Subject: Re: Connecting GPC to IDL
Posted by Michael Galloy on Fri, 24 Jun 2011 16:35:19 GMT

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On 6/20/11 3:19 PM, kBob wrote:
> On Jun 20, 10:00 am, kBob<krd...@gmail.com> wrote:
>> On Jun 17, 1:00 pm, Haje Korth<hajeko...@gmail.com> wrote:
>>
>>
>>
>>
>>
>>> Ok, typically when using visual studio from the command line you need
>>> to execute a batch file so set the paths correctly. On my machine this
>>> is vsvars32.bat. It it siemwhere in the visual studio tree. I copied
>>> it to c:\windows so that it is always found. Then try the examples
>>> again, and do not attempt to compile gpc until the examples work. The
>>> next question I have is whether you wrote the proper wrapper routines
>>> to interface from IDL to gpc?
>>
>>> On Jun 17, 10:15 am, kBob<krd...@gmail.com> wrote:
>>
>>>> On Jun 17, 6:46 am, Haje Korth<hajeko...@gmail.com> wrote:
>>
>>>> > Were you able to successfully compile any of the small example
>>>> > programs in the IDL external directory?
>>
>>>> > On Jun 16, 5:21 pm, kBob<krd...@gmail.com> wrote:
>>
>>>> >> On Jun 14, 3:44 pm, kBob<krd...@gmail.com> wrote:
>>
>>>> >>> On Jun 11, 10:07 am, Michael Galloy<mgal...@gmail.com> wrote:
>>
>>>> >>>> kBob<krd...@gmail.com> wrote:
>>>> >>>>> On Jun 10, 7:52 am, Haje Korth<hajeko...@gmail.com> wrote:
>>>> >>>>>> Kelly: I have always found using gcc with IDL on Windows to be a
>>>> >>>>>> difficult endeavor. Also, the use of make_dll is optional and in the
>>>> >>>>>> past has made life more difficult rather than easier. I suggest
>>>> >>>>>> grabbing the free edition of Visual Studio Express and creating the
>>>> >>>>>> dll this way. Just remember to export the functions you will be
>>>> >>>>>> accessing from IDL. This is definitely an advanced topic, so start
>>>> >>>>>> with the simple examples in the external directory of the IDL distro.
>>>> >>>>>> Haje
>>
>>>> >>>>>> On Jun 9, 10:35 am, kBob<krd...@gmail.com> wrote:
>>
>>>> >>>>>>> On Jun 6, 2:11 pm, kBob<krd...@gmail.com> wrote:
>>

>>>> >>>>>>>> I would like to use the General Polygon Clipper (GPC) thur IDL.
>>
>>>> >>>>>>>> This is a software package written in C that is available from
>>>> >>>>>>>> Manchester that clips polygons.
>>
>>>> >>>>>>>> Has anyone implement this in IDL, already?
>>
>>>> >>>>>>>> I assume MAKE_DLL is the way to go.
>>
>>>> >>>>>>>> Kelly Dean
>>>> >>>>>>>> Milliken, CO
>>
>>>> >>>>>>> I am still looking into this, as time allows.
>>
>>>> >>>>>>> I ahve reviewed some different ways to implement this, I have
>>>> >>>>>>> determine that the following routines can be used :
>>
>>>> >>>>>>> LINKIMAGE
>>>> >>>>>>> SPAWN
>>>> >>>>>>> MAKE_DLL
>>>> >>>>>>> CALL_EXTERNAL
>>>> >>>>>>> CALL_EXTERNAL/MAKE_DLL
>>
>>>> >>>>>>> There is a nice example to use CALL_EXTERNAL/MAKE_DLL, but MAKE_DLL is
>>>> >>>>>>> giving me problems as I am trying to use the gcc compiler. There is a
>>>> >>>>>>> ITTVIS Tech Tip that helps, but another problem appears while dealing
>>>> >>>>>>> with the IDL example.
>>
>>>> >>>>>>> There is a GCP DLL provided thru the MatLab Contrib site. I am playing
>>>> >>>>>>> around with this in CALL_EXTERNAL, bypassing the MAKE_DLL.
>>
>>>> >>>>>>> Sorry, that this is turning into a blog, but I find it helps to scatch
>>>> >>>>>>> some notes down once in awhile for future reference.
>>
>>>> >>>>>>> Kelly Dean
>>>> >>>>>>> Milliken, CO- Hide quoted text -
>>
>>>> >>>>>> - Show quoted text -
>>
>>>> >>>>> Yes, apparently the ITTVIS example assumes you have Microsoft Visual
>>>> >>>>> installed.
>>
>>>> >>>>> Well, I spent most of the day installing Microsoft Visual C++ 10.0 and
>>>> >>>>> regist for the free version.
>>
>>>> >>>>> So far, here are the problems I am having :
>>
>>>> >>>>> cl.exe : Solution ?

>>>> >>>>> mspdb100.dll pop-up : Solution ?
>>>> >>>>> stdio.h 'no such file' : Solution ?
>>
>>>> >>>>> I am sure the problems are related to path, as all these file are
>>>> >>>>> within the new install of MS Visual Studio 10.0.
>>
>>>> >>>>> Kelly
>>
>>>> >>>> Make sure to launch IDL from the special command line provided by VS (or
>>>> >>>> set your path and possibly other environment variables accordingly).
>>
>>>> >>>> Mike
>>>> >>>> --www.michaelgalloy.com
>>>> >>>> Research Mathematician
>>>> >>>> Tech-X Corporation- Hide quoted text -
>>
>>>> >>>> - Show quoted text -
>>
>>>> >>> Becoming a little wiser.
>>
>>>> >>> Visual Studio Command Prompt is looking for "vcvarsall.bat"
>>
>>>> >>> I did install MinGW. From the MinGW shell prompt I was able to make a
>>>> >>> DLL -
>>
>>>> >>>   gcc -Wall -shared gpc.c -o gpc.dll
>>
>>>> >>> However, this is a 32-bit DLL. The IDL 64-bit version using
>>>> >>> CALL_EXTERNAL doesn't like the DLL.
>>
>>>> >>> Although, the IDL 32-bit version does like the DLL, but IDL promptly
>>>> >>> crashes.
>>
>>>> >>> Progress!
>>
>>>> >>> Kelly- Hide quoted text -
>>
>>>> >>> - Show quoted text -
>>
>>>> >> Still working on it, but starting to lose steam.
>>
>>>> >> Tried to use gcc from CYGWIN to compile C source code. Failed. Reports
>>>> >> from
>>>> >> from tech support and other IDL users, avoid doing this.
>>
>>>> >> Installed Visual C++ (express) as recommended by tech support and
>>>> >> other IDL
>>>> >> users. Used the Visual Command Prompt, but still unable to make a 32-

>>>> >> bit
>>>> >> DLL without getting some kind of warning or error.
>>
>>>> >> Installed MinGW as suggested by tech support and other IDL users. From
>>>> >> their
>>>> >> experience, they have more success with compiling 3rd party packages
>>>> >> with this
>>>> >> package. I was able to creating a 32-bit DLL with ggc in the MinGW
>>>> >> shell. Used
>>>> >> -shared option to gcc to create a DLL. For example :
>>
>>>> >>   gcc -Wall -shared gpc.c -o gpc.dll
>>
>>>> >> Despite the success of creating a DLL, the 32-bit IDL 6.4 crashes when
>>>> >> CALL_EXTERNAL
>>>> >> is used to access this sharable library. For sure, I didn't use the
>>>> >> compiler properly
>>>> >> to create a sharable DLL.
>>
>>>> >> Found a sharable DLL for the General Polygon Clipper at Mathworks
>>>> >> (circa 2005). Needs
>>>> >> a MatLab library to work. I didn't purse this much further, as I no
>>>> >> long have MatLab
>>>> >> on my desktop.
>>
>>>> >> New Life! Michael Galloy announced his book is available - Modern IDL.
>>>> >> There is a whole
>>>> >> chapter about this External Development. So, there is lots of new
>>>> >> ideas to try. Even
>>>> >> a Python example. GPC has a Python wrapper.
>>
>>>> >> Kelly- Hide quoted text -
>>
>>>> > - Show quoted text -
>>
>>>> Nope!
>>
>>>> I have been working with the ITTVIS example routine SIMPLE_VARS.pro
>>
>>>> Common errors are undefine reference, unrecoginize commands (CL),
>>>> missing libraries (mspdb100.dll), and cannot find<stdio.h>.
>>
>>>> Kelly- Hide quoted text -
>>
>>> - Show quoted text -
>>
>> Will the vsvarall.bat file work? It is in the Visual C++ 10.0
>> directory.

>> The vsvar32.bat is in the VC /bin directory.
>>
>> I moved the vsvarall.bat (as well as the vsvar32.bat) to the C:
>> \windows
>> directory and the same problems persit. You move it there to be found
>> by what app? I assume MAKE_DLL is starting a adminstrator command
>> prompt.
>>
>> I have yet to work on the IDL wrapper for GPC. I am still working to
>> get
>> the ITTVIS examples to work.
>>
>> Kelly- Hide quoted text -
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>> - Show quoted text -
>
> Well this works (ITTVIS example) ...
>
> Start up a Command Prompt ...
>
> Drag-n-drop the vsvarall.bat from the Visual Studio C++ 10.0 VC
> directory into the command prompt ...
>
>   "C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC
> \vcvarsall.bat"
>
> Drag-n-Drop the (IDL 6.4) idlde.exe into the same Command Prompt ...
>
>   "C:\Program Files\ITT\IDL64\bin\bin.x86\idlde.exe"
>
> Hit return in the active command prompt and the IDL DE starts up.
>
> Now you can running the ITTVIS CALL_EXTERNAL examples work just fine.
>
> However, is this a viable solution?
>
> Maybe for a quick and dirty - get-it-done - option.
>
> Kelly

For Windows, what I have done (haven't done this for awhile, though) was
to just set the environment variables that vcvarsall.bat sets. I don't
remember clearly, but I think this was a bit of a hassle. But then
CALL_EXTERNAL, MAKE_DLL, etc. "just work" all the time.

Mike
--
Michael Galloy

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Modern IDL, A Guide to Learning IDL: http://modernidl.idldev.com
Research Mathematician
Tech-X Corporation