Subject: Re: Convert_Coords for map gives many 'error messages'?
Posted by David Fanning on Tue, 27 Aug 2002 12:11:45 GMT
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Robbert Verweij (verweij@science-and-technology.nl) writes:

> we're implementing a piece of IDL code where multiple windows are used to
> visualise different parts of the data at the same time.
>
> The windows are individual draw_widgets. The active window is determined by
> the cursor position. This cursor position is being tracked and printed if
> the motion_events for that draw_widget are enabled (really much like one of
> the example IDL programs...). Two problems remain...
> 1) If I move the cursor to a MAP, convert_coords returns only NANs, until I
> redraw the map. It's not !P or so, I've stored and restored those (I
> think...). What can be the problem?

You are forgetting to save !MAP in addition to !P. (And !X and !Y, too,
probably. I always forget which ones I need, so I just save them all!)

> 2) Convert_coords returns the string 'Program caused arithmetic error:
> Floating illegal operand', if I move the cursor into the title field or so.
> Of course I could just not call Convert_coords for event.x < 10 and event.x
>> eg 400, but I don't know how many lines (hence pixels) the titlefield will
> be... Is it possible to call Convert_coords in 'Silent mode', ie to let it
> NOT return error messages?

Typically, you don't want to hard code numbers like 10 and 400
into your code because, of course, things can change. (You might
decide to use a resizable graphics window, for example.) If you
need to restrict the location of something, it is better
to use a value that changes with changing conditions (I.e.,
!D.X_SIZE and !D.Y_SIZE, etc.). In your case, you might want
to limit CONVERT_COORDS to the extent of your map projection.

For example, you might do something like this:

```
; Convert map boundaries to device coordinates.
xboundary = !X.Window * !D.X_SIZE
yboundary = !Y.Window * !D.Y_SIZE

; Restrict cursor location to map boundaries.
x = xboundary[0] > event.x < xboundary[1]
y = yboundary[0] > event.y < yboundary[1]
latlon = Convert_Coords(x, y, /Device, /To_Data)
```

> The source code is quite much.

It always is. :-)

Cheers,

David

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