
Subject: Re: more difficulties in IDL - C++ combination
Posted by [R.Bauer](#) on Sat, 07 Jun 2003 07:25:27 GMT
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Juan Luis Medina Trujillo wrote:

> Hi again,
>
> Im starting to know more about IDL, but then Ive been thinking in the
> main architecture of the complex program I have to implement and I need
> pipes between IDL and C++. In the top of the software and the only thing
> the scientists (astrophysics) will see will be a GUI (widget in IDL)
> made preliminarily in IDL and able to perform many scientific functions.
> This IDL process will be using the pipes to hear from C and to send
> commands, this means that once the C program is launched from IDL, IDL
> should continue iterating between pipes and waiting also for user
> requirements.
>
> I dont know if I made myself clear, does anybody know if this is
> feasible using IDL - C combination?? does IDL get halted when the C
> function is launched?? how does it work?
>
> In case it is not possible, maybe a solution is to run both programs
> independently and IDL would connect with the program in C++ (dont know
> how) iteratively while running the widget.
>
> Any suggestions? Im putting it difficult eh?

One could help better just for information.

At FZ Juelich ZAM there is a client / server library in preparation
"the visit project" which will do all this complex data exchange.
Marlene Busch writes at the moment the idl interface to this library.
An alpha version should be available soon or is already available.

<http://www.fz-juelich.de/zam/visit/>

best regards

Reimar

>
> Thanks in advance, its very comforting to have a place where you can
> send your problems and get useful ideas from it.
>
> Juan Luis

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Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
<http://www.fz-juelich.de/icg/icg-i/>

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a IDL library at Forschungszentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro.html

Subject: Re: more difficulties in IDL - C++ combination
Posted by [Rick Towler](#) on Sun, 08 Jun 2003 05:49:38 GMT
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"Juan Luis Medina Trujillo" wrote in message ...

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- > main architecture of the complex program I have to implement and I need
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- > feasible using IDL - C combination?? does IDL get halted when the C
- > function is launched?? how does it work?

Calling a DLM function is like calling any other IDL function, program execution is halted until the function returns. This doesn't mean you are stuck though. You can send events back to IDL thru the widget interface. It is rather limited in that you only can send back a single long value (I think) but it is sufficient to notify your IDL process that something has happened on the C side. From this point on I am making all of this up but you could call a DLM function which launches your C++ code in a separate thread and communicate "events" via IDL's widget interface and another set of DLM functions could be called in response to these events. I can elaborate if desired.

- > In case it is not possible, maybe a solution is to run both programs
- > independently and IDL would connect with the program in C++ (dont know
- > how) iteratively while running the widget.

This is certainly possible. Reimar's post might get you started. Also, the socket functions or shared memory functions (5.6+) might be useful.

Good Luck!

-Rick

Subject: Re: more difficulties in IDL - C++ combination
Posted by [Chris\[1\]](#) on Mon, 09 Jun 2003 11:44:27 GMT
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Hi Juan;

We use pipes regularly to link IDL and C language functions in UNIX/Linux (It's a headache in Windoze..). I simply modify the C language functions so that they can take their I/O through named pipes, and then read/write them through normal file operations in IDL. To keep the IDL function running independently of the C function, just make sure you spawn the C language function in the background, and that you have the communication protocol between the processes worked out. This method to spread large IDL processes out over multiple CPU's (by breaking it into a number of smaller processes that communicate via pipes) it works pretty efficiently.

You could also look at socket programming, which is a little more direct & generic and has some hope of working on MS systems. I avoid it because I don't ever want any of the people I work for thinking I might enjoy working on a Bill Gates product :)

Cheers;

Chris
