Manual for MATLAB tool - CSD responses at 64-site

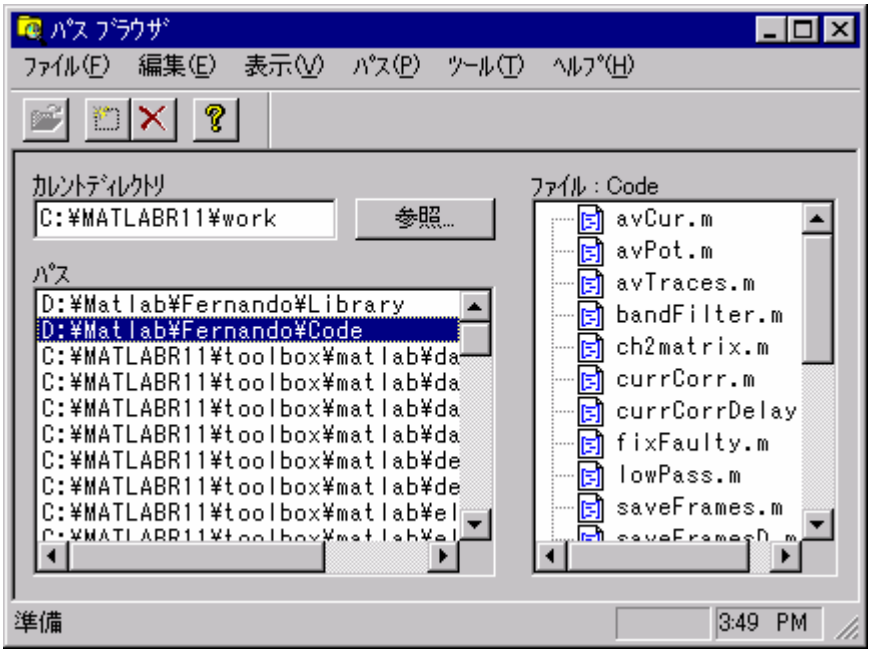
1. Contained Software
   - Txt2Mat: Transform Text Data to Matlab Form.
   - CalCSD_nl: CSD Analysis Calculation.
   - Multipolot64: Graphical Representation of Conversion to 8 x 8.

2. Installation
   1) Installation & copy to be used

      Install MATLAB and copy attached M-files to suitable place.

   2) Initial setting

      First, Start MATLAB and choose [file]-[setup of path] to open the following window. Set up the copy place of the file attached using [Path]-[add path] (In this case, they are D:¥matlab¥Fernando¥Code and ¥library).



3. Individual usage

1) txt2mat: Data conversion tool

This tool can convert the TAB text into Matlab form. Since you can read all tools only in Matlab form, please change data format to run calculation under MATALB.

(Usage)

>> txt2mat ('Original.txt', 'Output.mat', 'label', Fs, nTraces, badChannel)

Original file: Original.txt

#notes: when you export by the conductor, please do not attach a header)

Converted file: Output.mat

Parameters

Label: Label which is displayed in graph.

Fs: Sampling-frequency

nTraces: The number of sweeps

badChannel: Setting of ch# not to change (usually nothing).

The following messages will be displayed if it succeeds.

[txt2mat] Loading data...

[txt2mat] No invalid data channel

[txt2mat] Saving data...

NOTE: Exported data.

When the start of time is not 0, please open using Excel etc., to change that the start of time is set to 0.

2) calCSD_nl: Calculation of CSD

Calculate CSD analysis and save the data after analysis.

(Usage)

>> calCSD_nl ('data')

Original data: data.mat

Calculated data: data_csd.mat

NOTE: analysis data attaches '_csd' automatically and stores it in the same place as original data.

3) Multiplot64: Display 64 point data

Display the data with which the display on the matrix of 8x8.

(Usage)

>> multiplot64(data, Yvalue, minX, maxX)

Original data: data

data is beforehand read by the ‘load’ command (e.g. load oritinal-data)

- If it is the CSD analysis data, it is saved at a variable called “csd_data”
- If it is the original potential data, it is saved at a variable called “data”.

Parameters

Yvalue: The range of a graph vertical axis (mV) - [-Yvalue and Yvalue]

minx, maxX; the range of a graph horizontal axis (ms)