

**guienvironment**

COLLABORATORS
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# Chapter 1

## guienvironment

### 1.1 GUIEnvironment Project Guide

GUIEnviroment

Version 37.61

General Guide

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FREWARE

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What is GUIEnviroment ?

Introduction  
A brief overview  
The sourcecode  
History

Copyright / Disclaimer

Copyright  
Disclaimer  
Contents of this distribution

Installation

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Past - Present - Future

What you should know

The Author

## 1.2 What is GUIEnvironment ?

This chapter gives a short description of what GUIEnvironment can do and why YOU should use it in your own programs.

Introduction

A brief overview

The sourcecode

History

If you are familiar with older versions of GUIEnvironment and you only want to have a look what's new in version 37.61, see chapter History .

## 1.3 Introduction

GUIEnvironment is a package which simplifies the creating and interacting with GUIs (Graphical User Interfaces). It consists of two parts:

- 1) The code generator which creates ready to run application modules out of GadToolsBox (© Jaba Development) files. So simply design your GUI with this great "interface builder" and then run GUIEnvironment on this and you don't have to worry anymore about the GUI !
- 2) The guienv.library and the geclass.library. The first library helps creating and handling GUIs and the second one is for sharing private BOOPSI classes.

Using GUIEnvironment will save you a lot of time when writing applications which take use of the Amiga GUI, although the guienv.library is very small. Your ready to run application will of course later only need the library !

Here are some examples of what the guienv.library does for you:

The developer must implement only the important parts of an applications. He must not care about the GUI and its handling, as the guienv.library does a lot of work by itself. The interacting with the input events is nearly complete managed by GUIEnvironment.

The guienv.library combines the gadtools.library features, the BOOPSI gadgets and some own GUI stuff.

The library interfaces are very simple but powerful. It was an important aim when designing the guienv.library to have short and simple to use

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interfaces to the GUI combined with the possibility of interaction whenever desired or needed.

This was achieved by using the OS2.04+ facilities, like amiga callback hooks and tag lists.

So there's no difference in handling gadtools gadgets and BOOPSI gadgets anymore.

But the most important fact of GUIEnv is - in my opinion - that you don't have to learn "a new programming method". There exist a lot of GUI libraries, but all of them offer a new method of describing the GUI with childs and parents and so on.

If you only want some support for your GUI and you don't need resizing, it is very frustrating to use those libraries.

GUIEnvironment offers the "old fashioned method" of defining GUIs together with the new one in a compatible way !

You only have to replace the names of the functions and structures from intuition and gadtools to those of GUIEnvironment. (OK, you will have to do just a little bit more, but not very much ...)

GUIEnvironment includes very powerful functions for fonts, screens, windows, gadgets, menus and GUI message handling.

All gadget kinds of the gadtools.library (OS2.04) are supported along with all BOOPSI gadgets and some own GUIEnvironment gadgets.

Due to this, it is now possible to resize and reposition all gadgets, even gadtools gadgets !

But this resizing is of course only possible if you tell GUIEnvironment how to resize ! So you have to describe the GUI - just for this purpose - in an "object orientated way": You say, e.g. this gadget is so and so many points away from that gadget and the distance between the border and the gadget is so and so.

The GUI can also be adapted to every font automatically. So it is easy to design GUIs for the workbench which fit to the user's preferences without any extra work !

All the GUI's message handling is done by GUIEnvironment, this means: E.g. gadgets like cycle kind, mx kind or string kind are handled automatically by GUIEnv. The application only has to care for "action" gadgets like button gadgets or menus.

This was achieved by "binding" a variable to a gadget. Each time the gadget status changes, the variable is updated by GUIEnvironment. So if you need the current state of the gadget, you simply check the variable ! There is no boring message handling any more for such gadgets !

For example, you are writing a configuration editor with a lot of cycle, mx, string and checkbox gadgets. There will also be two button gadgets for saving or cancelling !

If you don't use GUIEnvironment, you have to check every message and then remember the status of the gadget. Even worse, if you need string gadgets, then you have to update all these string gadgets before saving, because the user could have left the string gadget without pressing return. (In this case you don't get any message !)

But WITH GUIEnvironment, you tell, when creating the gadgets, which variable belongs to which gadget. (For example a string gadget gets an array of chars, a cycle gadget an integer and so on.)

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And now GUIEnv updates these variables for you each time a message for such a gadget arrives. Your application only needs to check the two button gadgets !

Key equivalents for gadgets are detected and handled automatically. The application sees no difference if the gadget was activated by a key or by the mouse pointer.

Callback hooks can be set for each gadget and menu item, so these functions are then called if the gadget resp menu item was activated. This method could be called "object orientated programming", because the whole application is controlled by sending messages to different objects, there is no (visible) main message loop.

GUIEnvironment offers an easy to use help function for gadgets and menus using the AmigaGuide without bothering the application !

All gadgets and menu items can be automatically localized without any further functions !

Also included are very easy to use requester functions which are even able to use ReqTools (© Nico François).

Because GUIEnv was designed as a real shared amiga library you can use it within (nearly) every programming language.

## 1.4 A brief overview

Here a some "headlines" which illustrate the possibilities and features of GUIEnv. This list is NOT complete, but it gives a brief overview !

Features of GUIEnvironment

- GadToolsBox (© Jaba Development) Code Generator (M2Amiga and OberonA)
- Supports all gadgets kinds of gadtools.library
- Access of BOOPSI gadgets
- Simplified handling of fonts, screens, windows, gadgets and menus
- Independent handling of IDCMP messages, e.g.
  - do refreshing automatically
  - notify changes of gadgets
- Supports automatically key equivalents
- Font adaptable GUIs
- Access to all important structures dealing with GUIs
- Own gadget kinds like a progress indicator or bevel boxes
- Resizable gadgets
- Object orientated description of the GUI together with the usual way of describing GUIs
- Requester and AmigaGuide support
- ReqTools (© Nico François) requester support

Sorry, but as I was not able to reach Nico François (it seems that his

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EMail address is not valid anymore...) I didn't want to include the reqtools.library without asking him. If you haven't got it yet, you can get it also from the AMINET !

## 1.5 The sourcecode

GUIEnvironment was developed using the commercial M2Amiga-Modula2-Compiler Version 4.3 by the A+L AG.

GUIEnv actually was a Modula2 library module which was converted into a amiga shared library using m2lmc (© C. Ziegeler) !

As I will stopp developing on the Amiga, I offer the possibility to buy all the source of the whole GUIEnvironment for someone who is interested in expanding GUIEnvironment. If you are interested, please contact me !

## 1.6 History / Changes

This is a short extract of the developing history of GUIEnvironment. Every version explains the main differences to the preciding version.

### Version 37.2

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GUIEnv now checks for the locale.library (Thanks to F.J. Copeland and all the others from the Oberon-A mailing list !)

Removed the old hooks

Changed gadget handling

Font adaptive GUIs

ATTENTION: Because of the huge changes in this release, the guienv.library is not upward compatible ! But don't worry, as GUIEnv is public domain this will be no problem. And I swear from now on the library will be upward compatible !

First working version

### Version 37.3

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Font adaptive code now works correctly

### Version 37.4

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New font adaptive code for better results with proportional fonts

ReqTools (© Nico François) support

GadToolsBox (© Jaba Development) support for M2Amiga and OberonA

### Version 37.5

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Get File Image BOOPSI Class

GEClass Library for making private BOOPSI classes "public"

Many bugs in GEGen removed and improved GEGen

Totally localized requesters (guienv.catalog)

68020 version of the libraries

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Version 37.6

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Minor bug fixes in the guienv.library

Several bug fixes in GEGen

Notify Option for GEGen

Textfield gadget (© Mark Thomas) support via GEClass

Fixed problems under OS3.0 with Multiview/Amigaguide and guienv.library

Add to 37.61 (Final release)

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Changed interface modules and output of GEGen for OberonA 1.5

AmigaOberon interfaces are coming soon. (Thanks to Volker Stolz)

Take a look at the `Changes` guide to see a detailed description of all changes.

## 1.7 Copyright

GUIEnvironment software and documentation are ©1994 by Carsten Ziegeler.  
All rights reserved.

This package is freeware, this means that you can copy it freely as long as you don't ask any more money for it than a nominal fee for copying and as long as the complete GUIEnvironment distribution is included. (See chapter `Contents` ).

This package cannot be used for commercial purposes without the written permission from the author.

Also commercial distribution of the GUIEnvironment package is not allowed without written permission from the author .

None of the files of the GUIEnvironment package may be modified.  
Crunching or achiving is allowed only if none of the GUIEnvironment files get modified by it.

If you use GUIEnv you HAVE TO include a remark into your program, that shows that the program uses GUIEnv which is © by C.Ziegeler.  
Special permission is hereby given to include GUIEnvironment into every real public domain software. But only if this software is fully available without any restrictions for everybody ! You can then include the guienv.library into your package, but you HAVE TO include the above mentioned remark in your documentation as well as in your running program !

It is allowed and highly welcomed to include interface-modules for other languages/compilers. This files may be added to the package. Also it is allowed to add documentation for other languages. But it is NOT allowed to charge extra for this "new" documentation or interface-modules !

It would be very nice, if you could send me such work to include it in the next release of GUIEnv. (see chapter `The Future` )

## 1.8 Disclaimer

The author cannot be held liable for the suitability or accuracy of this manual and/or the program(s) it describes. Any damage directly or indirectly caused by the use or misuse of this manual and/or the program(s) it describes is the sole responsibility of the user himself.

The author is not responsible for any loss of data, damages to software or hardware that may result directly or indirectly from the use of this package. The author reserves the right to make changes to the software and/or documentation without notice.

## 1.9 Installation

GUIEnv requires at least OS2.04. It was designed as a real amiga shared library, so you can use it with nearly every compiler / language which is able to use the standard libraries.

The first step of installation is to copy the libraries to your libs: directory. (Use the GUIEnv-Install script )

Copy the code generator GEGen to a drawer of your choice. If you want the online documentation for GEGen available, copy the GEGen.guide (found in the docs drawer) to the same drawer or to the HELP: directory (if you have assigned it)!

If you have a localized workbench you have to copy the appropriate catalog files by hand ! (Sorry, but I didn't have the time to write a good Installer script...) The catalogs for the guienv.library and GEGen are both in the libs/catalogs drawer !

This package includes the interface modules (header files) for the M2Amiga-Modula2-Compiler (version 4.3 or above), SASC-Compiler (version 6.51 or higher) and the OberonA-Compiler (release 1.5).

Choose the chapter for your compiler / language :

M2Amiga

OberonA - Oberon in general

SAS/C - C in general

Other compilers / programming languages

## 1.10 GUIEnvironment with M2Amiga

Using GUIEnvironment with M2Amiga is very simple because it was developed using this compiler version 4.3 !

Please read the M2Amiga document for more information !

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## 1.11 GUIEnvironment with OberonA - Oberon in general

Using GUIEnvironment with OberonA is very simple because it was tested under OberonA release 1.5 very carefully !

For different Oberon compilers there should be no real problems to convert the interface modules and there will soon be some interface modules for AmigaOberon !

Please read the OberonA document for more information !

## 1.12 GUIEnvironment with SAS/C - C in general

Using GUIEnvironment with the SAS/C is very simple, because the header files were tested and created using SAS/C version 6.51 !

Usually these header files should work with other C compilers as well, perhaps apart from the function declarations.

Please read the SAS/C document for more information !

## 1.13 Other compilers / programming languages

For different programming languages or compilers you need the library files guienv.library and geclass.library in the libs: drawer and appropriate interface modules , which are unfortunately not (yet) part of this package.

You can find in the libs drawer of this package FD files for the libraries, which could be important for some compilers to create interface modules. (Or perhaps you could use GUIEnv with BASIC ! - No, just a joke !)

Please read one of the documentation for the supported compilers for more information !

## 1.14 Past - Present - Future

Well, at this time I am really not sure if it is worth to continue this project, because - as you all know - the future of Commodore is very doubtful !

I don't believe that there will be any new Amigas out until the end of next year (1995) ! In all probability that's the end of the Amiga as a different operating system....and I don't believe any of the big rumours about new Amigas. (Sorry, but someday you have to face the truth !)

As GUIEnvironment is now - in my opinion - complete, there is no reason for new versions, unless some of YOU have some ideas/suggestions about what is missing in the library or unless there are still some more bugs or problems...

Still missing IS, of course, the code generator for SAS/C but I have

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absolutely NO time to do this, so if someone of YOU is interested in doing such a great work, please let me know..

I have many new ideas to implement in the GUIEnvironment, but at this time I see really no sense in it. But if the Amiga rises again to the top of the computer world, I will be there (and a new and better GUIEnvironment, of course, too !)

But beginning with 1995 I moved move my developing to NeXtStep, so I am not able to continue any of my amiga projects from now one ! So, if someone of YOU is interested in buying all the source of the whole GUIEnvironment project for M2Amiga to keep on my work, please contact me !

If you have any interface modules for different languages as currently supported or if you have written some nice examples, please make them public (AMINET...) to help other programmers ! Thanks !

(See Author for the address.)

## 1.15 What you should know...

Before you are delivered from this boring documentation, I have to do some apologies:

The whole documentation is not entitled to be complete, without any mistakes or at least understandable, although I worked really very hard on it.

If you don't know how to program an Amiga, you can throw away the documentation (but PLEASE NOT GUIEnvironment !). In many cases I left some explanations you can find in the RKRM's. If you are familiar with them, you will probably have no problems...

To reach a "wider audience" I tried to translate the definitions and the documentation into the english language. I hope you can understand it and that there will be noone who died by laughing at these texts !

I am NOT a C programmer. In fact: I don't like this very confusing and often very strange language. I even HATE it, because if you are familiar with C you write programs noone else can understand because of the "encryption" ! So my advice: If you have any problems with C, take a look at Modula2 or Oberon2. Actually, there is a great Oberon-2 compiler in the public domain. Look for the OberonA compiler © by Frank J. Copeland !

Sorry, but I don't do advertising for commercial products. (But there exists a very good Modula2 development software...)

But the thing I wanted to say was: As I'm not a C programmer at all, the C programs and also the documentation are not the best way of using C. I translated it only, because a lot of people think that C is the only way of programming the Amiga - BUT THEY ARE WRONG !

## 1.16 The Author

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Suggestions, bug reports, improvements, extensions and of course appreciation, too, can be send to the following address:

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Germany

Even if you don't like GUIEnvironment, please tell me why...

You can keep on sending me anything about GUIEnvironment but as I don't have ANY Amiga to do my work on, don't expect anything !

ATTENTION: There will be no warranty or responsibility for posted goods.  
If you want to have your work back, you must include enough return postage I can use here in germany (e.g. german money or german stamps, but not e.g. english stamps or french food).  
All posting will be at your own risk and of your own free will.

So please, if possible use electronic mail to avoid any problems !

Enjoy it !

"...It's the same old ending - time to go..." - GENESIS/The Lamb Lies  
Down On Broadway

"It's OK !" - Roy Cakes better known as Ray Cokes

Thanks to Steve Mason for his fantastic Experience Radio Show every week ! It's the best time to write programs ... and to fall in TRANCE.

## 1.17 rcs

\$RCSfile: GUIEnvironment.guide \$

\$Revision: 1.7 \$

\$Date: 1994/12/17 15:42:29 \$

GUIEnvironment Project Guide

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