Subject: Re: Any cross-platform IDL alternatives?
Posted by Mark Hadfield on Wed, 17 Oct 2001 20:58:14 GMT
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From: "Karsten Rodenacker" <rodena@gsf.de>
> Are there any experiences with Python by idl users on the net? Is that
> maybe an alternative?

Maybe. I use Python for minor stuff: system maintenance utilities and the like. From time to time I look at Numeric Python and the various scientific add-ons.

Here are some pluses:

* The base language is very nice, much nicer than IDL or Matlab. It's much more coherent (eg. no local variables vs heap variables distinction) and its facilities for code organisation (modules) are much better.
* In Numeric Python, as in IDL or Matlab, array routines are written in C so they run reasonably fast.
* Numeric Python has some nice facilities for array, slicing and dicing, better than IDL.
* Python is Open Source with very liberal licensing.

Minuses:

* As far as I can tell, the Python base language is much slower than IDL. So if you thought avoiding for loops in IDL was important, wait till you try Numeric Python.
* 2D plotting is a mess. There are several alternative packages, none of them seem very well integrated into Python. Their future is murky so it may not be wise to put too much effort into learning them. There was a SIG (special interest group) devoted to improving this area but it died without achieving anything significant.
* For 3D plotting there is an impressive package called VTK. It looks nice. (So far this is a plus.) However I think it's intended more for gaming & CAD than for scientific graphics. One thing it lacks in comparison with IDL Object graphics is coordinate conversion, i.e. the ability to interact with your graphical objects in data coordinates.
*It's Open Source, so if the language needs beefing up in areas where you find it lacking, you're relying on volunteers or yourself.

So I haven't switched!

BTW if you want to see the cool things that can be done with Python and VTK, check out the MayaVi Data Visualizer:

http://mayavi.sourceforge.net/

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