## Subject: Re: problems with passing structures around in gui widgets Posted by R.Bauer on Thu, 05 Aug 2004 13:30:54 GMT

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How often do you have answered this?

Cheers

Reimar

```
David Fanning wrote:
```

```
> RS writes:
>
>> I'm writing a GUI to streamline some data reductions and have run into
>> two problems passing information from the main program to the event
>> handler and back:
>>
>> 1) I can't reassign arrays to arrays of different size.
>> I have created a 1x1 array (as close to empty as IDL could get-- [0])
>> in the main (base widget) that I want to assign 1024x1024 or 1024x160
>> values during event handler calls. However, IDL won't write a larger
>> array over a smaller one in this case, even though it will at the
>> command line... ex:
>> a=indgen(1,1,1)
>> a=indgen(2,2,2)
>>
>> 2) I can only access (& change) the data from the main once and then
>> IDL spews back this message:
>> % Expression must be a structure in this context: INFO.
>> % Execution halted at: INTERFACE_EVENT
>> %
                   WIDGET_PROCESS_EVENTS
>> %
                   $MAIN$
>> Which is great, except that info IS a structure that I'm using in the
>> main to contain everything I want to be able to alter during the
>> events and setting it to be the uvalue of the top-level base. So, I
>> can load the data, but not perform any operations on it, because that
>> would require calling a second event. Peachy.
>>
>> Any ideas as to workarounds?
>
> Oh, dear. You need a book. :-)
>
> When something in a structure is changing (either size or data type)
> we make that field a pointer:
>
```

```
info = { name:'Coyote', data:Ptr_New(/Allocate_Heap)}
>
>
  Then, you can put whatever you like into it:
>
>
    *info.data = FltArr(10)
>
>
    *info.data = BytArr(50, 100)
>
> Be sure to free you pointer in your CLEANUP procedure.
> What!? You don't have a clean up procedure? Better read
> the documentation on the XMANAGER command. :-)
>
    PRO Myprogram_Cleanup, tlb
>
    Widget_Control, tlb, Get_UValue=info
>
    Ptr Free, info.data
>
    END
>
> The most common reason for your error message is
> that you took the info structure out of your TLB with
> a NO COPY and forgot to put it back before you left
> that event handler. This means you can process one
> event, but no more.
>
> The standard rule is to check the info structure
> out at the top of the event handler, and check it
> back in before you exit the event handler:
>
    PRO MyProgram_Events, event
>
    Widget Control, event.top, Get UValue=info, /No Copy
>
>
    info.data = blahblahblah
>
    Widget_Control, event.top, Set_UValue=info, /No_Copy
>
    END
>
>
> Cheers,
> David
>
>
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http://www.fz-juelich.de/icg/icg-i/
______
a IDL library at ForschungsZentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl icglib/idl lib intro. html
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