**IISView**

Loading data:

Data can be loaded in the Load Data tab – either manually or from a config file. Each panel shows the subtraction between two datasets in two channels (channel #1 – channel #2). A data file is a .mat file which stores a struct with a ‘data’ field (which is regarded as the actual data).

*Manual Loading:*

The user can choose files for each channel for each panel. The title of the panel can be set in the ‘Title’ field. After choosing all the files for all the required panels, the user should press the ‘Load’ button at the bottom and the data window will appear.

*Loading from a config file:*

‘Load from Config File’ in the ‘Load Data’ tab will load data (and IIS data if provided) from a config file. The config file is a .mat file storing a struct that should include 3 fields:

‘dataFileNames‘ - a cell array in the length as the number of requested panels, where each cell is a cell array of two strings with the name of the first channel and the second channel.

‘IISFileNames’ - a cell array of strings in the length <= of the number of requested panels. Any of them can be left empty if there is no IIS file to load. If shorter than the number of panels as provided by dataFileNames it will load until it reaches the last IIS file name.

‘dataTitles’ - a cell array of strings in the length <= of the number of requested panels. Any of them can be left empty in which case a default title is used (showing filenames). If shorter than the number of panels as provided by dataFileNames it will use the provided titles until it reaches the last one.

Navigating the data panel and marking/deleting IIS:

*Moving Back and Forward in Time:*

1. For moving back and forward one time-window at a time the arrows (right and left) can be used when the focus is on the data window.
2. For jumping to a specific point in time the user can provide the requested time point at the View Parameters tab (Go To box) and press the ‘Go’ button.

*Marking IIS:*

For marking IIS the user should press on the relevant data panel (on the white box background, but not on the plotted graph itself). The mouse icon will change and it will allow the user to mark IIS on the graph. In order to finish marking and get out of this mode the user can either press Enter or mark a point with a double click instead of one click.

*Erasing IIS marks:*

1. Deleting a single IIS mark - Clicking on or very near (200 ms) an existing IIS mark in the mark mode (which can be reached as explained in the previous paragraph) will remove that IIS mark.
2. Deleting all IIS marks in the current time window –
   1. Pressing the panel index when the focus is on the data window will erase the markings in the current time window from that panel – i.e. pressing 1 will erase the markings in the first panel, etc.
   2. Pressing the button 'Delete from current Time Window' in the IIS tab under the specific panel will delete from the current time window for that specific panel.
   3. Pressing the button ‘Delete All in Current Window’ in the IIS tab will delete from the current time window for all panels.
3. Deleting IIS marks an entire channel –
   1. Pressing the button 'Delete from Entire Channel' in the IIS tab under the specific panel will delete from the entire dataset for that specific panel.
   2. Pressing the button ‘Delete All’ in the IIS tab will delete from the entire datasets for all panels.

Marking Bad Segments

*Marking a bad segment:*

This can be done in the Bad Data Segment area of the View Parameters tab.

In order to mark a new a bad segment: the user should press on the ‘choose’ button next to the Start Point and then press on the relevant panel (on the white background, like when marking IIS) and then choose the point using double click (or click + Enter). There will be an error message if no point is chosen or two points are chosen. Similarly the user should choose the End Point. This process only changes the value in the text fields (which of course can also be changed manually).

To add the segment to the list of bad segments the user should then press on Add Bad Segment. The segment will be marked in red in the data panel.

Loading and Saving Markings

*Loading Markings:*

IIS marks and bad segments can be loaded from a .mat file.

The IIS config file is a struct that should include the fields ‘manualIIS’ and ‘automaticIIS’ - an arrays with the indices of the IIS from the manual and automatic detection respectively (either can be empty).

The struct can also include a badSegments field. The bad segments are stored as an array with the size Num of segments\*2 (so for the first segment, index (1,1) is the start point, index (1,2) is the end point).

*Saving Markings:*

Saving the IIS and bad segments marking in a config file can be performed by pressing on the Save button under the specific panel in the IIS tab, or by pressing ‘Save All’ which will save the files for all panels. The config file will be saved under the file name which appears in the IIS File text field (so if it remains unchanged after loading from a config file, it will overwrite the file).

After loading an IIS config file, if the Auto-save checkbox is checked for a specific panel the markings will be auto saved every set amount of time (by default every 5 minutes, can be changed in the View Parameters tab). The autosaved files are saved to a separate file with the file name: <current\_file\_name>\_autoSave, so they do not overwrite the original config file.

The saved config files also include the field IISdata with information on the current saved config file: data file names, sampling rate and a timestamp.

Adding Automatic Detections From a Loaded Config File

After loading a config file, the automatic detections (indices provided in the automaticIIS field of the config file) will be presented for each panel as green asterisks at the top of the panel. These can be hidden by pressing on ‘Hide Automatic Detection’ at the IIS tab (for a specific panel or for all panels), and they can be shown again by pressing on ‘Show Automatic Detection’.

If the user wants to accept all the automatic detections and merge them with the current manual detections, he can press on ‘Accept Automatic’ (for a specific panel or for all panels). He can then proceed to manually add and remove IIS if needed as previously explained.

Setting Data Parameters

Parameters for the data can be set at the View Parameters tab: Y axis limits, presented segment duration, low pass filter value (70 Hz by default), sampling rate (the default is 1000, if the user needs to change it, he should do it before loading the relevant data).