Subject: Re: Linking buttons to plot windows
Posted by David Fanning on Fri, 17 Dec 2004 18:53:29 GMT
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Clive Cook writes:

- > I am using the IDL GUI builder and i want a display with two plotting window
- > and 2 buttons on one page. Basically how do you link each button to the
- > desired plotting window. At the moment my plot appears in the last plot
- > window i create. Any ideas?

In your event handler you will have to find the ID of the draw widget you want to plot into, get it's value (which will be the correct window index number), and make this window the current graphics window (with WSET). Then draw your plot.

How one does this in the GUI Builder, I don't know. I've never used it. It will probably involve some kind of FIND BY UNAME, or something of the sort. :-)

Cheers,

David

P.S. You are probably lucking your plot went into your widget windows at all. The number one problem with widget programs I look at is that people have NO idea what window they are drawing graphics in! In widget programs, as in life, if you are not going to be lucky, you better be knowledgeable. There is only one current graphics window in IDL, ever! :-)

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Linking buttons to plot windows Posted by Clive Cook on Mon, 20 Dec 2004 19:50:40 GMT View Forum Message <> Reply to Message

Thanks David, i'm pretty new to widget programming so i am not really sure what to do. This is an example of the code that the GUIbuilder generates. I assume that the first part of the code (WID_BASE_0_event) handles the events, so when i press wid_button_1 the function contour1 is called. As i mentioned before this plots in the last area designated for plots (wid_draw_1). How can i specifically plot it in the first area (wid_draw_0)?

```
many thanks
Clive Cook
: IDL Widget Interface Procedures. This Code is automatically
   generated and should not be modified.
Generated on: 12/20/2004 14:15.45
pro WID_BASE_0_event, Event
wWidget = Event.top
 case Event.id of
 Widget Info(wWidget, FIND BY UNAME='wid button 0'): begin
   if( Tag_Names(Event, /STRUCTURE_NAME) eg 'WIDGET_BUTTON' )then $
    contour1, Event
  end
  Widget_Info(wWidget, FIND_BY_UNAME='WID_BUTTON_1'): begin
   if( Tag_Names(Event, /STRUCTURE_NAME) eq 'WIDGET_BUTTON' )then $
    contour2, Event
  end
  else:
endcase
end
pro WID_BASE_0, GROUP_LEADER=wGroup, _EXTRA=_VWBExtra_
 Resolve_Routine, 'phoenix_eventcb',/COMPILE_FULL_FILE; Load event
callback routines
WID_BASE_0 = Widget_Base( GROUP_LEADER=wGroup, UNAME='WID_BASE_0' $
   ,XOFFSET=5,YOFFSET=5,SCR XSIZE=800,SCR YSIZE=600 $
   TITLE='Phoenis Software V1.0', SPACE=3, XPAD=3, YPAD=3)
WID_DRAW_0 = Widget_Draw(WID_BASE_0, UNAME='WID_DRAW_0', XOFFSET=39 $
   YOFFSET=70 .SCR XSIZE=691 .SCR YSIZE=192)
WID_TEXT_0 = Widget_Text(WID_BASE_0, UNAME='WID_TEXT_0', XOFFSET=39 $
   ,YOFFSET=21 ,SCR_XSIZE=101 ,SCR_YSIZE=18 ,/ALL_EVENTS ,VALUE=[ $
   'Channel 1 - 532 nm', " ] ,XSIZE=20 ,YSIZE=1)
```

```
WID_BUTTON_0 = Widget_Button(WID_BASE_0, UNAME='wid_button_0' $
,XOFFSET=175,YOFFSET=20,SCR_XSIZE=111,SCR_YSIZE=20 $
,/ALIGN_CENTER,VALUE='Plot Channel 1')

WID_DRAW_1 = Widget_Draw(WID_BASE_0, UNAME='WID_DRAW_1',XOFFSET=39 $
,YOFFSET=333,SCR_XSIZE=697,SCR_YSIZE=189)

WID_BUTTON_1 = Widget_Button(WID_BASE_0, UNAME='WID_BUTTON_1' $
,XOFFSET=182,YOFFSET=306,SCR_XSIZE=111,SCR_YSIZE=18 $
,/ALIGN_CENTER,VALUE='Plot Channel 2')

Widget_Control, /REALIZE, WID_BASE_0

XManager, 'WID_BASE_0', WID_BASE_0, /NO_BLOCK

end

;
; Empty stub procedure used for autoloading.
;
; pro phoenix, GROUP_LEADER=wGroup, _EXTRA=_VWBExtra_
WID_BASE_0, GROUP_LEADER=wGroup, _EXTRA=_VWBExtra_
end
```

Subject: Re: Linking buttons to plot windows
Posted by David Fanning on Mon, 20 Dec 2004 22:11:05 GMT
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Clive Cook writes:

- > Thanks David, i'm pretty new to widget programming so i am not really sure
- > what to do. This is an example of the code that the GUIbuilder generates. I
- > assume that the first part of the code (WID BASE 0 event) handles the
- > events, so when i press wid_button_1 the function contour1 is called. As i
- > mentioned before this plots in the last area designated for plots
- > (wid_draw_1). How can i specifically plot it in the first area (wid_draw_0)?

It is my humble (and mostly ignored) opinion that it is *impossible* to use the GUI_BUILDER to create widget programs. At least programs you can understand. And this code is like running your fingernails across the blackboard to me. But, your code will look something like this (assuming the CONTOUR event handlers aren't doing something weird):

pro WID_BASE_0_event, Event

```
wWidget = Event.top
 case Event.id of
  Widget_Info(wWidget, FIND_BY_UNAME='wid_button_0'): begin
   if( Tag_Names(Event, /STRUCTURE_NAME) eq 'WIDGET_BUTTON' )then $
    BEGIN
    drawID = WIDGET_INFO(wWidget, FIND_BY_UNAME='WID_DRAW_O')
    Widget Control, drawID, Get Value=wid
    WSET, wid
    contour1, Event
    ENDIF
  end
  Widget_Info(wWidget, FIND_BY_UNAME='WID_BUTTON_1'): begin
   if( Tag_Names(Event, /STRUCTURE_NAME) eq 'WIDGET_BUTTON' )then $
    BEGIN
    drawID = WIDGET INFO(wWidget, FIND BY UNAME='WID DRAW 1')
    Widget Control, drawID, Get Value=wid
    WSET, wid
    contour2, Event
    ENDIF
  end
  else:
 endcase
end
If that is not the ugliest code I've ever posted in a newsgroup,
I don't know what is. :-(
Cheers.
David
P.S. Really do yourself a favor and ditch the GUI_BUILDER. You
(and your boss) will be glad you did. :-)
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
```

Subject: Re: Linking buttons to plot windows Posted by Robert Barnett on Wed, 22 Dec 2004 23:09:49 GMT View Forum Message <> Reply to Message

And look ... it's possible to write an entire application demonstrating this in little over half the code it took to write the event loop for

GUI builder. Apologies, the excess documentation makes it a little hard to read.

David Fanning wrote: > Clive Cook writes: > > >> Thanks David, i'm pretty new to widget programming so i am not really sure >> what to do. This is an example of the code that the GUIbuilder generates. I >> assume that the first part of the code (WID_BASE_0_event) handles the >> events, so when i press wid_button_1 the function contour1 is called. As i >> mentioned before this plots in the last area designated for plots >> (wid_draw_1). How can i specifically plot it in the first area (wid_draw_0)? >> > > It is my humble (and mostly ignored) opinion that it > is *impossible* to use the GUI_BUILDER to create widget > programs. At least programs you can understand. And this > code is like running your fingernails across the blackboard > to me. But, your code will look something like this (assuming > the CONTOUR event handlers aren't doing something weird): > > pro WID_BASE_0_event, Event > wWidget = Event.top > > case Event.id of > Widget_Info(wWidget, FIND_BY_UNAME='wid_button_0'): begin > if(Tag_Names(Event, /STRUCTURE_NAME) eq 'WIDGET_BUTTON')then \$ > **BEGIN** drawID = WIDGET_INFO(wWidget, FIND_BY_UNAME='WID_DRAW_O') > Widget Control, drawID, Get Value=wid > WSET, wid > > contour1, Event **ENDIF** > > Widget Info(wWidget, FIND BY UNAME='WID BUTTON 1'): begin > if(Tag_Names(Event, /STRUCTURE_NAME) eq 'WIDGET_BUTTON')then \$ > **BEGIN** > drawID = WIDGET_INFO(wWidget, FIND_BY_UNAME='WID_DRAW_1') > Widget Control, drawID, Get Value=wid > WSET, wid

>

>

contour2, Event

ENDIF

```
end
>
     else:
>
   endcase
>
> end
>
> If that is not the ugliest code I've ever posted in a newsgroup,
 I don't know what is. :-(
> Cheers,
>
> David
> P.S. Really do yourself a favor and ditch the GUI_BUILDER. You
 (and your boss) will be glad you did. :-)
>
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; Robbies Tools (rt)
Plot brown noise
; Present a "redraw" button to redraw the plot in the given window
; This code has absolutely now warranty at all and is not guarunteed
; to actually work.
; Written by Robbie Barnett, Westmead Hospital Sydney
; Draw the graph of the brown noise in the specified window
pro rt_brownian_draw, window
; Keep the seed as a global variable between calls
common rt_brownian, seed
; Set the window to draw in
wset, window
; Create the array which contains the values of the brown noise
```

```
values = lonarr(20)
for i=1,19 do values[i] = values[i] + (randomu(seed)-0.5)*10.0
; Plot the brown noise
plot, values
end
: Process an event generated from the widget button
pro rt_brownian_event, ev
; Get the draw id which has been packed in the user value of the
; widget button. If this problem were more complicated I would have
; packed a pointer to a structure or object.
widget control, ev.id, GET UVALUE=draw id
; Get the window id which maps to the desired the draw_widget
widget_control, draw_id, GET_VALUE=window
; Draw onto the desired window
rt_brownian_draw, window
end
; Create a widget which allows the user to redraw a plot of brown
: noise.
function rt brownian, PARENT=parent
; Create the "top level base" widget. This lays out the widget button
; and widget_draw in a column. Allow for the possibility that the
; parent was not specified.
if (keyword_set(parent)) then tlb = widget_base(parent,COLUMN=1) $
else tlb = widget base(COLUMN=1)
; Create the canvas (window) for drawing on to
draw id = widget draw(tlb,XSIZE=300,YSIZE=300)
: Create the button
button_id = widget_button(tlb,VALUE="redraw",UVALUE=draw_id)
; Realize the widget elements
widget control, tlb, /realize
; Register for events
xmanager, "rt_brownian", button_id, /JUST_REG
; Return an id for referencing to this widget
return, tlb
end
; Create 3 widgets arranged in a row. Each widget is independent and
; allows the user to redraw a plot of brown noise in each
pro rt brownians
; Create the parent widget for holding all of them
parent = widget base(ROW=1)
; Create the independant plots arranged in a single row
a = rt brownian(PARENT=parent)
b = rt_brownian(PARENT=parent)
c = rt brownian(PARENT=parent)
end
```

File Attachments 1) rt_brownians.pro, downloaded 86 times

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