

## Intuition and Workbench

## Introduction to Boopsi

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/* boopsi1.c - Execute me to compile me with Lattice 5.10a
   Lc -bl -offistg -v -Y -j73 boopsi1.c
   Blink FROM LIB:c.o.boopsi1.o TO boops1 LIB:LC.lib,LIB:Amiga.lib
   quit
*/

/* Boopsi example showing simple creation of boopsi
   ** gadgets and using system images.
   */

#include <intuition/intuition.h>
#include <intuition/classusr.h>
#include <intuition/imageclass.h>
#include <intuition/gadgetclass.h>
#include <clib/exec_protos.h>
#include <clib/intuition_protos.h>
#include <clib/graphics_protos.h>

#define LATTICE
int CHARRK(void) { return(0); } /* Disable Lattice CTRL/C handling */
#define
UBYTE *vers = "\0$VER: boopsi 1.0";

void ProcessWindow(void) ;

#define MYPROP      1L
#define MYSTRING    2L
#define MYLEFTBUT   3L
#define MYRIGHTBUT  4L

#define GADTOP      10L
#define STRLEFT     20L
#define STRRIGHT    30L
#define STRHEIGHT   11L
#define INITVALUE    25L
#define PROPWIDTH   100L
#define PROPVIS     10L
#define BUTGADWID   11L
#define BUTGADHEI   11L

struct Screen *screen;
struct Window *window;
struct DrawInfo *drinfo;
struct Library *IntuitionBase;
struct Gadget *prop, *string, *leftbut, *rightbut, *mygadgets;
struct Image *rightimage, *leftimage;

void main(void)
{
    struct Gadget *tmpgad;
    WORD gadtop;

    tmpgad = (struct Gadget *)kmygadgets;

    if (IntuitionBase = OpenLibrary("intuition.library", 36L))
    {
        if (screen = LockPubScreen(NULL))
        {
            /* need my screen's DrawInfo for the system gadget images */
            drinfo = GetScreenDrawInfo(screen);

            gadtop = screen->Font->ta_ysize + GADTOP;
            if (window = OpenWindowTags(NULL,
                WA_Title, (ULONG *) "Amail boopsi1",
                WA_Height, gadtop+STRHEIGHT+10L,
                WA_Width, STRLEFT+STRWIDTH+PROPWIDTH*2+BUTGADWID+15,
                WFLG_DEPTHGADGET | WFLG_DRAGBAR | WFLG_CLOSEGADGET,
                WA_IDCMP, IDCMP_CLOSEWINDOW | IDCMP_GADGETUP,
                TAG_END))
            {

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/* Create a boopsi string gadget */
if (string = (struct Gadget *)NewObject(NULL, "stringclass",
/* All the normal Gadget fields */
    GA_ID,
    GA_Immediate, TRUE,
    GA_RelVerify, TRUE,
    GA_Top, gadtop,
    GA_Left, STRLEFT,
    GA_Width, STRWIDTH,
    GA_Height, STRHEIGHT,
    STRINGA_MaxChars, 3,
    STRINGA_LongVal, INITVALUE,
    STRINGA_Justification, STRINGRIGHT,

/* Boopsi makes it easy to link gadgets together.
** The GA_Previous tag accepts a (struct Gadget **)
** to the previous gadget in the list, then changes
** this value to point to the gadget being
** created (in this case, "string").
*/
    GA_Previous,
    TAG_END))
    tmpgad,

{
    /* create the prop gadget */
    if (prop = (struct Gadget *)NewObject(NULL, "propclass",
        GA_Immediate, TRUE,
        GA_RelVerify, TRUE,
        GA_Freedom, FALSE,
        GA_Left, STRLEFT + STRWIDTH,
        GA_Top, gadtop,
        GA_Height, BUTGADHEI,
        GA_Top, INITVALUE,
        PGA_Top, PROPVIS,
        PGA_Visible, PROPWIDTH,
        PGA_Total, MYPROP,
        GA_ID,

        /* link prop to string and
        ** make tmpgad point to prop. */
        GA_Previous, tmpgad,
        TAG_END))
    {
        /* Ask the system for a left arrow image
        ** for the left arrow gadget. */
        if (leftimage = (struct Image *)NewObject(NULL,
            "sysiclass",

            /* boopsi needs this screen's DrawInfo
            ** structure to get the right image. */
            SYSIA_DrawInfo, drinfo,
            SYSIA_Which, LEFTIMAGE,

            /* this will give us 11 x 11 buttons */
            SYSIA_Size, SYSISIZE_MEDRES,
            TAG_END))
        {
            /* Now ask for a right arrow */
            if (rightimage = (struct Image *)NewObject(NULL,
                "sysiclass",
                SYSIA_DrawInfo, drinfo,
                SYSIA_Which, RIGHTIMAGE,
                SYSIA_Size, SYSISIZE_MEDRES,
                TAG_END))
            {
                /* Create the left button */
                if (leftbut = (struct Gadget *)NewObject(NULL,
                    "buttonclass",
                    GA_ID, MYLEFTBUT,
                    GA_Immediate, TRUE,
                    GA_RelVerify, TRUE,
                    GA_Image, leftimage,
                    GA_Top, gadtop,
                    GA_Left, STRLEFT+STRWIDTH+PROPWIDTH-15,
                    GA_Width, BUTGADWID,
                    GA_Height, BUTGADHEI,
                    GA_Previous, tmpgad,
                    TAG_END))
            {

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    {
        /* Create the right button */
        if (rightbut = (struct Gadget *)NewObject(NULL,
            "buttonclass",
            GA_ID, MYRIGHTBUT,
            GA_Immediate, TRUE,
            GA_RelVerify, TRUE,
            GA_Image, rightbimage,
            GA_Top, gadtop,
            GA_Left,
                STRLEFT+STRWIDTH+PROPWID+BTGADWID-10,
            GA_Width, BUTGADWID,
            GA_Height, BUTGADHEI,
            GA_Previous, tmpgad,
            TAG_END))
        {
            /* All of the gadgets have been created
            ** and linked together. Add them to the
            ** display and display them.
            */
            AddGList(window, mygadgets, -1, -1, NULL);
            RefreshGList(mygadgets, window, NULL, -1);
            ProcessWindow();
            RemoveGList(window, mygadgets, -1);
            DisposeObject(rightbut);
        }
        DisposeObject(leftbut);
    }
    DisposeObject(rightbimage);
}
DisposeObject(leftbimage);
}
DisposeObject(prop);
}
DisposeObject(string);
}
CloseWindow(window);
}
FreeScreenDrawInfo(screen, drinfo);
UnlockPubScreen(NULL, screen);
}
CloseLibrary(IntuitionBase);
}
}

```

```

void ProcessWindow(void)
{
    struct IntuiMessage *imsg;
    BOOL returnvalue = TRUE;
    ULONG class;
    LONG currval = INITVALUE;
    struct Gadget *g;

    while (returnvalue)
    {
        WaitPort(window->UserPort);
        while (imsg = (struct IntuiMessage *)GetMsg(window->UserPort))
        {
            g = (struct Gadget *)imsg->IAddress;
            class = imsg->Class;
            ReplyMsg((struct Message *)imsg);
            switch (class)
            {
                case IDCMP_CLOSEWINDOW:
                    returnvalue = FALSE;
                    break;
                case IDCMP_GADGETUP:
                    switch (g->GadgetID)
                    {
                        case MYLEFTBUT:
                            currval--;
                            break;
                        case MYRIGHTBUT:
                            currval++;
                            break;
                        case MYPROP:
                            /* read the prop gadget's value */
                            GetAttr(PGA_TOP, prop, &currval);
                            break;
                        case MYSTRING:
                            /* read the string gadget's value */
                            GetAttr(STRINGA_LongVal, string, &currval);
                            break;
                    }
                    /* make sure the value is between 0 and 90 */
                    if (currval < 0L)
                        currval = 0L;
                    else
                        if (currval > PROPWID - PROPVIS)
                            currval = PROPWID - PROPVIS;

                    /* Update the values of the prop and string.
                    ** gadgets (Intuition takes care of the refresh). */

                    SetGadgetAttrs( prop, window, NULL,
                        PGA_TOP, currval,
                        TAG_END );

                    SetGadgetAttrs( string, window, NULL,
                        STRINGA_LongVal, currval,
                        TAG_END );

                    break;
            }
        }
    }
}

```