bgui

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bgui

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            BGUI release 1.0
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1.2   bgui.guide/Preface

Preface
****

                         BGUI release 1.0
                (C) Copyright 1993-1994 Jaba Development
                (C) Copyright 1993-1994 Jan van den Baard
                     Written using DICE v3.0 by

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            when you absolutely need an anwser and (don't forget
                  this) include enough return postage.

                         User Manual
                (C)Copyright 1993-1994 Jaba Development

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                     (_____)

I have thought about how to release this package for quite some time. My initial thought went out to shareware but I soon forgot about this. Since most of the libraries of this kind seem to be shareware I do not think that many people like this simply because it's anoying to have to pay for a library if you had to pay for the application as wel.

To avoid these problems I have decided to release this package as giftware for people writing freely distributable software. With "freely distributable software" I mean non-crippeled, free of charge software. Authors who wish to use BGUI in shareware and/or commercial programs must pay for the usage of BGUI before actually using it.

ShareWare and/or commercial usage is not allowed without:

    1) Prior written permission from the author.
    2) A small finacial donation of US$ 20,-, DM 30,- or HFL 30,-.
    3) A free and registered copy of the product including free updates that
       still make use of the library.

The idea behind this distribution policy is simple. You make money with the aid of BGUI? I want to get my (very humble) share.

This software is not crippeled so when you register it you will not recieve a key-file or an updated version. Registering simply buys you the right to use this software in shareware and/or commercial applications.

Resonable, eh?

1.3 bgui.guide/Introduction

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Introduction
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BGUI is a BOOPSI based shared library contaning a number of BOOPSI classes. It allows for easy creation and managing of font sensitive and size adjustable GUI's on the Amiga. Hmm, where have I read something like this before..., I hear you say.

YES! This is yet another GUI library. I know there has been a lot of discussions about the usabillity and neccesity of GUI libraries on the nets lately. Still, being the ignorant bugger that I am, at some point I felt it was necessary to write yet another one.

Believe me when I say that BGUI was not intended to become a releasable project. I started coding BGUI simply because I was amazed what MUI did using BOOPSI. Therefore I started coding some BOOPSI classes as a learning experience.

   Hmmm... This is beginning to sound like an excuse... As if I did something
terrible ;)

   The point is that, while working on BGUI, I saw many GUI libraries being
released and not one of them really seemed to take off. This made me think
that all this talk about "For every app I run I need to install a different
GUI library" really is bull. Please correct me if I'm wrong but I have yet to
see a program requiring a GUI library (with the exception of MUI ofcourse).

   Sure there are a lot available but MUI is the only one which actually seems
to be used by the programmers.

   This is the reason for BGUI. I have tryed to create a library which does
it's thing simular to MUI eliminating the biggest problems that programmers
seem to have with MUI. Meaning no fancy
background-pen-frame-text-image-whatever settings editor, not a zillion extra
images, no external class libraries etc.

   BGUI is a single library which can be removed as easely as it can be
installed. It provides an easy way to create and control GUI's without becoming
excessive in what it does.

   I guess time will tell if BGUI is going to be accepted or not...

1.4 bgui.guide/Features

Features
****

   * Requires at least OS 2.04 (Yes, that is a feature :)

   * Extends on the existing system gadgetclass and rootclass.

   * Creates completely font sensitive GUI's.

   * Supports sizable windows.

   * AppWindow support.

   * Titled group-frames and seperators.

   * Supports OS 3.0 when available.

   * Style Guide compliant.

   * Keyboard control of most gadget classes.

   * Several types of notification to create "self driven" GUI's.

   * Easy intergration of third-party classes.

   * Easy to make your class work directly with BGUI.

* Object oriented.

* Resonable speed, even with a 68000 processor.

* Relatively small library.

* Classes for easy filerequester and commodity creation.

* Seperate ARexx class including source code.

1.5 bgui.guide/Requirements

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Requirements
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BGUI requires at least version 2.04 of the operating system. It does not run on 1.3 systems. Are there still people running 1.3?

BGUI also requires the following disk-based libraries to operate:

* gadtools.library   (V37)   (menus)

* asl.library   (V37)   (filereq class)

* commodities.library   (V37)   (commodities class)

The following libraries are not required but they will impose on the functionality of the library when not available:

* locale.library   (V38)   (localized library strings)

* amigaguide.library   (V37)   (On-line help)

* workbench.library   (V37)   (App-window support)

It should not be a problem to use BGUI on a system with 512KByte but a minimum of 1 Megabyte is suggested as a minimum.

1.6 bgui.guide/Installation

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Installation
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The installation of BGUI is very simple. You can either use the Installer utility by C= which will install the library for you or you can copy the bgui.library to your LIBS: directory or into a directory you might have setup for non-system libraries.

Where you put the headers/modules for the language you use is up to you. Since the different compilers and users use different directory structures I

did not supply a script for you to install these. You'll have to do this by
hand.

1.7   bgui.guide/Read Me

Read Me
****

   * The bgui.library is a special library in the sence that it is a single
     task library. This means that every task using the library must open the
     library for itself. The library base pointer may not be shared between
     different tasks.

     The reason for this is that the library tracks information like window
     bounds etc. This tracking is done for each individual task.

     So if your code spawns a sub-task which needs the library, the sub-task
     code must open the library for itself. It may not share it with the main
     task.

   * The object ID's (gadgets and menus) are restricted to the range 1..65535.
     ID's smaller or larger than this are not allowed. This should not be a
     problem :)

   * When designing custom classes to work with BGUI please try to keep your
     tag values and method ID's well out of the range of the BGUI tag values
     and method ID's. Using values that conflict with the BGUI values may have
     unexpected results.

1.8   bgui.guide/Keyboard & Mouse

Keyboard & Mouse
****

   Most of the BGUI gadget objects can be controlled by the keyboard. Usually
the key that is used to control an object is shown by an underlined character
in the object it's label. The objects can be controlled as follows:

   *   Button – Pressing the key will make the object appear pressed. If you
         release the key the object appears normal again and the application is
         signalled that the object was selected. When you accidentally activated
         the button you can press SHIFT or ESC before releasing the key to cancel
         the selection.

   *   Toggle Button – Pressing the key will toggle the selected state of
         the toggle button.

   *   CheckBox – Pressing the key will toggle the selected state of the
         checkbox object.

*   Prop (Scroller) - Pressing the key will advance the knob position by
one page. When you press the key together with SHIFT the knob will backup
one page. You can reset the knob position when you are dragging the knob
with the mouse by clicking on the right mouse button.

*   Listview - Pressing the key will select the next entry in the list
scrolling the entries when necessary. Pressing the key together with
SHIFT will select the previous entry. Read only listview objects will
simply scroll the list forward and backward.

*   Cycle - Pressing the key will cycle one choise forward. Pressing the
key together with SHIFT will cycle one choise backward. Selecting the
gadget with the mouse while holding down the SHIFT key will also make the
gadget cycle backward. When the cycle gadget was setup to be a popup
gadget by the application programmer you can click inside the label area
to pop-up a menu from which you can select the desired item. You can
recognize a popup gadget by the imagery left of the label area. Normal
cycle gadgets have a circular arrow here and popup gadgets have a small
menu here.

*   Slider - Pressing the key will advance the knob position by one.
Pressing the key together with shift will decrease the knob position by
one. You can reset the knob position when you are dragging the knob with
the mouse by clicking to on the right mouse button.

*   String,Integer - Pressing the key will simply activate the gadget.

As you can see this behaviour is mostly style guide compliant with some
additional possibilities.

1.9   bgui.guide/Disclaimer

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1.10   bgui.guide/License

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                  License
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1.11 bgui.guide/History

            History
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            V37.12

            V37.13

            V37.14

            V37.15

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            V37.21

            V37.22

            V37.23

            V37.24

1.12 bgui.guide/V37.11

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V37.11
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   * Started written history...

   * Added the PROGRESS_Divisor tag for those extremely large values.

   * BUG FIX: The progress class object could fill the gauge 1 pixel to far in
     some cases. Added some extra code to prevent this from happening.

   * Added the external class. This class makes it easy to include third party
     classes like the colorwheel.gadget in a BGUI user interface. Still have
     major problems handling notification though...

   * Added the WM_ADDUPDATE method to the window class. This method makes it
     possible to connect an external class object to another object to perform
     simple icclass style notification.

1.13 bgui.guide/V37.12

```
V37.12
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```

   * BUG FIX: The layout engine sometimes layouted an object one or two
     pixels to small. Added some extra code to prevent this from happening.

   * Added the LGO_Align attribute to enhance the layout procedure.

   * BUG FIX: The stringclass screwed up in computing it's minimum size when
     it did not have a frame attached to it.

   * BUG FIX: The layout engine sometimes GURU'd. Ooops. Should be fixed now.

   * BUG FIX: The LISTV_RenderHook did not setup the entry correctly in the
     lvRender structure.

   * Added the LVM_REMENTRY method which can be used to remove single entries
     from a listview.

   * Added the LVM_REFRESH method to refresh the listview object after
     adding/removing some entries.

   * BUG FIX: The infoclass computed the maximum width of the formatted text
     one pixel to small.

1.14 bgui.guide/V37.13

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V37.13
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  * BUG FIX: The window class did not succeed in opening a screen size window
    when the screen was smaller than it's default size.

  * BUG FIX: The listview class did not refresh the list correctly when a
    single entry was added.

  * BUG FIX: Fixed the AddEntryVisible macro in bgui_macros.h.

  * BUG FIX: Fixed a couple of bugs in the string class. Bugs found by Paul
    weterings.

  * BUG FIX: The Toggle() and KeyToggle() macros from bgui_macros.h did not
    make it possible to set a toggle button selected by default. Note that
    these macros require an additional parameter now. Bug found by Paul
    Weterings.

1.15 bgui.guide/V37.14

V37.14
======

  * BUG FIX: The online-help system of the gadget objects did not work at all.

  * BUG FIX: The drop-box frame used incorrect spacing when the
    FRF_THIN_FRAME flag was set. The radio-button frame totally ignored the
    FRF_THIN_FRAME flag. Bugs found by Paul Weterings.

  * Added the LISTV_TitleHook attribute to the listview class. This hook
    makes it possible to render a title entry in the listview object. Can
    come in handy with multi-column listviews.

  * Re-arranged and adjusted the source for DICE V3.0 commercial. Boy oh boy
    it really is picky about correct prototyping now...

  * The list class now uses the memory pool routines from the 3.1 amiga.lib.
    This means working memory pools even on 2.04.

  * BUG FIX: The group class did not always yield the correct results when
    requesting the minimum size of another group. This resulted in a
    wrong-sized mx object when it had a label attached to it.

1.16 bgui.guide/V37.15

V37.15
======

  * Added task-relative information tracking. This means that from now on the
    library is a SINGLE-TASK-LIBRARY. If your code spawns a sub-task that
    requires the use of BGUI then this sub-task must open the library itself.

It may not share the base pointer with the main-task.

* Added the WINDOW_UniqueID attribute to give a window a unique ID of your
  choise. This ID is used by the task-relative information tracking to
  store the window size/position even when you dispose of the object and
  re-generate it.

* Added the LVM_SORT method for re-sorting the entries in a listview
  object. Also added the SortList() macro in bgui_macros.h for this purpose.

* Made the flag bits of the frameclass and labelclass also available as
  boolean tags. This allows for easier switching of single flags.

* BUG FIX: The lvma_Entry field of the lvmAddSingle structure was defined
  as (APTR *) while it should be (APTR).

1.17   bgui.guide/V37.16

V37.16
======

* You can now reset the knob of a sliderclass or propclass object to it's
  initial setting by pressing the right mouse button before releasing the
  left-button.

* Added the WINDOW_Window attribute to enable you to obtain a pointer to
  the window structure of a windowclass object.

* Started keeping up with the source code revisions using the Revision
  Control System (RCS) supplied with DICE 3.0.

1.18   bgui.guide/V37.17

V37.17
======

* BUG FIX: The buttonclass now takes the design size of a vectorclass image
  into consideration when computing it's minimum size. Bug found by Wouter
  van Oortmersen.

* BUG FIX: Fixed the rendering bug of objects on invisible pages. Bug found
  by Paul Weterings.

* BUG_FIX: Fixed the enforcer hits of Infoclass objects in a Pageclass
  object. Bug found by Paul Weterings.

* Added a XEN style button frame to the frame class. Also added some new
  macros to the bgui_macros header specially for this purpose.

* Added XEN macros in the bgui_macros.h file for the checkbox and cycle

objects.

* Added the GROUP_BackFill attribute to supply a group backfill possibility
  without a group frame.

* Added the BREQF_XEN_BUTTONS flag to supply the requester buttons with a
  XEN style frame.

1.19   bgui.guide/V37.18

V37.18
======

* BUG FIX: The infoclass sometimes screwed up with text-styles. I'm not
  sure if this was a bug in the infoclass itself but I have coded a
  work-around to the problem.

* Optimized setting pens and drawmode in a rastport. Now the code checks
  the pens and drawmode to see if it needs to change. Should speed up the
  rendering somewhat.

* BUG FIX: When flushing the library from memory while one or more of the
  classes failed to free could result in a GURU. This should not happen
  anymore.

* Added the seperator class which adds the possibility to seperate groups
  with a single 3D line with or without a title. Also added a couple of
  macros to bgui_macros.h for this purpose.

1.20   bgui.guide/V37.19

V37.19
======

* BUG FIX: The stringclass by default used the wrong pens to render it's
  contents. Now the correct pens are used by default keeping track of user
  set pens.

* Added some simple macros for NewMenu definitions in the bgui_macros.h
  header.

* BUG FIX: Drag-selecting menus would result in replying a non-existant
  IntuiMsg (enforcer hits... GURUs... ouch!)

* BUG FIX: Fixed a bug that caused rendering object labels in the wrong
  color when the object was selected and the label was located outside the
  object hit area.

* BUG FIX: The HorizSlider() macro was broken.

* BUG_FIX: Some classes screwed up computing their minimum size when the
  label was located above or below the object. This should not happen
  anymore.

* Extended the Listview class rendering hook result code. When the hook
  returns non-NULL the class will see this as a string and render it. A
  result code of NULL is ignored. Please read the LISTV_DisplayHook section
  of the listviewclass.doc file for more information on this subject.

* Added hook-notification to the baseclass. Please refer to the
  baseclass.doc file for more information on this subject.

* BUG FIX: Fixed a small bug in the tab-cycling code of the string class.
  The bug caused non-tabcycling gadgets to notify the event-handler when it
  was de-activated.

* BUG FIX: The AddEntrySelect() macro was broken.

* Added the LVM_LOCKLIST and LVM_UNLOCKLIST methods to the listview class.
  These methods should have been in there from the beginning to prevent
  strange results when somebody is fiddling with the listview while you are
  changing one of it's entries.

* BUG FIX: While converting a text-editor I'm writing to BGUI I came
  accross a buch of small bugs bugs in BGUI. These (I shall not list them)
  should be fixed now.

* BUG FIX: When using a shared window port for the BGUI windows it would
  happen that the event handler did not get the initial IDCMP_ACTIVEWINDOW
  message because the port is added to the window after it is opened. Now
  the code will manually activate the window when the WA_Active tag is TRUE
  after the port has been added.

1.21 bgui.guide/V37.20

V37.20
======

* Changed the behaviour of the WINDOW_UniqueID tag when the
  WINDOW_PosRelBox tag is also used. Please refer to the WINDOW_UniqueID
  section of the windowclass.doc file for more information.

* Added some extra code to ensure that the window sizing-gadget size is
  computed correctly. This will ensure the correct operation with patches
  like SysIHack. One note about SysIHack... When using the PGA_NewLook
  feature SysIHack renderes the proportional gadget left&and up from the
  intended location and to big and it ignores the PGA_Borderless tag. I
  would report this to the author of SysIHack if only I knew who Mr. BOOPSI
  was :)

* BUG FIX: The progress class now checks frame thickness before filling the
  indicator.

* BUG FIX: Fixed the PACKPENS() macro in bgui_macros.h. Docs clearly state

"packed as two WORDs into a longword" but as it seems it should be two
bytes in a word? Am I wrong???

* BUG FIX: After testing BGUI on another public screen with a BACKGROUNDPEN
different from 0 it came to my attention that BGUI had some problems with
this. Now all rendering should occure OK with a different BACKGROUNDPEN
than 0. I have fixed the labelclass and vectorclass and added a
backfill-hook (WA_BackFill) to the windowclass to fix these problems.

* Added a pop-up menu option to the cycle class. Also added a couple of new
macros to bgui_macros.h to support this new option. Suggested by Jim
Cooper.

* The infoclass does not clip the text anymore when it won't fit. Now it
simply renders as much text as will fit in the area.

* Removed the text class completely. It was not a necessary class since the
infoclass can do the most important things that the text class could do.
The info class even does a better job at it. This also means that I
finally got rid of all rastport-clipping.

* The complete GUI is rendered in a buffer bitmap so that it can be made
visible in a single blit. This looks much smoother than rendering visible
on-screen. If a buffer cannot be allocated the rendering occures
on-screen.

* BUG FIX: It was possible to size an empty group to 0x0 which lead to
potentially dangerous situations. I have made all RectFill() that are
performed safe which means that the rectangle specified is checked for
wierd values.

1.22   bgui.guide/V37.21

V37.21
======

* Changed the imagery of the cycle gadget when it is in Popup mode. It is
not the best of imagery but it works. If anybody has a better idea let me
know.

* BUG FIX: A window with an ID and positioned relative to a rectangle would
be placed wrong if the window was to big for the used font. This does not
happen anymore but windows which grow to big for the used font and have
to use the fall-back font will not remember it's size.

* BUG FIX: Fixed a big-fat-stupid-lame-bug in the external class. I failed
to aply rule number one when writing a BOOPSI dispatcher by not using the
__geta4 (__saveds) qualifier. Bug found by Paul Weterings.

* BUG FIX: Using a frame and/or a label on the master-group caused the
rendering of this frame and/or label to be overwritten. Bug found by Paul
Weterings.

* Changed Xen frame rendering so that you get "rounded" corners. Looks much

better.

* Made the LISTV_Top attribute gettable as it should have been al along.

* BUG FIX: Some IDCMP bits where not accessable with an IDCMP hook. Should
  be fixed now.

* Added the EXT_NoRebuild attribute to handle external gadgetclasses which
  are smart enough to handle a resize themselves. Suggested by Paul
  Weterings.

* BUG FIX: The stringclass rendered through the active page when it's
  contents was changed. This also happened when the gadget was not located
  on the active page. Bug found by Paul Weterings.

* Added a method to the groupclass to insert members at any place into an
  already existing group. Suggested by Paul Weterings.

* The cycleclass notification (in popup mode) is now delayed until the menu
  window is closed. Suggested by Paul Weterings.

* The pageclass now also renders the current page in a buffer before it is
  shown. Note that this is only true when the page to show is a group.
  Suggested by Paul Weterings.

1.23 bgui.guide/V37.22

V37.22
======

* BUG FIX: LISTV_MakeVisible and LISTV_Select did not make the item
  visible. Bug found by Paul Weterings.

* Added a couple of macros to create non-fixed size checkbox objects.
  Suggested by Paul Weterings.

* Made the WINDOW_Screen and WINDOW_PubScreenName settable when the window
  is closed. Suggested by Paul Weterings.

* BUG FIX: The Popup menu of a Popup-Cycle object would not open on the
  correct screen when the window in which it resided was not located on the
  default public screen. Bug found by Paul Weterings.

* BUG FIX: Erasing the title area of a seperatorclass object did not yield
  the desired result when the area-pattern of the rastport was not cleared.

* BUG FIX: After running tests with memoration it came to my attention that
  the re-size oprations where not working properly if the buffer rastport
  could not be allocated.

1.24 bgui.guide/V37.23

V37.23
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   * Enhanced listview class scrolling a bit. The old routines had a lot of
     overhead because they simple re-rendered the complete list even if the
     top only changed one or two places.

   * Switching pages in a pageclass object looks smoother now.

   * Most small allocations are now made in memory pools instead of allocating
     them directly from the system memory pool.

   * Changed the operation of the WINDOW_SigMask, WINDOW_AppMask and
     COMM_SigMask attributes. Instead of OR'ing the mask value to the storage
     field the mask value is set now.

   * Added the WINDOW_Bounds attribute which can be used to open a window at
     the place and width the size that you want. Suggested by Paul Weterings.

   * Initial Public Beta Release... (30.09.94)

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V37.24
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   * Added the BT_HelpText and WINDOW_HelpText attributes to pop a requester
     with a help text instead of having to use AmigaGuide® for small help.
     This also results in a new BGUI catalog (version 2).

   * BUG FIX: BGUI did not recognize language changes. Now each time BGUI
     needs to access localized strings the catalog is refreshed before
     actually accessing the strings. This results in the strings always being
     in the preferred language.

   * Added the GROUP_EqualWidth and GROUP_EqualHeight attributes to make the
     members of a group all have the same minimum width and or height.

   * Made the WINDOW_Bounds attribute settable with OM_SET. You can set it
     when the window is closed or opened. Suggested by Paul Weterings.

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Future
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   This is a list of known bugs and quirks. Please read this before you start
sending me bug reports and suggestions.

```
BUG  = A bug that is still present.
SUG  = A suggestion which might be implemented in the future.
REV  = Revision and/or fine-tuning that still needs to be done.
MAY  = Maybe...
```

*   BUG - The MX class still can't be controlled by the keyboard. There
    is bug in the code which seems to prevent this from working the way it
    should.

*   BUG - The infoclass screws up computing it's minimum dimensions when
    the last thing in the text is a command sequence. Should not be a real
    problem since it is bullshit to end a string with a command sequence.

*   SUG - Automatic, aspect-ratio dependant thick-thin framing. Suggested
    by Paul Weterings.

*   SUG - Add a method to the listview class that enables the programmer
    to manipulate single entries in whichever way necessary. Suggested by
    Magne Oestlyngen.

*   SUG - A Palette selector class. External? Suggested by Paul Weterings.

*   REV - BGUI gadgets on intuition requesters is NOT supported yet.

*   REV - The commodity class could use some cleaning up. I'm not really
    satisfied with it as it is.

*   REV - The format of the library and class documentation files suck. I
    should convert them to "real" autodoc format or amigaguide files.

*   REV - Error reporting. It's OK that a window failed to open or an
    object failed to create but it would be nice to know why. Both numeric
    and textual error descriptions should be made available.

*   REV - Adding method, conditional and hook notification to the window
    class to. This will allow notification to happen on the application task
    instead of the input.device task.

*   REV - Adding a method to the listview class to move entries up&down
    in the list.

*   REV - Work on the menus. For now it is not possible to dynamically
    add items, add notification or help files to the menus. This really sucks.

*   REV - Try to cut down on the code size. Although, all things
    considering, BGUI is not excessive in size I'de like to see it smaller.

*   MAY - Letting the window backfill hook optionally make use of the
    preferred workbench window backfill pattern or picture.

*   MAY - Fonts and images in the info class.

*   MAY - Add a posibility to "snapshot" window sizes to disk. Should
    this be up to the application programmer? Suggested by Paul Weterings.

*   MAY - Take the layout engine of BGUI and make a seperate shared/link

library out of it. This would result in a +/- 10 KByte shared/link
library with the same functionality as the BGUI layout engine. Maybe this
will satisfy those people who are always bitching and complaining about
GUI engine libraries.

1.27   bgui.guide/Thanks To

Thanks To
****

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   Amiga.

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