MC's PLOTXY basic information

What MC's PlotXY is

MC's PlotXY (in the following just PlotXY) is a program to create scientific plots from files produced by simulation programs or laboratory instruments.

It is thought as a tool for scientists and engineers, and therefore it is optimised for speed, and built from the ground up as a tool capable to deal with huge data sets.

PlotXY is available in the following versions:

- For Microsoft Windows operating systems (from Win-XP to Win 10, either 32 or 64 bit)
- Apple (MAC) operating systems since 10.7 (Lion)
- for Linux 64 bit distributions (first available on January 2018). The Linux AppImage was created and tested on Ubuntu 16.04 but should work on other recent distributions.

Both versions have nearly exactly the same functionality. The appearance, however, is slightly different, since it is coherent with the user interface recommendations from the operating systems manufacturers, for both systems.

The file formats it is compatible with are:

- **Binary outputs from Modelica simulations (made with Dymola or OpenModelica)**
- ATP binary files (from Alternative Transients Program)
- MAT files (fully compatible with Matlab 4.0 format, and partially compatible with 6.0 format)
- COMTRADE files (both binary and textual)
- LVM files (output from National Instruments' Lab-view compatible software)
- ADF files (a very simple text file format explicitly defined for PlotXY use)
- CSV files (simple comma-separated values file format)

What PlotXY can basically do

The fundamental capability of PlotXY is to make line plots, with the following special characteristics:

- Plots can easily have hundreds of thousands of points each, and contain several curves
- From the same set of files different curves can be simultaneously displayed in a single plot; up to four different plots (each having several curves) can be managed using the same program instance
- Not only can plot data from your files; PlotXY can also create new plots mixing those data using sums, products, integrals et cetera
- It can perform Fourier analysis of a plot and create bar charts for the Fourier harmonic components.
- The produced plots can be exported as images in the system's clipboard or as a SVG (scalable Vector Graphics) file. They can also be printed on an actual printer or as a pdf file

- Underlying numerical data can be peeked at directly from the plots
- New files can be obtained (in several formats) by saving just a few variables

What to do to use PlotXY

It you read these notes, you've downloaded the archive PlotXY-2017, to which this file belongs.

If you want to try PlotXY, I recommend to do the following:

- Install the program. This is simply done by copying the application file (**PlotXY.exe** for Microsoft Windows users **PlotXY.app** for Apple Mac users, or PlotXY.AppImage for Linux users) of the PlotXY archive in a directory of choice and using it. Windows users might find it convenient to create a link to PlotXY.exe and to put that link wherever they like, for instance in Windows' desktop. At this point, to run the program all you have to do is to double-click on PlotXY.exe or its link. Windows users can also just drag & drop input file(s) on PlotXY.exe application file or its link.
  Linux users may need to make PlotXY.AppImage executable by selecting the execute box on the Permissions tab of the file Properties; some users may need to set the Group Access to Read & Write to access network or attached devices.

- Have a look at the first pages of file **Tutorial.pdf**. It explains how to do nearly everything. If by looking these first pages you find that PlotXY may be useful for you, you are strongly recommended to follow the whole tutorial, reproducing the supplied plots using the supplied files (in folder "Data sets"). It will require 30- 40 minutes, but I think it will be a good investment of your time.

In the same folder of this document, you can find also the following support documents:

- File **Input formats and naming conventions.pdf:** a description of how different supported input file types are read, and how names are converted between different file formats
- File **History and road-map.pdf** A rapid résumé of the past history of PlotXY and programmed developments.

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*NOTE. The Windows distribution archive PlotXY contains also the directory named **Pro & Object files.** It is intended only for programmers. Any other user can totally ignore this folder, or even delete it.*