AUG Workbench

February 2003 *Issue 188*

Pegasos Demo at this Month's Meeting !!!

Yes folks at this month's AUG meeting Scott Pringle of Boing International will be presenting the first public, full Australian demonstration of the PegasoOS PPC powered, Amiga OS compatable MorphOS machine.

PEGASOS

MorphOS

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Contributions
Contributions can be soft copy (on floppy½ disk) or hard copy. It will be returned if requested and accompanied with a self-addressed envelope.
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Editorial

Once again another month has passed. Still no sign of Amiga OS 4 and no word on AmigaONE deliveries to Australia.

However some good news is the demonstration of the Pegasos PPC powered machine running the Amiga OS compatable MorphOS. Be at the meeting if you want to see the latest in Amiga compatable equipment.

Now for some bad news. I've found myself a new job and I'm afraid it will take up all my spare time and yes it's the spare time I devote to producing Workbench. So this means this will be the last issue of Workbench from myself. I hope someone will volunteer to take over the reins and I would be contributing whenever I could. Please contact me if you can help.

Tony Mulvihill

Amiga Users Group Inc. News

Last Months Meeting

January 19th 2003

Scott of Boing.Net brought in a Pegasos motherboard. It was quite a small board with cpu card that can be replaced to upgrade the processor.

There was my Amithlon machine booting off a modified Amiga rom as well as various other machines being worked on.

David Myers brought us the latest news and a quick hands up showed around seven members have or intend to order an Amiga ONE board

This Months Meeting

February 16th 2003

Latest news and info from our bringer of Ami news, David Myers.

The first Australian demo of a Pegasos computer running MorphOS. Scott of Boing.Net has announced AUG's February meeting as the first official public Australian demonstration of Pegasos and MorphOS.

Pegasos is a PPC powered motherboard and MorphOS is the Amiga compatable OS that runs on Pegasos.

Next Months Meeting

March 16th 2003

Nothing planned but I'm sure something will come up. Maybe OS 4 and Amiga One??

ADUG Memberships

The Amiga Downunder Users Group offers you the chance to help bring Amiga back to the people.

By joining ADUG you help fund for show appearances like the upcoming Sydney CeBit show this year. It was though ADUG the 2001/2002 Comdex show appearances were funded. Memberships can be paid at AUG meetings.
http://www.amigadownunder.org

Bytes & Pieces

Club Amiga Magazine

Amiga Inc. have emailed out the long awaited first issue of the "Club Amiga" magazine. Those who joined the club with a $50.00 US pre-payment on an AmigaONE and OS 4 combo by now have received the first issue. If you're a Club Amiga member make sure Amiga Inc have your current email so you can receive the issues.

http://www.amiga.com/

New YAM2.4 Dev

version

Visit the Yam-Dev website to download the latest YAM v2.4 development version, compiled **5/2/2003**.
Fully optimized 68020 version only.
This version is currently in development, and may not work perfectly!
PLEASE do not complain about these development versions! If you want to continue getting developer versions, please read the ChangeLog file before reporting bugs.

YAM2.4 Dev page
http://yam.boing.net

Version 0.19 of SimpleMail released!

The changes are:
PGP works again as it did (encrypt/decrypt) moving through mails updates their state again (Bernd Gollesch) proper secondary sort support (Bernd Gollesch)
Can read signed S/MIME mails properly (displaying them at least, needs AmiSSL), importing the addressbook of YAM works for newer versions too

SimpleMail is a mailer for the Amiga classic platform but it is intended to be as portable as possible..

http://simplemail.sourceforge.net/index.php

Mediator MM CD UP 1.22

ELBOX COMPUTER

The Mediator Multimedia CD UP 1.21 update for users of,

Mediator PCI 3/4000T,
Mediator PCI 4000D,
Mediator PCI 4000Di,
Mediator PCI 4000,
Mediator PCI 3000D,
Mediator PCI 1200 SX,
Mediator PCI 1200,
Mediator PCI ZIV,

who are registered owners of the Mediator Multimedia CD has been released.

The update includes a new AHI driver: fm801.audio

This driver handles Fortemedia FM801-based sound cards in all currently produced Mediator busboards. It allows using all analogue and digital (S/PDIF and TOS-Link) inputs and outputs provided in the user's FM801-based sound card model.

The update includes the new versions of: sb128.audio, mixer.library, tv.library and FastEthernet.device.

Mariusz Wloczysiak,
ELBOX COMPUTER
http://www.elbox.com

IBrowse 2.3 News

We are pleased to unveil a distribution agreement with Stefan Burström and the IBrowse Team and we are now the worldwide distributor for IBrowse (support for IBrowse is still done by the IBrowse development team, though).
Furthermore, we are pleased to announce the immediate release of the eagerly awaited update to IBrowse 2.2.
A demo of IBrowse 2.3 and the update-archive from V2.2 can be found in our download area.

Felix Schwarz, IOSPIRIT
http://www.iospirit.de

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Amithlon Rom Mods

How to Modify The Amiga ROM in Amithlon

By Tony Mulvihill

This article is fairly technical and assumes you know your way around an Amiga, can unlha files and use a shell. More so, since Linux must also be used, you'll either need access to a Linux machine or install a version of linux yourself. You can typically buy a copy of Linux at computer swap meets, your local newsagency, or visit the local library. The library usually have books on Linux with Linux on CD's and there are Amiga versions of Linux.

First, "why would you want to modify the Amiga ROM used by Amithlon?" My answer to that question is, "Because the code used in the ROM isn't perfect and many developers have written improvements that can be inserted into the ROM to add new functions and fix bugs."

Unfortunately the tools to insert the ROM improvements are based around using a CPU card with "shadowing ability", which is the ability to copy the ROM into RAM memory.

So what do we do to overcome the lack of a CPU card in Amithlon? We grab a copy of the ROM from Amithlon while Amithlon is up and running. Then we apply the required patches to the ROM and save the ROM with the name "shape.rom" to a floppy disk. The ROM in Amithlon is named shape.rom because it's had modifications applied so the Macintosh emulation Shapeshifter will run.

The patches we will be applying are the exec44.1beta4 update, various modules from the Blizkick archive and PowerWindows Next Generation. (see the end of the article for the names and locations of the archives)

Install PowerWindowsNG first. There's not really much to do apart from unarchiving and copying the PowerWindows directory to your Work: directory. I recommend reading and following the PowerWindowsNG guide for further instructions on installation of PowerwindowsNG.

Step One.

In the PowerWindows directory, locate the tools/shell directory and copy the files, "SaveROM" and "PatchROMforPW" to Ram:

Ram: is the working directory I'll be using for the purpose of this article.

From a shell, type

cd Ram:
saverom ram:ks

The above lines set the current directory to ram: and saves the Amithlon kickstart ROM as a file named "ks".

Unarchive the exec44.1beta4 update and copy these files to ram:

exec.bin.a2000
zapexec

From the shell again execute the following lines

cd ram:
"zapexec FROM ram:ks WITH exec.bin.a2000 TO ram:shape.rom1"

The above lines set the current directory to ram:, patch the Amithlon ROM with the exec update for the A2000 and save

the patched file to ram: with the name of “shape.rom1". We use the A2000 update because the ROM used in Amithlon is a ks3.1 68000 version.

We’ve performed the first patch :-)

Step Two.

Next we patch the ROM for PowerWindows. Execute the following line, note it’s a single line.

“PatchROMForPW ram:shape.rom1 ram:shape.rom1_pw”

This line patches our shape.rom1 with the patch required for PowerWindowsNG to do it’s magic stuff and saves it as “shape.rom1_pw”.

The second patch is done !

Step Three.

Next, the Blizkick modules.

Unarchive the Blizkick package and copy “applypatch” and the following modules to ram:

fixmath404
remcards
patchmath020
romfixes

These are the modules that can be applied to our ROM to enhance and fix bugs.

Type the following lines in a shell,

cd ram:

“applypatch ram:shape.rom1_pw to ram:shape.rom1_pw_bliz fixmath404 remcards patchmath020 romfixes force”
Note this is a single line.

We now have a ROM for Amithlon that’s had the exec core updated, has the PowerWindowsNG patch needed to enable PowerWindowsNG to move windows out of the screen and has 4 other enhancements and bug fix patches applied from the Blizkick archive.

The best thing to do now is to copy all the patched roms to a storage directory and our final ROM, the shape.rom1_pw_bliz ROM, we rename to shape.rom and copy it to a PC 1.44 format floppy disk.

We then copy the Amithlon boot file “Smallird.gz” to the same floppy.

The Linux Part.

So now we have a floppy disk with 2 files on it. One is the modified Amiga ROM we want Amithlon to use (called shape.rom) and the other is the Amithlon boot file we want to insert the ROM into (Smallird.gz). The next step requires a linux install so we can decompress “Smallird.gz” and mount it as a file system. Once Smallird is mounted as a file system we will have access to the directories inside it and will be able to copy over the original shape.rom with our own modified shape.rom.

Boot up Linux and log on as root.

mount your floppy and copy the smallird.gz file to “/”

From your Linux shell use the following command sequence.

gunzip smallird.gz
cd /
mkdir /aim
losetup dev loop0 /smallird
mount dev loop0 /aim

Amithlon Rom Mods

gunzip smallird.gz, unzips the smallird.gz file.

The **cd /**, command takes you to the system root.

mkdir /aim, creates a directory in the system root called “aim” (for Amithlon).

losetup dev loop0 /smallird, sets up the file “smallird” as a loop device.

mount dev loop0 /aim, mounts the loop0 device to the /aim directory.

Next we locate the Amiga ROM by looking in the /aim directories for “shape.rom” and copy our modified shape.rom overtop of the original. Once the ROM has been replaced execute the following commands.

cd /
umount dev loop0
losetup -d dev loop0
gzip –best smallird

cd /, this again moves us to the system root directory.

umount dev loop0, unmounts the loop0 device from the /aim directory.

losetup -d dev loop0, detaches the smallird file from the loop device.

gzip –best smallird, rezips the smallird file using the best compression. Note that there are two “-“ in front of “best”.

A new smallird.gz file appears in the system root / directory that should be slightly smaller then the original.

Transfer the new smallird.gz file to a floppy and place it in your Amithlon dos boot partition, being sure to rename your original smallird.gz file first so it isn’t accidentally overwritten.

Boot Amithlon and enjoy the use of a more stable system and the new functionality of “Power Windows”.

Archives Required

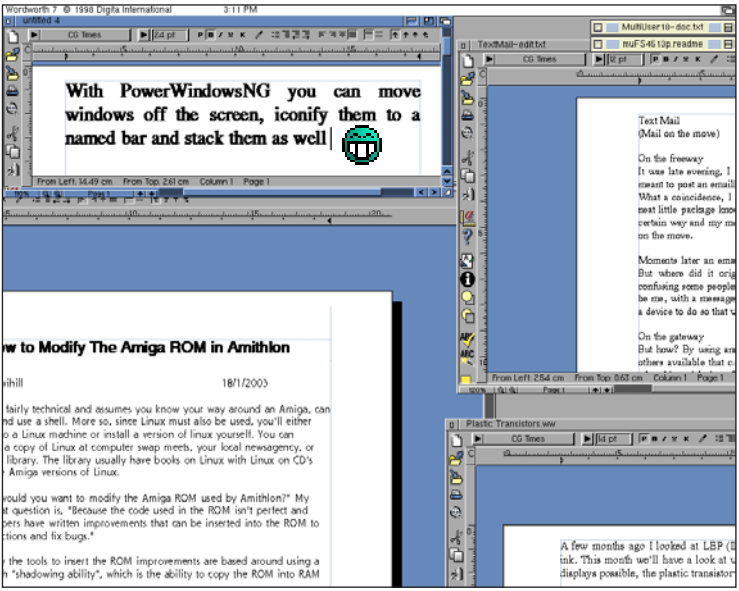
PowerWindowsNG.lha
Georg Steger

BlizKick-1.24rc5.lha
Harry Sintonen

exec44beta4.lha
Harry Sintonen

Both the Blizkick and exec44.1b4 files can be found at
http://80.197.46.38/~p/sw/

PowerWindowsNG can be found in Aminet/util/misc



Workbench Funnies

Get Boinged! AMIGA

Laughter

From the Amiga OS4 Yahoo maillist we have a selection of ideas for new error messages for Amiga OS4.

From: Bob Compono <bob@compono.org>

Subject: Re: [AmigaOS4] Guru Meditation Messages Contest

Okay, here's the list as of now.

Fabian

1. Yoda.catalog – "format this drive you want, hmmm?"

2. 1337.catalog – "j00 w4n7 2 nux0r dlz drlv3?"

My 2cents worth (Bob C.)

3. JohnWayne.catalog – "Are ya' sure ya' really wanna format that drive? Pilgrim?"

4. JimmyCagney.catalog – "You dirty rat, you're the rat that wants to format that hard drive?"

Greenfield Productions wrote:

5. "Harry Enfield.catalog" "You don't wanna format that hard drive, you wanna make a back up first, ONLY ME....."

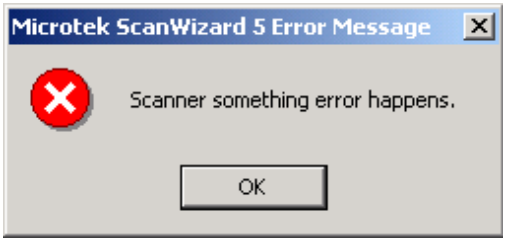
Bob C. Again

6. startrek.catalog – "Scotty, I need that hard drive formatted NOW!"

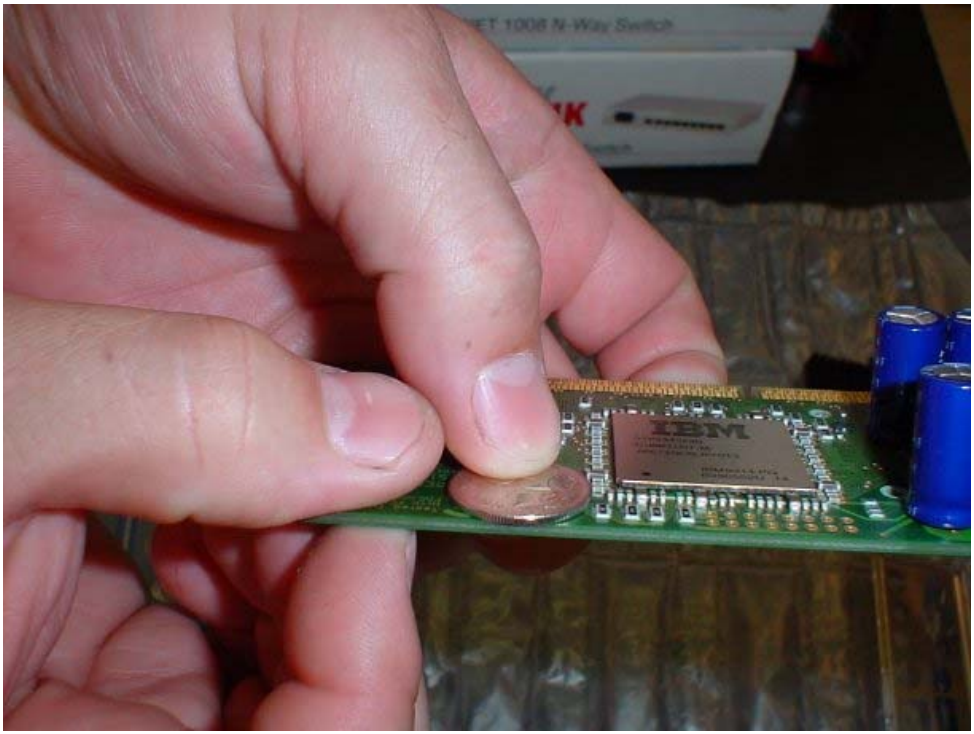
7. startrek2.catalog – "If I format 'er any 'arder Cap'n she'll blow!"

Here are a selection of "Engrish" requesters from various computer programs.

Engrish is that curious blend of English that often arrives from our Asian neighbours. For more Engrish collections take a look at the Engrish web site http://www.engrish.com/



Meeting Pictures



Meeting Pictures

Opposite Page:
Top: Closeup showing the very thin PPC processor compared to a five cent piece.
Bottom: Another close up of the Pegasos accelerator card. A duel PPC powered accelerator card is in development.

January Meeting Pictures

Pictures clockwise from top left:
Scott and his baby :-)
Scott's table of info and networking gear.
What the actual Pegasos board looks like without the processor board.
The size of the board compared to a coke can.

Umilator Feature List

By Bernie Meyer

Although this product will almost certainly never see the light of day (given the distinct lack of miracles in the current Amiga market), I have received numerous requests to provide a list of features of The Product Formerly Known As Amithlon2, or "Umilator". So here is that list.

This just lists the differences between Umilator and the original Amithlon — features already available in Amithlon are only mentioned if there have been improvements (or at least changes :). It should also be noted that a number of the improvements have been made available for the original Amithlon in the form of updates and contrib packs... so if you think "Hey, I already got that!", that might be why...

Drivers/PCI system

One of the big problems in Amithlon was the scarcity of drivers, especially for sound and network cards. Umilator addresses this by facilitating the drivers available for the underlying linux kernel.

o AmigaOS SANA-2 driver wrapping around linux networking drivers. Please note that this is very different from the bsdsocket way of wrapping that can be found in WinUAE and AmigaXL. The Umilator driver sends and receives ethernet frames just like any other SANA-2 driver. Only the lowest level hardware access is handled by the linux drivers, for everything else, you still run an Amiga side networking stack (e.g. Miami, Genesis, Envoy) or network utilities. Full support for multiple network cards.

o AmigaOS AHI driver wrapping around linux sound drivers. Special care has been taken to avoid an extra layer of buffering (and thus increased sound latency) being introduced through this wrapping. The linux driver is used only to set up the card and handle the low level hardware interrupts; The AHI driver writes directly into the card's playback buffer, just as it would on, say, a Toccata card on a "real" Amiga. Full support for multiple sound cards, as well as both playback and recording.

o AmigaOS serial device wrapping around linux serial driver. Linux's UART initialization code has been refined and debugged for years, and can optimally handle a plethora of different chips and multi-port cards, and possibly even USB-to-serial converters (although that is completely untested). Support for up to 8 serial ports.

o Automatic hardware detection system. At bootup, a small utility is run that scans the system's PCI bus and loads the appropriate linux driver modules for the sound and network cards found. Hardware-to-module mapping is defined in an editable config file, and modules are loaded from the Amiga-side filesystem, so they can easily be upgraded or added to.

o Hardware accesses to the Amiga's parallel port are transparently translated into accesses to the PC's parallel port. No more need for custom devices, the AmigaOS parallel.device works.

o IDE/SCSI hard disk driver now uses linux "raw disk" devices for increased throughput, lower CPU load, and increased responsiveness. Also improved support for

Umilator Feature List

removable disks (ZIP, LS120).

o Integrated wheel and multi-button mouse support, with overridable auto-detection for the number of mouse wheels present.

o Keyboard support more robust in the presence of non-OS programs that directly read CIA registers (e.g. the "Matrix" screen saver, and possibly MCP). Also fixed Caps-Lock and Right-Ctrl handling, and optional support for keyboard LED setting.

o PuhDerBaer (Paula-to-AHI redirection) now provides stereo sound.

o Support for outputting sound at arbitrary pitch and length through the PC's internal speaker, and a utility to patch AmigaOS's "DisplayBeep" function to make use of it (DisplayBeep can only flash the display in 8 bit modes, not in 16 or 24 bit modes).

Graphics system

o Full 2-D accellerated support for additional graphics cards (e.g. GeForce3, GeForce4-MX, Voodoo3/4/5, Matrox G550).

o Improved 2-D accelleration, massively improving opaque window moves and other off-screen bitmap uses.

o Support for Matrox multihead cards, and for multiple cards in the same computer. Support for individual configuration of all found cards/heads.

o Support for changing resolution, bit depth and display timings even on cards only supported through VESA bios.

o Support for hardware big-endian display modes on Matrox and Voodoo cards at full speed. Support for software-emulated big-endian modes on other cards (at the cost of some performance).

o Improved calculation of display timings, and improved support for user-supplied timings.

o Support for limiting amount of gfx memory reported, to avoid bitmap and/or pointer corruption while lots of off-screen bitmaps are in use.

o More descriptive modenames, based on the type of gfx card.

o Improved detection of gfx card parameters.

Booting/Installation

o Graphical boot menu, allowing easy setting of configuration options during CD boot.

o Included thorough memory tester as boot option.

o Support for overriding boot priorities from boot menu, providing "rescue mode" boot (forcing boot from known-good minimal OS3.9 install included on the CD).

o Default resolution when booting from CD now 1024x768x16bpp. Looks much better than 640x480x8 :)

o New and improved early bootup screen, with all the functionality implemented within the emulator itself. This overcomes the problem where the SetPatch-caused reboot ignores the boot selection made in the ESM.

o "mbr.device" pseudo-device, allowing manipulation

Umilator Feature List

and creation of MBR (aka "PC standard") partition tables using AmigaOS HD-Toolbox.

o Support for a new type of "virtual disk" that holds both the files required to boot the PC as well as space to be used as a hard drive by AmigaOS. Thus, a full Umilator install can now fit into a single partition.

o Ability to install Umilator fully self-booting on a previously empty hard drive completely from within AmigaOS, using only standard AmigaOS tools. Such an install has a graphical boot menu identical to that on the CD.

o Patch applicator with full checking for patches obsoleted by updated main executable or later patches, allowing for convenient application of in-the-field fixes.

CPU Emulation/JIT Compiler

o Pentium4 compatible (Intel changed the way the BSF and BSR instructions work in the Pentium4, and thus broke the JIT compiler on P4 equipped machines).

o Many bugfixes and improvements in the FPU emulation. Imagine version 5 now seems to run correctly.

o JIT cache size can be specified as a percentage of available memory, and defaults to 12%. Specifying an absolute size in kilobyte is still possible.

o Improved safety-net fallback mechanism for JIT compiler, making it more tolerant towards software using the same instructions both to access real memory as well as custom chip registers (e.g. PGP).

o Much improved statistics are gathered and can be viewed regarding many aspects of JIT compiler.

Distribution

o Distribution as freely downloadable and redistributable ISO image.

o By default, CD boots in "Demo mode", which has the following restrictions:

o No support for writing to hard disks, floppies or CD-R/RW. Writing to ram disks (and the minimal OS 3.9 installation kept inside a linux ramdisk) is not restricted.

o After a timeout period of 20 minutes, emulation speed will be gradually reduced.

o Screen refresh limited to 65Hz or less.

o Through the purchase of an individualized registration key, the demo version can be upgraded to full functionality.

o Registration keys can easily and transparently stored on the hard drive, making entering them a one-time-only hassle.

o Systems for both online and dealer distribution of registration keys have been designed and implemented.

o Kickstart Image has been modified in various ways, preventing abuse of Umilator-included IP outside it.

o Except for P96, Kickstart and partial OS 3.9 (which are required to get anything running), no force-bundled commercial software, allowing for low retail price.

o Attractive default OS 3.9

Umilator Feature List

Get B@inged! AMIGA

install that has been enhanced through numerous free add-ons, providing a modern look and functionality to WB 3.9.

o Various freeware and demo versions included on CD ready to run, to allow for convenient testing/demoing of emulated Amiga.

Miscellaneous

o Workaround for OS3.9BB2 resident tag memory corruption bug.

o Massive rework of internal ELF loader for x86, dramatically improving load speed for large modules.

o Support for an additional 68k->x86 call mechanism designed by Martin Blom to allow for faster library calling in code generated by his big-endian x86 compiler.

o Improved "setconfig" mechanism, generally avoiding the need for a setconfig-caused reboot.

o Improved support for directly user-accessible high-resolution timers (as opposed to only providing the same functionality through cumbersome CIA emulation).

o Added OS3.9BB2 stacksize cookies to all included tools that require increased stack.

o GPL'ed debugger running "beside" the emulation, with support for viewing/watching/protecting arbitrary areas of memory (including segtracker support), disassembling as either 68k or x86 code and watching the emulation-internal log file. Debugger is used through a telnet interface from a second PC — thus it can be used for post-mortem work after an AmigaOS crash. Extremely handy for AmigaOS as well as x86 code development.

Linux kernel

o Reworked PCI remapping strategy overcoming boot failures common on DELL machines (their BIOS initializes the PCI bus in a bizarre way!).

o Mechanism to boost emulation thread's priority over other I/O related threads during times when rapid emulation response is required.

o Support for powering off machine under software control (requires cooperation of motherboard's APM BIOS).

o Timing and speed improvements for gfx

accelleration.

o Support for gathering and retreiving emulation performance statistics.

o Kernel updated to version 2.4.20pre4.

o No more green square around boing ball when booting in 16 or 24 bpp VESA modes :)

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http://www.umilator.net/blog/features.shtml

ANYTHING AMIGA

Eyetech Z4 Amiga 1200 Tower Case AU$420.00
Eyetech's famous A1200 tower conversion.

Maximus Amiga 1200 Mid Tower AU$320.00
Based around our AmigaOne tower this mid tower case utilises a new fabricated rear panel that allows fitting of your A12oo motherboard.

Amiga 1200 Magic Pack AU$399.00 Brand new
Note:These packs are fully imported from our supplier ...

EzyMouse PS/2 Adaptor AU$70.00
Mouse adaptor and software. Now you can use any PC PS/2 mouse on your Amiga.

EzyKey Keyboard Adaptor AU$58.00
The EzyKey adaptor allows the use of PC keyboards on your A1200. A necessary item for tower conversions.

IOBlix High Speed Serial Port 1200S AU$81.00
High Speed Serial Port 1.5 mbps for Amiga 1200 computers.

Highway USB Controller AU$190.00
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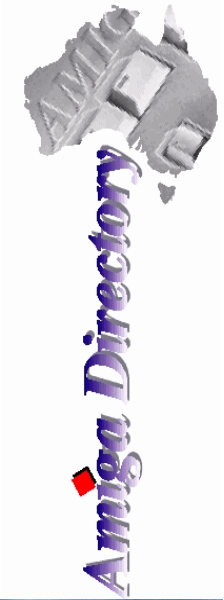
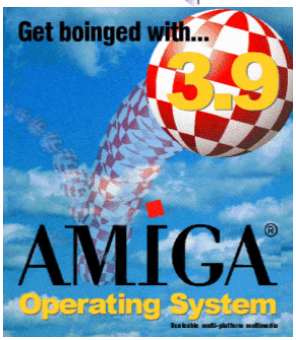
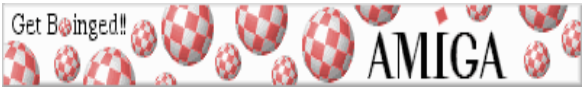
Southport, Q'land 4215,
Phone (07) 5591 6188.





See your local dealer for harddrives, mice, monitors, OS upgrades, roms, software and complete systems.

AMIGA One



About the Group

AUG Contact Information

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About The Group

The Amiga Users Group Inc. is a non-profit association of people interested in the Amiga family of computers and related topics. We do not support or condone software piracy. To contact us

http://www.aug.org.au

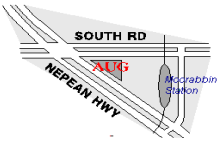
Membership

The AUG Inc. membership year runs from September to August. If you are joining in:

August-September	.....$25
October-November	.....$21
December-January	.....$17
February-March	.....$13
April-May	.....$33
June-August	.....$29

Mail to.

Amiga User Group
PO Box 2389 Seaford Vic 3198



Amiga Disk and Book Library

AUG has a collection of Amiga books, magazines and programs. Members can borrow for a period of one month. The library is available at most meetings.

World Wide Web Access

The vast array of internet providers can make choosing a provider for yourself a difficult task. The AUG can help with advice and a helping hand with setting up your own internet access.

Members Mailing List

The AUG moderates a members mail list at Yahoo Groups. Help, advice or anything Amiga related can be discussed.
http://yahoogroups.com/group/Amiga_Users_Group_Vic

The Dead Letter Department

The AUG's BBS run by Craig Hutchison has access to all the latest AmiNet files as well as other goodies. Registration is free to all members.
Phone: (03) 9571 7194

Meetings

The Amiga Users Group meets at the Moorabbin Arts Centre Complex, 979 Nepean Hwy, Moorabbin (see map) on the 3rd Sunday of each month from 2:00pm to 6:00pm. There is ample parking at the rear of the complex off South Road. Meetings are held in either Workshop 1 or the Sun Room. Ask at reception if you get lost. Cost: $2.00. This is to cover some of the rental costs.

Membership Form

First Name:.....Surname:.....
Address:.....
Post Code:.....EMail:.....
Phone (AH):.....Phone (BH):.....

I have enclosed a cheque or money order as outlined in the table above. Once admitted as a member of tha Amiga Users Group (Vic) Inc. I agree to abide by the rules of the association for as long as I continue to be a member.

Signed: Date: / / 2002

If joining by mail please allow 2-3 weeks for your membership to be processed. (The following is optional)
Year of Birth: Amiga models: Occupation:
Where did you hear of the AUG ?:
Can you assist the AUG to provide services ?: