Subject: fortran feasability
Posted by Conor on Mon, 16 Jul 2007 12:42:58 GMT
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For a project I'm working on, I'm trying to implement in one of my programs the pikaia minimization algorithm (http://www.hao.ucar.edu/Public/models/pikaia/pikaia.html). It has a non-optimized IDL port which I've used so far. My problem is that when I run it with any reasonable number of generations, the result is REALLY slow. What used to take half a day with other algorithims would take roughly 20 days using pikaia in IDL. Unfortunately, this algorith is simply computationaly expensive, and I really don't think that optimizing the IDL code is going to facilitate a 40x speed up.

The solution, I think, is to run the original fortran code and call it from IDL. However, I've never tried such a thing and so I have a few questions. I'll also take other suggestions, if anyone has any. My first question is about common blocks. Implementing pikaia requires a couple common blocks. Currently I have common blocks in IDL that store all the necessary data. Is there a way to share common blocks in IDL with fortran code called by IDL? Or would I have to pass all the necessary data to fortran and then have it load it's own common blocks?

Also, does anyone know any good tips sites or tutorials on running IDL from fortran? I found this of course: http://www.dfanning.com/tips/fortran_linking.html
It would be nice to have some background though - I can probably follow the steps but it would be ince to know what is going on (and what is a DLM?). Also, any ideas if this still works? It's listed for IDL version 5.2-5.4.

Thanks,
Conor