Emperor

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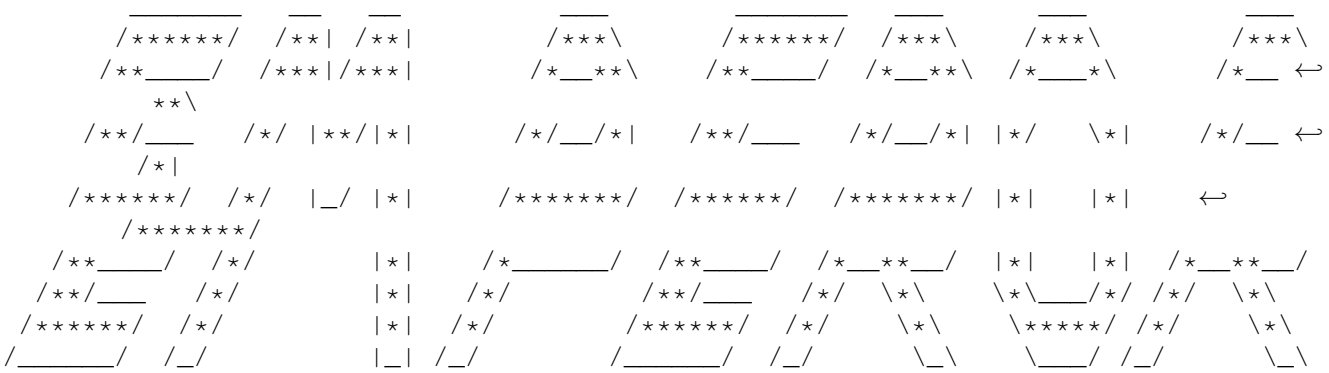
Contents

Chapter 1

Emperor

1.1 Documentation of Emperor



The object-oriented programming language

Available at www.aminet.de ! (Drawer: dev/c)

Emperor - an easy object-oriented programming language

Introduction	What does Emperor do ?
Copyright	What rights do I have ?
Systemrequirements	What does Emperor need ?
Installation	How to install Emperor ?
Getting started	How to run Emperor ?
Operating	How does Emperor work ?
predefined variables	Which variables can I use ?
Macrofunctions	How does Emperor make working more easily ?

1.2 Introduction

```
 Please support the further development of this software and mail me
 your opinion, problems und criticisms, because the programming costs a lot
 of time (but it was a pleasure!).


Thank you for decrunching and the will to testing the program-packet.
This program is for "revolutioning" the software-development on Amiga.

Object-oriented programminglanguage (OOP) is maybe a bit too high for that
program, because there are "real" C/C++-sourcecodes generated and
an external C/C++-Compiler must translate it into machine-code. In the Amiga- ↩
    sphere
there are only less applications like CanDo, Storm-Wizard and so on, but one day
I have seen the program "Delphi" on the PC :( ! This OOP is exclusive controlable
in Pascal (that set's me up) and it has millions of configuration-possibilities.
I didn't knew such things on Amiga, and so I made it by myself.

I want to make parameting of the Graphical User Interface (GUI) and its macro- ↩
    elements as easy as
possible. Following standard-GUI-elements are implemented:
 * Windows
 * OS2.0 Gadgets (GadTools)
 * OS3.5 Gadgets (Reaction)
 * Requests      (EasyRequest)
 * Menus         (NewMenu)
 * ASL-Requests  (File, Font, Screenmode)
 * Locale        (Translations)
 * Function-macros, which makes programming under OS3.5 more easily

With Emperor you are generating a complete C/C++-sourcecode, which only must be
compiled by an external compiler (e.g. StormC from the developer CD2.1).
There are many different files, which are including following data:

PROJEKTNAME.c           Programsourcecode (compileable)
PROJEKTNAME.cd          Catalog-rawdata
PROJEKTNAME.h           own sourcecode
PROJEKTNAME.project     projectfile for Emperor
PROJEKTNAME.¶           Storm-projectfile
PROJEKTNAME_SPRACHE.ct  translated catalog in rawdatas


Aim of this program is to assure software developer to create their programs (its  ↩
    sourcecode)
```

by Emperor, because the making of software (opening of windows, file- and fontrequests,
menus etc.) is often equal and must not longer copied by programmers from other sourcecodes.
Emperor decrees about one or more macros for every GUI-element. Like the menus:
here you must, for creating the complete Project-menu (open, close, save, print etc.) and its
translation, (in Locale-".catalog"-file) only select the corresponding entry in the list.
This is also possible with requests e.g. by making a QuitRequest. These are called in
the own sourcecode as function "REQUESTNAME();".

But the program should also be for amigans, who never programmed before,
and bade an easy way in the programming of AmigaOS-GUIs.

1.3 Copyright

What is Freeware ?

Freeware you can copy and spread freely, as long as there is made no benefit
with the program, but the program-packet must be complete, which means there must be:

- the program "Emperor"
- the startuppicture "Emperor.pic"
- the prefs-file "Emperor.prefs"
- the install-script "Emperor.install"
- this guide "Emperor.guide" (english and german)
- the catalog-file "Catalogs/deutsch/Emperor.catalog"
- the raw catalog-file "Catalogs/Emperor.cd"
- the project-directory "Projects/" with some projects
- das scripts-directory "Scripts/" for interactive StormC-connection via ARexx

If you are missing one of these files in the archive, please contact me !

1.4 Systemrequirements

- an Amiga ;-)
- Memory 4 MByte; recommended 16 MByte or more
- Workbench version 3.5 or higher
- Processor at least 68020; recommended 68060
- Amiga Developer CD 2.1 of the HAAGE & Partner GmbH

```
- C/C++-Compiler (from the developer CD "ADCD_2.1:Contributions/Haage_&_Partner/ ↩
    StormC/")
- CatComp (from the developer CD "ADCD_2.1:NDK/NDK_3.5/Tools/CatComp")
- xen.font in size 8 installed in "Fonts:"-directory of the Bootdevice, :-)


tested with follow configurations:

- A 1200
          * 68060/50MHz (BlizzardPPC-Card)
          * 603e+/240MHz
          * 100 MB Memory
          * BlizzardVisionPPC - graphixcard

- A 4000
          * 68040/25MHz
          * 64 MB Memory
          * CyberVision 64/3D - graphixcard
          * FastLane Z2

- A 2000
          * 68040/30MHz
          * 18 MB Memory
          * GVP Series-II SCSI Filecard

- A 2000
          * 68040/40MHz
          * 1 MB memory CHIP
          * 58 MB memory FAST
          * Delfina Lite soundcard
          * CyberVision 64/3D graphics card
          * 10 GByte hard drive space

- A 1200
          * 68060/50MHz (Blizzard 1260)
          * 1230 SCSI-Kit
          * int. IDE  HD 60MB
          * ext. SCSI HD 3.3GB
          * ext. SCSI CD-player
          * ext. SCSI ZIP-drive (250 MB)
          * AmigaOS 3.9 with BoingBag1
          * AGA-screen (800x600 pixel)
```

1.5 Installation

```
Please use enclosed install-skript.

If you want to install by hand, then copy the catalog ("Emperor.catalog") in the
directory "SYS:Locale/Catalogs/deutsch";

the program-file ("Emperor"),
the startuppicture ("Emperor.pic"),
the prefs-file ("Emperor.prefs"),
this guide-file ("Emperor.guide")
the scripts-dir ("Scripts/")
```

and
the projects-dir ("Projects/")

to a place you'd like.

Then add the line:

"Assign Emperor: PROGRAMMPATH:"

in your user-startup-file and reboot your system.
Now you can use the program without an restriction.

"PROGRAMPATH:" should be the path, where you've copied "Emperor".

1.6 Getting started

The program can be started by CLI (Shell) without following arguments.

But you can also doubleclick on the icon of the program.

There are a few things, you must pay attention on:

* AmigaOS 3.5 installed ?
* 4 MBytes of systemmemory must be free on startup
* assign on <PATH>:Emperor
* RexxMast already started ?
* stack at >50000 bytes ?
  - under CLI: type 'stack 50000'
  - under WB: in iconinformations choose a stack of >50000 bytes
  - under DOpus:in menu 'Settings-Environment' choose point 'CLI-Launching' ↩ and
    change stack !

1.7 Operating

How the menu of Emperor is used...

Menu

How the single windows of Emperor are used...

Mainwindow
- Reaction-page
- Requests-page
- Menu-page
- ASL-page
- Locale-page
- Arrays-page
- GlobVars-page
- Windows-page
- GadTools-page

```
            InterConnection-page

      other windows
            Programminghelp
            Input message handle
```

1.8 Menu

```
At this place should be the menuentries only listed and short descipted:

New       - Deletes the current project from the memory (additional loading of " ↩
   template.project")
Delete                    - like "New", no loading of "template.project"
Open        - Opens a created project ("*.project"-Datei)
Merge       - Adds a project to the current

Save              (Submenu)
Project save            - Saves the current project ("*.project"-file)
Storm-project save      - Generates a Storm-project ("*.¶"-file)
Catalog-raw-file save   - Generates catalog-raw files ("*.cd" and "*_LANGUAGE.ct"- ↩
   file)
Own sourcecode save     - Saves the own sourcecode ("*.h"-file)
Catalog generate    - Generates the catalog file ("*.catalog"-file)
          ATTENTION ! This is only functionable, if "CatComp" is installed.
sourcecode generate     - Generates compilable C/C++-sourcecode ("*.c"-file)
Save as     - Saves the current project under new name ("*.project"-file)
Save as template    - Saves the currnet project as template-project ("*.project"- ↩
   file)
Clipboard save    - Saves the clipboard-content
Save all            - Saves following data:
                  ("*.c"-file)             generated program-code
                  ("*.h"-file)             Own sourcecode
                  ("*.catalog"-file)         Locale-catalog
                  ("*.project"-file)           Emperor-project
                  ("*.¶"-file)             Storm-project
                  ("*_LANGUAGE.ct"-file)         Catalog-translationfile


Print             (Submenu)
Objecttable print         - prints the current objecttable
Catalog-raw-files print - prints the catalog-raw files ("*.cd" and "*_SPRACHE.ct"- ↩
   file)
Own sourcecode print    - prints the own sourcecode ("*.h"-file)
Programsourcecode print - prints compilable C/C++-sourcecode ("*.c"-file)
Print all                       - prints following data:
                  ("*.c"-file)    generated program-code
                  ("*.h"-file)    own sourcecode
                  and the objecttable


Manager     - changes to page "Windows"
Preferences     - opens the window for several program preferences
Program preferences   - opens the window for several program-specific preferences
Information       - gives Information about program
Quit                            - quits the program
```

```
Cut             - cuts the current listentry
Copy        - saves  the current object into the Clipboard
Paste             - pastes content of the Clipboard into a list
Undo                   - take back last operation
Redo                - do operation again
Delete      - deletes the current listentry


*** Then there are some menuitems, which only can reached from the texteditor.   ↩
    ***

Format text     - this item has 2 modi:
                                                        * when the 1.character ( ↩
                                                           row 1) is a space- ↩
                                                           character,
                                                          Emperor is formatting  ↩
                                                             the text in the  ↩
                                                             normal way.
                                                        * when the 1.character is  ↩
                                                           NOT a space-character,
                                                          the text is formatted on ↩
                                                              the left border


Testwindow            - opens a window, which is comparable to the compiled  ↩
    project
Attributwindow    - opens a window, in which you can paramete object-depending  ↩
    adjustments
Show own sourcecode     - opens the internal texteditor
Programminghelp   - opens the Programminghelp-window
Input message handle           - opens the Input message handling-window
```

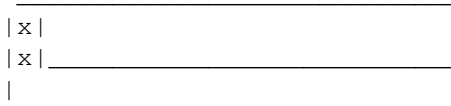
1.9 Mainwindow

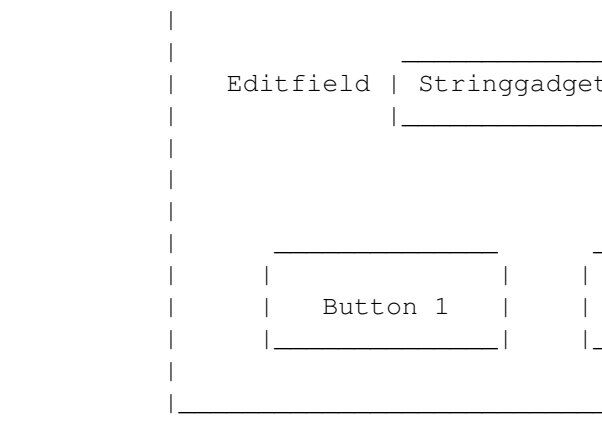
```
The mainwindow carrys as title the name of the current project. It has a statusbar ↩
    ,
in which a little help is shown, when the pointer is over a gadget.
There are also filing-cards, which contents a determined systemcomponent.
So there are 9 different pages:

                  Reaction-page
                  Requests-page
                  Menu-page
                  ASL-page
                  Locale-page
                  Arrays-page
                  GlobVars-page
                  Windows-page
                  GadTools-page
                  InterConnection-page

In general the window is equal for all filing-cards.
```

```
On the right side there is a list with templates for every component,
left from this there are some buttons:
with "Add" you can add a modified element to the own list;
with "Up"/"Down" you can move the current active entry in the own list up/down;
with "Delete" deletes the current active entry from the own list;
with "Test" can Emperor show, how your work looks (without compiling)
On the left side you'll have an empty list, which should be fill by modified ↩
    objects.
```

1.10 Mainwindow - Reaction - page

```
On the gadgets-page there are 3 groups of gadgets:

     *  On the right side there is a list with gadget-templates.
        If you are choosing an entry, the "Attribute-window for gadgets" is ↩
           renewed, in which
  the attributes can be set.

     *  In the middle there are some buttons:
        with "Add" you can add a modified element to the own list;
        with "Up"/"Down" you can move the current active entry in the own list up/ ↩
           down;
        with "Delete" deletes the current active entry from the own list;
        with "Test" can Emperor show, how your work looks (without compiling)

     *  On the left side there is an empty list, which later could be filled with ↩
        the own
        hierarchical liste of gadget-objects.
  The entries are at a time the names of the gadgets.
  An added gadget is put into the next-higher "generation", and it's so
  an diverted gadget of the previous.


Aim of this "new" kind, to create surfaces is it to took more and more work from ↩
    the
programmer. The positions und sizes are automatically rendered by the system,
in relation to the windowsize.
You can influence the arrangement of the gadgets, when you create vertical and ↩
    horizontal
groups (Layouts). Gadgets, which belongs to a layout, must be diverted from the ↩
    Layout-Gadget,
which means that they appear in the list more right and form a new subclass.
But horizontal und vertical Layout-Groups can split into new horizontal
and vertical Layout-Groups.

Horizontal group means, that all gadgets are horizontal arranged.
Vertical group means, that all gadgets are vertical arranged.

Example 1:
  Easy example with one string-gadget (Inputfield) and two buttons.
```



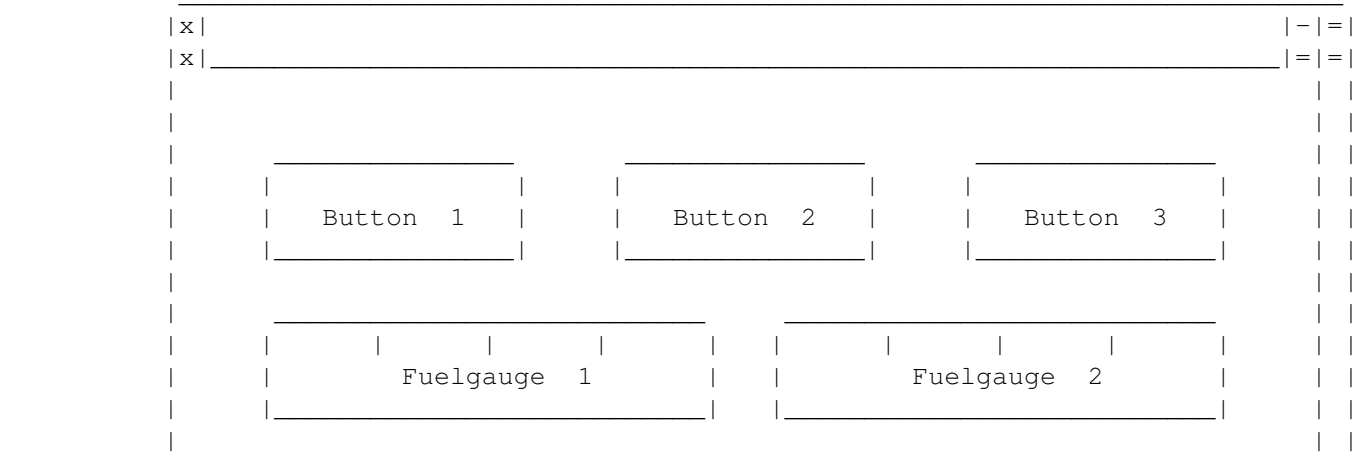


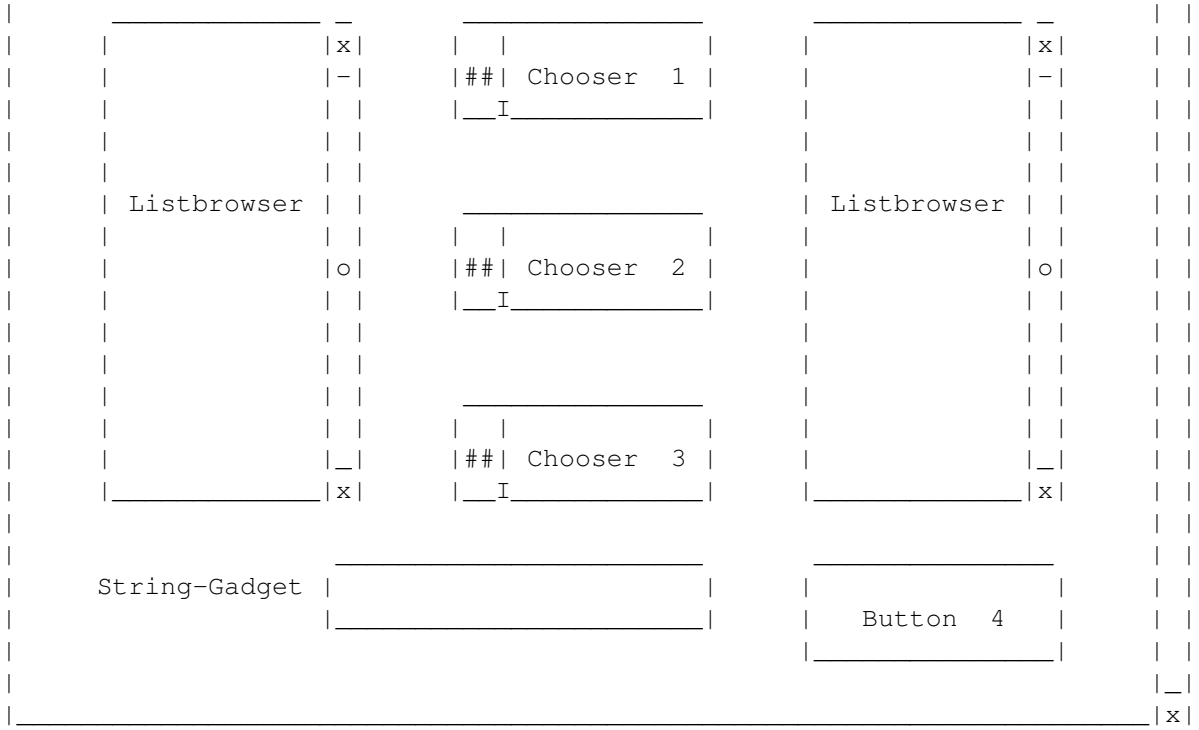
The list for this example must look like that:

```
vertical Layout1    the so-called "Root-Layout" appoints the beginning
|       of every gadgetlist. In this case it should have
|       the attribute "Orientation-vertical", because
|       there are two gadget-groups (1. String-Gadget / 2. two Buttons),
|       which are layouted vertically.
|
+- String1      the string-gadget is the first visible
|       object in our list.
|
+- horizontal Layout2   a renewed devide of the space tooks place right here.
   |        First we had devide the whole window in vertical
   |        groups; in one we had the string-gadget and in the other
   |        we are creating a new group, which contents gadgets
   |                             that are laying side by side (horizontally  ↩
      arranged).
   |
   +- Button1     this is the left Button
   +- Button2     and this the right Button
```

It isn't difficult or is it ??
So, then more extensive:

Example 2:






```
Layout1
|
+- vertical Layout
   |
   +- horizontal Layout
   |  |
   |  +- Button1
   |  +- Button2
   |  +- Button3
   |
   +- horizontal Layout
   |  |
   |  +- Fuelgauge1
   |  +- Fuelgauge2
   |
   +- horizontal Layout
   |  |
   |  +- Listbrowser
   |  |
   |  +- vertical Layout
   |  |  |
   |  |  +- Chooser1
   |  |  +- Chooser2
   |  |  +- Chooser3
   |  |
   |  +- Listbrowser
   |
   +- horizontal Layout
      |
      +- String
      +- Button4
```

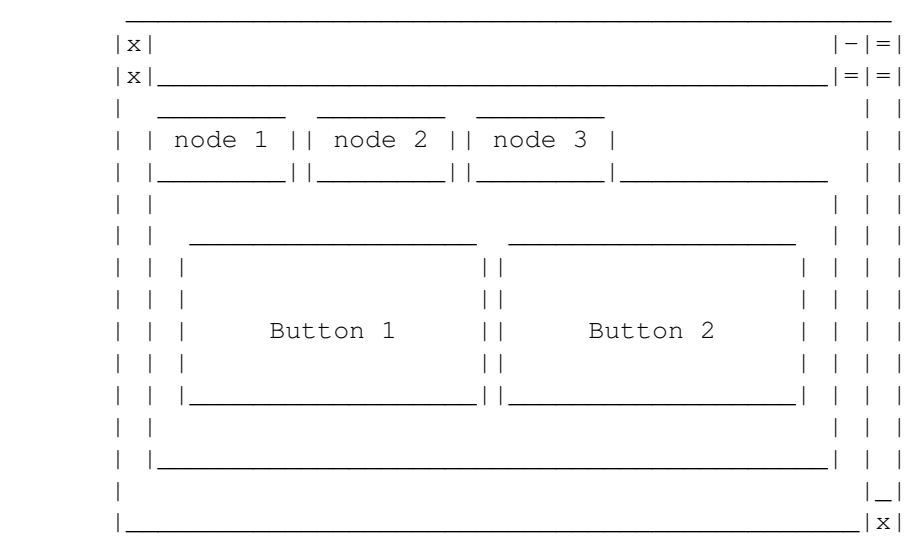
So play around with the horizontally and vertically groups, so that you are getting
a feeling for that. If you worked with the Gadtools-Library so far, and used absolute
values for sizes and positions, then the swifting around from that isn't soooo easy ! But, ...

the more you'll exercise the better you are !

SPECIAL NOTES...

ad 1 (using clicktab-gadgets):

When using clicktab-gadgets you MUST create your gadget-list that way:




```
Clicktab
|
+- vertical Page1
   |
   +- horizontal Page2
   |  |
   |  +- Button1
   |  +- Button2
   |  |
   +- vertical Page3
   |  |
   |  +- Integer1
   |  +- Integer2
   |  |
   +- horizontal Page4
      |
      +- Listbrowser1
      +- Listbrowser2
```

You can generate a "Page" by taking a layout-gadget and turn it into "PageMode"
in the attributes-window.

```
PAY ATTENTION ! Don't forget the first page-gadget below the clicktab !!!!


ad 2 (using images):

Images are special gadgets, which contains e.g. picture informations or system ↩
    glyphs.
If you want to integrate such an image, you have to pay attention that the image ↩
    is
derive from the corresponding gadget or you have to assign the image via ↩
    connecting
within the attributes-window. But be careful ! You only have got possibilities to
derive an image from a button, a layout or a slider gadget !!!

An example may looks like that:

        horizontal Layout1
        |
        +- vertical Layout2
        |  |
        |  +- Bitmap1
        |  |
        +- vertical Layout3
           |
           +- Button1
           |  |
           |  +- Glyph1
           |  |
           +- Slider1
              |
              +- Bitmap2


 SPECIAL NOTES...
```

1.11 Mainwindow - Requests - Page

```
On the Requests-Page there are entrys in the right list, which generates
requests like for information, quit oder errorreports.
An easy click on the corresponding entrys (with the opened "Window-Attributwindow ↩
    ")
you can edit them. Then you can add them into the own list.

There are prepared requests, like the Quitrequest (a dialogwindow, which makes
a creating of a request to quit superfluous), whether the program (not Emperor)
really should be quitted, like you know from other applications and tools.
```

1.12 Mainwindow - Menu - Page

```
In the menueditor in the right list there are 5 entrys; the first three entrys are
systemdefinitions (Title, Item, Subitem) -> see AutoDocs;
```

The other entrys are complete menus. Project stand for the known Project-Menu
(open, save, print etc.). Thwe entry must be chosen and added to the own list
Now you have created the complete menu INCLUSIVE TRANSLATIONS.
The single entrys can be modified and adjusted to the own taste.

1.13 Mainwindow - ASL - Page

Here you can modify the requests for File-, Font- and Screenmode-choosing
and test them, until they meet with your ideas.

See AutoDocs !

1.14 Mainwindow - Locale - Page

On the Locale-Page you can create catalog for Locale.
The catalog-Identification will be transported from all parts of the programs
(Requests, Menu etc.) into this list.

Only the translation is done right here. For that, you must choose the lauguage and the
catalog-ID, which should be translated.
Then choose the middle string-field (in the opened attribute-window Menu-"Window- Attributewindow")
and translate the string below the chosen field.

1.15 Mainwindow - Array - Page

When you are creating an Array (entrys for Listbrowser, Radiobutton, Chooser and Clicktabs),
you MUST open the attribute-window Menu-"Window-Attributewindow".
In the Attributewindow there is also a list, which must filled out with entrys of the Array,
before the entry (Name of the Array) is added to the own list in the Mainwindow

1.16 Mainwindow - GlobVars - Page

Here you can choose between different variabletypes. Before you add them to your own list,
you must make the specific preferences.

The first cyclegadget (from the top) can only be used, when a systemstructure
(see AutoDocs) is called and initialized.
The second field specify the variablenames, which are used in the the own sourcecode.
The third is used for the initial value.

1.17 Mainwindow - Windows - Page

```
On this page, you are able to configure your whole windows, which do you wish to ↩
    implement
into your program.

Here you must pay attention, that the current window is marked by "Active". Which ↩
    means, that
the lists of gadgets denpends on your current window.
I.e., ONLY the content of an "Active" window could be changed anyway.

 !!IMPORTANT!!

In the attributwindow you can say set, whether a window should appears in
AmigaOS 2.0 or AmigaOS 3.5 - look. If you choose the OS 2.0 - look, you aren't ↩
    allowed to allocate
Reaction-gadgets to it !

 !!IMPORTANT!!
```

1.18 Mainwindow - GadTools - Page

```
Because GadTools only decrees about gadgets, which demands absolute positions, the
handling is a bit more complicated (or more logical ? :))).

For creation of an window with GadTools-gadgets (OS 2.0 - look), the window itself ↩
     must be an
OS 2.0 - window. This could be attributed on the Window-page.

Now it is important, that the window, in which the gadget will be positionized, is ↩
     open.
Now you can choose on the GadTools-page the gadget what you want. And in the ↩
    second step
you have to define position and size by mouseclick (and mousemove) into the window ↩
    .
Subsequent changings are possible by clicking the marked areas in the edges of a ↩
    gadget.
Do you want to move or resize a gadget, you can activate it by a simple click.

The left-sided list is deactivated at the GadTools-page.

It is possible to generate a program based on OS 2.0 as well as based on OS 3.5,
by supportting of OS 2.0 - windows and gadgets.
```

1.19 Mainwindow - Interconnection Map - Page

```
Interconnection maps connect gadgets to each other. This connection makes it ↩
    possible, that different
tags and its values between gadgets are exchanged.

I.e. a fuelgauge-gadget is connected with a palette-gadget; there must be clear, ↩
    which tags are used.
```

```
So you can connect tag "FUELGAUGE_Level" with "PALETTE_Colour". Everytime the  ↩
   palette is clicked, it
will be send its new value direct to fuelgauge.

There are unidirectional and bidirectional maps;
unidirectional maps only send informations from primary to secondary gadget,
bidirectional maps will send informations from primary to secondary and from  ↩
   secondary to
primary gadget.

Let gadgets exchanging datas, an ICMap must be added to own list. - without  ↩
   writing a single line
of source !
```

1.20 Programminghelp

```
The programminghelp is in a very early phase of development.
From this window you can call the prepared Function-macros,
paramete them and include them to your own sourcecode.

        1. Choose the function by clicking
        2. A window is opened, where you can choose the parameters
        3. Press the button "Add function to your own sourcecode"
        4. Two windows, the texteditor and the Input message handle are opened (4a ↩
           ),
           if the texteditor wasn't open itself (4b).
                4a. In the window Input message handling you must
                    choose the message, in which the function should be added.  ↩
                       This could be
                    also a non-existing function.
                4b. When the texteditor is open, the function is added at the  ↩
                   position of
                    the Cursors.


When a function is choosen, HELP can be pressed to start the guide on that side,  ↩
   which describes
the specific macrofunction.
```

1.21 Input message handle

```
This window is devided in two lists. The list on the left side
consists of many possible appearing messages.

The single entries of the list means:

        GadgetUp        - when a gadget was clicked
        GadgetHelp      - when the pointer is over a gadget
        MenuPick        - when a entry is picked from the menu
        MenuHelp        - when the pointer is over a menuitem
        CloseWindow     - when the close-symbol is clicked
        Iconify         - when the iconify-symbol is clicked
```

```
        Uniconify       - when the icon was double clicked
        ActiveWindow    - when the window was activated
        InactiveWindow  - when the window is gone in state "inactiv"
        RawKey          - when a key was pressed
        VanillaKey      - when a key was pressed (menu-shortcut)
        MouseButtons    - when a mousebutton was pressed
        MouseMove       - when the mouse was moved
        NewSize         - when the size of a window was changed
        ChangeWindow    - when the size or position of a window was changed
        DisposedWindow  - when a window has done an action
        IntuiTick       - all 1/10-sec a message
        ShowWindow      - when a window was opened
        Startup         - at program-start (by initialization)
        Shutdown        - at program-finish

        For detailed description of messages of the system,
        please consult the AutoDocs of the AmigaDeveloperCD!
```

If you choose one of these enties, the corresponding selection-possibilities to specify the wanted Gadget/Menu/Window-objects appears in the right list.
A doubleclick on the entry in the right list generates a new function (procedure) in the texteditor, in which the own sourcecode could be included.
That could be e.g. the prepared Function-macros
or the systemfunctions of AmigaOS.

1.22 predefined variables

Name	Kind	Contains
os35	(BOOL)	= TRUE, when OS 3.5 is installed
terminated	(BOOL)	= TRUE, when program should be quitted
vinfo	(void *)	= GetVisualInfo()
Catalog	(struct Catalog *)	= OpenCatalogA()
Menu	(struct Menu *)	= CreateMenus()
AppPort	(struct MsgPort *)	MsgPort for windows and its evaluation
Screen1	(struct Screen *)	= LockPubScreen()

Variable "Screen1" has been changed for 4.0 from variable "Screen"

1.23 Macrofunctions

In Emperor there are some macrofunctions, which overtakes complicated operations with
an easy call and the corresponing parameters. These macros are to call from the own sourcecode.

```
            Windowhandling
                  Emperor_CloseWindow
                  Emperor_OpenWindow
                  Emperor_IconifyWindow
                  Emperor_UniconifyWindow
```

```
            Windowattributes
                  Emperor_ChangeWindowPosition
                  Emperor_ChangeWindowSize
                  Emperor_SetWindowBusyPointer
                  Emperor_SetWindowTitle
                  Emperor_SetScreenTitle

            Gadgetattributes
                  Emperor_GetGadgetAttr
                  Emperor_GetGadgetDisabledAttr
                  Emperor_GetGadgetReadOnlyAttr
                  Emperor_SetGadgetAttr
                  Emperor_SetGadgetDisabledAttr
                  Emperor_SetGadgetReadOnlyAttr

            Menuattributes
                  Emperor_GetMenuItemAttr
                  Emperor_SetMenuItemAttr

            Misc
                  Emperor_ActivateGadget
                  Emperor_RethinkLayout
                  Emperor_RefreshGadget
                  Emperor_QuitFunc
                  stringlength()
                  stringtoint()
                  inttostring()
```

1.24 Function Emperor_CloseWindow

```
Function
 Macrofunction for closing windows

Synopsis
 Emperor_CloseWindow(WindowObject)

 void Emperor_CloseWindow(Object *);

Action
 This function does some tasks for the programmer.
 1. deleting created Menu
 2. closing window
 3. resetting variable "Window"

Input
 WindowObject - This must be the name of the windowobject.
          You can paramete it in the project-manager, when you are
          creating a new window. Template is:
     Object *WindowObjX; X is the number of the window;
     e.g. Object *WindowObj1, *WindowObj2...;

Example
 /* Closing of windows must be done by yourself,                          */
 /* because that actions of freeing memory can't done by the maincode.    */
 /* If the applicationwindow is closed, Emperor isn't closing the program ! */
```

```
 void Emperor_Chooser1GadgetUpEvent(void)
 {
   /*
   ... pre-sourcecode ...
   ...
   ...
   ...
   */

   Emperor_CloseWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... past-sourcecode ...
   */

   Window1 = Emperor_OpenWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... sourcecode ...
   */
 }

See also
 Emperor_OpenWindow()
```

1.25 Function Emperor_OpenWindow

```
Function
 Macrofunction for opening windows

Synopsis
 Window = Emperor_OpenWindow(WindowObject)

 struct Window *Emperor_OpenWindow(Object *);

Action
 This function does some tasks for the programmer.
 1. Opening of the window
 2. Creating the menu

Input
 WindowObject - This must be the name of the windowobject.
          You can paramete it in the project-manager, when you are
          creating a new window. Template is:
     Object *WindowObjX; X is the number of the window;
     e.g. Object *WindowObj1, *WindowObj2...;

Result
```

```
 is a variable of the type "struct Window *". It's a pointer to the windows- ↩
    structure.
       This should be that variable, which name you typed at creating the window  ↩
          in the
       project-manager. If you haven't gave a name for the window, it's a  ↩
          variable like this:
   Object *WindowX; X is the number of the window;
   e.g. struct Window *Window1, *Window2...;

Example
 void Emperor_Button1GadgetUpEvent(void)
 {
   /*
   ... pre-sourcecode ...
   ...
   ...
   ...
   */

   Emperor_CloseWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... pre-sourcecode ...
   */

   Window1 = Emperor_OpenWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... past-sourcecode ...
   */
 }

See also
 Emperor_CloseWindow()
```

1.26 Function Emperor_IconifyWindow

```
Function
 Macrofunction for iconify of windows

Synopsis
 Emperor_IconifyWindow(WindowObject)

 void Emperor_IconifyWindow(Object *);

Action
 This function does some tasks for the programmer.
 1. deleting created Menu
 2. closing window
```

```
 3. resetting variable "Window"

Input
 WindowObject - This must be the name of the windowobject.
          You can paramete it in the project-manager, when you are
          creating a new window. Template is:
     Object *WindowObjX; X is the number of the window;
     e.g. Object *WindowObj1, *WindowObj2...;

Example

 void Emperor_Checkbox1GadgetUpEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_IconifyWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */

   Window = Emperor_UniconifyWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 Emperor_UniconifyWindow()
```

1.27 Function Emperor_UniconifyWindow

```
Function
 Macrofunction for uniconify of windows

Synopsis
 Window = Emperor_UniconifyWindow(WindowObject)

 struct Window *Emperor_UniconifyWindow(Object *);

Action
 This function does some tasks for the programmer.
 1. Opening of the window
```

```
 2. Creating the menu

Input
 WindowObject - This must be the name of the windowobject.
          You can paramete it in the project-manager, when you are
          creating a new window. Template is:
     Object *WindowObjX; X is the number of the window;
     e.g. Object *WindowObj1, *WindowObj2...;

Result
 is a variable of the type "struct Window *". It's a pointer to the windows- ↩
    structure.
       This should be that variable, which name you typed at creating the window  ↩
          in the
       project-manager. If you haven't gave a name for the window, it's a  ↩
          variable like this:
   Object *WindowX; X is the number of the window;
   e.g. struct Window *Window1, *Window2...;

Example
 void Emperor_Checkbox1GadgetUpEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_IconifyWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */

   Window = Emperor_UniconifyWindow(WindowObj1);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }


see also
 Emperor_IconifyWindow()
```

1.28 Function Emperor_ChangeWindowPosition

```
Function
 Macrofunction for setting the window-attributes.

Synopsis
 Emperor_ChangeWindowPosition(Window, Left, Top)

 void Emperor_ChangeWindowPosition(struct Window *, WORD, WORD);

Action
 This macro is using the ChangeWindowBox()-Function of the Intuition-Library.
 The position of the windows is modified.

Input
 Window - Window to modify. Example: Window1
 Left   - Left edge of the window, relative to the left screenborder.
 Top    - Top edge of the window, relative to the top screenborder.

Example
 void Emperor_WindowPositionMenuEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_ChangeWindowPosition(Window, 100, 200);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 Emperor_ChangeWindowSize()
```

1.29 Function Emperor_ChangeWindowSize

```
Function
 Macrofunction for setting of window-attributes.

Synopsis
 Emperor_ChangeWindowSize(Window, Width, Height)

 void Emperor_ChangeWindowSize(struct Window *, WORD, WORD);

Action
 This macro is using the ChangeWindowBox()-Function of the Intuition-Library.
 The position of the windows is modified.
```

```
Input
 Window - Window to modify. Example: Window1
 Width  - Width of the window.
 Height - Height of the window.

Example
 void Emperor_WindowSizeMenuEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_ChangeWindowSize(Window, 300, 400);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 Emperor_ChangeWindowPosition()
```

1.30 Function Emperor_SetWindowBusyPointer

```
Function
 Macrofunction for setting of window-attributes.

Synopsis
 Emperor_SetWindowBusyPointer(Window, on/off)

 void Emperor_Window(struct Window *, BOOL);

Action
 This macro is using the SetWindowPointer()-Function of the Intuition-Library.
 The pointer is toggled to "Busy"-mode.

Input
 Window - Window to modify. Example: Window1
 on/off - switching the BusyPointer on ("TRUE") and off ("FALSE").

Example
 void Emperor_WindowBusyPointerMenuEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */
```

```
    Emperor_SetWindowBusyPointer(Window);

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }
```

1.31 Function Emperor_SetWindowTitle

```
Function
 Macrofunction for setting of window-attributes.

Synopsis
 Emperor_SetWindowTitle(Window, windowtitle)

 void Emperor_SetWindowTitle(struct Window *, STRPTR);

Action
 This macro is using the SetWindowTitles()-Function of the Intuition-Library.
 The titel of the window is modified.

Input
 Window - Window to modify. Example: Window1
 windowtitle - new titel for the window

Example
 void Emperor_WindowTitleMenuEvent(void)
 {
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */

    Emperor_SetWindowTitle(Window, "new title");

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
 }

see also
 Emperor_SetScreenTitle()
```

1.32 Function Emperor_SetScreenTitle

```
Function
 Macrofunction for setting of window-attributes.

Synopsis
 Emperor_SetScreenTitle(Window, screentitle)

 void Emperor_SetScreenTitle(struct Window *, STRPTR);

Action
 This macro is using the SetWindowTitles()-Function of the Intuition-Library.
 The titel of the screen is modified.

Input
 Window - Window to modify. Example: Window1
 screentitle - new titel for the screen

Example
 void Emperor_WindowTitleMenuEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_SetScreenTitle(Window, "new title");

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 Emperor_SetWindowTitle()
```

1.33 Function Emperor_GetMenuItemAttr

```
Function
 Macrofunction for getting of menuitem-attributes.

Synopsis
 result = Emperor_GetMenuItemAttr(MenuObject, MenuattrID)

 BOOL Emperor_GetMenuItemAttr(UBYTE, UWORD);

Action
 The function gives the current state of attributes of menuitems.
 You can ask, whether the item is checked, enabled and so on.
```

```
Input
 MenuObject   - here you must put in the name of the menu-objects,
          which could be attributed by creating the menustrip.
          This solution is very advantageous, because the management
          of menus and its ID-numbers is relative complicable
          for beginners.
 MenuFlagmask - this parameter you must set by the three following masks,
          which choose the asked attribut:
     * ITEMENABLED (whether the item is chooseable)
     * MENUTOGGLED (for MutualExclude or Checkit;
                    asks, whether the item is toggled)
     * CHECKED     (für MutualExclude oder Checkit;
                    asks, whether the item is checked)

Result
 result = TRUE, if the chosen attribute is set, otherwise result = FALSE

Example
 void Emperor_ItemCheckitMenuEvent(void)
 {
   BOOL boolean;

   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   boolean = Emperor_GetMenuItemAttr(Menu_ItemCheckit, CHECKED);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 Emperor_SetMenuItemAttr()
```

1.34 Function Emperor_SetMenuItemAttr

```
Function
 Macrofunction for setting of menuitem-attributes.

Synopsis
 Emperor_SetMenuItemAttr(MenuObject, MenuattrID, Set/Reset)

 void Emperor_SetMenuItemAttr(UBYTE, UWORD, BOOL);

Action
 The function sets the current state of attributes of menuitems.
```

```
 You can set, whether the item should be checked, enabled and so on.

Input
 MenuObject   - here you must put in the name of the menu-objects,
          which could be attributed by creating the menustrip.
          This solution is very advantageous, because the management
          of menus and its ID-numbers is relative complicable
          for beginners.
 MenuFlagmask - this parameter you must set by the three following masks,
          which choose the set attribut:
     * ITEMENABLED (whether the item is chooseable)
     * MENUTOGGLED (for MutualExclude or Checkit;
                    set, whether the item should be toggled)
     * CHECKED     (für MutualExclude oder Checkit;
                    set, whether the item should be checked)
 Set/Reset    - Set/Clear the chosen mask.

Example
 void Emperor_ItemCheckitMenuEvent(void)
 {
   BOOL boolean;

   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_SetMenuItemAttr(Menu_ItemCheckit, ITEMENABLED, TRUE);
   Emperor_SetMenuItemAttr(Menu_ItemCheckit, CHECKED, FALSE);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 Emperor_GetMenuItemAttr()
```

1.35 Function Emperor_ActivateGadget

```
Function
 Macrofunction for activating a String- or CustomGadgets.

Synopsis
 Emperor_ActivateGadget(GadgetObject)

 void Emperor_ActivateGadget(struct Gadget *);

Action
 When this function is called a StringGadget is activated and the Cursor
```

```
 is set into das Gadget, so that the user can make inputs, without clicking.
 This macro uses the Intuition-function ActivateGadget().

Input
 GadgetObject - Name des Gadgets, das aktiviert werden soll.

Example
 void Emperor_ActivateMenuEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_ActivateGadget(String3);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }
```

1.36 Function Emperor_QuitFunc

```
Function
 Macrofunction for quitting the program.

Synopsis
 Emperor_QuitFunc()

 void Emperor_QuitFunc(void);

Action
 When you are calling that function, all opened libraries etc.
 are closed.

 Bevor calling this function, you needn't close opened windows !

Example
 void Emperor_ProjectQuitMenuEvent(void)
 {
   BOOL error;

   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   if(error) Emperor_QuitFunc();
```

```
    /*

    Ende

    */
  }
```

1.37 Function Emperor_RethinkLayout

```
Function
 Macrofunction for redrawing the whole layout.

Synopsis
 Emperor_RethinkLayout(GadgetObject)

 void Emperor_RethinkLayout(struct Gadget *);

Action
 This macro uses the LayoutGadget-function RethinkLayout().
 When you are calling this function, the whole layout is redrawed.
 But you can define from which position in your gadgetlist the refreshing
       should take place.
 If you want to redraw all gadgets, you should put the value "GadgetX[0]",
 "X" represents the number of the window in your list in the project-manager
       Important by complete refreshing is the "[0]" behind the name in the list.
       This expression stands for the Root-Gadget (first Gadget in the list).

Input
 GadgetObject - Name of the Gadgets, from which position in the list of the
                Gadgets the objects should be refreshed.

Example
 void Emperor_RethinkMenuEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_RethinkLayout(Button1);

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */

   Emperor_RethinkLayout(Gadget1[0]);

   /*
   ...
```

```
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_RefreshGadget()
```

1.38 Function Emperor_RefreshGadget

```
Function
  Macrofunction for redrawing a single gadget.

Synopsis
  Emperor_RefreshGaget(GadgetObject)

  void Emperor_RefreshGadget(struct Gadget *);

Action
  This macro uses the Intuition-Function RefreshGList().
  When you are calling this function, declared gadget is redrawed.

Input
  GadgetObject - Name of the gadgets, which should be refreshed.

Example
  void Emperor_RefreshMenuEvent(void)
  {
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */

    Emperor_RefreshGadget(Button2);

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_RethinkLayout()
```

1.39 Function Emperor_GetGadgetAttr

```
Function
 Macrofunction for getting a Gadget-value.

Synopsis
 result = Emperor_GetGadgetAttr(GadgetObject)

 STRPTR Emperor_GetGadgetAttr(struct Gadget *);

Action
 This macro uses the GetAttr()-Function of the Intuition-Library.
 Depending on the kind of the gadget this macro controls GetAttr()-Function.
 Without additional inputs, the flag-choice is made by this macro !
       These flags are supported:

       GA_Selected             (Button, Checkbox)
       CHOOSER_Selected
       CLICKTAB_Current
       FUELGAUGE_Level
       GRAD_CurVal
       INTEGER_Number
       LISTBROWSER_Selected
       PALETTE_Colour
       RADIOBUTTON_Selected
       SCROLLER_Top
       SLIDER_Level
       STRINGA_TextVal
       TEXTEDITOR_Contents - Flag.

 If you want to get other flags, then please use the real Intuition-Function.

Input
 Gadget - which gadget should be get   Example: Checkbox3

Result
 This function returns the flag (see above) of the gadget.

 ATTENTION!! The return value is of type "STRPTR" (chain of characters).
       The transformation of the value can be executed by calling these functions ↩
          :

       stringtoint()
       inttostring()

Bugs
       The function returns a peculiar value in version 2.00.
       This bug is compensated since version 2.20.

Example
 void Emperor_Checkbox3GadgetUpEvent(void)
 {
   LONG number;
   STRPTR string;

   /*
   ... some sourcecode ...
   ...
```

```
    ...
    ...
    */

    number = stringtoint(Emperor_GetGadgetAttr(Fuelgauge2));

    strcpy(string, Emperor_GetGadgetAttr(String3));

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_SetGadgetAttr()
```

1.40 Function Emperor_GetGadgetAttrComplex

```
Function
  Macrofunction for getting a Gadget-value.

Synopsis
  result = Emperor_GetGadgetAttrComplex(GadgetObject, GadgetattrID)

  STRPTR Emperor_GetGadgetAttrComplex(struct Gadget *, ULONG);

Action
  This macro uses the GetAttr()-Function of the Intuition-Library.
  In contrast to Emperor_GetGadgetAttr() here you must
  set a concrete tag.

Input
  Gadget - which gadget should be got   Example: Checkbox3

        GadgetattrID - which GadgetattrID should by used   Example:  ↩
           CHECKBOX_TextPlace

Result
  This function returns the value of the given tag.

  ATTENTION!! The return value is of type "STRPTR" (chain of characters).
        The transformation of the value can be executed by calling these functions ↩
           :

        stringtoint()
        inttostring()

Example
  void Emperor_Checkbox3GadgetUpEvent(void)
  {
    LONG number;
    STRPTR string;
```

```
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */

    number = stringtoint(Emperor_GetGadgetAttrComplex(Fuelgauge2, FUELGAUGE_Min));

    strcpy(string, Emperor_GetGadgetAttrComplex(Button3, GA_Text));

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_SetGadgetAttrComplex()
```

1.41 Function Emperor_GetGadgetDisabledAttr

```
Function
  Macrofunction for getting the GA_Disabled-attributes.

Synopsis
  result = Emperor_GetGadgetDisabledAttr(GadgetObject)

  BOOL Emperor_GetGadgetDisabledAttr(struct Gadget *);

Action
  This macro uses the GetAttr()-Function of the Intuition-Library.
  The GA_Disabled-Flag (whether the gadget is chooseable) is set
  and returned.

Input
  Gadget - which gadget should be got   Example: Checkbox3

Result
  The function returns the GA_Disabled-Flag of the corresponding gadget.

Example
  void Emperor_Integer1GadgetUpEvent(void)
  {
    BOOL result;
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */
```

```
    result = Emperor_GetGadgetDisabledAttr(Button1);

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_SetGadgetDisabledAttr()
```

1.42 Function Emperor_GetGadgetReadOnlyAttr

```
Function
  Macrofunction for getting the GA_ReadOnly-attributes.

Synopsis
  result = Emperor_GetGadgetReadOnlyAttr(GadgetObject)

  BOOL Emperor_GetGadgetReadOnlyAttr(struct Gadget *);

Action
  This macro uses the GetAttr()-Function of the Intuition-Library.
  The GA_ReadOnly-Flag (whether the gadget is only for reading) is set
  and returned.

Input
  Gadget - which gadget should be got   Example: Checkbox3

Result
  The function returns the GA_ReadOnly-Flag of the corresponding gadget.

Example
  void Emperor_Integer1GadgetUpEvent(void)
  {
    BOOL result;
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */

    result = Emperor_GetGadgetReadOnlyAttr(Button1);

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }
```

```
see also
 Emperor_SetGadgetReadOnlyAttr()
```

1.43 Function Emperor_SetGadgetAttr

```
Function
 Macrofunction for setting a Gadget-value.

Synopsis
 Emperor_SetGadgetAttr(GadgetObject, Value)

 void Emperor_SetGadgetAttr(struct Gadget *, STRPTR);

Action
 This macro uses the SetGadgetAttr()-Function of the Intuition-Library.
 Depending on the kind of the gadget this macro controls SetGadgetAttr()-Function ↩
    .
 Without additional inputs, the flag-choice is made by this macro !
       These flags are supported:

       GA_Selected             (Button, Checkbox)
       CHOOSER_Selected
       CLICKTAB_Current
       FUELGAUGE_Level
       GRAD_CurVal
       INTEGER_Number
       LISTBROWSER_Selected
       PALETTE_Colour
       RADIOBUTTON_Selected
       SCROLLER_Top
       SLIDER_Level
       STRINGA_TextVal
       TEXTEDITOR_Contents - Flag.

 If you want to set other flags, then please use the real Intuition-Function.

Input
 Gadget - which gadget should be set   Example: Checkbox3

 Value  - Value, how the flag should be modified.
          ATTENTION!! The value must be from type "STRPTR" (chain of characters).
                The converting can be done by using these functions:

                stringtoint()
                inttostring()

Example
 void Emperor_Checkbox3GadgetUpEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */
```

```
    Emperor_SetGadgetAttr(Fuelgauge2, "23");

    Emperor_SetGadgetAttr(String3, "String");

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
 }

see also
 Emperor_GetGadgetAttr()
```

1.44 Function Emperor_SetGadgetAttrComplex

```
Function
 Macrofunction for setting a Gadget-value.

Synopsis
 Emperor_SetGadgetAttrComplex(GadgetObject, GadgetattrID, Value)

 void Emperor_SetGadgetAttrComplex(struct Gadget *, ULONG, STRPTR);

Action
 This macro uses the SetGadgetAttr()-Function of the Intuition-Library.
 In contrast to Emperor_SetGadgetAttr() here you must
 set a concrete tag.

Input
 Gadget - which gadget should be set   Example: Checkbox3

       GadgetattrID - which GadgetattrID should by used   Example:  ↩
          CHECKBOX_TextPlace

 Value  - Value, how the flag should be modified.
          ATTENTION!! The value must be from type "STRPTR" (chain of characters).
                The converting can be done by using these functions:

                stringtoint()
                inttostring()

Example
 void Emperor_Checkbox3GadgetUpEvent(void)
 {
   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   Emperor_SetGadgetAttrComplex(Fuelgauge2, FUELGAUGE_Min, "23");
```

```
    Emperor_SetGadgetAttrComplex(String3, STRINGA_MaxChars, "10");

    Emperor_SetGadgetAttrComplex(Listbrowser1, LISTBROWSER_MinVisible, "20");

    Emperor_SetGadgetAttrComplex(Listbrowser1, LISTBROWSER_Labels, (STRPTR) & ↩
       Listbrowser_NewListArray);
    /*********************************************/
    /* This isn't a bug in the guide....         */
    /* When changing Labels, you must pay attention */
    /* that you cast the argument with (STRPTR)  */
    /* and give the address (&)!! to the function   */
    /*********************************************/


    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

 see also
  Emperor_GetGadgetAttrComplex()
```

1.45 Function Emperor_SetGadgetDisabledAttr

```
 Function
  Macrofunction for setting the GA_Disabled-attributes.

 Synopsis
  Emperor_SetGadgetDisabledAttr(GadgetObject, disable/enable)

  void Emperor_SetGadgetDisabledAttr(struct Gadget *, BOOL);

 Action
  This macro uses the SetGadgetAttr()-Function of the Intuition-Library.
  The GA_Disabled-Flag (whether the gadget is chooseable) is set.

 Input
  Gadget          - which gadget should be set   Example: Checkbox3
  dis/enable      - TRUE to disable, FALSE to enable flag.

 Example
  void Emperor_Integer1GadgetUpEvent(void)
  {
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */

    Emperor_SetGadgetDisabledAttr(Button1, TRUE);
```

```
    Emperor_SetGadgetDisabledAttr(Checkbox3, FALSE);

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_GetGadgetDisabledAttr()
```

1.46 Function Emperor_SetGadgetReadOnlyAttr

```
Function
  Macrofunction for setting the GA_ReadOnly-attributes.

Synopsis
  Emperor_SetGadgetReadOnlyAttr(GadgetObject, on/off)

  void Emperor_SetGadgetReadOnlyAttr(struct Gadget *, BOOL);

Action
  This macro uses the SetGadgetAttr()-Function of the Intuition-Library.
  The GA_ReadOnly-Flag (whether the gadget is chooseable) is set.

Input
  Gadget          - which gadget should be set   Example: Checkbox3
  on/off          - TRUE to make gadget readonly, FALSE to make gadget choosable.

Example
  void Emperor_Integer1GadgetUpEvent(void)
  {
    /*
    ... some sourcecode ...
    ...
    ...
    ...
    */

    Emperor_SetGadgetReadOnlyAttr(Button1, FALSE);
    Emperor_SetGadgetReadOnlyAttr(Checkbox3, TRUE);

    /*
    ...
    ...
    ...
    ... further sourcecode ...
    */
  }

see also
  Emperor_GetGadgetReadOnlyAttr()
```

1.47 Function stringtoint

```
Function
       This function converts characters (STRPTR = chains of characters) into
       an integer number (LONG = 32-bitnumber).

Synopsis
 result = stringtoint(string)

 LONG stringtoint(STRPTR);

Action

       It is for transformations of the results of functions like:

       Emperor_GetGadgetAttr
       Emperor_SetGadgetAttr

Input
 string - characters to convert

Example
 void Emperor_Cut_MenuEvent(void)
 {
   LONG number;
   STRPTR string = "-123456789";

   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   number = stringtoint(string); /* !! number = -123456789 !! */

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 inttostring()
```

1.48 Function inttostring

```
Function
       This function converts an integer number (LONG = 32-bitnumber)
       into characters.

Synopsis
```

```
 result = inttostring(number)

 STRPTR inttostring(LONG);

Action
       This function converts a number of the area from -999999999
       to 999999999 into characters (= STRPTR).
       It is for transformations of the results of functions like:

       Emperor_GetGadgetAttr
       Emperor_SetGadgetAttr

Input
 number - number to transform

Example
 void Emperor_Cut_MenuEvent(void)
 {
   STRPTR string;

   /*
   ... some sourcecode ...
   ...
   ...
   ...
   */

   strcpy(string, (char *) inttostring(-123456789));

   /*
   ...
   ...
   ...
   ... further sourcecode ...
   */
 }

see also
 stringtoint()
```

1.49 Function stringlength

```
Function
       This function returns the length of a string.

Synopsis
 result = stringlength(string)

 ULONG stringlength(STRPTR);

Input
 string - string, you want to get the length from

Beispiel
 void Emperor_Cut_MenuEvent(void)
```

```
{
        ULONG result;

  /*
  ... some sourcecode ...
  ...
  ...
  ...
  */

        result = stringlength("Hello"); /* result = 5 */

  /*
  ...
  ...
  ...
  ... further sourcecode ...
  */
}
```

1.50 History

```
2.0  - Initial release

2.1  - AmigaOS 2.0 Gadget support !!
       (GadTools-Gadgets are implemented now !)
     - reached to shrink programsize by coding the window-stuff by myself
       instead of making it by ReActor

2.2  - Oops..The program crashed, when a clicktab was in a test-window.
     - speed optimizations (e.g. at startup, shutdown etc.)
     - defined catalog-creation
     - C++-Code support
     - added the macro "Preferences-Menu" for Prefs-Programs
     - better & easier generated C-sourcecode
     - minor bugfixes

2.3  - prefs-editor rewritten
     - chooseable processortype for generated StormC-project
     - modified programming-help
     - some functionmacros rewritten
     - minor bugfixes

3.0  - gadgets-test routine rewritten
     - fixed bugs by showing tapedeck & colorwheel gadgets
     - fixed problems with clicktabs & page gadgets (see "clicktabsexample")
     - added function "Shutdown()" (called, when program quits)
     - added progress-bar while saving
     - added macrofunctions Emperor_Set/GetGadgetAttrComplex()

3.1  - fixed a bug when generating source for window with colorwheel
     - source is now *more* SAS/C friendly
     - fixed a silly bug when copy a function from programming help into  ↩
       texteditor
```

```
     - added online help for macrofunctions (see chapter Programming Help for ↩
       details)
     - added ARexx-connection to StormC (Scripts - Dir)
     - added arguments by starting StormC (e.g. GoldED support for StormC)
     - added loading picture

3.2  - added parametry of several image-gadgets (bevel, bitmap, glyph)
       (see "ClicktabExample" for details)
     - fixed a bug with slider and getfile-gadgets
     - fixed problem with requester-body-text ["\n" (Newline) will be recognized ↩
       now]
     - rewritten routine for adding, moving (up and down) and removing of objects ↩
       in a list

3.5  - showing of scroller & slider-gadgets fixed
     - layout-gadget (bevelstyle & -state) doesn't switch back to previous setted
       values anymore
     - added support of finnish catalog
     - added program-environment for configuration of version, program name,
       stack, mem and many more
     - deleting windows is possible now
     - when pages were added to gadgetlist, its generation was incorrect
     - added gadgethelp support - just connect a gadget to configure ! (program- ↩
       environment)
     - added function <Menu-Edit-Clearlist> to reset current list of objects
     - label's Locale-connection works correct now
     - gadgethelp for nearly every gadget
     - added chooseable HookType for string-gadgets
     - added some initial-configurations for texteditor-gadgets
     - moving Locale-entrys is possible now
     - editing the includelist is also possible now
     - added new startup-picture (thanks to Janne Peräaho)

3.6  - Gradientsliders horiz/vert orientation works correct now
     - some global variables problems fixed
     - problems with node-array fixed
     - special positions/sizes for OS 2.0 windows work now
     - chooseable smallfont for large lists
     - fixed crash when moving a test-window
     - modifyable library-integration for your project
     - fixed bug in installer-script (doesn't notice, if an OS higher than 3.5 was ↩
       installed)
     - added interconnection maps
     - generating source based on AmigaOS 2.0, AmigaOS 3.5+ or mixed code

4.0  - DONE ! the whole code is rewritten and structured ! only 4 MBytes of ↩
   systemmemory
       is needed !
     - the programflow maybe changed a bit to a better, because also all low-level
       functions were rewritten
     - look also changed a bit
     - menu is more complex and professional
     - expanded GadTools-handling (with RightMouseButton)
```

1.51 FAQ

```
Question:   When I change the size of a GadTools-gadget, the border, which marks ↩
   the activation,
            isn't (or just a bit) visible.

Answer:     Probably you are using a program like VisualPrefs, which patches the ↩
   visualization
            of GadTools-gadgets. If you deactivate it, it should work.
            Or you may change your border-sizes of a "String"- and "Integer"- ↩
               gadgets down to
            normalsize, which does have the same effect.


Question:   Emperor doesn't run on my system !

Answer:     There are a few things, you must pay attention on:
            * AmigaOS 3.5 installed ?
            * 4 MBytes of systemmemory must be free on startup
            * assign on <PATH>:Emperor
            * RexxMast already started ?
            * stack at >50000 bytes ?
              - under CLI:  type 'stack 50000'
              - under WB:   in iconinformations choose a stack of >50000 bytes
              - under DOpus:in menu 'Settings-Environment' choose point 'CLI- ↩
                 Launching' and
                            change stack !
            To every occured error at startup should appear a request...
```

1.52 known bugs & future plans

```
known bugs of the program:

       1. Printing the objecttable is deactivated.
          This bug shouldn't have an influence to the capability of functions of ↩
             the program.

       2. The attribut-window "Datebrowser" is much too wide (when choosing a ↩
          nonproportional
          screenfont) ! (but why .... ?)

       3. Saving clips has no function. (deactivated)

       4. Text- or lineformatting is not implemented yet. (deactivated)

       5. Labels and bitmaps aren't shown in the preview-window

future plans:

       1. Speedbar-Buttons should be configurable one day

       2. Screen-category

       3. Undo/Redo action for lists
```

4. Checking items of the lists

5. Insertmode isn't supported by the ReAction-Texteditor-Gadget

1.53 Author

If you have some suggestions for improving or correcting the program,
please write or mail me your facts to:

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1.54 Expression of thanks

I want to thank very, very much Janne Peräaho for his nice startup-picture he made ↩
.
Also for his bugreports, to correct existing errors in Emperor.
- Thanks Janne !

Olivier Martin for his bugreports and his highend-example project "automate". You ↩
can
find this example in the directory "projects" of Emperor. It is a very nice tool ↩
to show
the developing of "virtual life" on Amiga - check this out !
- Thanks Olivier !

Also I want to say thanks very much to all the bugreporters for the thorough use ↩
of Emperor !!