

# **IconTrace**

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# Chapter 1

## IconTrace

### 1.1 IconTrace Guide 2.02 Copyright © 1993 P. Stuer

Table of Contents:

Welcome to the IconTrace AmigaGuide®. Select any of the following topics and follow the links to other subjects as you please:

- 1 Introduction
- 2 Features
- 2 System requirements
- 3 Using IconTrace
- 4 About the trace output
- 5 Legal Stuff
- 6 About the author and the program
- 7 Program History

### 1.2 About AmigaGuide

Contents - Display the Table of Contents document for the current database.

Index - Display the index document for the current database.

Help - Display the help document for the current database. If the database doesn't have a Help document of its own, then the global Help database will be used instead.

Retrace - Go back to the previous node.

Browse - Step through the documents in sequential order, in the order they appear in the database.

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## 1.3 Introduction

IconTrace is a program that allows you to monitor what the icon library is doing when you start a program using the Workbench. It's main use lies in discovering undocumented ToolTypes and debugging your existing ToolTypes by watching if the program finds them correctly. You are also shown what icons your programs look for.

## 1.4 Features

Currently the following functions can be monitored:

FindToolType GetIcon

GetDiskObject MatchToolValue

GetDiskObjectNew PutDiskObject

GetDefDiskObject PutDefDiskObject

PutIcon

You can specify which functions IconTrace should monitor.

IconTrace saves the trace information it gathers as session history. It provides a scrollbar which enables you to scroll through the session history.

IconTrace is also a commodity. You can specify a hotkey to show or hide the output window.

IconTrace can open on any public screen.

## 1.5 System Requirements

IconTrace should run on any Amiga system with at least 512K RAM and one disk-drive. IconTrace requires KickStart v2.04 or higher to run. Special care has been taken in the program design to make the program work with 68020, 68030 and 68040 processors without sacrificing 68000 compatibility.

IconTrace also requires the ReqTools.library v38 or higher.

ReqTools is copyright © 1992, 1993 by Nico François.

IconTrace is KickStart 3.0 compatible and aware. It will show you some of the new features available with this version of the operating system.

Should you have any trouble running IconTrace on your machine, please write to me with the full specifications of your machine, that is KickStart version, model, expansion boards etc...

## 1.6 Using IconTrace

You can be start IconTrace from the CLI/Shell or the Workbench. IconTrace will always check to make sure it is not already running. If so, the copy of IT that is already running will be notified and its window will open or come to the front. The second copy will exit quietly.

[Starting IconTrace from the Shell](#)

[Shell Startup Options](#)

[Starting IconTrace from the Workbench](#)

[Workbench Startup Options](#)

[Stopping IconTrace](#)

[Project menu](#)

## 1.7 Starting IconTrace from the Shell

To start IconTrace from the Shell simply type:

```
1> IconTrace
```

followed by a return. If you want to continue using the Shell while IconTrace is running, you need to prepend the Run command before IconTrace as follows:

```
1> run IconTrace
```

If IconTrace is succesful in initializing itself, you see the IconTrace window and will start monitoring the icon.library. If no window is displayed, consult Appendix A (Troubleshooting) for more assistance.

## 1.8 Shell Startup Options

IconTrace can be started with various options. If you run IconTrace with a questionmark (?) as argument you'll get the argument template.

### HISTORY

This option tells IconTrace how many lines of history it should keep. Use 0 to disable the history feature. The default number of history lines is 256.

### OUTPUT

With this option you can direct the trace information to some other AmigaDOS device or file in addition or in place of the

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information being displayed in the window.

If you have a debugging terminal attached to the serial port you could use 'IconTrace OUTPUT=AUX:.' to have all trace information appear at the terminal.

A special symbol is DEBUG. 'OUTPUT=DEBUG' will output all trace information to the serial port at 9600 baud.

#### LEFT

This option specifies the left position of the IconTrace output window in pixels. By default, the leftedge will be zero (0).

#### TOP

This option specifies the top position of the IconTrace output window in pixels. By default, IconTrace will open its window 1 pixel under the screen title bar.

#### WIDTH

This option specifies the width of the IconTrace output window in pixels. By default, IconTrace will open a window that is as wide as the visible width of the public screen it is appearing on.

#### HEIGHT

This option specifies the height of the IconTrace output window in screen lines. By default, IconTrace will open a window that is as high as the visible height of the public screen it is appearing on, without overlapping the title bar.

#### SCREEN

If you do not use this option, IconTrace will open on the default public screen which is most of the times the Workbench screen. IconTrace will try to open on the public screen whose name is specified after this argument.

#### TRACE/DONTTRACE

By specifying a trace mask using the TRACE parameter you can determine which icon.library functions IconTrace will actually trace. The trace mask consists of a string of characters. The function corresponding to the character will be traced. Use the following characters (case sensitive):

A: GetIcon F: PutDiskObject

B: GetDiskObject G: PutDefDiskObject

C: GetDefDiskObject H: FindToolType

D: GetDefDiskObjectNew I: MatchToolValue

E: PutIcon

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For example, TRACE=HI will only trace the icon.library FindToolType() and MatchToolValue(). By default, IconTrace monitors all icon.library functions it knows about.

Specifying a trace mask for DONTTRACE will make IconTrace ignore the functions that you specify here. For example, DONTTRACE=a will cause the GetIcon() calls not to be shown. The DONTTRACE trace mask always takes precedence over the TRACE trace mask.

#### CX\_PRIORITY

This option allows you to specify priority relative to the other Commodities programs. Default priority is 0.

#### CX\_POPKEY

This option allows you to change the default hot key for IconTrace. The default hot key is 'ralt i' (right Alt key pressed with 'i').

#### CX\_POPUP

If you do not want IconTrace to open its window, you can specify the CX\_POPUP switch like this: DT CX\_POPUP=NO. By default, the IconTrace window will open.

#### CX\_ACTIVE

By specifying CX\_ACTIVE=NO, IconTrace start without its tracing code enabled. By default, tracing starts immediately.

## 1.9 Starting IconTrace from the Workbench

To start IconTrace from the Workbench, simply double-click on the IconTrace icon to start the program or use the 'Execute Command' item from the 'Workbench' menu.

## 1.10 Stopping IconTrace

You can stop IconTrace at any time by sending it a break signal. If you started IconTrace from the Shell, you can do this by pressing Ctrl-C.

Since IconTrace is a commodity you can use the Exchange utility to control it.

'Show Interface' will open the IconTrace output window

'Hide Interface' will close the IconTrace output window

The 'Active/Inactive' cycle gadget will toggle IconTrace's

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activation status. When IconTrace is active it will update it's internal history even when the output window is closed; when it is inactive, no output will occur.

The "Active" menuitem of the "Project" menu will also allow you to toggle the activation status of IconTrace.

'Remove' will tell IconTrace to quit.

#### NOTE

IconTrace will try to quit immediately. If any of the patches are still in use, it will wait until no program uses the IconTrace patches anymore.

## 1.11 The Project menu

The Project menu gives you some control over IconTrace's behaviour while it is running.

- The Active menu item

IconTrace is 'active' when it is allowed to monitor icon.library calls. When this menu item is checked, IconTrace is **active**.

- The Clear menu item

Clears the session history and the window.

- The Hide menu item

Does the same as the Hide gadget of the **Exchange** program. IconTrace stays in memory and, depending on its activation status, continues to trace the icon.library.

- The Quit menu item

This causes IconTrace to try to quit. See also **Stopping IconTrace**.

## 1.12 Workbench Startup Options

You can specify the same options as explained in the paragraph "Shell Startup Options" by adding tooltypes to the IconTrace icon.

#### NOTE

If you use the CX\_POPUP and/or the CX\_ACTIVE tooltype you must specify them with '=YES' appended to them.

For example, 'CX\_POPUP=YES'. Not using them defaults to CX\_POPUP=YES and CX\_ACTIVE=YES.

To change the task priority of IconTrace you can add the TOOLPRI tooltype to the IconTrace icon. For example, adding TOOLPRI=5 will start running IconTrace with task priority 5.

## 1.13 About the trace output

The information shown depends on which function is being traced

but all messages have 3 components in common:

**Process Name** The name of the process calling the icon.library function.

**Trace Info** Verbose information about the function being executed.

**Result** Whether the call was succesfull or not (if applicable)

## 1.14 Legal Stuff

### COPYRIGHT NOTICE

IconTrace software and documentation are Copyright © 1993 by Peter Stuer. All rights reserved.

### DISCLAIMER

IconTrace has proven to be stable in everyday use. 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 program. The author reserves the right to make changes to the software or documentation without notice.

### PREFACE

This program 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. If you want to distribute this program you should keep this document with it. This program cannot be used for commercial purposes without written permission from the author.

None of the files of the IconTrace package may be modified or left out without permission of the author. Crunching or achiving is allowed only if none of the IconTrace files get modified by it.

Special permission is hereby granted to include IconTrace in Public-Domain collections such as Fred Fish's Amiga Library.

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## 1.15 About the author and the program

IconTrace has been created using the Macro68 Assembler and CygnusEd Professional 3 on an Amiga A3000 25/100 with 10MB memory. The IconTrace documentation was formatted with P<sup>R</sup>off.

If you have suggestions or remarks about this program, or if you find any bugs, please let me know.

When sending in bug reports, please state exactly under what circumstances the bug occurred, what equipment was used and what happened. If possible also try to give me enough information to reproduce the bug. It is very difficult to find bugs when you don't know exactly what happened.

Write to the following address:

Fido : 2:292/603.7 (Peter Stuer)

AmigaNet : 39:120/102.7 (Peter Stuer)

NLA Net : 14:200/101.7 (Peter Stuer)

UUCP : Peter.Stuer@p7.f603.n292.z2.FidoNet.Org

SnailMail: Peter Stuer

Beatrijslaan 2 bus 13

B-2050 Antwerpen L.O.

Belgium - Europe

I will also try to put the latest available version of IconTrace on the following BBS (this may change without further notice):

Great Balls Of Fire BBS

ReqTools Support BBS

Herman Stevens

Lubbeek

ADS Distribution HUB

ABC Host Belgium

AFN Host Belgium

Tel. +32-(0)16-64.09.12

ZyXEL U1496+ 16800 BPS (N.8.1) v32bis v42bis

24-24 h.

Fido Node 2:292/603

NLA Node 14:200/101.0

AmyNet 39:120/102.0

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## 1.16 Program History

### Program History

::: Version 2.02 ::: December 14, 1993 ::::::::::::::::::::

- BUG FIX: Fixed a small bug that caused high-ASCII characters in filenames to disappear. Thanks to Stefan Ottosson for reporting this.

- BUG FIX: The session history was not redrawn if there were less lines in the session history than could be displayed. Thanks to David Nouls & Bart van Assche for reporting this.

::: Version 2.01 ::: December 6, 1993 ::::::::::::::::::::

- NEW: LEFT and TOP options let you specify the left and top position of the IconTrace window. Thanks to Preben Nielsen for suggesting this.

- NEW: IconTrace remembers the position and dimensions of its window when it shows it window again after a 'Hide'.

- NEW: You can use the following keys to control the position of the session history:

Cursor Up/Cursor Down 1 line up/down

Shift Cursor Up/Cursor Down 1 page up/down

Control Cursor Up/Cursor Down top/bottom

Thanks to Magnus Holmgren for suggesting this.

- NEW: To avoid using a ridiculously long TRACEMASK parameter if you DON'T want to see the trace results of a function, I replaced the TRACEMASK parameter with the TRACE and DONTTRACE parameter. For more information, see the documentation.

- NEW: Brought the manual up to date.

- BUG FIX: Due to register leaking IconTrace would exit when it reopened its window after another copy of IconTrace woke the original up. Thanks to Rafael D'Halleweyn for reporting this.

- BUG FIX: IconTrace ignored the CXPRIORITY argument. Thanks to Rafael D'Halleweyn for reporting this.

- BUG FIX: The broker name of IconTrace did not fit completely in the provided space by Exchange. Thanks to Rafael D'Halleweyn for reporting this.

- BUG FIX: Fixed a bug that could cause a lock-up of the console device during a refresh of the history. Thanks to Bart van Assche for helping me to track it down.

::: Version 2.00 ::: November 15, 1993 ::::::::::::::::::::

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- Complete rewrite.
  - NEW: Removed the annoying delay when quitting IconTrace. Thanks to Rafael D'Halleweyn for the suggestion.
  - NEW: Added up/down gadgets to scroll up/down line by line.
  - NEW: Added Clear menu item to clear the history buffer while IconTrace is running.
  - NEW: Added an Active menu item to make activating and deactivating IconTrace on the fly easier.
  - NEW: Added trace code for undocumented functions GetIcon() and PutIcon(). Apparently, the Workbench uses these calls to get its icons when opening Workbench windows.
- NOTE: If you want to know why it takes so extremely long for the Workbench to show a disk/drawer contents in using View By Name mode, start IconTrace and be amazed!
- IMPROVED: Optimized some of the core routines.
- ::: Version 1.02 ::: June 26, 1993 :::::::::::::::::::::::
- BUG: The patch of the GetDiskObjectNew used the wrong trace code.
  - NEW: Made error reporting and failure handling more verbose.
  - NEW: Improved and optimized code.
- ::: Version 1.01 ::: June 24, 1993 :::::::::::::::::::::::
- BUG: FindToolType trace code gave wrong results, sorry...
- ::: Version 1.00 ::: June 23, 1993 :::::::::::::::::::::::
- First release
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