
Subject: Re: IDL and C inter-language communication / call_external()

Posted by [Craig Markwardt](#) on Thu, 24 Jul 2014 22:46:01 GMT

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On Thursday, July 24, 2014 5:08:53 AM UTC-4, Frink3141 wrote:

> If I understand aright you mean that I call the routine via call_external() with initial value, then it does the first fitting step and ends returning the partial results, IDL plots and executes call_external() again with the last partial results and so on? Okay, this is a possibility, but would involve as far as I see a lot of changes in the C routine. Futhermore I think this would slow down everything a lot.

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> I didn't get what you mean by your second suggestion. The "external program" is a kind of deamon with the fitting routine waiting for input?

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> My primary idea was to allocate memory for the partial results with idl and pass that via call_external() to C. This way idl has access to the data and could plot it. But there are two problems: First I would have to create another thread for the plotting in IDL. But the major problem is the synchronisation: IDL should only plot after C has written the array and C should only write after IDL has read the array. This would require some kind of mutex-status variables that may be difficult to implement.

You really like to pour gasoline on the fire, don't you? :-) I wish you luck.

My comment about having an external program... At least on Unixy type computers, you can call SPAWN, 'myprogram', unit=unit

On the IDL side, you have a file UNIT you can read from using READF to monitor the progress of the task.

On the task side, you can print out some kind of progress indicator information that the IDL side can monitor to the standard output. (It is wise to use fflush() so that you don't run into buffering deadlocks.) It can be as simple as printing a "percent done" integer value. But it could be as sophisticated as printing out the numerical values of the fit after each iteration. It would be up to your IDL code to read the file UNIT to retrieve this information so in a timely way, and plot it or do whatever you want.

Criag
