**Adding a new dataviewer to EARLY**

A standard “dataviewer” is an analysis method that may serve as a viewer for online data analysis during data collection.

To add a new dataviewer to EARLY, do the following:

1. create the analysis method mfile FOO as a dataset method
2. make sure a “dataviewparam” object can be created for dataset method FOO
3. add FOO to the list of dataviewers
4. specify the stimuli that will use FOO

**1. The analysis method mfile**

Create the analysis method mfile FOO as a dataset method. It has to be located in EARLY\vs10\DataAnalysis\@dataset\

**2. Allow a dataviewparam object to be created**

Make sure a “dataviewparam” object can be created for dataset method FOO. This means that the dataviewer mfile FOO.m itself must return a template for its analysis parameters in the struct T and the GUI for specifying these parameters in G when it is called using the syntax

[T, G] = FOO(dataset(), ‘params’);

in which dataset() is a dummy dataset object.

The typical way for doing this, is to handle the case of a parameter query first:

function [T,G] = FOO(D, figh, P);

% handle the special case of parameter queries. Do this immediately to

% avoid endless recursion with dataviewparam.

if isvoid(D) && isequal('params', figh)

[T,G] = local\_ParamGUI;

return;

end

% open a new figure or use existing one?

if nargin<2 || isempty(figh),

open\_new = isempty(get(0,'CurrentFigure'));

figh=gcf;

else,

open\_new = isSingleHandle(figh);

end

% parameters

if nargin<3, P = []; end

if isempty(P), % use default paremeter set for this dataviewer

P = dataviewparam(mfilename);

end

% delegate the real work to local fcn

local\_FOO(D, figh, open\_new, P);

% enable parameter editing when viewing offline

if isSingleHandle(figh, 'figure'), enableparamedit(D, P, figh); end;

And the local\_ParamGUI function:

function [T,G] = local\_ParamGUI

% Returns the GUI for specifying the analysis parameters.

…

For more information, and for a concrete example, see dataset/dotraster.

**3. Add the dataviewer to the list of dataviewers**

Add FOO to the current list of registered dataviewers, using the dataset/listdataviewer method:

listdataviewer(dataset(), ‘add’, @FOO);

in which dataset() is once again a dummy dataset object.

If no default parameters for FOO have been specified yet, and given that FOO was correctly implemented, the execution of the above line will actually result in a call to dataviewparam. The GUI defined in the local function local\_ParamGUI then pops up and allows you to specify default parameters. After that, you really add FOO to the list of dataviewers by executing the above line again.

**4. Specify stimuli the dataviewer applies to**

To be able to choose from a list that includes FOO as a dataviewer in the stimulus menu of stimulus STIM, add FOO to the list of dataviewers applicable for STIM in dataset/listdataviewerfor.

Editing the mfile listdataviewerfor.m and adding

1. new stimulus types as cases and/or
2. dataviewers

is straightforward.

listdataviewer(dataset(), ‘STIM’);

is the syntax for querying the registered dataviewers for stimulus STIM.