
Subject: Re: Concurrent widget program.
Posted by [davidf](#) on Mon, 01 Jun 1998 07:00:00 GMT
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David Foster (foster@bial1.ucsd.edu) replies to Imanol Echave by writing:

> Imanol Echave wrote:
>>
>> I've a little question: Is it possible to run two IDL programs concurrently? My
>> problem is that I run a time expensive IDL program into a widget program, and
>> I'd like to continue managing widgets while the other program is processing. Any
>> advice?
>
> If you have IDL 5.0+ then you can use the /NO_BLOCK keyword in
> your call to XMANAGER; this prevents IDL from "blocking" (where
> processing stops at the XMANAGER call) until the widget is destroyed.
>
> Your command line will reappear after starting this program, and
> new programs may be started and their events will be handled properly.
> This was one of the best features of IDL 5.0, IMHO.
>
> Look up NO_BLOCK keyword under XMANAGER in the Online Help.

I think there is some confusion here over asynchronous event processing, which widget programs certainly allow, and multi-tasking, which IDL doesn't do.

You can certainly have as many widget programs as you like all running concurrently. IDL doesn't care which widget program generates an event. As events are generated IDL puts them into a queue to handle one after the other. If the code for each event (i.e., the event handler code) is fast, then it would appear that widget programs are running "concurrently".

But that is not the case at all. Consider this example. Suppose the event handler code went into a processing loop and that the loop took 5 minutes to execute. Then the user could be pushing as many buttons on as many widget programs as he or she liked, but nothing would be happening. In fact, nothing at all would happen until that loop finished and then, probably, all hell would break loose as IDL rushed to handle all the events that had queued over the past five minutes.

IDL does only one "thing" at a time. It is not a multi-threaded or multi-tasking program. This is exactly why you try to avoid writing loops in event handler code. In fact, when you

need a loop, you try to take advantage of the widget program itself *acting* like a loop. A widget animation is a perfect example of this. If a widget animation was really in a loop, there would be no way to interrupt the animation with, for example, a Quit button. You can look at the example XMOVIE on my web page for an example of how to use the program itself to simulate a loop. You will see that each "event" actually displays just a single frame of the animation sequence. Between one event and the next a Quit button event, for example, could be queued up and processed.

Cheers,

David

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Phone: 970-221-0438
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Look up NO_BLOCK keyword under XMANAGER in the Online Help.

Dave

--

~~~~~  
David S. Foster      Univ. of California, San Diego  
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(619) 622-5892      8950 Via La Jolla Drive, Suite 2240  
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~~~~~

Subject: Re: Concurrent widget program.
Posted by [David Foster](#) on Tue, 02 Jun 1998 07:00:00 GMT
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Andy Loughe wrote:

>
> David Fanning wrote:
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>> minutes.
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> I am not a widget genius, but isn't that one reason you
> add the hourglass keyword when controlling widgets that
> take "awhile" to process the event?
>

Yes! AFTER you've used NO_BLOCK to get the second widget up
on the screen! As far as I can tell, that is what the gentleman
was asking. I never meant to imply that IDL could process *events*
concurrently...sorry for the confusion. Are we having a bad day?...

Dave
--

~~~~~  
David S. Foster      Univ. of California, San Diego  
Programmer/Analyst   Brain Image Analysis Laboratory  
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Subject: Re: Concurrent widget program.
Posted by [davidf](#) on Tue, 02 Jun 1998 07:00:00 GMT
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Andy Loughe (afl@cdc.noaa.gov) writes in response to one of my articles about trying not to put loops in widget event handlers:

- > I am not a widget genius, but isn't that one reason you
- > add the hourglass keyword when controlling widgets that
- > take "awhile" to process the event?

Absolutely. I try very, very hard to NOT write event handlers that take a long time to process, but occasionally it is unavoidable. In that case, you can be sure I turn the hourglass cursor on before I enter the loop.

But I am also (knowing what I know about users) careful to use the CLEAR_EVENTS keyword to WIDGET_CONTROL when I come *out* of that loop! :-)

Cheers,

David

David Fanning, Ph.D.
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E-Mail: davidf@dfanning.com
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Posted by [Andy Loughe](#) on Tue, 02 Jun 1998 07:00:00 GMT
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"I do not feel obliged to believe that the same God who has endowed us
with
sense, reason, and intellect has intended us to forego their use."
-Galileo
