Subject: window events

Posted by Phil Williams on Fri, 08 Nov 1996 08:00:00 GMT

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I'm in the process of building a widget application and want to open some auxialliary windows for plotting and displaying images. Is there a way to get the mouse events that occur in these windows? If so, how do I do it?

Thanks in advance, Phil

Phil Williams, Ph.D. Research Instructor

Children's Hospital Medical Center "One man gathers what lmaging Research Center another man spills..."

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Subject: Re: window events

Posted by davidf on Mon, 11 Nov 1996 08:00:00 GMT

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Phil Williams <williams@irc.chmcc.org> writes:

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- > some auxialliary windows for plotting and displaying images. Is there a
- > way to get the mouse events that occur in these windows? If so, how do
- > I do it?

Absolutely. Those graphic windows should be draw widgets that exist in their own top-level bases. You will have to turn button events (or motion events, or both) on for the draw widgets. I also make sure they have a group leader so they die properly when the main program dies. And I usually assign them their own event handler. This means they will need to know where the "info" structure that has all the program information is stored. (Normally, an event handler looks in event.top for the info structure, but of course, this is a *different* event.top than the one associated with the main program.) I usually put the main programs top-level base identifier in the user value of the draw widget as a "pointer" to the info structure. Your definition code might look like this:

graphicsBase = WIDGET_BASE(TITLE='Image Window', GROUP_LEADER=tlb) graphicsDrawID = WIDGET_DRAW(graphicsBase, XSIZE=imgXsize, \$ YSIZE=imgYsize, BUTTON EVENTS=1, \$ EVENT PRO='GRAPHICSBASE EVENTS', UVALUE=tlb) WIDGET_CONTROL, graphicsBase, /REALIZE WIDGET CONTROL, graphicsDrawID, GET VALUE=graphicsWID WSET, graphicsWID

A bare-bones event handler might look like this:

PRO GRAPHICSBASE EVENTS, event WIDGET_CONTROL, event.id, GET_UVALUE=infoStorageLocation WIDGET CONTROL, infoStorageLocation, GET UVALUE=info, /NO COPY WSET, info.graphicsWID

: Here is where you do your thing with the event, whatever it is.

WIDGET CONTROL, infoStorageLocation, SET UVALUE=info, /NO COPY **END**

In actual practice, I never try to do any graphics into a detached graphics window like this without first making sure its still around on the display. Those darn users are always destroying things like graphics windows with their mouse. I always have the ID of the graphics draw widget in my info structure, so my event handler code looks more like this:

PRO GRAPHICSBASE EVENTS, event WIDGET CONTROL, event.id, GET UVALUE=infoStorageLocation WIDGET CONTROL, infoStorageLocation, GET UVALUE=info, /NO COPY

; Make sure the graphics window is still there. If not, recreate it.

IF WIDGET_INFO(info.graphicsDrawID, /VALID_ID) THEN BEGIN WIDGET_CONTROL, info.graphicsDrawID, GET_VALUE=graphicsWID WSET, graphicsWID **ENDIF ELSE BEGIN** graphicsBase = WIDGET_BASE(TITLE='Image Window', \$ GROUP LEADER=infoStorageLocation) info.graphicsDrawID = WIDGET DRAW(graphicsBase, XSIZE=info.imgXsize, \$ YSIZE=info.imgYsize, BUTTON EVENTS=1, \$ EVENT_PRO='GRAPHICSBASE_EVENTS', UVALUE=infoStorageLocation) WIDGET_CONTROL, graphicsBase, /REALIZE WIDGET_CONTROL, info.graphicsDrawID, GET_VALUE=graphicsWID WSET, graphicsWID **ENDELSE**

; Here is where you do your thing with the event, whatever it is.

WIDGET_CONTROL, infoStorageLocation, SET_UVALUE=info, /NO_COPY END

If you would like to see an example of this kind of thing, I cobbled together an image profile program called XPROFILE. It has a main program window, and detached window for the image, and a second detached window for the profile plots. If you click in the image window, you update the profile window with new column and row profiles of the image at the location you clicked. If you click in the profile window, you see the actual column and row in the image window that was used create the profiles.

You can download it via anonymous ftp from the machine ftp.frii.com. It is in the directory /pub/dfanning/outgoing/idl_examples. It is named xprofile.pro.

Good luck!

David

- * David Fanning, Ph.D.
- * 2642 Bradbury Court, Fort Collins, CO 80521
- * Phone: 970-221-0438 Fax: 970-221-4762
- * E-Mail: davidf@dfanning.com

*

- * Sometimes I go about pitying myself, and all along my
- * soul is being blown by great winds across the sky.
- -- Ojibway saying

Subject: Re: window events

Posted by Robert Moss on Mon, 11 Nov 1996 08:00:00 GMT

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Phil Williams wrote:

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- > I'm in the process of building a widget application and want to open
- > some auxialliary windows for plotting and displaying images. Is there a
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>

- > Thanks in advance,
- > Phil
- >
- > --

Phil Williams, Ph.D. > Research Instructor > Children's Hospital Medical Center "One man gathers what Imaging Research Center another man spills..." > > 3333 Burnet Ave. -The Grateful Dead Cincinnati, OH 45229 email: williams@irc.chmcc.org URL: http://scuttle.chmcc.org/~williams/ Create the auxillary windows using WIDGET_DRAW with the /BUTTON_EVENTS and/or /MOTION_EVENTS keyword. See the manual for more details. Robert M. Moss, Ph.D. - mossrm@texaco.com - FAX (713)954-6911

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