> The strength of IDL lies in enabling researchers to get results fast
> without a ton of programming. In the languages you mention, how may
> lines of code are required to read and display an 8-bit 512x512 gray
> scale image? In IDL, it takes four lines:
>
> openr, lun, 'image.dat', /free_lun
> image = bytarr(512, 512)
> readu, lun, image
> tvscl, image
>
> Those four lines of code will work on any IDL platform, and in under a
> minute you're looking at an image...

That is certainly a strength of IDL but I disagree that the same advantages
can't be had with C++. As a case in point we use a great (copyleft and hence
freely available) NMR simulation package called Gamma which is
a library of C++ functions. The NMR scientists who don't want to think about
programming can run an extremely complex NMR simulation with 4 or 5 lines of code.
Those who are willing to learn a little more, to e.g. do something that doesn't
come with Gamma can tinker with the source. And the programmers at our
lab are building a lab specific library of convenient functions which they couldn't
have even thought about without access to the source. Linking to other free
or commercial libraries (e.g. IMSL) is much more straightforward than in IDL.
I know this opens up the whole can of worms re. free software but to me that's the
major issue, i.e. who is going to write a GNU type class library that has IDL style
functionality and open source (NSF are you listening ?). To me that would be the
optimal solution; one could rely on the expertise of the scientific community (e.g.
the authors of IMSL, the designers of gcc) for all the functionality that wasn't
directly specific to data manipulation and visualization, rather than a small group of
overworked commercial programmers who are no doubt always conscious of the bottom
line. The one could take advantage of the real value of object oriented software.

-- KY

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