
Subject: Lost Functions

Posted by [Matthew Hanson](#) on Fri, 24 Oct 1997 07:00:00 GMT

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I have been having a very bizaare problem in IDL 5.0 on Solaris 2.6 involving Functions becoming 'lost'.

In my batch file i compile all functions. Output reads as expected:

Compiled Module: MY_FUNCTIONS

Then the batch file calls a main, the main then calls MY_FUNCTION, but instead of working it says : Unknown Variable: MY_FUNCTION, even though right above it it says that it is a compiled function. If you type Help at this point MY_FUNCTION appears as a valid function.

Now here is the even weirder part.

I commented out MY_FUNCTION and put in a STOP. After the program stops

I enter MY_FUNCTION at the command prompt Exactly as it appears in the script. It works fine. But if i .continue it will fail as before. I

have seen this behavior with several different functions.

Has anyone else experienced this?

--

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Subject: Re: Lost Functions

Posted by [davidf](#) on Fri, 24 Oct 1997 07:00:00 GMT

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[This followup was also posted to comp.lang.idl-pvwave]

Matthew Hanson (matt@ktaadn.com) writes:

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- > involving Functions becoming 'lost'.
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- > script. It works fine. But if i .continue it will fail as before. I
- > have seen this behavior with several different functions.
- > Has anyone else experienced this?

Of course. :-)

Here is what is happening to you. Somewhere in the list of procedures and functions that is being compiled *before* your MY_FUNCTION is compiled is a call to the MY_FUNCTION function. Since IDL doesn't yet know about the MY_FUNCTION function, it figures the call:

```
result = MY_FUNCTION(whatever)
```

is a subscripted variable and it puts its name on its variable name list. This list is consulted first before it looks at its procedure and function list when it is trying to resolve the call.

Most of the time this kind of problem is resolved by having your programs be compiled automatically when they are needed. In other words, give your program files the same name as the procedure or function and let IDL find them when it needs them.

If you absolutely need to compile your programs first, then put this command on the first line of your batch file:

```
Forward_Function MY_FUNCTION
```

Now the name "MY_FUNCTION" will be reserved for the function and IDL will not get confused.

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Lost Functions
Posted by [Martin Schultz](#) on Tue, 04 Nov 1997 08:00:00 GMT

David Fanning wrote:

>
> [This followup was also posted to comp.lang.idl-pvwave]

>
> Matthew Hanson (matt@ktaadn.com) writes:

>
[cut]
> Most of the time this kind of problem is resolved by having
> your programs be compiled automatically when they are needed.
> In other words, give your program files the same name as the
> procedure or function and let IDL find them when it needs them.

let me just add a little note on separate files vs. "libraries", because I don't think this is mentioned in the IDL manuals:

It seems as if the automatic compilation of IDL always compiles up to the

point where it finds the procedure or function with the same name as the filename. Hence, if you have some functions that are closely related, and

you don't want them all in separate files, you have to make sure that you

call the last one first - or that all your *sub*routines precede your *main*pro(cedure/gram). I use this for a usage mechanism, so instead of writing out the usage lines within my procedure, I define a use_<procname>

procedure and this is called when an error is detected in the parameters passed.

Also, in this respect, it may be of interest to note that IDL is not completely

case-insensitive when trying to match a filename with a procedure name.

I once

tried a procedure name test_3D.pro, and IDL did not like it, although the procedure

is named completely identical. Here is what I got:

```
% Attempt to call undefined procedure/function: 'TEST_3D'.
```

```
% Execution halted at: $MAIN$
```

Regards,
Martin

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