Subject: Re: widget_list() question
Posted by David Fanning on Thu, 09 Sep 2010 19:47:16 GMT

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Paul van Delst writes:

> I am putting together a little display tool where I would like to keep track of datafiles I have been using/displaying.
> I want all the filenames for the session to be visible, as well as selectable so I can "flip" between files (all of the
> data from the files are kept in an IDL_Container object.)
>
> So what I want to be able to do is:
> 1) create an empty list widget.
> 2) append new filenames to the list as they are read in. (e.g. "widget_control, id, append_value = filename" type of thing)
> 3) retrieve the list of all the filenames, or just the currently selected one.
> 4) retrieve the position in the list of the currently selected entry (I think I know how to do that already).
>
> I thought I could use a regular old WIDGET_LIST() to do this but it appears to be quite difficult to concatenate values
> in an already existing list, to say nothing of retrieving the list of string values in the list. I gather I'll need to
> use the FUNC_GET_VALUE keyword, but how does one construct a function to retrieve the list contents? (The documentation
> didn't point to any examples that I could find)

These are call-back routines, meaning that they are called
(like the CLEANUP call-back routine) with the first positional
parameter being the ID of the widget whose value you are trying
to set.

```
  PRO MySetValue, id, value
  END

  FUNCTION MyGetValue, id
     RETURN, value
  END
```

Naturally, you don't call them, IDL does, typically:

```
  Widget_Control, myWidgetID, SET_VALUE=thisValue
  Widget_Control, myWidgetID, GET_VALUE=someValue
```

You might get some sense of this by looking at CW_DrawColor:

  http://www.dfanning.com/programs/cw_drawcolor.pro

> I guess the question I'm asking is if widget_list() can handle this sort of functionality, or do I need to construct my
> own compound widget to do the job?
>
> Alternatively, should I just keep track of stuff in my own (already existing) file_list container and simple recreate
> the list from scratch everytime something changes? (Seems a bit bull-in-a-china-shop'ish)

Uh, this is IDL we are talking about, right!? It's going
to be a bit bull-in-a-china-shop'ish. In fact, it's likely
to be a LOT more work than you were planning to do today. :-)

I think you are going to have to write some kind of a
compound widget, since list widgets don't (for some
inexplicable reason) actually *have* a value:

   http://www.dfanning.com/widget_tips/listselection.html

Naturally, I think you should write an "object-widget"
since those are a great deal more flexible than a regular
compound widget (see the example above), but it's up to you.
It's a day's worth of programming, probably, in either case.

I think you are going to have to destroy and recreate
the list widget when you change its contents. Whether
you can do that in a non-intrusive way without a lot
of flashing going on depends on things that may be
outside of your control, although I would certainly
try to turn the UPDATE keyword on and off for the
TLB when you try to do these things. Occasionally,
I have been successful with this technique, although
not always.

Good luck! We will be happy to use it when you are
finished with it. :-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")