
Subject: Re: Communication between different widget bases

Posted by [davidf](#) on Fri, 02 Mar 2001 18:17:39 GMT

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Michael Baca (mbaca@bos.fti-net.com) writes:

> I have a program that allows the user to view a TVSCL of a data cube with
> intensity obtained at (x,y) position (rows/columns) over time. Typically the
> user plots the intensity at all positions at a single slice in time, i.e.
> TVSCL, A(*,*,n). I would like to allow the user to open a new window that
> will show the intensity plot vs. time for the position under the mouse
> pointer. Regrettably, I have already used up all of the space in my current
> WIDGET_BASE and I do not have room to add another draw widget. I would like
> to open a new WIDGET_BASE with a draw widget that will change as the mouse
> moves over the image.
>
> Does anyone have any suggestions? Most of the work I have done before
> spawned new WIDGET_BASEs that ran independent of the original one. I can
> already pop up a plot of the point under the mouse after a mouse release
> event, but that's not what I had in mind. I want the plot to change as the
> user moves the mouse to new positions. Is there any way to have real-time
> communication between two widget bases?

I guess there would probably be a dozen different ways to do this. But the simplest is to just write the pop-up window as a function that returns information you are interested in. For example, if you call the function from within a widget event handler, it might be written like this:

```
FUNCTION INTENSITY_PLOT, time, intensity, Group_Leader=gleader
  tlb = Widget_Base(Group_Leader=gleader)
  drawID = Widget_Draw(tlb, XSize=400, YSize=400)
  Widget_Control, tlb, /Realize
  Widget_Control, drawID, Get_Value=wid
  WSet, wid
  Plot, time, intensity
  RETURN, {tlb:tlb, drawID:drawID, wid:wid}
END
```

Suppose you have a field in the info structure of your main program where you store this information:

```
info.iplot = Intensity_Plot(time, intensity, Group_Leader=event.top)
```

Then, when you want to update the plot, all you have to do is this:

```
IF Widget_Valid(info.iplot.drawID) THEN BEGIN
  WSet, info.iplot.wid
  Plot, time, intensity
ENDIF ELSE BEGIN
  info.iplot = Intensity_Plot(time, intensity, Group_Leader=event.top)
ENDELSE
```

You might even want to close the pop-up window
for some reason:

```
Widget_Control, info.iplot.tlb, /Destroy
```

Cheers,

David

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