
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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