
Subject: Re: IDL/Wave alternatives
Posted by [noymer](#) on Tue, 10 Oct 2000 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <8rvr3q\$57\$1@sloth.swcp.com>,
<aaron@boofura.swcp.com> wrote:
> I am looking for an IDL, PV-Wave, MatLab, -like product,
> free and open source.

I am not in a strong position to recommend anything,
but have you tried:

R - <http://lib.stat.cmu.edu/R/CRAN/contents.html> ?
Yorick - <ftp://ftp-icf.llnl.gov/pub/Yorick/yorick-ad.html> ?
Octave - <http://bevo.che.wisc.edu/octave/> ?

The Yorick web page is hosted at an FTP site, but should load
into your browser no problem.

HTH,
Andrew

Sent via Deja.com <http://www.deja.com/>
Before you buy.

Subject: Re: IDL/Wave alternatives
Posted by [John-David T. Smith](#) on Tue, 10 Oct 2000 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

aaron@boofura.swcp.com wrote:
>
> 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.
>
> I'm looking for something to do image processing.
> Writing new algorithms.
> If it has a nice interpreted command language, and open architecture,
> I'm willing to add c-modules to do things like import/export of
> various file formats.

>
> I just want to get images into data arrays that I can then play with.
>
> Thanks for any help.... including pointers to FAQ's.

You might take a look at <http://pdl.perl.org/>. I haven't used the software myself, but have taken a close look. Certainly less polished than IDL, but there are so many resources to draw on from within Perl (e.g. TK widgets, PGPLOT, compatibility with all kinds of file formats, etc.), that things get interesting. And if you're willing to get your hands dirty there is an active developers group.

JD

--

J.D. Smith | WORK: (607) 255-6263
Cornell Dept. of Astronomy | (607) 255-5842
304 Space Sciences Bldg. | FAX: (607) 255-5875
Ithaca, NY 14853 |

Subject: Re: IDL/Wave alternatives
Posted by [Frank Stolpe](#) on Wed, 11 Oct 2000 06:47:24 GMT
[View Forum Message](#) <> [Reply to Message](#)

On 10 Oct 2000 aaron@boofura.swcp.com wrote:

> 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.
>
> I'm looking for something to do image processing.
> Writing new algorithms.
> If it has a nice interpreted command language, and open architecture,
> I'm willing to add c-modules to do things like import/export of
> various file formats.
>
> I just want to get images into data arrays that I can then play with.
>
> Thanks for any help.... including pointers to FAQ's.
> --
> Aaron Birenboim
> Albuquerque, NM

> aaron@ptree.abq.nm.us
> http://www.swcp.com/~aaron
>
>

Hi Aaron,

if you are looking for something very similar to IDL/PV-Wave then try ANA from Lockheed. It is available for several UN*X'es.

I started using it some months ago and I'm surprised about its abilities.

I had no problems to get ANA running on a Linux PC running SuSE 6.2.

Before I changed to ANA I worked for 6 years intensively with IDL on SunOS, HP-UX and Linux. ANA is so similar to IDL that you make syntactic error because you think you are in IDL.

ANA is an excellent alternative depending on your demands. You really should have a closer look on it. It satisfies all of your demands:

- > I'm looking for something to do image processing.
- > Writing new algorithms.
- > If it has a nice interpreted command language, and open architecture,
- > I'm willing to add c-modules to do things like import/export of
- > various file formats.

try: <http://ana.lmsal.com/>

Good luck

Frank Stolpe

Subject: Re: IDL/Wave alternatives

Posted by [Randall Smith](#) on Wed, 11 Oct 2000 07:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

<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.
- >
- > I'm looking for something to do image processing.
- > Writing new algorithms.
- > If it has a nice interpreted command language, and open architecture,
- > I'm willing to add c-modules to do things like import/export of
- > various file formats.

>
> I just want to get images into data arrays that I can then play with.
>
> Thanks for any help.... including pointers to FAQ's.

Another possibility (although it doesn't have any built-in graphics per-se) is S-lang (<http://space.mit.edu/%7Edavis/slang.html>) or ISIS (<http://space.mit.edu/ASC/ISIS/>) which is built on top of S-lang and does have graphics via pgplot. It's IDL-like but built with a stack-based model. It's quite lightweight, and we've been using it as a command language built inside our X-ray spectral analysis code.

Without any built-in graphics, S-lang can't be a drop-in replacement for IDL, but if you've got a project that could really use a small, powerful, and IDL-like scripting language, S-lang might be useful to you.

Subject: Re: IDL/Wave alternatives
Posted by [hcp](#) on Wed, 11 Oct 2000 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <8rvr3q\$57\$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) PerlIDL

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 haven't tried:

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

(*) OpenDX <http://www.opendx.org/>

Used to be a proprietary 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^Kodak are quaking in their shoes.

Hugh

--

=====

=====

Hugh C. Pumphrey | Telephone 0131-650-6026
Department of Meteorology | FAX 0131-650-5780
The University of Edinburgh | Replace 0131 with +44-131 if outside U.K.
EDINBURGH EH9 3JZ, Scotland | Email hcp@met.ed.ac.uk
OBDisclaimer: The views expressed herein are mine, not those of UofE.

=====

=====
