Identify-E

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Chapter 1

Identify-E

1.1 Identify-E.guide

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1.2 Identify-E.guide/Introduction

Introduction *******

The identify.library has a rather long history.

It all began when I got mad about all the System info programs only showing the expansion boards as a number. So I wrote expname.library, which you may already be familiar with.

Later, expname could also identify the system's parameters (even if it was wrong sometimes ;)). I still have new ideas for this library. The only trouble is that the name does not fit any more.

Well, now you have the second generation of the expname.library, called identify.library. It has been completely rewritten and expanded. The conceptional flaws of the expname.library have been removed, and a lot of new features have been added.

The library has currently these features:

- * Converting manufacturer and product id into manufacturer name, product name, and product class.
- * Converting the cryptical Amiga Guru codes into readable descriptions.
- * Analyzing the system's configuration (system type, processor, memory, graphics and so on...).
- * Converting shared library offsets into function names.

Even if the library appears to be quite ready -- it is still far from complete!

I need your help! Please send manufacturer and product names and IDs, your system's configuration, suggestions, bug reports and so on; simply all you want to see implemented in the library.

1.3 Identify-E.guide/Copyright

Copyright *******

Please read this part carefully.

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- * Disk magazines and services that charge extra for file transfers may NOT distribute it without written permission from me!
- * You are allowed to use the expname.library even in a

commercial product without any written permission of me. Please note in your program's documentation that you're using identify.library by Richard Körber. DISCLAIMER By using this product, you accept the FULL responsibility for any damage or loss that might occur through its use or the inability to use it. The developer of the software can NOT be held responsible. CONTENTS OF THE PACKAGE The Identify package is only complete if these files are present: FILE_ID.DIZ Identify.info Identify/Function Identify/Guru Identify/ListExp Identify/arexx/alert.ify Identify/arexx/commodities.ify Identify/arexx/expansions.ify Identify/arexx/functionname.ify Identify/arexx/system.ify Identify/arexx/versioncheck.ify Identify/catalogs/deutsch/Identify.catalog Identify/catalogs/deutsch/IdentifyTools.catalog Identify/catalogs/Identify.cd Identify/catalogs/IdentifyTools.cd Identify/examples/ExpansionMUI Identify/examples/ExpansionMUI.c Identify/examples/MyExp Identify/examples/MyExp.c Identify/identify.doc Identify/identify.doc.info Identify/Identify-D.dvi Identify/Identify-D.dvi.info Identify/Identify-D.guide Identify/Identify-D.guide.info Identify/Identify-E.dvi Identify/Identify-E.dvi.info Identify/Identify-E.guide Identify/Identify-E.guide.info Identify/include/identify_lib.i Identify/include/clib/identify_protos.h Identify/include/fd/identify_lib.fd Identify/include/inline/identify.h Identify/include/libraries/identify.h Identify/include/libraries/identify.i Identify/include/modules/identify.m Identify/include/modules/identify.txt Identify/include/modules/libraries/identify.e Identify/include/modules/libraries/identify.m Identify/include/Pascal/identify.lib Identify/include/Pascal/libraries/identify.h Identify/include/pragmas/identify_pragmas.h Identify/include/proto/identify.h Identify/libs/identify.library Identify/libs/rexxidentify.library

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If you do not agree with these copyright notes, you must delete the Identify packet and all related files immediately!

1.4 Identify-E.guide/Address

My Address

Please send all bug-reports, board descriptions, missing graphic OS, keyfiles, flames and so on to one of the following e-mail addresses: INTERNET I'm reachable through Internet via these E-Mail address: shred@chessy.aworld.de richard.koerber@koeln.netsurf.de Check my home page for the latest release and other programs. The URL is: http://www.is-koeln.de/einwohner/shred SNAIL MAIL You can send me a snail mail letter, too. My address is: Richard Körber Hornstraße 20 51465 Bergisch Gladbach Germany Please enclose a "1,10 DM" stamp if you live in Germany and want to get a reply. INFOLIST You can add yourself to a information list to get notified when new versions of the library are available. Just write a mail with the subject "HELP" (body will be ignored) to:

richard.koerber@koeln.netsurf.de

This list is handled offline, so please allow some days for the reply.

1.5 Identify-E.guide/ListExp

ListExp ******

ListExp is a small tool that was already included in the expname.library package.

It describes the hardware components of the system. On the first line it will write some hardware parameters (like CPU, Memory). After that, all expansion boards will be listed (hopefully by name).

By using the option FULL, all currently used commodities are listed too. The output is then useable for bug reports and similar.

A further option allows to get the manufacturer name, product name and class from manufacturer ID and product ID. Use the options MANUFID and PRODID to do so.

Example:

> ListExp MANUFID=514 PRODID=9
-- ListExp V7.0 -- by Richard Koerber

Manufacturer: Commodore West Chester Product: A2060 Class: ArcNet

If some entries in the expansion list begin with a # instead of a name, you should send a copy of the ListExp output and the description of the missing board (manufacturer name, product name, product class) to me. :-)

Please write me if an expansion name has been guessed. You can easily recognize this by the class (guessed).

It is also not possible to check out all combinations of Amiga expansions. If your hardware is not properly recognized, please write me.

Please note: Some manufacturers, especially GVP and Phase 5, assigned the same ID to different boards. identify.library is prepared and tries to differ these boards, anyhow it can't in any case decide right.

Example: ListExp FULL

1.6 Identify-E.guide/Guru

Guru ****

Guru translates the cryptical alert code into a human-readable form.

You may provide your alert code (all eight digits without any

symbols before or behind) as parameter. An example: > guru 8100005 -- Guru V1.2 -- by Richard Koerber Alert Code: 81000005 Deadend Type: Subsystem: exec.library General: General fault Specified: Corrupt memory list detected in FreeMem Or you can pass LASTALERT. In this case, the last alert code will be examined. Please read the results like this:: Alert Code This is the alert code that has been decoded. Type What kind of alert is it? It may be a deadend alert, or a recovery alert. Subsystem Which system caused the alert? General To what general class does this alert belong? In this case, it is a general fault which must be specified later. Specified What was the cause? This example shows that the memory list has been corrupted by a badly written program. Example: Guru 81000005

1.7 Identify-E.guide/Function

```
Function ******
```

You can use the tool Function to decode the name of a function by providing the library name and the function offset.

The first argument is the library name, e.g. exec.library. You may also specify device or resource names here. All letters after the point (including the point itself) are optional, but it is case sensitive.

The last argument is the function offset to be decoded. It must be a multiple of 6, but it doesn't need to be signed.

Example:
 > Function exec.library -456

-- Function V1.0 -- by Richard Koerber Library: exec.library Offset: -456 Function: DoIO

This function requires the .fd files and an assign FD: to the drawer containing these files. The files must have the usual file name format, e.g. exec_lib.fd.

```
Example:
Function exec.library -456
```

1.8 Identify-E.guide/ARexx

ARexx ****

```
Since V6.0 an ARexx function library is available. You can now also
use Identify in your ARexx scripts.
To do so, you just have to install the rexxidentify.library into
libs:. The library is included into ARexx by using a CALL
```

```
libs:. The library is included into ARexx by using a CALL
AddLib("/libs/rexxidentify.library",0,-30,0) command.
```

These functions are available since Release 1:

ID Release()

Returns the release- and version numbers of the rexxidentify.library. The format is: '<release> <version>.<revision>(<date>)' (Example: '1 1.0(23.4.97)'). You should use the <release> part to check out if a function or option is available (e.g. Word(ID_Release(),1)). The result can also be easily split up into the single contents by using the PARSE command.

```
ID_NumBoards()
```

Returns the number of expansion boards added to the system. You can easily construct a loop for ID_Expansion, using this function.

```
ID_Expansion(<board>, <result code>)
```

Returns the appropriate result to the board number <board> (0 to ID_NumBoards()-1) and the <result code>. Result codes are: MANUF

Manufacturer name

PROD

Product name

CLASS

Product class (localized)

ADDRESS

Memory address of the expansion (hexadecimal)

SIZE Reserved amount of memory for the expansion board (decimal, KBytes) SHUTUP Has the expansion been shut up? (0:No, 1:Yes) SECONDARY (since Release 4) Checks if the entry is primary (Result: Primary) or secundary (Result: Secundary). ID_Function(<library>, <offset>) Returns the name of the <library>'s function and the offset <offset>. See the Shell program Function. ID_Alert(<code>, <result code>) Returns the appropriate result to the alert code <code> (hexadecimal string) and the <result code>. Result codes are: DEAD Deadend or Recovery? SUBSYS System causing the alert GENERAL General alert class SPEC Specific alert class See the Shell program Guru. ID_Hardware(<result code>) Returns a description of the hardware. <result code> are: SYSTEM Used Amiga model (e.g. Amiga 4000) CPU Used CPU FPU Used FPU, if available MMU Used MMU, if available OSVER AmigaOS ROM version EXECVER exec.library version WBVER Workbench version, if available ROMSIZE Size of the AmigaOS ROM.

RAM

OSNR

VBR

CHIPSET Available chip set (e.g. AGA) GFXSYS Used graphics system (e.g. CyberGraphX) CHIPRAM Total size of Chip RAM (includes virtual RAM) FASTRAM Total size of Fast RAM (includes virtual RAM) Total size of total RAM (includes virtual RAM) SETPATCHVER SetPatch version, if available. AUDIOSYS Used audio system (e.g. AHI) Used OS version (e.g. 3.0) VMMCHIPRAM Size of virtual Chip RAM VMMFASTRAM Size of virtual Fast RAM VMMRAM Size of virtual RAM PLNCHIPRAM Size of physical Chip RAM PLNFASTRAM Size of physical Fast RAM PLNRAM Size of physical RAM Address of the processor vectors LASTALERT Last system alert VBLANKFREQ VBlank interrupt frequency POWERFREQ Power frequency ECLOCK Special system clock's frequency

SLOWRAM Size of the A500 and A2000's special Fast RAM. GARY Gary version RAMSEY Ramsey version BATTCLOCK Battery backed up clock available? CHUNKYPLANAR Does a chunky planar hardware exist? POWERPC Is a PowerPC available? PPCCLOCK The clock of the PowerPC, in MHz units. See also the AutoDocs of IdHardware(). These functions are available since Release 2: ID_ExpName(<manufid>, <prodid>, <result code>) Returns the appropriate result to the manufacturer <manufid> (0 to 65535), product <prodid> (0 to 255) and the <result code>. Note that Identify cannot differ between expansions with the same product ID in this access mode. Result codes are: MANUF Manufacturer name PROD Product name CLASS Product class (localized) These functions are available since Release 4: ID_LockCX() Fetches a copy of all currently present commodities and returns a slot for it. You must always provide this slot to the other functions. ID_CountCX(<slot>) Results is the number of commodities found. ID_GetCX(<slot>, <nr>, <result code>) Returns the appropriate result to the commodity <nr> of the slot <slot>. Result codes are: NAME Name of the commodity TITLE Title of the commodity

DESC A short description GUI Result is 1 if the commodity provides a GUI, 0 otherwise. ACTIVE Result is 1 if the commodity is active, 0 otherwise. ID_UnlockCX(<slot>) Frees the slot. You must not use it after that! Some example programs you'll find in the arexx drawer.

1.9 Identify-E.guide/Bugs

Known Bugs

This is a snapshot of my current Amiga:

-- ListExp V7.0 -- by Richard Koerber (mailto:shred@chessy.aworld.de) ListExp is a part of the Identify package (see AmiNet util/libs)

** HARDWARE **

System: Amiga 4000 (CPU=68060 FPU=68060 MMU=68060 PowerPC=None) Chipset: AGA (RAMSEY F, GARY Normal, CHUNKY None) VBR=0x0803AF80 AmigaOS: 3.0 (V39.106, SetPatch V43.6) Exec V39.47 Workbench V39.29 Support: GraphicOS: CyberGraphX 3, AudioOS: AHI Clock: Power 50 Hz, VBlank 50 Hz, E-Clock 709379 Hz

Memory: CHIP FAST TOTAL ROM = 512.0KB SLOW = 0 PLAIN ~2.0MB 25.5MB ~27.5MB VIRTUAL 0 0 0 TOTAL ~2.0MB 25.5MB ~27.5MB

** EXPANSIONS **

Nr IDAddressSizeManufacturerProduct12140.224000000064MPhase 5CyberVision 64Graphics22140.1900EA0000128KPhase 5CyberStorm MK-II Flash-ROM3082C.1000E9000064KBSCMultiface II Multi I/O44754.0C00EC000064KMacroSystem GermanyToccata Audio54754.0500ED000064KMacroSystem GermanyMaestroPro Audio

THESE BUGS ARE CURRENTLY KNOWN:

- * Phase 5 and GVP have sometimes assigned one ID to two or more boards. In this case, identify.library may return a name that does not fit to the hardware.
- * Currently, an 68030 will always be recognized with MMU.

- * I couldn't test the Amiga analysis completely, because of missing Amiga. If your Amiga model is not properly recognized, please send me a copy of your ListExp output.
- * A new memory list will be ignored by identify if changed after its start (e.g. by starting VMM after identify). Workaround: simply remove the identify.library from memory, e.g. with avail flush.
- * All IDHW_LASTALERT accesses will most probably cause an Enforcer hit "LONG-READ from 00000100". This is necessary and harmless.

1.10 Identify-E.guide/History

History ******

V 7.3

- * Bugfix: GfxOS detection was broken under certain situations
- * Added Commodities to rexxidentify.library [Domenic Gebauer]
- * Minor DraCo bugfixes [Udo Reuchlein]
- * Picasso96 (hopefully) is properly recognized now [Jens Langner]
- * Added further boards.

V 7.2

- * Bugfix: LowMemory handler now works fine
- * Some minor optimizations
- * Added IDTAG_Secondary
- * Added SECONDARY to rexxidentify.library
- * Increased IdFunction() parser maximum line length, due to some lines in the cybergraphics_lib.fd.

V 7.1

- * Bugfix: rexxidentify.library returned additional Null termination [Bossman]
- * Bugfix: LowMemory handler hangs up and is temporary disabled
- \star Added further boards.

V 7.0

- * Chunky to planar hardware recognized
- * PowerPC recognition implemented, but not yet completed

- * Added an LowMemory handler (AmigaOS V39+ only)
- * Memory sizes are shown like in ShowConfig

V 6.1

- * Added further boards.
- * Enforcer hit now only occurs on LASTALERT query.
- * Added ARexx command EXPNAME

V 6.0

- * Added further boards.
- * OS2.1 recognized properly.
- * Some new hardware requests (VBR, Gary, RAMSEY, Slow-RAM, Frequencies, BattClock)
- * You can list all expansions without the need to open expansion.library now
- * IdHardwareNum() implemented: you can also request a numerical result for own evaluating purposes now
- * localized and actualized ListExp, Function and Guru
- * ARexx access to the library via rexxidentify.library
- * More example programs

V 5.2

- * Added further boards.
- * Wrote a small C example: using identify with MUI

V 5.1

- * Bugfix: did not recognize AHI properly
- * Added further boards.
- * Properly recognizes A500 with A570 expansion.
- * AmigaE include files [Roger Hågensen]

V 5.0

- * Better Picasso96 recognition
- * Should now FINALLY recognize OCS/ECS Amiga with OS3.1
- * Added further boards.
- * Now also checks Audio OS and AmigaOS.
- * Added plain and VMM memory checkings.

- * Supports shared Manufacturer IDs now.
- * Bugfix: Enforcer hit when asking directly for an unknown expansion
- * Gained several KB by optimizing tables, database compression and clean-ups
- * Adapted ListExp

V 4.4

- * Recognizes Picasso96
- * Added further boards.
- * Bugfix: "-?-" printed beside guessed expansion name
- * Bugfix: Some Amiga 1200 were recognized as "Walker" :-)

V 4.3

- * Recognizes CyberGraphX V3
- * Added further boards.

V 4.2

- * CyberGraphX wasn't recognized properly.
- * Added further boards.

V 4.1

- * Bug fix: still some problems with Amiga recognition.
- * Picasso will be recognized.
- * Added further boards.

V 4.0

- * IdFunction() implemented.
- * New tool Function.
- * Added further boards.
- * Bugfix: In some cases the manufacturer name was trashed.
- * Pascal include files (made by Axel Dörfler)
- * Identifies SetPatch version

V 3.1

- * 2 boards added
- * Bugfix: always recognized an Amiga 3000 on ECS machines with OS3.1.
- * Bugfix: recognized CyberGraphX even when PictDT was installed only.

* Improved memory rounding

V 3.0

- * Bases on the expname.library, but completely rewritten.
- * Now convert alert codes, too.
- * Wrote GURU.

1.11 Identify-E.guide/Credits

```
Credits
******
   I want to thank especially these fellows (in no special order):
Andreas Gelhausen
     for Scout, his board list and his ideas.
Martin Wietfeld
     for his great board list!
Axel Dörfler
     for using Identify in XOpa, and the PASCAL includes.
Thomas Kessler
     for ShowConfigEnh and his many ideas.
Geert Uytterhoeven
     for his board list and the description of the GVP codes.
Roger Hågensen
     for the Amiga-E include files and his hints.
Timo Ronkko
     for his genious hint!
Colin Thompson
     for his field tests, checking my translations and his useful hints.
Ferraris Luca
     for his Blitz Basic 2 interface (see AmiNet
     dev/basic/IdentifyBB2.lha).
Frank Wille
     for his great PhxAss assembler, his hints and all his help.
Domenic Gebauer
    for cP!_ShowConfig.
Sascha Reissner
     for ToxicBoards.
```

Kössi

for his many boards, his help for all my TexInfo problems, and his debug skills.

... and for their contributions (sorted alphabetically):

'2bros', Daniel Adolfsson, 'ALV', Thomas Andersson, Andrija Antonijevic, Sven Arke, Jörn Asmussen, Matthias Bethke, 'Bossman', Paul Braithwaite, Dave Clarke, Gary Coleman, Gagliardini Daniel, Marcus Cai Degler, Ethan Dicks, Frank Dietrich, Norbert Dimpfl, Kevin Fairhurst, Ulrich Falke, Alexander Fichtner, Ramiro Garcia, Matthew Garrett, Domenic Gebauer, Andreas Gelhausen, Patrick Gern, Neil Griffiths, Roger Hågensen, Fred Hamilton, Michael Hartmann, Georg Hazianastasiou, Dirk Hebisch, Matthias Heilmann, Ian P.Heitmans, Gene Heskett, Patrick Hess, Torfinn Ingolfsen, Bengt Jensie, Thomas Kessler, Bernd Kösling, Bernd Kriwolat, Mario Kuban, James Kückmann, Rask Lambertsen, Jens Langner, Lutz Legero, Mika Lembke, Petter Lindquist, Mika Lundell, Gunther Mannigel, Peter Marquardt, Peter Mattsson, Mario Misic, L Mac Mullan, David Oakes, Jürgen Ofner, Jakob Ölund, Chris Painter, Oliver Peike, Markus Pietz, Heiko Polig, Giuseppe Premoli, Michael Reichenbach, Sascha Reissner, Jan Rembser, Udo Reuchlein, Kai Rode, Timo Ronkko, Gregor Rosenauer, Andre Schenk, Bodo Schulz, Thomas Schürger, Frank Seidel, Simon Shead, Karsten Soeth, Mark Sorensen, Nicholas Stallard, Teemu Suikki, Johan Sundstrom, Adam Szymczak, Patrick Thato, Colin Thompson, Henrik Tikanvaara, Jürgen Urbanek, Geert Uytterhoeven, Jarkko Vatjus-Anttila, Milco Veljanoski, Federico Villata, Christian Wasner, Pete Wason, Ralph Wermke, Henrik Wetterstrom, Martin Wietfeld, Alexander Wild, Frank Wille, Beno Zidaric, Rolf Zuercher, Alessandro Zummo.

(and all I might have forgotten!)

, ,

Keep on!

1.12 Identify-E.guide/Concept Index

	Bugs
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