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Subject: Re: Dereferencing a large array in a structure

Posted by [btt](#) on Tue, 26 Sep 2006 21:26:26 GMT

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Braedley wrote:

> In one of my widget programs, I have a tab widget, and the bases that  
> belong to it store a fair amount of data concerning that tab in their  
> uvalues. When a tab is selected, all the data in the uvalue must be  
> dereferenced and loaded into common block variables. This was done so  
> that other widgets within the program have quick and easy access to the  
> data of the currently open tab.  
>  
> Enter the problem: Some of the data can be very large. One field in  
> the uvalue structure can be as large as a 20 by 50000 double array (or  
> larger), and it obviously can take some time to copy, especially with  
> memory running low with other similarly large structures for other  
> tabs. I've already set the no\_copy keyword in calls to widget\_control  
> when setting and getting the uvalues to help reduce the load on memory  
> and help out with some speed, but the million element array still needs  
> referencing into the structure to be set, and dereferenced from the  
> structure of the newly selected tab, which is taking up a large portion  
> of the time spent. Are there any faster ways of doing this? Bonus  
> points for reducing the load on memory and not making me rewrite every  
> subwidget (ie not messing with the common blocks).  
>

Hello,

How about storing a pointer to your data in your UVALUE instead of a  
copy of the data itself.

In the widget constructor you can ...

```
pData = PTR_NEW(myBigData)
myStuff = {DATANAME: 'baggage', PDATA :pData, FLAVOR: 'vanilla'}
WIDGET_CONTROL, myBaseWidgetID, SET_UVALUE = myStuff
```

In the event handler you can then ...

```
WIDGET_CONTROL, ev.TOP, GET_UVALUE = myStuff
```

```
*(myStuff).pData = doSomething(*(myStuff).pData, FLAVOR = myStuff.flavor)
```

```
WIDGET_CONTROL, ev.TOP, SET_UVALUE = myStuff
```

Don't forget to free the pointer memory when the widget hierarchy dies

(or when ever you want it to.)

The common block stuff is throwing me off a bit. This isn't an IDL EPA quiz is it? ([http://www.dfanning.com/misc\\_tips/iepa.html](http://www.dfanning.com/misc_tips/iepa.html))

Cheers,

Name Withheld Just In Case It Is A Quiz

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