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Subject: Re: Problem concerning accessing external library in IDL6.0

Posted by [Rick Towler](#) on Tue, 28 Feb 2006 18:51:53 GMT

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yingjie, Peng wrote:

- > I am a master student in Germany. Now we are planning to use IDL 6.0 to
- > develop software for our smart rover robots. This project requires the
- > software should be able to capture video from a camera (e.g. a Webcam).
- > It seems to me that it's almost impossible to complete this job
- > purely in IDL.

Well, yes and no. If your webcams are networked then you can grab images using IDL's SOCKET procedure. Those interfaces tend to be slow though which may not work for your application. If your webcams are serial/USB based then yes, you will need to use one of the external interfaces provided by IDL.

- > So we plan to use a well developed class library
- > (DirectX.Capture.dll). Since I am not very sure about how to use an
- > external library, the only way for me is to use ActiveX Control to
- > access this library. In order to get the COM object's class
- > identifier (CLSID), I try to use the command line below to register
- > this library: regsvr32 DirectX.Capture.dll. Unfortunately, I received
- > an error message: the DirectX.Capture.dll is loaded, but cannot find
- > the DllRegisterServer entry point and the registration failed. The
- > reason I finally figured out is that this library is a .NET library,
- > which do not need to be registered under .NET framework. But without
- > the CLSID, I have no idea how to use ActiveX control to access this
- > library anymore. Could you please give me some idea how to achieve this
- > requirement? Thank you very much for your kind assistance!

Does that library implement a COM/ActiveX interface? (I'm no COM expert but the error makes me think it doesn't.) If it does, you should be able to get the CLSID using the COM/OLE viewer which ships with MS visual studio and can also be downloaded for free from MS.

I would start with the docs for the capture library and determine what interfaces it provides. Then it would be worth your time to read the external development guide (\$IDL\_DIR/help/edg.pdf) to learn about the different methods for accessing external libraries. With that information you should be able to determine the best technique and move forward from there.

-Rick

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Subject: Re: Problem concerning accessing external library in IDL6.0

Posted by [ronn](#) on Tue, 28 Feb 2006 21:41:30 GMT

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Hi Peng,

Have you tried using Randall Frank's Video For Windows dll on my website?

<http://www.kilvarock.com/freesoftware/dlms/randallfrank.htm>

I am currently using it to control a web cam from IDL and it works great.

Here is a simple test procedure that you can use

```
pro testVFW
```

```
if VFW_PRESENT() eq 0 then begin
  void = dialog_message('No Devices Found!')
  return
endif
```

```
err=VFW_LIST(names,descs)
```

```
print, 'These are the devices found'
location = -1
for i=0,n_elements(names)-1 do begin
  print, names[i], descs[i]
  ;find the webcam
  if strpos(strupcase(names[i]),'WEBCAM') ge 0 then location=i+1
endfor
```

```
if location eq -1 then message,'No WebCam found'
```

```
err = VFW_CONNECT(location)
if err ne 0 then message,'Cannot connect to Webcam'
err= vfw_dialog(1)
err = vfw_grab(image, info)
window,0,xsize=(info.dimensions)[0],ysize=(info.dimensions)[ 1]
tvsc!,image,/true
for i=0,10 do begin
  err = vfw_grab(image, info)
  tvsc!,image,/true
endfor
```

```
return & end
```

thanks,

Ronn Kling

KRS, inc.

email: [ronn@rlkling.com](mailto:ronn@rlkling.com)

Use these books to upgrade your IDL skills.

"Application Development with IDL"

"Calling C from IDL, Using DLM's to extend your IDL code". SECOND

EDITION includes C++ and debugging!

"Power Graphics with IDL, A Beginner's Guide to Object Graphics",

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Subject: Re: Problem concerning accessing external library in IDL6.0

Posted by [yingjie, Peng](#) on Wed, 01 Mar 2006 22:52:56 GMT

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Hi, Rick

Thanks for your kind reply. I think the problem is that the library which I used (DirectX.Capture.dll) is COM object, but it is not an ActiveX library. It is a .NET library. In .NET framework, you do not need to (or simply you can't) register the .NET library. This function is used to simplify coding within the .NET framework, such as C#. However, for us, the IDL user, we can't use ActiveX control to access this kind of library any more since we can't get the CLSID.

BTW, do you have any library or do you know where I can find some library to control a web cam from IDL? Thanks a lot.

Yingjie, Peng

Information Department VII

University of Wurezburg

Germany

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Subject: Re: Problem concerning accessing external library in IDL6.0

Posted by [yingjie, Peng](#) on Wed, 01 Mar 2006 22:54:55 GMT

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Hi, Ronn

Thanks for your kind reply. I have tried the library and the test code you gave to me. When I run the test code, I received an error message:

These are the devices found

Microsoft WDM Image Capture (Win32)Version: 5.1.2600.1106

% TESTVFW: No WebCam found

I did connect my Web Cam to my computer through USB. I also have no idea whether the Microsoft WDM Image Capture has relationship with the Web Cam or not. I will spend more time to read the instruction of Randall Frank's library and try again. I will tell you my results later and if you have some good suggestions, please let me know. Thanks a

lot.

Yingjie, Peng  
Information Department VII  
University of Wurezburg  
Germany

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Subject: Re: Problem concerning accessing external library in IDL6.0  
Posted by [ronn](#) on Thu, 02 Mar 2006 10:35:15 GMT  
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Someone else just emailed me and reported the same problem. I have this running on two windows XP computers but I don't remember having to do anything special. I am getting ready to add it to a third later today so I may have the same problem.

-Ronn

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Subject: Re: Problem concerning accessing external library in IDL6.0  
Posted by [Haje Korth](#) on Thu, 02 Mar 2006 13:32:04 GMT  
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Did you check the webcam manual to see whether it is VFW compatible at all? If not, this DLM is not the way to go for you! Then the question is whether to spend days/weeks on programming or 50 Euro for a new web cam. Personally, I would go for the latter...

Haje

"yingjie, Peng" <yingjiepeng@yahoo.com> wrote in message  
news:1141253695.165134.309290@j33g2000cwa.googlegroups.com.. .

> Hi, Ronn  
> Thanks for your kind reply. I have tried the library and the test code  
> you gave to me. When I run the test code, I received an error message:  
> These are the devices found  
> Microsoft WDM Image Capture (Win32)Version: 5.1.2600.1106  
> % TESTVFW: No WebCam found  
> I did connect my Web Cam to my computer through USB. I also have no  
> idea whether the Microsoft WDM Image Capture has relationship with the  
> Web Cam or not. I will spend more time to read the instruction of  
> Randall Frank's library and try again. I will tell you my results later  
> and if you have some good suggestions, please let me know. Thanks a  
> lot.  
>

> Yingjie, Peng  
> Information Department VII  
> University of Wurezburg  
> Germany  
>

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Subject: Re: Problem concerning accessing external library in IDL6.0

Posted by [Rick Towler](#) on Thu, 02 Mar 2006 17:55:42 GMT

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yingjie, Peng wrote:

> Thanks for your kind reply. I think the problem is that the library  
> which I used (DirectX.Capture.dll) is COM object, but it is not an  
> ActiveX library. It is a .NET library. In .NET framework, you do not  
> need to (or simply you can't) register the .NET library. This  
> function is used to simplify coding within the .NET framework, such as  
> C#. However, for us, the IDL user, we can't use ActiveX control to  
> access this kind of library any more since we can't get the CLSID.

Are you \*sure\* you can't get the CLSID? Again, I am not a .NET guy, but I see a ".NET Category" in my COM/OLE browser. I can then look for something that I might be able to find docs or guess a method... I see:

"System.Random"

I use the COM/OLE browser to get the CLSID and then create the IDL COM object:

```
test=obj_new('IDLcomIDispatch$CLSID$4E77EC8F_51D8_386C_85FE_7DC931B7A8E7')
```

I then try to guess a method or two, and fail. Then I go to the VS .net docs, find the .net random class, see that the method to get a random number is "next" and voila!

```
IDL> print, test->next()  
1957853535  
IDL> print, test->nextdouble()  
0.80895216  
IDL> print, test->tostring()  
System.Random  
IDL> print, test->gethashcode()  
54267293
```

So I think you should at least \*try\* to find the CLSID using the COM/OLE browser. I mean it will only take a few minutes and you may save yourself a lot of time.

If you do find the CLSID, you still may not be "out of the woods" as we say. I have had mixed success with IDL's COM interface. Simple things tend to work, but more complex methods can run into problems. For example, the nextbytes method of our aforementioned system.random object seemed very straightforward. It fills a byte array with random bytes. So you would think it would be as easy as:

```
IDL> a=bytarr(5)
IDL> print, test->nextbytes(a)
IDLCOMIDISPATCH$CLSID$4E77EC8F_51D8_386C_85FE_7DC931B7A8E7:: NEXTBYTES:
Unable to call method NEXTBYTES.
The parameter is incorrect.
```

I tried numerous variations with no success. I'm sure there is a reason, and maybe some way to get it to work, but my point is that it isn't always smooth sailing on the IDL COM seas.

So in the end you may end up writing a DLM anyways. It isn't as hard as it may seem, especially if you buy Ronn Kling's book "Calling C from IDL". You can order it from his website [www.kilvarock.com](http://www.kilvarock.com).

Good luck!

-Rick

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Subject: Re: Problem concerning accessing external library in IDL6.0  
Posted by [ronn](#) on Mon, 06 Mar 2006 13:23:00 GMT  
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Hello Peng,  
I just loaded IDL6.2 on a new XP machine, the Creative WebCam software and the idl\_tools dll and dlm and everything worked great. I will bet that Haje is correct in that your weCam doesn't support VFW.

-Ronn

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