Subject: Re: Inexpensive / free-ware similar to IDL?
Posted by grunes on Sun, 26 Sep 1999 07:00:00 GMT
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I for one find this very interesting, and
think the post did us all a great service.

Do any of these products have all of the following
characteristics (which IDL and WAVE both have):

(1) Ability to handle arrays of arbitrary dimensionality
(not just 1 or 2 or 3 dimensions), of 1, 2 and 4
byte integers, 4 and 8 byte reals, and 8 and
16 byte complexes (actually, WAVE omits the
16 byte complexes, last I checked).
(2) Ability to read raw bytestream files containing
mixtures of 1,2 and 4 byte integers, 4 and 8 byte
reals, and complex numbers. We all frequently need
to handle other-people's-data-format files.
(3) Ability to reverse byte orders of those data
types, so we can easily interpret data from other
types of machine.
(4) Can produce PROFESSIONAL-LOOKING (e.g. not
GNUPLOT-like) 2D plots, with professional
looking fonts. Can overplot other plots and
isolated points on the same plot frame in other
colors. Should be able to display to screen,
and output to postscript, and output to an image
file would also be nice.
(5) Can display images easily, with user settable
pseudo-color tables. Same comments about display
and output as above.
(6) Can read and write common image formats, like
TIFF and GIF.
(7) Has support for matrix operations (inversion,
solution of equations, eigen-values and eigen
vectors), for the most frequent transcendental
arithmetic operations you find on scientific
calculators.
(8) Allows you to draw buttons (or at least text)
on a graphics screen, and can detect the press
of a mouse button and where it occurred--useful
for setting up one's own GUIs. Another capability
that is nice (but not essential) is the ability
to detect single key presses.

If any of the free packages meet all this, I might
well switch for some purposes, especially if they

run as fast or faster than IDL/PV-WAVE, and run on multiple platforms.

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