Subject: Re: widget_button, event_pro and passing arguments
Posted by Benjamin Hornberger on Wed, 15 Dec 2004 16:00:51 GMT
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Francois Leduc wrote:
> Hello,
>
> I have a widget_button that calls a procedure "plot_function" :
> row_base4 = widget_button(TLB, /align_left, value=' Plot
> ',event_pro='plot_function')
>
> The proceduce is defined as:
>
> pro plot_function, event
> envi_plot_data, x,y
> end
>
> How to pass arguments, such as X and Y, to the procedure plot_function ?
>
> Thanks
>
> Francois.
>
>
>

You can't pass anything other than the event structure to the event handler. Instead, the event handler has to fetch the information it needs from somewhere. The usual strategy is to store all your information you need to run your widget program (which includes your x and y) in the top-level base's user value. David Fanning calls this the "info structure". So, at the end of your widget definition module, create your info structure like

info = { x: x, y: y } ; and whatever else you need to run your program

For data arrays it usually makes sense to use pointers (free them in the widget program's cleanup procedure).

Then (still in the widget definition module) store the info structure in the top-level base's user value:

widget_control, tlb_id, set_uvalue=info, /no_copy

In your event handler, you will then at the very beginning (e.g., after the error handling code) fetch the info structure:

widget_control, event.top, get_uvalue=info, /no_copy

Then do whatever you want with info.x, info.y etc. At the very end of the event handler, write the info structure back into the TLB's user value, so that the next event handler can use it:

widget_control, event.top, set_uvalue=info, /no_copy

This is briefly described in the IDL help, search for "managing the state of a widget application" in the index. Don't use the first technique described (COMMON blocks), since that would allow only one instance of your program running at a time. The second technique described is explained in detail in David Fanning's book. The third one (using a pointer to the data or info structure) is used in Liam Gumley's book.

Good luck!

Benjamin
