal]
	[$*$ 0.0616718]	0 to	2020.74	[scaled]

statcode = fift; statpar = 4 191

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For each sub-brick in the 'bucket' dataset, program 3dinfo prints the label and the range of values. Since sub-brick #11 is a statistical sub-brick, additional information is displayed. The "statcode = fift" indicates that this sub-brick contains F-statistics; "statpar = 4 191" means that for the voxels in this sub-brick, the numerator dof = 4 and the denominator dof = 191.