Subject: Re: CALL_EXTERNAL and Progress Bar
Posted by Allan Whiteford on Tue, 24 Jun 2008 19:45:06 GMT
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Mario wrote:
> Hi all,
> This is the first time that I post on this news group and I want to
> greet everyone.
>
> I have a little problem in my IDL program. I use this progress bar
>
> http://www.dfanning.com/widget_tips/show_progress.html
>
> in my code and it work very well.
> Now, I would use this progress bar also with CALL_EXTERNAL function,
> but I don't know how to update the value of progress bar from inside
> shared library.
> Someone can help me?
>
> Thank you for everything and I'm sorry for my english.
> Best regards.
> --
> Ciao,
> Mario
>
> [Web Info: http://members.ferrara.linux.it/cavicchi]
>
>

Mario,

You "pretty much" can't do this, please see:

http://groups.google.com/group/comp.lang.idl-pvwave/browse_t
hread/thread/a5b561900a046ce4/

and the other references in the above. I also spoke to ITTVIS about this
and they confirmed that it's not safe to call IDL code (such as you
would need to update a progress bar) from inside code called via
CALL_EXTERNAL (or any other method).

I expressed an interest in such a feature being present, perhaps you
could as well and we may well see it in a future release.

In the meantime, the following implements very roughly what you want:

test.pro

```
pro test_e,event
 widget_control,event.top,get_uvalue=info

        if event.id eq info.but then begin
         x=[0.0,0,0,0]
         y=[0.0,0,1,1]
  widget_control,info.draw,get_value=wid
  wset,wid
                junk=call_external("test.so","progbar");
        endif
end

pro test
        tlb=widget_base(title='Progess bar test',/column)
        draw=widget_draw(tlb, ysize=80, xsize=480)
        but=widget_button(tlb,value='Go')
        info={draw:draw,but:but}
 widget_control,tlb,set_uvalue=info
        widget_control,tlb,/realize
        widget_control,draw,get_value=wid
        wset,wid
        plot,fltarr(10),/nodata
 xmanager,'test',tlb,event_handler='test_e'
end

test.c
------

#include <stdlib.h>
#include <stdio.h>
#include "idl_export.h"

IDL_VPTR progbar(int argc, IDL_VPTR argv[])
{
 int i;
        IDL_VPTR var[2];
        IDL_SYSRTN_GENERIC func;

        var[0]=IDL_FindNamedVariable("x",IDL_FALSE);
        var[1]=IDL_FindNamedVariable("y",IDL_FALSE);
 func = IDL_SysRtnGetRealPtr (IDL_FALSE,"polyfill");

        for (i=1;i<=10;i++)
        {
                sleep(5); /* actually calculate something */
  ((float *) (var[0])->value.arr->data)[1] =i;
  ((float *) (var[0])->value.arr->data)[2] =i;
```

```
  func(2,var,"");
        }
}
```

compilation
---

gcc -I/usr/local/rsi/idl/external/include -shared test.c -o test.so

Note here that the progress bar is being updated every 5 seconds from inside the C loop.

The above solution is particularly ugly although as far as I can tell it's completely safe unlike some other methods which almost work. I only wrote the above is a proof of concept for myself back when I was pursuing the same issue as you - I eventually decided having a progress bar wasn't worth it if I had to jump through the above hoops. Maybe you really need one that badly though.

Even given the above "solution" I think my response would be the same as Brian's in that it isn't possible to do what you want.

Thanks,

Allan
