Subject: Running time display

Posted by gunter on Wed, 19 Feb 1997 08:00:00 GMT

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I would like to have an elapsed-time display in a widget application but I can't figure out how to update the display. Placing the update-routine in the event handler only works as long as events are being generated. Has anyone else attempted this before?

--

david gunter

http://www.mcs.anl.gov/people/gunter/

"When you are a Bear of Very Little Brain, and you Think of Things, you find sometimes that a Thing which seemed very Thingish inside you is quite different when it gets out into the open and has other people looking at it." - A.A. Milne, "The House At Pooh Corner"

Subject: Re: Running time display Posted by davidf on Fri, 21 Feb 1997 08:00:00 GMT View Forum Message <> Reply to Message

David Gunter writes:

- > I would like to have an elapsed-time display in a widget application but I
- > can't figure out how to update the display. Placing the update-routine in the
- > event handler only works as long as events are being generated. Has anyone
- > else attempted this before?

Oh, many's the time, David. :-)

This used to be the compound widget building exercise in my first IDL widget programming classes. I expect many of the people on this newsgroup still have this program hanging around in a subdirectory somewhere. :-)

Here is mine, dusted off, looking a little worse for wear, but still servicable. The secret is the TIMER. In this case I cause a timer event to be generated by the label widget (which normally *never* generates events). I catch those events in a separate event handler.

It's a compound widget, so you can include it in your programs just the way you would a button, or label, etc. There is a tiny test program at the end of the code, so you can run it and see what it does.

You will want to fix this up and make it more sophisticated, but this will get you going. Try making the timer faster or slower. This is about right on my machine. It may be too slow on yours. If the label flashes, try making the clock a text widget instead of a label widget.

```
Enjoy,
David
PRO CW TIMER UPDATE, event
 ; This event handler handles the timer events set on the clock.
Widget_Control, event.id, Get_UValue=stateHolder
Widget Control, stateHolder, Get UValue=state
 ; Calculate the elapsed time.
elapsedTime = SysTime(1) - state.startTime
 ; Update the clock.
strTime = String(elapsedTime, Format='(F6.1)')
Widget Control, state.clock, Set Value=strTime
 ; If the stop flag is clear, set another timer event.
IF state.stopper NE 1 THEN Widget_Control, state.clock, Timer=0.2
END: *******
PRO CW_TIMER_BUTTONS, event
 : This event handler handles the START and STOP buttons.
child = Widget Info(event.handler, /Child)
Widget_Control, child, Get_UValue=state
 ; Which button event?
Widget_Control, event.id, Get_UValue=thisButton
CASE thisButton OF
 'START': BEGIN
   state.stopper = 0; Clear stop flag.
```

```
state.startTime = SysTime(1); Starting time.
   strValue = String(0.0, Format='(F6.1)')
    ; Get the first timer event going.
   Widget_Control, state.clock, Timer=0.02, Set_Value=strValue
   END
 'STOP': BEGIN
   state.stopper = 1; Set stop flag.
   END
ENDCASE
Widget_Control, child, Set_UValue=state
FUNCTION CW_TIMER, parent, UValue=uvalue
IF N ELEMENTS(uvalue) EQ 0 THEN uvalue=0
 ; Define widgets.
tlb = Widget Base(parent, Column=1, UValue=uvalue, $
 Event_Pro='CW_TIMER_BUTTONS', Frame=1)
holderbase = Widget_Base(tlb, Column=1); To hold "state".
starter = Widget Button(holderbase, Value='Start Clock', UValue='START')
quitter = Widget_Button(holderbase, Value='Stop Clock', UValue='STOP')
strValue = String(0.0, Format="(F6.1)")
clock = Widget Label(holderbase, Value=strValue, $
 Align Center=1, Event Pro='CW TIMER UPDATE', UValue=holderbase)
state = {stopper:1, clock:clock, tlb:tlb, startTime:-1D}
Widget Control, holderbase, Set UValue=state
RETURN, tlb
END: ******
PRO TEST_EVENT, event
WIDGET CONTROL, event.top, /Destroy
END
PRO TEST
tlb = Widget_Base(/Column)
clock = CW_Timer(tlb)
quitter = Widget_Button(tlb, Value='Quit Program')
Widget Control, tlb, /Realize
XManager, 'test', tlb
END
```

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