Subject: Re: Dereferencing a large array in a structure
Posted by JD Smith on Wed, 27 Sep 2006 18:17:18 GMT
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On Wed, 27 Sep 2006 05:43:06 -0700, greg michael wrote:

> In my widget programs, I settled for the option of putting everything
> into a single state variable, s - a sometimes huge structure containing
> all kinds of stuff, and frequently pointers to variable-sized or large
> items, which gets passed around via the tlb uvalue (extract and set it
> as the first and last things in the event handler). Then nearly every
> routine passes s as its first parameter. Seems to me much cleaner than
> using common blocks. In all other widget uvalues, I pass only its name
> (e.g. 'tab3.some_button'), and where necessary decompose that to call
> the right routine.

You've basically re-implemented parts of the object framework which exist in IDL already. In that case, a special variable "self" gets passed to all class methods magically, by reference. This is IMO by far the nicest way to do GUI programming.

The only trick is getting XManager or WIDGET_EVENT to pass events to the object methods (normally they only like plain routines). The trick is simple and has been well documented: just save "self", the object reference, in the TLB UVALUE, and use a tiny glue procedure like this as the EVENT_PRO:

```
pro myclass_event,ev
  widget_control,ev.top,GET_UVALUE=self
  self->Event,ev
end
```

On a related note, shouldn't XManager and the event processing in IDL be modified to remove this hack? Shouldn't we be able to tell XManager "Pass events from this widget heirarchy to method foo of object boo", with bonus points for allowing the object/method to change during runtime (similar to how widget_control,b,EVENT_PRO= can already be used to change the callback routine). This is a simple modification. A better method might be a new XMANAGER class, from which objects can inherit to gain all manner of (extensible) event processing functionality.

JD