button_gc

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REVISION HISTORY			
NUMBER	DATE	DESCRIPTION	NAME

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button_gc

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1.2 button.gadget/--datasheet--

```
NAME
   button.gadget--Action button                                (V42)

SUPERCLASS
   gadgetclass

DESCRIPTION
   The button gadget class is used to create action buttons that are
   momentary, toggle and sticky.  This class also supports relativity
   and placement within the window border.

   An advantage that this class provides that the system buttongclass
   doesn't support fully is:

    o Centered images.

    o Centered pen-sensitive glyphs.

    o Ability to change the text and background colors for normal
      and selected buttons.

METHODS
   OM_NEW--Create the button gadget.  Passed to superclass, then OM_SET.
```

OM_SET--Set object attributes. Passed to superclass first.

OM_UPDATE--Set object notification attributes. Passed to superclass first.

GM_LAYOUT--Calculate gadget imagry positioning. Passed to superclass first.

GM_RENDER--Renders the gadget imagry. Overrides the superclass.

GM_HITTEST--Determines if mouse is within the gadget rectangle. Overrides the superclass.

GM_GOACTIVE--Handles activation, toggle-select and button-select. Overrides the superclass.

GM_HANDLEINPUT--Handles input events once active. Handles cycle buttons, repeat and RMB abort. Overrides the superclass.

GM_GOINACTIVE--Deselects the button. Overrides the superclass.

All other methods are passed to the superclass, including OM_DISPOSE.

ATTRIBUTES

GA_ToggleSelect (BOOL) -- Indicate that the gadget is a toggle button. Defaults to FALSE.

GA_Selected (BOOL) -- Determines whether the button is selected or not. Changing selection state will invoke GM_RENDER. Setting selected causes BUTTON_Current to go to 1. Clearing selected causes BUTTON_Current to go to 0. Defaults to FALSE.

GA_Disabled (BOOL) -- Determines whether the button is disabled or not. Changing disable state will invoke GM_RENDER. A disabled button's border and label are all rendered in SHADOWPEN and then dusted in a ghosting pattern that is rendered in SHADOWPEN. Defaults to FALSE.

GA_Text (STRPTR) -- Used to specify the NULL terminated string to use as the text for the gadget. The Text() function is used to draw the text. The class does not currently support underlining of the keyboard shortcut character. NULL is valid input. Changing the label will invoke GM_LAYOUT and then GM_RENDER.

GA_Image (struct Image *) -- Used to specify the image to use for the label of the gadget. The DrawImage() function is used to draw the image. NULL is valid input. Changing the label will invoke GM_LAYOUT and then GM_RENDER.

GA_TextAttr (struct TextAttr *) -- Text attribute for the font to use for the labels.

GA_ReadOnly (BOOL) -- Read-only gadgets ignore activation attempts. Defaults to FALSE.

BUTTON_Glyph (struct Image *) -- Used to specify the image to use for

the label of the gadget. The BltTemplate() function is used to draw each plane of the image. NULL is valid input. Changing the label will invoke GM_LAYOUT and then GM_RENDER.

BUTTON_PushButton (BOOL) -- Used to indicate that the button stays pressed in when the user selects it with the mouse. The button may programmatically be deselected using {GA_Selected, FALSE}. Defaults to FALSE.

BUTTON_Array (LONG) -- Indicates that the label is an array, and indicates the number of elements in the array. This allows the gadget to be used as a checkbox or a cycle gadget without the cycle glyph. Defaults to 1.

BUTTON_Current (LONG) -- Used to select the current image from the BUTTON_Array. Changing the current image will invoke GM_LAYOUT and then GM_RENDER. Defaults to zero.

BUTTON_TextPen (LONG) -- Indicate the pen number used to render the IDS_NORMAL text. If -1 is specified, then TEXTPEN is used. Defaults to -1.

BUTTON_BackgroundPen (LONG) -- Indicate the pen number used to render the IDS_NORMAL background. If -1 is specified, then BACKGROUNDPEN is used. Defaults to -1.

BUTTON_FillTextPen (LONG) -- Indicate the pen number used to render the IDS_SELECTED text. If -1 is specified, then FILLTEXTPEN is used. Defaults to -1.

BUTTON_FillPen (LONG) -- Indicate the pen number used to render the IDS_SELECTED background. If -1 is specified, then FILLPEN is used
.
Defaults to -1.

1.3 button.gadget/GM_GOACTIVE

NAME
GM_GOACTIVE--Activate a gadget. (V42)

FUNCTION
The GM_GOACTIVE method is used to indicate to a gadget that it has become active. This method overrides the superclass.

GA_ToggleSelect: Toggles selection state.

BUTTON_PushButton: If not selected, then becomes selected and sets BUTTON_Current to 1. If selected and BUTTON_Array is greater than one, then will cycle through the array, while staying selected, with 1 being the lower bounds.

BUTTON_Array: Sets selection state and cycle through the array with 0 being the lower bounds.

Otherwise: Sets selection state.

```
   Invokes GM_RENDER with GREDRAW_REDRAW set.

RESULT
   For GA_ToggleSelect returns GMR_VERIFY | GMR_NOREUSE.

   For BUTTON_PushButton returns GMR_VERIFY | GMR_NOREUSE when the
   state changes, otherwise returns GMR_NOREUSE.

   All other cases returns GMR_MEACTIVE.

   Sets the *msg->gpi_Termination field to BUTTON_Current, which in turn
   fills in the IntuiMessage->Code field.
```

1.4 button.gadget/GM_GOINACTIVE

```
NAME
   GM_GOINACTIVE--Button has lost activation.              (V42)

FUNCTION
   The GM_GOINACTIVE method is used to indicate that the button has
   become inactive.  This method overrides the superclass.

   For momentary buttons, this will cause the GFLG_SELECTED flag to be
   cleared and the GM_RENDER method to be called with GREDRAW_REDRAW.

RESULT
   This method returns 0.
```

1.5 button.gadget/GM_HANDLEINPUT

```
NAME
   GM_HANDLEINPUT--Handle input events.                    (V42)

FUNCTION
   The GM_HANDLEINPUT method is used to handle the input events of an
   active button gadget.  This method overrides the superclass.

   This method correctly handles RMB abort.

RESULT
   This method returns GMR_MEACTIVE as long as the gadget is active.
```

1.6 button.gadget/GM_HITTEST

```
NAME
   GM_HITTEST--Is gadget hit.                              (V42)

FUNCTION
   The GM_HITTEST method is used to determine if the given mouse
```

coordinates are within the domain of the button. This method overrides the superclass.

RESULT
This method returns GMR_GADGETHIT if within the domain, otherwise zero is returned.

If the gadget is GA_ReadOnly, then zero is always returned.

1.7 button.gadget/GM_LAYOUT

NAME
GM_LAYOUT--Calculate the positioning of the imagry. (V42)

FUNCTION
The GM_LAYOUT method is used to calculate the domain of the button and to center the label within the domain. This method is passed to the superclass first.

Gadget relativity is fully supported.

RESULT
This method returns 0.

1.8 button.gadget/GM_RENDER

NAME
GM_RENDER--Render the visuals of the button. (V42)

FUNCTION
The GM_RENDER method is used to render the visuals of the button. This method overrides the superclass.

The border of the gadget is drawn first. Disabled gadgets get a border that is drawn completely in SHADOWPEN. A selected or read-only button gets SHADOWPEN for the left and top sides, and SHINEPEN for the right and bottom sides. A normal button gets SHINEPEN for the left and top sides, and SHADOWPEN for the right and bottom sides.

The inside of the button is then drawn. A normal button gets filled with BUTTON_BackgroundPen. A selected button gets filled with BUTTON_FillPen.

Then the label is drawn.

GA_Text: Text() is used to render the text. BUTTON_TextPen is used for a normal button and BUTTON_FillTextPen is used for a selected button.

GA_Image: DrawImageState() is used to render the image. Note that the background pen color is already set appropriately for

```
        the image state.

        BUTTON_Glyph:  BltTemplate() is used to render each of the planes
        of the image.  BUTTON_TextPen is used for a normal button and
        BUTTON_FillTextPen is used for a selected button.  The second
        and higher planes are render using SHADOWPEN.

    If the button is disabled, then the ghosting pattern is applied.

RESULT
    This method returns 0.
```

1.9 button.gadget/OM_NEW

```
NAME
    OM_NEW--Create a button.gadget object.                    (V42)

FUNCTION
    The OM_NEW method is used to create an instance of the button.gadget
    class.  This method is passed to the superclass first.

ATTRIBUTES
    The following attributes can be specified at creation time.

    GA_ToggleSelect (BOOL) -- Indicate that the gadget is a toggle button.
        Defaults to FALSE.

    GA_Selected (BOOL) -- Determines whether the button is selected or
        not.  Defaults to FALSE.

    GA_Disabled (BOOL) -- Determines whether the button is disabled or
        not.  Defaults to FALSE.

    GA_Text (STRPTR) -- Used to specify the NULL terminated string to use
        as the text for the gadget.

    GA_Image (struct Image *) -- Used to specify the image to use for the
        label of the gadget.

    GA_TextAttr (struct TextAttr *) -- Text attribute for the font to
        use for the labels.

    GA_ReadOnly (BOOL) -- Read-only gadgets ignore activation attempts.
        Defaults to FALSE.

    BUTTON_Glyph (struct Image *) -- Used to specify the image to use for
        the label of the gadget.

    BUTTON_PushButton (BOOL) -- Used to indicate that the button stays
        pressed in when the user selects it with the mouse.  The button
        may programmatically be deselected using {GA_Selected, FALSE}.
        Defaults to FALSE.

    BUTTON_Array (LONG) -- Indicates that the label is an array, and
        indicates the number of elements in the array.  This allows the
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gadget to be used as a checkbox or a cycle gadget without the cycle glyph. Defaults to 1.

BUTTON_Current (LONG) -- Used to select the current image from the BUTTON_Array. Defaults to zero.

BUTTON_TextPen (LONG) -- Indicate the pen number used to render the IDS_NORMAL text. If -1 is specified, then TEXTPEN is used. Defaults to -1.

BUTTON_BackgroundPen (LONG) -- Indicate the pen number used to render the IDS_NORMAL background. If -1 is specified, then BACKGROUNDPEN is used. Defaults to -1.

BUTTON_FillTextPen (LONG) -- Indicate the pen number used to render the IDS_SELECTED text. If -1 is specified, then FILLTEXTPEN is used. Defaults to -1.

BUTTON_FillPen (LONG) -- Indicate the pen number used to render the IDS_SELECTED background. If -1 is specified, then FILLPEN is used.
Defaults to -1.

RESULT
If the object was created then a pointer to the object is returned, otherwise NULL is returned.

1.10 button.gadget/OM_SET

NAME
OM_SET--Set the attributes of a button.gadget object. (V42)

FUNCTION
The OM_SET method is used to set the attributes of a button.gadget. This method is passed to the superclass first.

ATTRIBUTES
The following attributes can be changed at OM_SET or OM_UPDATE.

GA_Selected (BOOL) -- Determines whether the button is selected or not. Changing selection state will invoke GM_RENDER. Setting selected causes BUTTON_Current to go to 1. Clearing selected causes BUTTON_Current to go to 0. Defaults to FALSE.

GA_Disabled (BOOL) -- Determines whether the button is disabled or not. Changing disable state will invoke GM_RENDER. A disabled button's border and label are all rendered in SHADOWPEN and then dusted in a ghosting pattern that is rendered in SHADOWPEN. Defaults to FALSE.

GA_Text (STRPTR) -- Used to specify the NULL terminated string to use as the text for the gadget. The Text() function is used to draw the text. The class does not currently support underlining of the keyboard shortcut character. NULL is valid input. Changing the label will invoke GM_LAYOUT and then GM_RENDER.

GA_Image (struct Image *) -- Used to specify the image to use for the label of the gadget. The DrawImage() function is used to draw the image. NULL is valid input. Changing the label will invoke GM_LAYOUT and then GM_RENDER.

GA_TextAttr (struct TextAttr *) -- Text attribute for the font to use for the labels.

GA_ReadOnly (BOOL) -- Read-only gadgets ignore activation attempts. Defaults to FALSE.

BUTTON_Glyph (struct Image *) -- Used to specify the image to use for the label of the gadget. The BltTemplate() function is used to draw each plane of the image. NULL is valid input. Changing the label will invoke GM_LAYOUT and then GM_RENDER.

BUTTON_Current (LONG) -- Used to select the current image from the BUTTON_Array. Changing the current image will invoke GM_LAYOUT and then GM_RENDER. Defaults to zero.

BUTTON_TextPen (LONG) -- Indicate the pen number used to render the IDS_NORMAL text. If -1 is specified, then TEXTPEN is used. Defaults to -1. Changing the pen will invoke GM_RENDER.

BUTTON_BackgroundPen (LONG) -- Indicate the pen number used to render the IDS_NORMAL background. If -1 is specified, then BACKGROUNDPEN is used. Defaults to -1. Changing the pen will invoke GM_RENDER.

BUTTON_FillTextPen (LONG) -- Indicate the pen number used to render the IDS_SELECTED text. If -1 is specified, then FILLTEXTPEN is used. Defaults to -1. Changing the pen will invoke GM_RENDER.

BUTTON_FillPen (LONG) -- Indicate the pen number used to render the IDS_SELECTED background. If -1 is specified, then FILLPEN is used.
Defaults to -1. Changing the pen will invoke GM_RENDER.

RESULT

The class will update the attributes of object. Changing some attributes will result in GM_LAYOUT and/or GM_RENDER being called.

The return value will be non-zero if the gadget needs to be refreshed.