Subject: Re: Beginning GUI Applications
Posted by Rick Towler on Fri, 11 Aug 2000 07:00:00 GMT
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> Is there a way to pass values between event procedures?

finally one I can answer! :)

Use a data structure. Stick it in the UValue of the top level base widget. There are a few details but this is the main idea. You get at the data by using the Get_UValue keyword of Widget_Control.

```
pro my_event_handler, event
   ;we have the event structure. It contains the reference to our tlb
   ;widget.  Use that to get our user value that we defined in
   ;our main program routine.
   WIDGET_CONTROL, event.top, GET_UVALUE=info, /NO_COPY

   ;now I can do anything I want with my info structure
   info.xsize=200
   info.ysize=400

   ;Just don't forget to put it back when your done!
   WIDGET_CONTROL, event.top, SET_UVALUE=info, /NO_COPY
end

pro my_gui_main

   ;create the top level base
   tlb=widget_base(column=1, mbar=menuID, /TLB_size_events)
   ;add buttons and draw areas or whatever

   realize the widget hierarchy
   widget_control, tlb, /realize

   ;create the anonymous data structure "info"
   info = {
         ;stick important variables/pointers/objects
         ;you need to pass around in here. For example:
    bigdataset:ptr_new(), $
         plotobject:obj_new(), $
         xsize:50, $
         ysize:50, $
   }


   ;here's the good stuff
   ;stick your data structure into the UValue of the TLB widget
```

```
    WIDGET_CONTROL, tlb, SET_UVALUE=info, /NO_COPY

    ;call x manager and your done here
end
```

You'll want to look at the IDl docs to understand the /NO_COPY keyword. Basically it forces widget_control when getting uvalues to "detach" your data from the source (in our case the UValue of the tlb widget) instead of making a copy of the data. This is generally preferred but your UValue becomes undefined and if you don't "reattach" your data to it using Set_Uvalue the next time you try to get the UValue of your tlb it will be undefined.

Clear as mud? Hopefully this will at least get you started.

You might want to pillage David's website/FTP server for example code. He has a bunch of simpler widget programs that are well commented. http://www.dfanning.com

-Rick Towler

hom@sask.usask.ca wrote:
>
> Is there a way to pass values between event procedures?
>
> I want several values to be carried and modified throughout my GUI
> application.
>
> When just coding, I use a main program. When using GUI's, where is the
> "main program"?
>
> I would really appreciate any help!!