Subject: IDL and C-
Posted by rsmith1 on Thu, 20 May 2004 01:44:25 GMT
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Hello-

I am attending a small undergraduate university at I am trying to I am trying to interface a CCD with a computer through an NI IMAQ card in IDL.
The only examples they give are in C or through the use of labview. I
need to be able to snap images from the card inside of IDL. The way I am currently going about the problem is to use the code they have given
inside of C and then reference it using the IDL call_external function.
The C code is compiling fine now and the IDL code seems to be referencing the C code, however there are some variable declaration issues. Here is my code in IDL:

```
Pro TestDLL2

image = bytarr(640,480)
help, image
image = call_external("C:\11ryan\temp\Debug\testDLL.dll","testDLL ")
help, image
END
```

This references the following C code:

```
#include <stdio.h>
#include <windows.h>



#include ".\resource.h"
#include "IDL_export.h"
#define _NIWIN

#include "nitypes.h"
#include "niimaq.h"

#include "sample.h"
#include "acqfuncs.h"

extern "C" __declspec(dllexport) char* testDLL(void)
{
```

```
   INTERFACE_ID interfaceID;
   SESSION_ID sessionID;
   Int8* buffer = NULL;
   IMG_ERR error;
   uInt32  top, left, height, width, rowBytes;


   //open an interface and start a session
   error = imgInterfaceOpen("img0", &interfaceID);
   error = imgSessionOpen(interfaceID, &sessionID);

   //pass a pointer to a NULL pointer and the driver will allocate
   //a buffer of the appropriate size for you.
   error = imgSnap(sessionID, &buffer);

   //get the image dimensions.  These default dimensions depend on the
type
   //of camera that is currently configured
   error = imgSessionGetROI(sessionID, &top, &left, &height, &width);
   error = imgGetAttribute(sessionID, IMG_ATTR_ROWBYTES, &rowBytes);




   //process function here


   //close this interface and free all resources associated with it,
   //such as the buffer that was allocated by the driver during
imgSnap


return buffer;
   }
```

The c code was given in a manual from NI, however I left out the final portion where they close the buffer and I made some changes in order to
get it to compile as well as pass information through to IDL. As it stands now, I have declared an array inside of IDL the size of my image. When I use the call_external function IDL changes the variable type on the fly and returns a long int. I think that this is a pointer
to the memory address of the start of the buffer. I am unsure as to

how to take this information and obtain the image from it inside of IDL. Any help you can offer is appreciated. Thanks in advance-

-Ryan