Subject: Re: IDL - RPC? IDL - AVS?
Posted by chase on Wed, 23 Mar 1994 18:53:17 GMT
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In article <2mpkbuINNgsa@maz4.sma.ch> idl@sma.ch (idl Adm) writes:

ao> 1. print,'Does anyone use IDL-RPCs?'

ao> if (yes) then mail,'How are Your experience?'

ao> if (yes) then mail,'Did You ever do RPCs on a CRAY?'

I have used IDL's RPC features but not on a Cray. I have used them successfully on HP9000/s700 and SGI IRIS4D workstations (mainly the HPs though). We used them to add powerful but simple to use graphics facilities to our C programs.

We were doing preliminary development of a space based sensor algorithm for track association/prediction of objects against a star field background. Using RPC we were able to create graphics without coding low-level graphics routines ourselves or without having to write lots of data to files to be post-processed by IDL.

Using the supplied example RPC routines, I wrote a very simple interface routine for passing arrays (or scalars) in C to IDL and another routine for sending commands for execution to IDL. The actual IDL display code is put in an IDL procedure file - the advantage being that when we want to change the display routines we don't have to recompile C code, just IDL code which is faster and can even be done while our C code is running.

Typically, in the C program I do the following:

```
connect_to_idl();
/* Just once at the beginning of the program.  This
looks for an IDL server running on the current host (but could look
on a different host).  If an IDL server is not found, then the
commands below just do nothing. */

/* Within our main simulation loop */

send_idl_var(....)
...
send_idl_var(....) /* Send the needed variables to IDL */
send_idl_cmd(".run ait_proc"); /* Run the IDL procedure file */

/* End loop */
```

disconnect_from_idl(); /* Close connection */

There is another nice advantage to using IDL as a server. I have a client program that acts as just a command line interface to the IDL server (it's a modification of one the example programs that uses the GNU readline library). _While_ the simulation is running and connected to the server, I can use the command line client to the IDL server from another window (I always seem to have lots of xterms up doing different things - one for the IDL server, one for our simulation, one for the command line client, etc - alot of clutter) to issue commands like set the color table, change the device parameters, check values of passed variables, or whatever.

I haven't used IDL as a computation engine for returning values to our C programs, nor have I used the RPC functions on a Cray. I do not know if the equivalent features are fully implemented yet for a MS Windows environment using DLE but I understand that there are plans to support such features.

Chris
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