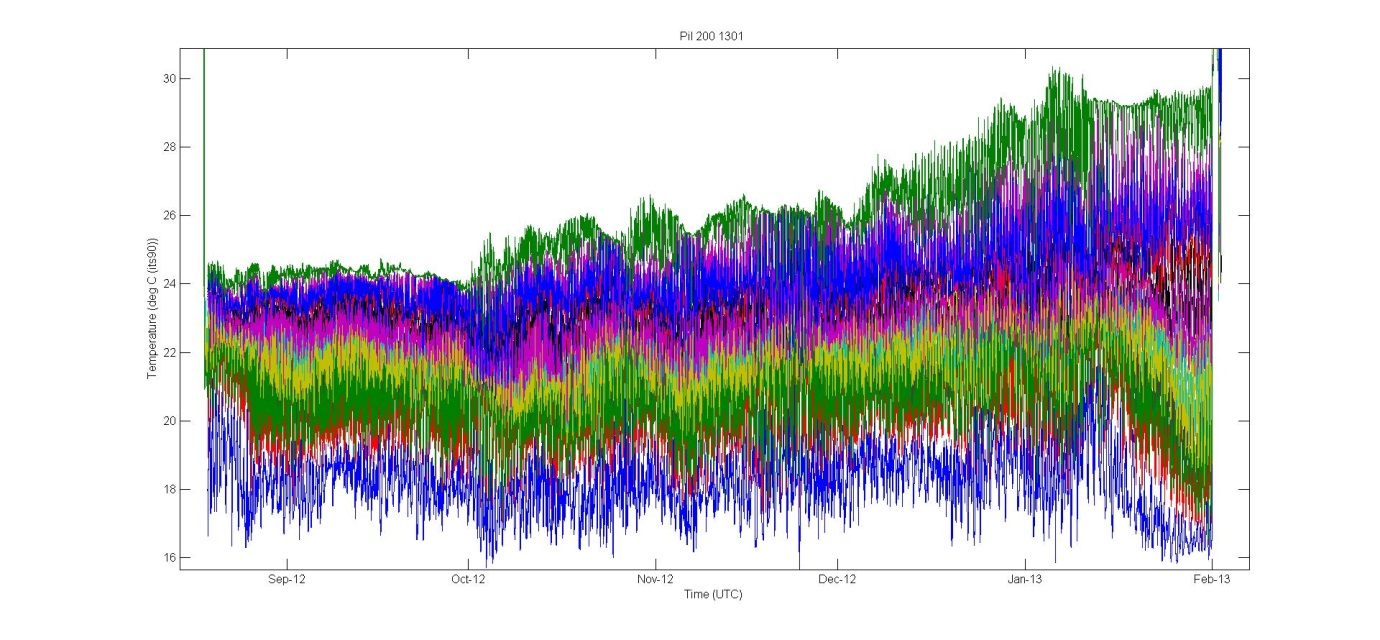
OGTECH *easyplot*

Feb 2014



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| --- | --- | --- |
| 2013-05 | Mederic MAINSON | Original version |
| 2014-02 | Simon Spagnol | Utilize IMOS parser routines |
|  |  |  |

Introduction.

The aim of *easyplot* is to deliver a simple to use program to plot and easily compare instrument data for diagnostic purposes. The original scripts written by M Mainson involved a two step process of importing the data and then calling the plotting script. The latest version present the user with a figure with various action buttons. The instruments recovered data file must be supported by the IMOS toolbox parser routines, which for AIMS is pretty much most of instruments we deploy in the field.

# Get MATLAB

Hurrah guys, here is the download link, I suggest you install asap on your machine:

Login Information   
User ID:  [j.luetchford@aims.gov.au](mailto:j.luetchford@aims.gov.au)   
Temporary Password:  M2rYulA2

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# Prepare data file

Most raw instrument data files will require some sort of conversion in order for the IMOS routines to read them (the one exception is the RDI 000 file). Table 1 is the description on how output variable should be setup. Using the IMOS routines means output order of variables in the file is not crucial, but some variables must be included in the output.

|  |  |  |
| --- | --- | --- |
| Instrument | Data file type expected | Example output variables, bold variables must be included in output |
| SBE16plus, CTDSBE19plus, CTDSBE25plus | .cnv | Variables like 'Conductivity' 'Pressure' 'Temp' in whatever order. The variable **'time elapsed in second'** must be included. |
| SBE37 | .asc | As downloaded from instrument. |
| SBE37 | .cnv | Variables like 'Pressure', 'Temp', 'Conductivity' in any order. The variable **'time elapsed in second'** must be included. NOTE: if your SBE37 does not have a pressure sensor do not include a pressure variable in your data setup. |
| SBE39 | .asc | As downloaded from instrument. |
| SBE56 | .cnv | %setting for export are: file type: .cnv  %date format: julian days,  %miscelleanous: output informational header. |
| WQM | .dat | WQM processed DAT file, the corresponding DEV file must be in the same folder and have the same base name eg if you data file is test.DAT the the dev file is test.DEV |
| TR1060 | .txt | Use Ruskin v1.7.19 or later, open your hex file. Right click on the dataset in the navigator window and export as Rtext using engineering format. |
| TDR2050 | .txt | Use Ruskin v1.7.19 or later, open your hex file. Right click on the dataset in the navigator window and export as Rtext using engineering format. |
| RDI | 000 | Standard PD0 format as downloaded from instrument. |
| Wetlabs FLNTU | raw | The corresponding DEV file must be in the same folder and have the same base name. |
| Vemco Minilog-II-T | csv | From Logger Vue software export VLD file as CSV. |
|  |  |  |
|  |  |  |

Tableau 1 - expected format.

# Setting up *easyplot* for the first time

To run *easyplot* you will require the easyplot and imos-toolbox routines. An example layout of the files on your computer would be to create a folder (say C:\AIMS) and place the easyplot and imos-toolbox (latest version in use at AIMS is imos-toolbox-v2.3b-aims) folders in there.

On your first install of *easyplot* you will need to set some paths up, navigate into the easyplot folder and edit the file ‘setup\_easyplot.m’. Edit the variables ‘easyplotDir’ and ‘imos\_tb\_home’ to match your installation.

# Running *easyplot*

## Step 1

To setup the paths for *easyplot* (only once per session) you should only have to one of the following

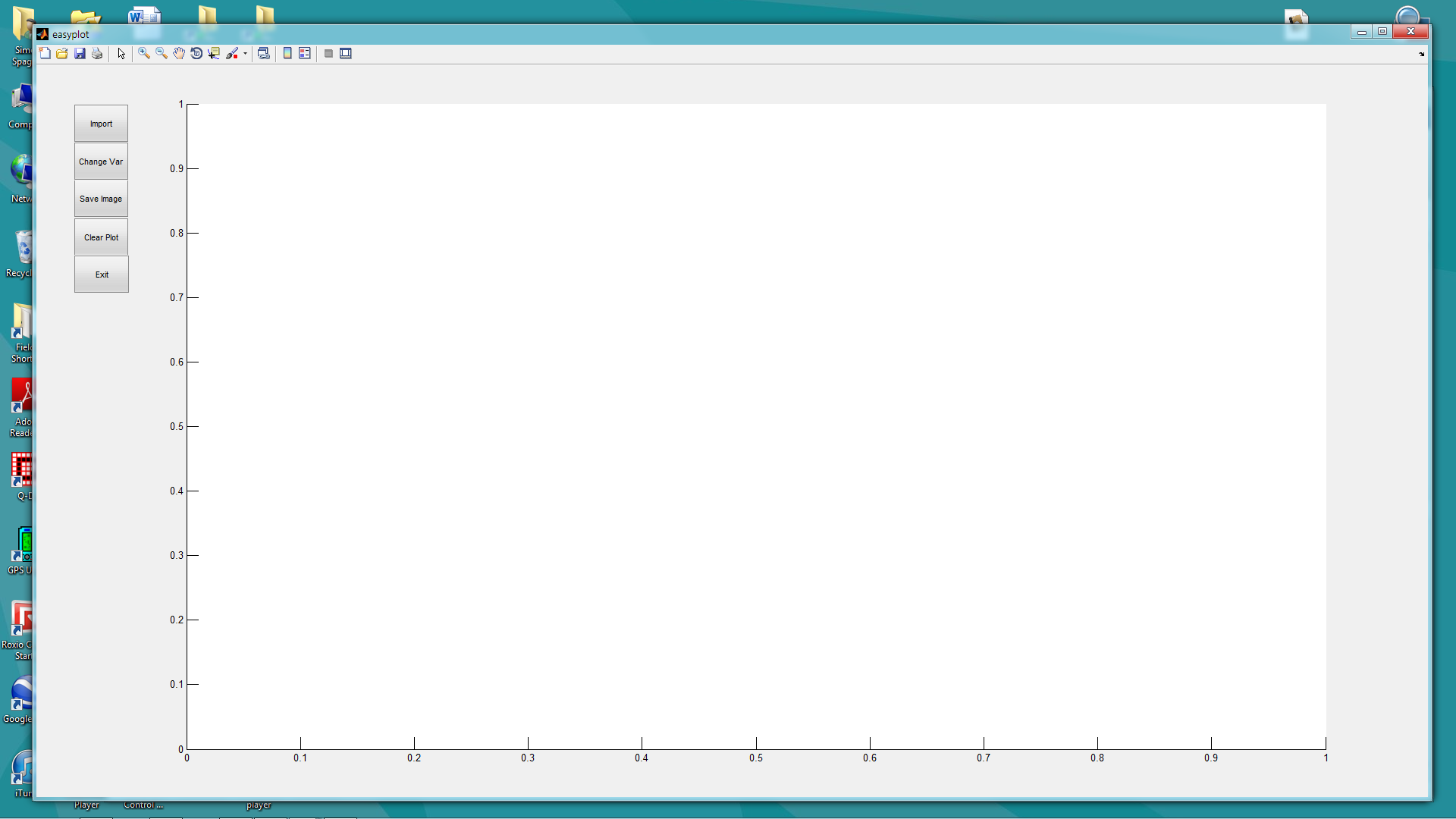
* navigate to the easyplot folder and run setup\_easyplot from the command line, or
* open setup\_easyplot.m in the matlab editor and run it
* set ‘CURRENT FOLDER’ in matlab to easyplot folder in the folder view pane, select setup\_easyplot.m and run it by pressing F9.

## Step 2

Execute easyplot by either

* navigating to the easyplot folder and run easyplot from the command line, or
* set ‘CURRENT FOLDER’ in matlab to easyplot folder in the folder view pane, select easyplot.m and run it by pressing F9.
* open easyplot.m in the matlab editor and run it.

You will be presented with a display



You now have a choice of buttons

* Import: allows you to choose particular instruments files and the variable to plot. You may add more plots to the display by using this button as well.
* Change Var: this will allow the user to change the variable being displayed for the instruments listed. Note if an instrument does not have to requested variable it is not shown.
* Save Image: save the current view to a png file.
* Zoom X extents: zoom x-axis to entire data set.
* Zoom Y extents: zoom y-axis to entire data set.
* Clear Plot: removes all plots.
* Exit: exits easyplot.

# Editing plot

This section is a bit out of date and may not be correct.

Here is where Matlab get handy by using its built in feature the ‘PLOT BROWSER’.  
In the figure window that just open, go onto the view tab and click ‘plot bowser’. You can then select easily show or hide the curve you like to see!!!

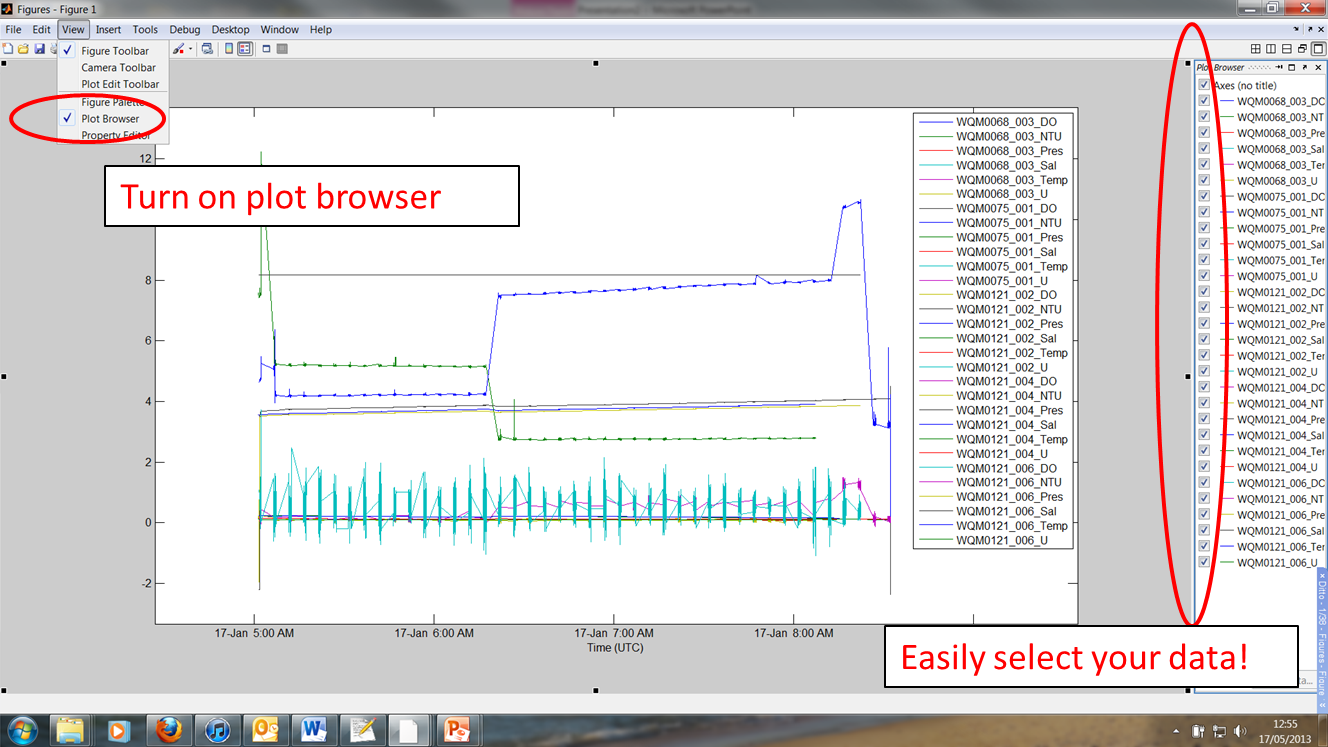


Figure 2 - Matlab figure window

Unfortunately, legend doesn’t update with the plot browser, so u can use the function ‘showSelectedLineSerieLegend’, select and click F9, then turn off the legend using the button ‘legend in the top ribbon of the figure window, and then turn it back on. The legend is up to date. I know it’s a bit clunky for the moment; I will work on it…

Another nice feature is the property editor, have a go at it….  
  
Conclusion

Best thing since sliced bread.