Subject: Re: CDAT
Posted by David Fanning on Tue, 13 Oct 2009 20:43:25 GMT
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Paolo writes:

> Hi all - in the September 1, 2009 edition of EOS, the American
> Geophysical Union (AGU) journal, an article presented software
> called "climate data analysis tools" (CDAT) - written in *python*.
>
> That inspired a few questions to me...
>
> Is the climate community running away from IDL/ENVI?
> Or did they never cared much for it anyway? (I am not that
> familiar with the field myself).
> A sign of things to come? Will other disciplines follow?

The climate community is similar to a lot of other science communities: they like cheap (read "free") software that they can waste hours and hours of graduate student time on to make a simple plot. Having worked in such a community for some time now, I am more sympathetic than I used to be. There are LOTS of good, free software programs out there (proj4 map projections, ImageMagick, etc.) and we should take advantage of them.

The alternative, of course, is to pay big bucks for commercial software that does (much of the time) save you time and money because it actually works. The downside is having to come up with increasingly scarce maintenance dollars for more geegaws you will probably never use. :-(

Personally, IDL is not the be-all and end-all it used to be for me. But it is still, at its core, a damn fine piece of software for doing climate or any other kind of science.

Cheers,

David

Subject: Re: CDAT
Posted by Maarten[1] on Wed, 14 Oct 2009 14:22:24 GMT
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On Oct 13, 10:18 pm, Paolo <pgri...@gmail.com> wrote:

> Is the climate community running away from IDL/ENVI?

> Or did they never cared much for it anyway? (I am not that
> familiar with the field myself).
> A sign of things to come? Will other disciplines follow?

I think that the commercial science packages (IDL, Matlab, Mathematica, LabVIEW and others) will be facing a lot of competition in the near future from free packages, especially those based on Python. Installation is still a mess for some packages, but usability is improving at an impressive rate.

As always: there may be several tools for a particular job, but try to use an appropriate one (i.e. avoid Excel in most cases).

Personally I think the plotting in Python (matplotlib) is already more usable than IDL's, the ability to plot georeferenced data on the background of NASA's blue marble is rather nice in some cases. Note that this is a standard feature of the Basemap addition to matplotlib, not a dirty hack, or requiring a lot of code: map.bluemarble (scale=0.5) is enough to add bluemarble to the map.

The ability to use simple plotting tools (like the IDL direct graphics), and then alter at will and save to a variety of formats (including vector formats) is something IDL should have had from the start, rather than introducing the fancy object graphics. Note that headless operation is entirely possible as well.

Then there is the HDF5 format. The python interface for these files (pytables.org) is teh best on any language I've used, mainly because they moved away from the C-interface.

And yes: the ability to run on my laptop or machine at home, away from any floating licenses is a bonus.

Maarten