Subject: ODEPACK
Posted by ushomirs on Thu, 09 Sep 1999 07:00:00 GMT
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Hi,

It looks like IDL 5.2 includes one of the ODEPACK routines, LSODE. But that's just the basic routine, FORTRAN ODEPACK on Netlib (which is where i think they got the routine) has several more sophisticated routines.

In addition, it seems that RSI has done a sloppy job integrating LSODE into IDL. they don't support all the options the original LSODE has, including the useful ones, like single-stepping through the integration. the documentation seems haphazardly put together. for example, their description of output value STATUS=3 is

"The integration was performed successfully, and no roots were found"

what roots?? anyway, this makes me doubt the correctness of the implementation.

Anyway, I have 2 questions.
(1) does anyone know if RSI has plans to integrate the rest of ODEPACK routines into IDL??

(2) Since the answer to (1) is probably "No", how do I call an IDL routine from a DLM (dynamically loadable module)?? What i'm thinking is just compiling all of the odepack routines into a dlm, and writing and IDL interface. however, i would need to pass the function that computes the right-hand side of the differential equation to the FORTRAN routine in a dlm. IDL external development guide describes how to call external routines from IDL, but not the other way around.

Please note that "Callable IDL" is probably **not** what's needed here. It seems to me that "callable idl" inits a whole separate copy of idl, which is clearly not what i need here. (unless i'm wrong on this point).

greg