
Subject: widget event structure doesn't transfer

Posted by [Oana Coman](#) on Mon, 13 Aug 2012 20:45:15 GMT

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hi guys,

I have a widget base(1) with a couple of buttons on it, and when i click one of the buttons it brings up a base widget(2) containing a draw widget and a couple of fields from which I want to save the input to do stuff in that first widget with all the buttons (so when i click a button there, i can use the data I got from (2) to do stuff in (1)).

The code for widget 1 is in one .pro file, and the code for widget 2 is in another. Would this be the reason the information is not transferring between the two? I thought that would be ok. Or maybe my code is crazy (which is most probable)

here is what I have in the widget 1 definition module to get to widget 2 (thes are just to save space):

```
w_userRoi= widget_button(p,value = 'Get User Defined ROI',frame = 2,$
                        event_pro = 'userROI')
widget_control,w_top , set_uval = { .....,$
                                userROI: -1L,$ ;since I don't have an event structure yet. Maybe I
should put something else here??
                                userCon: w_userCon,$
                                cx1: w_cx1 ,$
                                .....,$etcetc}
```

and here is my actual UserROI code, in UserROI.pro

Pro UserROI, event

```
tlb = Widget_Base(Title='User Defined ROI', row=4,xsize=260, $
  /Base_Align_Center, Group_Leader=event.top)
drawID = Widget_Draw(tlb, Xsize=260,Ysize=260, uvalue=13)
widget_control, drawID, get_value=wid
wset, wid
```

```
;get data from widget 1
widget_control, event.top, get_uval = w
widget_control, w.imagevu, get_uval = w
widget_control, w.cw_image, get_uval=w
widget_control, w.data, get_uval = d
widget_control, w.stretch, get_uval=s
widget_control,s.smin, get_valu=smin
widget_control,s.smax, get_valu=smax
```

```
image=congrid(d.image, 260,260)
```

```
xlabelbase = Widget_Base(tlb, Row=1)
```

```

w_xStart = cw_field(xlabelbase, /text, title='X:', frame=2, valu=0, xsize=6)
w_xDelta= cw_field(xlabelbase, /text, title='dx:', frame=2, valu=0, xsize=6)

ylabelbase = Widget_Base(tlb, Row=1)
w_yStart= cw_field(ylabelbase, /text, title='Y:', frame=2, valu=0, xsize=6)
w_yDelta= cw_field(ylabelbase, /text, title='dy:', frame=2,valu=0, xsize=6)

buttonBase = Widget_Base(tlb, column=3, /align_center, /base_align_center)
cancelID = Widget_Button(buttonBase, Value='Cancel', event_pro='userROI_quit')
viewID = Widget_Button(buttonBase, Value='View', event_pro='userROI_view')
acceptID = Widget_Button(buttonBase, Value='Accept', event_pro='userROI_accept')
; Realize the widget hierarchy.

```

```
Widget_Control, tlb, /Realize
```

```
tvimage1, bytscl(image, smin, smax)
```

```

info = {   use:0,$
          image:image,$
          origImage:d.image,$
          wid:wid,$
          drawID: drawID,$
          xstart:w_xStart,$
          xdelta:w_xDelta,$
          ystart:w_yStart,$
          ydelta:w_yDelta,$
          xend:-1L,$
          yend:-1L}

```

```
Widget_Control, tlb, Set_UValue=info, /No_Copy
```

```

widget_control, event.top, get_uval=w
w.userROI = tlb
widget_control, event.top, set_uval=w

```

```

XManager, 'textbox', tlb
END

```

When I try to call my userROI data in widget 1, I get:
 % WIDGET_CONTROL: Invalid widget identifier: 143.

Do you have any thoughts on this? Where did I go wrong?
 Thanks.

Subject: Re: widget event structure doesn't transfer
Posted by [David Fanning](#) on Tue, 14 Aug 2012 13:22:29 GMT
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Kat writes:

- > When I try to call my userROI data in widget 1, I get:
- > % WIDGET_CONTROL: Invalid widget identifier: 143.
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- >
- > Do you have any thoughts on this? Where did I go wrong?

Well, it appears you have gone wrong almost from the get-go. :-)

Mostly what I think you need to know is that IDL doesn't suspend it's rules about local variables being protected inside of procedures and functions just because you are writing a widget program. Widget identifiers are local variables. (This is your immediate problem, but there are many others, too.)

You might want to read up on widget programming a bit. IDL Programming Techniques is **very** old and outdated, but the widget section is still pretty good. If you could find a copy of that, it would help you a great deal, I think.

If you want to call a second widget program to provide information to the first, we call that a "pop-up" or "dialog" widget. It is written as a function that returns data (usually in the form of a structure) to the calling program. You can read more about how to write it here:

http://www.idlcoyote.com/widget_tips/popup.html

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: widget event structure doesn't transfer
Posted by [Oana Coman](#) on Tue, 14 Aug 2012 21:30:37 GMT
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Hi,
I have the book and it's definitely my go-to widget guide. I have a bit of an idea how to run normal widgets using procedures but once I try to figure out the functions and these popup dialogs it's like a whole new ballgame (I am also a little slow haha so I'm sure that doesn't help). I've looked at the Pop-up Dialog page a lot and though I get the overall idea, I'm not sure how to carry it out.

For example, textbox is defined:
FUNCTION TextBox, Title=title, Label=label, Cancel=cancel, \$
 Group_Leader=groupleader, XSize=xsize, Value=value

but if I want it to launch when i click a button, the code (and i'm assuming this is how i would call it):

```
w_userRoi= widget_button(p,value = 'Get User Defined ROI',frame = 2,$  
                          event_func = 'textbox')
```

wouldn't have anywhere to input the various arguments. How would I put those in the function? (i tried taking them all out and calling it that way, but I'm still getting an "incorrect number of arguments" error"). But either way, I do want to have at least one argument.

Also, do I even need all those? All I want the function to use is the uservalues of the original widget (since I want to do stuff with those), and I guess the Cancel variable. But then there's the issue of not knowing how to call the function correctly.

Finally, where does my return value save to? Would it be w_userRoi, or somewhere else?

Thanks for the help.

On Tuesday, August 14, 2012 6:22:29 AM UTC-7, David Fanning wrote:

```
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>  
>  
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> Cheers,
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> David
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> David Fanning, Ph.D.
>
> Fanning Software Consulting, Inc.
>
> Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: widget event structure doesn't transfer
Posted by [David Fanning](#) on Wed, 15 Aug 2012 01:29:40 GMT
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(i tried taking them all out and calling it that way, but I'm still getting an "incorrect number of
arguments" error"). But either way, I do want to have at least one argument.

Event handler routines (what you are defining with the `EVENT_FUNC` or `EVENT_PRO` keywords) are all written in exactly the same way: with one and only one parameter, which is the event structure that the window manager passes to it. In general, you never call event handlers yourself. They are called for you.

What you *do* in an event handler is entirely up to you. You could, for example, call any other IDL procedure or function you wanted to, including those that implement other widget programs. You can pass these IDL procedures and functions any variables that you have defined in the context of the procedure or function, via either arguments or keywords.

> Also, do I even need all those?

You need whatever makes sense for the program you are calling. That's all you need.

> All I want the function to use is the `uservalues` of the original widget (since I want to do stuff with those), and I guess the `Cancel` variable. But then there's the issue of not knowing how to call the function correctly.

You call it exactly like you would call any other function in IDL, passing appropriate arguments and keywords.

> Finally, where does my return value save to? Would it be `w_userRoi`, or somewhere else?

If it is information that is only going to be used in that event handler module, you don't have to save it anywhere. Just use it. If it is information that you are going to need to run your program, then you save it in the `info` structure with all the other stuff you need to run your program.

Cheers,

David

--

David Fanning, Ph.D.

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