
Subject: Widgets and Animation Loops in IDL 5.0
Posted by [drphys](#) on Fri, 23 Jul 1999 07:00:00 GMT
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Hi,
I am using IDL 5.0 on a DEC Alpha. I am animating a 3D plot of a particle trajectory by incrementing the "az" variable and then replotting in a loop. I decided to add widgets to control the speed of rotation and the angle about the x axis "ax". I have found this to be unworkable so far because once the code enters the loop the widgets do not issue events, so my event handlers do not get called. This was easily fixed by using widget_control commands inside the loop and using sliders to control the speed and x angle, however, I can not find a method to exit the loop, except for possibly adding a slider that could turn it off. The solution seemed to be a toggle button that could be examined using widget_control during the loop, but I have found no way to examine the state of the toggle button. Also while I am at it, I am new to 3D plotting using "plots" to do a trajectory plot. There seems to be no way to get axis on the screen. I have tried the axis command and can only get either one axis, or a white blotch (this seems random as I have not touched that line of code for a while). So help on any of the above will be greatly appreciated.

Thank you,
Shawn

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Subject: Re: Widgets and Animation Loops in IDL 5.0
Posted by [drphys](#) on Mon, 26 Jul 1999 07:00:00 GMT
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thank you!
I believe that this is what I need.
Shawn

In article <7ng6aq\$s6q\$1@clam.niwa.cri.nz>,
"Mark Hadfield" <m.hadfield@niwa.cri.nz> wrote:
> <drphys@my-deja.com> wrote in message
news:7na6kq\$q9b\$1@nnrp1.deja.com...
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 >> method to exit the loop, except for possibly adding a slider that
 could
 >> turn it off.
 >
 > Do not use a for or while loop for an animation. Instead, set up your
 code
 > so that
 > each time a frame is drawn, a widget timer event is set with
 >
 > WIDGET_CONTROL, TIMER=delay
 >
 > (where delay can be zero). Then the widget event handler catches the
 timer
 > event,
 > draws the next frame, and resets the timer, etc. The loop can be
 terminated
 > by instructing
 > the event handler to ignore timer events. This is how CW_ANIMATE does
 it.
 > Information about the current state of the animation (current frame,
 which
 > direction
 > we're going in, where the end is & what to do when we get there) can
 be
 > stored in a
 > structure stored attached to one of the widget's UVALUE fields or,
 better,
 > in an object.
 >
 > I have found object graphics particularly good for animations, and I
 have
 > written a
 > set of animator classes, which illustrate the above technique.
 >
 > See my Web page:
<http://katipo.niwa.cri.nz/~hadfield/gust/software/idl/>.
 > In particular the MGHgrAnimation and MGHgrAnimator classes and the
 > MGH_EXAMPLE_ANIMATOR routine. But you'll need version 5.2 to run them.
 >

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

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thank you!

This all looks very good. I will try implementing it later today.
Shawn

In article <MPG.120253cba46679d7989844@news.frii.com>,
davidf@dfanning.com (David Fanning) wrote:

> Shawn (drphys@my-deja.com) writes:

>
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>> examined using widget_control during the loop, but I have found no
way
>> to examine the state of the toggle button.

>
> You can look at my XMOVIE program for the proper way to
> do an animation in a widget program. It demonstrates how
> to write the program so that other events can be processed,

> so you can stop the animation, etc.
>
> <http://www.dfanning.com/programs/xmovie.pro>
>
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>> new to 3D plotting using "plots" to do a trajectory plot. There
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>> to be no way to get axis on the screen. I have tried the axis
command
>> and can only get either one axis, or a white blotch (this seems
random
>> as I have not touched that line of code for a while). So help on
any of
>> the above will be greatly appreciated.
>
> Here is an article that shows you exactly how
> to do a particle trajectory with axes:
>
> http://www.dfanning.com/tips/particle_3d.html
>
> 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
>

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Posted by [Mark Hadfield](#) on Mon, 26 Jul 1999 07:00:00 GMT
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Mark Hadfield m.hadfield@niwa.cri.nz
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PO Box 14-901, Wellington, New Zealand
