Subject: Re: IDL/Wave alternatives
Posted by hcp on Wed, 11 Oct 2000 07:00:00 GMT
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In article <8rvr3q$n57$1@sloth.swcp.com>, <aaron@boofura.swcp.com> writes:
|> I am looking for an IDL, PV-Wave, MatLab, -like product,
|> free and open source.
|>
|> Does anybody know of any suggestions?
|>
|> I have run into scilab, which seems to be the front-runner to me.
|> I once saw a graphing package mentioned in LINUX journal, from
|> one of the USA National labs... but it seemed too minimal.
[That was probably Yorick]

A string of suggestions has been made by various people, and I have tried quite a lot of them, prompted mostly by my boss's refusal to shell out for an IDL license for my machine at home. (As an aside, if RSI want to maintain customer loyalty for a product that is too expensive for the home user, they might perhaps consider issuing free home licenses to those who have a license at work. Quite a few other commercial software suppliers do this.) I keep meaning to put together a thorough review of packages of this sort, but here are my nutshell thoughts on some of them.

(1) Yorick ftp://ftp-icf.llnl.gov/pub/Yorick/yorick-ad.html

PROS: Small package, clean language, runs stably, postscript o/p is much better related to screen output than in IDL. Works properly on 16-bit colour. OK access to binary files, especially netCDF and its own save files.
CONS: Command-line is horrible -- has to be run in emacs terminal mode or its own terminal mode to be usable. Development rather slow. Language has some tiresome restrictions (can't define structs in a function, functions cannot change their arguments..) No maps (but see ftp://ftp.met.ed.ac.uk/pub/misc/yorick/). Fonts and plot labelling a bit limited.
COMMENT: Geared more to scientific data sets and less to image processing.

(2) R http://www.R-project.org

PROS: Nice graphics. Active development. Long heritage (it is an implementation of S). Many cool features for the statistician. Developed by a large team, not a one-man product.
CONS: No way to read binary files (without linking your own Fortran/C). Linguistically a huge culture shock for the IDL user. No geographical maps.

(3) ANA http://ana.lmsal.com/

PROS: More like IDL than any others. More geared to image processing.
Development fairly active.
CONS: Stability flaky. Contouring poor. No geographical maps. Colour behaves
very oddly under any colour depth other than 8 bit (just like IDL...)
COMMENT: More geared to image processing than plotting. May have changed/
improved/got worse since I last tried it. No geographical maps.

(4) Octave http://bevo.che.wisc.edu/octave

PROS: Based on MatLab
CONS: Based on MatLab. Poor graphics (supplied by GnuPlot).
No geographical maps.

(5) PerlDL

PROS: It _is_ perl, with add-ons.
CONS: It _is_ perl, with add-ons. 2-D graphics done via pgplot, which is
not true free software. No geographical maps.

Other possibilities that I havn't tried:

(*) RLab http://rlab.sourceforge.net/
Doesn't look a strong contender.

(*) OpenDX http://www.opendx.org/
Used to be a proprietory IBM product. Looks seriously interesting.
Free Software credentials messed up by dependence on Motif (yuck).

Hopefully this is of interest to someone, although I doubt that
RSI^H^H^HKodak are quaking in their shoes.

Hugh

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