Subject: Re: Button_events and data
Posted by David L. Windt on Wed, 25 Feb 1998 08:00:00 GMT
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<HTML>

<P>Bernard Puc wrote:
<BLOCKQUOTE TYPE=CITE>Hello,

<P>   I'm looking for pointers
on how to do the following: I have a line

plot in a draw widget. I want to click the pointer on the plot
and have

a vertical line drawn at the nearest datapoint to the mouseclick.

          widget_draw returns the
cursor location in device coordinates and I

need to translate that into dataspace coordinates.

          Going one step further,
ideally, I'd like to have a vertical line

follow the cursor around the draw widget at all times, jumping from

datapoint to datapoint. I suspect someone has already written
such a

thing...

<P>Any help appreciated.

<P>-Bernard Puc

puc@gsfc.nasa.gov</BLOCKQUOTE>
  Assuming you're plotting X vs Y, and have captured a draw widget
event

called EVENT...

<P>You can use CONVERT_COORD to first convert the draw widget event to

data coordinates:

<P>CC=CONVERT_COORD(EVENT.X,EVENT.Y,/DEVICE,/TO_DATA)

<P>You might then try my VALUE_TO_INDEX function to get the x data index

corresponding to the x value closest to the widget event (i.e., the

mouse click):

<P>X_INDEX=VALUE_TO_INDEX(X,CC(0))

<P>and then plot the vertical line using PLOTS:

<P>PLOTS,[0,0]+X(X_INDEX),!Y.CRANGE

<P>(Or if you like, this can all be done in one line, as in:

PLOTS,[0,0]+ $

X(VALUE_TO_INDEX(X,(CONVERT_COORD(EVENT.X,EVENT.Y,
$

/DEVICE,/TO_DATA))(0))), $

      !Y.CRANGE

)

<P>To have a vertical line that follows the mouse around will require

a bit more work, but it could make use of the same methods as above.

<P>VALUE_TO_INDEX, as well as all my other thrilling idl programs can be

found at <A
HREF="http://www.bell-labs.com/user/windt/idl">www.bell-labs.com/user/windt/idl</A>.
In particular, you might

also be interested in TRACK_PLOT - it doesn't draw lines, but it

provides live X and Y values in a text widget as you move the mouse

over an x,y plot. It might make a reasonable starting point for

doing what you want to do with vertical lines.

<P>David Windt

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