
Subject: Creating an IDL array within C?

Posted by hotplainrice@gmail.co on Fri, 29 Aug 2008 13:40:34 GMT

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Hi guys,

Another problem for everyone. Yay!

Firstly, I'm working on translating code from IDL to C for CUDA purposes by re-writing it as a system routine.

so the issue:

Within IDL, the user can do this

```
IDL> help, data6
```

```
DATA6      UNDEFINED = <Undefined>
```

and call an arbitrary function that will have it created.

```
thisfunc, data6, wv
```

Within thisfunc.pro

```
pro thisfunc, data6, wv
```

```
  data6 = fltarr(5,6)
```

How do I do this in C?

Is it even possible or do I have to ensure that data6 exists before I call my system routine?

Regards

Zaki

Subject: Re: Creating an IDL array within C?

Posted by [MC](#) on Sat, 30 Aug 2008 16:52:07 GMT

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On Aug 30, 1:40 am, "hotplainr...@gmail.com" <hotplainr...@gmail.com> wrote:

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When you create the function prototype you declare the variable, even if it has no value at that time.

In your case 'data6' could be a pointer variable for an as yet unsized or variable sized array
-at least that's how I remember ANSI C should work e.g.

<myheader.h>

```
int thisfunc(float *data6, int wv ....);
```

Cheers

Subject: Re: Creating an IDL array within C?
Posted by [Karl\[1\]](#) on Tue, 02 Sep 2008 03:21:19 GMT
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On Aug 30, 10:52 am, MC <Morefl...@gmail.com> wrote:
> On Aug 30, 1:40 am, "hotplainr...@gmail.com" <hotplainr...@gmail.com>
> wrote:
>
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```

No, that's not even close. The OP is asking how to create an IDL array in a C routine.

It is a lot easier to allocate the array in IDL and pass it to the C function if you can. But sometimes you don't know the size of the array until after you are actually in the C code.

Here is the general idea:

Suppose you want to return an IDL variable containing an array [5,6] of floats. (The dimensions COULD be determined at run time.)

The variable is to be passed to the caller in argv[0].

```
IDL_MEMINT dim[2];
IDL_VPTR vpVar;
dim[0] = 5;
dim[1] = 6;
float *fp;
fp = (float*) IDL_MakeTempArray(IDL_TYP_FLOAT, 2, dim,
IDL_ARR_INI_NOP, &vpVar);
```

```
/* code to fill in array pointed to by fp */
```

```
if (argc >= 1)
    IDL_VarCopy(vpVar, argv[0]);
```

See the IDL External Programming Guide for more info.
