THE FUTURE OF AMIGA COMPUTING

AMIGACTIVE

ISSUE 24

SEPTEMBER 2001

loading nextgen...

...november rebirth

...customised amiga

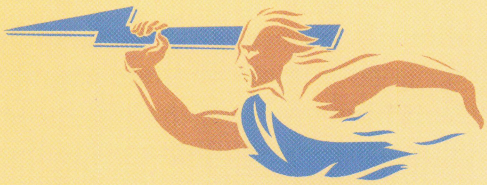
...repulse reviewed

...free your mind!

£5.95

9 771467 353022 09

Pinpoint Publishing



power comp

see our secure e-commerce web



OS 3.5 £14.95
THE NEW AMIGA OPERATING SYSTEM
OS 3.5 DEVELOPER KIT £19.95

AMIGA OPERATING SYSTEMS

Amiga 3.5 OS - the very latest Amiga OS for all Amiga models (it requires 3.1 Kickstart ROM and a CD-ROM drive) £14.95
Amiga 3.1 OS for A1200
Full version of OS 3.1 with ROM chips £39.95
Amiga 3.1 OS for A1200 ROMs only
ROM chips for the A1200 £25.95
Amiga 3.1 OS for A3000
Full version of OS 3.1 with ROM chips £39.95
Amiga 3.1 OS for A3000 ROMs only
ROM chips for the A3000 £25.95
Amiga 3.1 OS for A4000
Full version of OS 3.1 with ROM chips £39.95
Amiga 3.1 OS for A4000 ROMs only
ROM chips for the A4000 £25.95
Amiga 3.1 OS for A500/600/2000
Full version of OS 3.1 with ROM chips £35.95
Amiga 3.1 OS for A500/600/2000 ROMs only
ROM chips for the A500/600/2000 £19.95
Amiga 3.1 OS disk set & 4 manuals
Software & manuals only (no ROMs) £19.95
Amiga 3.1 OS disk set only - software only £9.95

For all SCSI cables, spares please call or see our ecommerce web site.

NEW OS 3.9
(REQUIRES KICKSTART 3.1)
AVAILABLE NOW! £29.95
SPECIAL BUNDLE FOR A1200 ONLY!
OS 3.9 AND 3.1
KICKSTART ROMS £44.95



VIPER TURBO 630

Accelerator Board for the Amiga 600 with 40MHz 68030 and MMU, socket for optional 68882 FPU, socket for one optional 72-pin SIMM for up to 32MB autoconfiguring 32-bit FastRAM. £79.95

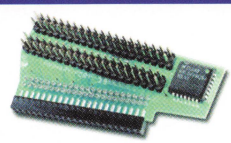
MEMORY EXPANSION BOARDS

A1208 Bare £34.95
A1208 with 8MB SIMM £44.95
A500+ 1MB Chip RAM - Expand Chip RAM £19.95
A500 2MB RAM £49.95
A600 1MB Chip RAM £24.95
CDTV 2MB RAM £49.95
Mini Mega Chip - 2MB Chip £79.95

MEMORY MODULES & FPU'S

4MB SIMM - 72-pin £14.95
8MB SIMM - 72-pin £19.95
16MB SIMM - 72-pin £39.95
32MB SIMM - Specify model of accelerator when ordering £59.95
64MB SIMM - Specify model of accelerator when ordering £139.95
128MB SIMM Slim - Specify model of accelerator when ordering £199.95
1MB ZIP RAM static column for A3000 £16.95
20MHz PLCC FPU - 68882 for 030/020 £10.00
33MHz PLCC FPU - 68882 for 030/020 £15.00
40MHz PGA FPU - 68882 for 030/020 £20.00
50MHz PGA FPU - 68882 for 030/020 £29.95

EIDE99 4-way buffered interface with advanced feature software £24.95



A1200/A4000 MOTHERBOARD ADD-ONS

Catweasel ZII MK2 - For Zorro Amigas, inc. Buddha IDE controller for up to six IDE/ATAPI devices £79.95
Catweasel MK2 - High density floppy drive controller for A1200 £49.95
Kylwalda - Allows use of a standard PC floppy drive as replacement for DF0 £14.95
Catweasel, Kylwalda & HD PC floppy drive
Special bundle inc. a high density drive £75.95
Catweasel & HD PC floppy drive £59.95
Buddha Flash - Zorro IDE controller for all Zorro Bus Amigas £49.95
Twister MKII - Fast Serial Interface for the A1200 to improve internet access £29.95
Silver Surfer - Fast Serial Interface for the A1200 to improve internet access £29.95

Order Special Twister or Silversurfer mechanically compatible with Mediator for an extra £10.
Please specify when ordering.

HyperCOM3+Z - Two fast serial ports/ one fast parallel port for all Amigas with Zorro connectors £49.95
HyperCOM3+ Desktop - Two fast serial ports /one fast parallel port for A1200 with clock port £49.95
ProMidi - Midi port for all Amigas £24.95
IOBlix 1200 P
EPP Parallel Port for Mustek Scanners £49.95
IOBlix 4 Fast Serial ports and EPP/ECP parallel port with any Amiga with Zorro slots. £99.95



SPECIAL OFFER ONLY £99.95
Amiga 1200 Magic Pack

AMIGA 1200 & MOTHERBOARDS

Amiga 1200 Magic Pack
The original desktop 1200, with software £99.95
Bare Motherboard inc. 3.1 ROMs
The original A1200 motherboard £94.95

2.5" IDE HARD DRIVES

Please call for available sizes.

3.5" IDE HARD DRIVES

4.3GB IDE - inc.IDE 40 pin to 40 Pin cable only £79.95
15GB IDE - inc.IDE 40 pin to 40 Pin cable only £99.95
30GB IDE - inc.IDE 40 pin to 40 Pin cable only £139.95

Buy any 3.5" IDE Hard Drive and you can order the OS3.5 CD for only £14.95. We will partition and install 3.5 for you with no extra charges. Please remember, OS3.5 needs 3.1 Kickstart Roms,
If in doubt ask when ordering.

Please note that as the pre-3.5/3.9OS doesn't support HardDrives bigger than 4GB, you will need to upgrade to OS3.5/3.9 or buy an Eide99 (1200 Only) or Power Flyer EIDE interface. Both interfaces come with software overcoming ths limitation.

Note also that because 3.5" Hard Drives come with 40 pin to 40 pin IDE cable, in order to connect them to a standard A1200 IDE connector you will need to order an EIDE interface or a stack cable.
If in doubt ask when ordering.

For different sizes, please call or see our web site.

3.5" SCSI HARD DRIVES

9.1GB SCSI - 50-pin or 68-pin UW £159.95



SPECIAL OFFER! ONLY £59.95
Ultraslim 8x ATAPI CD-ROM Drive complete with 4-way buffered interface & EIDE '99, Allegro s/w, cables

NEW PHASE 5 & DCE PRODUCTS

ACCELERATOR BOARDS FOR A1200

Apollo 1240/40 £129.95
Blizzard 1240 68040 40MHZ £159.95
Blizzard 1260 68060 50MHZ (for A1200 Tower only) £219.95
Blizzard SCSI-2 Kit - for 1240/1260 £69.95
200MHZ PPC 603/68040 33MHz - N/A SCSI £249.95
200MHZ PPC 603/68040 33MHz - with SCSI £309.95
200MHZ PPC 603/68060 50MHz - N/A SCSI £399.95
200MHZ PPC 603/68060 50MHz - with SCSI £459.95

ACCELERATOR BOARDS FOR A3000/4000

Cyberstorm MKIII 40MHz 68040 £359.95
Cyberstorm MKIII 50MHz 68060 £469.95
Cyberstorm PPC 604 233MHz 68040 40MHz £439.95
Cyberstorm PPC 604 233MHz 68060 50MHz £559.95

ACCELERATOR BOARDS FOR A2000

Blizzard 2040 40MHz 68040 - Inc SCSI £269.95
Blizzard 2060 50MHz 68060 - Inc SCSI £369.95

GRAPHIC CARDS

BVision - for PPC 603, new MK2 version £189.95
CyberVision PPC 604 £199.95
CyberVision 64 3D £169.95
ScanDoubler with Flicker Fixer - Int. £69.95
ScanDoubler with Flicker Fixer - Ext. £59.95

FOR OWNERS OF PHASE5 BLIZZARD PPC AND CYBERSTORM PPC CARDS ONLY!

G-REX PCI for A1200 - PCI Interface for Blizzard PPC
Five PCI 2.1 Slots.
- 32 Bit DMA Mode
- Data Transfer Rates Up to 25 MB p/sec
- 1.76 GB of non bank switching address space
- Requires Blizzard PPC
- Comes with a complete driver package for:
  - Voodoo 3 2000 and 3000
  - Voodoo 4 4500
  - Voodoo 5 5500
  - NIC 10 MB/sec (Realtek Chipset)
- Suits all Amiga 1200 Towers

The new G-REX PCI card for Blizzard PPC 603 £149.95
The new G-REX PCI card for Cyberstorm PPC £149.95

VISA MasterCard

ALL PRICES INCLUDE VAT

Please note that unlike other dealers, we do not surcharge orders paid by credit card. Neither we charge credit cards (or cash cheques) if the requested product is not in stock. Our policy is that we cash our money only the day we ship.

All trademarks acknowledged.

£5 delivery 2-3 days
£8 next day
£15 saturday
£15 northern ireland
£8 monitor/tower/A1200 (u.k. mainland only)

uting limited

site for more products and technical specifications

www.powerc.com

tel 01234 851500
fax 01234 855400
email sales@powerc.com

Power Computing Limited, Unit 82a, Singer Way, Woburn Road Industrial Estate, Kempston MK42 7PU. ENGLAND.

CD-ROM, RECORDABLE & REWRITABLE

50x Speed Internal ATAPI (bare unit) £39.95

50x Speed External ATAPI - includes case with PSU, cables, 4-way buffered interface with EIDE99, Allegro s/w and Y-audio mixer cable £79.95

32x Speed Internal SCSI (bare unit) £89.95

32x Speed External SCSI - requires SCSI £119.95

8x 8x 32x Internal Rewritable ATAPI (bare) £89.95

8x 8x 32x External Rewritable ATAPI
Includes external case with internal PSU and cables, Software to write to CD-R or CDRW's, (i.e.,MakeCD) and 4-way interface sold separately £129.95

Box of 20 CD-Rs £10.00

Box of 5 CD-RWs £24.95

CD-RW - SPECIAL OFFER!
8x 8x 32x Internal Rewritable ATAPI £89.95
8x 8x 32x External Rewritable ATAPI £129.95

IOMEGA ZIP PRODUCTS

Zip 250MB External SCSI Drive
SCSI controller required £189.95

Zip 250MB Internal ATAPI Drive
EIDE99 and Allegro s/w £129.95

Zip 250MB Internal ATAPI (Bare Unit) £99.95

Zip 100MB Cartridge £12.95

Zip 250MB Cartridge £19.95

ZIP 250
For all your backup needs!



FLOPPY DISK DRIVES

XL 1.76MB Internal Floppy Drive for Towers only. No patch required. £49.95

A500/600/1200 Internal 880K £19.95

A2000 Internal Drive 880K - inc Kylwalda £35.95

A4000 Internal 880K - inc Kylwalda £35.95

PC880E External for all Amiga models £39.95

PC Floppy Disk Drive £14.95

FLATBED SCANNERS

Artec AM12s - 600 x 1200dpi optical resolution Requires a suitable SCSI interface and software (Scanquix 5.0CD) £99.95

Artec scanner bundle -
Artec AM12s, Scanquix 5.0CD and squirrel (For A600 and A1200 only) £189.95

Epson perfection 1200 SCSI - Requires a suitable SCSI interface and software (Scanquix 5.0CD) £219.95

Epson perfection bundle -
Epson perfection 1200 and scanquix 5.0CD the scanner requires a suitable SCSI interface £296.95

POWERTOWER ACCESSORIES

new **Z-IV Bus Board** - The ultimate complement to our successful A1200 Power Tower, Pass-through and compatibility jumpers for all major accelerator cards £99.95

Z-IV Bus Board Video Adaptor
To activate the video slot on the Z-IV Bus Board £24.95

A4000 Original Keyboard
A replacement one, or with an adapter/int. for other Amiga models £39.95

PC Windows Keyboard
An inexpensive alternative to the original keyboard; requires PC key/ int. £14.95

A1200 Desktop Universal Keyboard Interface -
Interface for non-towered Amiga 1200. It can use Amiga 4000 or PC keyboards £24.95

PCMCIA "V" Adaptor
Rotates 90 degrees the PCMCIA port to allow the use of PCMCIA cards inside tower cases £19.95

Power SCSI Adaptor
Internal to External SCSI adaptor £19.95

PC Windows Keyboard adaptor
for A4000, A3000 and A2000. Supports Multiple key-press(Keyboard sold separately) £24.95

MODEM BUNDLES

new **Bundle 1** - 56.6K V90 modem, flash upgradable with cables, iBrowse and Net & Web s/w £69.95

Bundle 2 - as above plus Silver Surfer fast serial interface £89.95

Order special Twister or Silversurfer mechanically compatible with Mediator for an extra £10.

Please specify when ordering.

56.6Kbps V.90 Modem
Flash upgradable, modem only £49.95

SVGA MONITORS

new

15" SVGA Monitor £119.95

17" .27 pitch SVGA Monitor £159.95

EPSON PRINTERS & CONSUMABLES

Please call to check compatibilities with available Amiga software.

PUNCHINELLO MKII PC MOUSE ADAPTOR

new

Punchinello MKII supports directly mice with one or two wheels and up to four buttons.

Punchinello MKII £19.95

Punchinello MKII & 3 button mouse and wheel £14.95

3 BUTTON MOUSE
(Needs Punchinello MKII)



NETWORKING SOLUTIONS

Power-LAN (PCMCIA Ethernet card A1200) include networking software & CC-Reset fix, no soldering required £54.95

XSurf Zorro Card £89.95

SOFTWARE

new **Amiga OS 3.5 Developer CD V2.1**
Supporting tools and information for Amiga developers £19.95

Cyber GraphX V4 - Professional version of the software for graphics cards £19.95

Aminet Set 9 - Aminet Set 9 includes four CDs with the best of the biggest collection of Public Domain and Shareware software for Amiga £19.95

PowerMovie - Animation editing software £14.95

Red Mars - CDROM game £15.95

Breathless - Award winning 3D game £5.00

Amiga Magic Pack Software
Includes Wordworth 4.5SE, Turbocalc 3.5, Datastore 1.1, Photogenic 1.2SE, Personal Paint 6.4, Organizer 1.1, Pinball Mania and Wizz £14.95

new **Amiga Magic Pack software with Kickstart 3.1 ROMs for A1200** £39.95

Aminet Games - 1500 compressed archives of games from the Aminet collection £14.95

new **Aminet Set 10** £19.95

new **Aminet 41** £14.95

Big Red Adventure - CDROM game £5.00

Directory Opus - Magellan II £49.95

Scala MM400 £55.95

new **CamControl** - software for digital cameras £25.95

ScanQuix 5.0 CD Scanning software
Supports Epson GT family, Mustek, Artek, Canon and Umax. CD only £54.95

iBrowse 2 / Net & Web £34.95

Make CD DAO - Backup, duplicate, create CDs £49.95

Turbo Print 7.16 - full new version £38.95

Turbo Print 7 upgrade - from v5/6 to 7 £18.95

Turbo Print 7.10 upgrade - from v7 to 7.10 £14.95

SPARES & MISCELLENOUS

Official Amiga Mouse and mat £9.95

Replacement 230W Tower PSU - Please specify if for A1200 or A4000 Powr Tower £39.95

CD32 Joypad (for any Amiga) £9.95

Original internal A1200 replacement k/board £14.95

Original Amiga 1200 replacement PSU £9.95

SuperBuster chip rev. 11 £49.95

Parallel Port Data Switch - to connect two printers to one computer. Includes cable to connect the box to the parallel port of the computer £19.95

ELBOX PRODUCTS

Mediator PCI 1200 £139.95
4 PCI 2.1 compatible slots, 132MB/s between PCI cards, ready to run with existing Amiga 68k and PPC accelerator cards.
(Needs an A1200 motherboard housed in a tower case).

Mediator PCI ZIV £169.95
(Needs an A1200 motherboard housed in a tower case and a ZIV bus board).

Mediator PCI ZIV £149.95
(Only for A4000 motherboard housed in a Power Tower A4000 Mk2 tower case).

Mediator PCI Zorro III £149.95
(Only for Amiga computers with fully functional Zorro III slots).

PCI CARDS AVAILABLE FOR THE MEDIATOR

S3 ViRGE 4MB graphics card £29.95

3dfx Voodoo3 2000 16MB graphics card £79.95

3dfx Voodoo3 3000 16MB graphics card £109.95

3dfx Voodoo4 4500 32MB graphics card £169.95

Ethernet 10/100Mbps network card £24.95

TV video card - Available soon £69.95

Soundblaster 128 sound card - Available soon £29.95

Soundblaster Live! Player 1024 sound card Available soon £49.95

Shark PPC G3/G4 750@ 400MHz - Available soon £269.95

Shark PPC G3/G4 750@ 550MHz - Available soon £369.95

POWER TOWERS

A1200 Power Tower – Kit only
Inc. tower case, PSU, universal keyboard interface, PC keyboards, fascia for floppy drive,fitting kit and instruction manual. Ideal for Mediator PCI and GREX boards. £119.95

A1200 Power Tower 1
As above, but fully assembled and with a new 3.1 ROMs A1200 motherboard, floppy drive and mouse £219.95

A1200 Power Tower 2
As Power Tower 1, with Apollo 1240 40MHz, 8MB of RAM, 8.4GB Hard Drive, 4-way EIDE-ATAPI buffered interface, EIDE99 and AllegroCDFS software. £469.95

A1200 Power Tower 3
As Power Tower 2, but with 16MB instead and a 50x ATAPI CD-ROM drive. £519.95

A1200 Power Tower 4
As Power Tower 3, but with 32MB instead, and Mediator PCI, Voodoo3 2000 graphics card, Ethernet Network card wit hPower-LAN software, 15" SVGA monitor, external audio port for CD-ROM drive and speaers. £899.95

A4000 Power Tower MK2
With new redesigned bus board with 7 ZORRO II / III slots, 5 PCI slots, 1 slot video. PCI slots are activated by the optional Mediator PCI for A4000.
Features also 230watt PSU, 3x 5.25" external bays, 2x 3.5" external bays, 6x 3.5" internal bays and instruction manual. £209.95

IDE ENHANCEMENTS

Power Flyer A1200 Gold £49.95

Power Flyer A1200 Gold Upgrade £10.00

Socket raise [illegible] Power Flyer A[illegible]



Mediator PCI 1200 £139.95

AMIGACTIVE MAGAZINE

What's on this month's AACD?

Welcome to the new look *Amiga Active* contents pages. Instead of a brief list of a few of the programs on the CD, we will now be giving you more information about the contents of our coverdiscs as well as pointers to some of the regular features of AACDs that you may not know about.

We will also be using this extra space to cover any explanations needed to get particular programs running. Remember, the main CD content is all in the AACD drawer.



Cover Disc 24

SEPTEMBER 2001

TV Paint
Originally £800. Now Free!

Aqua Demo
Read the review and try the game.

Games Updates
Dynamite update, Payback maps.

Safe
Latest version of this virus detector.

C Compilers
Updates for GCC and VBCC.

PLUS...
Internet utilities, drivers, demos, mods, web sites from top Amiga companies and much, much more...

Unique interface. Enhanced for OS 3.5+

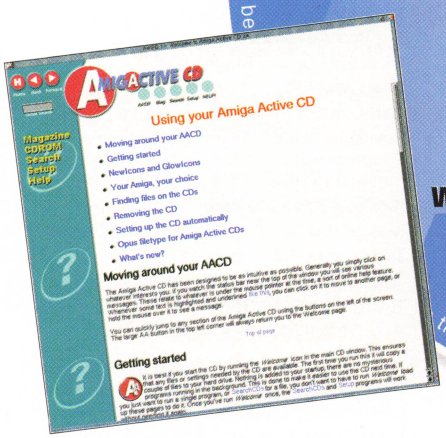
www.amigactive.com

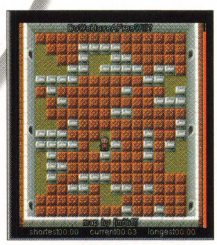
COMPACT disc DIGITAL DATA

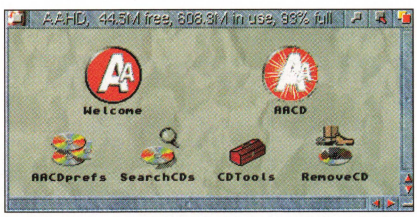
© Pinprint Publishing Ltd. System requirements vary. Pinprint Publishing can not be held responsible for any damage that may arise from using this disc.

TV Paint

TV Paint used to cost over £800, now you can have it for free. Newtek were happy for us to bring this to you, on condition we mentioned "son-of-TVPaint", Aura for the PC. See AACD24: AACD/Graphics/TVPaint and www.newtek. com for more information.







Welcome

This is the first icon you should double-click when you put a new AACD in your drive. It loads up the CD's front end and does a few important things before that, like making sure any of the scripts needed by the CD are available and that any assigns needed by software on the CD are set up. If you have the CD index files on your hard drive for faster searching, it also updates these for you, either automatically or after asking your permission, depending on your AACDPrefs.

'Welcome' won't overwrite any of your system files or touch any of your software, nor will it mess with your startup-sequence.

You should run 'Remove CD' before ejecting the coverdisc. This will cancel any assigns made by Welcome, and optionally eject the CD for you. We do our best to save you from laborious taks like pressing 'eject'!

Games

As well as a demo of Aqua (which we've reviewed this issue), we have updates for Payback, Dynamite and Foundation, along with several other games to help you pass the time.

What are these other icons?

CDtools

This drawer contains various programs used by the CD itself, as well as the main CD index files. There are also a couple of other goodies, including a DOpus AACD filetype which gives your AACD icons a popup menu to run Welcome, initialise or eject the CD.

SearchCDs

This is a search tool, which lets you search AACDs and other sources such as Aminet for files. The next time you install a piece of software that asks for xyz.library, have a look for it using SearchCDs. Chances are it was on a previous *Amiga Active* coverdisc! We'll have more information on this next month...

What's in this month's issue?

regulars

06 **News** - *Amiga ventures into the PDA space.*

10 **News Focus** - *Reaction to Amithlon.*

12 **Rants & Raves** - *Opinion on timely issues.*

50 **Active Gamer** - *Warp3D 4.2 for Voodoo 3.*

54 **Interactive** - *Daylight Robbery? As if.*

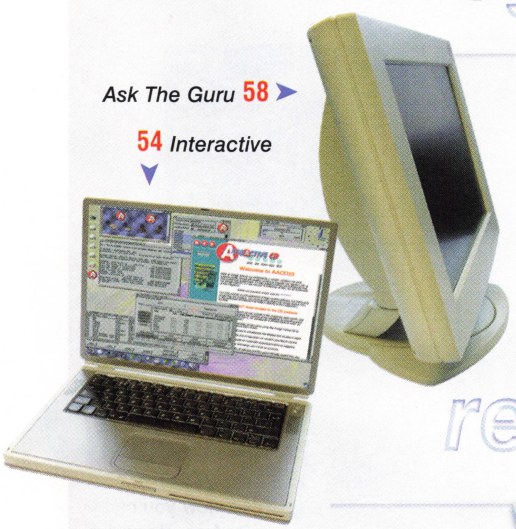
57 **Subscriptions** - *12 issues, bargain price.*

58 **Ask the Guru** - *Technical problems solved.*

60 **Active Online** - *FTP... it's as easy as 1, 2, 3!*

62 **Next Month** - *Second birthday special?*

64 **Back Page** - *Paging the other Active...*



Ask The Guru 58

54 Interactive

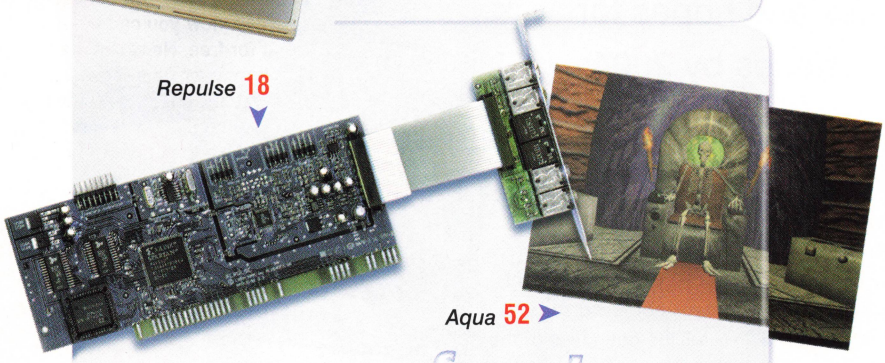
reviews

18 **Repulse** - *The new Zorro II sound card from Alien Designs reviewed and rated. Alternatives are few and far between in the Amiga market these days...*

24 **Active Shareware** - *Including, this month, an interview with a man who juggles hard drives. Not just any man, mind you.*

38 **Active Media** - *A roundup of recent books, new CDs and helpful, informative web sites.*

52 **Aqua** - *A Myst-like adventure game for the Amiga? In this day and age? Surely not!?*



Repulse 18

Aqua 52

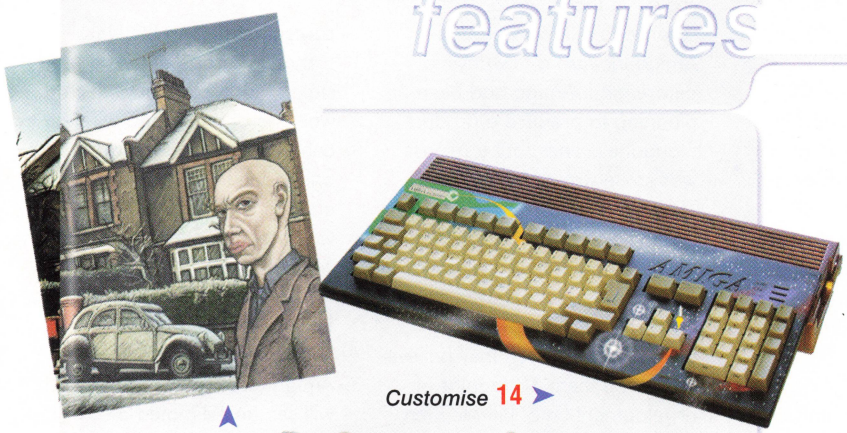
features

14 **Customise your Amiga** - *Apple aren't the only ones who can make 'stylish' home computers. Give your Amiga a lick of paint!*

22 **Zipity-Doo-Dah** - *Find out how to use a 250MB Zip drive with your Amiga and bag yourself a free one in our competition.*

40 **Install In Style** - *It's no good writing a killer app if you can't install it properly.*

45 **Getting to Know Photogenics** - *In the final part, we show you how to seamlessly combine foreground and background.*



Customise 14

Photogenics 45

Nextgen

28 **Nextgen News** - *What's happening in the arena where Amiga hopes to be king?*

29 **Industry Voices** - *Fleecy and Francis from Amiga and Tao Group share their thoughts.*

30 **The OCPA** - *Big comapnies, big market, big opportunity... and it's happening now.*

33 **MathEngineering** - *Bringing realistic dynamics to games everywhere.*

MathEngineering 33

30 The OCPA



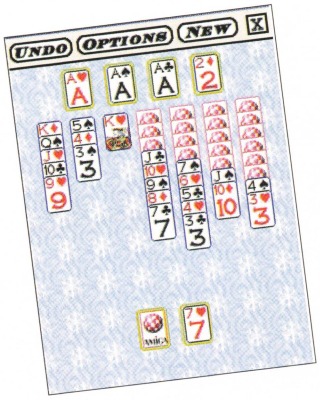
Amiga Announce November 1st Rebirth



AmigaOS on x86, Series Zero games and hopes for 100 million Amiga-enabled mobile phones by 2004.

Amiga Inc. President Bill McEwen used the Amiwest show in California on 28th July to announce that they will be releasing AmigaDE v1.0, AmigaOS v4.0, the AmigaOne computer and an Amiga classic solution for x86 by November 1st this year.

While a November 1st date represents a small slippage from the previously announced release date for the AmigaOne, it should be stressed that McEwen announced these products as being released by, not on, November 1st. Alan Redhouse of Eyetech believes they will have the AmigaOne hardware ready in October, as previously stated.



AmigaOS on x86

The biggest surprise of the show was the demonstration by Amiga Inc. of a version of AmigaOS 3.9 for x86, currently going under the name Amithlon. This product was developed by Bernd Meyer, the Developer of the JIT engine for UAE (see AA22) and Harald Frank of VMC. It utilises a modified version of the JIT engine running on a custom Linux kernel to provide what is, in effect, a 680x0 instruction set platform using standard x86 components. This is not the same product as the ultra-fast emulator announced in last issues' news pages - although it has much in common technically.

The Amithlon x86 version of AmigaOS is not intended as a competitor to AmigaOS 4.0 PPC, but rather a way to enable "classic" Amiga software to run on a wide range of hardware at much greater speeds than any current Amiga. It will be behind the curve as far as OS development goes, running OS3.9 rather than OS4.0, and will not support software that requires the Amiga custom chipset or any AmigaPPC software. AmigaOS 4.0 for the Zico specification PowerPC AmigaOne platform will remain the way to go for full compatibility.

The announcement was not just a surprise for the attendees of the show - in fact it was a surprise to Bill McEwen and Amiga Inc. just a few days beforehand. Amiga had been planning to produce a product along these lines, but a release was some way down the line. They were informed of the pre-existing system by Harald Frank, and are now working with the Amithlon developers to integrate it with the work they have already done, which they believe has saved them 18 months of development time. Bill McEwen said, *"...all the things we were going to have to do on the low level have been done for us."*

100 million new Amigas

McEwen's keynote speech went on to discuss the relationships Amiga Inc. are developing with third party manufacturers, including Sharp, and went on to hint at some exciting developments which are going to be announced in the next 90 days. He said that Amiga are negotiating deals with wireless content carriers in the US, Canada, Europe and Asia, and stated that a company which was one of the largest wireless content carriers in the world - and indeed one of the largest entertainment companies - would be announcing a joint venture for content creation with Amiga within the next few months.

McEwen also stated that Amiga already has deals which will see an estimated 3.5 million Amiga enabled devices sold over the coming 12 months, with other deals in the works, including a 2.2m unit deal with one of the largest European set-top box manufacturers, which he hopes will meet a 12 month target of 10m units.

By contrast, Commodore and Escom combined sold fewer than 8m Amigas throughout the entire previous history of the platform. McEwen went on to say that his target is 100 million Amiga enabled mobile phones,

PDAs and small computer systems over the next three years.

McEwen also had a lot to say about upcoming devices that they are aiming to get the AmigaDE on, although specifics will have to wait until deals are signed. He mentioned that there are three mobile phones set to use the AmigaDE, including the Sharp mobile phone we have alluded to in the past which is based on the same hardware as the Sharp PDA. In reference to the recent move away from the consumer market by Psion, Mcewen stated that it shouldn't affect any possible deal that company and Amiga, and that there was still a *"very strong possibility"* of seeing Psion Netbooks running AmigaDE.

Most intriguing of all were references to a mobile gaming platform from an *"extremely large, multi-billion dollar organisation"*, who apparently rang McEwen out of the blue recently to discuss using the AmigaDE on a device which fits somewhere between Nintendo's GameBoy Advance and traditional games consoles. This highly secret product apparently has a 200MHz processor, plenty of RAM, and a target price of under $200. McEwen stated that they were, *"trying to figure out how to get it out by Christmas."*

AmigaDE Games

Bill McEwen also used his keynote speech at AmiWest to promote the first AmigaDE content which Amiga have already provided to Sharp for their Zaurus platform and which are due to go on sale via Sharp's Spacetown e-commerce web site.

The first five titles, developed for the AmigaDE by various individuals and companies, are collectively termed the *"Series Zero"* games and have been chosen to target the tastes of the Japanese market. A *"Series One"* games package, which will include a number of more arcade-style gaming titles, is due shortly.

The Series Zero games package includes Batty, a Breakout/Arkanoid style game by Titan Computers; Boxikon by e.p.i.c Interactive GMBH; Convex by Zeoneo; and Linea by Titan Computers, all three of which are board-game style puzzlers involving moving patterns of marbles around the screen. Last but not least, John Harris has contributed Solitaire which contains 10 different variations of the popular card game. The games are designed to run on the Sharp Zaurus using its horizontal quarter-VGA sized screen.

STOP PRESS!

Part One

Word of new 3D drivers being developed for cards far more powerful than the Voodoo 3 has reached the *Amiga Active* offices. The drivers will give PCI owners access to blistering graphics performance on their Amigas.

Part Two

Elbox have announced the release of their Mediator Multimedia CD containing drivers for Soundblaster PCI 128 sound cards and TV tuner drivers for cards using the Bt878 video decoding chipset. The disc will retail at around 25 Euros excluding VAT (around £16). Look for a review in *Amiga Active* 25.

editorial

AmigaDEvolution?

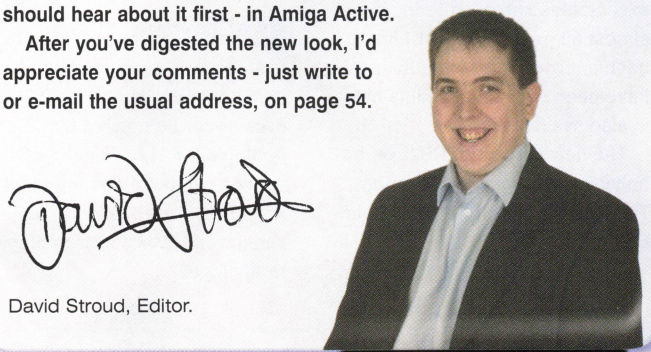
Classy, isn't it. Or should that be "glassy"? You can't have failed to notice the new look bestowed on these pages by now - but the changes aren't merely cosmetic: we've made a few tweaks to the *Amiga Active* formula as well. So, what have we done and why have we done it, you ask?

Chances are you've already observed our new look contents pages - unless you're one of those people who stands in the newsagents and flicks through a magazine from back to front (you're in everyone's way! Just buy the magazine and get outta there!). These are now split 50/50 between the magazine and coverdisc, because we keep getting letters and e-mails from people who want us to include a particular feature on our CD which is already there. With a whole page now at our disposal, we hope to give everyone an idea of what they might have been missing. We still welcome your suggestions and contributions for our CDs, of course - just make sure you don't ask us to include something that we've already got on there!

The news section that we're in now is slightly shorter, but it's all Amiga-related news at the front of the magazine. This also gives us the flexibility to bring you up to speed on important news issues when necessary via more regular News Focus pieces, like the one on page 10 of this very issue. To make room for even more news, we've shunted Amiga and Tao's columns further back in the magazine. Yes, they're still here and exclusive to *Amiga Active* every month, but they're now together on page 29 in our extended Nextgen section.

Which brings us to the main feature of the new look *Amiga Active*. Now that development of the AmigaDE has reached a stage where we can start to show you just what's going into it (more on this in our next issue), combined with the announcement of the Open Contents Platform Association comprising content developers, middleware providers and hardware manufacturers (see page 30), we feel it's important to inform you about what's happening - rather than what's already happened - in the market Amiga are hoping to be a big part of. So on page 28 you'll find the new look Nextgen, containing some of the news that we've moved from the front of the magazine along with related features - and, eventually, tutorials and other articles - to show you where the Amiga is headed. This isn't futuristic crystal ball-gazing: these things are actually kicking off as I write this, and some big companies are involved. Other magazines may start to talk about it in a few months' time, but we think you should hear about it first - in Amiga Active.

After you've digested the new look, I'd appreciate your comments - just write to or e-mail the usual address, on page 54.



David Stroud, Editor.

News in brief

95% Freespace

Steffen Haeuser, the man charged with porting Freespace to the Amiga, sends word that the project is almost complete and has already been shipped to beta testers. Minimum requirements for the game are now an '060 Amiga with a 3D graphics card or any Amiga with at least a PowerPC accelerator, which will be able to run the software rendering engine at sufficient speed in a lower resolution if a 3D graphics card isn't present.

Elbox at WoASE

Elbox have confirmed that they will be attending the World of Amiga South East show on November 3rd. The company's CEO, Maciek Binek, will be present to demonstrate their upcoming SharkPPC boards in the company's Zico-compliant systems, and to sell SharkPPC and Mediator products.

Online ordering for the World of Amiga show should be available by the time this issue of *Amiga Active* hits the shelves. Visit the web site for more info.

www.worldofamiga.com

Airsoft News

A major update for RB2Exe is available now from Airsoft Softwair's web site. RB2Exe version 1.5 allows you to create presentations from RainBoot files. With this new version of the program, the size of resulting executables has been reduced by almost 60 percent, the GUI has been improved and various bugs have been squashed. Online help is also available.

The new version of RB2Exe is only available for owners of the The Best Of Airsoft Softwair Gold Edition CD-ROM.

www.airsoftsoftwair.de

e.p.i.c. Amiga Content

German Amiga games developer e.p.i.c. Interactive Entertainment have signed a deal with Amiga to create handheld-style games for the AmigaDE. The company's first three titles: Boxikon, Piles O' Tiles and Pegger are all puzzle games, but e.p.i.c. also plan to release shoot-em-ups and sports titles at a later date.

Grab it now!

Stephan Rupprecht has released a new version of SGrab, the Amiga screen grabber. You can download v1.18 of the utility from Stephan's web site:

http://home.wtal.de/stephanr/

Ottawa Amiga Show

The Ottawa Amiga Show will be taking place on the weekend of November 17 and 18, at the Travelodge Hotel (formerly known as the Talisman) on 1376 Carling Avenue in Ottawa, Canada. Attendees currently confirmed include Amiga Inc, Amiga retailer CineReal Pro Video, and Monitor Magazine (an Ottawa-based computer monthly). Unlike traditional hall-based events, the The Ottawa Amiga Show will have each exhibitor in their own 300+ square foot room.

A mailing list has been set up for further announcements; e-mail oas-subscribe@technomages.net to sign up. For show info, e-mail: amigashow@technomages.net

Apollo-gies

Last issue, we incorrectly stated that the Apollo 1260/66 accelerator being sold by Analogic for £175 was the LC version without a floating point unit (FPU). In fact, it's the full version with MMU! Our apologies to Analogic.

MCC: Merlancia Computer Cases!

Amiga have sold the 'legendary' Amiga Walker and MCC (Multimedia Convergence Computer) case designs to Merlancia Industries. The cases will feature in Merlancia's upcoming range of PowerPC-based 'Torro' computer systems.



The Walker case design (above right) received what can only be described as a poor reception when it was initially unveiled in the mid 1990s. Featuring both floppy and CD-ROM drives in the front of its hunched black casing, the Walker was soon nicknamed the 'Hoover' for obvious reasons.

The MCC design (right) was unveiled at the World of Amiga 1999 in London, also to a mixed reception. Looking more like a piece of stereo equipment and designed as a set-top box, the MCC case was designed to house a next-generation Amiga system built around, confusingly, the MMC (Magical Mystery Chip). It also featured on the cover of the first ever issue of *Amiga Active*, in cartoon form.

Both case designs will be re-worked by Merlancia for their own systems. The Walker case will house the Merlancia Radian, a desktop unit to feature a PowerPC G3 or G4, whilst the MCC case will be resurrected as the Merlancia Apocalypse, intended as a set-top box with broadband video capabilities.

"We anticipate minor styling changes and modifications, as needed for the implementation of our hardware, none of which will effect the beauty or harmony of the case designs." stated Ryan Czerwinski, CEO of Merlancia Industries. *"We will be producing the cases out of stainless steel, with the possibility of other materials being available as well."*

Frankly, we'd be surprised if Merlancia used anything other than stainless steel! The Radian and Apocalypse systems are currently slated for release sometime next year.

www.merlancia.com

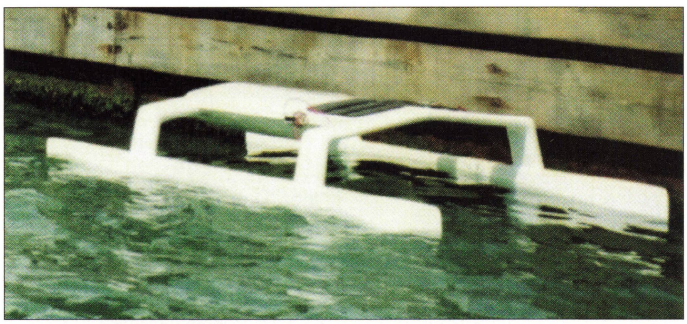
No More Amiga Cologne?

MacExpo 2001, the show which was due to be held on September 21-22 in Cologne, has been cancelled, putting the plans for an accompanying Amiga show in jeopardy.

The Amiga show itself hasn't been cancelled, however, and the organisers are hastily trying to find a new venue to host the event. Keep an eye on the official web site for information as soon as a new location - and date - is confirmed.

http://www.amiga-messe.de

Solarnavigator puts Amiga in control!



Above: A 1/20th scale model of the Solarnavigator undergoing sea trials at Cowes.

The UK challenger for the first solar-electrically powered boat to circumnavigate the world has nominated Amiga for communications and control on the vessel.

Technical Director of the Solarnavigator project, Richard de Rivaz (whose communications software Inet Dial was reviewed in a past issue of *Amiga Active*) has devised a control system that will provide each member of the crew with up to date information and control of the vessel utilising Radio Frequency (RF) networking.

At the heart of the system will be an Amiga-based Apache web server, interfacing with control software to optimise power utilisation. Each crew member will have their own RF-enabled Personal Digital Assistant (PDA). Any crew member who has the misfortune to fall overboard can even recall the vessel to pick him up, provided that he has his PDA with him at all times!

The 100 foot-long Solarnavigator will have moveable solar panels to track the sun and batteries to keep the boat moving during the hours of darkness. In August, the project team attended the Skandia Life Cowes week yachting festival on the Isle of Wight with a 20th scale radio controlled model, featuring in local press and radio.

The route takes the vessel from Gibraltar to Panama via the Canary Islands, before crossing the Pacific and calling at Darwin. The return leg takes the boat back through the Suez canal to Gibraltar. More information, club membership and a competition for a free berth on the first leg of the voyage can be obtained from the Solarnavigator web site.

www.solarnavigator.org.uk

Warp3D for Everyone

Elbox Computer have announced that they have finally come to an agreement with Hyperion Software on Warp3D licensing.

Elbox, manufacturers of the Mediator - the first PCI solution for the Amiga - are the last of the three PCI busboard manufacturers to license Warp3D from Hyperion. Matay and DCE, producers of the Prometheus and G-Rex PCI busboards respectively, signed the same deal with Hyperion for Warp3D earlier in the year.

The announcement is welcome news, as it means that all three PCI solutions for the Amiga will be able to benefit from games which use Warp3D.

Hyperion will support all four models of Mediator being manufactured by Elbox - the Mediator PCI 1200, Mediator PCI ZIV, Mediator PCI 4000 and Mediator PCI ZIII - with fully-featured Voodoo3 drivers which will run on both 68k and PPC processors.

The drivers, which will be available for the first two makes of Mediator around the time this issue of *Amiga Active* hits the shelves, are expected to be available directly from Elbox for registered owners of the PCI busboards.

www.elbox.com

MorphOS Mumblings

Things have been fairly quiet on the MorphOS front lately, with most of the developers' effort concentrated on developing MorphOS for the bPlan motherboard.

A new Development section has, however, been added to the web site. Meanwhile, third party programmers are continuing work on MorphOS apps. Recent releases include the Apache web server, a 68K cross-compiler and Bochs, an X86 PC emulator that will run Windows and Linux.

A range of MorphOS ports of useful programs can be found at http://fr3dy.meanmachine.ch. These include tools for MPEG audio and video creation and manipulation, and utilities to convert various proprietary PC file types to openly accessible formats.

www.morphos.de

Amiga on top!

A demo created on an Amiga has come top in this year's Assembly demo party competition.

The winning Amiga demo was Lapsuus, created by MatureFurk. An LhA archive of the demo is available to download from the competition results web page.

www.asmparty.net/content/compos/results.html

Hyperion Online

Hyperion Entertainment, creators of the Amiga versions of Heretic II and Shogo:MAD, have found time between all their other work to revamp their web site.

The site, with updated FAQ and corporate info pages has been migrated to a more powerful server. A new progress report on the porting of Freespace (see News In Brief) and a download section where visitors can find updates for the aforementioned games (see this month's Active Gamer) are among the site's new features.

Registered users of Hyperion's titles will benefit from early access to new versions of Warp3D and be eligible for beta-testing new products.

www.hyperion-entertainment.com

Loading...
please wait

3Q 2001:

- **SharkPPC G3/G4** - To be demo'ed at WoASE.
- **Earth2140 Missions** - For e.p.i.c's real-time strategy port, reviewed in AA20.
- **PaybackPPC** - and now 3D!
- **Pianeta Amiga 2001** - Still no date! Just turn up whenever.
- **Saku 2001** - Vantaa, Finand, Saturday Sep. 1st.

4Q 2001:

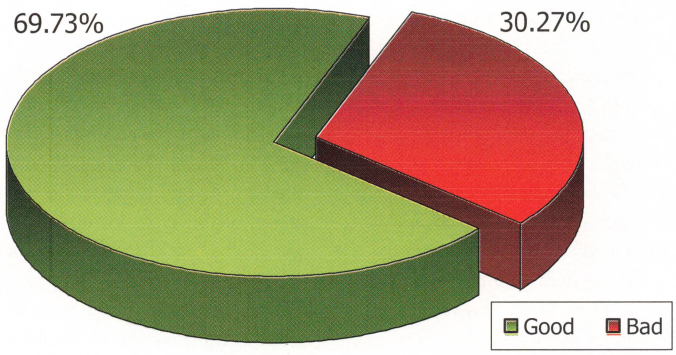
- **Ottawa Amiga Show** - November 16-17 (eyes left!)
- **AmigaOS 4 & AmigaOne** - November 1st (see page 6).
- **WoASE** - November 3rd.

In the distance:

- **AmigaOS 4.2, 4.5, 5.0**

News Focus: Amithlon

The announcement by Amiga Inc. of an official emulation for x86 caused a storm of opinion. We take a look at those opinions and ask what it's all about.



Above: Is Amithlon a good or a bad thing for the Amiga market?

Opposite: How have people's opinion of Amiga changed since the announcment? (Results from our online survey)

When Bill McEwen announced the Amithlon AmigaOS for x86 product at the AmiWest show, he can't have been expecting the reaction he received. A cosy presentation full of cheering Amigans wouldn't have prepared him for the storm of opinions pro and con that flooded the Internet following the announcement - most notably from one of Amiga's closest partners, Hyperion Software.

Amithlon is, simply, a modified version of UAE-JIT (Unix Amiga Emulator with Just In Time compilation) that runs on a cut-down Linux kernel, allowing an x86 box to boot straight into AmigaOS, bypassing any intermediary operating system completely. In effect, the JIT sitting on the Linux kernel and hardware drivers forms a hardware abstraction layer (HAL) which makes the x86 box appear to Amiga binaries as an Amiga - although one without the AGA chipset. One of the things that makes Amithlon a lot faster than UAE is that it does not emulate the custom chips, which is a very CPU intensive part of the emulation process. Many have suggested it is more a Draco emulator than an Amiga emulator.

However, one thing that has drawn extra attention and criticism is the ability of Amithlon to use x86 native binaries transparently. What this means is that it is perfectly feasible to write software modules for the Amithlon which are executed under AmigaOS but run natively on the hardware. This is not dissimilar to what has already happened in the Amiga market with the current PowerPC solutions. You can, for example, get a PPC rendering engine for the 3D graphics package Imagine, which speeds up the rendering of 3D scenes considerably. In theory, an Amithlon specific rendering engine could also be developed that would pass the rendering task over from the 680x0 native application to an x86 native module in order to render at very high speeds.

Controversy corner

This is what worries Hyperion Software's Ben Hermans. If Amithlon can perform as well - or better - than a PowerPC native AmigaOS, where does it leave those companies that have been loyal to the Amiga? While Amithlon can run without another OS, it is a safe bet that most people will want to have a dual-boot machine that can access Windows as well. That being the case, how could Hyperion hope to sell a PowerPC port of a Windows game?

Other developers have voiced similar concerns. Doesn't this have the potential to split the market and make development more expensive while at the same time forcing developers to compete with Windows products?

What you think

There have been as many opinions about Amithlon as there are Amiga users who've heard about it. Here are just a few of the ones we've heard...

On Novemeber 1st, I will be queuing up to get my AmigaOne 1200, but it would be nice to either include Amithlon with it, or give a discount for AmigaOne buyers. I'd love to be able to run my Amiga apps on my sister's 1GHz AMD!

Matt King, Student

PPC rulez !!!

Detlef Thiene, Media Designer

This is the only way for Amiga to make a comeback!

Chistoph Meier, Developer

I think a native x86 version of AmigaOS is daft, but I do want to see a native version of AmigaDE for x86.

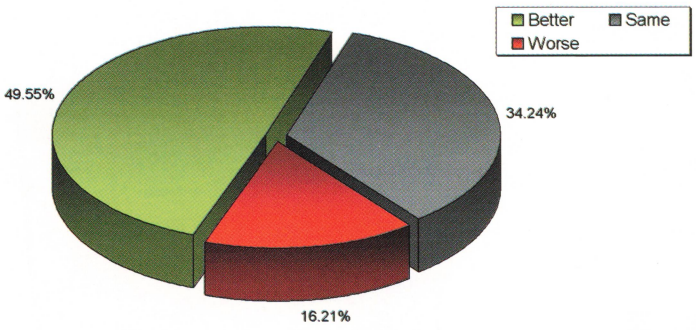
Peter Hutchison

Personally I like the idea of being able to run some Amiga apps I need on my notebook.

"greencup", Software Engineer

Amiga must be Amiga, new chips, new point-of-view of information technology. The choice of an AmigaOS for x86 is a strategic error.

Christian



Amiga Inc.'s defence is that there is no direct comparison between Amithlon and the PowerPC native AmigaOS. As the debate has progressed, some interesting points have been made.

The first is that Amithlon will ship with OS3.9 compatibility, not OS4.0 compatibility. The second is that as Amithlon emulates 680x0 instructions, not PowerPC instructions: it won't help people with a library of PowerPC software. Amiga are clear that, at least initially, AmigaOS 4.x is targeted at the PowerPC platform only. They have stated that AmigaOS 5.0 will become multi-platform, so at that point the debate will be moot anyway.

Probably the main reason people will find for using Amithlon is to run Amiga applications on laptops and to be able to run legacy applications (at least, those which don't use the custom chipset) on newer, faster, cheaper hardware. It's not going to be good for running classic Amiga games, so perhaps Hyperion shouldn't be too worried - it's simply not going to be the Amiga of choice for gamers. What's more, given that it will have significantly less functionality than the AmigaOne, it seems unlikely that too many people will buy an x86 box specifically to run Amithlon; most users will be people who already own an x86 box, so the argument that having a PC will tempt them to buy x86 originals rather than Hyperion's PowerPC ports goes out the window - they already have that choice.

It's no surprise that one of the most persuasive voices saying that Amithlon was not going to be bad for Amiga was Cloanto's Michael Battilana. Cloanto have, after all, been selling the Amiga Forever emulator since 1997. Cloanto heard all the same arguments back then, yet Amiga Forever seems to have had no negative effect on the market. What's more, as he pointed out on the open@amiga mailing list, Amithlon really is nothing new. It has been perfectly possible to boot straight into UAE for years but, he observes, most people would prefer to have two Operating Systems running side by side. It has even been possible to have x86 modules for UAE - but there has been very little interest in pursuing this possibility.

A final point to note is that Amithlon is quite a specialised product - it is most likely to appeal to people who will benefit from the speed increase it will grant to specific apps that are important to them. In Michael Battilana's words: *"the purpose of [emulation] is supposed to be to run software that your regular system can't. WinUAE and WinFellow aim to run all programs. This other software doesn't even try, does it?"*

Now the smoke has cleared...

Hyperion's Ben Hermans initially blasted the announcement of Amithlon and the possibility of an x86 version of the AmigaOS - but now that the dust has settled, has his opinion changed at all?

"I don't fear Amithlon,"* Ben told us just before we went to press. *"I don't consider it to be a commercial opportunity for us - it won't generate any sales. People who are running this aren't going to be spending any money on the Amiga. I don't see them going out and buying genuine Amiga products like Photogenics.

"People think I over-reacted, but look at Loki - they were the pinnacle of Linux gaming and they've just filed for bankruptcy. I see that as confirmation of what I was saying. As soon as you go up against Windows, people would rather buy Windows products than Linux products. In the same way, I simply don't see people buying Amithlon, running it on PC hardware next to another OS and still using Amiga software. It's impressive, technically speaking, but I don't think it's going to be a runaway commercial success."

"Other developers have voiced similar concerns. Doesn't this have the potential to split the market and make development more expensive...?"

I'm going to sell my A4000T and buy an AmigaOne and a PC with emulation.
Leon Tan, System Administrator

I attended AmiWest and got to play with it myself. I'm very impressed.
Rick Rudge, President, North West Amiga Group, Portland

I think its fine as long as Amiga Inc. push it as an 'emulator' and NOT an alternative to PPC/OS4/5.
George Liontos, IT Analist

I was blown away by the very short demo I saw.
Chuck

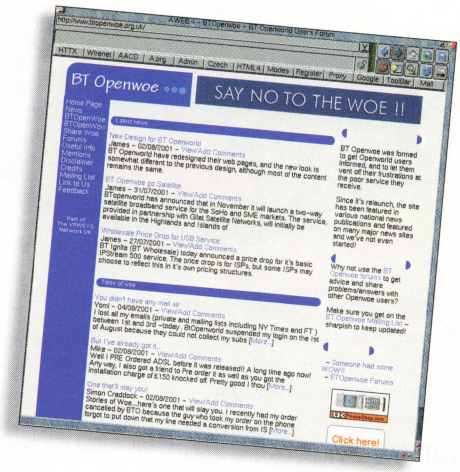
From a developer standpoint, I'm not inclined to develop anything for the x86 side of the Amiga. I will however develop for the DE and AmigaOS4+.
Kent Seaton, Amiga.org Public Relations

It will make my job easier as our clients like the solution we offer but are wary of installing "non-standard" hardware, and yes, that includes PPC motherboards.
Neil Damian Ginns, Security Specialist

The announcement wasn't handled at all well and left a LOT of people wondering what the point of the AmigaOne & OS4.0 is.
James Kelly

Rants and Raves

What we think about what we know.



Not Very British!

Should we expect more from our national institutions when it comes to quality of service, or has Britain turned cheap and nasty?

Imagine my joy when I found the new house I was moving into was in range of an ADSL enabled telephone exchange. I wasn't able to order ADSL until after I had moved in and had a phone line installed, as I use a separate line for work. As with any new purchase, if you can't get it for several weeks, you spend the time reading all you can about it. One of my main sources of information was the newsgroup uk.telecom.broadband, where all matters ADSL and cable modem are discussed. It did not take long to discover that there was something seriously amiss with the BT Openworld service.

Tales of a transparent proxy server that didn't work (a transparent proxy is one that you are forced to use whether you want to or not), e-mails taking up to a day to be delivered (or going missing!) and less than helpful support were rife. It is inevitable that there would be more complaints about BT Openworld than any other ADSL ISP - they have far and away the most subscribers - but even this didn't explain the sheer volume of problems reported.

BT Openworld are popular for three reasons. Firstly, the ADSL network that connects users to the ISPs is provided by a BT company, BT Ignite. This inevitably leads to the assumption that all ADSL Internet access is provided by BT. This isn't the case, any more than having a BT phone line means you have to use BT Internet as your ISP. Secondly, they offered free installation, normally costing £150, to anyone who registered their interest on the BT web site before a certain date. This could be considered unfair, since other ISPs weren't able to do this without swallowing the £150 cost themselves.

> **"Doesn't anyone else think that a high profile company like British Telecom should be providing a quality service?"**

Cheap and cheerful?

Thirdly, they are the cheapest, at £39.99 per month. How this works out when the standard wholesale price for ADSL connections from BT Ignite is £41.13 is anyone's guess, although BT Ignite have just reduced the wholesale price to £35.25. This only covers the cost of connecting the user to the ISP. The ISP still has to provide external bandwidth, mail and news servers, web space, technical support, accounts management and all the other things an ISP has to do.

By setting their monthly price so low, BT Openworld have put themselves in the position of having to provide all of this, and make a profit, on an absurdly low markup. Some of this could be handled by "creative accounting", but it is clear that BT are providing the most basic of services in order to make ends meet. Cost cutting, from the enforced proxy to save on bandwidth costs, the underpowered mail servers and the low capacity news servers means that users get a bargain basement service at a bargain basement price.

I have no problem with an ISP providing such a service. After all, there is always a market for a 'cheap and cheerful, if slightly less than reliable' product. There is also a market for good quality at a sensible price, as well as the premium quality market where cost is not the main concern.

What saddens me is that British Telecom, our national telecom company, should choose to provide the cheapest possible service, whatever the consequences for quality of service. There are no Service Level Agreements (SLAs), so if the service falls over, it's just tough. Contrast this with BT's telephone service, where you receive compensation if your line is out of action for more than a day and where the customer service staff appear to acknowledge that you are the customer and they should provide service (even if it doesn't always work out quite like that).

Is it just me? Doesn't anyone else think that a high-profile company like British Telecom should be providing a quality service? I don't mean a premium service where cost is no object, just something of a decent quality at a fair price. They have several advantages in this market place already, and many people with go with Openworld without realising there are alternatives. BT should therefore provide a decent service and leave the bargain basement stuff to the ISP equivalents of the box-shifter. Or have we, as a nation, become fixated on getting the lowest price at any cost?

Neil Bothwick

Interact

Agree? Disagree?

If what you've read on these pages has made you think, we'd like to hear your views. Write to us or e-mail the usual address...

interactive@amigactive.com

Access Denied. Please Upgrade.

Once a place for freedom of information and access for all, what does the ever-changing Internet mean for new Amigas?

The Internet is a great device for entertainment and information gathering and now, thanks to the wealth of Internet connection CDs available, it is much easier than ever ton get connected - if you run Windows or MacOS. Unfortunately, this is an all too apparent symptom of the increasing system dependence and dumbing down of the Internet.

While there is nothing wrong with making the Internet a less complicated affair, I have a major problem when it impacts on freedom and operating system independence. Once a place of platform diversity and the universal sharing of information, the majority of the Internet has turned into what may as well be a Windows only zone. Not only is this apparent in the set-up CDs of many Internet Service Providers (ISPs), but also in the obligatory plug-ins and file formats, whether Java, Flash, or real-time video and audio streaming. At least those technologies do have their uses, even if they are somewhat overused these days. No, what really annoys me are those people who are too lazy to check whether their web site works on different browsers.

Expecting all web site designers to test their creations on every browser would be impractical, but there are good style guidelines which, frankly, nobody pays any attention to any more. Why? Yup, web authoring software! Gone are the days when you actually had to be able to understand and write HTML. These packages can now do it all for you.

New Amigas, new problems?

In the past, you actually needed to have some respect for those who had their image loading turned off, or didn't have frames, and certainly for those who didn't have Javascript. Now, the general tactic seems to be to use anything that looks good and not worry about whether it breaks on other systems; those other platform users are all a bunch of savages anyway.

You'd have thought that the increase in set-top boxes and Internet-enabled televisions (however marginal at the present time) would be enough to encourage flexible coding practice, but it seems that site designers aren't yet aware of them and instead only test their creations on high-spec PCs connected to high-speed networks.

"...the general tactic seems to be to use anything that looks good and not worry about whether it breaks..."

Sites that interrogate your web browser to find its name, and fail with a *"Please upgrade to new browser"* message when they don't recognise it, are a prime example of the lack of thought that goes into design. Indeed, this is why the 'Spoof as Mozilla' setting was born - but we shouldn't be content with this as a cure to the problem - we should be fixing it at its source: web site creators who are too lazy to find the correct way of discovering whether a browser supports Javascript, for example.

What does all this mean to Amiga users? Could it be that no matter how good Amiga's future Internet appliances, they will be completely scuppered if all the web designers refuse to take set-top boxes and handheld devices into account?

Change for the better

If the new Amiga appliances are to be attractive to the general consumer, then a number of things are going to have to be done. Firstly, the web designers are going to have to learn how to write proper code and not assume everyone is using the same browser. Secondly, any new Amigas are going to have to be easy to get on the Internet, hopefully in the same way that Windows currently is. It would be really great if the free ISPs acknowledged the existence of other operating systems, but so far this hasn't even extended as far as the much-vaunted Linux. Just some instructions on the server names and IP addresses needed to perform a manual set-up would be enough.

Assuming that people will use an 'installation CD' to connect to the Internet means that many ISPs only have a basic level of technical support, and no real knowledge of how the Internet works. I hope Amiga can get a cracking deal lined up with an ISP or two that can get these new machines online straight away. If not, then the Amiga remains the harder, more fiddly alternative to Windows, which isn't where we want to be. After all, which will appeal to the newbie more: a nice shiny WIntel PC with all sorts of bells and whistles, or an Amiga which is a bit fiddly to set up and can't even access the Internet properly?

Philip Corner



If you've still got a desktop A1200, isn't it about time you upgraded to a tower system? No? Well, we're glad you said that actually. No, really! If you haven't yet upgraded, chances are your Amiga has turned a funny shade of yellow by now, in which case it's high time you gave it a new lease of life. How, you ask? Well, if you haven't guessed from the surrounding pictures, we're going to give it a paint job like no other! Stand aside, Apple. This is how you design a home computer...

CUSTOMISE YOUR AMIGA!

iMacs may come in a dozen pastel shades and psychedelic colours, but there's no reason an Amiga can't be even more colourful, if you don't mind a little DIY.



Safety first

Before we begin, it's worth re-iterating a few safety warnings. We're going to be sanding, spraying and painting here - so get yourself a good quality face mask and do all the work outside, or at least in a properly ventilated area. This doesn't mean it'll be alright to spray your Amiga in your bedroom if you open the window and turn on your desk fan. Please take care to follow all the guidelines on the equipment you'll be using.

When investing in a face mask, make sure you buy one that is suitable for paint sprays and vapours. This should be marked on the packaging, so check the small print before spending your money. A decent face mask shouldn't cost you more than a couple of quid, if that - and you want to live to appreciate your masterpiece!

The equipment

So, let's go shopping. Got your face mask? Good. You'll also need some fine grade sandpaper, primer (suitable for plastic) and whatever takes your fancy in the way of other colours of spray paint. We plumped for black and metallic copper. A gloss spray would also come in handy for coating and preserving your finished design - it's either that or have powdery paint rubbing off on your hands for months to come. We also picked up some match pots of emulsion (water based) paint for the fine artwork. For painting the details, you'll also need some small brushes and perhaps a sponge. Masking tape and newspaper will be needed for masking off any areas of the A1200's case that you don't want to spray in one go. Finally, don't forget to invest in some coloured pencils so you can sketch your design ideas before you start - which is what we're going to do now.

THE TOOLS!



Just as much as record breakers need dedication, designers (like our Steve) need inspiration. You can take your ideas from anywhere you like - the Internet is as good a place as any to start. Otherwise, flick through some magazines, visit your local library or - if you work for a publishing company like Steve does - riffle through some art collection books until you find an idea you think you could achieve. Remember that an A1200 isn't quite a blank canvas - there aren't a lot of wide-open areas to play with, so reproductions of the Mona Lisa aren't going to work too well.

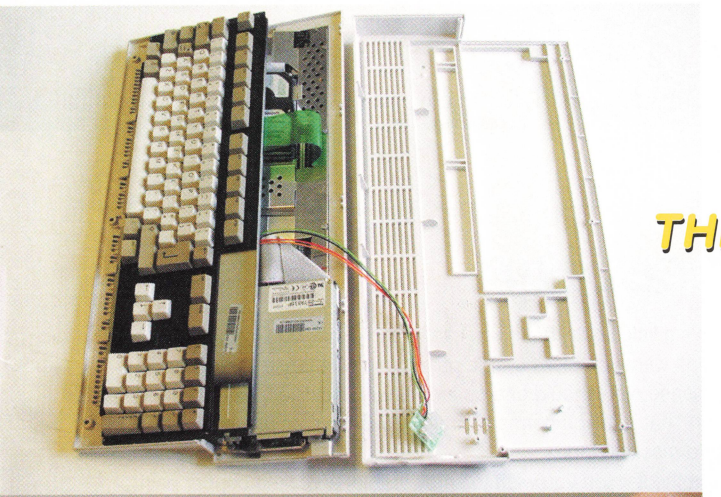
The obvious design to go for would be a spacey theme... stars, planets and rocket ships, for example. Space is a good idea because you can make it as simple or as complicated as you like: from a jet-black design with a couple of flecks of white paint for stars to a full-blown masterpiece with planets and galaxies - how far you take it is down to your confidence and ability.

"Just as much as record breakers need dedication, designers need inspiration..."

THE DESIGN



THE 'BEFORE'



THE REMOVING

Screw loose?

Before you begin, you'll need to undo a handful of screws on the underside of the A1200's casing and pop off the top. After taking out all the screws, hinge the 'lid' open from the side nearest the space bar - when you lift the plastic casing clear of the keyboard, you'll find a few wires travelling to the LEDs, mounted and fixed to the inside of the case with a couple of screws. Undo these and put away for safe keeping.

Using some fine ('super grade') sandpaper, lightly sand the plastic casing to remove any dirt and grime that may have accumulated over the years, then rinse with warm soapy water and dry thoroughly. Don't sand too hard - especially over the lettering next to the LEDs. If you want to keep the A1200's badge (top left of the casing) then mask it out, or take care to sand around it so as not to scratch that lettering.



THE SANDING



"...a couple of light coats to achieve a smooth surface."

THE PRIMER



Sanding will allow the primer that we're now going to apply to adhere properly to the plastic. Do this (once everything is properly dry) outdoors, or in that well ventilated area. Apply the primer in a couple of light coats to achieve a smooth surface. Start by spraying the slots at the back of the casing at 45-degree angles to get into the gaps properly. Do the same to cover the recesses in the holes for the keyboard. Finally, apply primer to the parts of the top surface not yet covered. Doing it this way should ensure you end up with an even finish, without any over-sprayed areas.

Once the primer is dry, you're ready to begin your design. We've decided to spray the back section of the A1200 case with a single colour - metallic copper - leaving the rest of the case for the main design. Using some old newspaper and strips of masking tape, mask off the front section of the casing, taking care to apply the tape neatly





THE MASKING





THE FIRST COLOUR

into the corners. It's a little fiddly, but if you can't handle this, don't go any further - we wouldn't want you picking up a paintbrush with those shaky hands!

Once you've finished, you should end up with what looks like a half-wrapped Christmas present. That is, if you normally wrap your Christmas presents with old newspaper and masking tape.

With nothing but the section you wish to spray visible, apply the copper paint following the guidelines on the can - a couple of even coats applied with nice, light strokes - leaving an hour or two for the first coat to dry before applying the second, of course. A couple of coats should be sufficient. When left to dry, dust can settle or paint can occasionally run, however hard you try to stop it happening. If this happens, give the casework a very light sanding to remove any debris. If you encounter any unsightly blobs of paint, sand them down and re-apply a thin coat of paint to the affected area. At the end of the day, recognise this for what it is: a bit of plastic casing rather than a canvas - you're unlikely to achieve perfection with these materials at your disposal.

When you've applied sufficient coats of paint and allowed it to dry thoroughly, you can carefully remove the masking tape to reveal the rest of the A1200's casing, where we're going to apply the main design. We now need to mask off the area we've just sprayed to apply a coat of black paint to the as yet

THE UNMASKING

THE SECOND COLOUR

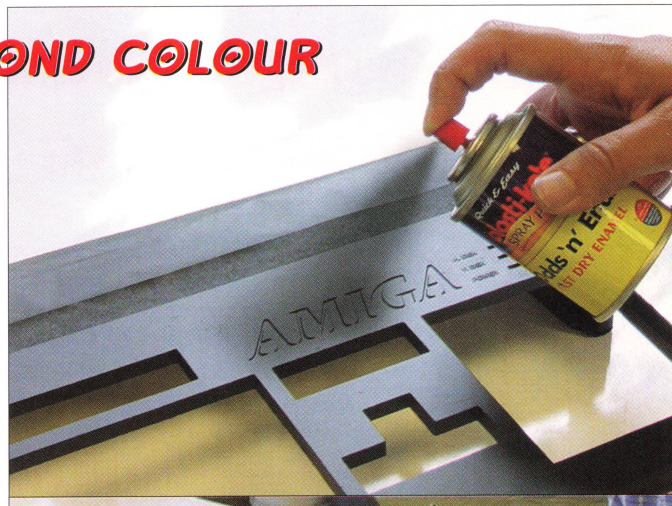
untouched, virgin white part (or slightly off-virgin-white, depending on age and exposure to sunlight over the years!) Again, make sure all surfaces are completely dry before applying masking tape and newspaper - you don't want anything to stick and ruin your hard work.

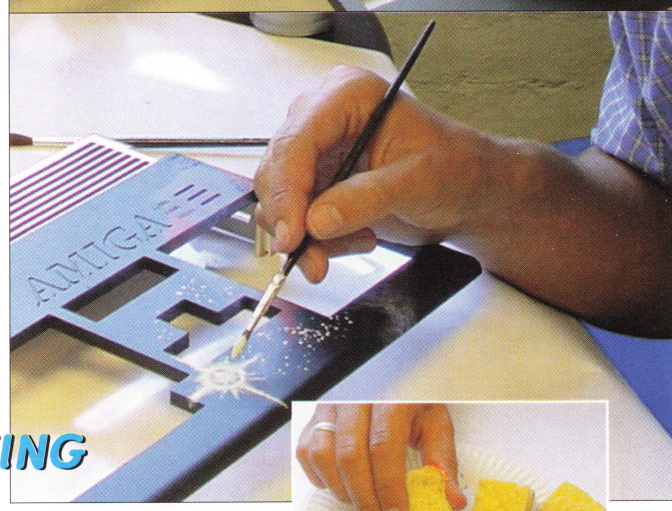
A couple of coats of black paint on the rest of the casing then leaves us with a two-tone case design, ready for finer detail to be applied. If you're not artistically inclined, you can at least get this far before applying a coat or two of clear gloss spray to fix the design - but we're going to crack on and apply some detail.

Using some small pieces of sponge with our match pots of emulsion paint, we painted on a nebula design in the bottom left corner of our Amiga's casing. We applied two colours - 'rich red' and 'real indigo' - lightly dabbing on the paint in small amounts and blurring the two together with a dry brush to achieve the desired effect. It's best to take your time here and work in stages. Trying to do everything at once will leave you with large, unpleasant looking patches of paint that are about as well blended as lumpy custard, which isn't really the effect we're after.

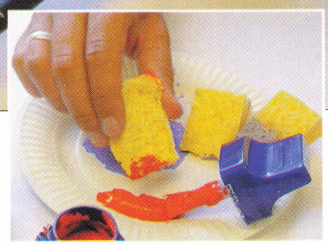
As well as some basic specks of white paint, which we hope to pass off as stars, we're going to paint on a starburst effect - again, building up the effect in stages with light applications of white paint interspersed with using a dry brush to soften those edges.

To balance the nebula and stars in the bottom right hand corner, we then painted a small blue-green planet in the other corner, again with a steady hand! Stars can then be applied all over the black casing, in whatever formation takes your fancy. Just be careful not to over-egg the pudding, or you'll end up with a design that looks like it needs treating with a regular dose of anti-dandruff shampoo!





THE PAINTING

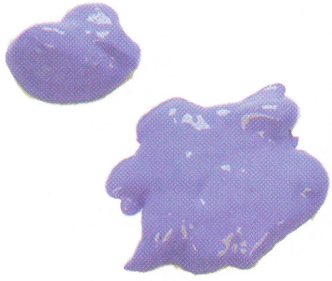




THE RESULT!

"...arcing poetically into the 'Help' key. Stunning!"

That's all we've got space (sorry) for here - where you go after this is really down to your inspiration and how artistic you feel. To help spur you into picking up your paintbrushes, we'll leave you with a picture of how our A1200 ended up after Steve got carried away with his old airbrush (if you're really adventurous, you may be able to hire one from a local art shop). Along with some self-adhesive plastic masking sheets, our A1200 was soon blessed with its own Milky Way effect running from underneath the front of the casework through the keyboard and up across the top of the embossed Amiga logo. We still felt it was missing a little something, though, so finished with a flourish: a rocket ship taking off from our planet and arcing poetically into the "Help" key. Stunning!

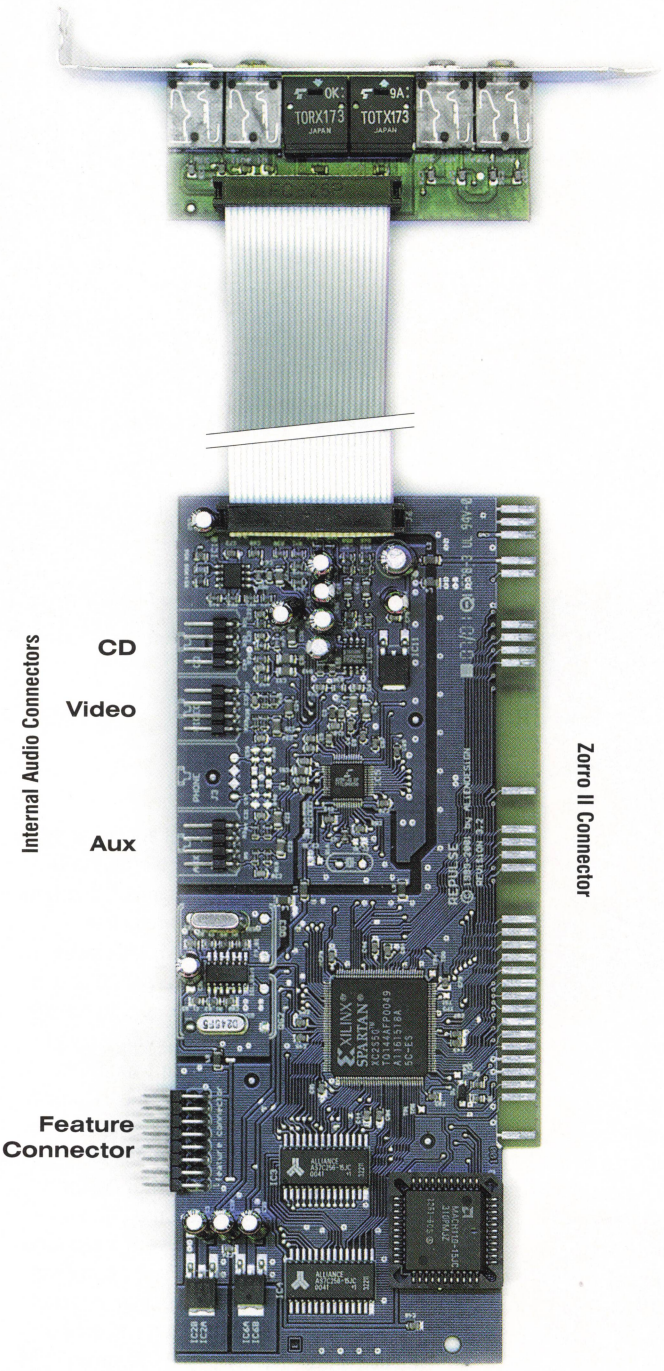


Where for art thou?

Think you can do better than the inimitable Mr. Crabb? Send us evidence of your artistic endeavours (to the usual address, on page 54) and we'll showcase the best in a future issue of *Amiga Active* - if we think they're worthy!

- Name Repulse
- Price 200 Euros (around £190)
- Supplier Alien Design
- Contact www.aliendesign-gbr.de

REPULSE



With Amiga sound cards about as common as gold-plated potatoes these days, Alien Designs' new offering is more than welcome.

The Repulse is a sound card for all Amigas with Zorro II slots. It resembles other Zorro II sound cards, but adds optical digital input and output.

Amigas have of course always had sound output, originally with a resolution of 8 bits and more recently, with the introduction of calibration software, in a respectable 14 bits. Devices for digitizing audio were originally 8 bit only, and connected to the parallel port.

Why a sound card?

If this 8 bit hardware is used carefully, making sure that the digital data uses the full range of the 8 bits, good quality sound can be produced. This can be heard in some of the best MOD files. However, there is absolutely no leeway to allow for a slightly low level recording, which could easily fall down to six bits or even less. Nor is it easy to adjust levels in a mix without quality dropping below the acceptable.

"With more bits, the signal-to-noise ratio increases..."

These problems are greatly reduced if 16 or more bits can be used, and this is the main reason for adding a sound card. With more bits, the signal-to-noise ratio increases, so that recordings which do not use the full range are more likely to be successful, and the quieter parts of a sample are better defined.

At present there is a wide range of Amiga software available which can handle 16-bit audio data. I don't know of any Amiga software for data of 18, 20 or 24 bits, but programs handling these depths are available on other platforms. The AHI device which handles Amiga audio at the lowest level can pass 24 bit data, but it appears nothing can use it.

Most of the improvement gained from digitising in more than 16 bits can be retained if the data are reduced to 16 bits with a well designed dither. Crudely, if the level should be part way between bits 12 and 13, the output from the dithering software will give some samples at 12 and others at 13, in a pattern made to be as inaudible as possible. As human hearing is most sensitive at the middle frequencies, this means that the frequencies used in the pattern should be mainly in the highest and lowest bands of the whole range. This is called

"noise shaping", because so far as the dither is audible it will be a low level hiss. Designing a pattern which is both inaudible and easy for the computer to calculate is something of an art.

Dither of this type is in use in most recent commercial CDs, which are recorded at 20 or even 24 bits and dithered down to 16. Sony's "Super Bit Mapping" is a well known example. In image processing, similar dithers are used to give the least visible pattern on colour inkjet prints, or when viewing a 24-bit image on an 8-bit screen.

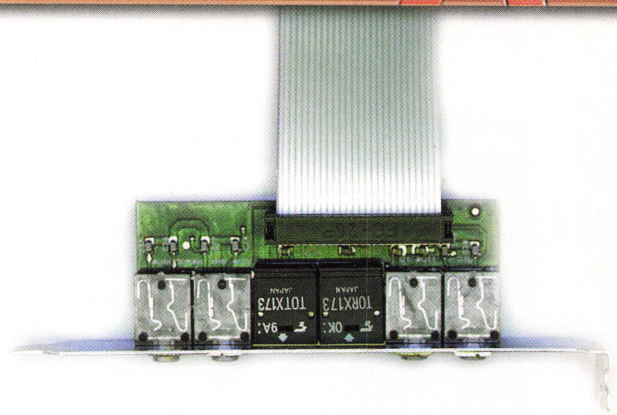
So the most urgently needed piece of Amiga software is a recording program to take in data from AHI at a high bit rate, dither it down with noise shaping, and save it to disk as a standard 16 bit file. It could have an option to dither right down to 8 bits, and to convert existing 16 bit data to 8 bit dithered data. Some clever programming will be needed to do this in real time on a 68k processor.

The hardware

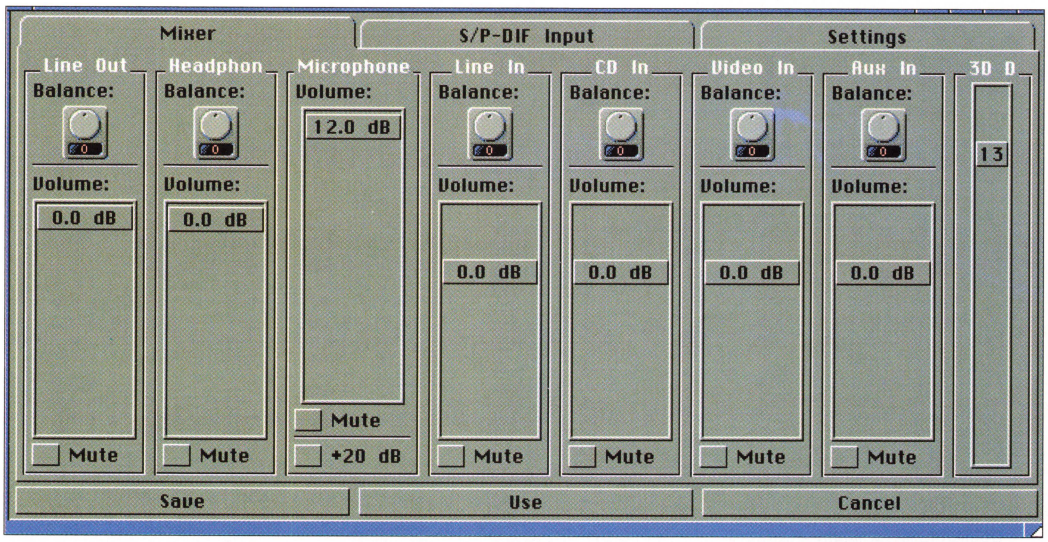
The card itself is well laid out and well made. As can be seen from the picture, there is an analog area and a digital area, which are well separated. The card itself is small, and is connected to the backplane card containing the sockets by an unshielded ribbon cable. This seems risky, as interference could be picked up on the ribbon, but in practice noise levels from this card are very low.

The manufacturers advise using a Zorro slot with an empty slot next to it to reduce the risk of digital interference, and in a desktop A4000 to use the slot furthest from the motherboard. These arrangements will not always be practicable, and fortunately don't seem to be essential. Some Zorro cards will cause more interference than others, so if any is noticed, some rearrangement may help.

The analog inputs are all stereo, one being suitable for unbalanced microphones and four for line level signals. Although the four are labelled Line, CD, Aux and Video, they are all the same. Three are internal connections on the board itself. It would have been better to provide two line level inputs on the back panel, so that one could be used to connect the output from Paula; as it is, this would have to be done by running a cable round to the inside of the computer. By contrast, the Prelude sound card has a captive lead with a pair of phono plugs to connect straight into the Paula output - this seems the best arrangement, and would take up less space on the back panel than a socket.



Above: The Repulse's connectors. Left to right: Head Out; Line Out; S/PDIF Out; S/PDIF In; Line In; Mic In.



Above: The prefs program includes a good little mixer.

The external sockets used are all 3.5mm stereo jacks. This is a good choice as they are more reliable than RCA phono plugs and take up less space. Some care will be needed to avoid connecting to the wrong socket.

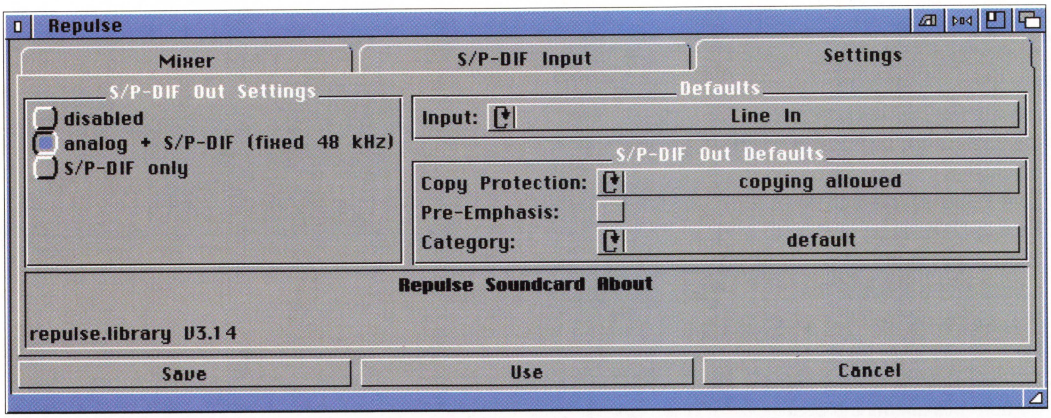
One of the internal connectors could take the analog output from an audio CD in a CD-ROM drive. These drives have three outputs from an audio CD - the digital data can be brought into the computer directly through the SCSI or IDE interface and played with a program such as Play16, or there is an analog output on the front for connecting headphones (this can also be connected to a line level input on the computer), or there are some small pins at the rear of the drive which provide a line level analog output. This last connector is suitable for the on-board CD input of the Repulse.

"...set the levels of the various inputs and even mix in real time while recording."

The preferences program provided includes a simple, well designed mixer program which can be used to set the levels of the various inputs and even mix in real time while recording. As the card can play back and record at the same time (termed 'duplex'), this gives a basic recording studio. However, most musicians would soon want an external mixer with real faders.

There is also a "Feature Connector" which could be used to attach small cards such as a hardware MP3 decoder. No cards have been announced and it is safest to assume none will appear.

The only major omission is a SMPTE time code input. This was provided on the AD516 sound card, which is still the best Amiga sound card to date, and can be very useful in a studio situation for synchronising Amiga audio with external equipment. The workaround is to use the SMPTE- ▶



Above: The Repulse's preferences program.

to-MTC converter from Phil Rees to convert to MIDI Time Code, but this involves extra expense and cables. (Note that the AD516 was discontinued years ago, cannot be repaired, and doesn't work properly with AHI. It had excellent sound quality and superb supporting software, though).

Optical digital

Those who own a DAT recorder, a CD player with digital optical output, or other similar equipment will find this connector very useful. Transferring the digital data directly without first converting it to analog and then back to digital is obviously desirable. (Likewise, it is better to transfer samples from an audio CD by "ripping" the data directly than by recording from an analog output).

The AES/EBU digital audio connection standard dates from 1985, and uses normal wire connectors. Sony and Philips (who regularly collaborate on audio standards such as the Compact Disc) then developed a consumer version called S/PDIF (Sony Philips Digital InterFace). This can use either ordinary wire connectors with RCA plugs, or a low cost optical interface as used on the Repulse.

The optical connectors use red light and cheap plastic fibres, not the high grade glass fibre used for serious work, and it is doubtful if there is any advantage over the normal cables. "Optical" here doesn't mean "magic", and the fibre cables are limited to at most about two metres for reliable use.

A pair of programs is under development for handling S/PDIF data, called Playstream and Extractstream. These were not available in time for this review.

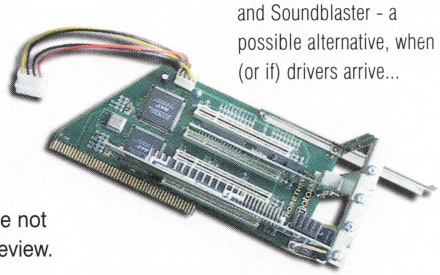
"A notable omission is a version of Samplitude..."

The software

The card comes with an install floppy and a CD full of software, the most relevant of which includes the required AHI drivers and the Preferences program, which includes the mixer and various settings for S/PDIF.

Also provided are AHI, Play16, demos of various well known Amiga audio programs, and a fully licensed version of SoundFX (reviewed in AA22). A noteable omission is a version of Samplitude, which has been included with most other Amiga sound cards. As mentioned earlier, a recording program to suit the card would be desirable, as would a simple multitrack mixer to combine several tracks in 20 or 24 bit definition. The program AHIrecord works well enough for the time being.

A Toccata emulation library is also provided to suit software that doesn't know about AHI. This is so far for playback only.





Below: The Prometheus and Soundblaster - a possible alternative, when (or if) drivers arrive...

Is it worth it?

Although budget sound cards for PCI slots are available at much lower prices than this, cards of comparable quality will be around the same price. If you want a sound card for a big box Amiga, this is one of the best so far, and is worth the money.

Other good sound cards such as the AD516 or the Prelude are no longer in production. An alternative is to use a PCI adapter such as the Prometheus with a Soundblaster Live! card, but how long will it be before drivers for these cards are available? The Repulse is here now.

Don Cox

You are the weakest link!

The documentation for the Repulse is weak, it must be said. A small booklet is provided covering 15 A5 sides in each language. The diagram of the back panel is on one page while the corresponding list identifying the numbered sockets is on the next page.

There are no detailed instructions given on how to connect up and use the card in various situations. Setups and settings should be provided for various examples such as recording from DAT, recording from CD, connecting the Paula output, and so on. A card priced and designed for the serious user deserves better presentation.

Repulse

SYSTEM: Any Amiga with Zorro II or Zorro III slots, including the Draco.

SUMMARY: A good Amiga sound card using up to date hardware. Documentation and software support could be better.

The most powerful AMIGA® you have ever seen!

- Just in Time compilation makes it possible to emulate a much faster Amiga - up to ten times faster!
- Very high performance: equivalent to a 450MHz 68040! *
- Supports all common graphics, network and sound cards as well as PS/2 and USB keyborads and mice
- Virtual memory for the whole AmigaOS
- Networking support over TCP/IP and direct within your LAN
- Web Browser with SSL, JavaScript, Java, Macromedia Flash-Player, MPEG-Player and RealAudio-Player
- Direct access to Amiga hard drives
- and much more...



"We installed ImageFX on AmigaOS XL during a private meeting in St.Louis and the speed was amazing. It was like having ImageFX completely native on a fast PowerPC machine!!" *Kermit Woodall, Nova Design*

For more information, see Amiga press or visit

amigaxl.haage-partner.de

Exclusive UK Distributor: Virtual Programming Ltd.

VP
VIRTUAL PROGRAMMING

+44-(0)1202-411117

** Figures from SysInfo running on a 1 GHz Athlon.*

Amiga is a trademark of Amiga Inc.

Copyright 2001 Amiga Inc. • Washington/USA and HAAGE&PARTNER GmbH • Germany

MINI-MASTERCLASS

iomega zipitydoo-daa 250

Since the arrival of the 250MB Zip drive from Iomega, one of the most frequently asked questions has been, *"how can I use PC formatted 250MB Zip disks with my Amiga?"* There have been numerous solutions put forward in recent times. You could use someone else's mountlist - if you know what one is, where to put it and what to do if it doesn't work. You could use MountDos - but what does that entail? What, indeed, can you do if you can't get your Zip drive working in the first place? If you, like many others, are frustrated at the lack of an easy solution, worry your pretty little head no longer. Here's how it's done.

Want to use 250MB Zip disks to transfer files between an Amiga and a PC? No problem.

Having got yourself a SCSI 250MB Zip drive, simply unpack it and plug it in to your Amiga's SCSI bus, making sure your Amiga is turned off first, of course. If you're not entirely sure about the intricacies of SCSI, take a look at our previous Mini Masterclass on the topic in issue 19. Once you've connected up your Zip drive, take a look at the rear of the unit. You'll need to set the termination (on by default - turn it off if you're plugging another device in) and Unit ID number. Here, you can only choose 5 or 6, so make sure it doesn't conflict with other devices on your SCSI chain such as a CD-ROM drive by changing the other devices' IDs if necessary.



Writing to a FAT one!

Turn on your Zip drive and your Amiga. Pop in this month's *Amiga Active* coverdisc (no, don't put it in your Zip drive! Use the CD-ROM drive like you normally do) and navigate to the AACD24:AACD/Magazine/Zip250 drawer. Open the FAT95 drawer and double-click the install icon. FAT95 is a PC file system for the Amiga, which we'll be using to read our PC formatted 250MB Zip disks.

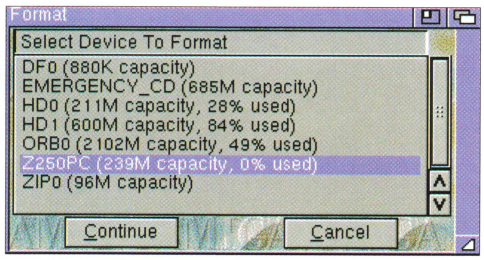
Go into your Amiga's boot partition and open the Devs:DosDrivers directory. The Fat95 installer has copied across two mountlists for you (no, we know it didn't ask) called MS0 and MS1. These are intended for PC formatted floppy disks, rather than Zip disks, so you can move them to Sys:Storage/Datatypes - or delete them - if you don't need them. The former is the better option, as it will just stop them from being mounted when you boot; you can always put them back at a later date if you really need to use PC floppy disks.

Also in the AACD/Magazine/Zip250 drawer on our CD you'll find a "Z250PC" icon. This is a mountlist for 250MB Zip disks. Copy it to Devs:DosDrivers/ on your Amiga's boot partition. It uses the Fat95 file system that we've just installed, and has its default tool set as "Mount", so that when you boot your Amiga, Z250PC: will be mounted automatically as a device on your system.

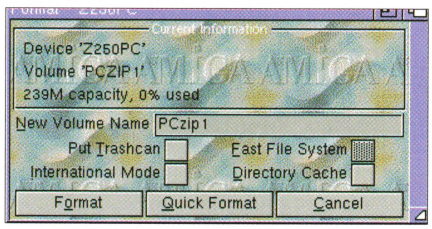
Before you reboot to mount this device, however, you'll need to change a couple of tooltypes to suit your set-up. Click the icon once and call up the Icon Information window (via the RAmiga-I keyboard shortcut or 'Icon > Information' menu option). Change the DEVICE and UNIT tooltypes to point to your Zip250 drive (here, we plugged it into an Oktagon SCSI controller on ID 5). Save these changes, then reboot.

Fat Friends

Of course, file transfer using a 250MB Zip disk would be pretty useless if you didn't have a 250MB Zip drive on your PC too, so we hope you have. You could keep lugging your zip drive back and forth, of course, but if you only have one drive we might be persuaded to give you another if you enter our competition (eyes right!). If you want two drives - one for your Amiga and one for your PC - persuade a friend to enter our competition too. Just don't blame us if your friend gets one and you don't!



Above & Right: Formatting a Zip disk only takes a couple of clicks!



If you have a PC formatted Zip disk already, you can put this in the drive connected to your Amiga and it should be recognised and mounted on your Workbench screen. If you don't have such a disk, take a 250MB Zip disk (the one supplied in the Zip250 box, for example) and pop it in your PC. Format it, eject it and transfer it to the drive connected to your Amiga. It should be recognised straight away, thanks to the FAT95 file system and the mountlist we have provided for you.

If the disk isn't recognised, there is an alternative to banging your head on the desk and tearing your hair out: MountDos, also on this month's coverdisc, is a tool which you can run to mount devices 'on the fly'. You can run this from the shell, or even put a command in your user-startup - see MountDos' documentation - but our good old friends, icon tooltypes, make using it a little easier. Copy the MountDos drawer to your hard disk and open up MountDos' Icon Information window. Set the DEVICE and UNIT tooltypes accordingly, as you did with the Z250PC icon mentioned earlier.

Open a shell, 'cd' to the MountDos drawer and type:

```
MountDos <device> <unit number> GENERATE
```

MountDos should spew out a mountlist for the drive. If so, you can try:

```
MountDos <device> <unit number> MOUNT
```

The result should be a mounted Zip disk on your Workbench screen. Now you have two options. If you know a little bit about mountlists, compare the one we have provided you with to the one you've just generated using MountDos and try to figure out what you need to change to get our mountlist to work. Or, if you don't know, nor care to know about mountlists, just put the above MountDos command - with a QUIET option appended: `MountDOS oktagonscsi.device 5 MOUNT QUIET` for example - into your user-startup script. Each time you boot, as long as you have a Zip disk in your drive, it should be mounted for you.

Quicker Format

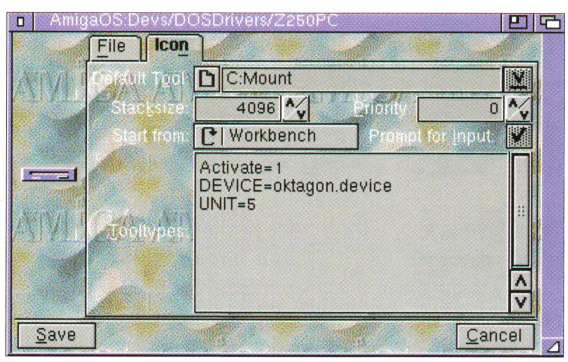
Using PC-formatted Zip disks as a method of file transfer doesn't mean you have to format your Zip disks on the PC. In fact, because formatting anything on the PC takes longer than it should, rendering Windows even more unusable than normal by devoting all its CPU cycles to such a menial task, it's often much faster to format your Zip disk on the Amiga. Just run the Format command (double click the Sys:System/Format icon to get a GUI), make sure you've selected the Z250PC device and click Quick Format, followed by OK a couple of times. A few seconds later, you've got yourself a freshly formatted PC Zip disk. Much quicker than the "My Computer > Zip 250 (right click, wait for menu) Format > Start > OK" route on the PC.

"...it's often much faster to format your Zip disk on the Amiga."

Finally, a word about changing disks. Because the Zip drive uses removable media and you can swap Zip disks at any time, you'll need to issue a 'diskchange' command for a new disk to be recognised. Ejecting a disk is simply a matter of pressing the button on the front of the Zip drive, but after putting another one in, you may not see its icon appear on your Workbench screen. If this is the case, you'll need to open a shell window and issue the command `diskchange Z250PC:`

This will poll the Zip drive, recognise that you have inserted a new disk and show its icon. You don't have to 're-mount' the Zip drive by double-clicking your mountlist in Devs:DosDrivers! We've even included a project icon that you can double click to run this command on our coverdisc. Just put it on your system and drag the icon to your AmiDock for a one-click diskchange solution.

Right: Just change a couple of tooltypes to point your mountlist in the right direction.



Competition Time!

We've told you how to use them, but how can you get hold of one if you don't yet own a 250MB SCSI Zip drive? Easy - we've got half a dozen of the things here, just waiting to be claimed by six lucky readers.

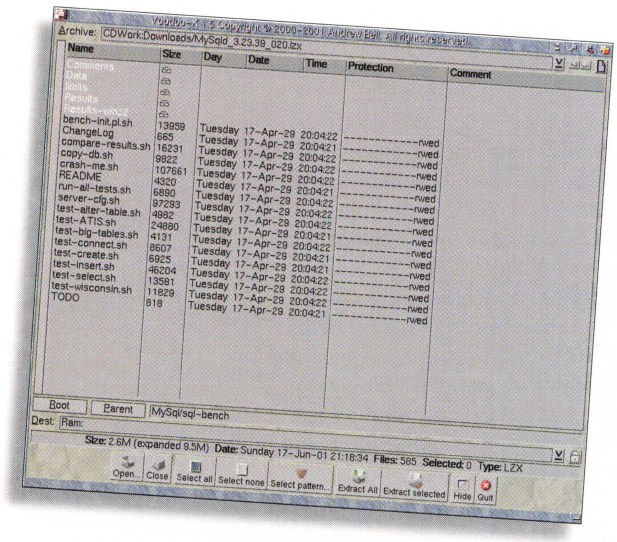
Just send us a postcard with your name and address and tell us the answer to the following insultingly easy question:

How many times does the word 'zip' appear on these two pages?

Correct entries will be put into the mailbag and Bluey, *Amiga Active*'s office Mailhound, will sniff out the winners who will be announced in two issues' time. Closing date for entries is Monday October 1st. Editors' decision is final, etc. Alternatively, e-mail your address and answer to zipcomp@amigactive.com

ACTIVE Shareware

Easier archive handling, simpler HTML handling, and Urban Mueller juggling with hard drives - what else but Active Shareware?



That old black magic

The file archive is a ubiquitous piece of technology these days. This is because it's easier to distribute software as a single unit rather than as a series of files and directories, and because compressed files allow faster download times over the Internet. This popularity has a downside, though.

Dozens of archive formats and archiving tools have been created over the years, and it has becomes a real pain to remember which options and parameters to use with which archiver. Thankfully, this complexity can be hidden with a tool such as Voodoo-X.

Voodoo-X is a graphical front-end for viewing and extracting files from archives. It is built upon the XADMaster library, a modular shared library system which provides read access to any sort of file archive with a common API. With XADMaster, a particular archive format or compression method is handled via a plug-in module. Supporting a new format simply requires someone to write a new module, and any program which uses the API will benefit from that new module.

The latest XADMaster (version 10) ships with modules to handle almost 80 different types of archive including disk image formats such as ADF, DMS and MS-DOS FAT images.

"...modules to handle almost 80 different types of archive..."

We have mentioned Voodoo-X on these pages before, but this latest release has a slew of new features and bug fixes. The first and most obvious change is largely cosmetic: Voodoo-X now has a configurable toolbar at the bottom of its main window, which provides quick access to commonly used operations. Also, it now supports the NListTree MUI class for listing the contents of an archive: much better than the standard MUI list class.

A great new feature is the XAD client info page. This pops up a window with a list on the left of all the archive formats supported, and displays the corresponding AmigaGuide documentation for the selected XAD client on the right. This is handy for finding out information about a particular archive format, as the docs for most of the clients contain web-links to useful resources, archivers implementing that format and so on. Clicking on one of these links will fire up that page in your web browser via operurl.library.

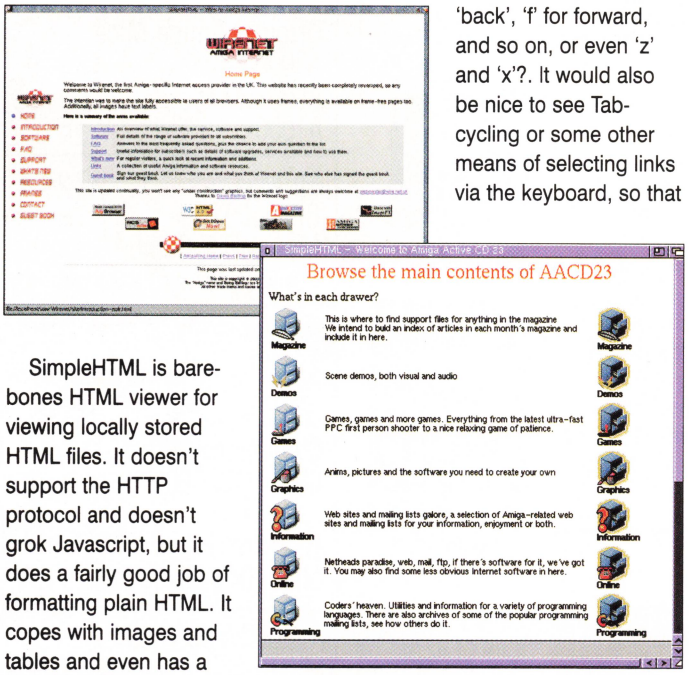
Voodoo-X is an excellent and easy-to-use piece of software marred, unfortunately, by installation difficulties - or rather dependence upon particular shared library versions. The big dependence, obviously, is on XADMaster: Voodoo-X requires version 10 of this. It refuses steadfastly to work with the version 9 special edition that was shipped with OS3.9. Why? Has the XADMaster API changed that much between versions 9 and 10? It would surely have been no trouble for the author to make it work with version 9 as a courtesy to users that shelled out recently to buy OS3.9.

The other troublesome shared library is the NListTree custom class, again requiring a specific version that user will have to download and install first. Now, this should be an optional library, because it's feasible the program could run without it - you just wouldn't be able to use the NListTree view of an archive's contents. These types of problem are common in Amiga software these days and it negates the idea that the AmigaOS is a more user-friendly platform than other operating systems. Authors should think more carefully about the library versions that their software uses, not simply demanding the latest version of a library without a good reason. Maybe a more intelligent method of packaging and installing software - perhaps based on Linux's RPM or Debian package formats - would be good too.

A lighter view

HTML is becoming a far more prevalent format for Amiga developers to ship documentation in, which is not surprising since far better tools exist for HTML authoring than for writing AmigaGuide documents. However, none of the usual GUI toolkits for the Amiga provide a standard component for viewing HTML files, so the user generally has to view such documentation in their web browser. A web browser is, however, a rather resource hungry beast to load up just to view a simple HTML page, though, so Sebastian Bauer has come up with a lighter solution: SimpleHTML.

"a distinct lack of simple keyboard shortcuts."

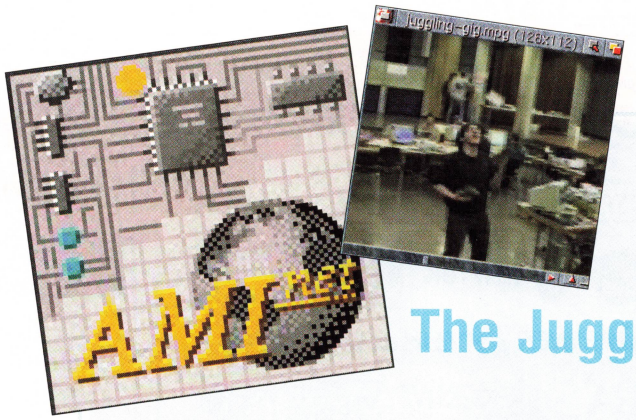


SimpleHTML is bare-bones HTML viewer for viewing locally stored HTML files. It doesn't support the HTTP protocol and doesn't grok Javascript, but it does a fairly good job of formatting plain HTML. It copes with images and tables and even has a stab at CSS1 (Cascading Style Sheets). It provides only back and forward navigation controls and a simple search facility, but these suffice for the job. There isn't a space-consuming toolbar, so you get the maximum display area for your documents.

I have but two complaints about SimpleHTML. One is the absence of a 'loading' message or progress bar; when you load a large document with many images, the window isn't updated until everything is ready to be displayed, which can leave you wondering if the program is doing anything at all. Secondly, there's a distinct lack of simple keyboard shortcuts. There are standard menu shortcuts used in conjunction with the Right Amiga key so, for example, Amiga and '<' is for backward navigation - but this requires you to press the Right Amiga key, Shift key and the period to go back - which is rather cumbersome. Why not just 'b' with no modifier for 'back', 'f' for forward, and so on, or even 'z' and 'x'?. It would also be nice to see Tab-cycling or some other means of selecting links via the keyboard, so that you could operate SimpleHTML without using the mouse.

SimpleHTML, however, is perfect for reading HTML documentation and viewing HTML attachments to e-mails. It would be great if the author turned this program into an embeddable BOOPSI component that developers could use in their own software - either that or add an ARexx port to it. Oh, and some HTML documentation, perhaps, that loads via tooltypes the first time you run it?

Richard Drummond



The Juggler

Aminet, the number one source for freely distributable Amiga software, has been around since January 1992 when it began its life hosted on a 25MHz 68030 Amiga in Switzerland. This machine's 50MB hard drive was, however, unaware of the flood of uploads that was soon to kill it and turn it into juggling fodder (see our coverdisc if you don't believe us).

But Aminet was not to be written off so easily. By September 1993, the fledgling online resource was home to 5,000 archives and in May 1994 had become the world's largest collection of freeware and shareware software on the Internet. Now, with the Amiga market about to undergo a significant change, *Amiga Active* asked Aminet's founder, Urban Mueller, about the past and future of downloadable Amiga content.

AA: What have you learned from running Aminet over the last nine and a half years?

UM: Not to waste the time of Aminet users. They should be able to find out what's come up since their last visit, and also be able to quickly find something specific they're looking for. I think this has worked very well.

AA: How has Aminet managed to survive for so long?

UM: We run the archive quite efficiently and we don't depend on it for our livelihoods!

AA: With the decline of the classic Amiga market and appearance of the AmigaDE, what will happen to Aminet in future?

UM: That's quite open. But if people start uploading AmigaDE freeware, we'll certainly not refuse it.

AA: There'll soon be a new front-end for Aminet too, we hear?

UM: Yes, Andrea Kareth and myself finally built a quicker and nicer looking web front-end to Aminet. It's available at http://us.aminet.net/pub/aminet/ and will soon be deployed to other mirrors. Comments and requests are welcome.

Readers who are interested to learn more of Aminet's past can find several documents on our coverdisc this month, in AACD24:AACD/Magazine/Shareware/Aminet, where you can also find Urban Mueller practising one of his other pasttimes: juggling defunct hard drives!

Merlancia Industries

Great minds think alike.
Creative minds think Amiga.
www.merlancia.com

Look for this icon on official Merlancia products as a symbol of quality.

Got Boing?

Merlancia Industries

Technology for the needs of tomorrow.

AMIGA Systems

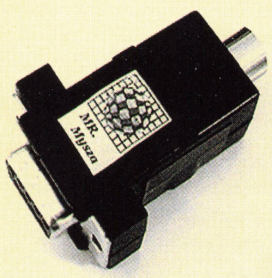
Amiga 4000T-	$1999.95
Amiga 4000D-	999.95
✓ Amiga 1200HD-	189.95
Amiga 3000T-	999.95
Amiga 3000D-	329.95
Amiga 600-	129.95
Amiga 2000-	129.95
Amiga 500-	99.95
Amiga 1000-	149.95
Amiga CD32-	$199.95
Amiga CDTV-	219.95

Monitors

NEC 17"-	$299.95
Amiga 1950-	199.95
Amiga 1084S-	129.95
Amiga 1084-	99.95
Amiga 1080-	99.95

Mice

Amiga Designer Mouse:	
Black-	$12.95
White-	12.95
Original Amiga Mice:	
A3000-	$39.95
A500/2000-	9.95
A1000-	29.95
Mr Mysza-	$29.95
Crystal TB-	29.95
Mysza/TB Combo-	54.95
PenMouse-	29.95

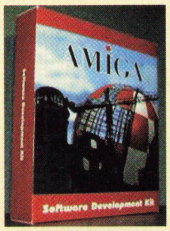


Mr. Mysza PS/2 mouse adapter- Finally! After all this time, all Amigans can now share in the world of PS/2 devices made for IBM/PC compatible systems! From the super-cool Crystal Trackball to the Microsoft Optical Mouse, you now have a full range of up-to-date, current, mice and mice alternatives.

The Mr. Mysza also supports up to four buttons and the scroll mouse (utility drivers included) for additional ease of use. The Mr. Mysza is fully "plug and play". Just plug in the Mr. Mysza, and your choice of literally thousands of PS/2 devices and you are set to go! All you need is the adapter and a PS/2 mouse device to get up and going. There is no need for additional software to use Mr. Mysza! (Except to use features such as the scroll on scroll mice.) Why are you waiting? Order the Mr. Mysza today!



$49.95!



$89.95

Accelerators

PowerPC Cards

CyberstormPPC:	
604e-233/060-	$979.95
BlizzardPPC:	
603e/040-33-	$429.95
Amiga 3000/4000:	
MK-III 060-	$659.95
Amiga 1200:	
Blizzard 060-	$409.95
A1260/75-	349.95

Software

Amiga SDK 1.0-	$89.95
Amiga O/S 3.5-	49.95
ImageFX 4.0-	239.95
Heretic II-	59.95
AmigaWriter 2.0-	94.95
ArtEffect 4.0-	109.95
AmigaVision-	19.95

CALL FOR MORE TITLES

www.merlancia.net
Web hosting for $9.95 per month.
Web Design starting at $49.95 per hour.
For detials, call or view:
http://www.merlancia.net

Hardware

XSurf Ethernet-	$129.95
RedBoard-	59.95
(Infared Keyboard)	
IR Keyboard Kit-	$69.95

CALL FOR MORE

Amiga Sales, Service, and Support.
Repairs & Upgrades. Hardware & Software.
What more could you ask for?
Friendly courteous staff. Lower Prices. Higher Qual
Yep. All here.

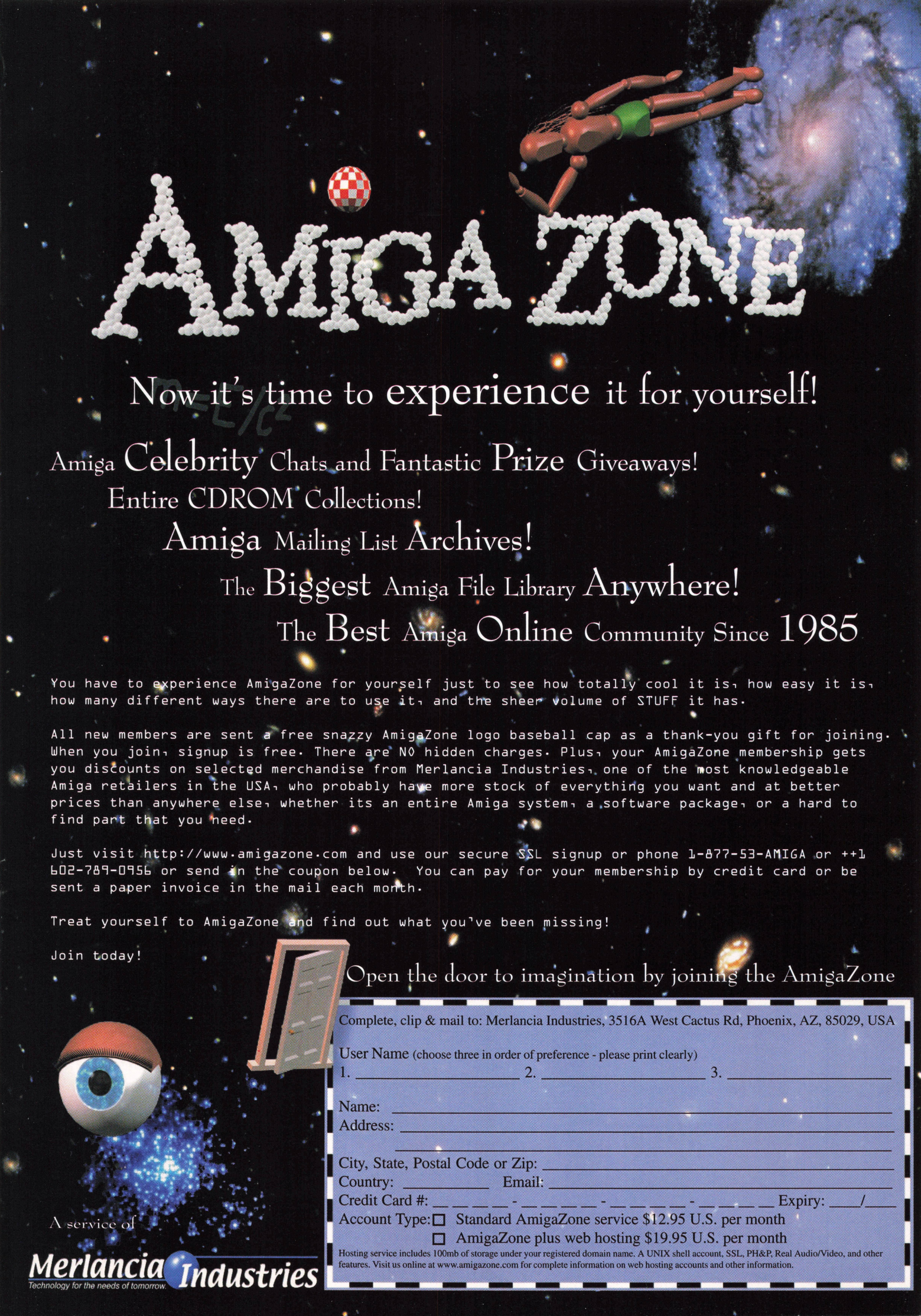
We'll beat their price or eat our hats.
Lower prices, guaranteed!
30 Day Warranty on all Software and used Hardware. 1 Year on NEW Hardware!
Experienced Technicians.
Full SMT Station.
Why wait? Call us today!

THANK YOU FOR YOUR BUSINESS.

Merlancia is a TM of Merlancia Industries/Ryan E. A. Czerwinski. Amiga® and the Amiga® logos are ® of Amiga, Inc. Commodore® and the Commodore® logos are ® of Commodore, B.V. ; licensed to Computers National, Inc. WOCA and the WOCA logos are TM of Merlancia Industries. ICON and "International Computer Owners Network" are TM of Merlancia Indsutries. This advert is © 2000 Merlancia Industries, all rights reserved. Other TMs and ©s are held by their respective owners.

www.gotboing.com
www.merlancia.com
1-877-53-AMIGA

e-mail: Merlancia@merlancia.com | sales@merlancia.com
Tel: ++1 602-789-0956 FAX: ++1 602-978-1661
Tel: ++1 602-896-1338 WATS: 1-877-53-AMIGA
Merlancia Industries
3516A West Cactus Road
Phoenix, AZ 85029 USA


AMIGA ZONE
Now it's time to experience it for yourself!
Amiga Celebrity Chats and Fantastic Prize Giveaways!
Entire CDROM Collections!
Amiga Mailing List Archives!
The Biggest Amiga File Library Anywhere!
The Best Amiga Online Community Since 1985
You have to experience AmigaZone for yourself just to see how totally cool it is, how easy it is, how many different ways there are to use it, and the sheer volume of STUFF it has.
All new members are sent a free snazzy AmigaZone logo baseball cap as a thank-you gift for joining. When you join, signup is free. There are NO hidden charges. Plus, your AmigaZone membership gets you discounts on selected merchandise from Merlancia Industries, one of the most knowledgeable Amiga retailers in the USA, who probably have more stock of everything you want and at better prices than anywhere else, whether its an entire Amiga system, a software package, or a hard to find part that you need.
Just visit http://www.amigazone.com and use our secure SSL signup or phone 1-877-53-AMIGA or ++1 602-789-0956 or send in the coupon below. You can pay for your membership by credit card or be sent a paper invoice in the mail each month.
Treat yourself to AmigaZone and find out what you've been missing!
Join today!
Open the door to imagination by joining the AmigaZone
Complete, clip & mail to: Merlancia Industries, 3516A West Cactus Rd, Phoenix, AZ, 85029, USA
User Name (choose three in order of preference - please print clearly)
1. _____ 2. _____ 3. _____
Name: _____
Address: _____
_____
City, State, Postal Code or Zip: _____
Country: _____ Email: _____
Credit Card #: __ __ __ __ - __ __ __ __ - __ __ __ __ - __ __ __ __ Expiry: ____/____
Account Type: ☐ Standard AmigaZone service $12.95 U.S. per month
☐ AmigaZone plus web hosting $19.95 U.S. per month
Hosting service includes 100mb of storage under your registered domain name. A UNIX shell account, SSL, PH&P, Real Audio/Video, and other features. Visit us online at www.amigazone.com for complete information on web hosting accounts and other information.
A service of
Merlancia Industries
Technology for the needs of tomorrow.

Nextgen news



All Change in the PDA Market

The PDA market in 2001 has far from fulfilled earlier expectation. Sales have been poor and most PDA manufacturers have reported lower than expected unit sales.

The state of the market was brought home on 11th July when Psion announced the completion of their business review and the end of their consumer PDA line.

Psion expect their PDAs to be available for about another year, longer if there is sufficient demand. They have committed to supporting customers of their consumer PDA line until December 2004. Psion will continue with the NetBook and Techlogix lines, as reported in our news section last issue.

Further evidence of the changes happening in the market came from Gartner Dataquest. First quarter shipment figures for PDAs showed a 7.1 percent increase, but this was almost wholly down to the success of Compaq in the market. Palm's market share dropped to 32.3% from 59.5% in the same period last year, while Compaq's increase from 21,100 units to 153,112 units saw their market share rise to 30.3%. Psion declined considerably both in market share and total unit shipments, but remains in third place ahead of Handspring.

On the OS front, PalmOS remains in first place but dropped market share to just 42.3%, barely ahead of WinCE, while Epoc slipped to 10% but remains the third most popular. In the US, Handspring remains the second biggest PDA company after Palm, with both companies losing ground to WinCE-based rivals. Combined, the two share just under 60% of the market.

The interesting trend to note here is Compaq single-handedly saved the market from a major downturn. This implies that Europe favours the more powerful colour devices over Palm's smaller, lower powered PDAs. Companies such as Sharp planning to release higher-end devices should find the European market a strong one for them.

Microsoft bows to Kodak

In what could be considered as something of a clash of the titans, Software giant Microsoft has bowed to pressure from photo-imaging giant Kodak to open WindowsXP to competitors' software.

Kodak's objection to Microsoft, who are currently fighting a supreme court claim that they abuse their monopolistic position to the detriment of competitors, is that WindowsXP provides direct links to Microsoft's own photo finishing software and on-line photo finishing companies backed by Microsoft.



Microsoft have agreed to clearly label their own photo-editing software as such, and to allow third party photo-editing software to appear in context menus as prominently as their own.

Microsoft have been embroiled in similar disputes over the past few months with providers of third-party solutions to which Windows XP has built-in competitors, notably media players (Real Networks) and Instant Messaging systems (AOL, etc.)

Readers and justices of the supreme court with long memories may recall similar disputes a few years back between Microsoft and a once market-leading web browser company...

Less of the Online Ads

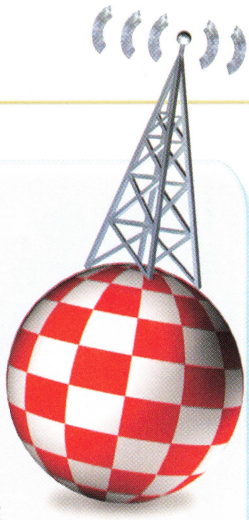
According to Internet research firm Jupiter MMXI, the on-line advertising market is due to get worse before it gets better, putting a question mark on the future of web sites funded through advertising revenue.

On-line advertising has suffered massive rationalisation since the collapse of the Internet "bubble", and this trend is set to continue.

According to Jupiter MMXI, 40 percent of Europe's 113 biggest advertisers have not budgeted for any on-line advertising spend for 2001, while only 18 percent were planning to spend more than five percent of their advertising budget on-line.

They report that the failure of predicted advertising growth to materialise has meant the average revenue for on-line advertising sales dropped by a third since last year.

Zero Effort!



An important milestone was reached on July 23. The first series of applications for AmigaDE were released to content brokers for inclusion in their retail channels. I'd like to take this opportunity to thank e.p.i.c. interactive, Titan Compuetr, Zeoneo, and John Harris for all their hard work in producing Boxikon, Linea and Batty, Convex and Solitaire. It has been a learning experience for all of us, and to be able to release five such high quality applications, with many more due, bodes very well for the future.

Why have they bothered developing for the AmigaDE, what does it mean for ordinary AmigaOS users, and how does this allow for such a rosy future?

Initially, the "series 0" apps will be sold through the first content broker that has signed up for the AmigaDE. This means that the hundreds of thousands of Sharp Zaurus owners will be able to download the DE and purchase this content, providing revenue to Sharp, Amiga and the content producers. So far, nothing too special.

However, Amiga now has AmigaDE running on the iPaq and the Casseiopia. At the AmiWest show in Sacremento, Bill McEwen handed out such devices to those attending the show. Guess what? The series 0 apps were on these devices. The content producers were never told about this - they developed a piece of content for a PDA and for no additional effort their market is now not just Zaurus but iPaq and Casseiopia as well.

Play it, Amiga

Amiga is also a few weeks away from releasing the DE Player. This is a desktop application that sits on Windows and Linux (and eventually AmigaOS4.2) allowing desktop owners the chance to use DE content. It isn't the full AmigaDE, but then the full AmigaDE isn't for everyone. From your desktop you can go to a store, download DE content and then activate it - very simple.

So now the series 0 content producers not only have the Zaurus, iPaq and Casseiopia markets but Windows and Linux (and AmigaOS4.2) markets as well; for no extra effort on their part, and the number of places where the DE can exist will continue to increase over the next year. If a device has processor or runs an OS, it's an opportunity.

For the content consumers, the traditional users, they can now purchase one copy of a DE application and it can be moved to any of their devices that are supported by the DE. Bill is proud of playing John Harris's Solitaire on the Zaurus, quitting the game half way through, removing the compact flash from the Zaurus, plugging it into the iPaq and then finishing the game.

Amiga is intent on breaking hardware dependency, and finally enabling the true benefits of the microprocessor and binary code - digital living.

Fleecy Moss,
Chief Technology Officer Amiga Inc.

In ARM's Way

Towards the end of July, I attended a Partners Meeting at ARM in Cambridge. The River Cam was sparkling, the sun was shining, pure blue skies and tourists lazily pushing along in hired punts. It was the sort of occasion when one could only feel that all was right with the world. It must feel even more so to the team at ARM and not just on days like the one when they played host to us.

ARM has been a revelation. Its CPU architecture is now the dominant microprocessor platform for wireless products and the company continues to drive relentlessly forward. Licensees include IBM, Motorola, Intel, TI (Texas Instruments), Sharp, Sony, Palm, Symbian and so on. And it's a company out of the United Kingdom! ARM has made it okay to American and Japanese corporations to be a technology company *and* British.

> **"ARM has made it okay to American and Japanese corporations to be a technology company and British."**

It was a crazy perception really. When one considers all of the great software engineers that have come out of the United Kingdom, especially in markets such as video games, one would expect British companies to be well accepted. But when Tao started out that was certainly not the case. Most investors and potential licensees looked to the US first and last. So Robin Saxby, who has led ARM from its inception, is somebody towards whom company leaders such as myself must be heavily indebted.

In fact, it's a mark of what that company has achieved that Tao has to make its goal as being 'the next ARM'. Both Tao and ARM are intellectual property generators. We're both platform companies: theirs is a physical, little endian, RISC micro-processor; Tao's is a virtual, little endian RISC microprocessor. Their combination of customers and target clients is the same as ours. We have the same business models. ARM have a genuine partner mentality - so does Tao.



ARM is further along the curve in terms of commercial maturity but their leadership has given Tao something powerful to aim for. We're on our way.

Francis Charig,
Chairman of Tao Group.



The Open Contents Platform Association

The key to achieving platform dominance may be easy: don't try to achieve it...

On the 12th of July, a group of companies lead by Tao Group of the UK and Sharp, JVC and Kyocera of Japan, announced the launch of the OCPA (Open Contents Platform Association), a body dedicated to seeking a standardised, binary compatible content platform for home and mobile digital devices such as PDAs, mobile phones, digital cameras and web pads.

The OCPA currently counts a significant body of software and hardware developers as members, and many more are expected to announce their membership at the first general assembly of the association this September. The members of the OCPA will utilise Tao Group's intent JTE (Java Technology Edition) multimedia stack to provide a common pluggable platform for software development. This platform will then be promoted through the OCPA as a common open standard for device manufacturers.



Right: CDs versus PDAs - the differences can cause a lot of problems for manufacturers.

The standards problem

The consumer electronics industry faces a problem as it enters the era of digital communications. In previous markets where software is standardised (such as VHS and DVD for video), having many devices from a number of different manufacturers has always made sense. This approach, however, is deeply problematic where there is no standard - such as in the field of software for computer devices, which doesn't lend itself to a common standard.

Take a CD player, for example: the protocol for encoding and decoding this data is readily available, and involves a simple process that can be integrated into a single chip at a relatively low cost. Manufacturers can therefore differentiate their devices through additional features, branding and performance. Computing devices are much more complex, however. The real problem is that they are programmable - software has to address the hardware. To create differentiation between products, the hardware has to change - and with current systems, that means that the software will also need to be different.

It could be argued that in the case of the desktop computer there is a de facto standard in Microsoft Windows. While it has never been adopted by any independent body as a standard, the ubiquity of the software has made it as close to being a standard as possible. However, this has also meant a great deal of standardisation in hardware, which does not suit the business model of the large consumer electronic firms. It certainly doesn't suit the digital convergence market, where devices are far more varied in terms of the kind of hardware which will be used - it simply doesn't make sense to use the same hardware in a set-top box as in a mobile phone, for example.

"...PDAs could provide advanced editing facilities to the video equipment..."

Finding the solution

While Microsoft are trying to address the consumer electronics (CE) and digital convergence markets with various flavours of the WindowsCE operating system, this is not an ideal solution. The software does not scale as well as is required by the market, and it is not truly hardware agnostic - for the CE market you really don't want to confuse consumers by offering dozens of versions of the same piece of software for each rival product.

It is exactly this reason that has made Java such a tempting answer for the CE companies, which is why Tao Group's intent appears to be the ideal solution. intent provides a very fast, low footprint Java solution, as well as a host of additional functions. Applications can be written in VP (Virtual Processor) code for greater performance and the extra power granted by the Audio Visual Environment (AVE) and third party extras like the AmigaDE offers a lot of functionality that Java doesn't.

The currently announced members of the OCPA are a wide assortment of companies, covering both the OEM (Originating Equipment Manufacturer) and content provision sides of the industry. For the OEMs, having a binary compatible open platform means they can tap into a pool of content for their devices rather than competing with other manufacturers for content, while the content providers can develop for a single platform rather than re-coding for many devices to achieve equivalent market penetration.

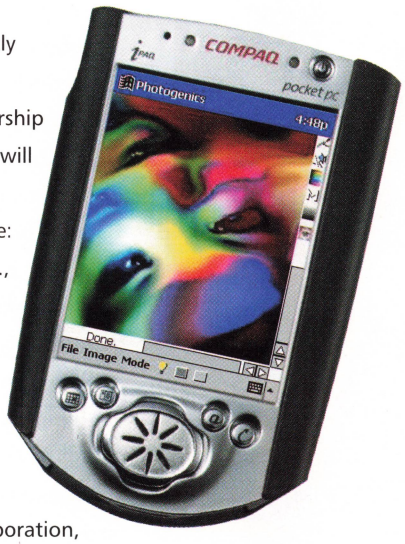
The open forum

The OCPA, which will be based in Japan, will also carry out promotional activities to spread the standard as wide as possible. They will also provide a verification scheme for both hardware and software in order to ensure compliance.

Individual companies taking part in the OCPA will be free to offer their own extensions to the core product, but by publishing the OCPA specifications, developers will have a foundation for intercompatibility. The AmigaDE, for example, may not become a fundamental part of the standard adopted by all, but the AmigaDE will run on OCPA specification devices, which in turn will be able to run any application developed to the OCPA standards.

A similar situation will occur with hardware. For example, JVC may want to use the OCPA standard for digital imaging equipment such as digital still and video cameras. For this, they will require video capture hardware, which a device like a set-top box is unlikely to have - so software that accesses this video imaging hardware will not run on those set-top boxes simply because the hardware support is not there. However, a graphics editing package designed to run on PDAs could provide advanced editing facilities to the video equipment.

The members



So far a couple of dozen companies, mostly partners of Tao Group and Japanese CE companies, have announced their membership of the OCPA. We understand this number will increase significantly over the next few months. Commited companies thus far are: Bandai Networks Co. Ltd, Capcom Co. Ltd., Criterion Software Ltd., Digital Hollywood Corporation, Espial Inc., Fujitsu Prime Software Technologies Ltd., HI Corporation, Justsystem Corporation, Lineo Japan, Inc., MathEngine, plc., Mediaglue Corporation, Metrowerks Co., Ltd., Mobile Computing Technologies Corporation, MontaVista Software Japan, Inc., Plazmic Inc., Prime Atlas, Inc., Sega Enterprises, Ltd., Sybergate KK, SSEYO Ltd., Taito Corporation, Web Soft International Inc. and Zoom Systems KK.

The hardware giants

JVC (Victor Company of Japan)

JVC were founded in 1927 to manufacture audio records. They now produce a wide range of audio equipment. They have played a key role in the development of the video industry as the developers of the VHS standards and a leading participant in the MPEG group. JVC have also played an important role in the development of Video CD and DVD technologies.

Kyocera

Kyocera were founded in 1959 to develop products based on advanced materials research. Their business is split between high-technology ceramics, technical equipment and electronic devices. They produce a wide range of goods including solar cells, dental implants, high-end photographic equipment, cutting tools, advanced mobile phones, IC (Integrated Circuit) packages, computer printers and liquid crystal displays. They even have an art gallery.



Sharp

You may be surprised to know that the name Sharp means exactly that - the company started in 1912 producing an "ever-sharp" pencil. A major Japanese electronics company, they make everything from televisions to silicon chips. They are a corporation with annual sales around the $15 billion mark, and a technology leader in several markets, including LCD screen technology and opto-electronics.

The games companies

Bandai

Inventors of the Power Rangers and the Tamagotchi, Bandai have nonetheless succeeded in becoming the third largest toy company in the world. Originally founded in Japan in the 1970s, Bandai became one of the first companies to license and manufacture handheld electronic games from Nintendo.

Bandai dipped a toe into the sea of digital home entertainment in the mid 1990s with Apple's ill-fated Pippin, a project that was to be based on PowerPC architecture (the 603e, as used in Phase5's A1200 PPC accelerator cards, no less). The forward-looking device included a CD-ROM drive and modem to allow people to play Mac games and surf the Internet on their TVs.

Bandai manufactured the first Pippin device (known as the 'Atmark' in Japan and the '@World' in the US) and were planning to ship half a million units thanks to a $50million advertising campaign in the first twelve months. Meanwhile, Sony were about to unleash a device at half the price with a mere $40m budget: the PlayStation. *"It's the business model of the future,"* claimed Apple's Senior Vice President Satjiv Chahil during the build-up to the @World's release. Maybe he was right!

Capcom

Japanese videogame company Capcom (the name is a combination of "Capsule" and "Computer") was founded in 1979 and is perhaps most famous for the Street Fighter series of games first released in 1987. Selling more than half a million arcade machines, 24 million units in software and generating over one billion dollars in revenue,
the Street Fighter franchise quickly established Capcom as big hitters in the videogame industry.

The company now produces games for Sega, Sony and Nintendo, as well as continuing to manufacture arcade machines through their Coin-Op division. Capcom recently launched - you guessed it - a new version of Street Fighter, EX3, for the PlayStation 2. *"Wherever you go,"* concludes the web site, *"Capcom is there."* Networked Street Fighter on a PDA, anyone?



Sega

At the beginning of the year, Sega was re-structured to focus solely on creating games for other platforms, after the poor performance of the Dreamcast. Sega also announced they would be licensing their Dreamcast technology to other OEMs - the first of these being Pace Micro Technologies who are producing a broadband set-top box which will let users surf the Internet and play Dreamcast games.

Sega's intent is to become a platform independent videogame producer. They have already announced a strategic partnership with Palm to provide games for the Palm V and VII PDAs, and also plan to produce Java-based games for Motorola phones. Meanwhile, Sega's Internet venture, SegaNet, announced in July that it was to merge with American ISP Earthlink, to open their network to all online game players. Sega also plans to support Microsoft's Xbox and Nintendo's GameCube with content when they appear.

The plan to include Dreamcast architecture into set-top boxes is an insightful one on two levels: the new devices will benefit from a wealth of content on release; Sega aren't therefore required to put a lot of time and effort into porting games for the new devices. Working the Dreamcast technology into handheld consumer electronics devices like mobile phones may prove more difficult. What Sega could really do with is a device-agnostic multimedia platform...

"What Sega could really do with is a device-agnostic multimedia platform..."



Oxford-based MathEngine are shaping up to become a key provider of development tools for the OCPA.

Amiga Active first took a look at MathEngine back in issue 19. With the announcement of their membership of the Open Contents Platform Association and the Zenon toolkit, it's time for a closer look at this unusual and ambitious company.

Getting physical

MathEngine was founded by a Welsh mathematician, Alan Milosevic, back in 1997. A small initial investment was just enough to fund himself and a few other mathematics experts to develop the core of a physical world simulation system that was impressive enough to win a much bigger investment in 1998. A rocky couple of years lead to a new management team and a new focus; they have hived off some of the non-core developments to subsidiary companies to concentrate on their games-oriented physics engine and have taken an intriguing step into the world of mobile computing with their Zenon APIs.

MathEngine's main product is the Karma physics engine. It allows games developers to add physical interaction simulation to objects in a 3D environment, giving those environments a far greater degree of believability and interactivity. Zenon is an entirely different beast. Firstly, it's designed for much lower footprint devices than the Karma toolkit; while Karma is for high end PCs and games consoles, Zenon is designed to run on small devices such as PDAs and Smart Phones - the stock in trade of the OCPA (Open Contents Platform Association, see page 30).

While 3D is undoubtedly coming to these markets, the need for an advanced 3D physics engine here isn't huge. Zenon offers a sophisticated multimedia API set including 2D bitmap and vector drawing tools as well as screen and audio handling functions. 3D will undoubtedly turn up in the near future. Perhaps of most interest to the development community, while Karma costs $50,000 per title to license, Zenon will be licensed to the OEMs and be free to developers.



Above: Sony Online Entertainment's Planetside, a recent convert to MathEngine's Karma.

"To put it simply, it's a shortcut to adding a lot to gameplay."

Bad Karma

MathEngine's initial foray into the public eye was not ideal; they released a free Software Development Kit (SDK) for their physics engine which garnered more interest from the curious than from the trade. Despite Sony selecting MathEngine as one of the first middleware providers for the Playstation 2, the games industry was not greatly impressed, many developers feeling they wanted to keep this sort of thing in-house. A review last year in online games development web site Gamasutra compared MathEngine's (alpha-release) product to the more mature physics engine from Havok, and Havok won.

However, MathEngine were not going to sit back and take it; after some significant improvements, the latest version of the Karma physics engine is busily changing people's minds. MathEngine's Karma is now being used in a number of high-profile projects including Sony Online's forthcoming massively multi-player online war game, Planetside. Some of the early sceptics are now using MathEngine's technology. We've heard from one or two developers who have been evaluating the project who report that they don't feel the same way that Gamasutra's testers felt back in that early preview test, and are looking to use Karma in future projects.

So what's so good about Karma? To put it simply, it's a shortcut to adding a lot to gameplay. Planetside was already a heavily developed project before MathEngine came into the picture, yet it only took two weeks for them to introduce the MathEngine libraries to their pre-existing code base. MathEngine showed *Amiga Active* a demonstration of Karma's capabilities - a first person shooting game into which they have added the Karma physics system as an in-house demo - the results were certainly impressive. Crates could be stacked on top of each other, and if they didn't balance properly the stack would collapse. Bad guys' limbs flailed realistically as they collapsed into a heap when shot. The doors swung open when blasted with a shotgun - and when a heavier weapon was employed, doors could be blown right off their hinges and blasted down corridors. None of these scenarios are directly coded - they are all the result of the physical rules and object properties defined in Karma. Don't feel like taking on a monster? Barricade the door, or drop a heavy weight on his head.

Zenon Codex

At $50k a pop, Karma is a tool for games with a decent budget. However, MathEngine's latest work is the Zenon API set, which has a rather different market. While development for Karma has been MathEngine's showpiece, they have had a growing interest in the development of the CE sector. A year ago MathEngine and Motorola announced an alliance to develop physical and natural behaviour modelling technology for gaming on next generation mobile platforms. As the relationship between MathEngine and Tao developed, this resulted in the opportunity to pursue the market sector aggressively through the OCPA. The Zenon APIs will be offered out to the OEM members of the OCPA - until the OCPA reveals more of their planning, we don't know if it will be a fundamental or optional part of the standard.

Targeting the smaller device market means that they are targeting smaller developments. A game or application for these devices simply isn't going to justify the kinds of budgets regularly thrown at full-price games for consoles or home computers. The APIs are licensed to the device manufacturer rather than being a part of the application distribution, and as such will be an open API set. Thus it won't cost anything to the developer to be able to write to the APIs - instead, the OEM pays MathEngine to enable their device to run applications using the Zenon APIs.

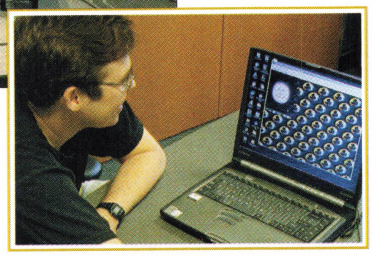
Zenon is designed to allow developers an easy path to utilising multimedia functions with Java. Java is advantageous to developers because of its stability and quick authoring, but it falls down when it comes to fast multimedia. Zenon provides a solution to that, allowing access to its highly optimised multimedia libraries through the Java interface - you could think of it as a sort of Direct X equivalent for intent. Zenon currently majors on the needs of small devices, so there's a strong emphasis on creating multimedia in a small footprint. With this in mind, MathEngine have concentrated on functions that will scale well - thus the 2D system will happily scroll a bitmap, or allow vector drawing so that you can develop a GUI that scales to the screen of the device it is running on.

One thing that isn't entirely clear at the moment is exactly how this ties in with what Amiga are doing. To a certain extent there may be some rivalry between the two product lines, as both provide multimedia functionality on top of intent, but we do not yet know to what degree the AmigaDE APIs and the MathEngine APIs overlap or complement each other. No doubt that is something the two companies will discuss between themselves. Zenon is not a direct competitor to the AmigaDE - it is not as wide-ranging in its functionality - but there will be cases in which the developer has a choice of APIs. Of course, as both run over intent this shouldn't be a problem - we are, after all, used to third party API extensions for the current Amiga OS such as MUI. We'll bring you a more detailed look at MathEngine's functionality very soon.

mathengine



Above: Vivid Image's forthcoming title Actor, the standard demo showcasing MathEngine's power.



Below: MathEngine's Will Osborne demonstrates Zenon's vector physics abilities, running under intent.

What is Karma?

Lincoln Wallen: Think of Karma as a dynamics player, in the same way that you think of an animation player. Animation is just a certain collection of constraints being processed - you have a trajectory of points [like keyframes of an animation] subject to certain constraints and you hit those constraints on the nose and that's what you call an animation.

Karma translates all the simulation, all the collision detection into a collection of constraints and solves those. Which is very powerful. Dynamics in this context really arises as a violation of constraints.

Imagine running a car around a corner. The ideal constrained solution is that the car is on rails and drives around the corner on these rails. When we see that, what we see is artificial. What we see as more realistic is where you've got some sort of violation of that constraint - you see the back wheels sliding out. The constraints are no longer being solved ideally. That's what we experience as dynamics.

"Think of Karma as a dynamics player, in the same way that you think of an animation player."

Amiga Active: *So you're actually modelling violations of constraints rather than producing a realistic model of the constraints themselves - a kind of short cut?*

LW: That's right. Articulated objects are what Karma does fantastically well. The premiere application of Karma was this massive operator training application which was a harvester, a large scale vehicle with a hydraulic arm and grabbing head that basically grabs hold of trees, cuts them from their roots and then slices them up in almost one single fluid motion. Scandinavians and North Americans are driving round forests cutting down trees using these machines, and the problems they face as operators are quite problematic in that they're on uneven terrain, holding on to something that is rigidly fixed to the ground which all of a sudden

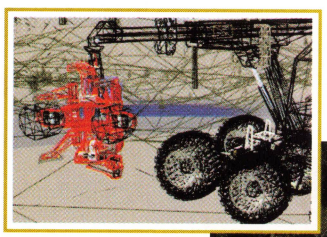
becomes a weight on the end of an extended arm - very easy to tip the entire apparatus over, damage you, the vehicle and the forest.

The manufacturing companies developed these simulators to train the operators in how to respond to these shifts in centre of gravity on uneven terrain. So there are these big mock-ups with nice large screens and operator chairs, and at the heart of that is the technology that ultimately became Karma, dealing with all of this. It would make a fantastic game! The Japanese would love it. We've never managed to get a developer to go down that route...

"So there are these big mock-ups with nice large screens and operator chairs"

Why a physics engine?

Lincon Wallen: MathEngine's founder was doing a lot of 3D visualisation of shapes and objects defined mathematically, and took the natural step of saying, *"why don't these things interact properly and what would it take to do that?"*





Right: A forestry training simulator developed using MathEngine's Karma.

The company set out with the goal of covering a wide space of markets from entertainment, games and education to engineering and commercial applications, which was a quite brave thing to do. The first product from the company, the MathEngine software development kit, did a not unreasonable job of providing resources across that range, but as a commercial product it didn't hit one market seriously.

We decided that the way to address these different markets was to concentrate both technically and commercially in them, so we established an engineering company in Helsinki - Lumeo - which is essentially building a platform for dynamic and interactive simulation. We've recently done that in the visual simulation area with our Montreal operation, which started out as a separate company acquired by MathEngine [and is now] an operator-training company with customers such as NASA. MathEngine now concentrates on the consumer markets.

A standard tool for unique products?

AA: *Do you see a danger in that you're going to reduce the amount of differentiation developers will be able to get between their product and their rivals' product? Will that be less of an issue in the future?*

LW: No, I think it's a big issue. Karma is designed in a very particular way. Most physics engines are monolithic - they provide you with physics services and that's it. Karma is designed to provide you with mathematical solvers. If you're up on dynamics, if you can do the maths, you can drive those mathematical solvers directly. We don't like to think of ourselves as supplying a physics solution. What we're doing is supporting the developer to achieve a physics solution that is appropriate for their application. Different developers can get into it at different levels depending on their expertise and how much time they've got to deal with it - and that creates enormous differentiation.

AA: *So it's more of a toolkit than an engine?*

LW: It is a toolkit. We've stuck with the perspective that we're providing a development tool to a game developer. We're not providing a component of their game. They build their component.

On choosing Tao and using Java

LW: The relationship started a long time ago before I joined the company. I talked with Tao quite a lot, but we were looking at the set-top box arena, expecting set-top boxes to move towards 3D faster than they have done. We formulated the plans for Zenon way back then as part of an adventurous project - which is still under wraps - for a reasonably revolutionary interface for handheld devices. As part of that we could see the need for very fast media processing, and we also knew the security issues of download. The telco industry was looking over the horizon at downloading code on their devices [and thinking] *'this is madness!'* The consumer impression if something goes wrong on your phone is, *'it's Nokia'* or *'it's Vodafone'* - you can't blame it on the app.

Stimulating a market in that context creates a really big problem: media processing. The one place where you want the silicon you can't get at it because you're wrapped in these sandboxes of languages that are not designed to do fast numerical processing. Developers discount Java immediately. We were one of the first companies to do games in Java - games of a few k with fantastic functionality. The power of it is really good, but you can't interest games developers because it's just too slow. But it's only slow in one

place, in media processing. So with Tao offering the fastest Java around, it's a perfect setting for extending the VM [Java Virtual Machine] with exactly the media functions you need.

Big vs Small

AA: *Do you think you're going to appeal more to smaller developers before you make the big wins?*

LW: In fact it's the opposite. The bigger developers are more business-like. It matters whether they make money out of their game. Most games do not make money, even if they actually end up on the shelf. That's not business. The reason the industry is sustainable is because of the enthusiasm of the participants, the technicians, if you like. People are willing to have the experience irrespective of the financial reward at the end. It's fantastic, but for companies this is really problematic.

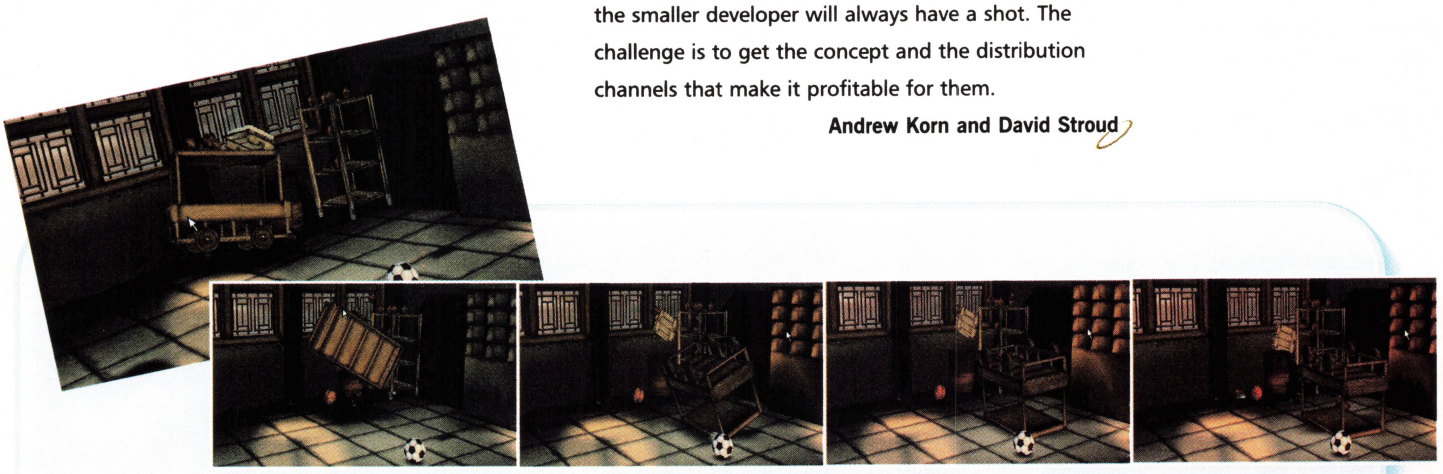
I think the end result is going to be much more like the film industry where you have a separation between the creative and the technical. Consumer electronic devices will bring that world into being, partly because the returns on content are steady. They're small amounts over a large number of people as opposed to big splashes over a couple of weeks, which means that brands are much more important, which means that the commercial industry will get involved, which means the advertisers will get involved. The mobile networks, the cable networks that are not 'free Internet' will catch consumer attention, but they will exercise extreme judgement and censorship in terms of what content they will allow.

The engine for consumer content is one step removed from those who are building the content. It's the soap powder people. That's the way the world works. If those players can have an interest in this content stream, you are in the mass market. The money will flow.

I would hope that a lot more developers then start thinking about applying their creativity within that framework rather than saying *'I want the freedom to think up anything!'* I think you get that freedom back at the other end of the scale. The successful designer or film director *can* think up anything and convince the studio to go with them. The Molyneuxs of this world can go down that route and the developer at the other end of the scale can do that as well because they have the freedom. But to submit to the consumer's constraints and make it through with a quality product requires some pretty fancy footwork.

It's not going to become a million plus for [developing] a mobile game. That isn't going to happen, and that's partly to do with the distribution mechanism. This is filling in for people - they might spend their day talking [on a mobile phone] but they won't spend their day playing on a small device. The content will improve in quality, the hardware will clearly improve, but the amount of time you put into packaging content won't expand enormously in the way it has done on the consoles, which means that the smaller developer will always have a shot. The challenge is to get the concept and the distribution channels that make it profitable for them.

Andrew Korn and David Stroud



Actor in Action

The best way of getting an idea the MathEngine physics system's capabilities is to play with it, which can be done thanks to the Actor demo from Vivid Image. Long-time Amiga users may remember Vivid Image - they were the developers behind Amiga hits The First Samurai and The Second Samurai. Actor is a game which is being developed using Karma to create a truly interactive world where you can pick up and move pretty much everything. In this sequence you can see how the objects interact. The trolley is picked up and thrown; the objects on the trolley fly through the air, colliding with other things; the trolley lands, tips, and settles; and finally the lighter items drop to the ground and come to rest.

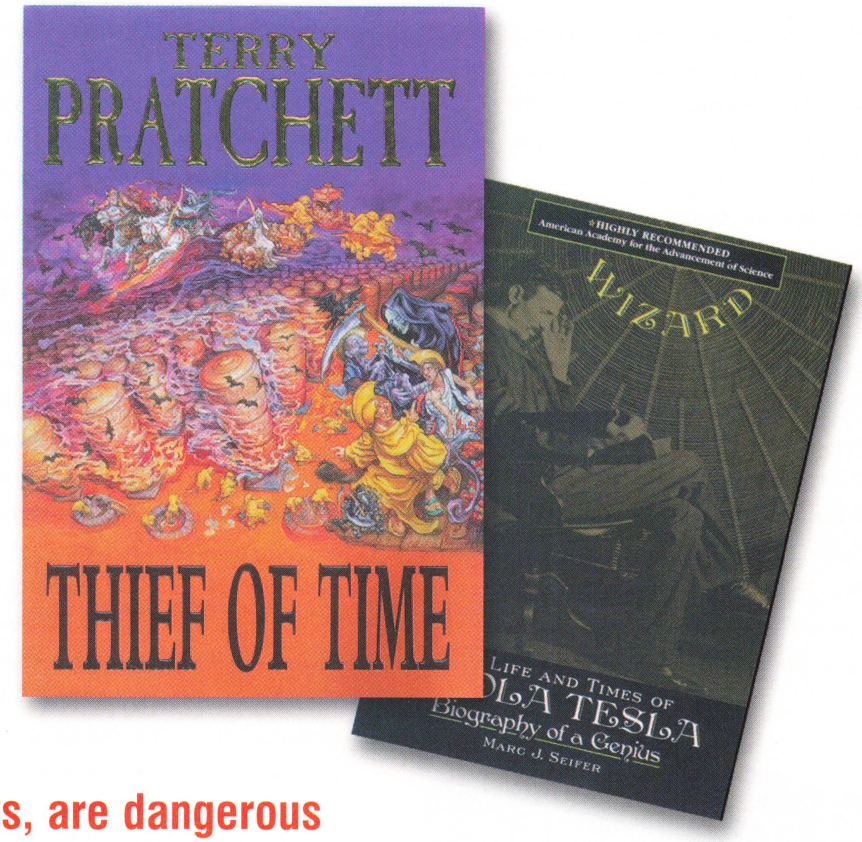
ACTIVE Media



What we've been reading, where we've been on the web and other miscellany we've stumbled across on our travels in the past month.

Thief of Time

- Hardback, 316pp
- By Terry Pratchett
- Publisher: Transworld / Doubleday
- ISBN: 0-385-60188-3
- Price: £16.99 RRP £8.49 from Amazon



Were Terry Pratchett a book reviewer given the task to review his own work, he would probably say that the problem with Terry Pratchett is that over the course of writing 26 Discworld novels, he has stopped having ideas and started having IDEAS. Ideas, as everyone knows, are dangerous things, capable of changing the world - or at least calling in the decorators and choosing some new wallpaper. IDEAS are what people have when the PR department tells them that's what the focus group wanted. He would go on to explain that he wasn't sure what the problem really was, but it was probably quantum.

Thief of Time is about a race to stop a clock before it starts. This clock, the most accurate ever made, is tuned to the ticking of the

"Ideas, as everyone knows, are dangerous things, capable of changing the world..."

universe, and will cause time to stop if it ever starts. The task of stopping this clock falls to one of the History Monks (an order that mends the tears in history) called Lu Tze (really just a reinvention of Cohen the Barbarian from his earlier works), Lobsang Ludd, his apprentice-with-a-secret whose character Pratchett never gets around to fleshing out, and Susan Sto Helit, Death's grand daughter, who is becoming a strong character for Pratchett.

The book meanders for a while, passing Yetis, various mythological anthropomorphisms, a reincarnated llama in nappies and a guest appearance from an old favourite or two. Fortunately Pratchett finally finds his feet, ironically after the clock ticks and time has come to an end. The last third of the book pits the main characters against a horde of cosmic auditors in a sequence of manic invention that reminds the reader just why Pratchett has managed to become the country's best-selling living novelist. There is a rather portentous thread about the fifth horseman of the apocalypse which was clearly one of Pratchett's IDEAS, but it doesn't have any real bearing on the story and so doesn't get in the way of an absorbing finale. Thief of Time encompasses Pratchett at his worst and at his best. If you're a fan you'll be more than happy to tolerate the rough patches to get to the good bits; if you aren't there are better Discworld novels to cut your teeth on. **AK**

Wizard: The Life and

- Paperback, 560pp
- by Marc J. Seifer
- Publisher: Citadel Press
- ISBN: 0-8065-1960-6
- Price: £18 RRP £12.57 from Amazon

This is not a book about one of Harry Potter's friends, but a life of one of the leading inventors of the late nineteenth and early twentieth century. Tesla was an inventor of the visionary kind, whose ideas far exceeded his finished and working devices. Some of his concepts are almost certainly impossible to realise, such as his dream of transmitting



Aminet Set 11

- CD-ROM
- Publisher: Schatztruhe
- Price: DM59 (around £19)
- Contact: +49 (0)7741 83041l or visit www.schatztruhe.de

Not content with one CD full of Amiga freeware? How about two? Three? Oh, what the heck - take four. Aminet Set 11 is now available from Schatztruhe, combining all the delights of individual offerings 40, 41, 42 and 43. This includes four full commercial packages: TurboCalc 4, ClickBOOM's beat-'em-up Capital Punishment, SuperView Productivity Suite and the video effect package Wildfire 5.

Add to these commercial software offerings another 3,000 archives of public domain software from the Amiga development community (totalling over three gigabytes) and you may not get out for the rest of the year, except for the odd glucose-rich snack to keep your brain ticking over as you delve into over 600MB of music modules - enough to keep the neighbours awake for a few weeks, 438MB of swirly demos and 363MB of games (anyone know a good Amiga joystick retailer?).

This is, of course, just one big chunk of the collection. Business software (including updates to commercial packages), communications utilities, development and disk tools, documents, graphics software, hardware utilities, pictures, text tools and other miscellaneous utilities should keep you out of harm's way until next month, when no doubt there'll be another Aminet CD breaking into view over the horizon. The Amigaguide GUI makes all four CDs a joy to use, so it won't be the browsing that keeps you busy. **DS**

What's on the other box?

- Web site
- URL: http://www.mydigiguide.com

You shouldn't spend too long looking at a computer display. Sooner or later you should switch off, give your eyes a rest... and watch some TV. Of course, half the time you do this to find there's nothing decent on. Help is at hand, however, from DigiGuide: a web site of UK TV listings that can be customised by the user. You choose which channels you want displayed, from a wide range of terrestrial, satellite and cable channels, and which programs you want highlighted. You can even have it send you an e-mail or SMS message when a program is about to start. The site is not particularly friendly to Amiga browsers, generating several JavaScript errors, but works fine if you turn off error reporting in your browser's prefs.

We're watching you

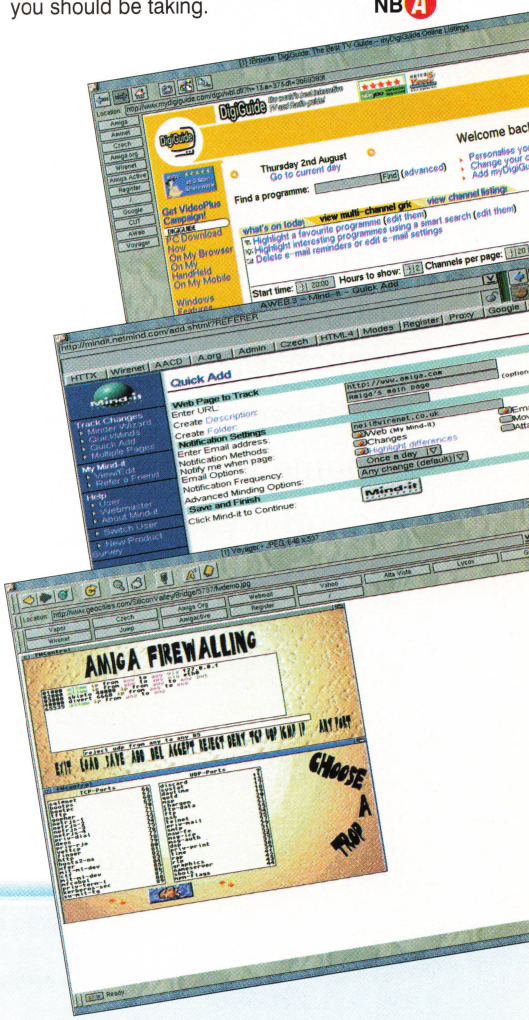
- Web site
- URL: http://mindit.netmind.com

How much time do you spend visiting the same web sites to see if anything has changed lately? There are programs on Aminet that you can run to check sites for changes, but wouldn't it be nice if someone else did it all for you? Netmind's URL-Minder service does just this. Give it a list of sites, along with your e-mail address, and it will e-mail you when any of them change. You get a choice of format for the emails - HTML or plain text - and you can have either a simple notification, details of the changes or even a copy of the new page sent directly to you.

Stand by to repel boarders

- Web site
- URL: http://www.geocities.com/SiliconValley/Bridge/5737/security.html

Internet security doesn't get much attention from Amiga users, but that's no reason to be complacent: there is now a web site dedicated to online security for Amigas. "Cyborg's Amiga Security Page" is a curious mix of German and English, but it's worth looking at if only to see what's possible and the sort of precautions you should be taking. **NB**



Times of Nikola Tesla

electrical power all over the world without any cables. Others required long development times and larger than available research budgets, such as his design for a turbine, which is now a useful device long after Tesla's death.

The wild speculations in some of Tesla's writings have made him something of a cult figure. His real engineering and electrical accomplishments are impressive enough, and lead the way to much of today's technology. The core of his work was a deep understanding of oscillations, phase and resonance - all standard concepts in physics today, but not well understood in the 1880s.

"Remember that all this was over 100 years ago."

These ideas allowed him to design new types of AC electrical motors, to pioneer the use of transformers to transmit electrical power at high AC voltages - leading directly (through the work of Ferranti in London) to the UK National Grid and the familiar local mains transformers which can be found tucked away in many suburban streets.

His greatest accomplishment in this field was the design of the power station at Niagara Falls, something he had dreamed of from childhood. Tesla also pioneered the concept of tuning in radio (allowing several signals to be broadcast at once), radio-controlled boats and torpedoes, and induction lamps which light up with no connecting wires. He was the first person to use the AND logic gate. Remember that all this was over 100 years ago.

This excellent, well-researched and readable biography will give you an introduction to the life of this astonishing genius. Anyone with any interest in technology should read it. **DC**



Writing a killer application or world-beating game is no good if you don't present it properly.

You have written your software masterpiece and now it's time to release it to the awaiting public, or at least submit it for inclusion on an AACD. Before you do, there is one thing you may have forgotten. How easy is it for potential users to install? Does it require libraries, and if so, are they included? Are you prepared for the e-mails that will arrive from people that haven't followed your installation instructions correctly? Potential problems such as these can all be dealt with if you supply a well-written Installer script.

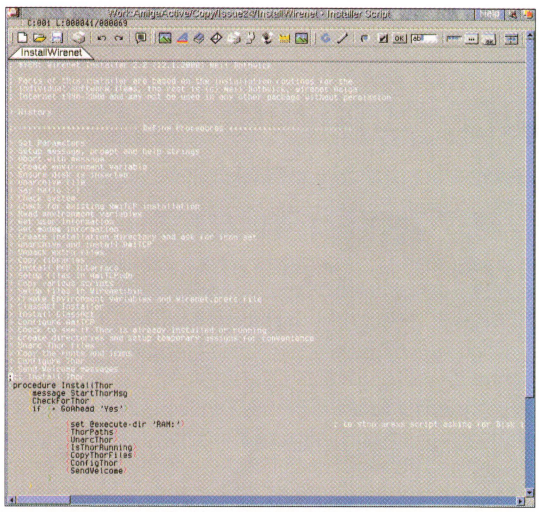
There are three main variants of the Installer program. The original supplied with OS 2.04/3.0/3.1 was limited and a pain to write for. Amiga Technologies later released the much improved V43 Installer. Finally, H&P improved it further with the V44 version supplied with OS 3.5 and 3.9. there are also alternative installer programs live SavInstaller and NewInstaller. This month we will concentrate on the V43 Installer as it works with everything from WB 2.04 upwards. If you are writing software for OS 3.5+ you should consider the later Installer program, and you can offer a choice for software that works with older versions of the OS. We will look at this later.

The best tools for the job

Installer scripts are plain text files, you only need a text editor to create them. However, you should choose your editor carefully. In an Installer script, every statement is enclosed in brackets (or, for the grammatically pedantic, parentheses - "()" - rather than square brackets like "[]"). Even the simplest of scripts can have several layers of nested brackets, and finding the extra one or the spot where you missed one out when your script reports something like "ERROR: Unexpected end of file on line 1938" can be a nightmare. The installer plugin for GoldEd's syntax highlighter is almost essential if you want to write all but the most basic of Installer scripts. When you put the cursor on a bracket, GoldEd highlights the matching bracket. It also warns if the overall number of opening and closing brackets don't match. Having written a 60KB, 2000 line installer script without the benefit of syntax highlighting, I can only advise you to use it if you value your sanity.

> **"...use it if you value your sanity."**

It is also worth using an editor that supports folding sections of text. Completed procedures can then be folded down to a single line containing a description. We would advise using ";;;" as the fold marker, as a single semi-colon, ";", is used to denote a comment. You'll notice that each section of the example scripts here starts with ";;; comment describing the section" and ends with ";;;"



Above: GoldED highlights the brackets, making it easier to match them up, and can fold away sections of the script you are not working on.

Note for non-programmers

While this Masterclass is intended to help programmers create better installer scripts, it is also important for users to have an understanding of how Installer works, so it may be worth your while glancing through this article to get an idea of what happens when you hit that Install icon.

Before we get started on the actual scripts, we need to look at the icon tooltypes available. Installer scripts are meant to be started from an icon, and the tooltypes contain information essential to the script. You can also start it from a shell, using arguments instead of tooltypes, but this is only intended for testing, as information from the debug statement is written to the shell.

The icon should be a project type with the default tool set to "Installer". You also need to set some tooltypes. APPNAME sets the name of the program being installed and is the name displayed in the welcome window and at other times. MINUSER and DEFUSER control the user level. The default is to use "Novice" for both. If you don't want the Installer to run in Novice mode, such as if you need the user to make decisions during installation, set DEFUSER to "Average". If you must prevent the script from running in Novice mode altogether, set MINUSER (minimum user level) to "Average". The LOGFILE tooltype, meanwhile, sets the path and name of the installation logfile. Normally you would save this to the program's directory, but if you are installing something that doesn't have its own directory, use the LOGFILE tooltype.

The SCRIPT and LANGUAGE tooltypes are often used together. A basic setup has a script called "Install" and an icon called "Install.info", but it is possible to have a different name for the script if you use the SCRIPT tooltype. This is how programs provide install icons for several different languages.

Down to business

For the first example we will write a script that installs a program and its icon, along with documentation. Perhaps the best way to write Installer scripts is as a series of procedures, even if a set of statements is only called once. It makes the scripts easier to maintain and the individual procedures can be reused in other scripts. Unlike many other scripting languages, Installer can only execute a procedure defined before the point at which it was called, so the common arrangement of putting procedures at the end of the script won't work. So we define the procedures first:

```
; Procedures¶
;;; Setup message, prompt and help strings¶
(procedure SetStrings¶
  (set¶
   #OldInstaller¶
   'You need at least version 43 of the
    Installer program\nYou can get this
    from any AACD'¶
   #GetDestPrompt¶
   (cat¶
    'Where would you like to install '
     @app-name '\n\n'¶
     'A drawer will be created.'¶
    )¶
   #GetDestHelp¶
   'blah...'¶
  )¶
)¶
```

It is important for an installer to give the user a clear idea of what's going on. Information and help messages should be just that, informative and helpful. Help messages in particular should contain all the information a user may need. Our first section of code has already introduced several functions. (procedure) defines a procedure with the given name. (set) creates one or more variables, the syntax is:

```
(set var1 value1 var2 value2...)¶
```

Installer treats line breaks the same as all other white space, so this can be written as

```
(set¶
      var1¶
           value1¶
      var2¶
           value2¶
 )¶
```

for improved readability. (cat) joins together several strings, which is useful for creating longer help strings. It can also be used to embed variables within text strings. There are a number of special variables created by Installer, all prefixed by "@". @app-name contains the value given in the APPNAME tooltype. "\n" is a line break. There are no particular rules for variable names, aside from not clashing with statements. The leading "#" is optional, but ensures it won't clash with any statements that may be added to future versions of Installer.

Now we check that we are running a suitable version of installer. Very few scripts do this, including the OS 3.9 Boing Bag installer, which is why several people were greeted with unexplained errors because they had the older Installer in their C: assign.

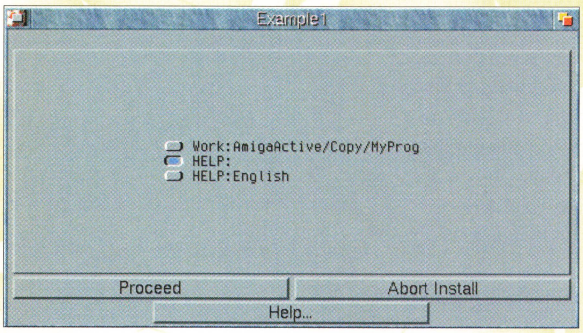
"Installer can only execute a procedure defined before the point at which it was called."

```
;;;Check installer version¶
(procedure CheckInstaller¶
    (if¶
    (< (/ @installer-version 65536) 43)¶
    (abort #OldInstaller)¶
     )¶
)¶
```

The @installer-version variable, and the output from the (version) function, return a 32 bit integer, version * 65536 + revision. We only want to check the version number, so we do an integer division. The arithmetic and logical function put the operator first, (+ 2 3) rather than (2 + 3). If the installer is too old, we abort with an informative message. Now we get to the more interesting part, asking where to install the program and copying it there. ▶

```
;;; Ask for the installation path¶
(procedure GetDestination¶
     (set #ProgDir 'MyProg')¶
     (set #DestDir¶
          (askdir¶
          (prompt #GetDestPrompt)¶
          (help #GetDestHelp)¶
          (default (expandpath 'SYS:'))¶
     )¶
)¶
(set #DestDir (tackon #DestDir
#Progdir))¶

(if¶
        (not (exists #DestDir))¶
        (makedir #DestDir)¶
)¶
        (set @default-dest #DestDir)¶
)¶
;;;¶
```



Above: Giving the user a set of choices for installing things like documentation isn't difficult.

Installing the program

The (askdir) function produces the familiar drawer selection requester. The prompt message is displayed above the requester, whilst the help message is shown when the user presses the Help button. It is important that your prompt message specifies whether a directory will be created or not, otherwise the user may end up with files being placed one level higher or lower in their directory tree than they would have liked - they'll have to clean up the mess and your program may end up not working properly as a result.

The output from (askdir) is the input for the (set) statement. We then use (tackon) to add the name of the program's directory we will create to this path. (tackon) takes care of any trailing "/" or ":" characters in #DestDir. It's the Installer equivalent of the OS' AddPart() function. We could have included (tackon) within the (set) function, but it is more readable this way, if marginally slower - although speed is rarely an issue with Installer scripts. (expandpath) takes the assign SYS: and converts it to the full path, so we can use the boot partition's name as the default path.

The second part of this procedure checks if the directory exists (from a previous installation) and creates it if not. Then we set the @default-dest system variable to the installation path. This is used in the closing message from Installer.

"...we can copy all documentation files, and their icons, with a single statement."

Now we copy the program itself. There are two statements for copying files. (copyfiles) will copy a batch of files to a destination directory. Any existing files are overwritten. We will use (copylib) here, which checks the version numbers before copying a single file.

```
(procedure CopyProgram¶
     (copylib¶
          (prompt #InstallPrompt)¶
          (help #InstallHelp)¶
          (source 'MyProg')¶
          (dest #DestDir)¶
          (confirm)¶
          (infos)¶
     )¶
)¶
```

The first four arguments should be self-explanatory. (confirm) asks for confirmation before overwriting a file, (infos) copies any icon files too. When (confirm) is set, (copylib) behaves differently according to the user mode. Novice users are never prompted, files are either copied or not, according to the version numbers. Expert users are asked for every file copy and are able to overwrite a file with an older version.

Finally we copy the documentation. We are giving the user the choice of putting this in PROGDIR: or HELP:

```
(procedure CopyDocs¶
     (set #DocPath¶
          (askchoice¶
               (prompt #DocPrompt1)¶
               (help #DocHelp1)¶
               (choices¶

                #DestDir¶
                "HELP:"¶
                "HELP:English"¶
          )¶
          (default 0)¶
     )¶
)¶

(set #DocPath¶
(select      #DocPath #DestDir "HELP:"
"HELP:English")¶
)¶

(copyfiles¶
     (prompt #DocPrompt2)¶
     (help #DocHelp2)¶
     (source "")¶
     (dest #DocPath)¶
     (pattern "#?.(guide|doc)")¶
     (infos)¶
     )¶
)¶
```

The first part gives the choices, using (askchoice) to present them as radio buttons. This returns a number; 0, 1 or 2 in this case. We use (select) to turn this back into

the selected string. The first argument to (select) is a number that determines which of the strings is returned. 0 gives the first, 1 the second and so on.

Lastly, we plug this string into (copyfiles) to copy the documentation. By setting source to "" (the current directory) and specifying a pattern, we can copy all documentation files, and their icons, with a single statement.

Don't cut corners when copying

Because (copyfiles) is able to copy a batch of files with a single command, you may be tempted to use it to copy executables or libraries. Don't!

(copylib) is a little more work, but a much safer option. Scripts that happily overwrite libraries and classes without checking version numbers are a sign of a lazy programmer. If your installer scripts are sloppy, who's going to trust the program itself? There is a way to copy a batch of files with the (copylib) command. It uses (foreach), which we will cover next month.

So far, all we have done is define the procedures, the script as it stands does nothing. so now we call the procedures.

```
; Main install¶
(welcome)¶
(SetStrings)¶
(CheckInstaller)¶
(GetDestination)¶
(CopyProgram)¶
(CopyDocs)¶
(exit)¶
```

When you progress to more complex scripts, you'll find putting everything in procedures makes it much easier to understand. It also means you can use stub procedures while developing. Something like:

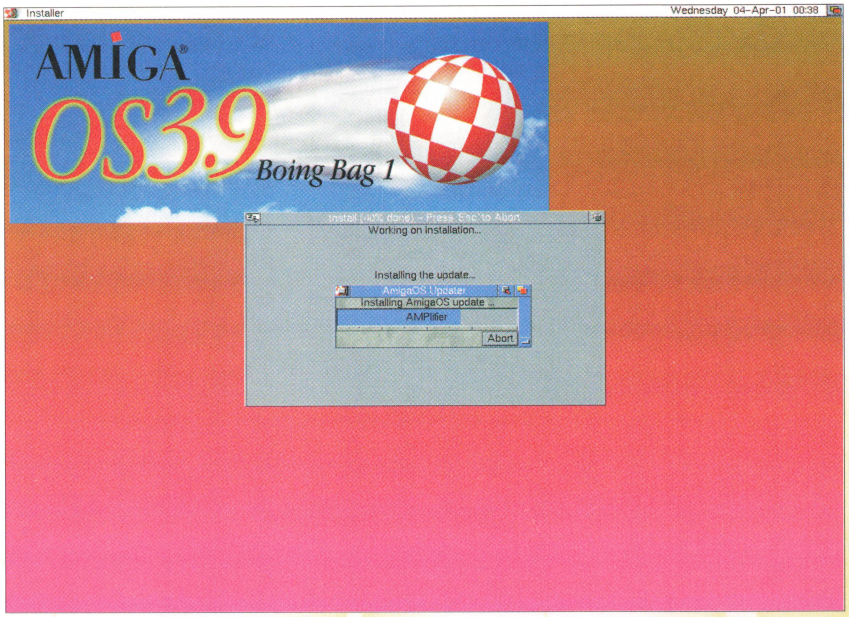
```
(procedure CopyDocs¶
   (message "Now we copy the docs")¶
)¶
```

displays a message so that you can check the flow of your Installer script before actually writing a particular procedure. Putting help and prompt strings in a separate procedure also avoids cluttering up the main working parts of the script with lengthy help text. The (message) statement is one way of informing the user what is going on. The other is (working). The difference is that

(message) waits for the user to click Proceed. (working) is displayed while the script is executing the following statements. This is useful when doing something that may take some time (other than file copying, which has its own progress gauge). You may need to unpack an archive, or patch an executable to an 060 version, for example. Putting something like:

```
(working "Unpacking additional files.
Please be patient.")¶
```

lets the user know what's going on - a good thing.

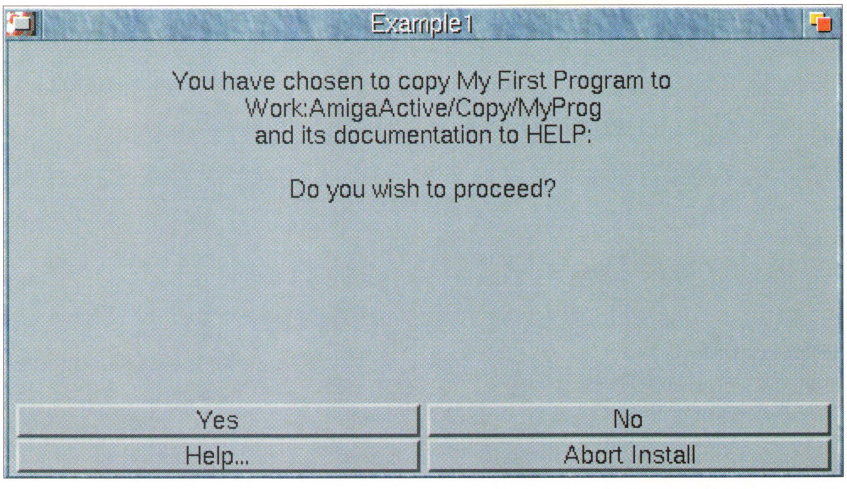


Be up front with your questions

The CopyDocs procedure first asks for the path for the docs and then copies the files. We've written it this way to make it clear what is going on, but it isn't considered good Installer practice. Wherever possible, all user interaction should be at the start of the script. Ask all the questions first and then do the copying once you have all the answers. There are two good reasons for this: it allows the user to see everything you are asking before committing to copy anything to disk. It also means he isn't waiting for each part of the installation to complete before answering the next question. This can be particularly annoying when installing software from a slow medium.

Above: The OS 3.5+ Installer gives a more colourful interface, as well as adding other - more useful - features.

"Ask all the questions first and then do the copying once you have all the answers..."



Below: Ask all the questions first and then give the user the option to review the answers before going ahead with the installation.

You can also confirm all the user responses before proceeding with any copying. Move the two "(set #DocPath..." sections from CopyDocs to to GetDestination and add a new procedure before GetDestination.

```
(procedure ConfirmDetails¶
    (askbool¶
        (prompt¶
            (cat¶
                "You have chosen to
                copy " @app-name " to "
                #DestDir "\nand its
                documentation to "
                #DocPath
                "\n\nDo you wish to
                proceed?"¶
            )¶
        )¶
        (help #ConfirmHelp)¶
    )¶
)¶
```

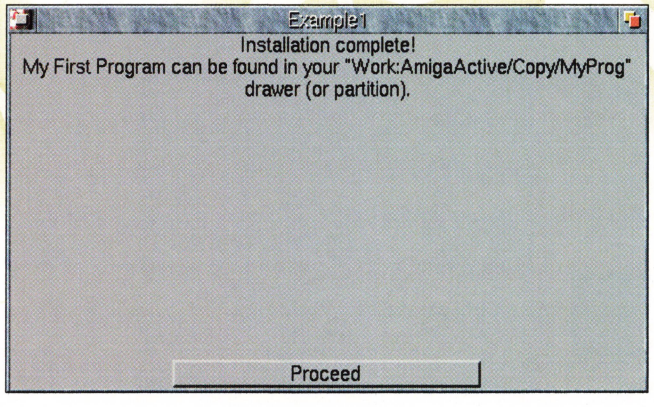
Now add the line "(ConfirmDetails)" to the end of GetDestination and change the procedure calls to

```
...¶
(CheckInstaller)¶
(until (GetDestination))¶
(CopyProgram)¶
...¶
```

This gives the user the option to review their choices and change them before anything is copied to their system. It's fairly trivial in this example, but if more complex information is being requested, such as an e-mail program gathering name and password information during installation to pre-configure the program, it becomes very important.

That's all we have space for this month. Later, we will be looking at more advanced examples such as installing system resources, running external programs, handling multiple languages and using the advanced features of OS 3.5 and 3.9.

Neil Bothwick



Right: You need to copy the installation path to @default-dest or the final window will show a meaningless statement at the end of the installation.

Adding to User-Startup

If you need to add an assign or other statement to someone's user-startup script, do it with the (startup) command:

```
(startup @app-name¶
    (prompt #StartupPrompt)¶
    (help #StartupHelp)¶
    (confirm)¶
    (command 'Assign >NIL: MyProg:
        "' #DestDir '"\n')¶
    (command "Path MyProg: ADD")¶
)
```

Note the use of quotes around the path, as it may contain a space. The "\n" is required, or Installer will put all command entries on the same line.

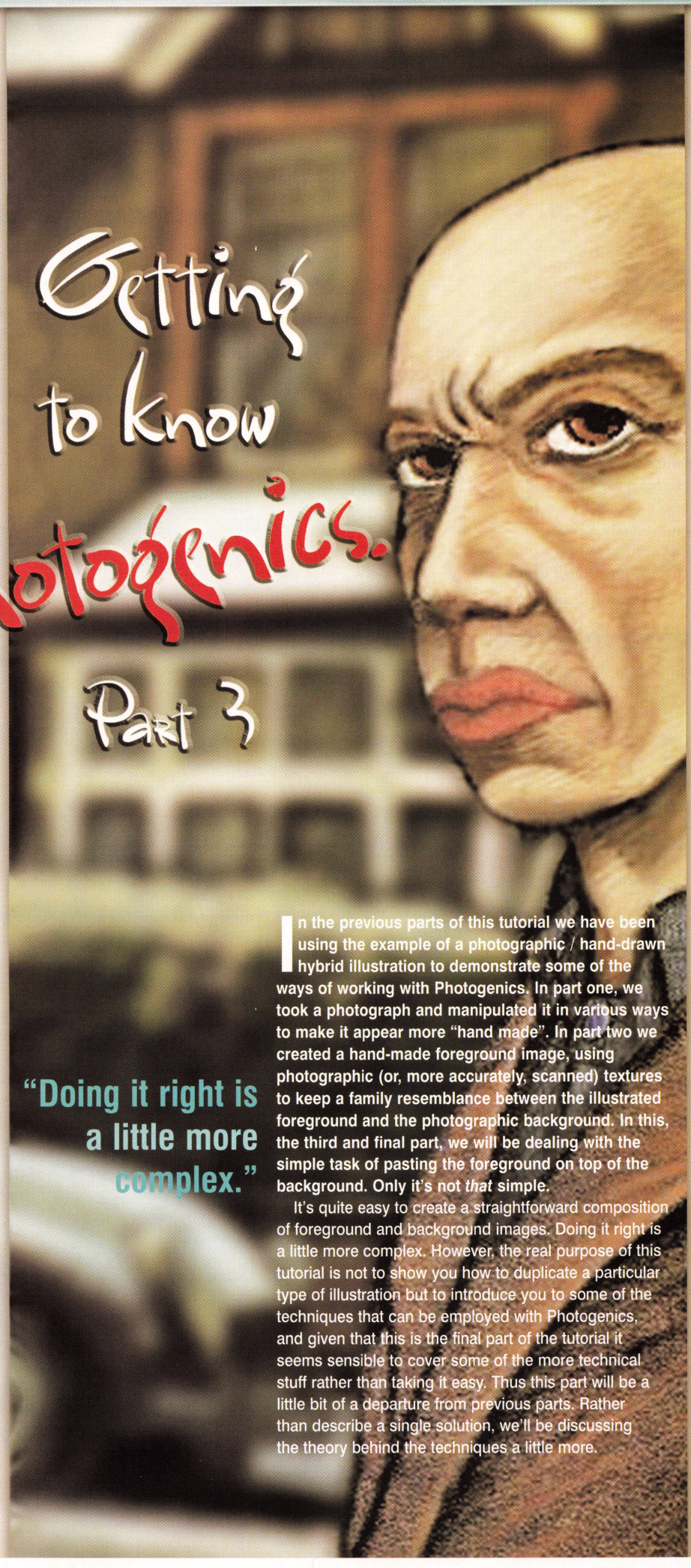
"It's fairly trivial in this example, but if more complex information is being requested, it becomes very important."

Debugging information

The (message) statement is used to inform the user, you could also use it to send yourself messages during testing, such as the values of variables. The disadvantage of this is that you need to click Proceed after each one, but there is a better solution: (debug).

This takes one or more strings as its arguments and prints them to the shell. If the Installer is run from an icon, nothing is output. This is faster as there are no buttons to press, and the (debug) statements do no harm in the release version of the script as the user won't see them. For example:

```
(debug "The variable #DocPath
contains " #DocPath)
```



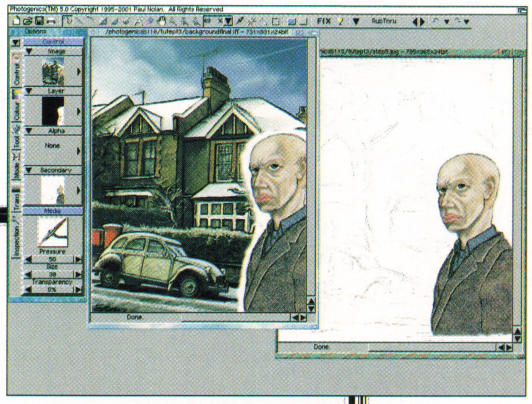
Getting to know Photogenics.

Part 3

"Doing it right is a little more complex."

In the previous parts of this tutorial we have been using the example of a photographic / hand-drawn hybrid illustration to demonstrate some of the ways of working with Photogenics. In part one, we took a photograph and manipulated it in various ways to make it appear more "hand made". In part two we created a hand-made foreground image, using photographic (or, more accurately, scanned) textures to keep a family resemblance between the illustrated foreground and the photographic background. In this, the third and final part, we will be dealing with the simple task of pasting the foreground on top of the background. Only it's not *that* simple.

It's quite easy to create a straightforward composition of foreground and background images. Doing it right is a little more complex. However, the real purpose of this tutorial is not to show you how to duplicate a particular type of illustration but to introduce you to some of the techniques that can be employed with Photogenics, and given that this is the final part of the tutorial it seems sensible to cover some of the more technical stuff rather than taking it easy. Thus this part will be a little bit of a departure from previous parts. Rather than describe a single solution, we'll be discussing the theory behind the techniques a little more.

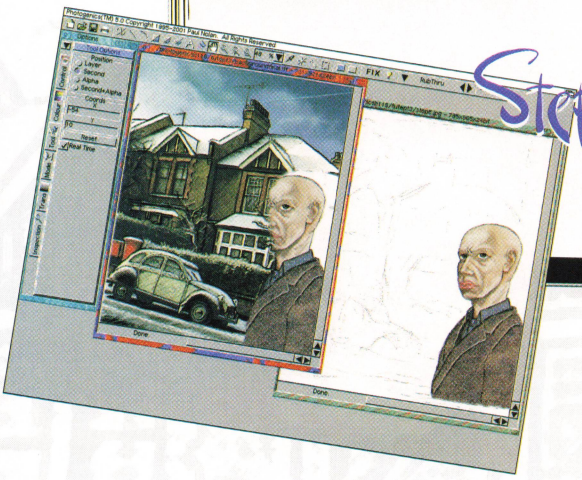


Step 1.

The most straightforward method of compositioning is to use rub through mode and do it all manually. Select the background as your main image and select your foreground as the secondary image. Select the "RubThru" painting mode and get painting. Don't worry about accuracy at the moment, the important thing is to get the foreground image onto the background.

There's a very good chance that the image rub-through will not be in exactly the place you want it. This is easily solved. Select the hand Icon from the topbar and simply drag the paint layer until the foreground is correctly aligned with the background.

Ensure the whole of the foreground image is rubbed through and then simply erase away by painting with the right mouse button to get rid of any surplus that surrounds the foreground image.



Step 2.

Getting it together

This method has the huge advantage of being incredibly simple. However, it has the disadvantage that it has to be done accurately by hand. In fact, in this example the black outline makes this technique easy: for many foregrounds it would be too difficult.

Automation's what you need

If you employ the rub-through method on a shape where fine detail overlays the background, you're asking for trouble. We're lucky that the character we've drawn here is bald; hair is notoriously difficult for exactly this reason. Clearly we need to find some way of automating the practice to a certain degree.

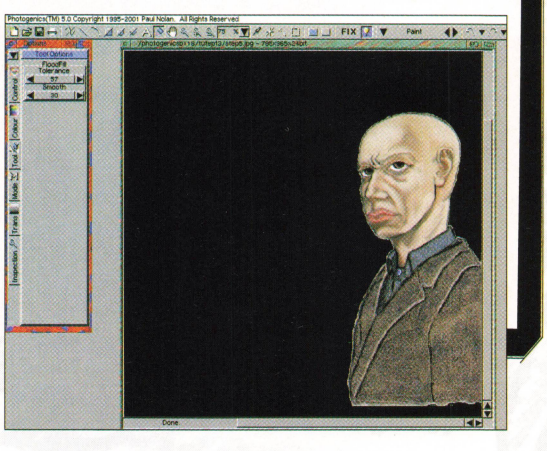
If you are familiar with graphics packages such as Photoshop or Art Effect you'll know all about selection tools. You may consider it a weakness of Photogenics that there is no selection tool; however that's not quite true. These selection tools are, in fact, doing exactly the same thing as a flood fill. They select pixels by flooding out from the pixel you click on, selecting adjacent pixels if they are the same colour or a similar colour, as determined by the "Tolerance" setting.

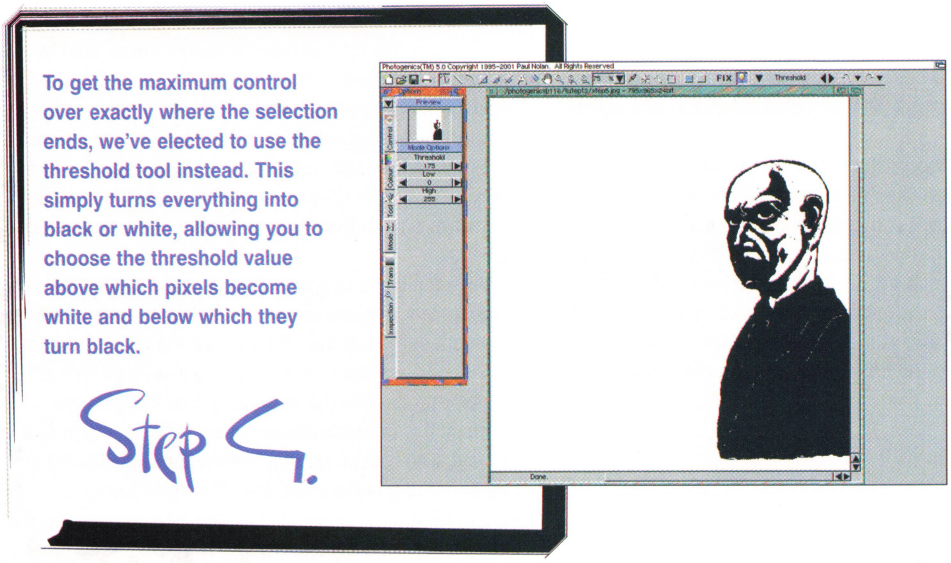
Once you have paint entirely covering the area we wanted to select, from the control panel's layer options menu you can move the paint layer to another image, or the alpha channel, where it will act as a mask. In fact this is in many ways a superior technique - rather than there being "marching ants" as per Photoshop, you see exactly what is covered, and

"This method has the advantage of being incredibly simple."

Step 3.

Here you can see exactly how this can work. By applying a flood fill to the backdrop we have created a blacked out layer which is equivalent to the area selection a selection tool would create. Because of the way that Photogenics works with paint layers, the fact that this is paint rather than an arbitrary selection is irrelevant.





To get the maximum control over exactly where the selection ends, we've elected to use the threshold tool instead. This simply turns everything into black or white, allowing you to choose the threshold value above which pixels become white and below which they turn black.

"...simply move the threshold slider up and down and immediately see the exact result."

the layer is entirely editable until you move it or fix it. You have every single paint tool available to you for creating the mask, including painting the selection area by hand.

A very common problem with producing this kind of selection, whether with Photoshop style magic wand or Photogenics style flood fill, is that most images are anti-aliased. You can see this clearly in the last picture, where the soft edges blend the dark outline to the white backdrop. If you select white you end up leaving an outline of not-quite-white antialiased pixels. If you simply up the tolerance you'll usually find that the selected area ends up spilling over the areas you want unmasked.

Here we have filled the paint layer with the threshold effect, with experiment mode switched on. This means that in the mode selection panel you can simply move the threshold slider up and down and immediately see the exact result. Once we have a selection that we're happy with, we have the outline we need and just have to paint in the blank areas within.

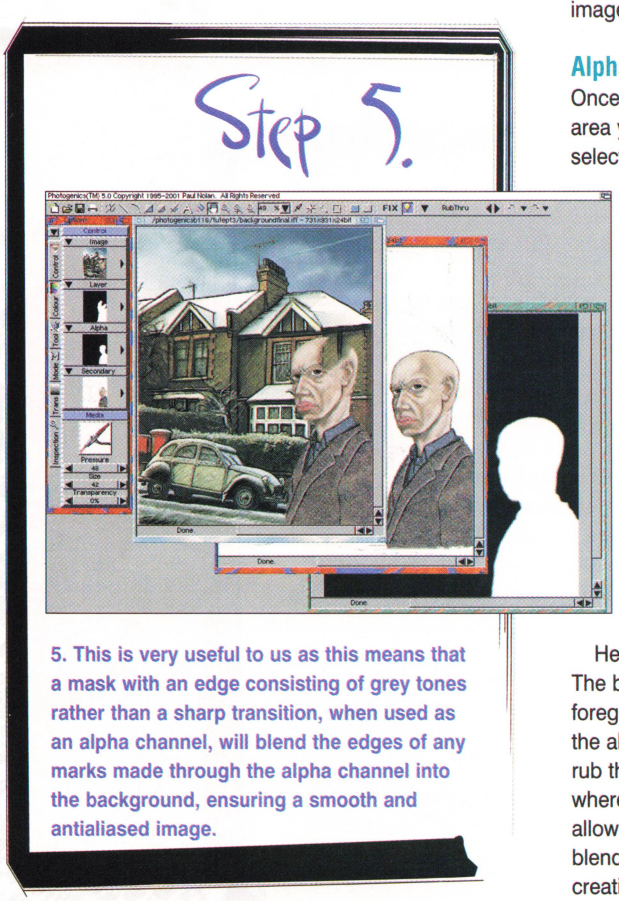
This does leave us with a hard edge, however, and cutting and pasting an image with a hard edge is not going to look good. Most software with the magic wand style selection tool has a "feather" option that softens the edge of the selection. With Photogenics there's a simple alternative - we just apply a blur to the black and white image, creating a grey "feathered" region.

Alpha to the rescue

Once you have created a paint layer which covers the area you want masked off (or unselected, in magic wand selection tool terms), you are able to use it the same way you could use a selection by moving it to the Alpha channel. Go to the Control panel in the Options window, click on the drop-down menu for layers, and select Move Paint Layer to Alpha.

An alpha channel is a layer interposed between the image and any marks we might want to add to that image - a stencil, in effect. If you try to draw on a pixel in your picture where the corresponding pixel in the alpha channel is black, you won't make any mark - the alpha channel masks it. If the corresponding pixel is white, the mark goes through - there is no mask in that area. However the alpha channel can also include grey levels. If that pixel is half way between black and white, then your mark will be applied, but at only half the value.

Here you can see the mask created earlier in action. The background is selected as the main image, the foreground as the secondary image, and the mask as the alpha channel. With Rub-Through mode selected the rub through will only be full where the mask allows it - where it is white. The soft blurred edges of the mask will allow the image in that region to rub through, but blended with the pixel information already there, thus creating a smooth composition. This technique can be



5. This is very useful to us as this means that a mask with an edge consisting of grey tones rather than a sharp transition, when used as an alpha channel, will blend the edges of any marks made through the alpha channel into the background, ensuring a smooth and antialiased image.

particularly useful with fine detail, as in the aforementioned case of hair, where the edges are too complex to ever get perfect, so the blending is a good compromise.

It's beyond the scope of this article, but a refinement of this technique uses multiple masks. In the case mentioned above, you can resolve more and more accurate masking definition by simply making more and more masks, each exposing less and less of the original image. Painting over several times with increasingly smaller masks allows the softening of the blended image while rebuilding the finer detail through the smaller masks.

Beyond montage

Okay, so we've successfully transferred the foreground onto the background, but that's not the end of the story. Sticking one thing on top of another is easy; the hard part is to make it look like the two things belong together.

You may recall from the first part of this tutorial that we discussed this point in reference to the visual appearance of the two image sources, the drawn image and the photographic image. We've used photographic textures in the drawn image and drawn over the photograph to ensure that the foreground and the background will appear to match, but there are other, less obvious factors at play.

The way the human brain analyses visual data is immensely complex. Remember how much trouble you had learning how to draw things in accurate perspective when you were a kid? Nevertheless you were able to make instantaneous calculations of depth accurate to millimetres every time you caught a ball. We are hugely sensitive on a subconscious level to all sorts of visual analysis.

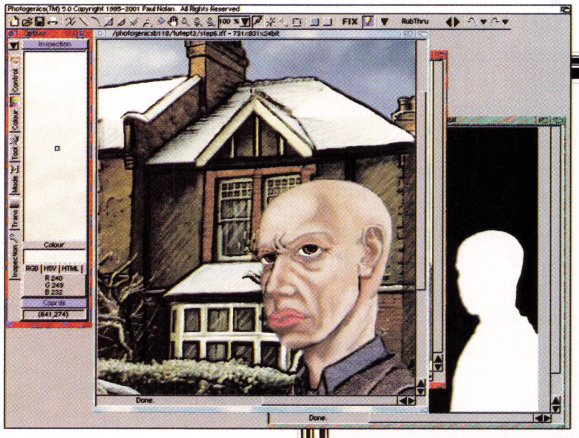
An excellent example of this process at work can be seen in virtually any movie with ships in it - the water tank effect. This is the effect where the movie makers have used a small model of a ship in a large tank of water, and despite the fact that the model may be perfect, it is immediately apparent that the image is a model. The reason for this is a matter of scale and the motion of the water's surface. The brain recognises that the motion of water in relation to the forces applied to it are wrong - at a smaller scale water appears to have a greater viscosity than a larger body of water would, so it looks wrong to us even if we're not quite sure why.

It's all in the lighting

The biggest problem that faces us when we try to paste one image on top of another is to ensure that there are no such giveaways that make the image look like it has been pasted on. The obvious one is scale; if the foreground is too large or too small, it will look wrong. That's relatively easy to deal with - you just make sure the image is the right size, either by generating it at the right size, or by rescaling it. The trickier issue is lighting.

When the layers of this image are collapsed, the warm white light area will overlap the cool white shadow area, so that whole the image area is covered with either our light tone or our shadow tone.

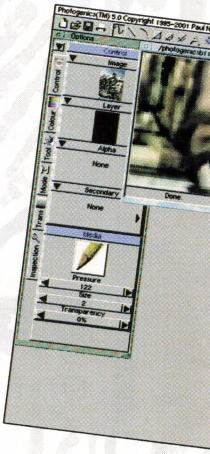
"The way the human brain analyses visual data is immensely complex."



Step 6.

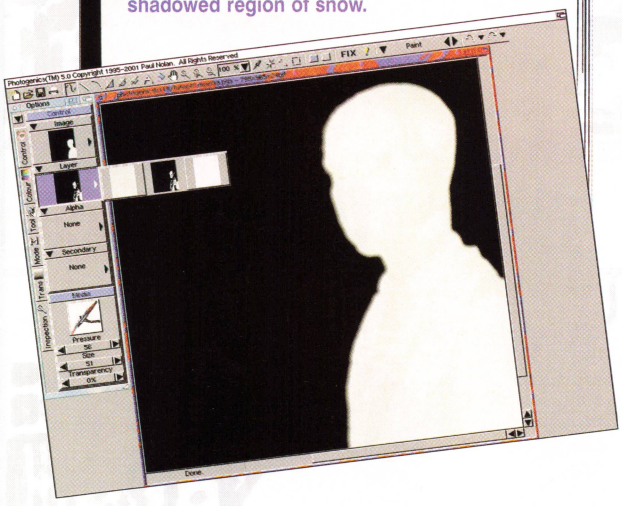
The first thing we have to watch for is the position of light sources. In this case the only significant light source is the sun. By looking at the position of shadows on the roof, it is clear that the sun is fairly low in the sky, behind and to the left of the camera position. This has to be taken into account with the foreground image from the word go - if the shadows are on the wrong side of the face there's no way it will look right. However at this stage, roughly right is enough. When the final finishing is applied to the face we can tweak that as necessary. If the foreground figure was closer to the background it would be appropriate to add a shadow to the background, using the position of shadows in other parts of the picture as a guide.

The second consideration is the colour of light, and by extension the colour of shadows. Shadows do not appear simply grey - they appear tinted in the complementary shade to the lighting colour. The easiest way of analysing the colour of light in the background image is to click the pipette (colour selection) tool over an area of white that is directly illuminated and an area of white that is in shadow, and note the RGB values down. In this image we used the snow on the roof. You'll need to average the figures a little, but it doesn't need to be perfect.

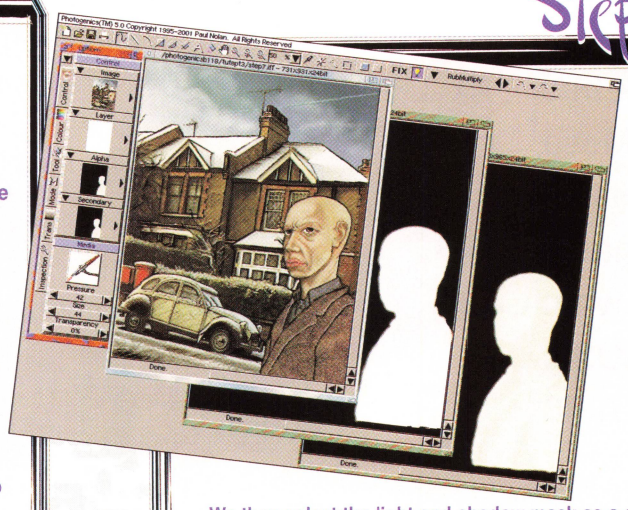


Step 7.

We're now going to use a "cheat" to match the colours of the foreground and background a little better. This will also give you a simple demonstration of the Image layer system. Starting with the original foreground image, we create three new image layers. The top most is simply filled with the original mask to give an outline guide. In the middle layer, we painted over the regions of the foreground where light would fall directly, using a reddish tinted off-white modified according to the colour values we sampled for the white snow. The bottom layer is filled with the greenish off-white that was taken from the shadowed region of snow.



Step 8.



We then select the light and shadow mask as a second image, and apply the colour modification to the main image by using rub multiply. The original mask remains as an alpha channel to stop the black background of the secondary image being rubbed through. The effect is to recolour the foreground subtly to make it appear to be illuminated in the same light as the background. This is not an exact science, but it doesn't need to be - it just needs to look right. Depending on the tones of the foreground image you may need to decrease the gamma of the light and shadow mask to get an effect that looks right to the eye

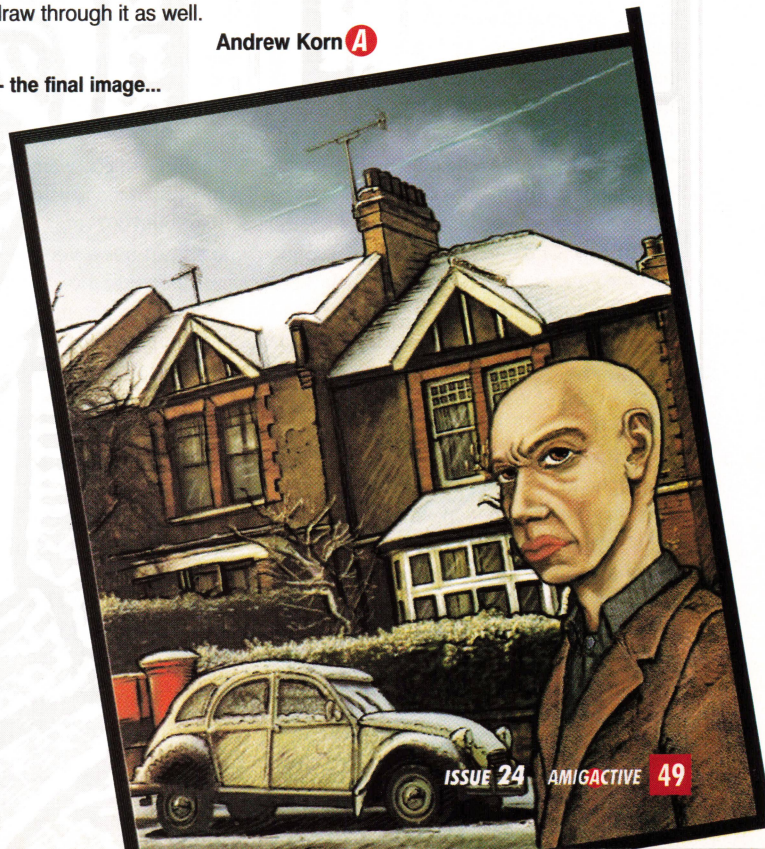
The end is nigh

A final point to note here is that we can use the light and shadow mask to modify an image as it is drawn. Load the mask as an alpha channel; because Photogenics works with a 24-bit alpha channel, we aren't simply limited to using the alpha to control the overall tone of the image drawn through the alpha mask - it will modify the colours we draw through it as well.

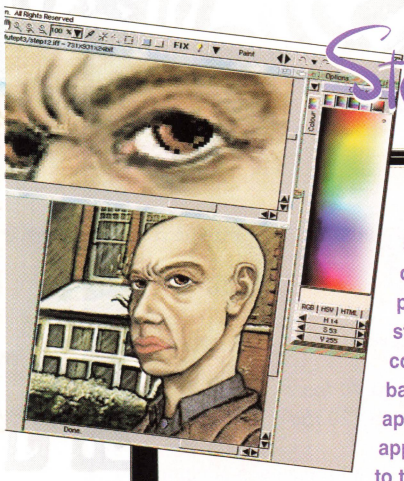
"Load the mask as an alpha channel."

Andrew Korn

Here we have it - the final image...



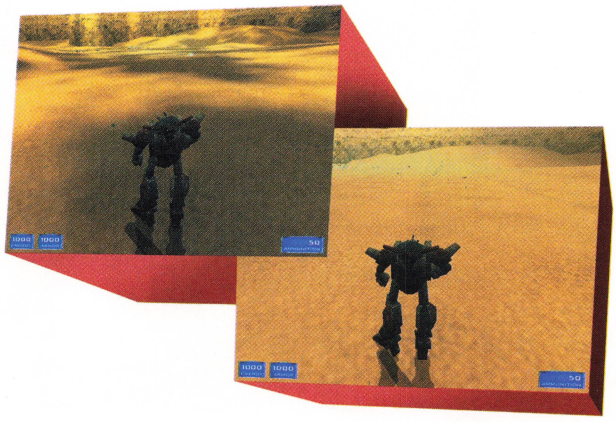
Step 9.



Looking back to the start of this series, you will recall that our main concept was to integrate a photographic and a drawn image stylistically. In part one we applied a coloured-pencil effect to the background to give it a drawn appearance; the last step is to now apply the same basic drawing technique to the foreground image, to finish it off and make it look as if it is part of the same artwork, remembering to keep an eye on where light and shadows are being cast, and making sure any highlights point towards the light source.

W Vo 3

3D talk has focused on Mesa and the capabilities of the AmigaDE of late - but what about AmigaOS's own 3D API?



Version 4.2 of the Amiga's primary 3D API has been in development for many months. Now on the verge of a public release, we investigate Warp3D's new features and learn of some nice things to come.

One major change is the legal status of Warp3D, which is no longer free for OEMs (Original Equipment Manufacturers). Programmers and users still get to enjoy the benefits of Warp3D for free, but due to time spent in the package's development, companies who wish to have Warp3D supported on their hardware are now asked to pay a license fee for drivers.

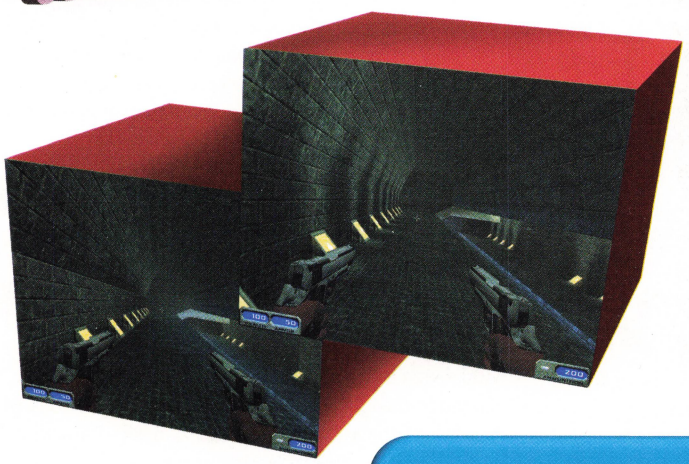
Two of the three companies affected by this decision have already signed a contract to pay the license fee (Matay and DCE, manufacturers of the Prometheus and G-Rex, respectively). The third company, Elbox - manufacturers of the Mediator PCI busboard - have not signed yet. Until they do, you won't be able to play 3D games on your Amiga if your graphics card is plugged into a Mediator. But aside from legal issues, what can software expect to gain from this latest version of Warp3D?

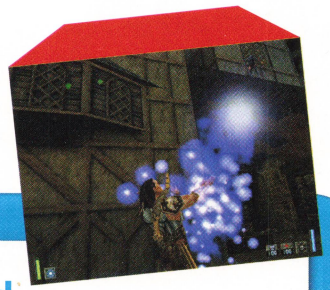
Fill me in

One of the most obvious changes as far as graphics are concerned is that Warp3D can now make use of a Voodoo 3 graphics card. Voodoo 3 support represents a big step for Warp3D, as this particular graphics chipset is far superior to the Permedia 2 used on current Amiga 3D graphics cards (the Cybervision 64/3D, the CyberVisionPPC and BlizzardVisionPPC). If you want to get the most from the likes of Heretic II, WipEout 2097 and Shogo, you should buy a Voodoo 3 card, simply because the Voodoo 3 chipset is much more advanced and supports more features in hardware than the Permedia 2.

One of the major limitations of 3D performance is fill rate, a measure of how quickly the graphics chip can fill polygons with colour. A slow fill rate leads to a slow frame rate and a frustrated gamer - especially in resolutions beyond 640x480, where the Permedia 2 struggles to keep up with the number of

"...with a Voodoo 3 you can now play games in 800x600 at virtually the same frame rate..."





Need For Speed

Below is a speed comparison between Permedia 2 and Voodoo 3 graphics cards, running Heretic II on a Prometheus-equipped Amiga. Note that whilst the Permedia 2 slows down at the higher resolution, the Voodoo 3 doesn't even flinch.

Heretic II timedemo:

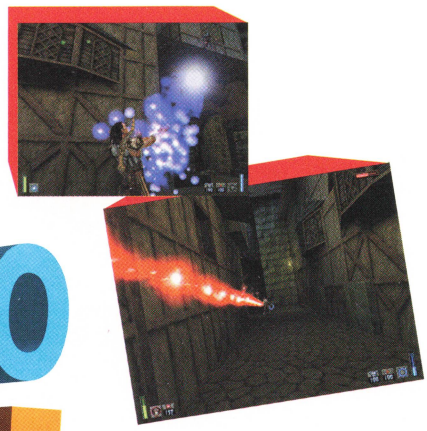
Resolution	Permedia 2	Voodoo 3
640x480	*14.9*	*18.6*
800x600	*9.9*	*18.6*

Heretic II timerefresh (Tutorial Level):

Permedia 2:	*Up to 40 fps*
Voodoo 3:	*Up to 120 fps*

Note: These tests were performed via a Prometheus-equipped Amiga, but there is no difference in performance between the Prometheus and G-Rex - both are fully supported by Warp3D.

arp oodoo 3D!



polygons being drawn on screen. On the Voodoo 3, however, the frame rate is almost independent of the screen resolution, which is how 3D acceleration should work. This means that with a Voodoo 3 you can now play games in 800x600 at virtually the same frame rate that you get in 640x480 (see table, left).

Start the fans please!

The speed of Warp3D is also improved thanks to another new feature of v4.2 which concerns the method of drawing polygons, thousands of which are needed for every frame. A technique employed to speed up this process in previous versions of Warp3D was to draw strips or fans of multiple triangles - triangles that share a common line or vertex - simultaneously. Even this, however, requires many drawing operations and a lot of processing power per frame - a significant overhead.

Warp3D 4.2 has support for Vertex Arrays, which allow you to put a large number of triangles into a single array and draw them all with one function call. Lines that are part of more than one triangle are then drawn just the once, rather than being drawn once for each triangle. In modern games using thousands of polygons per frame, the speed gained from using Vertex Arrays is quite noticeable.

Speed isn't everything

Navigating your way through a 3D landscape at a fair pace is one thing, but you also want the scenery to look nice, which is where another new feature of Warp3D comes in. Imagine you have a background graphic over which your in-game character is depicted holding an object which is on fire, such as Corvus' flaming arrows in Heretic II. To make the flames appear semi-transparent, some of the background texture needs to be visible through the fire texture. This is achieved via Additive Blending, whereby the colour values of the flame and background textures are added together to produce the transparency effect required.

As the Permedia 2 chipset does not support Additive Blending in hardware, previous versions of Warp3D attempted to mimic the effect in software - a process which is both slow and inaccurate compared to hardware blending. The Voodoo 3 chipset supports Additive Blending in hardware, making this extra work unnecessary. Furthermore, Warp3D's authors have gone out of their way to improve the effect on the Permedia 2 using some additional clever hardware trickery, so owners of both types of graphics cards can now delight in improved explosions, flames and other transparency effects in their 3D games.

Additive Blending is not the only new visual feature of Warp3D. Many 3D games also use "Multiplicative Blending". With this effect, the colour values of two textures are multiplied together, resulting in more realistic lighting of a scene, for example. This will never be possible on the Permedia 2, but the Voodoo 3 is happy to oblige. Games which use this feature will still play on both systems, but with such features disabled on the Permedia 2.

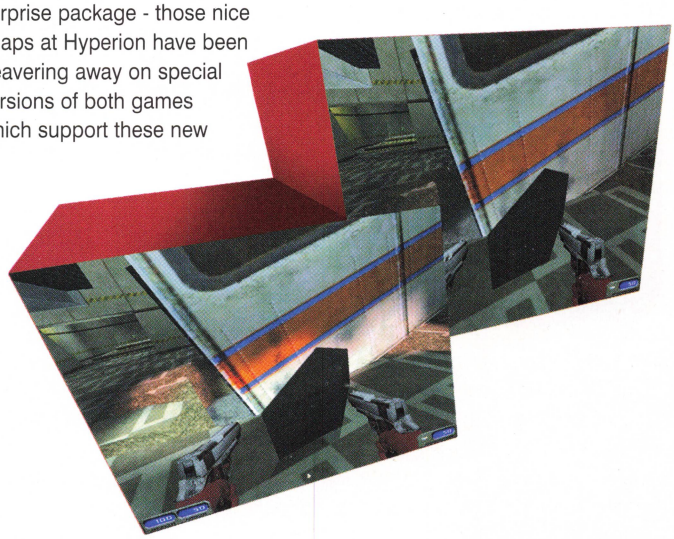
> "Hyperion have been beavering away on special versions of both games which support these new features..."

The question then arises: *"what advantage is there in Warp3D 4.2 for owners of Heretic II and Shogo?"* After all, these are old games that you wouldn't expect to recognise the new features of Warp3D 4.2. Well, here's the surprise package - those nice chaps at Hyperion have been beavering away on special versions of both games which support these new features, as you can see in the screenshots printed here. For comparison, we've printed some pictures from the old versions too. We shouldn't have to tell you which ones they are - the difference between the old and new screenshots is quite marked!

The new versions of Heretic II and Shogo will be available from Hyperion's web site soon - if not by the time you read this. If you install the latest version of Warp3D, you should download the updates to these games to avoid any potential problems, such as the new versions not recognising that they can take advantage of Additive Blending with the Permedia 2.

The future of Warp3D

One issue which has not yet been addressed in Warp3D 4.2 is Multi-texturing. This will be added in a future version, but not for the Permedia 2 (which doesn't support this feature). When this is implemented, we have been told to expect a speedup of another 25-30 percent. Before then, however, a final version of Warp3D 4.2 will be released in the near future with drivers for the G-Rex (currently only the Prometheus drivers are complete) and Mediator, if Elbox agree to sign the contract. Once a final release is ready, it will be available on Aminet and, naturally our coverdisc. Until then, kindly refrain from drooling directly over these pages!



- Name Aqua
- Price $19.95 (around £14)
- Developer / Publisher Kelly Samel / Emerald Imaging
- Contact http://browse.to/emerald

Aqua

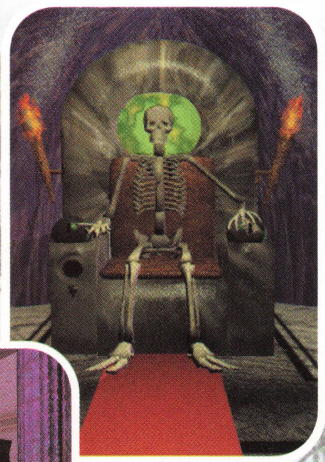
A new first-person adventure game for the Amiga... will it sink or swim?

In the current, wait-and-see Amiga market, the appearance of any high-quality, original, commercial Amiga software title should be cause for both wonderment and rejoicing: wonderment, that some intrepid soul had the vision and persistence to bring something new to the Amiga-loving public, and rejoicing, that we have something new to play with. Such is the case with author Kelly Samel's and publisher Emerald Imaging's excellent, Myst-like, first-person adventure game, Aqua.

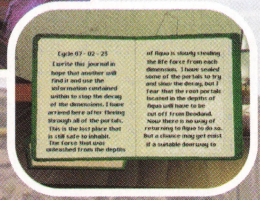
Aqua comes on a single CD, but is also hard drive installable for greater speed and convenience. The game requires at least OS 3.0, an '020 or better CPU and 8MB of RAM. Both AGA and RTG (Picasso96 or CyberGraphX) are supported. Aqua multitasks nicely - which is always a plus - and proved nearly flawlessly stable (other than a corrupted save game file at one point) on the test machine, an '060 A1200 with a Pixel64 card running Picasso96.

Having a whale of a time

The introductory animation to Aqua describes how an offshore oil-rig capsizes during a terrible storm, leading you to rent a mini-submarine and search for recoverable booty from the wreckage. Soon after, you find yourself following whales and listening to their songs for navigational tips, walking through mysterious portals and searching for bomb-making materials for a purpose you have yet to discover. From what we can gather, it seems Aqua is a mysterious realm from which a life-force-depleting entity has been released and it's up to you to locate the last known portal and seal off this evil forever. Possibly.







Playing the game is simplicity itself. Your mouse pointer shows you the directions in which you can walk, and if you suspect that an object can be picked up, just left click on it. A right click brings up the inventory screen, in which you can select items for use within the game, quit, save your current game at any time in one of three "Logbooks," and load a previously saved game.

> **"Connect this game to a good audio system and crank the sound way up!"**

Any game of this type should reward your puzzle-solving success with some "wow, that's cool!" eye candy, and on this account, Aqua often delivers. Many of the 3D rendered scenes through which you will navigate are quite gorgeous for an Amiga game, although a few might have benefitted from a little more polish. While the game uses sound samples rather than CD audio for its musical soundtrack and sound effects, audio is actually one of the game's best attributes. Some scenes feature moody, acoustic music loops and spot sounds are very nice: the filling of a water cup, the crashing of waves and chirping of birds on a sandy beach (which become muffled and distant when you enter a log cabin) as well as the songs of whales as they swim by your submarine. Connect this game to a good audio system and crank the sound way up!

Aqua is a cool and often very engaging game, but there are a few minor problems. Turning left or right is inconsistent: in some areas, turning rotates you 90 degrees - in others, a full 180 degrees. Additionally, you'd expect the opening "cinematic" movie for a CD-based game to be a big attention grabber, but Aqua's intro is perhaps the least impressive aspect of the game: it's short and rather choppy. Don't let that put you off, though: the in-game animations and cut scenes are of a far higher quality.

If you're experienced with first-person adventures, you should find Aqua's puzzles challenging, but certainly not impossible. This game will keep you absorbed and happily scratching your head for many hours.

Steve Folberg A



Aqua

SYSTEM: Any Amiga with 68020 or higher, AGA or RTG and 8MB of RAM.

SUMMARY: A beautiful, absorbing, difficult adventure game from a devoted Amiga author.


...Brace for Impact...
www.merlancia.com
Merlancia Industries

LETTERS TO THE EDITOR

Address your letters to:
Amiga Active Magazine,
14 Victoria Road,
Bournemouth BH1 4RR.
Or e-mail interactive@amigactive.com

InterActive

Show us your Workbench, tell us what you think of us. You don't even have to be nice!



Above: iFusion - it does exist, honest!

conFusion?

Dear Amiga Active,

This morning I received the latest issue of AA and, as usual, found it very interesting, but I have been wondering why there is no mention of iFusion in your magazine, not even in the Product Watch section. Considering that you were planning a review, it is rather strange to see that the product has disappeared completely from the pages of this magazine.

I was very suspicious about the pre-order scheme for iFusion. Above all, I wanted to see a review of the product before spilling out precious pounds for Mr. Drew's creation. Over the past few months I have read quite a lot about the frustration of those that have been waiting for ages for iFusion, and when it finally came out, it seems it wasn't the piece of software people were expecting. That made me feel I took the right decision in not pre-ordering it.

I am aware that AA was trying to get iFusion working. I am assuming that you have not managed to do so. Maybe it is time to tell your readers the truth about iFusion. If it is really so difficult to get working, that should be enough to put off many people from buying it.

Vincenzo Morra

"Correct me if I'm wrong, but didn't CU close quite a while ago?"

You are right that we have had trouble getting iFusion to work properly - particularly as it does not yet work on BlizzardPPC cards, the most common type. Microcode Solutions hope to get it to work on BlizzardPPC cards soon, but they have stated that they have run into an incompatibility with the BlizzardPPC drivers which they can't get around. Haage & Partner are currently investigating this issue.

Microcode Solutions felt it was necessary for them to get pre-orders before going ahead with the project. Equally, they felt that it was better to release the product for those people who can use it than to hold it back until it works for anyone.

Whether you feel those decisions were right or wrong, they really make no difference - it's your choice whether you pre-order a product, and it's your choice whether or not you buy something before it is reviewed.

We are in continual contact with Blittersoft about iFusion, and will give it a full review when the BlizzardPPC issues are resolved to our satisfaction. There's no conspiracy here, we just feel that it is sensible to hold the review until we are in a position to be able to evaluate the software properly.

Daylight Robbery!

I got my first Amiga Active today and I thought it was absolutely RUBBISH. To pay £5.95 is daylight robbery. I have seen better adverts on toilet paper than what was in your magazine. I certainly will not buy it again. What a let down.

D J Hill, Cumbria

If you don't like the adverts, I suggest you complain to the advertisers. We write the bits between the ads - you know, the articles and reviews and stuff. What do you want us to do, come up with some nice adverts to make you happy? Write loads of software and manufacture loads of hardware to fill those adverts with? Sheesh, some people.

Dead or Alive?

Dear AA,

I received a mail order magazine called 'Magazine Month' in the post this morning. It has listings for all sorts of things, including, to my surprise, an "Amiga Leisure" section. In this section I found Amiga Active... and CU Amiga! Correct me if I'm wrong, but didn't CU close quite a while ago? Surely Magazine Month has got it wrong?

Good luck with the magazine. I bought a PC and therefore left the Amiga scene several years ago now, but I still check up on it every now and again. My friend James and I are into Amiga emulation on the PC (he is the creator of AmigaInABox), but if any sort of interesting new Amiga hardware crops up, I'm sure we'll be interested. I'd guess that goes for many people now using PCs who used to be into Amigas.

George Robertson

It's true! CU Amiga is not dead at all. It's currently being published from a Buddhist

monastery in Tibet, under the watchful gaze of the new editorial team consisting of Elvis Presley, Lord Lucan and John F. Kennedy. This was, however, meant to be a closely guarded secret - how Magazine Month found out, we'll never know!

Trouble with PCs

Dear Amiga Active,

My brother purchased a PC in January and has had nothing but trouble with it. Windoze would not load properly, we get cut off from the Internet as often as every five minutes, and the keyboard and mouse often lock up when Windoze does eventually load.

Despite more than 10 phone calls, we don't seem to be getting anywhere. For every problem they have a list of about 20 potential solutions - only after they have tried all these will they accept that there is something wrong with the hardware. On top of this, our modem was damaged in a storm and we were told they would need to install a new motherboard and that it would take two weeks. Six weeks later and we got the computer back again. It's like a new computer - in fact, it is. They've wiped the hard drive and haven't even installed Microsoft Office. We didn't receive a letter or a phone call to confirm what they were going to do. Technical support even told us we should have invested in a CD-writer beforehand.

I told one chap at their technical support that I have had an Amiga 1200 since 1992 and that nothing has gone wrong with it, to which he replied that they really were brilliant, reliable machines.
I expect the AmigaOne to be able to live up to this!

Paul Nicholls, Slade Green, Kent

To be fair, there are people who have problems with Amigas, and people who have no problems at all with PCs. It's all a bit of a lucky dip, but as you have found out to your cost the only real answer is to buy whatever you are buying from a reliable company.

Your letter highlights one point that has not been much mentioned about the AmigaOne. One reason people remember the reliability of Amigas is because they were relatively simple things compared to a modern PC, which is made of dozens of parts from different manufacturers. While the AmigaOne uses a card-based approach like PCs rather than an all-in-one approach like old style Amigas, the fact that a limited set of cards will be supported will actually work in the Amiga's favour in terms of reliability, and the ability of Amiga dealers to diagnose faults quickly.

Too much tinkering

I have been using an Amiga for about eight years now. Like a lot of people, I use a PC at home and at work, but still like 'tinkering' with my Amiga. For the last few months, however, I have often found myself switching off my Amiga in frustration.

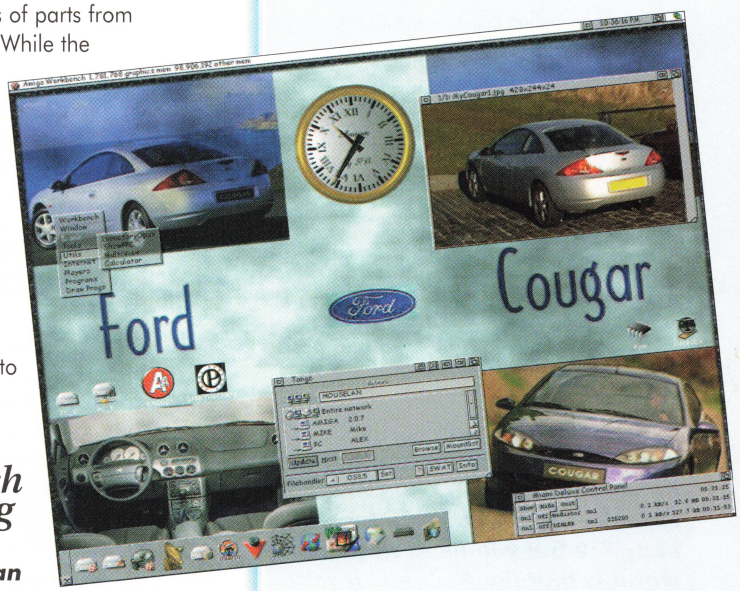
Why? Because various software programmes I have installed do not run 'out of the box', Genetic Species being the latest. After installation, reading the docs and trying to run it in various screenmodes, all I get is a corrupted screen (and sound). In my early days it was my PC that gave problems, whereas the Amiga was easy to use.

Like many I am grimly hanging on to see if a modern computer appears with an OS that suits my needs but I find that the eagerly awaited coverdisc on the mag often lies unexplored because of my lack of patience, and my system's lack of ooomph.

Hurry up Eyetech - my wife wants to spend the money on a holiday!

David Thomson ▶

Workbench Screen of the Month!



Alex Patton sent us the above offering for our OS3.9 Masterclass screenshot challenge. This machine runs his household LAN (Local Area Network) via Samba, set up with the aid of our article in issue 4 (always glad to hear when we've been of help!) and operating as an Internet gateway to a pair of PCs.

We think he's got a pretty tasty Workbench there, although it might be a good idea to use a slightly darker backdrop to make the Icon text a little more readable.

Do you think your Workbench is the best thing since sliced bread? Go on, show us what your Amiga is made of - and tell us what you made of our OS3.9 Masterclass!

"Hurry up Eyetech - my wife wants to spend the money on a holiday!"

The problem is that while Microsoft have been working hard to try to iron out some of the frustrations in Windows over the past half decade, the Amiga has been developed by third parties. Too many hacks make it harder to keep the system clean, and the price of that has been lower stability and more add-ons and patches that are required to make any given piece of software work. In the case of Genetic species I'd imagine that you need to delete your RTGMaster libraries and replace them with the most up-to-date version.

With new Amigas we should see the end of those problems. Already OS3.5 and 3.9 have gone a long way to making the situation better, but with a whole new OS coming we shouldn't need patches to keep our machines up with the times any more.

PlayAmiga, part 2

Dear AA,

Mr. Mckeough (Interactive, AA23) is absolutely right. As the Amiga's public speaker, you have the power to make or break the Amiga's image. What you need to show the world is that the Amiga is a sexy platform.

Sure, the mag itself is brilliant aesthetically, excellently executed and well finished but it just isn't enough. Ask yourself what the first thing is that you look at when browsing the glossy mags in the newsagents - is it Carrots Weekly or FHM? Do you think Stuff would have been as successful if they didn't have the good looking lass strategically placed throughout it?

The bottom line is... The lads want lasses and Amiga want a sexier image.

Gareth "Porn King" Kempster

We've thought hard about your comments, and we've realised that we could capture a huge, untapped market this way - female computer users. No computer magazine has a high proportion of female readers, yet the majority of computer users are now female. The solution is, of course, to fill the mag with pics of male models. Thanks for your suggestion!

Where do we send the tenner?

Joachim Froholt (Interactive, AA23) complains that there are too many tutorials and not enough game coverage. Games are important, as they are the "engines" that really drive people to buy systems - and since the Amiga was and still is an awesome game machine, reviews are needed so people know what is good and what is not. Tutorials covering the complex programs out there are definitely needed, however. Sometimes it is overwhelming to go through a manual and try to learn a program's many features - another viewpoint and another user's feelings are a much welcome help.

Amiga Active has a double-edged sword to cope with - trying to produce a high quality Amiga magazine (the quality speaks for itself) and a CD-ROM full of programs, help files, executables etc. It is a very difficult task, and it's hard to keep everyone happy all the time. Having seeing the demise of so much on the Amiga scene, Amiga Active is a welcome sight.



Above: Amiga on a laptop - can it be done? Of course!

Your article on the improved UAE made me realize I could buy a laptop and run UAE and have my Amiga environment. Oh happy days are here again!

Rich Woods,
President, Arizona Amiga Users Group

Ladies and Gentlemen, I give you Rich Woods. A man of inestimable taste and uncommon understanding!

"Oh happy days are here again!"

More Screens

Reader Simon Mason tells us he enjoyed the OS3.9 Masterclass and sent in this screenshot of his Workbench in action. We reckon it's pretty nice, apart from the title fonts. We're also a bit disturbed that his browser seems not to like one of the images on our web site!

Simon also tells us that he is *"...31 years of age, married with two girls, a soldier(!) and I even only live up the road from Bournemouth."* Married with two girls? Isn't that bigamy? How about the soldier - is that one of the girls or is that someone else you are married to as well? Frankly we're shocked!

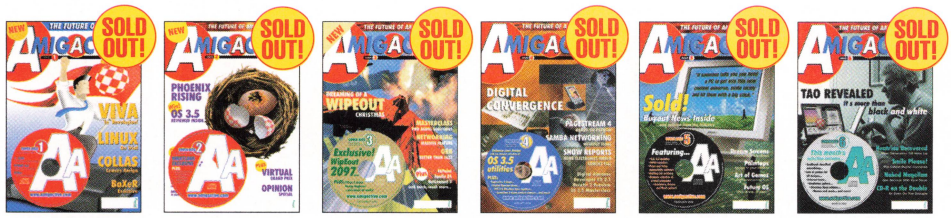
Finally, he asks if we're interested in contributions to the magazine. We're always happy to receive samples from anyone interested in writing for us, but please be aware that it can sometimes take us a while to work through submissions, and we do demand a high level of journalistic skill from our writers.



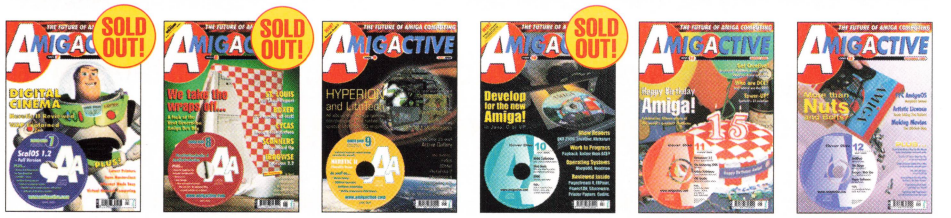
SAVE
ON UK SUBSCRIPTIONS!
12 MONTHS - SAVE £15.50
6 MONTHS - SAVE £5.80

subscriptions & back issues

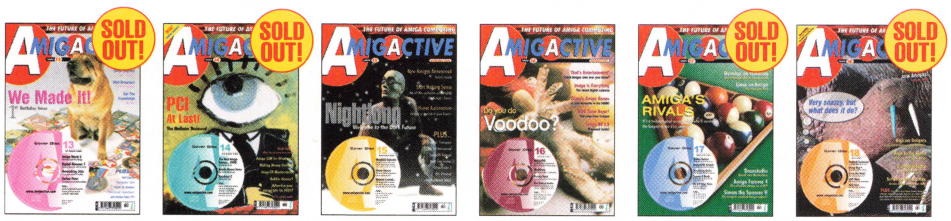
1-6



7-12



13-18



19-23



Subscription HOTLINE:
+44 (0)1202 411111
E-mail:
subscriptions@amigactive.com

...or get your local newsagent to order a copy of the magazine each month by using the magsave coupon on page 62.

Subscriptions & Back Issues ORDER FORM

BLOCK CAPITALS PLEASE

Please tick as appropriate: ☐ ***New subscription*** ☐ ***Renewal***

Name: .....

Address: .....

..... *Postcode:* .....

Country: .....

Telephone Number: .....

Email Address: .....

PAYMENT

Postal Order ☐

Cheque ☐

CREDIT CARD

Card Number: .....

Access ☐ *Expiry Date:* .....

Mastercard ☐ *Switch / Solo Card Issue Number:* .....

Switch / Solo ☐

Visa ☐ *Signature:* .....

I enclose my payment per issue as indicated opposite. Please make cheques payable to Pinprint Publishing Ltd.

Subscription RATES

Please start/renew my subscription with issue No... .....

12 ISSUES: (Tick as appropriate)

UK:	£55.90 ☐
EUROPE:	£72.00 ☐
WORLD:	£78.00 ☐

6 ISSUES:

UK:	£29.90 ☐
EUROPE:	£36.00 ☐
WORLD:	£39.00 ☐

Back Issues RATES

For information on our back issues, see our web site at www.amigactive.com

Please send me the following back issues...

9 ☐ 11 ☐ 12 ☐ 15 ☐ 16 ☐ 22 ☐

PER ISSUE:

UK:	£7.00 ☐
EUROPE:	£8.00 ☐
WORLD:	£9.00 ☐

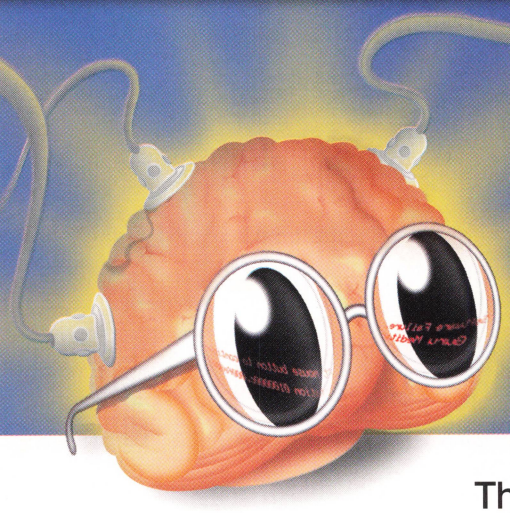
PDF CD Volume 1

☐ *Please send me the first six issues of Amiga Active on CD!*

Quantity: ☐ **at £12 each.**

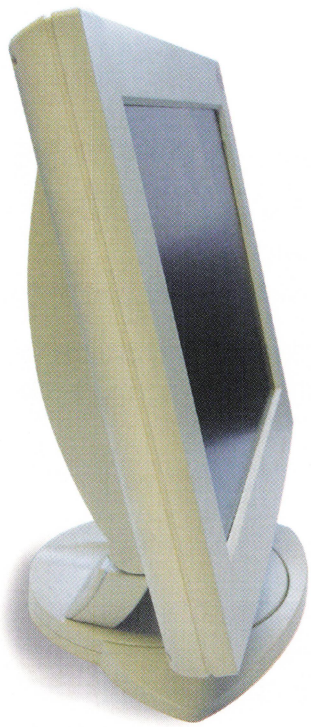
Please Note: *All prices quoted are in pounds sterling, and* ***inclusive*** *of postage and packaging.*

SEND YOUR COMPLETED FORM TO: Amiga Active Magazine, Systems House, 14 Victoria Rd, Bournemouth, Dorset BH1 4RR. ENGLAND



ASK THE GURU

The Guru is always happy to advise mere mortals on the best way of solving their Amiga-related problems.



Flatter than Flat



Greetings, oh revered Guru!

I am interested in buying a TFT monitor to use on my A1200. Later when I buy an AmigaOne I would like to use this monitor with it. What do I need to look for in a TFT monitor's specification for it to be compatible with both an A1200 and A1? All the specifications I read just leave me gob-smacked! I even saw a TFT monitor that had USB 1.1 - is this any good for the A1? Any possibility of USB coming to the A1200?

Thanks in advance.

Richard Biswas, via e-mail

Ideally, you would need a screen that syncs down to 15KHz, but as that is almost impossible today, any monitor designed for the PC should be fine on the Amiga provided you have a graphics card or at least a scan-doubler. An Amiga equipped with a graphics card is really a necessity when you're considering a flatscreen monitor, as these things aren't cheap - although prices are, understandably, dropping all the time. The AmigaOne should come with a standard SVGA output socket, so a TFT screen will plug straight in. As for the specification, the higher the refresh rate the better, as a good graphics card will be able to really push this up, although typically, TFT screens don't tend to go as high as CRT based monitors.

"...although prices are dropping all the time."

The other thing to note is that TFT monitors are designed with an optimal resolution in mind. Because of the fixed number of cells, you'll get the best quality display from a certain screen size such as 1024x768 for the smaller TFT panels or 1280x1024 for the larger, more expensive variety. Most monitors will have a go at scaling other screen resolutions to fit, but the results are far from desirable.

As far as any of the other specifications go, I really wouldn't worry too much. Apart from entertaining the tech-heads, they serve only to try and convince you that this screen is better than the rest because of the longer list of 'features'. USB, for example, is a neat feature that will allow you to plug in a USB mouse and/or keyboard, so only having one lead going off to your computer (which will also require USB) under the desk.

Overstep the Mark



Dear Guru,

I am using Workbench 3.9 on a towered A1200. Having read that hard drives larger than 4.3GB could be formatted and used with this version of the OS, I purchased a 30GB Maxtor drive. No matter how I try to partition and format the drive, I cannot get further than the 4GB limit of OS3.1.

Any ideas or suggestions to allow full use of the drive would be welcome. Do I need to install Professional File System 3? If so, how about a tutorial on the use of, and installation of this file system, now that large hard drives are fairly common?

Thanks for any help you can give, and every success with the magazine.

Mike Crossley
mcrossley52@lineone.net

There have been quite a few stories such as yours. Professional Filing System 3 (reviewed way back in our first ever issue) certainly is the better option for large disks and is quite painless to install and use. The only time where PFS is no good (or any other alternate filesystem, for that matter) is if you are using a GVP hard drive controller, as these controllers don't allocate enough memory to hold anything larger than FFS per partition.

A special version of PFS (included) will have to be used on a disk as big as this called PFSDS (Direct SCSI), which will bypass the standard Amiga disk accessing methods and talk to the drive directly. This is far more reliable than trying to use the 64 bit version of scsi.device and FFS. Check out the retailers in this issue for PFS3. A PFS3 mini-masterclass might be a good idea. We'll certainly look into it.

Perfect Vision



Hi,

I hope you can help me. I have purchased a second hand Microvitec 14" monitor, I have phoned Microvitec up and gave them the model number, and they told me it is a Multisync monitor so it will be compatible with my Amiga 1200. But can I get a lead for my A1200 to the monitor, and where from?

I hope I can use the Monitor for the Amiga as well as the Pentium. If this is the case then I will of course need a switcher box for the cables. This will be no problem, I just need to know where I can get a cable to connect the Amiga to the monitor. Thank you for any help you may be able to give me.

Regards,

Mike Lee, via e-mail

It's not a lead you want, it's a small silver box called a VGA Adapter. This converts the 23-pin video port on the Amiga to a standard 15-pin SVGA socket so that you can use the same lead as you would with a PC. This will allow you to use any PC monitor with the Amiga, but with VGA compatible modes only. Your Microvitec scans down to 15KHz so PAL modes are not a problem, but to use PAL on VGA monitors would require the use of a scan-doubler.

If you are handy with a soldering iron, you could even make your own VGA adapter, and instructions for that have been included on this month's CD. For the sake of a handful of pound coins, however, it would be far easier (and safer!) just to have one sent to you.

Wot, No Gadgets?



Hi Guru,

Is ClassAct included in OS3.9? I ask because I partitioned my hard drive to load Debian Linux and loaded a 3.0 minimum system (without Oxypatcher). When I re-loaded 3.5, your CD's frontend (AWeb 3) won't run, as ClassAct is apparently missing.

Keep trucking. Bye!

John Gray, via e-mail

OS3.9 has a new version of ClassAct, called Reaction. If AWeb is asking for ClassAct and not finding it, you may need to re-install it. We have included it for you on the CD this month. Hope that solves your problem.

The Mark of Zorro



Hi Guru,

I am currently designing a Zorro 2 busboard for my CDTV and have had trouble in obtaining a Zorro slot connector. I had dug out a project in an old Amiga magazine and the company they mentioned (Paxtron) has since been bought out by Centsible Software who don't sell them. Maplins don't do anything that big and Internet searches have turned up nothing. Do you know of anyone who sells PCB mounted 100 and 86-pin connectors and a few ISA connectors? Also, could you please tell your readers about my Commodore CDTV information site at www.used-boat.co.uk/cdtv.html.

Thanks for any help you can give.

Oliver Hannaford-Day, via e-mail

As the Zorro connector wasn't an industry standard connector, it is highly likely that Commodore may have had them specially made, in which case you may have to do the same. The only other place I can think of that you might like to try is RS Electronics (http://rswww.com). As for mentioning the web site, consider it done.

Virtually Confused



Hello Guru,

I need some Virtual Memory for my A1200. It has 128MB RAM which is not enough! I have heard that I need an Amiga with a certain chip on board. Is this true and what is needed? Do I need to change from A1200 to another Amiga like the A4000? If not, how do I get the A1200 to use Virtual Memory?

Also I am using a lot of graphics memory (Chip RAM) and I'm not sure how to increase it. Do I need a graphics card? If so, what do you suggest? I have lots of free hard drive space that is going to waste!

Hope you can help with these two points. Thanks in advance.

Jason Carroll, via e-mail

To use Virtual Memory you need an MMU (Memory Management Unit) which are present in full versions of the 68040 and 68060 CPUs. As you haven't given us any specifics, knowing whether or not you have a working MMU is a little tricky! Also, you cannot expand your Chip RAM: the only way to expand graphics memory is with a dedicated card. Your best bet is to invest in a PCI solution - there are three now!

The Guru

"It has 128MB RAM which is not enough!"



Lovely Guru will sort out the silicon



Sloppy software? Bug the Guru!



Networking & art of Zen explained



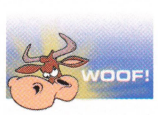
Get the most out of your Workbench



Confused about creative potential?



Save money - do the job yourself



Say WHAT? You must be bonkers!

FEELING BLUE? ASK GURU!

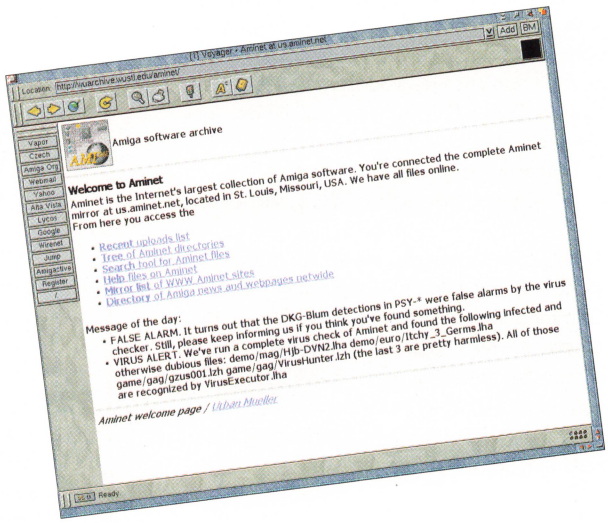
If you have any technical problems, tips you'd like to pass on, or requests for in-depth coverage of a particular problem, please send them to:

Ask The Guru,
Amiga Active Magazine,
Systems House, 14 Victoria Road,
Bournemouth, Dorset, BH1 4RR

Guru's personal e-mail mailbox:
guru@amigactive.com

F-T-P... Easy As 1-2-3!

Always on the Internet? Want access to your Amiga's files from anywhere in the world? Set up your own FTP server.



Right: If it's good enough for Aminet... Most Aminet mirrors use wu-ftpd for FTP access

Thanks to the increased availability of flat rate access, either through unmetered dialup services like Surftime and FRIACO or through 'always on' connections like ADSL and cable, running a server on your Amiga is now a viable possibility. A particularly useful service to run is FTP (File Transfer Protocol), which will allow others to download files from your Amiga across the Internet. You could use this to give other people access to programs or data, or to give yourself access to your Amiga at home when you are away.

Before you actually install anything, you should be aware of the security implications of running a server. You are allowing access to files on your hard drive and not everyone trying to access those files will be friendly. Some people gain pleasure from breaking into and wrecking systems.

Granting anonymous access is not a good idea. Instead, make all users log in with their own username and password and change these from time to time to minimise the risk of the details spreading to unwanted parties. This doesn't apply so much if you only want to use FTP to give yourself remote access, as only you should know the password to start with.

Which server to choose?

To run a server you need a "daemon" - a program that sits in the background waiting for connections and then handles those connections. There are several FTP daemons available for the Amiga. Some of them have GUI configuration programs for ease of use, but most tend to be limited in some way.

The alternative is to use a port of the industry standard wu-ftpd from the Unix world. This is a very capable program, but has the disadvantage that some configuration is achieved via text files. However, most of the initial configuration is done via the TCP stack and both Miami and Genesis have very capable GUIs. Besides, we aren't afraid of getting out hands dirty, are we? So lets give wu-ftpd a spin.

Woo, FTP!

All the files you need are on this month's coverdisc, in the AACD/Magazine/Online/wu-ftpd drawer. wu-ftpd was written for use with AmiTCP. It works with Miami but expects some files to be under the AmiTCP: assign. If you have AmiTCP or Genesis installed, everything will work fine, even when using Miami, but if you only have Miami or Miami Deluxe, you need to make the assign AmiTCP: to Miami: and create the directories AmiTCP:bin, AmiTCP:serv and AmiTCP:db. Then edit S:User-Startup to include the following lines somewhere after the Miami: assign is created:

```
Assign >NIL: AmiTCP: Miami:¶
Path AmiTCP:bin ADD¶
```

Now you can run the installer script. The script on our CD was modified to account for Miami users because the original exited with an error if you did not have AmiTCP installed. Finally, Miami users need an "ls" command to that wu-ftpd can generate a file listing of a directory. Copy the "ls" command in the Genesis demo from AACD/Resources/Online/Genesis/Genesis/bin/ to AmiTCP:bin.

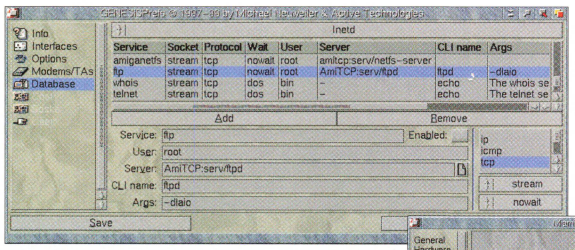
Setting up users

Once installed, you need to set up Miami or Genesis and edit the configuration files. Select the InetD section of Databases in Miami or GenesisPrefs and make sure there is an entry for ftp. It should be there by default. Now go to InetD and add an entry for ftp:

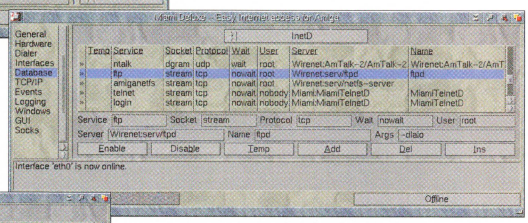
```
Service:    ftp
Socket:     stream
Protocol:   tcp
Wait:       nowait
User:       root
Server:     AmiTCP:serv/ftpd
Name:       in.ftpd
Args:       -dlaio
```

These are the terms used by Miami - Genesis' GUI is slightly different, so take a look at the screenshot (above right) to see how to set this up.

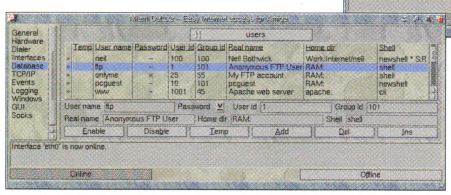
"Granting anonymous access is not a good idea..."



Left: Telling InetD what to do with FTP requests in Genesis.



Right: Miami Deluxe's GUI is slightly different, but all the options are the same.



Left: Be very careful about allowing anonymous users access. Setting up password protected access for trusted users is much safer.

Next, you need to specify the users who can log in. Go to the Groups section of the Miami/Genesis database and add:

```
Name:              ftp
ID:                55
Users/Members:     onlyme
```

The ID doesn't have to be 55, but make sure it's not used by any other group. Now go to the Users section and add:

```
User name:         onlyme
Real name:         your-name!
Password:          letmein
User ID:           25
Group ID:          55
Home dir:          RAM:
Shell:             shell
```

The names, passwords and IDs can be your choice, but the group ID must be the same as in the Groups entry above. "Home dir" is the directory that will be displayed when this user logs in. Now load up your favourite FTP program and point it at "localhost" with the username and password you set. Alternatively, set your browser to ftp://onlyme:letmein@localhost.

Further options

That's it, you have an FTP server working. You can add further users to the ftp group (names are case-sensitive), If you want to give others FTP access to your Amiga, it's a good idea to create a separate user account for each person, even if they are all downloading from the same directory. That way you can see who has connected and at what time.

It's not a good idea to allow anonymous FTP access to your Amiga. AmigaOS and its filesystems don't have the security features of systems like Linux. If you give everyone access to your system, sooner or later it will be hacked. But if you really must allow open access, you need to create another user and a group with ID 99 called "guest":

```
User name:         ftp
Real name:         Anon user
Pasword:
User ID:           26
Group ID:          99
Home dir:          RAM:
Shell:             nologin
```

Further configuration of wu-ftpd is done by editing the AmiTCP:db/ftpaccess file. Most of the defaults are fine. Unless you have a broadband connection, you will probably want to reduce the Limit settings which specify the maximum number of users that can connect at once.

The maximum uplink speed of a V90 modem is 33,600 bits/s, but is often less in practice. A single modem user would saturate this, so set the limits no higher than two. You should also edit the "DenyDir" setting. This specifies directories that are barred from entry by the user. By default, this only applies to SYS: (your system partition), so make sure you add all partitions apart from those you want people to see.

Because there is no concept of users in the standard Amiga filesystem, it is possible for an FTP user to go up to the parent of their home directory. The safest option is to use a separate partition for FTP access and lock out all the others with DenyDir entries. You should also consider the more secure Multiuser Filesystem (on the CD) if allowing anonymous access.

Neil Bothwick

Dynamic Addressing

All computers connected to the Internet have numeric addresses, of the form 194.74.63.2. People, however, find it easier to work with names like ftp.amigactive.co.uk. DNS is the system a program uses to convert a domain name into its IP address. This is fine for permanent servers, as their IP address is static. Most ISPs give dynamic addresses to their users - that is, each time you connect, your computer is given a different IP address. So how is anyone supposed to connect to you?

There are various providers of Dynamic DNS services. These carry the DNS entry for your hostname (either a sub-domain of theirs or your own hostname) and map it to your dynamically allocated IP address. To do this, you need to inform them of your new IP address each time you go online. You can do this via a web page, but there are programs to do it automatically.

Probably the most popular Dynamic DNS service is at http://www.dyndns.org. After setting up an account, you choose a sub-domain and it picks up your current IP address. Then you set Genesis or Miami to run one of the programs that notify dyndns.org of your new IP address as the Online event. There are several of these in the Magazine/Online drawer of this month's AACD.

InetD

A daemon has to be running all the time to wait for connections to its port. If you are running several different services, you could end up with several daemons, all spending over 99% of their time doing nothing but wait and take up memory. The solution is the InetD program (it is built in to Miami, don't go looking for it).

InetD is a "super daemon" that handles all incoming requests. When a connection comes in on any port, it looks to see which program is responsible for that port and starts it. If you haven't set a service to for that port in InetD, it refuses the connection. This saves system resources, as well as avoiding cluttering your user-startup with extra programs.

AMIGACTIVE MAGAZINE

THE TEAM

Publisher: Mark Hinton
Editor: David Stroud
Consulting Editor: Andrew Korn
Art Editor: Steve Crabb
New Media Editor: Neil Bothwick
Technical Consultant: Simon Archer
Contributors: Fleecy Moss, Francis Charig, Philip Corner, Don Cox, Richard Drummond, Steve Folberg.

THE CONTACTS

All e-mail contacts are @amigactive.com...
General enquiries: help Subs: subscriptions
Sales: sales Advertising: advertising
News: news Ask the Guru: guru
Feedback: interactive Editorial Queries: editor

THE MAILING LIST

Amiga Active has a couple of electronic mailing lists!

Low-traffic list carrying Amiga Active announcements:
http://groups.yahoo.com/group/amigactive-announce

General discussion list for our readers:
http://groups.yahoo.com/group/amigactive

THE SMALL PRINT

Amiga Active is published monthly by Pinprint Publishing Ltd, Systems House, 14 Victoria Road, Bournemouth, Dorset BH1 4RR, ENGLAND.

Readers' Letters: Letters to the Editor should be sent to the above postal or e-mail address. Letters should be clearly marked to *Interactive*. Technical queries should be addressed to *Ask the Guru*. We're sorry, but we can't guarantee a reply and can't promise to answer your question. Please don't send us SAE's - it's time, not postage that is the problem.

Advertising queries: If you are interested in advertising in *Amiga Active*, contact Mark Hinton at the above address to obtain our rate card and media packs.
If you have had a problem with any of the advertisers in this magazine, write a letter (not an e-mail) to the above address, but mark the envelope "advertisement problem."

Subscriptions: Subscriptions to *Amiga Active* can be bought for either 6 or 12 months. 6 month subs are £29.90 (£36.00 Europe, £39.00 Rest of world). 12 month subs are £55.90 (£72.00 Europe, £78 Rest of world). Subscription copies are normally mailed out a few days before the magazine is delivered to newsagents.

Printing & Distribution: *Amiga Active* is printed by E T Heron & Co. Ltd, The Bentall Complex, Colchester Road, Heybridge, Maldon, Essex CM9 4NW, ENGLAND and distributed by COMAG Magazine Marketing, Tavistock Road, West Drayton, Middlesex UB7 7QE, ENGLAND.

© 2000 Pinprint Publishing: No part of this magazine may be reproduced in any form, either mechanical or electronic, or may be distributed or sold on without the express written permission of Pinprint Publishing. Cover disc contents are © of the respective copyright holders, although the compilation itself is © Pinprint Publishing and may not be duplicated, sold on or distributed without their permission. All trademarks and copyrights recognised.

Our Policy: *Amiga Active* is a fully independent magazine, and none of the reviews, previews, news or features in any part of the magazine represent paid or otherwise solicited advertisement or promotion.
The opinions expressed herein are those of the individuals concerned and not necessarily of Pinprint Publishing or any of their agents. *Amiga Active* takes every reasonable precaution to ensure that facts are accurate at time of going to press, but cannot accept responsibility for any inaccuracies that may occur.

Pinprint Publishing

Pinprint Publishing Ltd.
Systems House, 14 Victoria Road,
Bournemouth, Dorset BH1 4RR, ENGLAND.
Tel: 01202 296293 • Fax: 01202 411110
www.amigactive.com



All sorts of information about the magazine can be found on our web site, at www.amigactive.com

Reserve a copy of Amiga Active magazine!

If you have trouble finding Amiga Active, please use the magsave coupon below.
Fill in and hand it to any newsagent who will then have to order a copy of the next issue in for you.

AMIGACTIVE MAGAZINE

Make sure you get the next issue of *Amiga Active* Magazine. Fill in this form & hand it in to your newsagent. Photocopies accepted.

Distributed by:
COMAG Magazine Marketing
Tavistock Road
West Drayton
Middlesex UB7 7QE
ENGLAND.

Your name and address:

Name: . . . . . .

Address: . . . . . .

. . . . . .

Post Code: . . . . . .

Newsagent's name and address:

Name: . . . . . .

Address: . . . . . .

. . . . . .

Post Code: . . . . . .

Box number: . . . . . .

NOTE: We can't promise anything, and everything is subject to change at the last minute whether we like it or not.

AMIGACTIVE MAGAZINE

Collectors Edition CD VOL 1

The first six issues of Amiga Active - with all related files from the original coverdiscs - all lovingly compiled onto one pant-wettingly gorgeous CD for just £12!

Relive these - and more - great moments!

"I must be a sucker for this sort of thing."
Andrew Korn, Issue 1

"All you get when you feed off hope is death by starvation."
Jason Compton, Issue 2

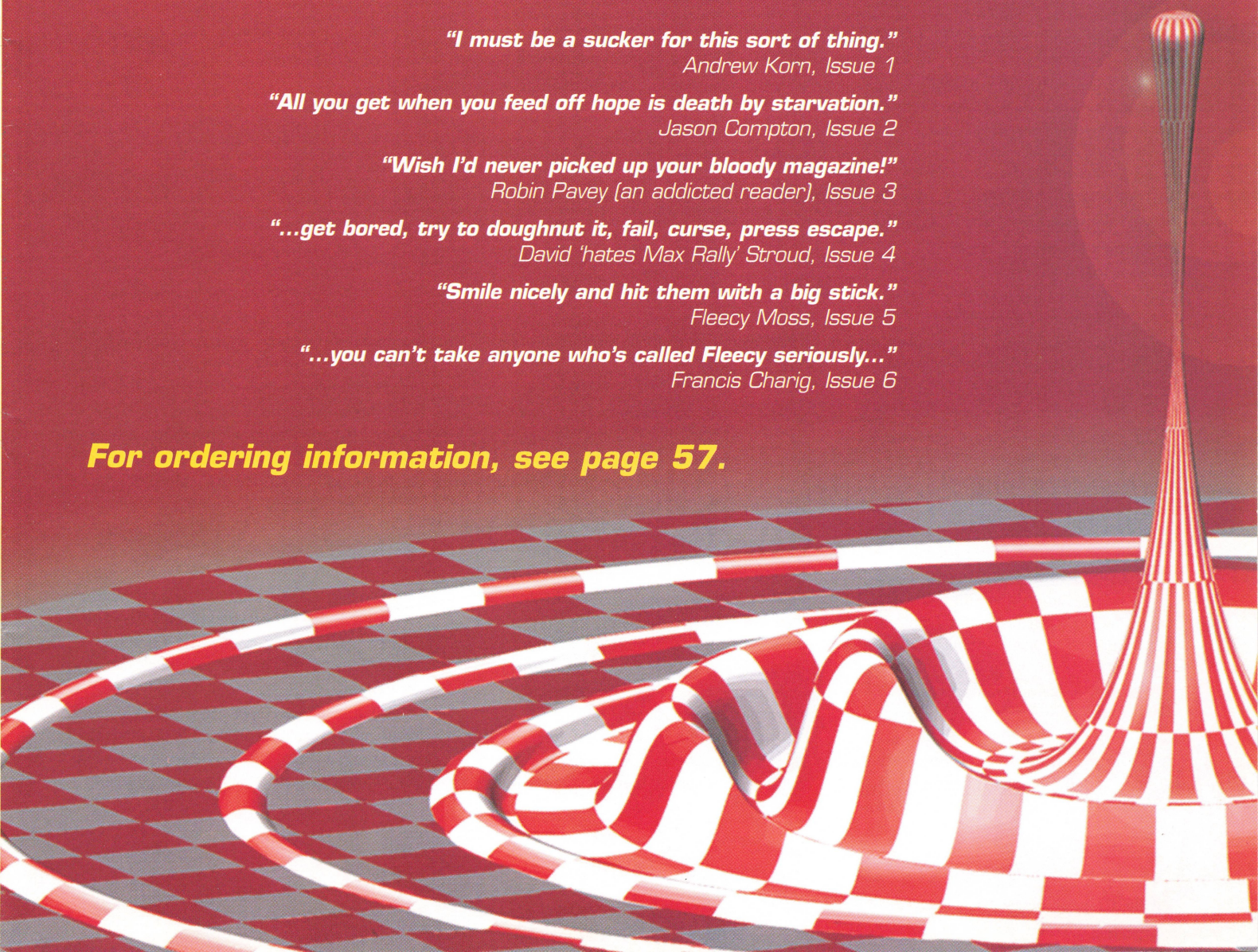
"Wish I'd never picked up your bloody magazine!"
Robin Pavey (an addicted reader), Issue 3

"...get bored, try to doughnut it, fail, curse, press escape."
David 'hates Max Rally' Stroud, Issue 4

"Smile nicely and hit them with a big stick."
Fleecy Moss, Issue 5

"...you can't take anyone who's called Fleecy seriously..."
Francis Charig, Issue 6

For ordering information, see page 57.



The other Active

Pasing Chris Wiles... Active Technologies' supremo talks about his time at the cutting edge of the Amiga's introduction to the Internet.

Remember Active Technologies? Of course you do; there's a pretty good chance you're using software from them - if you're online, that is. Active Technologies distributed Vapor's range of Internet software and most importantly compiled a lot of it into the superb NetConnect package.

Active Technologies stayed in the Amiga market longer than most. Their last product, NetConnect 3, was reviewed in issue three of this very mag. We found Active Technologies' owner Chris Wiles squirreled away in Bath, where he currently works for the former publishers of Amiga Format, Future Publishing.

Amiga Active: It was a shame to see Active leave the Amiga market - was it the traditional shrinking sales problem?

Chris Wiles: Essentially, yes. 1998 had been our best year and it was easy to get carried away and assume 1999 was going to be even greater. Instead of going ahead and releasing NetConnect 3, it would have been wiser to have given up earlier in the year. As far as I remember, the early part of 1999 was probably our worst sales period on record, and it never really recovered. NetConnect 3 turned out to be a logistical and financial headache, selling less than a third of the figures NetConnect 2 achieved.

AA: Active Technologies was a bit of a late-comer to the market. Do you feel that gave you an advantage in getting yourself established?

CW: Active had been around since the early 90's, but in a more localised format. It started off as the Bristol Amiga Club, which lead to the Northern Amiga Users Group. These were pretty much small-time hobbies of mine, concentrating on providing good quality public domain software to members. During 1995 (my last year at university) I remember dreaming of putting together a comprehensive 'all you need' Internet solution, and a multimedia solution for brand new Amiga users. NetConnect 1 didn't reach the shelves until March 1997.

AA: Are there any projects that you wish you had been able to complete with Active?

CW: Probably the PC version of NetConnect, which I had proposed in 1996. Considering Turnpike - who would have been our competitor - was sold to Demon for £11 million in late 1997, there was a market! The other would be Get Started, which was around 25 percent complete at termination point.

> "This really would have kickstarted the Amiga as an Internet ready machine."

AA: What can you tell us about the Get Started project?

CW: This was one of the two projects I considered back in 1995, but NetConnect (or "Get Connected", as it was called in 1996) dominated our development and Get Started was sidelined. Get Started was going to be a multimedia solution to show new Amiga users what they could do with their machine, and how to do it. The project was rekindled back in 1997 when Amiga Technologies decided they wanted to do their own Get Started and put me in touch with a couple of German developers, who had the idea of creating their own datatype - something that became Advanced AmigaGuide.

This was almost feature complete, before Amiga Technologies gave up the ghost and our programmer left university, became disillusioned with the Amiga market, and went on to code multimedia applications for the PC.

AA: Do you think that the Amiga Surfer pack could have given the Amiga a real chance as an early Internet-ready machine, or did the march of technology and Microsoft's desire to dominate the Internet mean that it was doomed from the start?

CW: Potentially, although the Amiga still needed a faster processor, more memory and a hard drive. These, plus a modem and the software, tended to take the Surfer Pack towards the £1000 mark, with a monitor. What was needed was an '030 machine and small hard drive included, for £400. This really would have kick started the Amiga as an Internet-ready machine.

AA: Do you pay much attention to what is happening in the Amiga market now? What do you think of the current Amiga Inc. and their partners Tao?

CW: I don't follow it too much. I don't think anything memorable has happened since we left the market in October 1999? I really don't believe that Amiga can come back as a home computer. Apple have enough problems trying to get 'brand name' software for OS X - and this company sells millions of computers every year! It's a chicken and egg - you need the software to encourage people to move over to the machine but you need to sell machines to get people developing the software.

Who's Next?

If you'd like to know what happened to someone from the Amiga's past, write in and let us know. Maybe you've seen a once-famous Amiga celebrity delivering post in your neighbourhood, or perhaps you're just curious to find out if your milkman is the real David Pleasance. Whatever your enquiry, we'll do our best to disseminate the truth, so e-mail backpage@amigactive.com or write to 'Back Page' at the usual address.

WORLD OF AMIGA IS BACK - IN THE UK!

WoA SouthEast

SPONSORED BY

AMIGACTIVE MAGAZINE

World of Amiga South East Show
Saturday 3rd November 2001
Brentwood Essex UK

Amiga CTO, Fleecy Moss will be in attendance showing the latest AmigaOS on the latest hardware. If that isn't enough, this could be your first opportunity anywhere in the world to see and even buy the AmigaOne and OS 4.0

Tickets £3.50
BUY ONLINE NOW!
www.worldofamiga.com

CONFIRMED EXHIBITORS

- AMIGA ACTIVE MAGAZINE
- EYETECH
- FORE-MATT HOME COMPUTING
- KICKSOFT
- ANALOGIC
- 100% AMIGA
- BLITTERSOFT

Poplars Hall, Poplar Drive, Hutton, Brentwood, Essex CM13 1YU

Quality Internet access from Wirenet

For fast reliable Internet access, call Wirenet
For Amiga support from experts, call Wirenet

For non-0845 access numbers, needed for some cost saving plans, call Wirenet

For special prices on your own Internet domain,
call Wirenet

WIRENET
AMIGA INTERNET

Call Wirenet on 01925 791716, email us at sales@wire.net.uk or... visit our web site at http://www.wire.net.uk

All connections are provided by the high-speed U-NET/VIANet backbone

FREE INTERNET FOR LIFE

100% UK Local Call Coverage

Abel Gratis Support Every day 09.00-23.00

Software on the Cover CD
Free software for Windows, Mac and Amiga Platforms

Become a free ISP.
Generate extra income.
Create client loyalty
Visit www.isp-pdq.co.uk

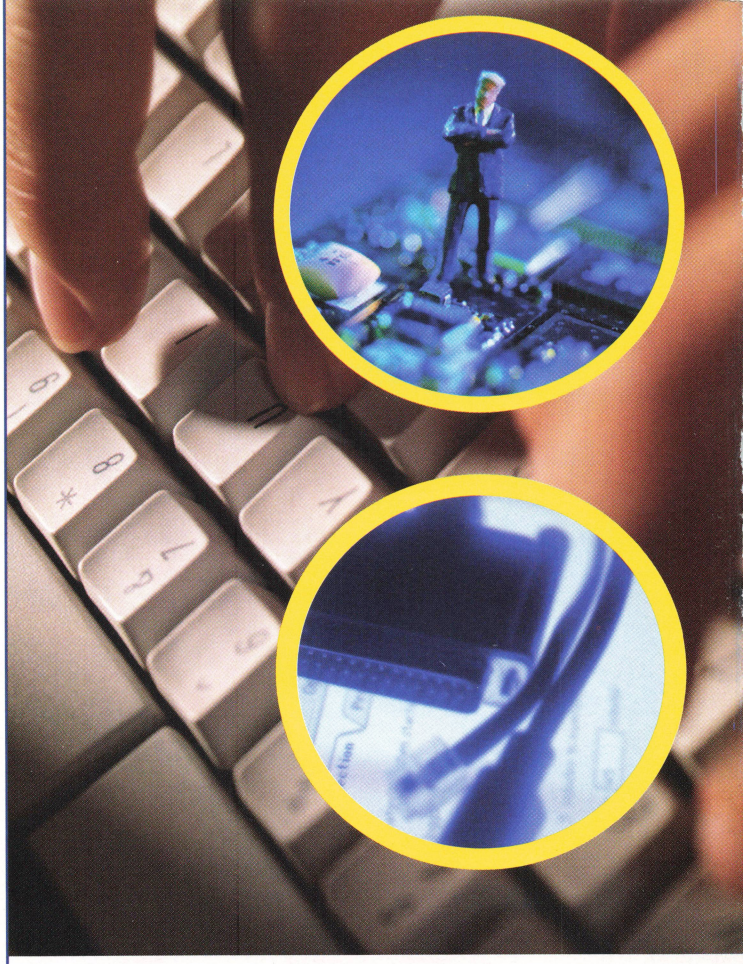
Tel: 0906 680 4444 Fax: 0906 557 4444
Email: sales@abelgratis.co.uk
Sign up by going to: http://www.abelgratis.co.uk

Now Switch, Solo, Visa and Mastercard payments can be made online at www.kicksoft.co.uk
Email: sales@kicksoft.co.uk Phone/Fax: 01737 219280

K SOFT

SHAREWARE		COMMERCIAL SOFTWARE	
Frogger 68k	£12	Candyfactory Pro	£35
Frogger PPC	£18	Golded 6	£30
Softcinema	£18	Drawstudio 2	£35
Riva	£18	Diavolo	£50
Moovid 68k	£12	Photogenics 5	£70
Moovid PPc	£18	Aweb Upgrade from OS3.5/3.9	£29.99
TaskiSMS	£12	Aweb full version	£35.99
Inet Dial	£40	Art Effect 4	£75
Spitfire 2	£25	PFS3	£35
Metaview	£18	Opus 5	£55
Image engineer	£25	Pagestream 4	£129
		Pagstream upgrade	£69
		Crossdos 7	£55

30 Whitegate Way, Tadworth, Surrey, KT20 5NS



VP
VIRTUAL PROGRAMMING

Programmers Wanted

Are you a coder?

Graphic artist?

Musician?

Do you want to work with a forward thinking software publishing team?

If so, we would like to hear from you.

We are a new company developing Entertainment and Application programs for the AmigaDE.

Please send a written CV and examples of recent work to us.
c/o Amiga Active Magazine,
Programmers Wanted,
Systems House, 14 Victoria Road,
Bournemouth, Dorset BH1 4RR.

Or fax your details to 01202 411110.


...Brace for Impact...
MERLANCIA
Industries
www.merlancia.com
Merlancia Industries

AMIGA® Computers & Peripherals

ANALOGIC

Sales & Repairs While-U-Wait!

THE ONLY AMIGA REPAIR CENTRE IN THE UK RECOMMENDED BY AMIGA INTERNATIONAL

FREE OS 3.9 when you buy 3.1 ROMs and 3.1 Gig 2.5" Hard Drive

For more special offers visit our website: www.analogic.co.uk

All repair prices include labour, parts & VAT • 3 months parts & Labour warranty • 24 hour turn around on most computers • FULL DIAGNOSTIC, SERVICE & SOAK • £10.00 Extra charge for while-u-wait repair service • Pick up & delivery service available • Fixed repair charge: A500 / A500+ / A600...£39.95, A1200...£49.95, A1500 / A2000 / A4000...Quotation.

AMIGA COMPUTERS & TOWER CASES FOR A1200 & A4000

A1200 Magic Pack £99.95
A1200 + 810Mb HD £139.95
A1200 + 1Gig HD £159.95
A1200 + 2Gig HD £179.95
A1200 + 3Gig HD £199.95

Please call for other 2.5" & 3.5" HD Configuration

A1200 TOWER + Mouse + PC Keyboard £119.95
A1200 TOWER + PC Keyboard + A1200 Motherboard + Mouse + Floppy Drive with Front Bezel £219.95
A4000 RBM Tower £199.95

Please call for other Tower Deals.

FREE FITTING into Tower all items bought from Analogic.

EXTERNAL SCANDOUBLER & FLICKER FIXER

Scandoubler with flicker fixer £69.95

MONITORS 3yrs warranty

15" SVGA £119.95
17" SVGA £159.00

VIDEO GRABBER

PROGRAB 24 .....£99.95
Grab images from any video source

060 SPECIAL OFFER APOLLO BOARDS

1230/40 with 2 sockets ..£59.95
1260/50 .....£149.95
1260/66 .....£174.95
Apollo Z4 .....£99.95
Trade in your 1230 for a 1260.
Please call for details.

SCANNERS

ARTEC Scanner + Classic Squirrel + Software ..£159.95

GENLOCK Now In Stock

For all Amigas **£99.95**

MEMORY SIMMS

4Mb ...£9.95
8Mb ..£14.95
16Mb ..£29.95
32Mb ..£49.95
64Mb ...£POA

SQUIRREL SCSI INTERFACES

Classic Squirrel £59.95

MEMORY UPGRADE A500/A500+/A600/A1200

A500 to 1Mb £13.95
A500+ to 2Mb £19.95
A600 to 2Mb £19.95
A1200 8Mb £39.95
A1200 4Mb (upgradeable to 8Mb) £34.95
A1200 0Mb £29.95

ROMS & OS 3.9

ROMs 3.1, Disks, Manuals .£39.95
3.1 ROMs for A1200 ...£24.95
3.1 ROMs for A4000 ...£29.95
OS 3.9 .....£29.95
ROMs 3.1 + OS 3.9 ....£44.95

HEAVY DUTY PSU

A500 / A600 / A1200 ...£49.95

FLOPPY DRIVES

Internal Floppy Drives for
A500 / A600 / A1200 ...£19.95
A2000 .....£39.95
A4000 .....£49.95

56.6K MODEMS

56K Modem (+ Software listed in last advert) £69.95

Silver Surfer £24.95
Power Flyer £49.95
IDE Fix (4 Way Buffered Interface + Software) £27.95
Buddha Flash £49.95
Kylwalda (Boot adapter) ..£14.95
PC Floppy DRive £19.95
Catweasel Mk2 .....£49.95
Hypercom 1 .....£29.95
Hypercom 3+Zorro £49.95
Hypercom 3+Z Desktop ..£49.95
Ioblix Parallel £49.95
Ioblix Serial £49.95
Midi Interface £29.95
XSurf Zorro Ethernet Card .£79.95
Cybervision 64/3D £169.95

RING US FOR A POSSIBLE **PRICE MATCH** FOR ITEMS NOT LISTED HERE

A1200 MOTHERBOARDS

A1200 Motherboards **With 3.1ROMs** £89.95
A1200 Motherboards **Without ROMs** £79.95

SPECIAL OFFERS

14" Colour Amiga Monitor ..... ONLY £39.95
CD32 with Power Supply £79.95
CD32 + SX32 Pro + 8Mb RAM and + 030 Accelerator £149.95
Track Ball £14.95

External SCSI Hard Drives with Power Supplies

540Mb £39.95
1.08Gig £59.95
4.3Gig £129.95

HARD DRIVES

All Hard Drives are pre-formatted, partitioned with Workbench loaded. 2.5" Hard Drive prices include cable, software and screws for fitting.

2.5" IDE

120Mb ...£44.95
340Mb ...£54.95
540Mb ...£59.95
720Mb ...£64.95
810Mb ...£69.00
1.1Gig ...£99.95
1.8Gig ..£114.95
2.1Gig ..£119.95
3.2Gig ..£129.95
4.8Gig ..£149.95
6.4Gig ..£169.95
10Gig ...£239.95

2.5" IDE Cable & Software if bought separately £9.95

3.5" IDE

2.5Gig ...£65.00
10Gig ...£85.00
30Gig ...£129.95

2.5" to 3.5" IDE Cable & Software if bought separately £12.00

3.5" SCSI

540Mb ...£29.95
1.08Gig ..£54.95
4.3Gig ...£99.95
9.1Gig ..£199.95

SOFTWARE

Image FX £149.95
Scanquix 5.00 ...£54.95
Camcontrol £25.50
Make CD (TAO) ..£34.95
Make CD (DAO) .£49.95
Scala MM400 ...£54.95
Photoscope £59.95
Turboprint (7.10) .£37.50
ibrowse 2 .....£34.95

Visit our website: www.analogic.co.uk

CD-ROMS & CD-REWRITERS & IOMEGA ZIP DRIVES

Please call if you require any combination in External Twin Boxes.

44x Internal ATAPI CD-ROM £39.95
44x External ATAPI CD-ROM £79.95
6x4x32 CDRW SCSI Internal £179.95
6x4x32 CDRW SCSI External £219.95
4x Internal SCSI CD-ROM £39.95
4x External SCSI CD-ROM £69.95
32x Internal SCSI CD-ROM £89.95
32x External SCSI CD-ROM £119.95
Zip 250Mb Internal ATAPI £124.95
Zip 250Mb External SCSI £134.95
8x4x32 CDRW ATAPI Internal £89.95
8x4x32 CDRW ATAPI External £129.95

WE STOCK A RANGE OF PCI CARDS FOR THE MEDIATOR INCLUDING VOODOO GFX

CHIPS • SPARES • ACCESSORIES

(Please ring for chips / spares / accessories not listed here).

ROM 2.05 .....£19.00
A500 / A500+ Keyboards £19.95
A600 / A1200 Keyboards £19.95
A500 / A600 / A1200 Power Supply £14.95
PCMCIA V Adaptor £19.95
Amiga Mouse £14.95
Amiga SCART Lead £14.95
Parallel Printer Lead £9.95
A1500 / A4000 PSU .....£POA
50 pin male to male Centronic Lead £14.95
50 pin female to male Centronic Lead £14.95
Amiga Monitor Leads £14.95
Squirrel Interface £59.95
PC Keyboard £14.95
Original A4000 Keyboard £39.95
80 watt Speaker £19.95
200 watt Speaker £34.95
Standard 3 Way IDE Cable £4.95

Component Spares: We are the largest distributor and retailer of Amiga spares in the UK.

NEW PPC PRODUCTS NOW AVAILABLE!

PPC FOR MEDIATOR

G3/G4 750@400 £269.95
G3/G4 750@550 £369.95

B.Vision for PPC £169.95

Mediator Bus Board £129.95

Full range of 3DFX Voodoo cards in stock.

ANALOGIC
ANALOGIC
ANALOGIC

Telephone: 020 8546 9575
Fax: 020 8541 4671
Email: sales@analogic.co.uk
Open Mon-Fri 8.00am-5.30pm, Sat 9.00am-1.00pm

Analogic Computers (UK)Ltd. Unit 8, Ashway Centre, Elm Crescent, Kingston-Upon-Thames, Surrey KT2 6HH.

AMPLE PARKING

MasterCard VISA

All prices include VAT. • All prices & specifications subject to change without notice. • Fixed charge for repair does not include disk drive / keyboard. • We reserve the right to refuse any repair. • P&P charges £5.00 by Royal Mail or £8.00 for next day courier. • Please allow 5 working days for cheque clearance. • All sales/repairs are only as per our terms and conditions, copy available on request. • Please ring for latest prices.