# TPUG NEWS

Volume 1, Number 2

# **President's Report**

of those changes that have taken place, or are in progress, include:

We have moved again. our new address is 5300 Yonge Street, which is right on the TTC route about 1 mile north of the 401. Our rent is now \$1000 per month, down from \$3000 per month at the Duncan Mill address. We also have a little more space. While we are still in the basement as before, our usable space is now 2,000 square feet instead of 1,500 square feet.

As of September of this year, we have discontinued producing our own publication, TPUG Magazine. Instead, we have contracted the Transactor to produce a magazine for us. This will consist of the normal Transactor magazine - about 80 pages of excellent material 100% advertising free - as well as an eight-page TPUG supplement produced just for TPUG. The reason for this is simple. We could no longer afford the luxury of our own glossy magazine at the present size of membership (8000+). We also have not been successful in getting adequate advertising revenue for TPUG Magazine to ease the burden. Moving to the Transactor will cut our costs in half, while at the same time I would like to close by thanking all of you for provide our members with a quality magazine.

Since most of the financial work is being handled by our accountant, we have reduced staff in the TPUG office. All of the magazine staff and some of the office staff were laid off. We now have two people, one full-time, one part-time, in the office to handle such things as meetings, disk copying, answering mail, etc. Our operating costs will now be more in line with the present size of the club.

We have added meetings for some of the new machines produced by Commodore. The Amiga and C-128 meetings have been going on for about a year now and are in full swing with a large number of new disks added to our library.

We have also produced a new VIC 20 and C-64 catalogue. The C-64 catalogue appeared in the first edition of the TPUG/Transactor insert.

After two years of losing money, TPUG made a slight profit of \$6503 last year. With the reduced cost of the magazine, office rent and salaries. we should also do quite well this year.

In the past year, there have been some signifi- Last year we ran the Commodore SIG on Comcant changes to the operation of the club. Some puServe for several months. However, after our contract expired, we lost that contract to an exboard member, Louise Redgers. We are still up and running on Delphi, which helps us serve our members all over the world.

> I would like to thank the many volunteers who, over the years, have helped to make TPUG what it is today. Some of these people include:

Our meeting co-ordinators: Donald Dalley, Victor Gough, John Easton, Allan Farquharson, Gerry Gold, Avy Moise, Anne Gudz, Don Farrow, Jim Hamilton, Keith Falkner, Gord Campbell, William Barrett, George Skinner, Mike 1987: Jan 6, Feb 3, Mar 3, Apr 7, May 5, June 2 Donegan.

Our librarians: Mike Donegan, Keith Falkner, Gord Campbell, Adam Herst, Colin Justason, Bill Dutfield, George Davis, Derick Campbell, Victor Gough, Richard Best, Paul Atchison.

Our Board of Directors: Carl Epstein, Gerry Gold, John Easton, Anne Gudz, David Bradley, Richard Bradley, Keith Falkner, Mike Donegan, Gary Croft.

Our BBS operators: Sylvia Gallus, Steve Punter

your support throughout the last year, and wish you luck and continued success in the years to

Chris Bennett, TPUG President 1985-1986

# TPUG BBS

telephone number:

(416) 273-6300

Operating hours: 24 hours per day 7 days per week The password is. . .

**NOEL** 

# TPUG MEETING SCHEDULE Sept. 1986 to June 1987

All meetings begin at 7:30 pm sharp, unless otherwise specified. Capitalized dates indicate that the meeting does not fall on its normal day of the month.

VIC 20 Chapter: York Public Library, 1745 Eglinton Ave. W. (just east of Dufferin) in the Story Hour Room on the second Tuesday of the month unless otherwise specified.

1986: Dec 19

1987: Jan 13, Feb 10, Mar 10, Apr 14, May 12, June 9

Commodore 128 Chapter: York Public Library, 1745 Eglinton Ave. W. (just east of Dufferin) in the auditorium on the first Tuesday of the month unless otherwise

1986: Dec 2

COMAL Chapter: York Public Library, 1745 Eglinton Ave. W. (just east of Dufferin), in the Story Hour Room on the fourth Tuesday of the month unless otherwise speci-

1986: DEC 18

1987: Jan 22, Feb 24, Mar 24, Apr 28, May 25, June 23

Amiga Chapter: Clarkson Secondary School, Bromsgrove, just east of Winston Churchill Blvd., Mississauga; at 7 p.m. in the Little Theatre on the third Thursday of the month, unless otherwise specified.

1986: Dec 18

1987: Jan 22, FEB 13, MAR 13, Apr 16, May 22, June 19

Westside Chapter: Clarkson Secondary School, Bromsgrove, just east of Winston Churchill Blvd., Mississauga; in the Little Theatre on the third Wednesday of the month, unless otherwise specified.

1986: Dec 18

1987: Jan 22, FEB 13, MAR 13, Apr 16, May 22, June 19

Brampton Chapter: Brampton Public Library, Four Corners Branch, 65 Queen St., on the second Thursday of the month, unless otherwise specified.

1986: Dec 11

1987: Jan 8, Feb 12, Mar 12, Apr 9, May 14, June 11

68000 Chapter (formerly SuperPET): Curtis Lecture Hall C, York University Campus (on the north side of the ROSS Building), on the third Wednesday of the month unless otherwise specified.

1986: DEC 10

1987: Jan 21, FEB 11, Mar 18, APR 8

Commodore 64 Chapter: Auditorium, York Mills Collegiate Institute (on the north side of Wilson Ave. between Bayview and Leslie), on the last Monday of the month unless otherwise specified.

1986 - DEC 15

1987 - Jan 26, Feb 23, March 30, Apr 27, May 25, Jun 29

Eastside Chapter: Dunbarton High School (go north on Whites Rd. from the traffic lights at Highway 2 and Whites Rd. to next traffic lights; turn left to parking lots), on the second Monday of the month unless otherwise specified.

1986: Dec 8

1987: Jan 12, Feb 9, Mar 9, Apr 13, May 11, JUNE 1

**Total Software** Development System from Piratebusters Assembler, editor and programming utilities for Commodore 64 and Commodore 128

# **Review by Chris Zamara**

At first glance, TSDS appears to be just a collection of standard utilities: an editor enhancement utility a la BASIC aid, an assembler, a sprite editor, a character editor, and a sound effects generator -- the kind of thing to make a jaded programmer yawn. After using the package for a short while, however, it becomes obvious that the programs in TSDS are the product of a programmer who has created high quality tools for his own use, and honed those tools to a keen edge.

The TSDS package consists of a manual and a single disk. The manual is 27 pages long and coilbound. The software comprises several programs, the main one being the editor/assembler system (sysedt and sysasm). Also on the disk are a sprite editor (sped), a sound effects editor (sed), a character/matte editor (macsed), an unassembler (unasm), and sample files for most of the programs, including assembler source code. There are also BASIC programs to convert source files from MAE or PAL assembler format into sysasm format.

The manual is well written, though fairly brief. For TSDS's intended audience of programmers, the brevity of the manual is a blessing, since it makes an excellent reference book. Generally, programmers don't want tutorials, they want lists and descriptions of functions. All functions are clearly laid out in the table of contents and explained in a concise paragraph. There are separate sections for each of the programs in the TSDS package, and bold type makes the important reference information stand out from the text.

Turning to the disk: aside from its actual content, an excellent feature right off the bat is that no copy protection is used. That means that you can copy the programs onto your standard utility disk, saving you the hassle of always breaking out the special TSDS disk. It also means that you'll always have a backup if something goes wrong. TSDS loads quickly (it uses a fast-load), won't bash your drive's head into a frenzy, and can be used on drives other than a 1541. It also won't wipe out your disk or print a message wishing you a horrible death if it thinks you're trying to make a copy of it. Any unprotected program is much more useful than a protected one, so Piratebuster's decision to go this route is commendable. And, as the name of the company suggests, they will thwart the software pirates by not giving them any protection to break. The only thing they ask in return is that you pay for your copy of the program. Sounds like a fair deal to me.

programs are integrated with the TSDS editor, and must be loaded and run separately. The core

the disk is a collection of extra programs, seem- continue to push the program up the screen by ingly thrown in as a bonus. Because of this isola- cursoring down; to make room for typing you tion, each program will be treated separately helow

# **SYSEDT: The Editor**

When you load TSDS (or boot the disk on the C-128), the sysedt program comes up, along with the built-in assembler. Sysedt makes the standard program-editing environment a better place thought out. to work in, especially if you are writing in assembler. There is a special editing mode for assembler source, and the edit command can be used to select source (S) or basic (B) editing. In the source mode (the default), program lines are not tokenized or modified in any way as they are entered, so you are not hampered by BASIC-dictated restrictions when editing assembler files. For example, you are free to indent lines with any number of spaces for readability, and you can use question marks freely without having them show up as print when listed. Using the put command, source programs are saved as standard means that you can edit source code with your favorite text editor if you wish, and otherwise manipulate them as you would any CBM-ASCII

Another prominent feature of sysedt is its built-in 1541 fast load. On all loads and gets, the fast-loader is invoked if a 1541 drive is being used. Files are retrieved over three times faster than with a regular load. The system is smart enough to only attempt fast loading if a 1541 drive is connected, but if your drive isn't up to the stresses of warp speed, you can turn off the fast load with the slow command. The fast-load capability is sure nice to have, but saves are still as slow as ever.

Sysedt redirects the reset and restore vectors, which can be a real time saver. If you have a reset button, using it to get out of a crash doesn't mean losing your current source file or rebooting TSDS. You come back up with TSDS re-initialized, and with your border and background colour settings intact! Typing old will bring back any source you may have been editing before you hit the panic button. If you were able to get out of your crash with a run-stop/restore, your colours won't be messed up either.

Excepting these features, sysedt is much like Power or BASIC aid in that it allows you to scroll forward and backward through your program using the cursor keys, adds some handy commands to BASIC, and allows you to redefine any key to print a character string of your choice.

The program scrolling feature is pretty slick, allowing you to position the cursor on any column during the scroll, and letting you select the scroll speed. The scroll is designed to work nicely with the special list command, which doesn't print break or ready after the listed lines. After the list, Except for the assembler, none of the other moving the cursor down will display further program lines with no breaks in the listing. The only awkward part of the program scrolling is that once of the package is the editor/assembler; the rest of you scroll to the end of the program, you can't

have to switch to return or shift/return. In other programs, I would call that an annoying quirk, but after spending some time with TSDS, I can't help thinking that Kevin Pickell (the author) purposely made the scroll work in precisely the manner it does, for some reason I just don't appreciate vet. That is the extent to which this system has been

The commands that have been added to BASIC to aid in editing have been kept to a mercifully small number; a system that requires you to memorize a hundred commands certainly can't do much for productivity. There is one command in here that is sadly lacking in many BASIC enhancements, and it's my favourite: help. You can get a list of all commands at any time by just typing the magic word. Most of the other commands are equally intuitive. The familiar find, change, renumber, auto and delete commands are all here, but often with high-powered extra CBM-ASCII sequential files with no line numbers, capabilities you don't find elsewhere. For examlike Commodore's assembler format. When re- ple, find and change let you search for a string trieving files with the get command, line num- occurring at the beginning or end of a line, search bers are automatically added so that the file can for an exact match, search only outside of quotes, be edited. This standard method of storing files and so on. All commands that use line numbers as parameters, including list, allow labels to be used instead. You could list a subroutine, for example, with the command list blowup-. And here's a good idea -- any command preceded by an asterisk will direct its output to the current printer device (normally 4) instead of the screen.

> Users of the DOS wedge utility will find that TSDS supports the single-character commands they are already familiar with: >. / and the rest. The exec command lets you execute sequential files as a series of commands, or turn SEQ files into BASIC programs. When TSDS comes up after it is loaded, it execs a file called ute. This file contains some handy key definitions and displays them. You can edit this file to your own specifica-

> The key command is used to define a keystroke to print out any string of characters. Touching a single key can spit out a commonly-used command, filename or editing operation. You can define any key, but some keys seem to start repeating as soon as you hold them down, requiring a skilful quick tap on the key to use. A rather severe limitation is that you can only define up to 15 keys, with a total of 255 characters for all keys. Also, there is no way to program a key to execute a BASIC or machine code routine. This feature, which is found in Brad Templeton's Power utility, would really help for setting up editing functions. In short, the programmable key capabability of TSDS is a definite plus, but it could go further.

# **SYSASM: The Assembler**

The TSDS Assembler is something between a convenient to use but limited assembler, such as PAL, and a less convenient but full-blown linking assembler like the Amiga's.

The assembler is invoked from sysedt with the assemble or asm command. You specify the source file and optional object file in the asm command, then sysasm takes over. It is a fullfeatured MOS-standard two-pass macro assembler, and is quite fast (I compiled a 24 block source

file in about 13 seconds using an 8050, and 40 SPED: The Sprite Editor seconds with a 1541). After compilation, you return to the sysedt environment, with a listing of assembly errors as the current source file in the editor. If you were working on something before the assembly that you hadn't saved, too bad. This file handling scheme is quite a shock for programmers raised on PAL, where a program is assembled directly from BASIC text space, the object goes to memory, and errors are printed as encountered. For those programmers, remember this when using sysasm: "Toto, I don't think we're in Kansas any more".

Actually, assembling from a disk file has its advantages. The .lib pseudo-op lets you include another source file in the assembly, so a good approach for a long program is to build it in modules, using a main module that just strings all of the other modules together with .libs. In that case, you want to always assemble the main module, which probably won't be what you have in memory anyway. Just make sure that what is in memory is saved before you assemble.

Sysasm can print the list of symbols from the program, sorted numerically or alphabetically, or unsorted. There are quite a few pseudo-ops, ranging from standard ones such as those used for conditional assembly, to more unusual but useful ones for generating checksums and scrambling the object code. An interesting form of .byt is .pok, which converts ASCII characters to their screencode equivalents. Bin is like byt, but allows you to use a disk file to supply the byte values great for including sprite definitions, music data and so on with object code. Additional pseudoops are included to make sysasm more compatible with PAL, though PAL's .bas, for example, is not supported.

There is no linker included, so sysasm falls short of being a full-fledged assembler. You can't make references to any labels that aren't included in your source file (with the .lib files added in). In this way, assembly is made simple, since linking is not required, but for large programs, an assembler with a linker might be better. However, sysasm is better than PAL for large programs, mostly because of the .lib command and macro capability. If you have PAL and prefer to use it for quick assemblies from memory, you can run it along with TSDS! That way you have the best of both worlds.

As with sysedt, the assembler is full of thoughful features. For example, attempting to abort an assembly by pressing the stop key brings up a prompt asking if you want to quit or continue. This allows an elegant exit, closing all files properly. A small point, perhaps, but it illustrates the care that seems to have gone into each part of the system.

# **The Separate Programs**

Although separate, the sprite, sound and character editors can all be used from within the sysedt environment. You can activate them with the up-arrow (load and run), and you can exit from them with the stop key, coming back into the undisturbed sysedt environment. Not complete integration, but it's better than having to reset and reboot TSDS.

The sprite editor is menu-driven and supports features beyond just the creation of sprite definitions. Up to 255 sprites can be defined, with the current sprite page displayed for editing, and the sprite itself displayed below. Any sprite page can be defined, and switching from one page to another is instantaneous. The menu has options to animate sprites, change colours, fill pages with rotated versions of a sprite, combine two sprites, load and save sprite definitions, manipulate a sprite by moving, flipping and rotating, transfer sprite pages, and view 64 sprites at a time. Multicolour sprites are also supported, and multicolour mode is automatically invoked when you switch to a multicolour sprite page. Up to six sprites can be combined in the sprite display using the overlay feature, for images consisting of a combination of several sprites.

This sprite editor can probably replace whatever you're using now, and be easier to use, faster and more powerful. It is definitely a worthwhile program to have in your collection. The only thing that detracts from its ease of use is the fact that the menu lists the single-key options, but has no descriptions of their function. Executing a function is often a hit-and-miss proposition. When you have hundreds of programs in your software library, and you use most of them only once every few months, you don't want to have to memorize anything for the next time. At least the control keys are listed on the menu -- some programs don't even go that far.

# **SED: The Sound Editor**

Sed brings up a screen full of cursor-operated slide controls that let you vary the SID chip's major parameters: attack, decay, sustain, release, frequency, waveform and pulse width. An envelope follower -- another amplitude envelope can also be shaped via slide controls to create a wide variety of effects. An intensity control, which varies the speed of the envelope follower, is also provided, and the number of times to repeat the effect (up to 15) can be selected as well. Up to 255 such screens of effects can be defined, and they can be given names, which appear at the top of the screen. Effects can be loaded and saved as with the sprite editor. Loading is accomplished without having to type in a filename: all sed sound effects files on the disk are displayed, and the desired one is chosen with the cursor keys. (The sprite and character editors work in the same

A file of sample sound effects is included on the disk to show some possibilities. The variety of effects possible with just a few controls is quite amazing. Once you've saved your sound creations, you can broadcast them from your own programs by using a source file included on the TSDS disk. By assembling the file using your sound data, you will create a machine language program that allows you to play any of your effects at will.

Using this package must be the simplest way to create sound effects, since you basically just twiddle knobs (actually, move sliders) until it sounds right, then make as many such effects as you desire. Not all features of the SID chip are utilized, though, and there is no polyphonic capability

allowing you to combine sounds, so the more sophisticated SID-manipulations are out.

# **MACSED: The Character Editor**

This is a unique program, but one for which there is a real need when designing characterbased graphics screens. The program is actually a tight integration of a character editor and a pseudo-text editor that lets you put together characters in any pattern. Like the sound effects editor, this one is easy to use even without the manual, after looking at the screen for a while to figure out what everything does.

The 'matte editor' portion of the program is much like a word processor, allowing you to lay out your custom characters to create a graphics screen. A cross reference of which characters map to which keys is maintained at the top of the screen to help you choose your characters. The display will scroll to the right up to 255 columns, depending on how you set the 'window size'. Within the current window, you can create any image that can be made up from the existing characters. This character matte can then be saved.

From the matte editor you can select the character editor. The character editor shows a group of 64 characters, a character editing field, and the current character in the field displayed in all 16 colours. You can pick any character in the field and edit it, and copy or transfer ranges of characters. Multicolour character mode is also supported; as usual, Kevin Pickell didn't miss a trick. Character sets can be saved independently from mattes. It's easy to switch between editing characters and mattes so that you can build a new character whenever you need it in the matte.

While the need for this program is obviously quite limited, when you do want to create character-based graphics screens, it's invaluable. had to write my own quick'n'dirty matte editor once, and the time I would have saved by using this one instead would pay for a TSDS package. (If you want an attractive title screen for your program or you want to write a game, consider using macsed to create a character matte instead of going to hi-res. Character screens load faster, use less memory, and let you move things around faster and easier. You can also smooth-scroll text screens vertically or horizontally.)

# The TSDS System

Taken as a whole, the TSDS package is a great bargain. Even if you just need a program development tool and have no use for the extra programs, the editor/assembler alone is worth the price of the TSDS package. If you develop programs mostly in assembler, it may be worth considering switching over to TSDS from whatever you're using now. BASIC aid may be cheaper (public domain), Power and PAL may have some advantages (instant subroutines, BASIC program debugging aids, more convenient assembling), and other packages may have a few more features, but the suitability of the sysedt environment for source code development and the overall good design of every part of the system make TSDS a very strong competitor.

# TPUG CONTACTS

shap & Fench Good hele Pla 24

# **TPUG OFFICE**

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# Membership Info:

Regular Member (attends meetings) \$35.00 Cdn. Student (full-time, attends meetings) \$25.00 Cdn. Associate (Canada) \$25.00 Cdn. Associate (U.S.) \$25.00 U.S. Associate (Overseas - sea mail) \$35.00 U.S. Associate (Overseas - air mail) \$45.00 U.S.

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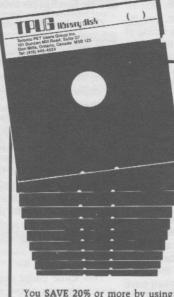
# **TPUG Unclassifieds**

Desperately seeking Administrator Software (8032/8050) by Professional Software Inc. Call collect Jim Shurter (402) 399-8282.

Wanted: SuperPEts and 8050 disk drives. Call Scott (416) 625-0930 (Bus.)

For Sale: 8096 Computer, 8250 disk drive and miscellaneous software. Call Lynn (705) 748-4803.

Wanted: people to phone free BBS. There will be a section in the Commodore section for reviews and software lists for the Commodore, but we need enough callers, so leave word to Stuart Fell and it will be set up. Call (204) 687-8665. 24 hours per day.



# **TPUG**

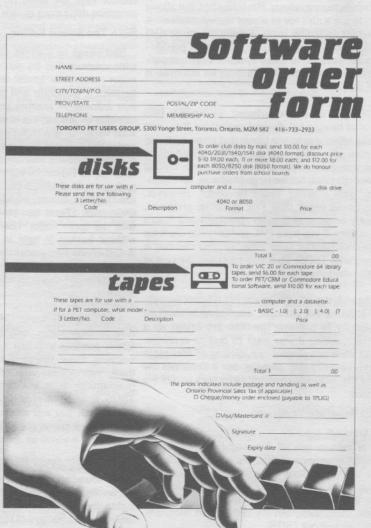
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#### TPUG Amiga Library Supplement

#### TPUG AMIGA PUBLIC DOMAIN DISKS

This public domain software is made available to you, the AMIGA owner, by the Toronto PET Users Group (TPUG). The disks were put together by Fred Fish of California.

Documentation for each disk is available in the README.list file.

We hope you enjoy these disks. Happy Computing

Mike Donegan - Amiga Librarian (416)639-0329 evenings 8-11 PM (Toronto time)

#### README listAAA

This is disk 1 of the freely distributable AMIGA software library.

amigademo Graphical benchmark for comparing amigas. Author: Gary Girzon

Terminal emulation program with xmodem upload/ download capability. Author: Michael Mounier amigaterm balls Simulation of the ''kinetic thingy'' with balls on strings where only the end balls move (quick, can YOU come up

Kivolowitz Shows off use of hold-and-modify mode. Posted to grep colorful usenet by Robert Pariseau.

with a better description?). Anyway, cute. Author: Perry

Dhrystone benchmark program. Author: Reinhold Weicker (Ada version), Rick Richardson (C version) dhrystone Source to the 'dotty window' demo on the Workbench dotty disk. Posted to usenet by Dale Luck.

A small ''paint'' type program. Free drawing, boxes, freedraw filled boxes, etc. Author: Rick Ross gad

'Fun with Gadgets' '. Demonstration program for use of gadgets. Author: John Draper (Aka ' 'crunch' ') Graphical memory usage display program. Watch your gfxmem machine's memory usage! Cute and useful. Author:

Louis Mamakos Sample program that demonstrates ''Extra-Half-Brite' mode on latter AMIGA's with new VLSI chip. Allows 64 colors in low-res mode, rather than 32. Posted to usenet

by Robert Pariseau. Demonstrates creation of a simple window, 'hello hello world''. Posted to usenet by Eric Lavitsky.

halfbrite

make

Shows how to access the Motorola Fast Floating Point latffp library from Lattice C. Also demonstrates the tremendous speedup obtained. Author: Larry Hildenbrand palette Sample program for designing color palettes. Author:

Charlie Heath trackdisk Demonstrates use of the trackdisk driver. Useful exam-

ple of ''raw'' disk read/write. Author: Rob Peck Sample program and documentation for building and requesters using requesters. John worked REAL hard to dig out all

the information in this one! Author: John Draper (aka 'crunch' ')

Sample speech demo program. Stripped down version of ''speechtoy''. Author: Rob Peck speech Another speech demo program. Cute. You have to see speechtov

this one. Be sure to click gadget that pops up the face. Author: David Lucas

# README.listAAB

This is disk 2 of the freely distributable AMIGA software library

Object module librarian. Author: Mike Schwartz Unix-like frontend for Lattice C compiler. Author: Fred Fish dbug

Macro based C debugging package. Machine independent. Provides function trace, selective printing of internal state information, and more. Author: Fred Fish Subset of ''unix' ' make command. Useful, but does not have many of the features of the full make, much less the newer 'augmented make'. Author: Landon Dver

make2 Another make subset command. Author: Marc Mengel Small, relatively portable version of emacs. Has keymicroemacs board macros. No extension language. Author: Dave Conroy

portar Portable archiver. Used to bundle text file up into a single file for transmission as a unit, or otherwise handling as a single file. ' 'Portable' ' because the code itself is portable and because the archive format is very simple (uses ascii headers to separate files). From Decus C distribution. Author: Martin Minow

C cross reference utility. Originally from Decus C distribution. Author: Bob Denny

# README.listAAC

This is disk 3 of the freely distributable AMIGA software library.

gothic Gothic banner printer. Prints DOWN the page, rather than across, so arbitrarily long banners can be created. Send EOF (CTRL-\) to end input. From a Decus C distribution several years ago. Author: unknown

''roff'' type text formatter, roughly following 'Software Tools' version. Somewhat upwardly compatible with unix ' 'nroff' ' command. Author Ken Yap

A very fast text formatter, controlled exclusively by command region line arguments. Author: Gary Perlman & hordes of students A highly portable forth implementation. Lots of goodies.

Author: Allan Pratt A nice little lisp implementation. Compiles and links ok, but

something in the Lattice C setjmp/longjmp code prevents it from currently running. Might be easily fixed. Version 1.4. Author: David Betz

#### README.listAAD

This is disk 4 of the freely distributable AMIGA software library.

distribution of several years ago. Author: Unknown Another grep like utility, also using the Boyer-Moore al-

gorithm. Author: Roy Mongiovi and Arnold Robbins A replacement for unix ''yacc'' command. This is from the

GNU (GNU is Not Unix) effort, and was obtained from the Free Software Foundation. Compiles and links (with some effort) but currently crashes the machine. Needs work, but will probably be worth it. Author: Bob Corbett and Richard Stallman

A grep like utility using the Boyer-Moore algorithm. Author: Peter Bain

Decus grep (Get Regular Expression and Print). Useful for text.demo finding strings in files. Author: Unknown

This is an absolutely ancient kermit, who's only saving grace is that it is small and quite portable. On the AMIGA, there is no connect mode, only send and receive. You must log into the remote machine via one of it's local terminals and point it's kermit at the appropriate serial line connected to the AMIGA. Author: Unknown, but it is so hacked up it doesn't matter by now.

MyCLI Another CLI for the AMIGA. Author: Mike Schwartz

mandel A Mandelbrot set program. Author: Robert French, with trackdisk additions by RJ Mical

### README.listAAE

This is disk 5 of the freely distributable AMIGA software library. It contains many of the programs, written by Commodore-Amiga people, that were included in disk number 1. However, they have been cleaned up so that they compile cleanly on the AMIGA, return resources allocated, etc.

Console device demo program with supporting macro routines. Author: Rob Peck 12/1/85

freemap Creates a visual diagram of free memory. Comes with custom icon so can be run from workbench screen.

Author: Robert J. Mical

input.dev In combination with hander.interface.asm (supplied), lets a user trap keyboard or mouse events before they get to Intuition and if desired, install new (phony) generated/other-devices-mouse-simulations) into the input stream. Handler.interface.asm is needed to convert the calling sequence performed by the input-.task for the input stream management into some thing that a C program can understand. Author: Rob Peck 12/1/85

iovstick Shows how to set up the gameport device as a joystick. Reports parameters received from joystick hooked to right port. Author: Rob Peck 12/1/85

Sample program to demonstrate direct communica tions with the keyboard. Author: Rob Peck 12/1/85 Shows use of the layers library, used by Intuition to create windows (layers handles all overlapping drawing areas and keeps things straight, sending to the back, bringing to the front, making larger/smaller,

etc.) Author: Rob Peck 12/1/85

1/85

keyboard

layers

proctest

mandelbrot Latest and greatest mandelbrot program. New features include the ability to save images in 'iff' format, for reading into Deluxe Paint or other programs that use iff. Also includes code from Graphi-Craft to handle color palette and change colors at will. Many additions by RJ Mical. Author: Robert French mouse Shows how to set up the gameport device as a mouse so that hooking up the mouse to the right port gives

access to mouse information. Author: Rob Peck 12/

one.window Produces a window with a console attached. Does setparallel graphics in the top half and limits the console activity to the lower half. Author: Rob Peck 12/18/85

parallel Demonstrates access to the parallel port. Author: Tom Pohorsky 12/1/85

printer Shows how to open and use a printer, does a screen dump of the workbench screen if there is a graphicscapable printer attached. Currently does not compile under Lattice C Ver3.02 and does not link under Lattice C Ver3.03. Author: Rob Peck 12/1/85

print.support Printer support routines. Currently won't compile, missing a header file ''local.h''. Author: unknown Sample code to create a process, set up message ports, pass messages, etc. Sample slave code for create process test (littleproc.c) currently does not link under either Lattice C 3.02 or 3.03 (unresolved global varia-

bles not in libraries). Author: Rob Peck 1/4/86

Demonstrates how a drawing area can be split into linked rectangular regions. Draws a rectangle in a single playfield display, then draws 'Behind a several times behind an apparent fence in the rectangle. Only works under Lattice Ver3.03. Author: Rob Peck 12/1/85

A sample font that produces clubs, hearts, spaces, and diamonds as its four characters. Shows precisely what is contained in an Amiga font. Author: Unknown Demonstrates access to the serial port. Requires an external terminal connected to the serial port. Au-

thor: Unknown banner Prints horizontal banner (across screen). From Decus C singlePlayfield Creates and displays a 320 by 200 by 2 bit plane single playfield display. Completely covers Intuition's display, but gives the system back at exit. Author: Rob Peck 12/1/85

Latest and greatest version of Dave's cute speech demo program. Comes with custom icon so can be run from a workbench screen. Author: Dave Lucas

speech.demo A much simplified version of speechtoy. Also includes exec support functions for extended 10 requests, CreateExtIO() to allocate and initialize a new

> tended IO request block. Author: Rob Peck 12/1/85 Sample program that asks AvailFonts() to make a list of the fonts that are available, then opens a window and then prints a description of the various attributes that can be applied to the fonts, in the font itself. Previous versions were released as ''whichfont' Author: Rob Peck 12/1/85

IO request block and DeleteExtIO() to free an ex-

Simple timer example program. Includes dynamic allocation of data structures needed to communicate with the timer device, as well as the actual device IO. Author: Rob Peck 12/1/85

Demonstrates use of trackdisk driver. Useful example of 'raw' 'disk read/write. Author Rob Peck 12/1/85

# README.listAAF

This is disk 6 of the freely distributable AMIGA software library.

Compress reduces the size of the named files using adaptive Lempel-Ziv coding. The amount of compression obtained depends on the size of the input, the number of bits per code, and the distribution of common substrings. Typically, text such as source code or English is reduced by 50-60%. Compression is generally much better then that achieved by Huffman coding (as used in 'pack' ') or adaptive Huffman coding (as used in ''compact' '), and takes less time to compute. Great for saving disk space, or reducing transmission time over phone lines! Also includes ' 'btoa' ' and ' 'atob' ' for converting binary files to ascii, and then back to binary (for trans-

Thomas Spencer, with improvements by others A digital computer impersonating an analog clock impersonating a digital clock. Author: Perry S. Kivolowitz An upgraded version of microemacs originally distrib-

uted on disk number 2. I don't have an exact list of changes but the new executable is about 25% larger, so there must be something in there! One enhancement is that some functions are now also bound to function keys. Author: Dave Conroy, with enhancements by Jack

mission over links that do not support 8 bits). Author:

Mult reads the input comparing adjacent lines. In the normal case, the second and succeeding copies of repeated lines are output, and the remainder of the lines are removed. Repeated lines must be adjacent in order to be found. Options are present to output the first of multiple lines, for comparing adjacent lines by field only, and for specifying the field separator character.

Author: Dennis Bednar

Demonstrates use of the Audio functions in the ROM to produce four voice sound. It uses a simple waveform (sawtooth) with no amplitude control (ie, envelope) or frequency variation (ie, vibrato), but these can be easily implemented. Also includes considerable documentation on audio device. Author: Steven A. Bennett

Kind of the opposite of the Unix ''uniq'' program.

Allows the CLI user to dynamically change any particular parallel port parameter. Author: Keith Stobie and Tom Pohorsky

Allows the CLI user to dynamically change any particular serial port parameter. Author: Keith Stobie and Tom

A quicksort based sort program, using separate driver and sort modules. Originally from a DECUS C distribution. Claims to be fast, but when operating entirely out of ram takes 93 seconds to sort its input file, sort.c, while AmigaDos's sort takes only 43 seconds under the same conditions. Author: Dave Conroy, Martin Minow, and

Ray Van Tassle Strips comments and extraneous whitespace from C source files. Useful for compacting the C header files to increase usable disk space. Author: Chris Metcalf

TPUG Amiga Library Supplement =

#### README.listAAG

This is disk 7 of the freely distributable AMIGA software library. This disk contains a port (executables only) of the popular UNIX game 'Hack' ', courtesy of John Toebes, 120 H Northington Pl, Cary NC. 27511. This is Version 1.0.1.

# README.listAAH

This is disk 8 of the freely distributable AMIGA software library. It contains the source to ' 'Hack' ', a popular UNIX game ported to the AMIGA by John Toebes. Please read all the associated README files before redistributing with changes.

#### README list A AI

This is disk 9 of the freely distributable AMIGA software library.

moire

proff

setlace

skewb

sparks

iff

ld

Is

sq.usq

trek73

Draws moire patterns in black and white in a borderless backdrop window. Currently only runs with Lattice C version 3.02, when compiled with 3.03 crashes the system Author: Scott Ballantyne MVP-FORTH Mountain View Press Forth, version 1.00.03A, A share-

ware version of forth from Fantasia Systems. Runable from the workbench, comes with icons and such. If you use this, you should send a contribution to Fantasia Systems / Mountain View Press.

Another text formatting program. This one is significantly more powerful than any of the others previously distributed on these disks. Program to toggle interlace mode on and off. When

used with a black background, and amber or green characters, produces a nice CLI environment. Author: Bob Pariseau, Nov 85 Not quite sure what this is supposed to be, it was

downloaded from a bbs with no documentation. C'mon folks, at least put a three line description at the start of your programs! Author: Raymond S. Brand Graphics demo that draws a ''moving pathway'', add-

ing to the front and removing from the tail (sure is hard to come up with verbal descriptions of these things!). Author: Scott Ballantyne

### README.listAAJ

This is disk 10 of the freely distributable AMIGA software library.

conquest You control an interstellar empire, decide which star systems to explore, which planets to colonize, etc. The computer will also be building its own empire and competing with you for resources. The one with the greatest population at the end wins. Executable only, no source. Downloaded from Denver BBS. Author: Unknown, ported to Amiga by Rob Shimbo

dehex Simple little program to convert hex format file into a binary file. Reads lines of hex characters on stdin and writes 8 bit dehex'd bytes to stdout. Author: Fred Fish

filezap Patch program for any type of file. Executable only, no source available. Author: John Hodgson fixobi

Strip extraneous garbage off end of object files transfered with xmodem. Does not require preknowledge of actual file length, uses knowledge of Amiga file structure. Author: John Hodgson

Routines to read and write iff format files. Includes program to display iff files made by DPaint. Also see the DPSlide program on disk 11. Author: Jerry Morrison, Steve Shaw, and Steve Haves I presume this stands for 'list directory'. Lists contents of

specified diretory or disk, using inverse video and colors to group objects by type. Author: Dave Haynie Minimal implementation of UNIX ls. Demonstrates use of

UNIX style filename pattern matching code. Author: Rick Schaeffer Squeeze and unsqueeze, from the CPM world. Works, but

'compress' ' from disk 6 runs almost twice as fast and produces even smaller files. Author: R. Greenlaw, Amiga port by Rick Schaeffer

A Star Trek game. This one is just crying out to be Amiga'ized by some ambitious hacker. Authors: Many, see comment in main.c

Dice game. Author: Sheldon Leemon vachtc

#### README.listAAK

This is disk 11 of the freely distributable AMIGA software library. This is a picture disk.

#### README.listAAL

This is disk 12 of the freely distributable AMIGA software library. Note that this disk contains a number of programs apparently available only in executable form. I am not real happy with this trend, but had no way of getting in contact with the authors who posted these programs to various BBS's to request source. I have no reason to believe that any of these executable only postings contain any deliberate "misfeatures", but you should always use such programs cautiously.

Shows a rotating 3 dimensional solid ''Amiga sign''. No amiga3d source available, executable only (downloaded from a Denver BBS) Author: Barry (bart) Whitebook of C-A ArgoTerm

arrow3d

StarTerm

144

Yet another terminal emulator program. However, this one is written in macro assembler, so should be of interest to anyone doing serious assembly language development. Version 0.20 Author: Jez San Shows a rotating 3 dimensional wire frame arrow. No

source available, executable only (downloaded from a Denver BBS) Author: Steve Beats of C-A Another directory listing program using some graphics

style output. Executable only, no source available. (Downloaded from a Denver BBS) Author: unknown IconExec These two tools allow execution of a program from a SetWindow icon without having to recompile the pro-

gram. Author: John Toebes VIII Miscellaneous DPaint and digitized pictures, in iff for-

images mat. Some are rated R. SetAlternate Merge the images from two icons to produce one icon

with a primary image, and a possibly completely different image to display when selected. Author: John Toebes VIII

Another terminal emulator program. ASCII and XMO-DEM support, telephone dialer, function keys, load file stripping, text file conversion, full/half duplex, Author: Jim Nangano and Steve Plegge

#### README.listAAM

This is disk 13 of the freely distributable AMIGA software library. It is a grab bag of basic programs, mostly untested. No speekee basic so if these don't work, call someone else.

#### README.listAAN

This is disk 14 of the freely distributable AMIGA software library. It contains the first ever public release of two new pieces of code, ''dex' and ''termcap''. Also, this is the first disk in the library that includes executables produced with both the Manx and Lattice C compilers, whenever possible. This greatly helps to isolate bugs.

amiga3d Shows a rotating 3 dimensional solid ''AMIGA'' sign. This is an updated version of the program released on disk number 12, and now includes full source. Author: Barry Whitebook @ Commodore-Amiga

beep Source for a function that generates a beep sound, like CTRL-G on a VT100 terminal. Author: Samuel Dicker @ Commodore-Amiga

Program to extract documentation in a human readable format inside source files, and produce nroff style output for manuals and other such external documents. First ever public release. Author: Fred Fish

Programs to demonstrate three and four dimensional graphics. Not quite sure how else to describe them! Author: Anselm Hook

An updated version of the file zap utility first released on filezap disk number 10. Can be used to patch any type of file. Nice, and VERY useful. Author: John Hodgson

An updated version of the graphical memory display program first released on disk number 1. Watch your machine's memory usage change dynamically under use! Author: Louis Mamakos

Converts DPaint brush files to C source files ' 'necessary to create an Image structure, including height, width, depth, and color information, as well as the array of data which represents the bit planes of the image' '. Author: Mike Farren

pdterm A simple terminal emulator that does ANSI or DEC VT- Ash 100 emulation in 80 cols by 25 lines. Version 1.21. Author: Michael McInerny

A simple csh style shell with history and some other goodies. Still needs some polishing and enhancement, but is quite nice as it. Thanks Matt!!! We've really needed something like this for a long time. Now if you would just do a ksh version instead. . . Author: Matt Dillon

A (mostly) unix compatible implementation of a termcap termcap library. First ever public release. Author: Fred Fish

# README.listAAO

This is disk 15 of the freely distributable AMIGA software library. Whenever possible, both Lattice C and Manx C executables are provided. The Lattice executables have the extension ''.lattice' and the Manx executables have the extension ''.manx''. This greatly helps to isolate bugs.

Blobs A simple graphics program, reminiscent of the unix 'worms' ' program, but in color of course. Author: Peter Engelbrite

A simple digital clock program designed to be small and to live completely in the screen title bar, where it is out of the way. Author: Mike Meyer

An eight-fold symmetry dazzler program. Really pretty! Author: Peter Engelbrite 'A demo program which runs an AnimOb in a

double buffered screen with sequence cycled anima-

top of the screen). Author: Catherine Wagner (posted by Barry Whitebook)

Monopoly A really nice monopoly game written in AbasiC. Follow the directions in the file 'InstallationGuide' to produce a bootable games disk. Author: David Addison

OkidataDump Okidata ML92 driver and WorkBench screen dump program. Does both alpha and graphics. Untested (I don't have the printer) Author: Raimund Gluecker

A drawing program written in AbasiC. Author: David Polydraw Addison A fractal program written in AbasiC. Author: David Polyfractals

#### README.listAAP

This is disk 16 of the freely distributable AMIGA software library. It is a copy of the Amiga Developer's IFF disk, received directly from Commodore-Amiga sources, with permission to place in the library and redistribute. It is unchanged except for:

1) The volume name has been changed to AmigaLibDisk16.

2) This file (README.list16) has been added.

Addison

3) The standard library README file README.dist has been added.

## README.listAAP

This is disk 16 of the freely distributable AMIGA software library. This is a copy of the Amiga Developer's IFF disk, received directly from Commodore-Amiga sources, with permission to place in the library and redistribute. It is unchanged except for:

1) The volume name has been changed to AmigaLibDisk16.

2) This file (README.list16) has been added

3) The standard library README file README.dist has been added.

Enjoy -Fred

# README.listAAO

This is disk 17 of the freely distributable AMIGA software library. This is a copy of a H.A.M. (Hold And Modify) graphics demo disk received from a vendor that is producing hardware to capture such images, and software to process them. It is unchanged except for:

1) The volume name has been changed to AmigaLibDisk17.

2) This file (README.list17) has been added.

3) The standard library README file README dist has been added.

4) The 'showilbm' program has been added to allow viewing of the two monochrome pictures (dozer.hires and robert.lores) without requiring Deluxe Paint.

5) The supplied 'readme' file has been augmented with information received on hardcopy along with the disk, and a note has been added about how to use the showilbm program.

Multidim

# README.listAAR

This is disk 18 of the freely distributable AMIGA software library.

AmigaDisplay Yet another variation of a terminal emulator program. This is a modified AmigaTerm that can emulate a dumb terminal (interesting paradox here somewhere. . .), translate line termination sequences, optionally capture or discard control characters in the captured file, use audible bell, use another font, etc. Author: Don Woods (Original code by Michael Mounier)

Prerelease version of a C-shell like shell program. Has history, command substitution, loops, etc. Author: Thorn Smith

A program that lets you wander around a file tree and peek into files, all with the mouse. Author: Mike (I'll

be mellow when I'm dead) Meyer MC68010 Complete information package for upgrading an

Amiga to use an MC68010 in place of the MC68000. Includes a software fix that makes this transparent to user programs that use instructions that are priviledged on the 68010. Author: Thad Floryan Lets you rotate a 2 to 6 dimensional "cube" on the

screen using the joystick. Author: Robert French PigLatin Tired of the ''say'' command? This one will translate and speak your input in pig latin! Author: Thomas Clement

Short for ''SCReen IMage PrintER''. A screen dump Scrimper utility which can be run from the workbench or the

CLI. Author: Perry Kivolowitz A very nice little lisp for those that want to study the internals of a real, working lisp interpreter. Author: Dave Betz

#### README.listAAS

This is disk 19 of the freely distributable AMIGA software library.

BlackJack A line oriented (no graphics) blackjack game. Author: Unknown

tion''. (Basically shows a fish ''swimming' 'across the JayMinerSlides These are the Amiga slides produced/used by Jay

TPUG Amiga Library Supplement

Miner (the designer of Amiga's custom graphics chips) in his talks about the Amiga. They are all hires (640 x 400) and are best displayed on a longpersistence color monitor.

Keymap\_Test A program to test the keymapping routines and find possible bugs. Useful as an example of keymapping. Author: Pushpa Kumar LockMon

Find file locks. Useful for discovering if programs properly clean up after themselves. Author: Dewi

#### README.listAAT

This is disk 20 of the freely distributable AMIGA software library.

AmigaToAtari Source code for an Amiga to Atari ST object code format converter. Takes Amiga objects as input and produces Atari objects as output. This allows the Amiga to be used as a cross development machine providing the proper libraries are available. (Currently does not work, but I don't have an ST to try it with anyway. . .) Author: Landon Dyer at Atari Corp. Program to recover files from a trashed AmigaDOS DiskSalv disk. Can also ''undelete'' files deleted by mistake, so long as they have not overwritten by further disk activity. Requires two disk drives. VERY useful. . . Author: Dave Haynie

Small example program that computes the Amiga-DOS directory hash function. Author: Neil Katin at Commodore-Amiga

Hex dump utility using some ideas from Mike Higgin's article in Computer Language magazine, Apr 86. Formats the dump based on the natural byte ordering of the machine on which it runs. Author: David Elins at NEC Information Systems MandelBrots Some mandelbrot images submitted for the "man-

delbrot images contest' some months ago. Only three people submitted mandelbrots and these were among the most interesting.

MultiTasking Tutorial and example program for multitasking at the Exec level. Author: Leo L. Schwab

Program to strip extraneous whitespace from C programs or header files. Can be used to condense the C compiler header files to free up disk space. Author: Jeff Dickson

PortHandler A sample Port-Handler program that performs the functions of the standard Port-Handler. Shows what the BCPL environment looks like from the handler point of view. Author: John Toebus VIII

Random number generator in assembly. Much faster than versions using floating point. Can be used by either assembly or C programs. Author: Steve Beats at Commodore-Amiga

Program to set the mouse port to either the left port or

SetMouse2 right port. Author: Robert Burns at Commodore-Amiga

Terminal emulator that can speak the received text. SpeechTerm Also has XMODEM file transfer. Author: Leftheris Koutsofios

Demo version of an editor that has since been renamed as TXed (I believe). Author: Charles Heath at MicroSmiths

#### README.listAAU

This is disk 21 of the freely distributable AMIGA software library. This is a copy of Thomas Wilcox's Mandelbrot Set Explorer disk. It is unchanged except for:

1) The volume name has been changed to AmigaLibDisk21.

2) This file (README.list21) has been added

3) The standard library README file README.dist has been added.

To run from CLI:

Random

1) cd dfX: (where X is drive containing disk)

To run from Workbench:

1) Click on MSD icon.

It contains extensive on-line help information, unlike other Mandelbrot programs distributed in this library. It also is capable of displaying some very pretty hi-res pictures in interlace mode

Enjoy -Fred

# README.listAAV

This is disk 22 of the freely distributable AMIGA software library. This disk contains two new ''strains'' of microemacs, both derived from early releases of Dave Conroy's microemacs. There is currently an attempt on usenet, lead by Dave Brower, to coordinate an effort to merge features from the different versions into a single supported microemacs. In the meantime, perhaps you can find a feature you need in one of these.

Lemacs Microemacs version 3.6 as enhanced and supported by Ps Daniel Lawrence. This version works and has been tested on

Unix V7, BSD 4.2, Amiga, MS-DOS, and VMS. Enhancements include overwrite mode, support for Amiga function keys, reverse video status line, numeric arguments using <ESC><number>, replace, buffer specific editing modes, word wrap mode, goto-line, buffer rename, insert-file, execute named command, describe bindings, startup files, and more. Author: Dave Conroy, enhancements by Daniel Law-

Pemacs Microemacs as enhanced by Andy Poggio. New features include use of <ALT> keys as Meta keys, default buffers on buffer switch, mouse support, higher priority to improve interactive response, creation of backup files, paragraph fill, word wrap, query replace, and support for function keys. Author: Dave Conroy, enhancements by Daniel Lawrence

#### README.listAAW

This is disk 23 of the freely distributable AMIGA software library. It contains a significantly enhanced version of microemacs based on the version 30 release posted to usenet's mod.sources newsgroup.

Previous versions of microemacs released on these disks derived from a very old version of microemacs. Since that old release, the author has cleaned up lots of loose ends and restructured major parts of the code. Other people have already added support for termcap, ports to other machines and operating systems, and a limited GNU emacs compatibility option.

Because recipients of this disk might wish to run this new microemacs on other machines in addition to the Amiga, I have encluded all sources that were available to me at the time of release. The subdirectories which give alternate implementations are:

System modules for VAX VMS

Sys/Vms

Sys/Atari	System modules for Atari ST	
Sys/Msdos	System modules for MSDOS	
Sys/Cpm86	System modules for Cpm	
Sys/Amiga	System modules for Amiga	
Sys/Ultrix	System modules for Ultrix/BSD4.2	
Sys/SysV	System modules for Unix System V	
Tty/Atari	Terminal driver for Atari ST	
Tty/7300	Terminal driver for AT&T Unix PC (7300)	
Tty/Intuition	Terminal driver for Amiga using Intuition	
Tty/Termcap	Terminal driver using termcap for Unix	
Tty/Ansi	Terminal driver using Ansi codes	
Tty/Amigados	Terminal driver for Amiga using just Amigados	
Tty/Heath	Terminal driver for a Heath terminal	

There currently is a major effort underway on usenet, led by Dave Brower, to standardize microemacs and bring the many variations under one common implementation. Please send any enhancements to rtech!daveb, or send them to me and I will see that he gets them.

#### README.listAAX

This is disk 24 of the freely distributable AMIGA software library.

Conquest You control an interstellar empire, decide which star systems to explore, which planets to colonize, etc. The computer will also be building its own empire and competing with you for resources. The one with the greatest population at the end wins. First distributed in executable form only on disk number 10. This distribution includes source. Author: Unknown, ported to Amiga by Rob Shimbo

Csh Second release of a csh-like alternative to the CLI, first released on disk number 14. Has alias, builtin functions like ''dir'' for speed, history, named variables, command re-execution with substitution, etc. Author: Matt Dillon

A pre-release version of the single pass Modula-2 com-piler originally developed for MacIntosh at ETHZ. This Modula-2 code was transmitted to the AMIGA and is executed on the AMIGA using a special loader. Binary only.

#### README.listAAY

This is disk 25 of the freely distributable AMIGA software library. This SuperBitMap disk contains a port (executables only) of the popular UNIX game 'Hack' ', courtesy of John Toebes, 120 H Northington Pl, Cary NC. 27511. This is Version 1.0.1E., with graphics enhancements for the

# README.listAAZ

This is disk 26 of the freely distributable AMIGA software library.

UnHunk Tool to process the Amiga ' 'hunk' ' loadfile format. Collects code, data, and bss hunks together, allows individual specification of code, data, and bss origins, and generates binary file with format reminiscent of Unix ''a.out' ' format. The output file can be easily processed by a separate program to produce Motorola ''S-records' 'suitable for downloading to

PROM programmer. Author: Eric Black Port of the popular ''kermit'' program, a flexible virtual C-kermit terminal and file transfer program from Columbia University. Author: Unknown, ported to Amiga by Davide Cervone

A program to display process priorities and another program to set a process's priority to any arbitrary valid value.

Very useful to provide finer control over your multitasking environment. Author: Dewi Williams

Archx Yet more programs for bundling up text files and mailing or posting them as a single file unit. Author: Martin Minow

#### README\_listABA

This is disk 27 of the freely distributable AMIGA software library.

**ABdemos** Amiga Basic demos. NewConvertFD creates .bmaps from fd files. BitPlanes finds addresses of and writes to bitplanes of the screen's bitmap. AboutBmaps is a tutorial on creation and use of bmaps. LoadILBM loads and displays IFF ILBM pics. LoadACBM loads and displays ACBM pics. ScreenPrint creates a demo screen and dumps it to a graphic printer. Author: Carolyn Scheppner, Commodore-Amiga

A simple 68000 disassembler. Reads standard Disassem Amiga object files and disassembles the code sections. Data sections are dumped in hex. The actual disassember routines are set up to be callable from a user program so instructions in memory can be disassembled dynamically. Author: Bill Rogers, Univ of WAIKATO (New Zealand) DvorakKeymap

Example of a keymap structure for the Dvorak keyboard layout. Untested but included because assembly examples are few and far between. Author: Robert Burns @ Commodore-Amiga Hypocycloids An electronic Spirograph inspired by an article in

Feb '84 Byte. Author: Terry Gintz LinesDemo A demo program which illustrates the use of proportional gadgets to scroll around in a superbitmap window. Posted to usenet by Barry Whitebook @ Commodore-Amiga

MemExpansion Schematics and directions for building your own homebrew 1 Mb memory expansion. Author: Michael Fellinger

SafeMalloc

Ever have a program that corrupts it's own memory? Well, this little gem can help you find the problem in a hurry. Acts as an interface between your program and the real malloc, checking for overrun, underrun, and duplicate freeing of malloc'd space. Author: Bjorn Benson, modifications by Fred Fish

ScienceDemos Some science demos. Sidereal is a tutorial program which introduces the user to the relationships between Julian and calendar dates and solar and sidereal times. J2000 is a utility program which converts stellar positions, proper motion, parallax and radial velocity from the standard epoch B1950 (FK4) to epoch J2000 (FK5). Galilean is a tutorial program which determines the position of the Galilean satellites relative to Jupiter. Programs courtesy of David Eagle at Science Software.

# README.listARR

This is disk 28 of the freely distributable AMIGA software library.

Backgammon Another game in AbasiC by the author of Monopoly. Author: David Addison This is a copy of the Decus cpp, ported to the Amiga.

This cpp is more powerful and complete than either of the built in cpp's in Manx or Lattice C. Also included is a modified version of the Unix like cc frontend, for Manx C, that knows about the cpp. Author: cpp by Martin Minow; cc by Fred Fish

Cribbage Another game in AbasiC by the author of Monopoly Author: David Addison

Another game in AbasiC by the author of Monopoly MileStone Author: David Addison

Othello Another game in AbasiC by the author of Monopoly Author: David Addison

A program which can pack and unpack archives compatible with the Unix ''shar'' (shell archiver) Shar

program. Author: Dave Wecker An example program that shows how to use ScrollLayer, how to sync the SuperBitMap prior to

printing, and how to create a dummy rastport for dumping the SuperBitMap. Works under 1.2 and up. Author: Carolyn Scheppner and Phil Lindsay

# README.listABC

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AegisDrawDemo Demo disk of the Aegis Draw program. This is the actual production program with only the ''save' feature disabled and without documentation (intentionally). Very impressive program! Received directly from Aegis Development.

Version of the Unix like C compiler frontend program, for Manx C. Previous released version was

for Lattice C. Author: Fred Fish Enough A new CLI execute file command that tests for

various system resources such as available memory or existance of specific files, directories, or devices. Author: Bruce Barrett @ Commodore-Amiga

1PUG Amiga Library Supplement Player Animation player for Aegis Animator, Received Puzzle Simulation of puzzle with moving square tiles. Execut-README.listABI directly from Aegis Development. able only. Author: Bill Beogelein This is disk 35 of the freely distributable AMIGA software library. Rubik An animated Rubik's cube program based on Barry Whitebook's ''amiga3d'' program and Raymond ShowHAM Program to display HAM (Hold And Modify) mode images from the CLI environment. Executable only. Author: **ASendPacket** Example program for sending multiple packets Brand's ''skewb'' program. Author: Bill Kin-Unknown asynchronously to a dos handler, for those internerslev Two new ABasiC games, Canfield and Klondike. Author Solitaire ested in implementing programs with asynchron-A public domain reimplementation of the Unix StringLib David Addison ous AmigaDos file I/O. Author: Phillip Lindsay string library functions. Author: Henry Spencer @ Spin3 Simple program that creates spinning cubes and trans-ConsoleWindow Example program for finding the intuition pointer U of Toronto forms them into op-art. Example of how to create a to an AmigaDos CON: or RAW: window, so you Vt100 A vt100 emulator program with Kermit and Xmodouble buffered display with color tables that can be can do WindowToFront, graphics, and other interdem file transfer protocols (based on AmigaTerm). changed. Author: Ronald Peterson esting things. (Requires AmigaDos 1.2) Author: Author: Dave Wecker Sword Sword of Fallen Angel. Text adventure game written in Andy Finkel and Robert Burns AmigaBasic. Author: Andry Rachmat DirUtil Nice little program to wander around directory tree Trails Cute little program that leaves a trail behind the pointer using a windowing interface and performing vari-README.listABD when the mouse is moved. The trail has programmable ous operations on files. Author: Chris Nicotra, symmetry, thickness, and length. The other interesting enhancements by Dave Jobusch This is disk 30 of the freely distributable AMIGA software library. Note thing about this program is that it is written in Modula-2 Dirl Itil2 Another variant of dirutil. Author: Chris Nicotra, that the programs on this disk are all shareware/freeware. This (source provided). Author: Richie Bielak enhancements by Ed Alford means that if you find them useful, you are morally obligated to send a FileRequester A very nice file requester module for lattice C small donation to the author to help support his efforts and fund programs, along with a demo driver program. further development. I hope that by including them in this library I README.listABG Author: Charlie Heath have furthered the author's goals of widest possible distribution and This is disk 33 of the freely distributable AMIGA software library MacView Allows viewing of standard MacPaint picture files thus maximum return. Also note (for those that like to split hairs) that in either Amiga low resolution (320 x 200) or high I am distributing this disk as a ''freebee''. To receive a copy, just 3d version of Leo's ''stars' 'program (also on this disk). resolution (640 x 400). Executable, sample picrequest it when ordering any other disks from the library. Author: Leo Schwab tures, and icons (version on disk 32 did not include Bigmap Program which demonstrates how to use the low-level Bbs A BBS for the Amiga (BBS-Amiga Version 1.1). Author: pictures). Author: Scott Evernden graphics calls, ScrollVPort especially. Demonstrates Ewan Grantham Author's suggested shareware dona-Short, simple, no-frills IFF reader program, and a scrolling around inside a very big bitmap. Author: Leo tion: \$25 sample picture made using a ray tracing algorithm. FineArt This is a collection of works from some of the best of Author: Jim Kent Dbuf.gels Sample program that demonstrates the animation roucurrent Amiga artists. Many thanks to Jim Sachs, Sheryl Provides a simple way of starting another CLI at tines for Bobs and VSprites. Uses double buffering to Knowles, Jack Haeger, and Aegis Development for subany time without having to load workbench or exit smooth the display motion. Author: David Lucas missions. whatever program you may be using. Also has a Displays sector allocation of floppy disks. Author: Leo DiskMapper FontEditor Does what the name implies, edits font's. Author: Tim builtin screen saver mode that automatically Robinson. Author's suggested shareware donation: \$5 blanks the Amiga console screen when there has MemView Program which sets up a direct window into RAM, thus MenuEditor Create and edit menus, saving the result as either a been no input for a specified period of time. Audynamically displaying the contents of memory. Aubinary file for further editing or as C source for inclusion thor: John Toebes thor: Leo Schwab in a program. Author: David Pehrson. Author's sug-QuickCopy Three versions of quickcopy, a nice little full disk Displays a window full of little bouncing balls. Author: Oing gested shareware donation: \$15 copier. Two of the versions are capable of making Leo Schwab StarTerm Starterm version 3.0. Very nice telecommunications backup copies of ''protected'' Electronic Art's program. Author: Jim Nangano. Author's suggested ScreenDump Dumps rastport of highest screen/window to printer. disks. Author: Dave Devenport Author: Carolyn Scheppner shareware donation: \$20 ScrollPf Creates and displays a 400 by 300 by 2 bit plane Simple database program, originally released on a playfield on top of a 320 by 200, 2 plane deep DECUS VAX SIG tape. Author: Unknown, Amiga port playfield, as a demo of dual playfield display. by Mic Kaczmarczik README.listABE Author: Carolyn Scheppner Same as Oing but includes sounds of balls colliding Sproing SendPacket General purpose subroutine to send AmigaDos This is disk 31 of the freely distributable AMIGA software library. with boundries. Author: Leo Schwab packets. Author: Phillip Lindsay Displays a screen full of stars, reminiscent of a view Life Executes the cellular automata game of LIFE in the SpriteMaker Program which lets you paint sprites and then from the starship Enterprise's flight deck. Author: Leo blitter chip. Uses a 318 by 188 display and runs at 19.8 converts the image into a C data structure to be enerations per second. Author: Tomas Rokicki used in programs. Allows interactive testing of the TermPlus Yet another variant of Michael Mournier's AmigaTerm Mandelbrot Latest version of Robert French's mandelbrot program, sprite as a pointer. Suggested shareware donation program. This one includes improved ascii capture, version 3.00. Author: Robert French of \$15 for source code and updates. Author: Ray CRC and checksum xmodem protocol transfers, Com-MxExample Example of mutual exclusion gadget handling. Author: Larson puServe B-protocol transfers, a phone library, function Davide Cervone Tracker Program which converts a boot-load disk (I.E. a key support, and limited AmigaDOS functions. Author: RamSpeed Program to measure raw memory speed, comparing kickstart disk) into a group of files for electronic Enhancements by Bob Rakosky internal memory to the external memory. Author: Perry transmission and reassembly. Completely pre-Vt100 Release 2.0 of Dave's version of AmigaTerm. Includes Kivolowitz. serves the original disk structure so the target disk support for function keys and script files. Author: Set Replacement for the Manx "set" command (to set or will be an exact duplicate of the original. Author: Enhancements by Dave Wecker and Steve Drew change environment variables) with several improve-Brad (Lord Bradford) Wilson ments. Author: Tomas Rokicki Very nice graphics oriented 3-D space invasion TriClops Tree Draws a recursive tree (green leafy type, not files). README\_listARH game. This was previously a commercial product Author: Robert French (original version by W. Balthrop) which is being released into the public domain for This is disk 34 of the freely distributable AMIGA software library. TxEd Latest demo version of Microsmith's text editor, TxEd. promotional purposes (they are working on a mul-This is the full production version except that files are Alint Support files for Gimpel lint to make it useful on the tiuser, multimachine version). Author: Unknown, limited to 10K bytes in length and the search/replace Amiga. Author: Thomas Althoff published by Geodesic Publications functions are disabled. Also, demo is based on an older A linker written as a replacement for Alink. Fully Alink Tsize A simple utility to print directory tree sizes. Disversion of TxEd, new release has additional features. compatible and supports many additional options not plays the total size of all files and subdirectories Author: Charlie Heath found in Alink. Also is much faster than Alink and generwithin a given directory. Author: Edmund VDraw ates smaller executable files. Version 5.7 Author: Com-Drawing program, based on freedraw, but now trans-Burnette formed and enhanced beyond recognition. Draws holbined efforts of the Software Distillery Unlfdef Useful program for removing ifdef ed sections from low boxes, filled boxes, freehand sketches, lines, circles, Browser Updated version of the browser program released on disk a file while otherwise leaving the file alone. Allows and arcs. Also has area fill, text insertion, 16 different number 18. This one has been ''manxified'', has scroll one source to be used as a porting base for many line patterns, predefined area fill patterns, a magnify bars, and several bugs fixed. Author: Mike Meyer, enmachines, without shipping the entire source to mode, cut and paste, color inversion, erase, grid pattern, hancements and fixes by Bob Leivian every source customer. (Preprocess for their maand more. This is version 1.08. Author: Stephen Ver-Btree Routines to implement a B-tree algorithm and several chine and send them only the source for their accompanying tests, apparently derived from the single meulen specific machine). Author: Dave Yost Xicon Contains two programs; Xicon which lets you use icons file version also included on this disk under 'Btree2' Program to test compatibility of vt100-compatible to call up scripts containing CLI commands, and Ticon, Still buggy, but looks useful with a little work. Author: terminals and terminal emulators. Requires the which is a simple program to display text files from Richard Hellier, posted to usenet by Steve Jefferson resources of a Unix system to test an Amiga hosted icons. Author: Pete Goodeve Btree2 Previous (original) version of btree routines. Author: Richvt100 emulator. (I haven't yet found one that even ard Hellier comes close to passing this test!). Author: Per Appointment calendar that lets you visually add and Calendar Lindberg README.listABF update appointments. Can also run in background and remind you 15 minutes before any scheduled event. This is disk 32 of the freely distributable AMIGA software library. Author: Unknown, Amiga port by Bob Leivian Address Extended address book written in AmigaBasic. Author: Less Like Unix ''more'', only better, with forward and back-Mark Hurst ward scrolling, searching and positioning by percent of file and line number, etc. Very useful! Author: Mark Nu-delman, Amiga port by Bob Leivian Calendar Calendar/diary program written in AmigaBasic. Author: Mark Hurst DosPlus1 First volume of CLI oriented tools for developers. Execut-NewFonts Set of 28 new Amiga fonts. Author: Bill Fischer ables only. Author: Bill Beogelein A background print utility with several options for letter DosPlus2 Second volume of CLI oriented tools for developers. quality compressed mode and line numbers. Also takes Executables only. Author: Bill Beogelein multiple files and wildcards. Author: Bob Leivian MacView Allows viewing of a standard MacPaint picture file in Requester

A file name requester that looks like the one used in

Deluxe Paint, and a sample program for using the re-

quester. Author: Kevin Clague

either Amiga low resolution (320 x 200) or high resolution

(640 x 400). Executable only. Author: Scott Evernden