Subject: Re: draw window mouse events
Posted by davidf on Thu, 27 Apr 2000 07:00:00 GMT
View Forum Message <> Reply to Message

Rick Towler (rtowler@u.washington.edu) writes:

> I have been trying to implement middle and third button events in my
> draw widget in much the same way as in the IDL demo d_objworld2.pro. I
> have not found it easy to understand how everything happens in this demo
> program.
>
> I am interested in getting one of these buttons to utilize the TRANSLATE
> feature of the trackball object so I can translate my models. I did
> have the left button transforming the model but I have broken that in my
> quest to understand this whole process which obviously I don't since I
> can't get it working again.
>
> I have the events getting into the correct handling loops. That is,
> clicks and motion trigger print statements in my loops, but I cant seem
> to get the updates from the trackball object. Every call to
> oTrack->update returns EQ 0.
>
> Hints and/or pointers to examples that are a wee bit simpler than
> d_objworld2 are much appreciated.

The problem here is this:

> 'MOTION': BEGIN
> print,'Motion with btndown='+string(state.btndown)
> IF (state.btndown) AND (bHaveTransform) THEN $
> state.oDWindow->Draw,state.oView
> END

You are not *doing* anything with motion events except
displaying the same view over and over again. Pretty
dull.

What you need here is a CASE statement that allows
you to rotate with the LEFT button, translate with
the RIGHT, etc.

I'm not feeling well enough to write an example today,
and looking at RSI code even when I feel well is almost
too much, but I'm guessing if you go look at that
d_objworld2 example you will find a LOT more code
in the MOTION section. :-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: draw window mouse events
Posted by Mark Hadfield on Fri, 28 Apr 2000 07:00:00 GMT
View Forum Message <> Reply to Message

"Rick Towler" <rtowler@u.washington.edu> wrote in message
news:39087CCA.263A52DC@u.washington.edu...
> I have been trying to implement middle and third button events in my
> draw widget in much the same way as in the IDL demo d_objworld2.pro. I
> have not found it easy to understand how everything happens in this demo
> program.
>
> I am interested in getting one of these buttons to utilize the TRANSLATE
> feature of the trackball object so I can translate my models. I did
> have the left button transforming the model but I have broken that in my
> quest to understand this whole process which obviously I don't since I
> can't get it working again.
> ...
> Hints and/or pointers to examples that are a wee bit simpler than
> d_objworld2 are much appreciated.

Well if you like you can look at my MGHgrWindow class:

http://katipo.niwa.cri.nz/~hadfield/gust/software/idl/mghgrw indow__define.pr
o

It calls a number of other routines, all of which you can find in

http://katipo.niwa.cri.nz/~hadfield/gust/software/idl/MARKS_ ROUTINES.tar.gz

MGHgrWindow provides for a range of manipulations with the mouse (rotate, translate, scale). In particular see methods EventTrack, EventScale and EventTranslate. But I don't guarantee that its code is any simpler or easier to understand than the IDL demo.

Looking through the code again, I note that I have used the Trackball object for rotation only. Scaling and translation are done through calls to the model's Translate and Scale methods. The basic logic for handling mouse events is pretty simple:

Press events
Reduce window's QUALITY for faster redraws
Store event.x and event.y (say as x0, y0)

Motion events
Scale/translate according to values of [event.x-x0, event.y-y0]
Set x0 = event.x, y0 = event.y
Draw

Release events
Restore window quality
Draw
Forget x0 & y0

Hope this helps

Mark Hadfield
m.hadfield@niwa.cri.nz http://katipo.niwa.cri.nz/~hadfield/
National Institute for Water and Atmospheric Research
PO Box 14-901, Wellington, New Zealand