
Subject: Re: widget cleanup problem

Posted by [David Fanning](#) on Tue, 28 Nov 2006 19:52:26 GMT

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Paul van Delst writes:

```
> I'm having a bit of issue with cleaning up after myself in a widget program.
>
> I have a main GUI that, alongside "regular widgets" also contains a bunch of standalone
> compound widgets. The main GUI info structure and loading looks something like:
>
> Info = { Debug      : Debug  , $
>         cw1Id       : cw1Id  , $ ; compound widget 1 base id
>         cw2Id       : cw2Id  , $ ; compound widget 2 base id
>         cw3Id       : cw3Id  , $ ; compound widget 3 base id
>         .....etc....
>         cwNId       : cwNId   } ; compound widget N base id
> InfoPtr = PTR_NEW( Info )
> WIDGET_CONTROL, tlBaseId, SET_UVALUE = InfoPtr
>
> To get a look at the compound widgets info structure I do the following:
>
> WIDGET_CONTROL, Info.cw3Id, GET_UVALUE = cw3_InfoPtr
>
> My problem is that when an exit event occurs and the cleanup routine is called, the child
> compound widgets are cleared first so the reference to their top-level-based is gone and I
> now have dangling pointers.
>
> In my main "exit" event handler, all the various compound widget base ids are still valid.
> However, by the time the "cleanup" routine is called, they are not -- and thus I can't
> free the info pointers.
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> I wanted the main "cleanup" routine to handle all the child compound widget pointer
> free'ing. Does it *have* to be done in the main "exit" event handler?
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> I hope my explanation above makes sense.
```

People here are just entirely too optimistic today!

With these kind of compound widgets, what we usually do is use KILL_NOTIFY to assign a callback to the TLB of the compound widget. (This isn't really a TLB, but you know what I mean.) When that base widget dies, you enter your "cleanup" routine for that compound widget. (This means you will have to write one for it.) This is where you free your pointer.

This is *identical* to the CLEANUP routine you assign to

the application's TLB, except that you can't (supposedly) use KILL_NOTIFY to assign a cleanup routine to a widget that is being managed directly by XManager. You have to use the CLEANUP keyword on XManager. (I see ITTVIS programmers break this rule all the time, so I presume it's not enforced like it used to be, but I still teach it this way. And it still works.)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: widget cleanup problem

Posted by [Paul Van Delst\[1\]](#) on Tue, 28 Nov 2006 20:10:14 GMT

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>>      .....etc....  
>>      cwNId      : cwNId   } ; compound widget N base id
```

```
>> IntPtr = PTR_NEW( Info )
```

```
>> WIDGET_CONTROL, tlBaseId, SET_UVALUE = IntPtr
```

>>

>> To get a look at the compound widgets info structure I do the following:

>>

```
>> WIDGET_CONTROL, Info.cw3Id, GET_UVALUE = cw3_IntPtr
```

>>

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You're brilliant, you are.

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> it used to be, but I still teach it this way. And it still
> works.)

I actually already had all the various cleanup routines - when i write widget code my
fingers just type out the code on their own. I just didn't know how to invoke it.

Bloody beautiful. My widget proggy works, the aussies won the first test. It's been a good
week so far. :o)

cheers,

paulv

--

Paul van Delst Ride lots.
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Ph: (301)763-8000 x7748
Fax:(301)763-8545

Subject: Re: widget cleanup problem

David Fanning wrote:

> Paul van Delst writes:

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

I have come to realize that I have a similar problem with a compound widget I created. Some sample code:

```
pro cw_listSelect_cleanup, id
widget_control, widget_info(id, /child), get_uvalue=state
;pointer cleanup
ptr_free, state.initial_value, state.eding_value
```

```
widget_control, /destroy, id
end
```

```
function cw_listSelect, parent, value=value, $
  uvalue=uvalue, uname=uname, $
  sensitive=sensitive, frame=frame, $
  title=title, xsize=xsize, ysize=ysize
```

```
base=widget_base(parent, col=1, $
  uvalue=uvalue, sensitive=sensitive, $
  frame=frame, uname=uname, title=title, $
  kill_notify='cw_listselect_cleanup', $
  pro_set_value='cw_listSelect_set', $
  func_get_value='cw_listSelect_get')
```

```
label_base=widget_base(base, /row)
if n_elements(title) eq 1 then $
  wTitle=widget_label(label_base, value=title)
```

```
;some irrelevant code
```

```
initial_value=ptr_new(value)
ending_value=ptr_new([""])
move_info={initial_list:initial_list, ending_list:ending_list, $
```

```
initial_value:initial_value, ending_value:ending_value}
```

```
;some more irrelevant code
```

```
widget_control, label_base, set_uvalue=move_info
```

```
return, base  
end
```

My problem comes when I try to destroy the widget. I actually do make it into the cleanup routine, but apparently label_base has already been destroyed because I get the following error:

WIDGET_CONTROL: Invalid widget identifier: 0.

when I try to get the uvalue. I still want the user to be able to set a uvalue for this compound widget, so setting the uvalue of base to move_info won't work. Any suggestions?
