
Subject: Re: call external speed
Posted by [steinhh](#) on Fri, 04 Sep 1998 07:00:00 GMT
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In article <6soch3\$5da\$1@nnrp1.dejanews.com>
rmlongfield@my-dejanews.com writes:

> I have a question though: Which chapters in the Advanced Development guide
> are related to LINKIMAGE? There seems to be a mixture of topics. Do you have
> a short example? I can't find any in the IDL documentation. (I work with
> UNIX on an SGI workstation.)

Now I don't have the printed documentation, but the online help does have some examples (IDLv5.1). Under the "Contents" in the normal online help, double-click on the *book* "IDL External Development Guide", double-click on "Open IDL Ext....". Then press the Contents button, and double-click again on "External Development Guide" - a list of chapters should appear.

"Adding system routines" is crucial to LINKIMAGE. Most of the other chapters are relevant, too, depending on what you want to do in your routines.

The Caution under LINKIMAGE is appropriate, but only to a certain extent. You do *not* have to have "intimate knowledge of the internals of IDL" in the sense that you have to qualify for work in RSI's development group - not by a long shot. The very least you have to know about is how variables are *stored*, *passed*, and returned. That's basically it (for writing something simple that works - for the right reasons).

Using Callable IDL has nothing as such to do with LINKIMAGE versus CALL_EXTERNAL, all permutations are possible.

However, you *have* to use Callable IDL to install new system procedures from inside CALL_EXTERNAL routines (i.e., *not* using LINKIMAGE, but the IDL_AddSystemRoutine function).

On the other hand, if you're using LINKIMAGE, Callable IDL provides some *very* useful routines/macros to do checks on your input data etc. For example, IDL_ENSURE_ARRAY will issue standard "system" error messages and associated behaviour (stopping etc), in exactly the same way that e.g. MEDIAN does:

```
IDL> print,median(0)
% MEDIAN: Expression must be an array in this context: <INT    (    0)>.
% Execution halted at: $MAIN$
```

Callable IDL also provides routines for keyword processing, type conversion etc. *Very* handy.

One thing that I cannot find in the online help is a good listing of "these routines and macros are available when linking your shareable objects with the idl library (i.e., using Callable IDL)". There is a list for RPC function calls, but not Callable IDL. Thus, you have to guess, and read through many chapters and a lot of text to find what you need (or just drop the whole thing because you don't know what you're missing!).

Regards,

Stein Vidar
