Subject: Summary of "IDL vs. Matlab ?" responses.
Posted by njconway on Wed, 12 Jan 1994 17:51:53 GMT
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This is a summary of the responses I got to my Usenet news query entitled "IDL vs. Matlab ?".

Many thanks to all who replied, and also many apologies for having taken a month to get around to doing this summary (!).

Note that my experience with both packages is quite limited, and many of the statements that follow have not been personally checked by me - keep this in mind ;-)

Most respondents considered IDL and Matlab to be rather close in most ways, (although they evolved from very different origins) with the remark frequently made that the actual users seem to be somewhat different -- engineers and theoreticians tending to like Matlab and astronomers and physicists (in particular geo-physicists) tending to opt for IDL.

Matlab evolved from numerical analysis and signal processing, while IDL evolved from image processing.

The bottom line appears to be:
IDL is a visualization tool which can be used to do some analysis,
Matlab is a computational tool which can do some graphics.

In fact, the programs overlap quite a lot anyway, and many tasks can probably be done equally well on either.

Matlab seems particularly aimed at mathematical tasks involving matrix equations and linear equations.

I get the impression that people who have both tend to use Matlab for generating information (possibly by modelling) and use IDL for visualization and analysis of the information.

Other comments:

One respondent thought that Matlab could not deal with more than two dimensions in an array, while IDL could handle up to eight dimensions.

Matlab *only* handles double-precision numbers, which is rather inefficient if you are dealing with images, or any data which is in integer format.

Both programs seem to be capable of running subroutines written in C or

Fortran.

Matlab has an annual renewal fee on (I think) just about all non-PC platforms, whereas once you buy IDL, you can use it forever.

IDL is cheaper.

Matlab has more worldwide support, and many pieces of "code" are available by internet-ftp. To a lesser extent, programs written in IDL are also available via ftp.

Matlab has more built-in maths routines.

IDL has much better support for user-defined file formats and can easily read binary files with an arbitrary format. Matlab can't, but you can write your own I/O in version 4 using C-like functions.

IDL does not have as much toolkit support as Matlab, and has only double-precision reals - not complex.

We still haven't made a decision ourselves, mostly because we haven't had a chance to really use both of them enough yet...

One quibble - we asked for and have at last received evaluation copies of both Matlab and IDL from their distributors here in England.
However, the Matlab distributors insisted that they could only give us an eval. copy of v3.5 - not v4. I find this annoying since I had the impression that v4 was a lot better than v3.5, and I'd rather not base my decision on an old version.

Hope the info helps someone...

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Disclaimer: ;-) Treat all of the above information with skepticism, and if you're feeling really cautious, ignore it entirely. My employers don't even know I wrote it...