

**GadUtil\_Dev\_History**

COLLABORATORS
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REVISION HISTORY
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# Contents

<b>1</b>	<b>GadUtil_Dev_History</b>	<b>1</b>
1.1	Changes in GadUtil.library . . . . .	1
1.2	Changes and tests done almost every day . . . . .	2
1.3	Changes 08-Dec-1994 . . . . .	2
1.4	Changes 09-Dec-1994 . . . . .	2
1.5	Changes 10-Dec-1994 . . . . .	3
1.6	Changes 11-Dec-1994 . . . . .	3
1.7	Changes 12-Dec-1994 . . . . .	3
1.8	Changes 13-Dec-1994 . . . . .	4
1.9	Changes 14-Dec-1994 . . . . .	4
1.10	Changes 15-Dec-1994 . . . . .	4
1.11	Changes 16-Dec-1994 . . . . .	5
1.12	Changes 17-Dec-1994 . . . . .	5
1.13	Changes 18-Dec-1994 . . . . .	5
1.14	Changes 19-Dec-1994 . . . . .	5
1.15	Changes 20-Dec-1994 . . . . .	6
1.16	Changes 21-Dec-1994 . . . . .	6
1.17	Changes 22-Dec-1994 . . . . .	6
1.18	Changes 23-Dec-1994 . . . . .	7
1.19	Changes 24-Dec-1994 . . . . .	7
1.20	Changes 25-Dec-1994 . . . . .	7
1.21	Changes 04-Jan-1995 . . . . .	8
1.22	Changes 05-Jan-1995 . . . . .	8
1.23	Changes 07-Jan-1995 . . . . .	9
1.24	Changes 08-Jan-1995 . . . . .	10
1.25	Changes 09-Jan-1995 . . . . .	10
1.26	Changes 10-Jan-1995 . . . . .	11
1.27	Changes 11-Jan-1995 . . . . .	12
1.28	Changes 12-Jan-1995 . . . . .	12
1.29	Changes 13-Jan-1995 . . . . .	13

---

1.30	Changes 15-Jan-1995 . . . . .	13
1.31	Changes 16-Jan-1995 . . . . .	13
1.32	Changes 17-Jan-1995 . . . . .	14
1.33	Changes 11-Feb-1995 . . . . .	14
1.34	Changes 29-Mar-1995 . . . . .	15
1.35	Changes 08-Apr-1995 . . . . .	15
1.36	Changes 22-Apr-1995 . . . . .	16
1.37	Changes 23-Apr-1995 . . . . .	16
1.38	Changes 24-Apr-1995 . . . . .	17
1.39	Changes 25-Apr-1995 . . . . .	17
1.40	Changes 26-Apr-1995 . . . . .	17
1.41	Changes 11-Jun-1995 . . . . .	17
1.42	Changes 16-Jun-95 . . . . .	17
1.43	Changes 19-Jun-95 . . . . .	18
1.44	Changes 25-Jun-95 . . . . .	18
1.45	Changes 05-Jul-95 . . . . .	18
1.46	Changes 06-Jul-95 . . . . .	20
1.47	Changes 22-Jul-95 . . . . .	20
1.48	Changes 30-Sep-95 . . . . .	20
1.49	Changes 10-Okt-95 . . . . .	21
1.50	Changes 13-Okt-95 . . . . .	21
1.51	Changes 02-Nov-95 . . . . .	22
1.52	Changes 09-Dec-95 avslutat klockan halv två på natten mod den 10:e.. . . .	22
1.53	Changes 01-Jan-96 . . . . .	22
1.54	Changes 03-Jan-96 . . . . .	22
1.55	Changes 06-Jan-96 . . . . .	23
1.56	Changes 07-Jan-96 . . . . .	23
1.57	Ändringar 20-Jan-96 . . . . .	23
1.58	Ändringar 24-Feb-96 . . . . .	23
1.59	Changes 29-Apr-96 . . . . .	23
1.60	Changes 01-May-96 . . . . .	24
1.61	Changes 02-May-96 . . . . .	24
1.62	Changes 10-May-96 . . . . .	24
1.63	Changes 13-May-96 . . . . .	25
1.64	Changes 14-May-96 . . . . .	25
1.65	Changes 15-May-96 . . . . .	25
1.66	Changes 29-May-96 . . . . .	26
1.67	Changes 12-Jun-96 . . . . .	26
1.68	Changes 12-Jul-96 . . . . .	27

---

1.69 Changes 15-Jul-96 . . . . . 27

1.70 Changes 22-Dec-96 . . . . . 28

1.71 Changes 10-Aug-97 . . . . . 28

1.72 Changes 28-Sep-97 . . . . . 29

1.73 Summary of all changes . . . . . 29

1.74 A list of possible future enhancements . . . . . 32

1.75 Something to remember when any of us are writing something new . . . . . 33

## Chapter 1

# GadUtil\_Dev\_History

### 1.1 Changes in GadUtil.library

All changes in GadUtil.library

~~~~~

Changes done between 8-Dec-1994 and 28-Sep-1997

|             |             |             |
|-------------|-------------|-------------|
| 08-Dec-1994 | 09-Dec-1994 | 10-Dec-1994 |
| 11-Dec-1994 | 12-Dec-1994 | 13-Dec-1994 |
| 14-Dec-1994 | 15-Dec-1994 | 16-Dec-1994 |
| 17-Dec-1994 | 18-Dec-1994 | 19-Dec-1994 |
| 20-Dec-1994 | 21-Dec-1994 | 22-Dec-1994 |
| 23-Dec-1994 | 24-Dec-1994 | 25-Dec-1994 |
| 04-Jan-1995 | 05-Jan-1995 | 07-Jan-1995 |
| 08-Jan-1995 | 09-Jan-1995 | 10-Jan-1995 |
| 11-Jan-1995 | 12-Jan-1995 | 13-Jan-1995 |
| 15-Jan-1995 | 16-Jan-1995 | 17-Jan-1995 |
| 11-Feb-1995 | 29-Mar-1995 | 08-Apr-1995 |
| 22-Apr-1995 | 23-Apr-1995 | 24-Apr-1995 |
| 25-Apr-1995 | 26-Apr-1995 | 11-Jun-1995 |
| 16-Jun-1995 | 19-Jun-1995 | 25-Jun-1995 |
| 05-Jul-1995 | 06-Jul-1995 | 22-Jul-1995 |
| 30-Sep-1995 | 10-Okt-1995 | 13-Okt-1995 |
| 02-Nov-1995 | 10-Dec-1995 | 01-Jan-1996 |
| 03-Jan-1996 | 06-Jan-1996 | 07-Jan-1996 |
| 20-Jan-1996 | 24-Feb-1996 | 29-Apr-1996 |
| 01-May-1996 | 02-May-1996 | 10-May-1996 |
| 13-May-1996 | 14-May-1996 | 15-May-1996 |
| 29-May-1996 | 12-Jun-1996 | 12-Jul-1996 |
| 15-Jul-1996 | 22-Dec-1996 |             |
| 10-Aug-1997 | 28-Sep-1997 |             |

Summary of all changes from 08-Dec-94 to 28-Sep-97  
 Something to think about when writing new routines...

|                  |              |       |
|------------------|--------------|-------|
| Almost every day | P-O Yliniemi | Later |
|                  | .....        |       |

## 1.2 Changes and tests done almost every day

Almost every day:

~~~~~

- \* Small changes/comments/bug fixes/additions in the test program.
- \* Reassembled with all possible settings on GU\_DEBUG and GU\_LIBRARY
- \* Testing of all external programs that uses gadutil.library.

## 1.3 Changes 08-Dec-1994

941208:

~~~~~

- \* Uses AllocMem instead of AllocRemember while making the HotKey structure.
- \* GU\_FreeGadgets - New routine that replaces the GadTools FreeGadgets if the layout part of the library isn't used (this routine will be called by GU\_FreeLayoutGadgets otherwise).
- \* IMAGE\_KIND now supports hotkeys. All tags that doesn't belong to GadTools should now be written in the LayoutTags list.
- \* GENERIC (IMAGE\_KIND) TOGGLESELECT now changes status when you press the hotkey for that gadget (only a IDCMP\_GADGETUP was sent before).
- \* GU\_CoordsInGadBox - New routine that checks whether or not a coordinate pair are within a gadgets area.
- \* GU\_SetGadgetAttrsA - Replacement for GadTools GT\_SetGadgetAttrsA.
- \* GU\_SetGUGadAttrsA - Changes an IMAGE\_KIND gadget's image(s).

## 1.4 Changes 09-Dec-1994

941209:

~~~~~

- \* Added debug functions for OpenLib (initRoutine). Now we don't have to open a lot of libraries in the beginning of the internal test program...
  - \* Added debug functions for Close and Expunge routines. Same reason as above. Expunge does not do a Remove() and FreeMem() on the library when the internal test program is used.
  - \* Settings GU\_DEBUG = 0 and GU\_LIBRARY = 0 didn't work. The program was using dosbase (for Delay) and this variable was not in the debug sect.
  - \* Wrote a routine that opens libraries in initRoutine. Can skip to check if a library was opened or not and tries to open the next one if one failed.
-

- \* A small bug fix in GU\_SetGUGadAttrsA:  
    move.l gg\_MutualExclude,d3 -> move.l gg\_MutualExclude(a0),d3
- \* Changed so that the HotKey part uses MutualExclude instead of UserData. The flags in MutualExclude is moved into a longword in the HotKey data structure.

All gadgets that uses the hotkey part, and all IMAGE\_KIND gadgets will now allocate about 40 bytes extra memory for each gadget.

## 1.5 Changes 10-Dec-1994

941210:

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- \* Uses AllocVec() instead of a new SECTION for the datas in GU\_LayoutGadgetsA. By changing this, the library now consist of two fewer SECTIONS.
- \* Removed all flags for the extra structure from the include file. None of these flags is needed outside the library.
- \* GU\_GetGadgetPtr - New routine that returns the gadget structure for any given gadget ID.
- \* GU\_GadgetArrayIndex - Returns -1 if an error occurs.
- \* .CalculateGadget - Returns -1 and Z=1 if an error occurs.

## 1.6 Changes 11-Dec-1994

941211:

~~~~~

- \* Made text\_width into a library routine (GU\_TextWidth).
- \* Made get\_locale\_string into a library routine (GU\_GetLocaleStr).
- \* Removed the routine FindTag. It was the same as GU\_FindTag.
- \* GU\_CreateLocMenuA - New routine that creates localized menus in that way that Commodore's Locale tutorial describes.

## 1.7 Changes 12-Dec-1994

941212:

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- \* Tested and bugg fixed GU\_CreateLocMenuA. Wrote a new external test program.



## 1.8 Changes 13-Dec-1994

941213:

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- \* GU\_OpenCatalog - New routine that opens a locale catalog. Uses /--- only two parameters - version and catalog name.
- |
- >-----> Only written so we don't have to open locale.library!
- |
- \--- \* GU\_CloseCatalog - New routine to close a locale catalog. The only difference from the locale.library routine is that this one checks if locale is opened.

## 1.9 Changes 14-Dec-1994

941214:

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- \* Made the part that created the gadget's label of create\_layout\_gadget into a subroutine. This routine will be used for MX-gadgets.
- \* Added support for the GU\_GadgetText to MX gadgets. The text will always be placed above the gadget, at the same side as the gadget's choices. Checked with WBPatten & Serial prefs to place the texts at the "right" places.
- \* Fixed an Enforcer-hit in the GU\_GetIMsg routine. All SLIDER\_KIND gadgets (LISTVIEW, SLIDER, SCROLLER) requires that you wait for IDCMP\_MOUSEMOVE messages. A MOUSEMOVE message's IAddress is a pointer to a gadget if the mouse pointer was above a gadget that requires IDCMP\_MOUSEMOVE messages and the left mouse button was pressed down when then message arrived. Otherwise, the IAddress for a MOUSEMOVE message is NOT NULL (?). I found out that the IAddress field was the same as im\_IDCMPWindow if isn't a gadget pointer.

## 1.10 Changes 15-Dec-1994

941215:

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- \* New tags:
  - GU\_AdjustBottom - subtract the height of the text font from y-pos
  - GU\_AdjustRight - subtract the length of the text from x-pos
- \* Changed the Hotkey part of the library to use gg\_UserData instead of gg\_MutualExclude. MutualExclude is not used anywhere (the RKM says so), but strange things started to happen with the PALETTE\_KIND gadget if running under OS3.0.
- \* Changed the inparameters to GU\_CreateLocMenuA. Now two tag lists is passed to the function instead of one. The first is used for CreateMenusA, and the other one is used for LayoutMenusA.

## 1.11 Changes 16-Dec-1994

941216:

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- \* Re-inserted the GADUSERMAGIC check for the UserData field. A part of the Hotkey structure and some other flags is now in gadutil.i
- \* All tags now uses the last given value.

## 1.12 Changes 17-Dec-1994

941217:

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- \* New tags:
  - GU\_AddLeftChar - add length of ti\_Data chars to x-pos of gad
  - GU\_AddTopLines - att height of ti\_Data lines to y-pos of gad

## 1.13 Changes 18-Dec-1994

941218:

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- \* Wrote some new code to the start routine in the internal test program. Now, a complete library base for GadUtil is created, and the CallLib macro can now be used to call and debug GadUtil routines.

## 1.14 Changes 19-Dec-1994

941219:

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- \* Made it easy to remove the test program from the library and change it to an external test program.

To change the internal test program to an external one:

~~~~~

1. Load ExternTestInit.s to a free F-key (?)
2. Search for TestProgram: in the library, set block start.
3. Search for TestPgmEnd: in the library, copy the block.
4. Press the right F-key to find ExternTestInit.s
5. Insert the copied block at the end of the source.
6. Insert the missing include files.

- \* Made it easier to replace the internal test program to an external one that uses ExternTestInit.s as start code.

To change an external test program to an internal one:

~~~~~

1. Load the external test program to a free F-key (?)
2. Search for TestProgram: in the library, set block start.
3. Search for TestPgmEnd: in the library, delete the block.

4. Press the right F-key to find the test program.
5. Search for TestProgram:, set block start.
6. Move to the end of the test program and copy the block.
7. Go back to the library source code and insert the copied block.
8. Insert the missing include files.

## 1.15 Changes 20-Dec-1994

941220:

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- \* Optimized the code that checks all Layout tags.
- \* Joined some routines that checks for different tags:
  - GU\_MinWidth, GU\_MaxWidth, GU\_MinHeight, GU\_MaxHeight
  - GU\_AddHeight, GU\_AddWidth, GU\_AddLeft, GU\_AddTop,  
GU\_AddRight, GU\_AddBottom
  - GU\_AdjustTop, GU\_AdjustBottom

## 1.16 Changes 21-Dec-1994

941221:

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- \* Optimized some more parts of the routine that checks Layout tags.
- \* Joined more routines:
  - GU\_Width, GU\_Height
  - GU\_Columns, GU\_AddLeftChar
  - GU\_HeightFactor, GU\_AddTopLines
  - GU\_DupeWidth, GU\_DupeHeight
  - GU\_AdjustLeft, GU\_AdjustRight
- \* Changed the internal test program. The old test program is saved as "OldInternal.s"

## 1.17 Changes 22-Dec-1994

941222:

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- \* Wrote the include file for Lattice/SAS C (and other C-compilers).
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## 1.18 Changes 23-Dec-1994

941223:

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- \* Some of the routines sent back the results in the "wrong" registers. This doesn't matter for assembly language programmers, but all other programming languages requires that the results is returned in D0.

Some of the routines now sends results in more than one register (often A0 and D0).

- \* Changed GU\_GadgetArrayIndex to use A0 as a pointer to the LayoutGadget array (A1 is used internally)
- \* Wrote the FD file and converted it to Lattice/SAS C, Aztec, DICE and Maxon C (pragma files = as LVO in assembly language)

## 1.19 Changes 24-Dec-1994

941224:

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- \* Wrote an installation program for the include files (uses AskEnv). The program can install and uninstall all include files that belongs to GadUtil (two different assemblers, 4 C-compilers).
- \* Fixed some small bugs in clib/gadutil\_protos.h (I forgot to insert GU\_ before some of the routine names).
- \* Started to rewrite the big test program (BetterTest.s) to C. All data structures was finished. A lot of fuss with (ULONG):s and "&" and Tags[5985.74] and other things that belong to C.

## 1.20 Changes 25-Dec-1994

941225:

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- \* Finished the C version of the test program. Started to fix all bugs in it (more than in the first version of the assembly language test program).
- \* Spent the rest of this day to find a weird bug that made the hotkeys stop repeating after that they had repeated 4 times.

Found the bug when I started MemSnapII and saw that the program allocated around 1k memory every second. The ListView gadget sets the IDCMP\_INTUITICKS flag (it's in LISTVIEWIDCMP) and the program got a message every 1/50s. I did use the wrong ROM routine to reply the message: ReplyMsg instead of GU/GT\_ReplyIMsg.

Weird that I didn't notice this 7 hours earlier... (the error was on the last line in the C source code except for all lines with a lot of ([{}]) chars that is used in C).

---

- \* Wrote two small assembly language routines to change the LED (sound filter) directly from a function call in C.
- \* It seems that C-compilers can't read a longword from two words right after each other in a structure. It could be done in a complicated way that should work with all C-compilers.

```
long coords;
coords = (LONG)imsg->MouseX << 16 | imsg->MouseY;
```

corresponds to this code in assembler (if imsg is in A0 and the coords should be saved in D0):

```
moveq.l #0,d0      ; coords = 0
move.w  im_MouseX(a0),d0 ; coords = MouseX
lsl.l   #16,d0      ; << 16
or.w    im_MouseY(a0),d0 ; | MouseY
```

or a bit optimized:

```
move.w  im_MouseX(a0),d0 ; coords = MouseX
swap    d0              ; x coord in the high word
move.w  im_MouseY(a0),d0 ; y coord in the low word
```

or fully optimized:

```
move.l  im_MouseX(a0),d0 ; X coord in high, Y coord in the low
```

## 1.21 Changes 04-Jan-1995

950104:

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- \* Wrote the beginning of the autodocs for all routines in the library. Only the parameters and a short explanation of the routine is in these files. I created one file for every function in the library. These files will be joined to a larger document or a guide at a later time. The file "99.GU\_NewFunction" is used as a beginning to autodocs for all new functions.

## 1.22 Changes 05-Jan-1995

950105:

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- \* GU\_DisableGadget - New routine that changes the GA\_Disabled flag of a gadget. This routine is a shortcut for the ordinary GadTools function GT\_SetGadgetAttrsA.
- \* GU\_SetToggle - New routine that makes it possible to change the status of a toggle-select gadget. Works with GadUtils own toggle-select gadgets and on CheckBox gadgets.

- \* Changed some routines to return result in the Z flag in the status register (SR). This is probably only useful for assembly language programmers.

Changed routines:

- GU\_GetIMsg  
Z = 1 if there is no message to get.
- GU\_GadgetArrayIndex  
Z = 1 if there were no gadget with the requested ID.
- GU\_CoordsInGadBox  
Z = 1 if the coordinates way outside the gadget's border.
- GU\_GetGadgetPtr  
Z = 1 if the gadget could not be found or the pointer was 0.

## 1.23 Changes 07-Jan-1995

950107:

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- \* Made GTLV\_ShowSelected work with gadgets created by GU\_LayoutGadgetsA. Normally you would have to create the string gadget manually before the other gadgets. Now the ti\_Data field of the GTLV\_ShowSelected tag is used for the gadget ID that should show the selected entry. GadTools requires that the string gadget is exactly as wide as the listview gadget that it should be connected to. Here is an example of a usable gadget definition:

ShowSelGad:

```
dc.l  GU_GadgetKind,  STRING_KIND,  GU_AutoHeight,  4
dc.l  GU_DupeWidth,   GAD_LISTVIEW, GU_GadgetText,  NULL
dc.l  TAG_DONE
```

It is possible to use the GU\_GadgetText tag, but I have never seen it in any program. The GU\_GadgetKind tag MUST be used and the GU\_DupeWidth tag is the best way to ensure that the gadget gets the right width. GU\_AutoHeight or another tag that controls the height of the gadget should be used (not really required, but otherwise the string gadget's height depends on the height of the gadget that was created before). Left and top position of the gadget is ignored by GadTools.

GTLV\_ShowSelected differs in these ways if used by GU\_LayoutGadgets:

ti\_Data = -1 Creates a read-only gadget below the listview. Same as if 0 is passed in ti\_Data for GadTools.

ti\_Data = x GadgetID for the gadget that should show the selected entry. Same as if a gadget pointer is passed in ti\_Data for GadTools.

This tag's ti\_Data field will be changed during the creation of the

gadget, but is changed back before the GU\_LayoutGadgets returns.

## 1.24 Changes 08-Jan-1995

950108:

~~~~~

- \* Tried to find a bug in GadUtil.library. After some testing I found out that this is a bug in GadTools.library. In the built-in test program, the bug is clearly visible if a string gadget is used to display the selected entry in a listview gadget. The included example is an early version of ListUtil3. More information is available in that example.

When a LISTVIEW\_KIND gadget is created, the maximum allowed height is given in gng\_Height. GadTools adjusts this value to the height of the text font and the spacing between the entries (LAYOUTA\_Spacing). The gadget should NEVER be taller than the given value, but can be smaller than the desired height.

In the example, the listview gets taller than the given height value, but if you use the built-in TEXT\_KIND gadget to show the selected entry (GTLV\_ShowSelected, NULL or GTLV\_ShowSelected, -1 for GUtil), the listview's height will be correct.

## 1.25 Changes 09-Jan-1995

950109:

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- \* Started to create a BORDER\_KIND gadget, but a little misunderstanding of this gadget kind caused this gadget kind to become BEVELBOX\_KIND. BORDER\_KIND will have to wait some time...

BEVELBOX\_KIND is used to create bevelboxes (what else ??). This kind is really not a gadget, but I created it to make it possible to place bevelboxes relative to gadgets and other bevel boxes. All tags that is used for placement and size works with this "gadget" kind.

BEVELBOX\_KIND supports all "FrameTypes" that is described for the GadTools function DrawBevelBoxA (v39). It is really only three kinds of boxes, but with some combinations there will be 12 different boxes available (6 of them is supported by GadTools v39).

Different bevelbox border kinds:

- BFT\_BUTTON (GT v39) - standard BUTTON\_KIND border
- BFT\_RIDGE (GT v39) - STRING\_KIND gadget border
- BFT\_DROPBOX (GT v39) - "icon drop box" border

All of these can be inverted with the tag GUBB\_Recessed, TRUE. All these kinds can be created and inverted in GadTools v39, but GadTools contains a little bug - if you use the tag GTBB\_Recessed, the bevelbox will always be inverted.

All different types (3 ordinary, 3 inverted) can have a gadget text, but this text is always placed in the middle of the upper line of the bevel box.

The color of the text can be changed with two tags:

- GUBB\_TextPen - selects which "pen" that should be used to write the text with.
- GUBB\_TextColor - selects which color register that should be used to write the text with.

Totally you will have 12 different boxes to choose from:

- 3 normal BFT\_BUTTON, BFT\_RIDGE, BFT\_DROPBOX
- 3 inverted GUBB\_Recessed, TRUE
- 3 normal + text GU\_GadgetText, GU\_LocaleText
- 3 inverted + text GUBB\_Recessed, TRUE, GU\_GadgetText

\* Two new routines was created for BEVELBOX\_KIND:

- GU\_RefreshBoxes - redraws all bevel boxes
- GU\_RefreshWindow - redraws the contents of the window and is a replacement for GT\_RefreshWindow.

## 1.26 Changes 10-Jan-1995

950110:

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- \* Changed BEVELBOX\_KIND to work better with different fonts.
  - \* Now diskfont.library is also opened by gadutil.library. If it's not found DiskFontBase is set to NULL, but everything still will work as before.
  - \* Changed text\_width to use OpenDiskFont to make sure that the font is loaded into memory. The font is closed right after it's opened. IntuiTextLength requires that the specified font is in the memory. This sometimes created weird gadgets when changing the font.
  - \* Created new border types for BEVELBOX\_KIND gadgets:
    - BFT\_HORIZBAR - A horizontal line with a shadow. The minimum required height to make the line look "right" is 2 pixels, but a smaller height can be used to draw a unshadowed line.

Can have a text, which is automatically placed on the middle of the line's length and starts at the line's Y-position + 1, or if the height is more than 2 pixels, at the line's Y-pos.

    - BFT\_VERTBAR - A vertical line with a shadow. The minimum required width to make the line look "right" is 4 pixels, but a smaller value can be used to create some weird effects.
-



Both of these types can be inverted with GUBB\_Recessed, TRUE.

## 1.27 Changes 11-Jan-1995

950111:

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- \* Added a RememberKey field in the extra data structure created for the gadgets that are GadUtil gadgets and gadgets using hotkeys. Can be used to allocate some extra data related to that gadget.
- \* All LISTVIEW\_KIND gadgets will now allocate the extra data structure (the RememberKey is needed for the list's nodes).
- \* Three flags added for the placement of the text in a bevel box gadget.
  - BB\_TEXT\_ABOVE - The default text placement. Using this flag, the text will be placed at the top line of the bevel box. \_\_\_\_Text\_\_\_\_
  - BB\_TEXT\_IN - The text will be placed so the half of the text will be below the top line of the bevel box. ---Text---
  - BB\_TEXT\_BELOW - The text will be placed below \_\_\_\_ the top line of the bevel box. Text
- \* A new function created - GU\_OpenFont. This routine will open a font using the diskfont.library's OpenDiskFont if diskfont.library was opened when gadutil was loaded into memory. Otherwise graphics library will be used to open the font. Graphics.library can only open fonts that are already loaded into memory and ROM fonts.
- \* GU\_OpenFont is used internally by text\_width, GU\_RefreshBoxes and create\_layout\_gad (.printtext).

## 1.28 Changes 12-Jan-1995

950112:

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- \* Made it possible to edit the include files from the include file installation program. The files to be edited can be selected and either the function files or the constant files can be edited. All files can be opened at the same time.
- \* GU\_NewList - a new routine that initializes a List structure.
- \* GU\_ClearList - a new routine that clear a ListView gadget and deallocates all the nodes that belongs to that gadget. All nodes must be allocated with GU\_AddTail, or connected to the gadget's

gu\_RememberKey in any other way (AllocRemember with that key is one way to do it).

- \* GU\_DetachList - detaches the list from a listview, without deallocating the nodes or clear the gadget. Should be used if you want to change the contents of a ListView gadget, or add a new node to the list.
- \* GU\_AttachList - reattach the list, or attach a new list to a ListView gadget. This function will also refresh the contents of the gadget.
- \* GU\_AddTail - Adds a node at the end of a list. This routine will allocate the memory needed for the node structure and the text that will be shown in the ListView (the node's name string). The allocation is done with the gadget's own RememberKey.
- \* GU\_ChangeStr - Changes the contents of a STRING\_KIND gadget.

## 1.29 Changes 13-Jan-1995

950113:

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- \* Wrote some small routines that just makes a call to the GadTools function with (almost) the same name. All routines can be used on OS 2.04, but the GU\_GetGadgetAttrsA doesn't do anything (for the moment) if it is used with an OS older than 3.0.

|                       |                      |
|-----------------------|----------------------|
| - GU_CreateContext    | - GU_GetGadgetAttrsA |
| - GU_CreateMenusA     | - GU_FreeMenus       |
| - GU_LayoutMenuItemsA | - GU_LayoutMenusA    |
| - GU_GetVisualInfoA   | - GU_FreeVisualInfo  |
| - GU_BeginRefresh     | - GU_EndRefresh      |
| - GU_FilterIMsg       | - GU_PostFilterIMsg  |
| - GU_ReplyIMsg        | - GU_DrawBevelBoxA   |

## 1.30 Changes 15-Jan-1995

950115:

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- \* Tested and fixed some bugs in the new routines I wrote on 12-Jun. The other new routines (13-Jan) should work, since they just call the GadTools function with the corresponding name.

## 1.31 Changes 16-Jan-1995

950116:

~~~~~

- \* Wrote a new routine for debugging that prints out the whole

contents of the NewGadget structure that is used to create the gadget.

- \* Inserted a line that shows the address of the created gadget. It should now be a lot easier to find the gadget that couldn't be created.
- \* New tags:
  - GU\_AddWidChar - increase the gadget width by ti\_Data characters
  - GU\_AddHeiLines - increase the gadget height with ti\_Data lines
- \* Changed GU\_AddTopLines and GU\_AddHeiLines so that they use the half of the calculated value ( (fontheight \* ti\_Data)/2 ). This was done to make it possible to add half the height of the font to something.

## 1.32 Changes 17-Jan-1995

950117:

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- \* Removed all menus and localization of some test programs. Older (new) examples was created by just copying the "BetterTest" program and removing the gadget datas. Everything that was in the BetterTest program was then also in the new program, making it larger than necessary.
- \* Made a script (XIcon) to create the archives that we are copying while developing the library.

## 1.33 Changes 11-Feb-1995

950211:

~~~~~

- \* GU\_AddTail now returns the pointer to the node, instead of just a TRUE/FALSE value. If there was not enough memory for the node, NULL will be returned. Also, a little bug in GU\_AddTail was fixed at this time. The allocated buffer for the string was one byte smaller than it should be.
- \* GU\_FindNode - New routine that located the node structure for a given node number. This function can be used to read the node's string (LN\_NAME) from a list item that was selected by the user. The routine can be used on any list, but if it is used on a list that you do not own (a system list, for example), you must use Forbid() and Permit() while you search and access the node's data.
- \* GU\_NodeUp - New routine that moves a node one step closer to the beginning of a list. All nodes, except the first node on the

list can be moved upwards, and if you try to move first node in the list upwards, nothing will happen.

- \* GU\_NodeDown - New routine that moves a node one step closer to the end of the list. All nodes, except the one at the end of the list can be moved downwards, and if you try to move the last node in the list downwards, nothing will happen. This routine actually moves the node below the selected one one step upwards.
- \* GU\_GetBevelBox - New routine that locates the bevel box's internal structure. The structure can be found in the include file, and should be considered read-only. The structure can be used to get the box's position and size (useful when you need to center a text for example).
- \* Removed the GU\_GetBevelBox function and changed the library so that the bevel box's address is saved at the same place as the normal gadget's gadget structures. It is now possible to obtain the bevel box data structure by using the same method as for any other gadget (directly from the LayoutGadget array, or by using GU\_GetGadgetPtr), but the bevelbox structure is not linked with any other gadget.

## 1.34 Changes 29-Mar-1995

950329:

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- \* GU\_AddHeilines and GU\_AddTopLines didn't work with negative values. Fixed by replacing a lsr.w instruction with an asr.w.

## 1.35 Changes 08-Apr-1995

950408:

~~~~~

- \* Ny version - 36.5

\* Bigfix:

Om man använde en DRAWER\_KIND gadget, och hade gng\_Flags satt till PLACETEXT\_IN eller 0, så gick inte gadgeten att trycka på.

Det verkar som att det var gadgeten som visar texten som inte fungerade som den skulle.

Den gadgeten jag upptäckte buggen med hade ingen text, så därför hade jag inte använt GU\_Flags. Det fungerade först, men sen när jag ändrade ordningen på gadgetarna, så kom en BUTTON\_KIND före (tidigare var det en TEXT\_KIND med PLACETEXT\_LEFT). Då fungerade det inte alls att trycka på gadgeten.

Jag antar att det fungerar lika dåligt med IMAGE\_KIND och

FILE\_KIND, men jag har inte haft tid att testa.

\* Åtgärd:

Jag har nu gjort så här med alla specialgadgetar -  
(IMAGE\_KIND, DRAWER\_KIND och FILE\_KIND):

Ifall att gadgeten inte har någon PLACETEXT(LEFT, RIGHT, ABOVE, BELOW), så kommer den att få PLACETEXT\_LEFT som default.

Även om den skulle ha PLACETEXT\_IN, så kommer den att bytas ut mot PLACETEXT\_LEFT.

## 1.36 Changes 22-Apr-1995

950422:

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\* Ny version - 36.51

\* Tagit bort några onödiga movem.l instruktioner. Ändrat några konstiga (men fungerande) movem.l instruktioner:

```
movem.l d2-d5/a3-a6,-(sp) \  
movem.l d0-d1/a0-a2,-(sp) /  
-> movem.l d0-d5/a0-a6,-(sp)
```

```
movem.l d0/a3/d1/d5/a2/a6/d3/d2/a0/d4/a1/a4,-(sp)  
-> movem.l d0-d5/a0-a6,-(sp)
```

```
movem.l d0/d1/d2/d3/a0/a1/a2/a3,-(sp)  
-> movem.l d0-d3/a0-a3,-(sp)
```

\* Ändrat några offsets för de parametrar som sparas på stacken i de flesta subrutiner:

```
move.l 72(sp),a0 -> move.l 16+20+_LGSTRUCTS(sp),a0
```

\* Fixat några av de rutinerna som kan fungera konstigt om två program använder dem samtidigt:

```
GU_OpenCatalog    -> använder stacken för tags  
GU_DisableGadget  -> använder stacken för tags  
create_layout_gad -> använder AllocVec för data
```

## 1.37 Changes 23-Apr-1995

950423:

~~~~~

\* DiskFont.library blev aldrig stängt vid fel eller Expunge. Ändrade två moveq #5-1 till moveq #6-1.

\* Bytte ut en cmp.l #0,a1 till en move.l a1,d0 (4 bytes mindre kod)

---

- \* Bytte ut en `cmp.l #0,a1` till en `move.l a1,d1` (4 bytes mindre kod)
- \* Ändrat `create_gad_images` så att all lokal data allokeras.

### 1.38 Changes 24-Apr-1995

950424:

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- \* Alla `BEVELBOX_KIND` gadgetar slutade att fungera efter ändringarna som jag gjorde de senaste dagarna. Körde diff (SAS/C) programmet på v36.5 av libraryt och jämförde mot mina ändringar.
- \* Skrev om nästan allt som jag ändrat i koden.

### 1.39 Changes 25-Apr-1995

950425:

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- \* Skrev in resten av ändringarna. Fyllde på en liten buggfix (jag glömde deallokera minne för lokal data på ett ställe).
- \* Fick libraryt att fungera igen. Felet var att en `AllocVec` hade förstört några register (A0,A1 och D0).

### 1.40 Changes 26-Apr-1995

950426:

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- \* Fixade en till bugg som blev till p.g.a de ändringar jag gjort. Hade glömt att spara några register runt en `AllocVec` (igen!!!).

### 1.41 Changes 11-Jun-1995

950611:

~~~~~

- \* Gjorde så att `GU_AddTail` kan använda textsträngar som slutar på LF (eller var det CR), dvs. `$0A`.

### 1.42 Changes 16-Jun-95

950616:

~~~~~

- \* Började skriva färdigt resten av autodocsen. Målet var att kunna skicka iväg allt (utom källkoden) den 19:e.
-

## 1.43 Changes 19-Jun-95

950619:

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- \* Skrev färdigt de mest avancerade autodocsen och skickade iväg en tidig version av dev-filerna (i första hand till Nico Max, och kanske några andra som han känner).

## 1.44 Changes 25-Jun-95

950625:

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- \* Ny version - 36.52
- \* Satte in några nya flaggor för BEVELBOX\_KIND gadgeten. Nu kan man ställa in x-position på den text som (kanske) placeras i titelraden. Ändringarna påverkar inga gamla program. Tre olika placeringar stöds just nu:
  - BB\_TEXT\_CENTER   Texten placeras på mitten av bredden av bevel boxen. Standardinställning.
  - BB\_TEXT\_LEFT      Vänsterjustering av texten. Texten placeras 8 pixel från vänsterkanten.
  - BB\_TEXT\_RIGHT     Högerjustering av texten. Texten placeras 8 pixel från högerkanten

Totalt stöds 100 typer av bevel boxar:

5 grund typer med eller utan invertering

9 olika ställen att placera texten på eller helt utan text

## 1.45 Changes 05-Jul-95

950705:

~~~~~

- \* Ny version - 36.53
- \* Satte in 3 nya tags och 4 nya flaggor för BEVELBOX\_KIND gadgetar.
  - En av dessa tags måste användas för att aktivera 3D texten:
    - GUBB\_3DText    Gör texten som hör till bevelboxen 3 dimensionell. Lägger till en skugga på texten. Skuggan placeras till höger, nedanför texten (1 pixel). TRUE/FALSE.
    - GUBB\_ShadowColor   Anger vilket färgnummer som ska användas för färgen på skuggan.
    - GUBB\_ShadowPen    Anger med vilken "penna" skuggan ska

skrivas med.

Nya flaggor:

- BB\_SHADOW\_DR Placerar skuggan 1 pixel nedanför texten och 1 pixel till höger om den.
- BB\_SHADOW\_UR Placerar skuggan 1 pixel ovanför texten och 1 pixel till höger om den.
- BB\_SHADOW\_DL Placerar skuggan 1 pixel nedanför texten och 1 pixel till vänster om den.
- BB\_SHADOW\_UL Placerar skuggan 1 pixel ovanför texten och 1 pixel till vänster om den.

\* Satte in 13 nya alternativ till flaggor och kombinationer av flaggor:

- BB\_TEXT\_ABOVE\_CENTER Placerar texten centrerad ovanför den översta kanten av bevel boxen.
- BB\_TEXT\_ABOVE\_LEFT Placerar texten vänsterjusterad ovanför den översta kanten av bevel boxen.
- BB\_TEXT\_ABOVE\_RIGHT Placerar texten högerjusterad ovanför den översta kanten av bevel boxen.
- BB\_TEXT\_IN\_CENTER Placerar texten centrerad i den översta kanten av bevel boxen.
- BB\_TEXT\_IN\_LEFT Placerar texten vänsterjusterad i den översta kanten av bevel boxen.
- BB\_TEXT\_IN\_RIGHT Placerar texten högerjusterad i den översta kanten av bevel boxen.
- BB\_TEXT\_BELOW\_CENTER Placerar texten centrerad nedanför den översta kanten av bevel boxen.
- BB\_TEXT\_BELOW\_LEFT Placerar texten vänsterjusterad nedanför den översta kanten av bevel boxen.
- BB\_TEXT\_BELOW\_RIGHT Placerar texten högerjusterad nedanför den översta kanten av bevel boxen.
- BB\_SUNAT\_UL Samma som BB\_SHADOW\_DR
- BB\_SUNAT\_DL Samma som BB\_SHADOW\_UR
- BB\_SUNAT\_UR Samma som BB\_SHADOW\_DL
- BB\_SUNAT\_DR Samma som BB\_SHADOW\_UL

Totalt ger de nya taggarna (för skuggtyp) 460 olika typer av bevel boxar:

10 utan text (5 grundtyper, invertering)

---



```
90 med text, utan skugga
90 med text, skugga nedanför till höger
90 med text, skugga nedanför till vänster
90 med text, skugga ovanför till höger
90 med text, skugga ovanför till vänster
```

\* En ny tag kan skickas till GU\_LayoutGadgetsA. Den här taggen fungerar på samma sätt som GU\_RightExtreme/GU\_LowerExtreme, men är för IDCMP flaggor istället. Resultatet är alla IDCMP flaggor som minst måste användas för att alla gadgets ska fungera. Det går bra att skicka in en pekare till de IDCMP flaggor som redan är inställda (IDCMP\_CLOSEWINDOW och andra).

\* Några andra interna ändringar:

- Gjorde en subrutin av lite kod (som används 4 gånger)
- Gjorde en subrutin av den del av den del av den rutinen som skriver ut bevelboxens titel. Används för att kunna skriva ut titelns skugga.

## 1.46 Changes 06-Jul-95

950706:

~~~~~

\* Ny version - 36.54

\* Gjorde så att GU\_AutoWidth fungerar med CYCLE\_KIND gadgets. Nu kollar libraryt vilket av alternativen som är längst och lägger sedan till 27 pixel på resultatet (för cycle symbolen).

## 1.47 Changes 22-Jul-95

950722:

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\* Fixade en liten bugg i hotkey delen, som gjorde att fel värde skickades tillbaka i im\_Code då man använde GU\_LabelHotkey på LISTVIEW\_KIND gadgets. Det som tidigare skickades tillbaka var det nya TOP värdet för listviewen.

## 1.48 Changes 30-Sep-95

950930:

~~~~~

\* Ny version - 36.55

\* Gjorde en ny gadget typ: PROGRESS\_KIND. Alla PROGRESS\_KIND gadgetar allokeras i en rememberkey. Begränsningarna på den här gadgeten är beroende av hur bred gadgeten är. Gadgetens aktiva värde (pg\_Current) får inte vara större än 4.294.967.295/

bredden på gadgeten. Det högsta tillåtna (pg\_Current) värdet för en 410 pixel bred progress gadget är 10.737.418. Om man försöker sätta pg\_Current till ett värde som är större än pg\_Total, ställs gadgeten så att den visar 100% (pg\_Total).

Tags:

GUPR\_FillPen - Anger vilken "penna" som ska användas för att fylla upp till pg\_Current/pg\_Total  
sätts till FILLPEN om taggen inte används.

GUPR\_FillColor - Anger vilket färgnummer som ska användas för att fylla upp till pg\_Current/pg\_Total  
Förvalt värde är färgen på FILLPEN.  
Ignoreras om GUPR\_FillPen används.

GUPR\_BackPen - Anger vilken "penna" som ska användas för att fylla bakgrunden av gadgeten. Sätts till BACKGROUNDPEN om taggen inte används.

GUPR\_BackColor - Anger vilket färgnummer som ska användas för att fylla bakgrunden av gadgeten.  
Förvalt värde är färgen på BACKGROUNDPEN.  
Ignoreras om GUPR\_BackPen används.

GUPR\_Current - Det värde gadgeten ska få då den tillverkas. Uppdateras automatiskt genom användandet av GU\_RefreshWindow. Förvalt värde är 0.

GUPR\_Total - Det värde som motsvarar 100% av gadgetens längd. Förvalt värde är 100.

- \* GU\_UpdateProgress - Ny rutin för att rita om en PROGRESS\_KIND gadget av någon anledning (nytt Total el. Current värde). Behövs ej användas om man använder någon av rutinerna GU\_RefreshWindow (vid öppning av fönster) eller GU\_RefreshBoxes (vid omritning av alla BEVELBOX\_KIND gadgets).

## 1.49 Changes 10-Okt-95

951010:

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- \* Ny version - 36.56
- \* Gjorde så att hotkeys inte fungerar på gadgetar som är "disablerade".
- \* Ändrade i GU\_DisableGadget, så att alla gadgetar kan bli "disablerade". IMAGE\_KIND, FILE\_KIND och DRAWER\_KIND gadgets måste ritas om helt för att de ska bli skuggade...

## 1.50 Changes 13-Okt-95

951013:

~~~~~

- \* Satte in FreeRemember för de allokerade ProgressGad strukturerna.  
Glömde bort det tidigare och märkte det först när ett program  
slarvade bort 40 bytes minne efter varje körning.

## 1.51 Changes 02-Nov-95

951102:

~~~~~

- \* Skrev klart (?) manualen.. Skrev åtminstone klart history delen och  
satte in en massa om vad libraryt är för ngt (bla från readme filen).  
  
\* Hittade en liten bugg i doc-filen för GU\_TextWidth.  
Förklaringen på INPUTS - textattr stämde inte riktigt...  
Där stod bla om IText grejer.. (GU\_TextWidth använder bara TextAttr :)  
Tog bort den felaktiga texten.  
  
\* Ännu en bugg i doc filerna. (GU\_GetGadgetPtr). fixat...

## 1.52 Changes 09-Dec-95 avslutat klockan halv två på natten mod den 10:e..

951210:

~~~~~

- \* Skrev klart LayoutGadgetsA autodoc filen.  
  
\* Är nu färdig med version 36.57!!!

## 1.53 Changes 01-Jan-96

960101:

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- \* Ny version - 36.58. Ej klar att spridas riktigt än.  
  
\* Fixade en liten bugg som gjorde att SLIDER\_KIND och SCROLLER\_KIND  
gadgets returnerade fel värde i imsg->Code. Buggen rapporterades  
av Lukasz Szelag.

## 1.54 Changes 03-Jan-96

960103:

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- \* Alla autodocs är nu kompletta (?)...  
Har kompletterat alla autodocs, en del ändringar kanske behövs, men  
det viktigaste är med iallafall. En del av förklaringarna på  
funktionerna kan eventuellt förbättras..
-

## 1.55 Changes 06-Jan-96

960106:

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- \* Ny version - 36.59
- \* Fixade en liten bugg som gjorde att GU\_AutoWidth, GU\_AdjustLeft och GU\_AdjustRight räknade lite fel (underscore tecknet räknades in i bredden på texten).
- \* Satte in en ny funktion som sorterar en eller två listor.
- \* Satte in fyra nya nya konstanter i include filerna för minimal storlek på FILE\_KIND och DRAWER\_KIND gadgets.

## 1.56 Changes 07-Jan-96

960107:

~~~~~

- \* Gjorde så att GU\_MinimumIDCMP får med IDCMP\_VANILLAKEY eller IDCMP\_RAWKEY beroende på den hotkey man valt för gadgeten.

## 1.57 Ändringar 20-Jan-96

960120:

~~~~~

- \* Ändrade PROGRESS\_KIND så att den kan använda GU\_GadgetText och GU\_LocaleText.
- \* Använder skärmens font för all gadget text om inget annat anges med GU\_DefTextAttr eller GU\_TextAttr.

## 1.58 Ändringar 24-Feb-96

960224:

~~~~~

- \* Ny version - 36.60
- \* Använder skärmens font för all gadget text om inget annat anges med GU\_DefTextAttr eller GU\_TextAttr. Buggfix från v36.59.

## 1.59 Changes 29-Apr-96

960429:

~~~~~

- \* Ny version - 37.0
-

- \* Satte in en ny funktion som kollar version.revision i ett library eller en device.
- \* Satte in två nya tags: GU\_FractWidth och GU\_FractHeight. Används för att t.ex tillverka två gadgets som är lika breda nedanför en annan. Negativt ti\_Data multiplicerar gadgetens bredd med ti\_Data, positivt värde dividerar bredden med ti\_Data.
- \* Fixade lite buggar i include filerna för 'C' (oavslutade kommentarer). Fixade en bugg som lyckats komma tillbaka i BetterTest.c. Sista instruktionen i programmet ska vara GU\_ReplyIMsg(msg), inte GT\_ReplyIMsg(msg).
- \* Satte in stöd för StormC i installations scriptet och include-installeraren. Gjorde ordlista för editorn i StormC, så att de ord (funktioner, tags, konstanter) som hör till GadUtil visas i andra färger.

## 1.60 Changes 01-May-96

960501:

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- \* New version - 37.1
- \* Fixed the bug in the IMAGE\_KIND gadgets. The normal image was not displayed right if you used multiple colors.

## 1.61 Changes 02-May-96

960502:

~~~~~

- \* New version - 37.2
- \* Started programming in StormC. Found a couple of bugs in the include files. Fixed.
  - \* Included an example in C. It uses PROGRESS\_KIND gadget and 8-color gadgets.

## 1.62 Changes 10-May-96

960510:

~~~~~

- \* New version - 37.3
  - \* Some enforcer hits fixed in the part that checks GU\_AdjustLeft and GU\_AdjustRight tags.
  - \* GU\_ClearWindow - New function that clears/fills the inner part of a window with a given color.
-

- \* GU\_SizeWindow - New function that is a replacement for the intuition functions SizeWindow, MoveWindow and ChangeWindowBox. If the window will fit on the screen, this function works as SizeWindow, otherwise it will try to move the window to make it possible to resize it.
- \* Bug fix in assembly includes "Malformatted line..."

## 1.63 Changes 13-May-96

960513:

~~~~~

- \* New version - 37.4
- \* Created a new gadget kind: LABEL\_KIND. This gadget kind is used to place text relative to other gadgets, bevel boxes, and other texts. Can use the same type of shadows that the text for the bevel box.
- \* Implemented a new function in the library: GU\_CloseFont. Works like graphics CloseFont, but takes the parameter in A0 instead of A1.
- \* Wrote a new document, "GadUtil.index", that have a list over all gadutil functions, sorted by what they do. There are also some shortcuts to all tags for gadutil's own gadget kinds.
- \* Created two new flags for BEVELBOX\_KIND and LABEL\_KIND:  
BB\_3DTEXT - can be used as a replacement for GUBB\_3DText, TRUE  
LB\_3DTEXT - can be used as a replacement for GULB\_3DText, TRUE

## 1.64 Changes 14-May-96

960514:

~~~~~

- \* Replaced the list sort routine with a new one that sorts better.

## 1.65 Changes 15-May-96

960515:

~~~~~

- \* New version - 37.5
- \* A little bug in the PROGRESS\_KIND gadget was fixed. A division by zero was done if the progress gadget was set to show x/0 (also 0/0). ↔

## 1.66 Changes 29-May-96

960529:

~~~~~

- \* Two new constants created for the include files: GADUTIL\_VER and GADUTIL\_REV. Can be useful together with the function GU\_CheckVersion to check the version of GadUtil.
- \* Changes in almost all test (demo) programs. The FPF\_DISKFONT flag in the TextAttr structure was unset for all demo programs. Replaced the manual version check, in the programs that checked the version, to GadUtil's own function GU\_CheckVersion.
- \* Removed unnecessary IDCMP flags from the demo programs, and replaced all GadTools IDCMP flags with the tag GU\_MinimumIDCMP.

## 1.67 Changes 12-Jun-96

960612:

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- \* New version - 37.6
  - \* gu\_Active in the structure that gg\_UserData points to was not updated when using any routine that used GU\_SetGadgetAttrs(). Now it checks the gu\_Active value to see if it is out of the gadget's limits. This check is done a bit different depending on the gadget type:
 

CYCLE\_KIND, LISTVIEW\_KIND:  
The selected value is set to max if it is greater than the maximum allowed value. LISTVIEW\_KIND gadgets can have an empty list attached, and the selected value will then be set to -1 (no selected entry).

SCROLLER\_KIND:  
The selected value is set to Total-Visible if it is greater than the maximum allowed value.

SLIDER\_KIND:  
The selected value is set to max if it is greater than the maximum allowed value. If it is less than the minimum allowed value, it will be set to the min value.
  - \* gng\_Flags and gng\_GadgetText is now cleared before creation of every new gadget.
  - \* The LAYOUTA\_Spacing tag for LISTVIEW\_KIND gadgets is now used to determine the height of the gadget. If the height of a gadget should be about 4 lines (GU\_HeightFactor, 4), the height of the gadget is calculated to 4\*(font height+value of LAYOUTA\_Spacing tag). The same method is used for the GU\_AddHeiLines tag.
-

- \* Hotkeys for LISTVIEW\_KIND gadgets works as they should again. In v37.5 of GadUtil (and probably some earlier ones), the listview didn't scroll down when you selected the next entry.
- \* Inserted pragmas and prototypes for tagcalls (pragmas only for SAS/C). It is possible to create stub routines for the tagcalls for other compilers by using fd2pragma 2.0.
- \* Inserted links to the include files in the index file for GadUtil.guide.

## 1.68 Changes 12-Jul-96

960712:

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- \* New version - 37.7
- \* Bug fix in the prototype for GU\_ChangeStr (two parameters was mixed up).
- \* GU\_ChangeStr now works for both STRING\_KIND and TEXT\_KIND gadgets. If the gadget isn't a STRING or TEXT gadget this function does nothing.
- \* Bug fix in GU\_CoordsInGadBox function. The register D3 was trashed in all earlier versions of GU.
- \* gu\_Active in the extra data structure now contains a pointer to the current string in a STRING\_KIND or TEXT\_KIND gadget. gu\_Active is also used by the INTEGER\_KIND and the NUMBER\_KIND gadgets to store the current value.
- \* Three new tags allows any STRING or TEXT\_KIND gadget to show a (localized) help text for each gadget in the window. These tags also works with the special gadgets (BEVELBOX, LABEL, PROGRESS). The gadgets attached to the window is scanned in sequential order. If a BEVELBOX\_KIND gadget matches the pointer position, this gadget's help string will have the lowest priority. If another BEVELBOX is found inside this, the help string for that one will be used if there is no gadget inside that box. The help text can alternatively be shown in the window's or screen's title.

## 1.69 Changes 15-Jul-96

960715:

~~~~~

- \* New version - 37.8
- \* Some bug fixes in the new help functions. If 0 was used as data on a `GU_HelpText` tag with a gadget that shows the help text in the window's or screen's title, there were some enforcer hits
- \* Deleted the separate autodoc files. Appended some information on the contents of the `GU_Public` structure to the autodocs. More info about `SCRTITLE_HELP` and `WINTITLE_HELP` was also appended.



- \* Changed the help function so that all gadgets and title bars that are used to display help strings is cleared if the mouse pointer is outside all gadgets that have help texts. ↵

## 1.70 Changes 22-Dec-96

961222:

~~~~~

- \* New version - 37.9
- \* 6 new tags added for the help functions. It is now possible to set a default help text that will be shown if no gadget is under the pointer.
  - GU\_DefWTitle - default window title
  - GU\_DefLocWTitle - localized window title
  - GU\_DefSTitle - default screen title
  - GU\_DefLocSTitle - localized screen title
  - GU\_DefHelpText - default help text
  - GU\_DefLocHelpText - localized help text
- \* A little bug removed from the help routines. Versions before 37.9 could display two different help text at the same time (in different gadgets or the screen or window title). ↵
- \* A new include file is included in the distribution now. Now it should be possible to compile the examples with older versions of the system include files (OS 2.0x includes are supported now)
- \* A third archive with the HTML version of the GadUtil documentation is included in the distribution now. Also included with this archive is some pictures of applications using GadUtil.
- \* The distribution has changed a bit, resulting in that the archive with all files became smaller (developer archive only).

## 1.71 Changes 10-Aug-97

970810:

~~~~~

- \* Internal version 37.9a
  - \* Changed the GU\_NoCreate tag, so that it works with single gadgets too.
  - \* Internal version 37.9b
  - \* 6 new tags to store position, size and the bottom corner of a gadget in an external variable.
    - GU\_StoreLeft, GU\_StoreTop, GU\_StoreWidth, GU\_StoreHeight
-

```
GU_StoreRight,  GU_StoreBottom
```

takes a pointer to a word as a parameter

## 1.72 Changes 28-Sep-97

```
970928:
```

```
~~~~~
```

```
* New version - 37.10
```

```
* Just felt it was time to bump the revision and make a release again... :)
```

```
* New for the distribution is include files for E
```

## 1.73 Summary of all changes

```
Short summary of all changes since 08-Dec-94
```

```
~~~~~
```

```
* New routines:
```

```
- GU_FreeGadgets   - GU_CoordsInGadBox
- GU_SetGUGadAttrsA - GU_GetGadgetPtr
- GU_TextWidth     - GU_GetLocaleStr
- GU_CreateLocMenuA - GU_OpenCatalog
- GU_CloseCatalog - GU_DisableGadget
- GU_SetToggle     - GU_RefreshBoxes
- GU_RefreshWindow - GU_OpenFont
- GU_NewList       - GU_ClearList
- GU_DetachList    - GU_AttachList
- GU_AddTail       - GU_ChangeStr
- GU_CreateContext - GU_GetGadgetAttrsA
- GU_CreateMenusA  - GU_FreeMenus
- GU_LayoutMenuItemsA - GU_LayoutMenusA
- GU_GetVisualInfoA - GU_FreeVisualInfo
- GU_BeginRefresh  - GU_EndRefresh
- GU_FilterIMsg    - GU_PostFilterIMsg
- GU_ReplyIMsg     - GU_DrawBevelBoxA
- GU_FindNode      - GU_NodeUp
- GU_NodeDown      - GU_UpdateProgress
- GU_SortList       - GU_CheckVersion
- GU_ClearWindow   - GU_SizeWindow
- GU_CloseFont
```

```
* New tags / constants:
```

```
- GU_AdjustBottom - GU_AdjustRight
- GU_AddLeftChar  - GU_AddTopLines
- GU_AddWidChar   - GU_AddHeiLines
- GU_FractWidth   - GU_FractHeight

- GU_MinimumIDCMP

- GU_HelpGadget   - GU_HelpText
- GU_LocaleHelp
```

---

- GU\_DefWTitle      - GU\_DefLocWTitle
- GU\_DefSTitle      - GU\_DefLocSTitle
- GU\_DefHelpText    - GU\_DefLocHelpText
  
- GU\_StoreLeft      - GU\_StoreTop
- GU\_StoreWidth     - GU\_StoreHeight
- GU\_StoreRight     - GU\_StoreBottom
  
- WINTITLE\_HELP     - SCRTITLE\_HELP
  
- GUBB\_FrameType    - GUBB\_TextColor
- GUBB\_Recessed     - GUBB\_TextPen
- GUBB\_Flags        - GUBB\_3DText
- GUBB\_ShadowColor   - GUBB\_ShadowPen
  
- BFT\_BUTTON        - BFT\_RIDGE
- BFT\_DROPBOX       - BFT\_HORIZBAR
- BFT\_VERTBAR
  
- BB\_TEXT\_ABOVE     - BB\_TEXT\_IN
- BB\_TEXT\_BELOW     - BB\_TEXT\_CENTER
- BB\_TEXT\_LEFT      - BB\_TEXT\_RIGHT
  
- BB\_TEXT\_ABOVE\_CENTER   - BB\_TEXT\_ABOVE\_LEFT
- BB\_TEXT\_ABOVE\_RIGHT
  
- BB\_TEXT\_IN\_CENTER   - BB\_TEXT\_IN\_LEFT
- BB\_TEXT\_IN\_RIGHT
  
- BB\_TEXT\_BELOW\_CENTER   - BB\_TEXT\_BELOW\_LEFT
- BB\_TEXT\_BELOW\_RIGHT
  
- BB\_SHADOW\_DR      - BB\_SUNAT\_UL
- BB\_SHADOW\_UR      - BB\_SUNAT\_DL
- BB\_SHADOW\_DL      - BB\_SUNAT\_UR
- BB\_SHADOW\_UL      - BB\_SUNAT\_DR
  
- GULB\_TextColor    - GULB\_TextPen
- GULB\_Flags        - GULB\_3DText
- GULB\_ShadowColor   - GULB\_ShadowPen
  
- LB\_TEXT\_TOP        - LB\_TEXT\_MIDDLE
- LB\_TEXT\_BOTTOM     - LB\_TEXT\_CENTER
- LB\_TEXT\_LEFT       - LB\_TEXT\_RIGHT
  
- LB\_TEXT\_TOP\_CENTER   - LB\_TEXT\_TOP\_LEFT
- LB\_TEXT\_TOP\_RIGHT
  
- LB\_TEXT\_MIDDLE\_CENTER   - LB\_TEXT\_MIDDLE\_LEFT
- LB\_TEXT\_MIDDLE\_RIGHT
  
- LB\_TEXT\_BOTTOM\_CENTER   - LB\_TEXT\_BOTTOM\_LEFT
- LB\_TEXT\_BOTTOM\_RIGHT
  
- LB\_SHADOW\_DR      - LB\_SUNAT\_UL
- LB\_SHADOW\_UR      - LB\_SUNAT\_DL

---

- LB\_SHADOW\_DL      - LB\_SUNAT\_UR
- LB\_SHADOW\_UL      - LB\_SUNAT\_DR
- LB\_3DTEXT
  
- GUPR\_FillColor    - GUPR\_FillPen
- GUPR\_BackColor    - GUPR\_BackPen
- GUPR\_Current      - GUPR\_Total
  
- FILEKIND\_WIDTH    - FILEKIND\_HEIGHT
- DRAWERKIND\_WIDTH   - DRAWERKIND\_HEIGHT
  
- GADUTIL\_VER       - GADUTIL\_REV

\* The Hotkey part:

- AllocRemember is used to allocate the extra structure
- Hotkey support for IMAGE\_KIND gadgets
- Better Hotkey support for GENERIC\_KIND toggleselect

\* Changed routines:

- GU\_SetGadgetAttrsA only replaces the GadTools function.
- GU\_GadgetArrayIndex returns -1 if an error occur.
- .CalculateGadget returns -1 if an error occur.
- Some of the tag checking routines joined together
- GU\_GadgetArrayIndex uses reg A0 externally as arraypointer

\* New / changed gadget types:

- MX\_KIND is now able to use gng\_GadgetText, as all other gads.
- All tags uses the last given value
- GTLV\_ShowSelected now works with gadgets created by GU\_LayoutGadgetsA.
- Started to create BORDER\_KIND, but it became BEVELBOX\_KIND
- BEVELBOX\_KIND has 3 main "gadget" kinds
- Two new BEVELBOX\_KIND gadgets added
- 9 different ways to place text in BEVELBOX\_KIND
- 4 different shadows on the bevelbox text

\* Other:

- Debugging of OpenLib (initRoutine) added
  - Debugging of Close and Expunge
  - New routine to open libraries in initRoutine
  - Allocates memory for local data in LayoutGadgetsA
  - Removed the routine FindTag (the same as GU\_FindTag)
  - Created a subroutine to create gadget labels
  - Bug fixes, some optimizing
  - Moved a part of the hotkey structure to the include file
  - Created a "real" library base in the test program
  - Made it easy to switch test program inside the library
  - Created a startup code for all external test programs
  - Wrote include files for SAS/C
  - Changed all routines to return the results in D0
  - Wrote the .FD file and converted to Pragma files for 'C'
  - Wrote a installation script for include files, using AskEnv
  - Rewrote the 'BetterTest' program in 'C'
  - Wrote the beginning of all autodocs (one file for every function)
  - Some routines now sends back useful result in SR
  - The library opens diskfont.library if possible
  - Made it possible to edit includes from the install program
-

- More debug information added. Shows the whole NewGadget struct.
- New test programs

## 1.74 A list of possible future enhancements

Later:

~~~~~

Ideas for later versions of GadUtil.library  
 ~~~~~

```
*****
* THIS LIST IS UNSORTED. EVERYTHING WRITTEN      *
* HERE CAN/WILL BE IMPLEMENTED IN THE ORDER ANY *
* OF US DECIDES TO IMPLEMENT IT IN.             *
* ALL NEW IDEAS IS IN FIRST IN THE LIST.         *
*****
```

- \* Make GU\_CreateBevelBoxA possible to handle more kinds of bevel boxes.
- \* Create a GU\_GetGadgetAttrsA that works on v37.
- \* Write include files and test programs for other programming languages. The possible additions are:
  - Oberon ( Oberon 1.4B is almost PD (GNU) )
  - Modula2 ( Amiga Turbo Modula-2 v1.0d (demoversion 2k) )
  - Pascal ( HiSoft Pascal)
  - E ( v3.0e demoversion, 32k exe)
- \* Make it possible to let GadUtil open asl-requesters by itself by using some new tags for the FILE\_KIND and DRAWER\_KIND gadgets.
  - Possibly new tag for FILE\_KIND: GUFIL\_AslTags
  - Possibly new tag for DRAWER\_KIND: GUDR\_AslTags
- \* Create a new built-in IMAGE\_KIND gadget. This gadget will open the font requester, screenmode requester, or just send a IDCMP\_GADGETUP. The name of it will probably be "SELECT\_KIND".
  - Tag to send font requester tags: GUSE\_FontTags
  - Tag to send scrmode requester tags: GUSE\_ScrModeTags
- \* Create something that allows easy creation of a lot of gadgets at the same time (e.g. 5 rows with 4 gadgets in each row, or 50 gadgets on 6 rows). When using this function, the passed in GadgetID will be used for the first gadget. For all later created gadgets this ID will be incremented by one.
- \* Make GU\_AdjustLeft, GU\_AdjustRight and GU\_AdjustBottom work with MX-kind gadgets.
- \* Implement BOOPSI look for IMAGE\_KIND gadgets with two images.
- \* Fix that little annoying memory leak when changing the image of a IMAGE\_KIND gadget.
- \* Make it possible to change the "selected" image in a IMAGE\_KIND

gadget with two images.

## 1.75 Something to remember when any of us are writing something new

- \* Allocate memory for all tag lists and variables. I have used the stack for small tag lists (less than 4 tags). An example of using stack as a tag list is in GU\_RefreshBoxes.
- \* Change version in all include files when the revision is bumped.
- \* Change all include files when a new tag or function is created. The files that needs to be changed is:

New functions:

- clib/gadutil\_protos.h (insert at the end of the file)
- FD/gadutil\_lib.fd (insert at the end of the file)
- libraries/gadutil\_lib.i (insert at the end of the file)

New tags and constants:

- libraries/gadutil.h (insert in the right group of values)
- libraries/gadutil.i (insert in the right group of values)

No changes needed:

- proto/gadutil.h

- \* Write in the most (or all ?) changes in the library in this file. Very small changes isn't so important, but things like new tags, new functions, bug fixes may be documented here.
- \* Write new ideas and maybe short descriptions of how they can be implemented in the <A HREF="later.html"> Later </A> node.
- \* This file will not be included with the distribution, so it can be used to write anything (which has something to do with the library) in.

Some parts of this file will maybe be in the final distribution since it documents a lot of tags, functions and bug fixes.

Well... it seems like it needs to be included anyway... :)

- \* Fill in new things to remember when creating new functions and tags in this node.