Subject: Widget Placement
Posted by Bernard Puc on Fri, 04 Sep 1998 07:00:00 GMT
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Is there a neat way of locating a widget to appear flush against the
bottom and right edge of the screen? By neat I mean without having
to calculate the x and y dimensions of the widget and figuring out
the offsets.

Thanks.

--
Bernard Puc
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Subject: Re: Widget Placement
Posted by David Foster on Tue, 08 Sep 1998 07:00:00 GMT
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Bernard Puc wrote:
>
> Is there a neat way of locating a widget to appear flush against the
> bottom and right edge of the screen? By neat I mean without having
> to calculate the x and y dimensions of the widget and figuring out
> the offsets.
>

Bernard -

You might find my routine POS_WIDGET() useful. This routine positions
a widget relative to a parent widget, and there are options for
(1) centering; (2) cascading; and (3) positioning to the right,
relative to the parent widget. You could easily enhance this so
that the child is positioned at any corner of the screen you like.

I've included the source and a doc file below. Hope this is helpful.

Of course, there is no elegant way of accounting for those nasty
borders. You might try inserting a "fudge factor" (oh the humanity!...).

Dave

```
 ;============================================================ =========
;  POS_WIDGET.PRO   5-21-97   DSFoster
;
```

```
;  Function to position a widget onscreen according to the following:
;
;    If a valid parent widget is provided, center the widget
;    within the parent widget. Otherwise, place the widget at the
;    center of the screen. In both cases, account for the size of
;    the widget to be positioned. Also, ensure that the widget
;    is completely visible.
;
;  This function may be called before or after a widget has been
;  realized.
;
; Modifications:
;
;  5-21-97 DSF Created.
;

FUNCTION pos_widget, base, parent=parent, no_offset=no_offset, $
       cascade=cascade, right=right

status = 0

if ( widget_info(long(base), /valid_id ) eq 0 ) then begin
   message, 'Invalid widget ID specified', /continued
   status = -1
endif else begin

   device , get_screen_size=s_size                    ; Screen size
   geom = widget_info( base, /geometry )
   b_size = [ geom.scr_xsize + (2 * geom.margin), $    ; Size of widget
          geom.scr_ysize + (2 * geom.margin) ]

   if (keyword_set(PARENT)) then begin        ; Center within parent
         if ( widget_info(parent, /valid_id) ne 1 ) then begin
          message, 'Keyword PARENT not a valid widget ID', /continue
          xpos = s_size(0)/2 - b_size(0)/2
          ypos = s_size(1)/2 - b_size(1)/2
        endif else begin
          geom = widget_info( parent, /geometry )
          ; Position of parent
          p_offset = [ geom.xoffset, geom.yoffset ]
          p_size = [ geom.scr_xsize + (2 * geom.margin), $
                 geom.scr_ysize + (2 * geom.margin) ]
          if (keyword_set(CASCADE)) then begin
             xpos = p_offset(0) + p_size(0)/5
             ypos = p_offset(1) + p_size(1)/5
          endif else if (keyword_set(RIGHT)) then begin
             xpos = p_offset(0) + p_size(0)
             ypos = p_offset(1) + p_size(1)/2 - b_size(1)/2
```

```
            endif else begin
               xpos = p_offset(0) + p_size(0)/2 - b_size(0)/2
               ypos = p_offset(1) + p_size(1)/2 - b_size(1)/2
            endelse
         endelse
      endif else if (keyword_set(NO_OFFSET)) then begin
         xpos = 1
         ypos = 1
      endif else begin
         xpos = s_size(0)/2 - b_size(0)/2
         ypos = s_size(1)/2 - b_size(1)/2
      endelse

      ; Make sure widget is entirely visible

      xpos = ( 1 > xpos ) < (s_size(0) - b_size(0))
      ypos = ( 1 > ypos ) < (s_size(1) - b_size(1))

      widget_control, base, tlb_set_xoffset=xpos, tlb_set_yoffset=ypos
endelse

return, status
END
;=========== End of POS_WIDGET.PRO ==================================


;=========== POS_WIDGET.DOC =========================================
POS_WIDGET

Function to position a widget onscreen, before or after the
widget has been realized. The widget is positioned according
to the following:

   If a valid parent widget is provided, center the widget
   within the parent widget. Otherwise, place the widget at the
   center of the screen. In both cases, account for the size of
   the widget to be positioned. Also, ensure that the widget
   is completely visible.

Other positioning options are available via keywords. This routine
always ensures that the widget will be entirely visible on-screen.


Calling Sequence

  Status = POS_WIDGET( Base_wid )

Arguments
```

Base_wid

The top-level-base (TLB) of the widget to be positioned. All child widgets must have been created; however, POS_WIDGET may be called before or after the TLB has been realized.

Keywords

CASCADE

Set this keyword to have the child widget positioned "down and to the right" of the parent widget, by an offset equal to 1/5th the size of the parent widget. This allows a sequence of child widgets to be "cascaded".

NO_OFFSET

Set this keyword when the widget is to have to offset, meaning that it is positioned in the upper left corner of the screen.

RIGHT

Set this keyword to have the child widget positioned just to the right of the parent widget (no overlap).

PARENT

Set this keyword to the TLB of a parent widget within which the widget will be centered. If this parent is not a valid widget, the widget is positioned in the center of the screen.

Outputs

Returns -1 if an invalid widget ID is specified for Base_wid, otherwise returns 0.

Example

```
<create TLB widget Base and create its child widgets>

ret = pos_widget( Base, parent=parent )   ; Position the widget

widget_control, Base, /realize            ; Realize the widget
```

;======== End of POS_WIDGET.DOC ==

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