BSP TOOLBOX STANDARDS COMPLIANCE SHEET

The purpose of this check-off sheet is to verify that all the functions in the BSP Toolbox comply with the standards which have been agreed upon by the toolbox design team. Click after the field name for the fields that require typing or click inside the boxes to check off the items which are in accordance with the standard described. Please fill out one separate sheet for each different function you wish to review.

Name of Reviewer:
Name and version number of function under review:
Note: The version number can be obtained by typing the function name at the MATLAB command prompt

I. FUNCTION INTERFACE

1. Function Name
   - □ Function name does not include any abbreviations not listed in the document Abbreviations.doc.
   - □ Function name is not identical to the name of any other function already existent in MATLAB.
   - □ Function name is descriptive enough of the function's utility. If not, please suggest an alternative name:

2. Input and Output Arguments
   - □ In the first line of the function code, the input variables have the same name as the variables listed in the documentation, with an "a" appended at the end. (Eg. fsa)
   - □ The required input arguments are listed before the optional arguments.
   - □ If one of the inputs is a vector containing a signal, it is labeled 'x'.
   - □ If one or more of the inputs is a vector containing a signal, the next argument is 'fs', the sample rate in units of Hz.
   - □ If two of the inputs are signals, they are listed consecutively as 'x1' and 'x2'.
   - □ The last optional input argument is 'pf', the plot format argument.
   - □ All scalars and vector inputs and outputs are denoted by lower case letters.
   - □ All matrices are denoted by upper case letters.
   - □ Output vectors returned by the function (if any) are column vectors.

3. Function Behavior
   - □ Function returns help documentation when called with no input or output arguments.
   - □ Function returns help documentation when too few or too many input arguments are specified.
   - □ When function is called, no output other than a plot or error message is displayed.

   If function includes plotting option…
   - □ Function returns a plot when no output arguments are specified.
   - □ Function does not return a plot when no value is specified for the pf input variable.
   - □ Plot returned by the function is displayed in a new window.
   - □ Plot window appears in the upper left hand corner of the screen.
   - □ Plot is properly labeled.

If function crashes, please paste below the function call that caused the crash and the error message displayed in the MATLAB command window:

II. FUNCTION DOCUMENTATION

1. Documentation Format

- □ The following sections are present in the help documentation in the order specified: (1) function name and brief description, (2) function call syntax, (3) input arguments, (4) output arguments, (5) detailed description of the function (can take more than one paragraph), (6) example, (7) references, (8) version, and (9) see also.
- □ All listed sections have three spaces of indentation, except for section 1, which has no indentation.
- □ There is exactly one blank line of separation between each of the sections.
- □ Section 1 follows the format ***FunctionName: Brief description***, with a colon immediately after the function name and a space between the colon and the function description.
- □ Section 2 follows the format ***[y1,y2,…] = FunctionName(x1,x2,…)***, where the output variables y1, y2, …, are specified into square brackets, the input variables x1, x2, …, are specified in parentheses
- □ Both input and output variables are separated by commas with no spaces.
- □ There is one space on each side of the equal sign that separates both sides of the equation.
- □ Sections 3 and 4 follow the format ***VariableName Variable Description (Unit). Default=DefaultValue***
- □ The beginning of the variable descriptions of all input and output arguments are aligned and placed three spaces ahead of the last character of the longest variable name.
- □ When appropriate, the units of the variable are specified into brackets after the description
- □ When appropriate, the default value of the variable is provided.
- □ Scalar and vector variables are listed in lower case, matrix variables use upper case.
- □ Variables with a finite set of valid values have the values explicitly listed as ***VariableName Variable Description: 1=Option1, 2=Option2, …***
- □ Section 5 has a blank line between paragraphs if it comprises more than one paragraph, and the paragraphs are not indented.
- □ Section 6 contains two parts: a sample question and the code to produce the results asked for. These two parts are separated by a blank line.
- □ The question follows the format ***Example: Sample question***, with a colon following the word example, and a space between the colon and the sample question.
- □ The code in the example has a total of six spaces of indentation
- □ The code in the example has exactly one instruction per line, and has a semicolon at the end of each instruction.
- □ Section 7 follows the format ***Author1, "Paper or Book Title," Name of Journal or Publisher, volume number (if applicable), pages, year.*** (eg. Hayes M., "Statistical Digital Signal Processing and Modeling," John Wiley & Sons, pp.408-412, 1996.)
- □ The different information in the references section is separated by comas, and there is a period at the end of each reference.
- □ Section 8 follows the format ***Version Number Initials*** (eg. Version 1.00 MA), where there is a space between each of the three words.
- □ The version number is composed of one digit for the integer part and two digits for the mantissa.
- □ Section 9 follows the format ***See also FunctionName1, FunctionName2, … , and FunctionNameN.***
- □ The names of the functions referenced are separated by commas, with a space after the commas.
- □ The last function name is preceded by an "and".
- □ The longest line in the help documentation does not exceed 70 characters.

2. Documentation Content

- □ Description of input and output variables is correct and understandable, with defaults, units, and options specified when applicable.
- □ The names of the input variables agree with the following standard: input signal is named x (or x1, x2, … whenever more than one input signal are required), sampling frequency is named fs, window type is named w, plot format variable is named pf.
- □ The detailed description of the function is clear and accurate.
- □ The code included in the Example (section 6) returns the desired output when copied and pasted in the MATLAB command window.