



Workbench

November 2002

Issue 186



Microsoft & Amiga Join Forces !!



Previously thought of as a match that would never happen, Microsoft and Amiga Inc. have become partners in distributing Amiga DE applications.

“Amiga has partnered with Microsoft to create the best experience for gamers and entertainment on Smartphone devices”, said Bill McEwen, CEO of Amiga. “We have been an early adopter of Microsoft Windows for Smartphones because of our belief it can revolutionize the mobile experience. With our new App Pak technology, users can access applications on their PDA or Smartphone without having to install them from their personal computer.”

Microsoft will work to distribute Amiga Inc. DE applications through Microsoft’s sale channels, with all proceeds going to both Amiga Inc. and DE developers directly. The target market will be Windows enabled smartphones and PDA’s (personal digital assistants). At the moment PDA’s are priced more to the business user but new powerful models with 64 megabytes of memory are on the horizon. These new models will have a more “Gameboy Advance” type retail pricing and thus should be more readily taken up by consumers. Plus the power of the new models will enable more complex software ideally suited to the Amiga DE.

Microsoft execs were shocked and amazed at an Amiga DE demo performed by Amiga Inc. CEO Bill McEwen. Microsoft and their partners had never envisioned such a thing possible as a high quality “App Pak” that can simply be plugged into a PDA or Smartphone. All their previous efforts were centered around downloading software from a CD in a PC and that was the best they could achieve.

Does all this have any negative effect on Amiga OS 4? No according to Hyperion. Hyperion have written a watertight contract that will enable OS 4 development to go ahead. Even if Amiga Inc. were to go belly up or be bought out, OS 4 development would remain firmly in Hyperion’s hands.



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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. The editor of the Amiga Users Group Inc. newsletter Workbench retains the right to edit contributions for clarity and length. Send contributions to: Amiga Users Group P.O. Box 2389 Seaford Victoria 3198 tonym@net2000.com.au

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Editorial

G'day everyone,

With Bernie Meyer attending the last meeting we got to test new Amithlon software addition's and get an update with the latest news on Bernie's progress at getting a Picasso 96 license. Unfortunately I'd say there is almost no hope of Bernie getting a license. But let's hope I'm proven wrong !! It would be nice to have both OS 4 and Berniethlon out for Christmas.

Good news is you can actually order an AmigaOne board from your local Australian dealer AnythingAmiga. Now that MAI Logic (the builders of the AmigaOne boards) have fixed their hardware problems, Eyetech have been able to place orders in bulk.

Tony Mulvihill



**Last Months Meeting
October 20th 2002**

Latest news and info.
Machine demonstrations.
Info on the DFX floppy interface and Thylacine USB card.
Latest Amithlon happenings from Bernie Meyer himself.
If you missed the meeting you missed a lot of great behind the scenes info.

**This Months Meeting
November 17th 2002**

Latest news from the world of Amiga.
A demonstration of remote controlling of Amiga's and PC's using the free remote access software VNC. Have you ever wanted to see Netscape/Modzilla/Internet Explorer running on an Amiga screen? I'll show you how at November's meeting.

More behind the scenes info? You'll have to be there to find out.

**Next Months Meeting
December 8th 2002**

Don't forget it's the second Sunday of the month and the last meeting before Christmas. Maybe we'll have OS 4 for demo?

What is the future of Amiga? How many people are considering an AmigaOne? Will any Cyberstorm owners be purchasing OS 4? How about PC's or Macintoshes, how many members have PC's? Look for a survey on the maillist.

**Australian Designed
thylacine**



USB

now shipping
\$134.95 +GST + S&H
<http://thylacine.boing.net>

Bytes & Pieces

Hollywood now available

Finally! After a long time of development, the Multimedia authoring system Hollywood is available.

Hollywood is a powerful and extensive program which is unique on the Amiga.

You could compare Hollywood with a modern version of Scala: But Hollywood works fully in 24bit mode and uses only system functions to grant compatibility on every Amiga system.

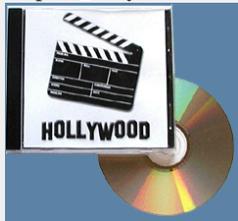
Because of this extreme system friendly programming Hollywood does also run on Amiga emulators with great speed. Versions of Hollywood for MorphOS and AmigaOS4 and maybe also AROS are

planned. On the Hollywood product page you will find an extensive overview including screenshots from the program.

In the next days some applications done with Hollywood will be presented here. Hollywood is delivered on CD-ROM and can be ordered now.

Andreas Falkenhahn,
Airsoft Softwair

http://www.softwarefailure.de/en/prod_hollywood.html



Sydney AmigaOne display

“The last meeting for SAUG took place on Sunday 20th October.

A large amount of Amiga hardware was on display at the meeting, but as expected the star of the show was the AmigaOne.

Ross Vumbaca of The Sydney Amiga Users Group has been doing development on the AmigaOne and gave a very good rundown on the board itself and explained all the ins and outs of the A1's PPCBoot bios. All of this was being displayed on Jeff Sereno's 42" Plasma screen.

At approx. 4.30 pm we went live with a question and answer session with Alan Redhouse.” -Doug Moir/AnythingAmiga

SAUG - <http://welcome.to/SAUG>

Pictures - <http://www.anythingamiga.com/saug/index1.html>



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Amiga Inc Offices Closed !!



AMIGA
Corporate

Amiga Inc. have closed their offices and cut their phones.

If you believe the rumors, Amiga Inc are bankrupt and finished.

However, Amiga Inc. explained the closure as moving to a new location to better allow dealing with their new Microsoft customers.

Fleecy Moss of Amiga Inc. said the phones were cut off as being the only way they could combat the constant phone spam from Amiga Fanatics.

On the weekend of November the second 2002 one of the biggest Amiga only shows was held in England.

The annual "World Of Amiga South East" show this year boasted more companies displaying their wares and a great line up of speaker including Alan Redhouse of Eyetech, Hans-Joerg Frieden of Hyperion and Fleecy Moss of Amiga Inc.

A great line up of companies were also in attendance,

Exhibitors at the show were as follows.

100% Amiga Magazine
Amiga (Fleecy Moss)
Cloanto
Eyetech (With the AmigaOne)
Forematt Home Computing
Kicksoft

Mediator Support Team
Thendic France (With the bplan Pegasos and MorphOS)
Total Amiga Magazine
Weird Science
Zeoneo

Also the following User Groups.

Amiga North Thames
Amiga Support Association
Huddersfield Amiga User Group
South Essex Amiga Link
Blackpool Amiga Club

Some of the features and events held at the show were,

AmigaOne and OS4
PageStream and ImageFX
Demonstration
USB on the Amiga
Games arena with competitions and prizes

Some good presentations were held. Alan Redhouse of



Eyetech gave a good talk on the Amiga ONE SE, Hans-Joerg Frieden talked about the goals and achievements for OS 4 and Fleecy Moss gave Amiga Inc's slant on all the recent happenings.

Hans-Joerg Frieden of Hyperion gave news of Amiga OS 4.0

The goals were to take the 68k based Amiga operating system, move the code base to PPC, untie the operating system from the Amiga chipset (the current Amiga OS version is very heavily dependent on the Amiga custom chips), update the Amiga OS at it's core level and prepare the operating system as a host for Amiga DE.



WoA SouthEast

The preparation as an Amiga DE host is important because it's a bit silly to have a product known as "Amiga" DE and not have it able to run on Amiga OS.

Here are some of the features of OS 4.0

HAL or Hardware Abstraction Layer.

This is to enable the relatively easy movement of the operating system to different PPC systems.

Virtual Memory.

This will not be a hack but will fully system integrated at the core. There is also a general rework of all memory handling, including stack enlargement on the fly (on the current Amiga OS running out of stack memory is responsible for around 30~50% of system crashes) and memory protection is under development for

inclusion in later releases of OS4x

Roadshow is the new TCP/IP stack for networking and internet use and is the fastest stack on AmigaOS. Only the dialer and a few parts of the GUI need to be finished.

The Amiga Fast File System is reimplemented as PPC with new tools for backup and recovery.

A PPC native CDROM filesystem is implemented and will include packet writing and a limited version of the Phillips mount rainier CD file system. This allows you to use your CDRW as a big floppy drive without the hassle of CD writing software.

The Layers Library is rewritten in "C" and windows can now be optionally moved off the screen as in Macintosh and Windows machines.

AmiDock is totally rewritten

to provide much more usability.

PPC datatypes.

USB stack.

True Type Font support.

New Harddrive Toolbox.

PPC version of MUI

IBrowse 2.3

AHI with Soundblaster Live support.

PDF read support and printing of PDF's.

MooVid with DIVX movie support.

A JIT (just in time or dynamic) 68k translator that is achieving better than 50mhz 68060 speed on Cyberstorms. Expected performance will be 5 to 10 times 060 speed on the AmigaOne SE at 600mhz.

Currently Amiga OS 4.0 is 99% finished and the



WOA SouthEast

performance is extraordinarily fast. For example Amiga OS 4 has a message signaling time of 4 microseconds on an AmigaOne SE at 600mhz. Compare this to Mac OSX which has a message signaling time of 400 microseconds.

Amiga OS is even faster than QNX and QNX purports to be a realtime operating system.

Alan Redhouse gave a very meaningful talk on the AmigaOne development and some of the problems that had to be overcome.

September 2000,
Alan Redhouse of Eyetech and Fleecy Moss of Amiga Inc. have their first discussions about developing a new Amiga.

December 2000,
contracts are worked out with Escena to design the AmigaOne and Haage & Partner to produce Amiga OS 4.0.

By around the middle of 2001 Amiga Inc runs out of money and can not pay for development costs. It's then that discussions are initiated between Eyetech and Hyperion on a way to develop both the AmigaOne and OS 4.

Haage & Partner refuse to play ball in helping with OS 4 and Escena admit defeat with their northbridge chip design.

Eyetech start discussions with MAI Logic for use of their PPC northbridge chip as it's the only PPC northbridge chip (besides Apple's) that can handle AGP slots.

Hyperion bypass Haage & Partner and make new contracts with developers for OS 4.0.

Delays in shipping the AmigaOne developer boards have occurred partly because a bug was found in the northbridge chip that causes it to hang when large amounts of

data is shifted across the PCI bus.

MAI have had their northbridge chip in development for around 8 years, however it was never really in mass production apart from it's use in settop boxes and a few hundred Teron CX developer boards. MAI's biggest customers for their chip are infact Eyetech of England and Bplan of Germany

Also the BIOS firmware produced by the American company Softex, refused to allow the computer to boot and precious time had to be allocated by Hyperion to develop a new BIOS based on the open source PPCBoot code.





The good thing is Hyperion managed to achieve this in only one month! Something Softex, with all it's engineers couldn't do in six months of work. Hyperion also grafted a mini x86 emulator into the BIOS, so any initialization of PCI/AGP cards at startup can be performed. This means standard x86 graphics cards and the like will work straight away before the OS even loads.

There been a lot of talk in the Amiga forums about the dongle code being applied to the AmigaOne boards.

Eyetech and Hyperion have agreed on the dongle code to protect Hyperion's investment in OS 4 and allow them to make a return on that investment so they have the funds to further develop.

For those who buy a non-dongled board to run Linux...well, that's all you'll be able to run. Amiga OS 4 will not be sold separately for AmigaOne boards. However those who buy an authentic AmigaOne board will receive OS 4 as part of the package and will also be able to run Linux should they so desire.

Eyetech have very carefully budgeted the production of the AmigaOne and it's only this careful budgeting that's brought the boards in at such a

low price for a low volume board. As an example MAI Logic sells it's Teron CX PPC board to developers at the real cost of the board, which is several thousand dollars. The AmigaOne is a very good deal, especially if you compare it to the current DCE PPC accelerators.

So now the AmigaOne is almost ready to roll. The northbridge chip problems have been rectified, a supply of G3 & 4 PPC chips has been secured and OS 4 is 99% done.

The go ahead has been given, AmigaOne production boards have been ordered from MAI logic and will be delivered in the coming weeks. The future of Amiga is looking good.

Glossary

BIOS

Basic Input Output System

The boot and initialization code of a PC. Usually stored in a flash rom on late model computers and is upgradable by electronically "flashing" the rom.

AGP

Accelerated Graphics Port

This is a faster dedicated port between the graphics chipset and the main processor. It's speed is usually double that of

a PCI bus and has special timing to allow x2, x4 speeds.

PCI

Peripheral Component Interconnect.

This is a fast modern way to plug in expansion cards in computers. You can plug in PCI cards to Amigas with a special PCI expansion board.

NORTHBRIDGE

The northbridge chip is a controller chip that directs internal data between memory, cache, PCI/AGP systems and processor. You might think of it as the traffic cop of a computer.

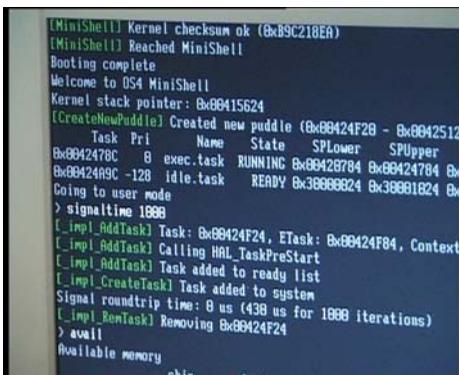
CACHE

A special piece of very fast computer memory used to temporarily store data and instructions. The use of cache memory greatly speeds up the operation of a computer.

ROM

Read Only Memory.

A type of memory that can be programmed once and read many times. This type of memory holds it's programming even with the power off.



Top Left. Latest revision AmigaOne SE board.

Top Right.

Amiga OS 4 booting to a mini test shell on an AmigaOne.

Middle Left. A very custom Amiga.

Left. Tales Of Tamar on a Mediator Amiga.

Above. Items for sale.

Pictures from World of Amiga South East

World Of Amiga SE

Get Bored!!



Top Pictures. Crowds

Below Left. A Pegasos computer running MorphOS

Below Right. The great line of Pegasos machines on display.

WOA SouthEast



How to keep your Amiga cool.

By David Myers

With summer approaching, now is the time to think about keeping your Amiga from overheating. In this article, I'll outline some of the issues involved generally and give a practical example in the case of the A4000 desktop model, perhaps one of the more notorious Amiga models for overheating. Before we start, however, the usual, and most important disclaimer:

CAUTION!

Some of these modifications involve modifying the power supply which contains **LETHAL** voltages. Make sure you remove the mains



power cord before attempting any of this work. Do not attempt modifying the power supply unless you really know what you are doing. You may damage the power supply, causing electrocution or a fire next time it is powered up. If in doubt get a qualified electronics technician to do the work. I will not accept responsibility for any damage or injury caused by these modifications. Perform them at your own risk.

With that out of the way, we can first look at the mechanics of heat generation within a computer. Heat is generated by the CPU, with the 68040 being the worst offender in this regard. Other heat sources are the power supply and also certain types of hard drive, particularly those that are either of old design or are of particularly high speed. In some cases graphics chips on graphics cards can also generate large amounts of heat.

The CPU is usually kept cool by means of a heatsink, which allows the heat to



radiate away inside the computer's case. Adding a fan greatly increases the efficiency of the heatsink, and is the perfect way to help combat an overheating CPU.

Some CPUs don't have a heatsink to start with and a Pentium heatsink/fan combo is ideal here. Unfortunately the various Motorola CPUs are smaller than the various Pentiums, so the clips supplied with the heatsinks are not suitable. Instead, glue the heatsink on with special heat conductive heatsink glue. Failing that, superglue will work, but make sure the layer of superglue is thin and that there are no air gaps.

Another alternative is to use one of the many "chipset coolers" which are available for PCs. These are smaller than traditional CPU coolers, but still perform well enough

for just about everything except overclocked 68040s.

These coolers may be used on graphics chips as well, particularly the Permedia 2 as used on the Cybervision and Blizzardvision cards. For some strange reason Phase 5/DCE did not fit a heatsink here. Given that at an ambient temperature of 20 deg C, I measured 69 deg C on a Permedia, and that the maximum rated temperature of the Permedia chip is 70 deg C, I strongly advise adding a heatsink.

If your hard drive is one of the few that generate a lot of heat, various hard drive coolers can be found at PC shops or swap meets. They usually fit over or under the hard drive and blow air from outside the computer over the hard drive.

While a heatsink/fan on your CPU or chipset may help in cooling those chips, they have a problem. They simply move the heat off the chip and dump it inside the computer's case. This heats everything inside the case and also reduces the efficiency of the heatsinks. The answer there is to use a fan to blow the hot air outside the case. This fan is built into the power supply in the A2000, A3000 and A4000. There are a number of ways to

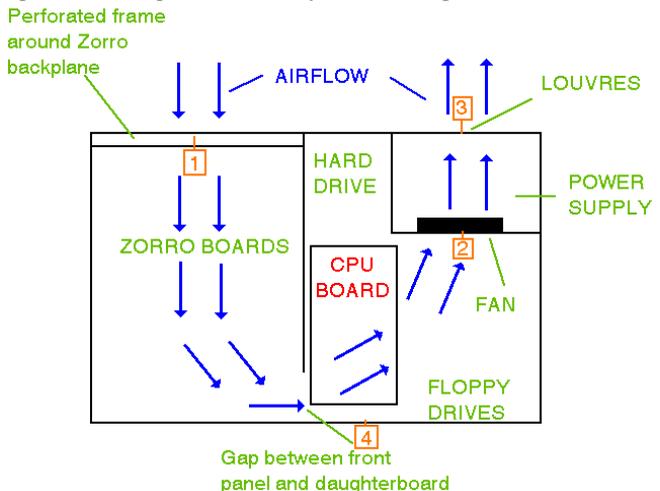
improve it's efficiency, which will be explained below in the A4000 case, though it's pretty much applicable to other desktop Amigas.

One really important thing in cooling a case, which is almost never mentioned, is airflow. The fan might be blowing the hot air out, but it has to be replaced by cool air from somewhere else. In other words, the computer's case must have an air inlet of some type. Cutting or drilling holes in the appropriate place may help, but make a point of ensuring the air flows past all the hot internal components on it's way to the fan.

Owners of desktop A1200s and A500s have fewer options. There are no fans within the case to expel hot air. It is possible to improve matters by

removing the tinplate shield inside the Amiga (at the cost of potentially greater radio/TV interference). A1200 owners can remove the trapdoor cover and add extra "feet" to raise the A1200 an extra centimetre or two, allowing a little more air to get to their accelerator card. Of course, the ultimate answer is to towerise your Amiga. Owners of the A4000 desktop model can try the following ideas, some of which may be applicable to the A3000 and A2000.

The diagram shows the main airflow path through the A4000. It enters through the perforated frame around the Zorro backplane, passes over the Zorro expansion cards, then through the gap between the Zorro daughterboard and the front panel. The airflow



continues over the CPU board, then enters the power supply through the fan and is finally expelled through the louvres at the back of the power supply. In order to improve airflow, the work has been broken up into sections. Each section is numbered in a square box in the drawing above. Doing the work on each section will provide an incremental improvement.

Section 1:

This is where the air enters the A4000. It is a perforated frame around the Zorro backplane. First, make sure it is not clogged with dust. Clean it with a soft brush. Airflow here can be improved by cutting away the section above the top Zorro slot. This will be hidden when the A4000 cover is fitted. If you have a Zorro card that needs extra cooling, you can then place it in the top slot, as there now will be more airflow along the top board. Another way to improve airflow is to remove some of the blanking plates in unused slots.

Section 2:

Firstly, read and understand the caution above. This section deals with the fan, which is located inside the power supply. Airflow can be improved by cutting away the perforated area in the case of

the power supply in front of the fan. It can be left open, though make sure cables don't get lodged in it, or you can fit a wire fan guard to cover the opening. These guards can be found at electronics stores, or out of the power supply from an old PC. As a bonus, the reduction in air resistance will also make the fan quieter. Incidentally, try to route the ribbon cables for the drives in a way that allows free airflow in the area in front of the power supply.

The fan itself can be sped up to provide more airflow. To do this, the PCB needs to be removed from the power supply case, and a 47 ohm resistor in series with the red fan lead shorted out. This will then mean that the fan will be running on it's full rated 12 V DC, and will be faster (and noiser - though this is more than offset by cutting away the perforations). The resistor is located on the PCB itself, next to the fan lead.

Section 3:

This is where the warmed air is expelled out the back, through a set of louvres stamped in the case of the power supply. Again, read the warning above. These louvres restrict the airflow. There are two ways to improve it - a screwdriver can be inserted (with the power off!) and the



louvres bent to widen the gaps. A better way is to actually cut away the louvres, and fit a metal fan guard over the hole. Do not leave the hole exposed as there will be high voltage components exposed. Don't forget to remove any metal filings left over before powering up!

Section 4:

This section is optional, and is intended mainly for those with CPU boards that generate a lot of heat. Cut a hole in the metal panel and fit a small CPU fan over the hole, with the airflow blowing across the CPU board. Since the air comes from the gap between the plastic front panel and the metal case, you may need to drill a couple of holes in an unobtrusive spot in the plastic panel to allow airflow.

As always, I am happy to answer any hardware related questions at AUG meetings. If you have any ideas for future hardware articles, please ask, I am happy to oblige.

Features from AmigaOS that I miss

By Hasse

Here are some of the features from the original AmigaOS (now nearly 20 years old) that I still miss in operating systems today:

The device system. Need to pipe something over TCP/IP? Just use TCP:. Need to open a console for whatever reason. Just use CON:. Etc. etc.

Full localization of all programs through a library (it still amazes me that programs for Windows are released in different language versions).

Dynamic size RAM disk, always present. Just copy something to RAM:, and there it is. No more temp files all over the place.

Recoverable ram disk (RAD). A ram disk that survives booting, and can even be booted from.

Datatypes. A kind of codec architecture for every kind of file. Programs didn't need to know what a gif file, a jpeg file or a text file was or how to

show them on screen. The os could handle that.

Long filenames from the start. A jpeg picture was always picture.jpeg.

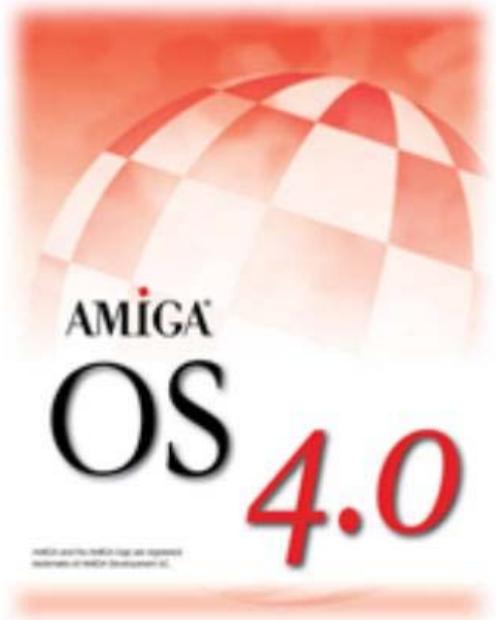
Fully user patchable. Any os function could be patched with SetPatch. The only reason people have been able to use it up until now (and also a virus writers dream in the old days).

System wide scripting/IPC with Rexx (ARexx really). All serious programs were fully scriptable with ARexx. Extremely powerful concept.

Screens. Think of them like virtual desktops. But every program could have one if you wanted. Flipping screens was instantaneous and if you dragged them, you could even have split-screen resolutions (although this was more thanks to the hardware).

A powerful shell, as well as a nice intuitive (but not overly, like the Mac) graphic environment. Linux got this. Windows still doesn't.

These were just some of the features that made AmigaOS a tinkerers dream. Sheer elegance all the way. It saddens me that Linux, with it's monolithic and archaic approach, is the best viable os alternative at the moment. People growing up with computers nowadays have really missed out on something special.



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Eyetech 4 way buffered IDE interface for A1200 and 600. Fit this device and use up to 4 IDE harddrives

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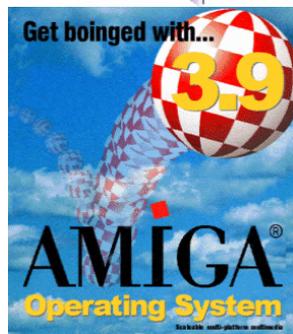
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Meeting Room Open/Close	Barry Woodfield	9523 7854	elbaz@hotmail.net.au
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Web Master	Michael Green	9576 2291	mfg@mfgreen.net
Disk/Book Librarian	Colin Roberts	9889 1819	colroberts@bigpond.com

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>

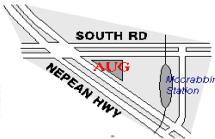
Membership

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://yahogroups.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 the 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 ?: