Documentation of Databaser Functions

July 25, 2013

Contents

Chapter 1

Overview

This documentation is currently sparse, and is very much a work in progress. It is my hope that anytime a new function is added to the Databaser, that it receives proper documentation here.

Chapter 2

Collection Functions

Chapter 3

Readers

Chapter 4

Analysis Functions

Chapter 5

Publishing Functions

Chapter 6

Helper Functions

Every function in the Databaser (Collection, Readers, Analysis, and Publishing), has access to the Helper Functions. Helper Functions are designed to be small pieces of code that are basic and used in many different circumstances. To get access to a Helper Function, use the EnableHelperFunction command. Helper Functions are arranged in folders and subfolders within the HelperFunctions directory of the Databaser. Here is an example of accessing and using one of the most basic Helper Functions, NewPaperFigure.m for generating the shell of a publication figure:

```
NPF = EnableHelperFunction([],{'FigureProduction';'NewPaperFigure.m'});
```

which says that you would like to enable the helper function called NewPaperFigure.m, which is located in the folder FigureProduction, and you would like to refer to that function as NPF. When you want to generate a figure shell to begin designing your figure, simply use:

```
FigureHandle = NPF('Margin',[0.5 0.5]);
```

which is call to NewPaperFigure.m, with a Margin input saying that you would like 1/2 inch margins on the top/bottom and left/right of the 8.5x11 sheet of paper. You may want to refer to this figure later, which is why the function creates a reference called FigureHandle.

6.1 FigureProduction

6.1.1 NewPaperFigure.m

Full path: ('FigureProduction';'NewPaperFigure.m')

```
FigureHandle = NPF(varargin);
```

Inputs:

1. Margin: A 2 element array [x y], where x is the left/right margin and y is the top/bottom margin, in inches.
2. Color: A MATLAB color string (e.g. 'k' for black) or 3 element array [r g b] specifying the background color of the figure.

3. Position: A 2 element array [x y] where (x,y) is the coordinate, in pixels, of the lower left corner of the figure on the screen.

Outputs:

1. FigureHandle: A MATLAB handle to the generated figure.

Examples:

1. `FigureHandle = NPF('Margin',[0.5 0.5],'color','k');`

   generates a figure with 1/2 inch margins on top/bottom and left/right, and sets the background color to black.

6.1.2 NewPresentationSlide.m

Full path: ('FigureProduction';'NewPresentationSlide.m')

```
FigureHandle = NPS(varargin);
```

Inputs:

1. Color: A MATLAB color string (e.g. 'k' for black) or 3 element array [r g b] specifying the background color of the figure. Default: white.
2. Width: In pixels, the width of the desire slide. Default: 1024.
3. Height: In pixels, the height of the desire slide. Default: 768.

Outputs:

1. FigureHandle: A MATLAB handle to the generated figure.

Examples:

1. `FigureHandle = NPS('color','k');`

   generates a Figure with the aspect ratio for a 1024x768 presentation slide and a black background.