

AMIGA

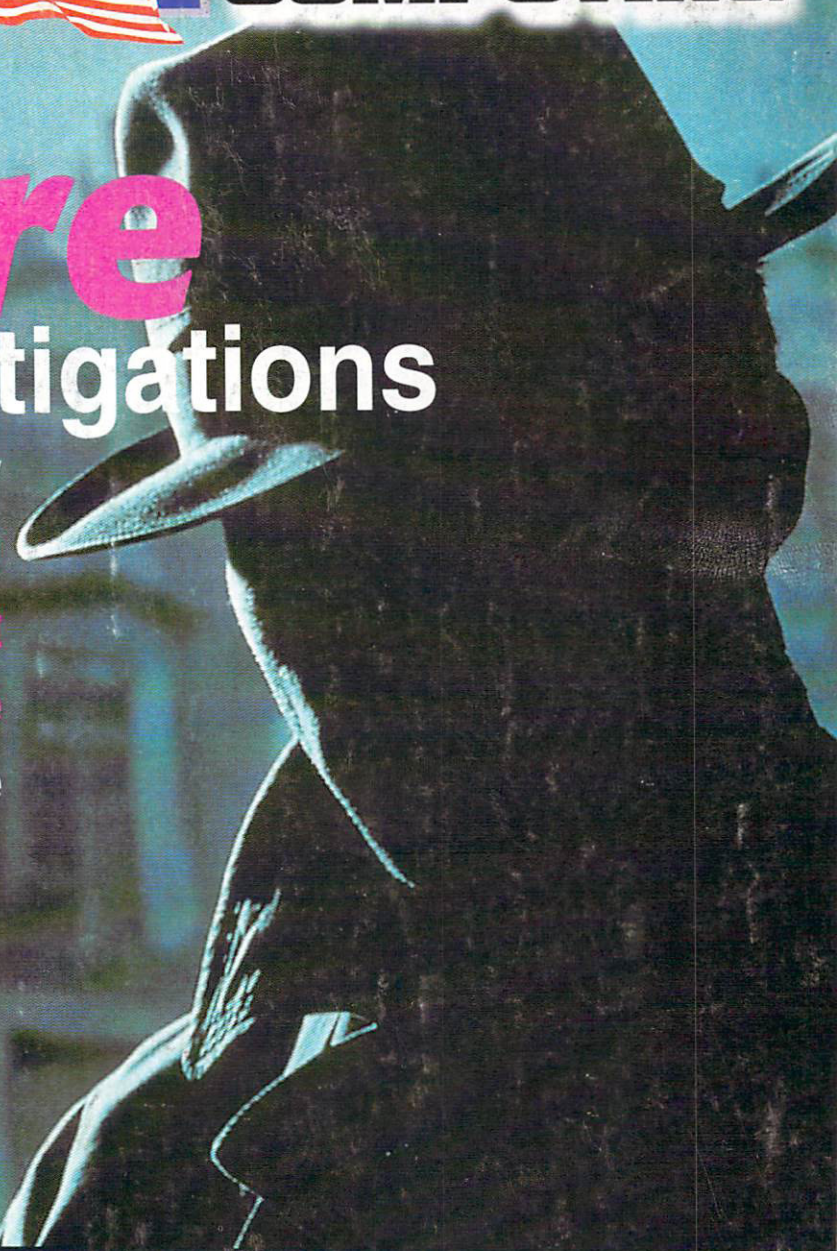
US EDITION



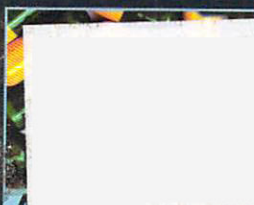
COMPUTING

Future investigations

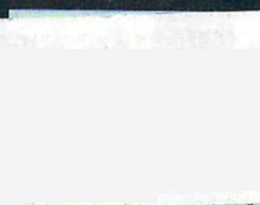
We start the new
year with an
in-depth look at
the future of the
ultimate machine



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C Contents

SYSTEM

SYSTEM NEWS 70

Do you want to know about all the latest happenings in the Amiga World, well you might find out here. Take a look, go on... We don't bite!

LEADING LAP 76

We review Kellion Software's 3D racing game, to please all the fans of Microprose's Formula One Grand Prix

PINBALL MANIA 72

If anymore Pinball games arrive on the Amiga, someone could open up a little Pinball shop? Hmm, that'd be nice

COALA 78

After presenting you with two Pinball games, we are now going to present you with a bumper crop of Helicopter games! Well, two actually



TEAM 82

'Probably the best football game ever!' Right, only if they set fire to every other football game in the world... probably!

CITADEL 74

Another Doom game! Hurrah, such excitement. At least we'll all be experts soon



THOMAS THE TANK ENGINE 84

Ringo Starr's jopery returns to grace the Amiga screens - only he doesn't really make an appearance, so I lied. Sorry

REVIEWS

MUI 3 27

The software responsible for countless Amiga make-overs gets its own facelift

PERSONAL SUITE 28

A one-stop-shop for typography, painting, writing and data storage



DIGITA ORGANISER 33

Digita's quest for order in the chaotic Amiga world continues

DIGITAL UNIVERSE 56

Terrestrial bodies, the latest in astrological software on test

LIGHTWAVE CDs 58

The add-ons just keep on coming for the ultimate in Amiga 3D



ASIM CDFS 46

The all singing, all dancing CD file system gets an impressive upgrade

APOLLO 620 60

An accelerator that can breath new life into a tired A600

FEATURES

LASER GUIDANCE 20

The search for the ultimate Amiga CD continues

HEALTH & HOSPITALS 24

Tina Hackett investigates the Amiga's roll within the hard pressed NHS

LOOK AHEAD 36

We talk to the gurus and ask what awaits the Amiga in 96

COLOGNE REPORT 38

An exclusive report from Europe's premier Amiga show



POWERPC 44

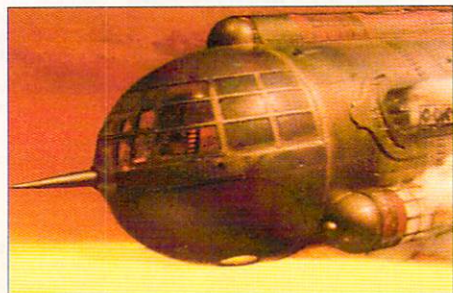
The inside story on the chip that's set to revolutionise the Amiga

UNDERCOVER 64

AC takes to the streets in search of a sales pitch that really sells

BEGINNER'S GUIDE 61

The A1200 is back. Enter the beginners' guide. Essential stuff for any Amiga newbie



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REGULARS

US NEWS 12

A marketing angle from Amiga Technologies – but only just

NEWS 8

The show season brings some surprise announcements from the States

LETTERS 47

Flaming pens and fiery prose as the readers drive the point home

PUBLIC SECTOR 52

The bargain basement. Everything must go in the Dave Cusick closing down sale

ACAS 50

The techie questions put to the sword by our ubiquitous systems guru

AMIGA GUIDE



Shock, horror! Yet more insider info on the finer points of formatting

88



Paul Overaa reveals why assembler is the only choice for Amiga coders

89



The inside story on the ARExx talents of our old friend Ed

90



Phil South logs-on and looks around for the very best in on-line imagery

91



The mysterious Mr Nord explores the uncharted depths of copyright law

92



The hints and tips continue in Phil South's Amos anthology

93



The hardware solution to the patching problem auditioned by Mr Overaa

94



Steve White explores the explosive side of 2D special effects

95

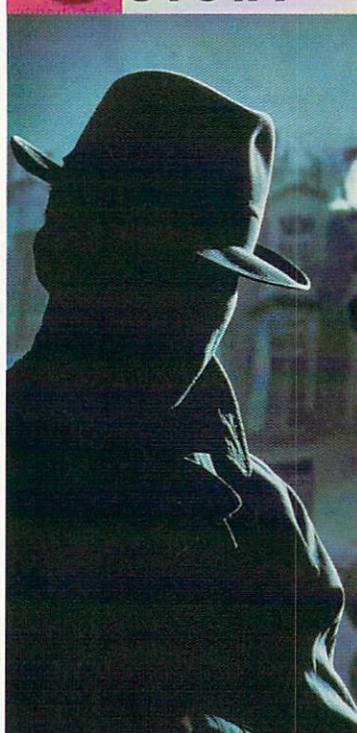


The concluding chapter in Gary Whiteley's inside guide to typefaces

97



COVER STORY



FUTURE AMIGA 35

This month Amiga Computing puts its plans on the table for an all new Workbench. Could this be the shape of things to come and perhaps even the ultimate operating system?

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For details of Amiga Computing's subscription offers turn to page 32



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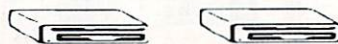
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-By Kit Felice. Amazing multi-level AMOS arcade game. REQ:Hard drive, 2 MB RAM, ECS or AGA, LHA decompressor, any Amiga OS. 3D tunnel scenes are featured in this excellent arcade adventure game. Hours of fun!

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-By John B. Graham. Experience Amiga's first software based Full Motion Video arcade game. Any Amiga with 1 MB of Chip RAM and hard drive can play this thrilling arcade F-14 fighter game. Over 11 megs of hard hitting all video action!

PSYCHO SQUARES DELUXE \$15

-By Shane R. Monroe. So easy, you'll learn it in 5 minutes; so addictive you'll play it for 5 hours! This strategy game features EHB graphics, digital speech, original music, two player mode and much, much more! Complete with many awesome background graphics! You'll love it!

PSYCHO SQUARES DLX:ADULT GRAPHIC DISK \$4

-By Shane R. Monroe. If you love Psycho Squares Deluxe background graphics, imagine playing for STEAMY ADULT pictures! 13 levels of beautiful, hot women! Requires the registered version of Psycho Squares Deluxe sold above.

WAR GAME PROCESSOR \$25

-By Sean Emerson. Your favorite wargame can now be played on computer, using a friendly graphic interface. Positions can be saved to disk, as well as detailed histories of where each unit moved in the previous turn or phase. These can be sent e-mail to your opponent, who will be able to replay the turn, even seeing your comments as play unfolds! Or maybe your opponent doesn't have this program. That's okay, because the War Game Processor can generate your turns into summaries of plain English text! All you do is make your moves. Other features are:compatible w/most strategy board war games, play by mail/Email, full color graphics, scrolling play screen, replay/review moves, automatic dice rolls, customizable dice, stores any # of games/setups at once..... too much to list! Also comes with a module editor that allows you to generate WGP modules for your favorite wargames and edit the heck out of them!

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news

By Tina Hackett

SHOW STOPPERS



The Cologne Developers conference – key figures from the company were on hand to convince everyone of a rosy future

The future of the Amiga is alive and kicking if the announcements at the latest computer shows are anything to go by. The first show on the agenda was the Video Toaster Expo which was held in Los Angeles on 2 November where the choice of the PowerPC for the next generation Amigas was revealed. It is hoped that the first 'Power Amiga' will be available in the first quarter of 1997 and will use the PowerPC 604 RISC CPU. They will be backwards compatible with current models.

Manfred Schmitt commented [at the Cologne developers conference]: "The choice of the Power PC was made for its speed, and also because it is actually the only RISC processor that is currently used in personal computers, which will insure us that needed quantities will be available at attractive prices

on a mass market." In addition to this Phase 5, a German turbo board manufacturer, independently announced that they will be releasing a Power PC board which will start with the MPC603e and will run at 100MHz upwards. They will then go on to release a professional version – the MRC604 which also starts at 100MHz. This will be a 64-bit local bus system with the option of PCI capabilities. Priced between 1000 and 2000 DM, it will be available for the A1200, A3000 and A4000. Development boards will also be released in January or February 1996 and will come with a compiler for Power PC code. The commercial board should be ready for summer 1996. The project is already being supported by Almathera, Softwood and SoftLogik.



The PowerPC board from Phase 5

platform, not as a quick money maker for the Christmas season, but as one of the most important strategic challenges in the Escom group. Amiga shall become the best platform for Multimedia, 3D software, graphics processing, Internet and many more applications."

The Internet bundle in question is one that will be marketed as a complete package and will include modem and cables with the software pre-installed on the hard drive. Manfred Schmitt commented: "We will use the Amiga technology to

provide very cost-effective on-line solutions. These can be marketed as set-top boxes or as Amiga computers equipped with the necessary hard – and software.

He continued: "The actual computer market is widely occupied by Intel and Microsoft platforms. We think that this combination is not satisfying for all uses. There is a strong market for the home computing below 1000DM. For Internet surfing, spending 2500DM for a PC is not what I would call a home-oriented solution. These are definitely market segments where the Amiga 1200 can be more competitive."

See our Cologne show and Power PC features for more details.

POSITIVE NEWS

The Cologne show was also very positive for the Amiga too and the developers conference brought news of the Internet package, the set top box, and support for developers. Confidence was high, and Petro Tyschtschenko was eager to point out the significance of the Amiga in their plans: "We want to show our commitment to the Amiga

NEW AMIGA'S HIT BY COMPATIBILITY PROBLEM

Disgruntled customers who recently bought the new Amiga Magic Pack are returning some software back to the shops because of a compatibility problem.

Computer Retail News, a trade paper for retailers, ran a story which suggested that retailers had been urged to remain calm after Amiga Technologies admitted there was a problem with the new machines. Some old and new titles have been affected and reasons put forward varied from 'anti-piracy code' to 'illegal software practices' by which they mean the developers have not been sticking to the Commodore AmigaDOS guidelines. However, many games incorporate this illegal code as

part of their piracy protection. Jonathan Anderson, Managing Director for Amiga Technologies UK commented: "The floppy drive is under re-evaluation tests. We will provide more news when we get the results back."

The newspaper also reported that retailers were not happy that the £499 Amiga Pack came with software that wouldn't run without an extra 2Mb of RAM. And the solution? Box stickers stating this were being provided.

The new Amiga Magic Pack arrived on the shelves – only to be met by incompatibility problems



SDL BACK IN BUSINESS



☞ The new owners of SDL (middle) have offered the original partners a position on the Board of Directors

million in share capital, specifically for the takeover.

SDL's financial troubles were caused by the collapse of Commodore International and not helped by the fact that when they tried to move into other markets, the supply of PCs from companies such as IBM and Compaq were erratic.

Gosling and Tidy will now be joint Chairmen of the company and Silica's original partners, Tony Deane and Mike West, have been offered the position of Directors on the Anglo Corporation board. Tidy commented: "Our immediate focus will be to concentrate on taking full advantage of the busy Christmas season. The next two months should see the new company off to a good start, allowing us time early in the new year to reflect on our performance and prepare our future strategy accordingly."

Part of that strategy will be the search for new product lines to strengthen and broaden the Silica product portfolio. When asked whether they would still be as dedicated to the Amiga line, John Arundel, Group Marketing Controller commented: "We're very committed to the Amiga – that's obviously where we're very strong, it's our speciality."

Anglo have also stated that they will be honouring all existing customer warranties and product deposits that were in place before the takeover. Arundel continued: "They [Anglo Corporation] are very committed to the customers – they are not obliged to do this but they want to keep the good relationship Silica have built-up over the years."

Q DRIVE



☞ The Amiga Q Drive will retail at £229 including VAT

Specifications for the new Amiga Technologies CD-ROM drive have been revealed. Called the Amiga Q Drive, it is an external, Quad-speed, CD-ROM drive that connects to the Amiga 600/1200 via the PCMCIA slot. Priced at £229 (including VAT) the Q Drive will be able to run CD32 software with software emulation, play Audio CDs, and an automatic slideshow feature for viewing PhotoCD. It offers a transfer rate of 600Kbs and ATAPI/EIDE interface. The sound will also be mixed with Amiga sound output. The drive should be available this December, so expect a full review soon.

VIRTUALLY THERE

The Virtual Reality headset, called the i-glasses, are now available from Silica. The glasses can be plugged into a computer or games console and the user will then be able to experience 3D video games.



The Amiga (composite/TV) headset ☞ **The Virtual i-glasses – takes any PAL composite video source – the future. But when will we see the software?** to produce a virtual 80" colour display. But now, an Upgrade Set is also available to give the composite version all the powers of the PC such as headtracking, which allows three degrees of movement in all directions. The glasses are apparently selling quite well with people who want to be 'the first in there' according to Silica's Marketing Controller, John Arundel. He offered: "We'll see big things from this in the future." Although there is, as yet, no Amiga software for the glasses to reap the full benefits, Arundel commented: "You'll get the full benefit with 3D games – it will all come to fruition."

A QUICK MENTION

A quick mention to the Amiga International User Groups Association – an association which is aimed at groups or programmers who produce software for the Amiga. Their committee represents a cross-section of Amiga users including programmers, modem users, PD houses and users groups. Formed from a number of other groups, they have recently published their second newsletter which highlights issues such as 'rip-off' CDs and cowboy PD houses.

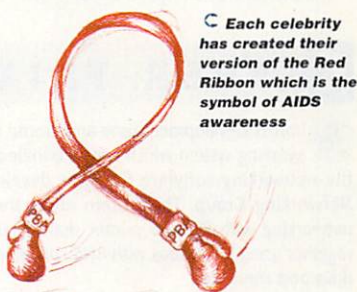
Anyone wanting to contact them can do so on 0181-455 1626.

news snippets

WORLD AIDS DAY

A new initiative to use the Internet as a way of communicating health promotion has been established in the run up to World AIDS Day. By the time you read this, World AIDS Day will have been and gone (1 December) but the site will remain live until the 31 January. The project has been set up by the Health Education Authority in order to convey accurate health messages about HIV and AIDS and raise awareness of the disease. Celebrities from Joanna Lumley to Barry McGuigan are endorsing the scheme, and each star has their own version of the Red Ribbon (the symbol of AIDS awareness) which can be seen in the Cyber Art Gallery.

Safe the net at: <http://www.wod.hea.org.uk>



☞ Each celebrity has created their version of the Red Ribbon which is the symbol of AIDS awareness

PROFESSIONAL BOXERS ASSOC

ALL THAT GLISTENS...

Golden Image have announced the launch of their new CD-ROM drive which is the first Quad-speed drive for Amiga 500 owners. To use the drive, an AlfaPower hard drive interface is required but for existing AlfaPower users they can buy the Quad-speed drive as an upgrade for £249.

Alternatively, a complete system with hard drive and CD-ROM Drive is also available from Golden Image. Managing Director, Navin Shah remarked: "We have always supported the Amiga 500 machine and this new CD-ROM product emphasises our commitment to the thousands of users around the country."

They can be contacted on 0181-900 9292.

BOOZENET

Off License Victoria Wine have moved off the high street and onto the Internet in a bid to increase their pre-Christmas sales. BarclaySquare, a division of Barclays Bank, offer a virtual shopping mall on the Internet and Victoria Wine are the latest retailers to join them. Retail Systems Manager, Paul Hamer commented for Victoria Wine: "The net is providing us with the opportunity to open our doors to consumers 24 hours a day, without the need for purchasing new premises or employing additional staff."

Shoppers will be offered a selection of wines and spirits and can choose wines from the recommended list or custom make up their own cases. They can then make a purchase with credit card and have it delivered free to anywhere in the UK.

Barclays is the first bank in the United Kingdom to offer such a service and promise that all transactions are subject to stringent security measures.

Victoria Wine can be found at: <http://www.tl.net/BarclaySquare/>

CANON FODDER

Following on from the successful Canon BJC-600e printer is their latest launch, the BJC-610. Aimed at SOHO users, it offers 720x720dpi resolution colour quality and by keeping their system of four separate print/colour cartridges, running costs will be kept to a minimum. It will print on a wide range of media and promises high resolution, whether on plain or glossy. Fast drying inks will also ensure that colours won't blur even with complex images. Its Automatic Sheet Feeder will hold 100 pages and when manually fed, the printer can produce double-sided documents.

Product Analyst, Julian Rutland commented: "We've designed BJC-610 with the users of dedicated colour printers in mind, and are confident that it offers the lowest running costs on the market." He continued: "The BJC-610 will be invaluable in the small office where the quality of proposals, reports, presentations and pre-press work is paramount."

The printer has an RRP of £449 + VAT.

The Canon BJC-610 promises the lowest running costs on the market



CLEVER TRIX

AmiTriX Development have announced the release of Amiga-Link, a networking system which comes bundled with the new version of Envoy, the networking software that was developed by Commodore's Amiga Networking Group. The system offers the possibility of 'peer to peer' networking with file and printer sharing, and 20 machines can be linked together using RG58 coax with BNC connectors connected to a special floppy drive port connector.

It also has a DMA transfer rate of 450,000 bps from network to memory, so avoids the heavy CPU contention of slip/packet. Envoy 2.0 has new features such as support of AmigaOS 2.04 DOS packet types, support for removable media, enhanced reliability and robust recovery, localisation and AmigaGuide documentation. AmiTriX can be contacted by e-mail - sales@amitrix.com

INTERACT '95

The industry show, Interact '95, is ready and set to go at the Hilton Cavalieri in Rome on the 3-8 of December. Organised by ELSPA and IDG Media, with support from French trade body SELL and German VUD, the conference includes many aspects of the interactive leisure industry and will offer the opportunity to debate how the industry should tackle the huge problem of piracy.

OPTONICAL ILLUSIONS

Multimedia Amiga company, Optonica, are currently giving the machine's corporate ambitions a real boost by supplying huge video walls driven by Amigas to football stadiums throughout the country. They have already installed the system in Wolverhampton FC with a 35ft corner to corner screen size. It has attracted interest from other clubs too and Optonica are now developing a similar system for West Ham.

Their future plans include installing the project for Aston Villa, but they see the real jewel in the crown as the 45ft screen planned for Glasgow Rangers FC. "We consider ourselves to be a professional organisation developing products for the Amiga in exactly the sort of markets Amiga Technologies are talking about" remarked Lee Gibson, Managing Director of Optonica.

SATURDAY NIGHT FEVER

Lottery fever sweeps the nation again and Anthea Turner's face beams out from the screen, as the many hopefuls hold their breath... it could be you.

Pro-soft, amongst many, picked up on this with their successful lottery program and new for next year is Pro-Lottery '96. Keeping the key features of the original, it also incorporates some of the improvements suggested by users of the original such as an enhanced perm generator which covers 48 of the 49 possible numbers. This is one of three new programs from Pro-

Soft for Amiga gamblers. The first to be released is Pro-Football, a prediction generator for both the UK and Australian(?) football leagues. To follow is Pro-Greyhounds which is, as you'd guess, a prediction system for greyhound racing.

Free Demos are available to anyone interested. Send an SAE and two blank disks to: Pro-Soft, 10 Lovell Park Heights, Leeds LS7 1DP. By mentioning *Amiga Computing* you can also receive three £5 vouchers to go towards purchasing the full versions.

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Back in the USA



by **Denny Atkin**

It's good news for the Amiga's revival here in the States – Escom/Amiga Technologies were present at the giant COMDEX computer show held in Las Vegas, Nevada in November with a small booth at the corner of the Virtual i/o i-Glasses pavilion. It was a bit understated, unlike the rather large booths of the past when Commodore chose to exhibit at the show, but it was nice to see a presence at all.

Unfortunately, there wasn't much there to dazzle the crowd. An A4000T with the new 060 board was on display, but there was no software loaded on it. Another A4000T displayed the capabilities of a Picasso board, but this was certainly nothing to write home about at a

show where PC vendors were showing new \$300 3D graphics cards that made Pentium games look like they were running on Silicon Graphics workstations. Between the units were a few A1200s running Pinball Illusions.

In one respect, the display was terribly disappointing. Despite the fact that Amiga hardware and OS development has remained stagnant for over two years now, there are plenty of applications and gadgets that Amiga Technologies could have loaded onto the machines to show that the Amiga is still a force to be reckoned with, one that can hold its own against the newest Pentium

machines for many applications. But they missed that chance, with a bunch of machines showing Workbench screens and pinball games.

On the other hand, this time last year Amiga owners thought they would never see an Amiga at COMDEX ever again, so it was a refreshing surprise to see the company making any kind of effort – however disappointingly executed – to get back into the North American market.

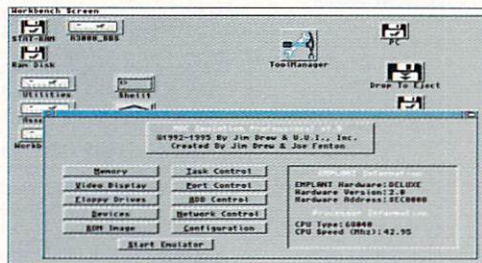
EMPLANT ENHANCED

Utilities Unlimited have announced MAC Emulation Professional, a rewritten and enhanced version of the Macintosh emulation software for the Emplant board. UU promises that the new code is smaller and faster than previous versions, and a new interface caps it off. The original software will continue to be updated to incorporate bug fixes, but I'd look to the Professional version for new features.

The update costs \$34.95, which isn't unreasonable when you consider that UU's Jim Drew has been providing free updates to the Mac emulation since the Emplant board's initial release. The update includes a new driver disk, updated documentation, and a replacement custom logic chip for the Emplant board that will allow UU to provide on-line updates for registered MAC Emulation Professional owners.

Among the new features is a completely revamped user interface that follows the Amiga User Interface Style Guide. The emulation software now opens on a Public Screen instead of a custom one, and the program now uses ASL file requesters. If you're running AmigaOS 3.0 or later, you'll even have access to on-line help.

In the past, Emplant used 256K Mac ROMs, which had the advantage of being inexpensive, but the disadvantage of being difficult to find. The Professional emulation supports all known 512K and 1Mb colour ROMs designed for 680x0



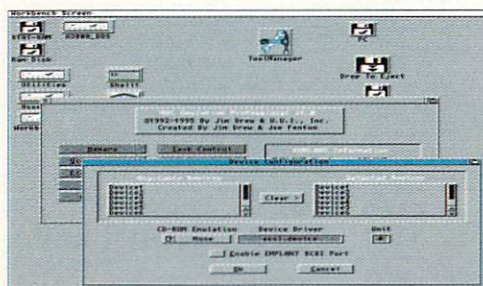
Macintoshes, including ROMs from the Mac II, IIx, IIcx, IIfx, IIsi, LC, LC II, LC III, Colour Classic, and Quadra 700-950. All ROMs will work with caches enabled.

A huge improvement for folks using the Mac emulation for professional work is support for virtual memory. If you have access to an Ethernet network, you can connect your Emplant-equipped Amiga to it using a SANA II-compliant Ethernet card. You can also now use Mac CD-ROMs even if your CD-ROM drive isn't connected to the Emplant SCSI port.

SMOOTHER RUNNING

The Mac OS has been patched so it won't constantly busy-loop, which should make the Amiga side run smoother during emulation sessions. Drew also says he's eliminated the serial port lockups that used to sometimes occur on the Amiga side. Other improvements include enhanced video driver support with more colours and larger screen sizes, better file-transfer capabilities (you can now set filetype and creator, as well as filter files by name), and enhanced sound support. The new custom logic chip serves as more than just copy protection: it improves bus timing, boosting performance and reliability of EMPLANT's VIA interrupts, serial communications, and SCSI operations.

For more information, write to Utilities Unlimited International, 3261 Maricopa #101, Lake Havasu City, AZ 86406; call (520) 680-9004, or fax (520) 453-6407. You can also check the new official Emplant web page at <http://www.mag-net.co.uk/Bsoft>.

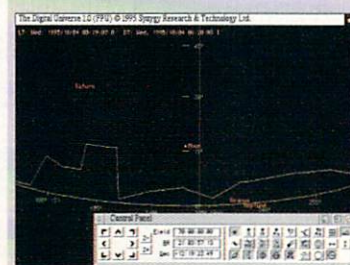


The completely rewritten MAC Emulation Professional module for Emplant sports an Amiga User Interface Style Guide-compliant user interface

DIGITAL SPACE

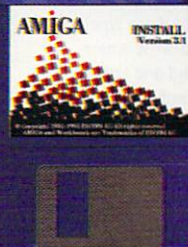
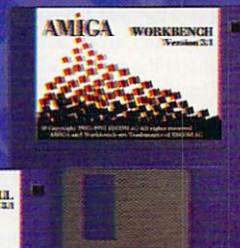
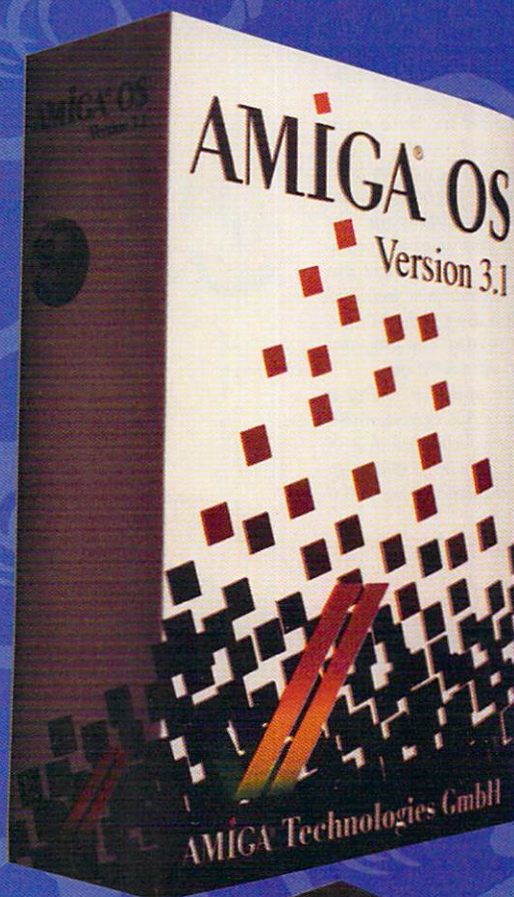
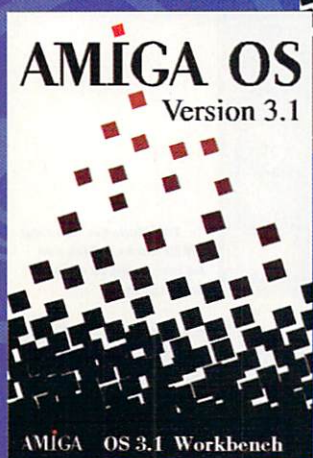
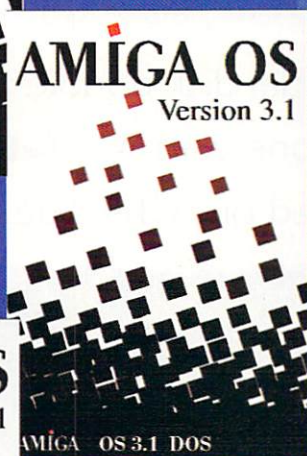
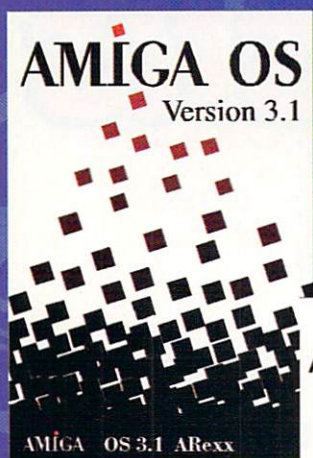
The Digital Universe is an astronomy program for the amateur or professional observer. It combines the advantages of traditional 'planetarium' programs with a massive hypertext multimedia encyclopaedia to create an effective tool which assists the user in observing and learning about the heavens. Fifty thousand lines of code, more than 700 pages of hypertext, and thousands of man-hours have gone into this product to make it the most complete program of its class.

The software was created with assistance from the Canadian Space Agency, the National Research Council of Canada, NASA, JPL, NORAD, the European Space Agency, the Bureau des Longitudes, the Smithsonian Astrophysical Observatory, the Russian Academy of Sciences, and several other organisations worldwide, so it should be extremely thorough. For a full review of Digital Universe see page 64 of this issue and you can also access the web browser on <http://www.syz.com/> for full info and a demo version.



Roam the skies with Digital Universe

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EXTRACTING COVERDISK FILES

To extract the programs off the second disk you must make sure you have booted your computer with the first cover disk, otherwise your Amiga will not be able to find the c:\installer program, and frustration will soon set in. Hard drive users should double click on the SetUp-HD icon before extracting any of the files.

To extract any single archive, simply double-click its icon and follow the on-screen instructions. If you want to quickly extract the program to RAM, select the NOVICE level on the welcome screen and press proceed once on the current screen, and then again on the next. The program can then be found in your RAM disk.

You also have the option of using a floppy disk. If you pick this option, make sure you have a blank formatted disk at the ready, and if you only have one drive get ready for lots of disk swapping and a long wait.

TOOLMANAGER 2.1A

Author: Stefan Becker
Workbench: 2.04

ToolManager is an amazingly helpful program, adding many useful functions and extensions to the Workbench. The prime use of ToolManager is to allow you to have easier access to your most useful programs and tools you have.

Once you have extracted the program off the cover disk there is a pre-written install script which will copy the necessary programs and libraries over onto your Workbench disk. Hard drive users will have no problems with this, but floppy users need to make sure they boot up their computer with a copy of their Workbench disk – otherwise they will need to install it by hand.

You have the option of trying out a supplied demo configuration which will give you a rough idea of what ToolManager is capable of. By dropping a program's icon in to the preference program's window, you are able to give it a number of very useful extras.

When you drop a program into ToolManager the program will ask you how it should handle that program.

The ToolManager preferences are split into a number of sections – exec, sound, image, icon, menu, dock, and access. The exec, sound and image parts allow you to add those types to the program, so the exec section is where you add your programs. The sound and image sections allow you to add sound samples, icon, graphics files and animation files.

The sound and image sections are available because it is possible to add sounds and images to certain parts of Tool Manager. Therefore, when a program is run a corresponding sound can be generated.

All these sections allow you to 'drag and drop' objects into them, so to add an icon image to the image section just drag the image you want over to the preference



Jargon box

Workbench – the Workbench is the Amiga's graphical user interface. The same as Windows 95 and System 7.51 are respectively the PC's and Mac's GUIs. It is meant to make using the Amiga a lot easier.

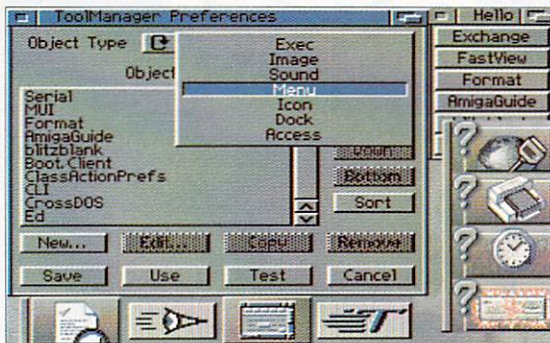
Shell – just as Workbench is a graphical representation of the Amiga's filing system, the Shell is a text-based system. Similar but a lot more powerful than the PC's DOS.

Hard Drive – can be thought of as a really big and really really fast floppy drive. Using a computer without one is a living hell.

Archive – all the files on the cover disks have been archived. This allows us to bunch a lot of files into a much smaller amount of disk space.



A special disk double this month, for everyone with 'L' plates firmly slapped onto the side of their Amiga's.



ToolManager showing off its docks, which can be text, icons or even animations!

window and 'drop' into the window. This then adds a new entry to the list view. To alter any of that object's settings you just have to double-click on that entry and a new window will open with all the adjustable settings that are available.

When you drop a new program into the exec section, ToolManager will ask whether you want just the program adding to the exec list or whether it should also add the program's icon to the image list, as well as giving it a menu entry and also an icon to the Workbench.

A menu entry will make the program's name appear in the Workbench Tool menu, which allows you to run the program by selecting it from there. Similarly, an icon entry creates an icon on the Workbench, and by double-clicking on this icon or dropping a file into the icon the program can be run.

A very useful part of ToolManager is the docks function. This allows you to have a selection of programs represented by a list of buttons on the workbench. This list can be made to appear anywhere, can appear or disappear, and can be viewed either as icons or

as text. Once you have a number of programs in the exec list, you can create a new dock. If you go to the dock section and click on 'new' a window appears that allows you to adjust the new dock. From here you can change where it will appear, how it will look, and you can add what is known as a hotkey. A hotkey is a combination of key presses which will then automatically make the dock appear or disappear. For instance, if you wanted a Tools dock, type *alt t*, and you can now call up the dock by pressing the alt and t key – easy.

To add programs to the dock you need to press the 'Edit Tool List', click on 'new' in this window, click on the choose exec button, and then choose the new program to add to that dock. This is a bit round the houses perhaps, but it works. From here it is also possible to choose images and sound to go along with that program button.

You are best experimenting with all the settings and using the test button to see what effect they have, as there are so many options and the instructions do not explain things too well.

CLASS ACTION

Author: Gasmi Salim
Workbench: 2.04

Computers are really thick. I mean really really thick – even thicker than the coffee we have to put up with from our drinks machine and for which we have had several interested construction firms seriously considering it as a replacement for cement.

When you give your computer a data file, unless it has a icon supplied with it, and if you do not have the program that generated that icon, when you just double-click on it you will only get an error message. What you need is something that will work out what the data file is and which program it should be passed to, and this is what ClassAction does.

As with ToolManager, an installer is available to make installation as simple as possible. Once installed you will have to use the preference program to set up the various options for your machine.

The preference program has two main sections. One to add new file types and the other to pick how a file type is used. The way Class action recognises a file type is that most file formats have an identifying string somewhere in the file



🔊 *The standard ClassAction preferences gives you a good range of preset file formats for you to be getting on with*

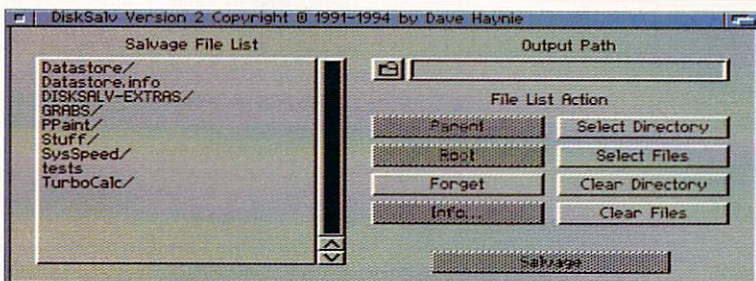
that specifies what file it is. So an IFF file always starts with the word 'FORM', and if it is a picture file it also has 'ILBM' a set distance further along.

Normally, to find out what this special string is you would have to carefully examine the file with a hex editor, but ClassAction has an auto-detect feature built in that can automatically work out how to identify a file type.

Once a file type is defined you can then tell Class Action which program to pass the file to. This is all done through file requesters and is not very difficult. There are also a good number of examples already set-up, so you can get an idea of how Class Action works. If all else fails you could always read the instructions!

DISKSALV 2

Author: Dave Haynie
Workbench: 2.04



C Once DiskSalv has scanned your drive, you can select which files you want rescuing, and where they should go.

One of the most annoying things that can happen when using a computer is when you lose work due to a disk becoming corrupt. There are usually two main reasons for this happening. Firstly, it could simply be the disk becoming damaged, or more annoyingly the computer crashes when you are saving something to disk.

If either of the above two happen the Amiga's file structure becomes damaged and the operating system will not let you write to the disk until the file system has been properly repaired. Strangely, the Workbench does not come with any sort of repair utility, which means someone using a hard drive that becomes damaged would be unable to fix a problem.

DiskSalv is one of the best file recovery programs available for the Amiga. The version on the cover disk is a shareware product, so if you decide to keep it you should send a payment to the author. There is, however, a new and improved version that is a commercial product, so if you feel you really need a disk salvage program, it is well worth considering.

DiskSalv is perhaps best stored on a separate floppy, so if anything horrible happens to your hard drive it will always be ready at hand. There are a number of modes that DiskSalv works in, and which one you use depends on the problem. The undelete and salvage modes allow you to recover deleted and damaged files. If you accidentally format a disk the unformat mode is the one you need, while the validate and repair functions are there to try and save damaged disks, which usually are unvalidated or have check sum errors.

MAGIC MENUS

Author: Martin Korndorfer
Workbench: 2.04



Magic Menu is probably found on almost every Amiga user's Workbench. It transforms the plain looking drop down menus into a far sexier 3D pop-up affair.

The only installation you have to do is drop the program into your WBStartup drawer. If you then double-click on it twice you will be able to configure the look of your

new menus through the easy-to-use interface.

There can be problems now again with Magic Menus, particularly when they are being used on a screen with strange colours, because Magic Menu cannot get the correct colours it uses from those that are at hand. This can lead to black text being used over a black background.



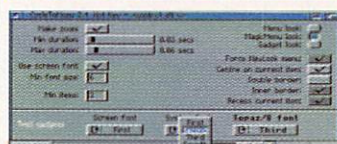
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Computing CoverDisk damaged
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Please allow 28 days for delivery

CYCLE TO MENU

Author: Federico Giannici
Workbench: 2.04



🔊 *Instead of having to tiresomely click through each entry, Cycle to Menu gives you a handy menu to choose from*

Another program I reckon almost every Amiga user has is Cycle to Menu. This smallish program improves the way the Amiga's cycle gadget works, and a prime example is in the Time preferences. The cycle gadget here is used to flick between the various months in a year. If you need to flick through six months it is a little tedious. Would it not be far easier if you could just jump straight to the month you want?

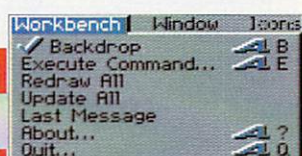
Well that is exactly what Cycle to Menu allows you to do by converting all the cycle gadgets to pop-up lists. So after running it, if you now click on the month cycle gadget instead of just going to the next month as normal, a window with all the months appears under the mouse pointer, allowing you to easily select the month you want.

It is still possible to skip a single entry by clicking on the first part of a cycle gadget, similarly to skip back a single entry, press shift and then click on the cycle gadget.

An installer is provided, in the language of your choice, and if you double-click on the program after running, it a preference window appears allowing you to choose how the cycle menus look.

🔥 The aptly named Magic Menus will transform your old ugly black and white menus to...

U ...this much more appealing three dimensional-looking affair



FAST VIEW 2

Author: John Hendrikx
Workbench 2.04

MultiView is a very good program but sometimes you need something that is a little more straightforward to use. FastView is currently the best all round picture viewer as it is both very fast and supports a good number of picture formats.

You need to install FastView as there are a number of support files that have to go in the right place. Once this has been done you only have to double-click on its icon and then using the requester select the picture file or files you want to view.

Fast View has a good number of extra options, but these are only available through-out the Amiga's Shell, and you need to read the documentation on how to use them properly.

ASL v42

Author: Marcin Orowski
Workbench: 2.04

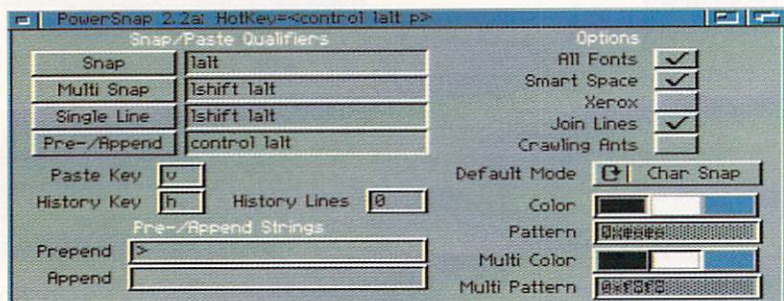
Yet another replacement for one of Workbench's standard functions. This new version of the ASL library gives you more control over how the standard requester appear.

If you do not know, most of the requesters that pop up quite frequently are all produced by a single library, called the ASL library. This allows programmers to easily get choices from the user. The main requesters used are the normal information windows that usually have one or two buttons in the bottom strip, file requesters that you will use quite a lot, and then there are the screen and fonts requesters.

The new version allows you to choose how and where these new libraries should appear, saying what part of the screen they should appear in and how big they should be. This makes using requesters more consistent, so each time you ask for a requester it will always appear where you expect it.

POWERSNAP

Author: Nico Francois
Workbench: 2.04



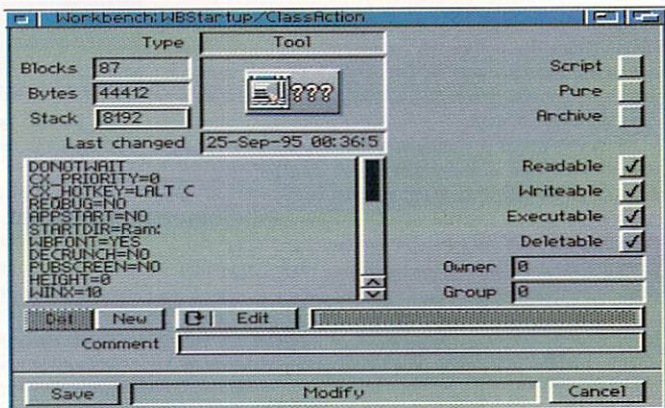
Universal cut and paste has been available to all Mac users for a very long time, and PowerSnap is the closest Amiga users are going to get. It simply allows you to select an area of text displayed on any screen and then copy and paste that

SWAZINFO

Author: David Swasbrook
Workbench: 2.04

This is another improved Workbench-type program replacing the standard icon information requester. To be honest this is fairly useless, offering only the minimal amount of functionality, so this drop in replacement gives you a large number of improvements.

Firstly, you can now copy icons and tools type by dropping the new icon into the respective part of SwazInfo's window. It also adds a large number of new features, letting you easily adjust icon and program settings - otherwise you would need to use a separate program, or the shell to do this.



SwazInfo is a greatly improved information requester

SCREENCLOCK

Author: Thomas Igracki
Workbench: 2.04

If you are not too careful you can waste your entire life just beaver away on your computer, but how can you tell when you can put down your tools and head off for lunch.

Screen Clock gives you a nice discreet clock lurking in the top right-hand side of your Amiga's screen.

It will even jump to a new screen when you change screens, so you never lose track of the time.

28-Nov-95 10:13:21

Look it is a clock, it tells the time, what more do you want to know?

MULTICX 2.24

Author: Martin Bernede
Workbench: 2.04

Good things do come in small packages, and MultiCX proves it to - a tiny utility that manages to pack loads of invaluable features into a tiny program.

Window and screen manipulation, mouse acceleration, screen blanking, no drive click, new look menus and sliders, alert patch, assign wedge and new edit are just a few of the many function MultiCX does.

Just drop the icon in your WBStartup drawer and read the document to get the low down on what every function does. All the functions of MultiCX have to be adjusted via the icon's tooltypes which you get to by clicking once on the MultiCX icon and then pressing the right Amiga key and i.

WB ALIAS

Author: Frank Wukner
workbench: 2.04

Macintoshes have had the ability to make what are known as aliases for a while now, and this program provides the Amiga with the same function. When you first run WBAlias, a file requester will appear asking you where the alias should initially be stored.

Once you have picked a location a menu item in the tools menu is created. If you now want to make an alias, just select the program or drawer icon and then 'Make Alias' from the tools menu.

You can now put the new alias icon where you like, snapshot it, rename it, or even run it. The only restriction is that you cannot put an alias into RAM due to the way the link to the original program is made. To quit WBAlias just select its menu item without an icon selection.

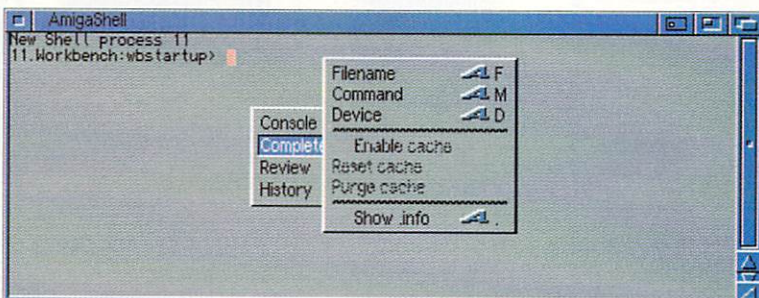
text in to another program. This may not sound too earth shattering, but in conjunction with MultiCX's new edit function you can easily cut file names, Web site addresses and paste them into which ever text requester you like.

KINGCON v1.3

Author: David Larsson
Workbench: 2.04

Nothing is perfect, so KingCON is another improvement to AmigaDOS. This time it adds a lot of extra functionality to what is known as the Amiga's shell. Initially I doubt you will use this too much, but when you do, KingCON makes it a lot easier to use. The ability to scroll back through past commands, and to add file names by pressing the tab key really simplifies your life.

A standard installer script is provided and you must use this to install KingCON as it makes some important lines to your user-startup sequence. Once installed you may not notice the difference, but if you read the instructions you will find out about all the benefits of KingCON.



Hidden beneath this bland window, throbs the mighty power of KingCON

VIRUS CHECKER v7.16

Author: John Veldhuis
Workbench: 2.04

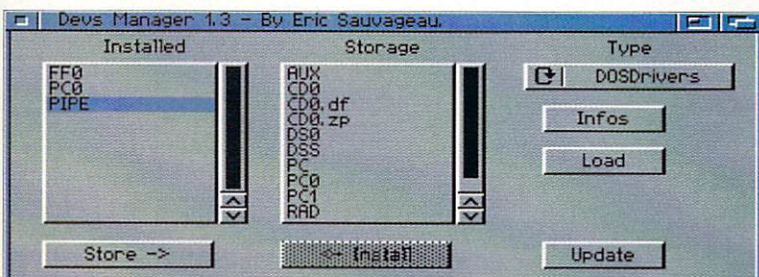
One thing that can cause havoc on your machine is a computer virus. Written by very strange people, these nasty things can cause all kinds of mischief, normally resulting in you losing data. To protect yourself properly you need a good up-to-date virus checker, and the strangely similarly named Virus Checker is just what you need. To install it there is a supplied installer program which will copy across all the necessary extra files. You should have Virus Checker in your WBStartup drawer so it is running each time you start Workbench.

DEVS MANAGER

Author: Eric Sauvageau
Workbench: 2.04

If you are a beginner this utility may not be of immediate use but as time goes on you will find use for it. Devs Manager allows you to simply swap certain Workbench extensions between the Devs drawer where they are active, and the storage drawer where they are made inactive.

This allows you to enable or disable the various extension in the Devs drawer - DOS drivers, Printer drivers, key board maps, Monitor drivers and Data Types. It also allows you to store programs from the WBStartup drawer, therefore allowing you to easily disable startup programs. The program needs no installation and only consists of a couple of buttons and list views, so is very simple to use.



Simplify your life with Devs Manager, handling DOSDrivers has never been simpler

SYSiHACK

Author: Mr BOOPSI
Workbench: 2.04

Not a program that turns your computer into a girly blouse but one that changes the look of Workbench's gadgets for the better. Instead of having the dreary looking plain close and resize window gadgets you get some snazzy 3D look ones.

To make the change you need to open a Shell, found in the System drawer, and type **Ed S:Startup-Sequence**. Then you need to add the following line just after the **Setpatch** command: **C:SysiHack 18 18 18 18 18 4 4 3DLOOK**. If you now save the file and restart the machine you will have lovely new looking system gadgets.



DATA TYPES

Workbench: 3.0

A new part of Workbench, introduced in version three, Data Types allow any program that supports them to recognise and load any Data Type that you have installed on your machine. When you first get your new Amiga you only have the basic IFF formats, which do however cover samples, pictures, animations and text. As the rest of the world uses many different file formats, it is handy to have a few others at hand.

Gather together the most common Data Types which includes GIF, Jpeg, TIFF, WAVE, VOC and Font ones. All have installer scripts for simple installation, and once installed allow programs such as MultiView to handle all these new file formats.



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Jargon box

Commodity - a commodity is a special sort of program that allows you to control it through the Exchange program. From exchange you can disable, hide, and remove commodities.

Gadgets - refer to the various types of buttons and sliders available for you to click on in Workbench and programs. The close window gadget in the top left of all Workbench windows is a good example.

Boot - when you first turn on your computer your machine will boot up - this simply means start up. To re-boot your machine press both the Amiga keys either side of the space bar and the Ctrl key.

Ram Disk - instead of having to only use disks, the Amiga allows your computer's memory to be used as a disk. This memory storage space is referred to as the RAM Disk. Strangely, no other computer lets you do this.

SHAREWARE

Many of the programs on the two cover disks are what are commonly known as Shareware. Such well written programs take many hours to write and a lot of hard work and dedication on the part of the programmer. When a program is called shareware it means the programmer has generously allowed you to try out their program, a lot of the time with no restrictions, and if you then decide you like it you are obliged to send the author the shareware fee.

Normally this is no more than ten pounds and in return the author will usually keep you supplied with the latest version of that program, along with their undying gratitude of course.

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Russ Izzo
Sales Manager

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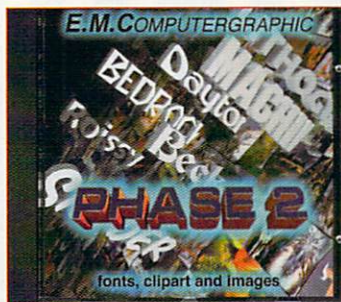
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PHASE 2



In the past E.M. Computergraphic have been one of the finest clip-art, image and font specialists – especially with Phase 1 being a success and Phase 3 + 4 shortly to arrive. Not only do they cover a wide spectrum of font volumes, they also include some very high quality images and clipart, all divided into specific categories.

Phase 2 continues where Phase 1 left off, with four volumes of colour fonts, not to mention five volumes of postscript fonts, along with 71 for use with Imagine. Along with the font file, you will also be able to view the font as an IFF so you can see it instantly rather than



I had to include a nice image of a puppy, because not only does it make everyone all content, it shows off one of Phase's 256 colour images! Woo!

loading up a DTP package and importing them directly. All the images and artwork are either in IFF 16/256 colours or HAM interlace and they are all of very high quality, with a wide variety of topics including famous people, places, Sci-fi, textures, animals and girls. I have to be honest that this CD is extremely male oriented. Just by loading up girls, you get all kinds of

beach/bikini shots, and even when you go to the sport directory, all you find are women exercising in all kinds of positions – not that I'm complaining of course. If you look at the majority of magazines of the shelves – with a few exceptions – you will find pictures of models dotted everywhere and they really are one of the most useful categories, so why not include them?

The index is excellently implemented, making it nice and easy to use, and with a thumbnails file you can, again, view all the pictures from a directory in a second. There are so many pictures you will undoubtedly find a good picture in a high quality resolution that will come in use.

Phase 2 is one of the best complete packages I have seen for a long time – it's the most user-friendly and efficient image/font package on the market.

Bottom line

PRODUCT DETAILS

Product:	Phase 2
Supplier:	E.M. Computergraphic
Price:	£24.99
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SCORES

Ease of use	90%
Implementation	90%
Value For Money	85%
Overall	90%

I couldn't actually find something interesting enough to demonstrate the LSD Compendium CD, all I could find was a nice picture of Dracula, and here it is

A change of reviewer this month as **Andy Maddock** gets his first dose of CD compendiums

Laser guidance

SUPER AUTOS 94/95

I have mixed feelings about this CD, mainly because it's full of shiny, brand new, spectacular and, not to mention, expensive cars that I shall never have the privilege of owning. There are pictures of the famous Dodge Viper, Mazdas and Ferraris, not to mention lots of oddly shaped boxes with wheels.

The pictures themselves are obviously photographs from a recent car show, probably somewhere in Europe. They are all presented on stands so unfortunately you don't see pictures of them whizzing around spitting dirt into the air.

There are 100 photos in different formats – Pict, Tiff, Ham8 and GIF. I've tried for the life of me to come up with a proper use for them – such as publishing or artwork – but they are too specific to use in anything mainstream. If you happen to be covering something like '100 great photos of super cars' then this CD-ROM would be of excellent use. You could, for instance,



use them as a desktop picture but that's about as useful as they get.

It may have been more useful if some documentation on the cars was included because at least you'd be getting a pseudo-encyclopaedia for your money, and you'd actually learn

something. However, even for £4.99, which seems relatively cheap, 100 car photos to look at surely is a bit steep.

One thing's for sure though. You'll have to be very careful – once you see the pictures, you'll be itching to nip down to your local showroom to see what they have on offer. It may turn out to be quite an expensive purchase.

Bottom line

PRODUCT DETAILS

Product:	Super Autos 94/95
Supplier:	PD Soft
Price:	£4.99
Phone:	01702 466933

SCORES

Ease of use	80%
Implementation	80%
Value For Money	70%
Overall	70%



Ooh, that's nice. Oh yes, very nice. It's a Mazda. A silver one. With four wheels. I'm doing that well am I?

SCI-FI SENSATION

Okay, who is the person with the word processor that keeps putting sensation at the end of all these CD titles? At least you are not left with too much doubt as to what is on the CD.

SCI-FI Sensation is a double CD, so you are getting a lot of data for your money. Before trying to click on any of the icons you should run the icon named click-me. This sets up a number of assigns and makes sure all the files and programs work correctly.

A big chunk of the first CD – two thirds of it – is taken up with various pictures, animations, samples, and music taken from a number of the more famous Sci-fi films and series, such as Aliens, Blade Runner, Dr Who, Babylon 5, Terminator 2 and, of course, an absolute ton of Star Trek stuff. Generally, the picture quality ranges anywhere from good to very poor.

Many of the included animations on the first disc are FLIs, which are only ever 8-bit, making them of use for AGA owners only. They do, however, play back fairly quickly on a plain A1200. I was quite interested to see that a good number of the flicks are taken from recent PC games, like BioForge and Full Throttle. It is just a shame the actual games will not be appearing on the Amiga.

Strangely, but still managing to slip into the Sci-fi category, are the collection of Klondike cards, but luckily none are compressed so they can be easily used straight off the CD.

Other things to be found on the CD include 3D objects for various raytracing

packages like 3D Studio, Imagine – which has the most objects – LightWave and Real3D. A large selection of fairly good samples, again from many Sci-fi films and series, are organised into their own directories, with such classics as "Open the pod bay doors HAL" and "I'll be back" dotted about.

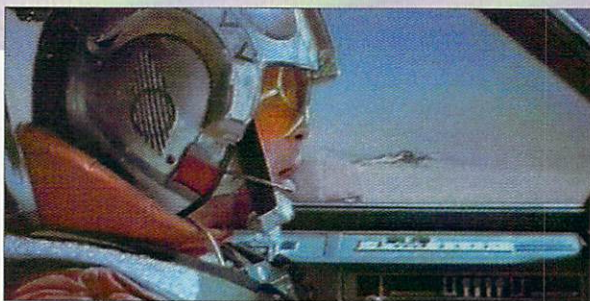
There is also a selection of Sci-fi games on hand for you to have a good play with. If you are an AGA owner, many of them will not run straight off the CD so you will need to degrade your machine.

Probably of more interest for actual Sci-fi fans is the collection of documents and AmigaGuides of various Sci-fi programs and UFO-type subjects. Dr Who and Star Trek get there usual fanatical coverage, along with a good X-Files section, letting you get all the details and plot twists of the series.

The second CD consists entirely of animations, the main three formats being the Amiga standard IFF Anim5, Mpeg, and a large number of FLI's. There are also a number of AVI animations which is the standard Windoze film format, but there is no supplied player. Therefore, the only way you will get to see these is if you have a version of TAPavi knocking about.

Even though the CD has decent Workbench organisation, most of the pictures and animations are played by selecting them with PD viewers, and the main two used are ViewTek and Flick.

Generally, I think the novelty of this CD will wear out fairly fast. It does have a wider appeal to more than just Sci-fi fans, as anyone will be able to enjoy the animations,



Ⓜ Apart from Star Trek, Star Wars has to be one of the finest science fiction films ever. This CD contains, documentation, pictures and samples of most others too

pictures and samples. These are generally of a good quality, but once you have seen all the animations and pictures and then shown them to your mate/s., I don't think you will be coming back to this CD too often.

Bottom line

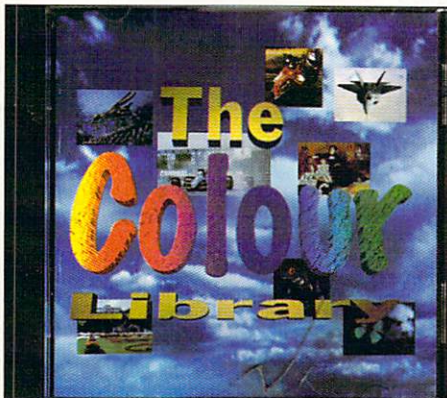
PRODUCT DETAILS

Product:	SCI-FI Sensation
Supplier:	Epic Marketing
Price:	£19.99
Phone:	0500 131485

SCORES

Ease of use	80%
Implementation	70%
Value For Money	70%
Overall	70%

THE COLOUR LIBRARY VOLUME 1



The Colour Library features all the latest graphical PD from all around the world, and contains images and clipart for use with publishing and artwork. Despite the impressions the title may give, it is solely an image/clipart CD-ROM, and has absolutely nothing to do with colour palettes or anything suchlike.

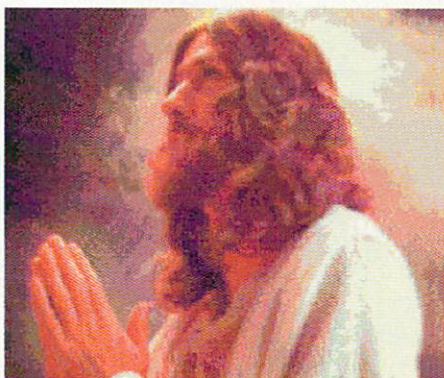
There are over 1,700 clipart and colour images you can import directly from the CD-ROM without the hassle of taking space on your hard drive. There are three applications included to view the artwork and images, so there's no need to buy or run a memory-consuming package just to see the formats.

The PCX datatype is included for you to slide into

your Devs drawer so the pictures can be viewed, or you can simply load Fast View which is a simple interface designed to load and view various files. They will appear in a matter of seconds and a wide range of directories can be obtained.

The actual images contained aren't of the same quality as Phase 2, as they are mostly in a low resolution. However, they are still well presented, containing a thumbnails file so you can view all the pictures in a particular directory.

The CD, on the whole, is well documented and



Ⓜ As you can see from the image, many of them aren't full screen, so they are best used for publishing and clipart. They don't boast tremendous quality either

includes a wide range of information and instructions for the CD itself as well as the applications included. The subjects for the images and clipart are fairly basic and not too specific, covering Animals, Maps, Dogs, Men, Women, Planes and more.

In all, there's around 600Mb of clipart and images and if you are looking for a cheap image CD packed full of reasonable artwork with a wide range of categories and extra features, then for £9.99 the Colour Library is good value for money.

Bottom line

PRODUCT DETAILS

Product:	The Colour Library
Supplier:	PD Soft
Price:	£9.99
Phone:	01702 466933

SCORES

Ease of use	80%
Implementation	80%
Value For Money	70%
Overall	70%

LSD COMPENDIUM DELUXE VOLUME 3

17 Bit Software are one of the best PD companies around, boasting a tremendous collection of PD and Shareware, and as soon as multimedia on the CD-ROM emerged it was inevitable that PD companies would relish in the fact they could store thousands of products from their own catalogue on CD and release it at a very cheap price. This is exactly what 17 Bit have been doing – and to great effect.

As usual, there is a good 600Mb of applications, utilities, games, modules, demos and more. These compilations are ten-a-penny at the moment because anybody with a half decent library can set one up. So far, there is no doubt that the Aminet series is leading the way – with constant updates and all the latest software, they are very tough competition.

Most of the Software is either archived by Lha or DMS, and a simple double-click will unpack it to your hard drive or floppy disk. Unlike many other CD-ROMs, it does contain some ready-to-run graphic/music demos – this makes a nice change as you escape the



archive process – and the demos are of a good quality both graphically and sonically.

There's the usual AmigaGuide database so you can easily search the software/demo you are looking for. However, if you're just browsing and looking for something interesting, then you may find it a little more awkward. This guide, however, is lacking seriously in information. Although the actual CD is well documented, the information on the products is fairly non-existent until you've de-archived it.

Before you buy any of these compilations, it's usually a great help to have an idea of what you actually want. If you are looking for some decent clipart images then a compendium isn't really the best idea, because the images won't be of the variety and quality of specialist clipart CD-ROMs. These compendiums would be more useful if you want to explore the Amiga and find different applications to use, or you want to watch some demos manipulate your Amiga.

If you are looking for something specific in the PD market then the Aminet series is undoubtedly the best. As a big lucky dip of

Bottom line

PRODUCT DETAILS

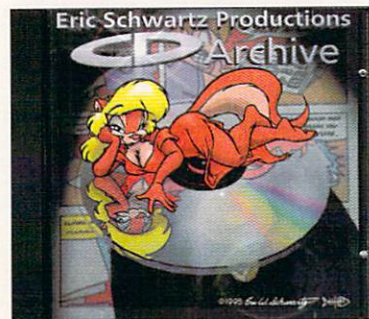
Product:	LSD Compendium Deluxe vol.3
Supplier:	17 Bit Software
Price:	£19.99
Phone:	01924 366982

SCORES

Ease of use	80%
Implementation	70%
Value For Money	80%
Overall	80%

various kinds of animations, clipart, demos, games, source code documents and lots of sexist jokes, the compendium is a very worthy purchase and excellent value for money.

ERIC SCHWARTZ ARCHIVE



This CD was created by the man himself, Eric Schwartz, and contains all of Eric's previously released animations and artwork. He began using an A500 designing small animations on Deluxe paint, and then continued to upgrade his system, eventually using an A4000 to design artwork in higher resolutions for outstanding quality. With his 4000, he is now at ease with packages such as Imagine and LightWave. Eric is not the only artist with work on this CD as his colleagues from former projects have included work too, particularly Les Dietz and Mark Stanley.

This CD is such a dream to use because just clicking on the icons will change the pattern, resolution, colours and screen for use with the animations you want to see, depending on your set-up – ranging from OS 1.3 to 3.0.

The CD contains various animations and pictures of the well known Rachel Racoon whom I've seen many times, although then I had no idea where it came from, or even who it came from.

The Eric Schwartz archive comes with the standard AmigaGuide documentation, as well as being split into directories which are clearly

labelled and neatly organised. This always seems to be a big problem with these CDs as you can fit a lot of artwork onto each CD but there tends to be too little time to write a time-consuming AmigaGuide. However, this CD contains all of this and finishes it off very professionally.

If you like to see the more creative side of the Amiga, or you're just a big fan of Eric himself, then this CD cannot be missed. It contains high quality images, such as Rachel Racoon, as well as some superb animations which are all ready to run directly from the CD.

It all adds up to being one of the finest and creative CDs compiled and shows the Amiga's capabilities, while still managing to please the public eye. It'll take you a while to sift through the objects, animations and artwork, so it is extremely good value for money, and shouldn't be missed by any Amiga art fan.

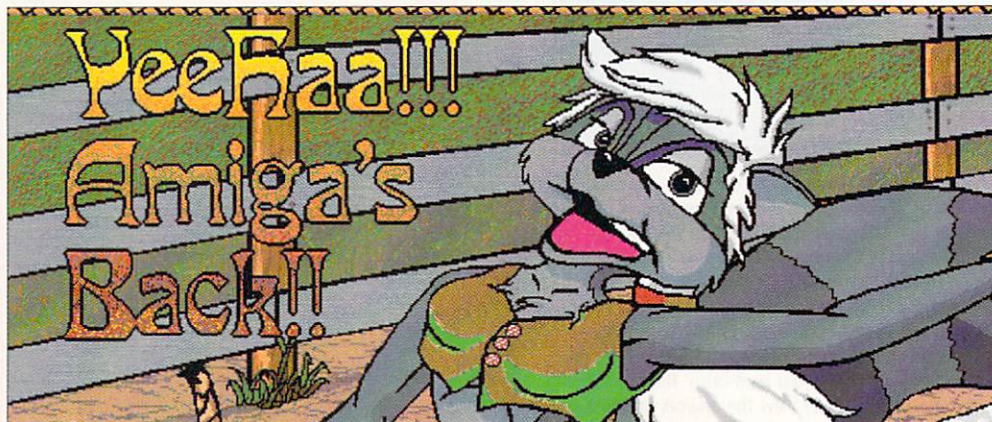
Bottom line

PRODUCT DETAILS

Product:	Eric Schwartz Archive
Supplier:	Amiga Library Services
Price:	£24.95
Phone:	001 602 491 0442

SCORES

Ease of use	80%
Implementation	80%
Value For Money	80%
Overall	80%



For all those that found Wilma Flintstone, Betty Rubble, and Bugs Bunny (when he dressed up as a woman) attractive, you will find Rachel Racoon the goddess of all!

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Think of a typical doctor's surgery – boring health leaflets lie dog-eared on the shelves with all the appeal of soggy lettuce, and outdated Hello magazines are the only other form of entertainment while you wait for your turn. That is unless your surgery is one of the thousand that is leaping into this century by providing patients with an informative multimedia presentation which gives you the latest health promotion messages and information about the surgery. It's the way forward – and you may be surprised to learn that the computer behind it all is the Amiga.

The brainchild of a Leamington Spa-based company, they have called their enterprise 'The Health Channel', an appropriate enough name for a project which aims to bring information to the public, an aspect which was outlined in the Patients Charter. An in-house development team master the whole project on the Amiga, transfer it to video, then sell the complete package to a doctor's surgery or hospital. Where the client needs something they can edit, they can then buy an Amiga as well which enables them to write over the script and impart vital information immediately.

TAILOR MADE

Divided into three sections, the video is updated bi-monthly and is tailored to each individual surgery. The first eight minutes provide information on the actual surgery such as doctors' names and who the staff are. There are then health promotion messages which last 26 minutes, and a final 10 minutes which is specific to each Health Authority. Health promotion ties in with the latest events on the health calendar such as World AIDS Day or National Autism Week, and they also give more general advice about heart disease and accident prevention.

One of the first to be persuaded to try out the project was Warwickshire Health Authority and others were quick to see the benefits. The system proved invaluable in Coventry recently when there was an outbreak of meningitis. A video explaining symptoms and the course of action to take was sent to the all surgeries in Coventry within 24 hours, providing the public with life-saving information.

And in hospitals it has been very useful too

THE INTERNET

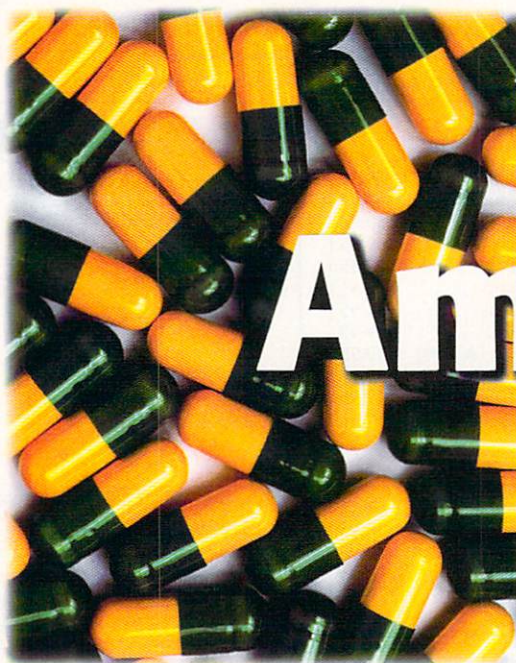
The Health Channel are already looking for opportunities to expand the project, and one channel they are working on is the Internet. Maisey remarked: "It's the obvious connection to go onto the Internet. The Health Education Board for Scotland wanted to put their information on the Net and we hope to persuade other Authorities to do the same."

By setting up their own home page, they hope they will be able to offer each Health Authority the service of creating their Web page and putting it as a link from this main source.

They suggest that each Authority puts on information such as press releases, job vacancies, and news of their latest activities. One potentially revolutionary idea is that practitioners could use it as an up-to-date reference manual, for example a doctor could easily access the waiting times for a particular operation or find out which specialists work where, and so on.

When asked whether they will stick to the Amiga for this project, Maisey remarked: "Well, we'll probably have to use a PC, but the graphics will still be created on the Amiga!"

The Health Channel are at: <http://www.ibmpcug.co.uk/~healthch/>



The Amiga in health

The **Amiga** is often dismissed in the corporate sector by those who shun it in favour of the PC and Mac.

Tina Hackett continues this series, taking a look at how the Amiga has found its niche as a serious business contender

by allowing staff to easily type in information in their Accident and Emergency Department. Nurses are able to type in messages such as why there may be a delay or how long the waiting times is. One hospital, the Whipps Cross day surgery unit, has gone a step further by using the monitors to manage patient flow and actually tell the patients when to move into the correct departments.

The North Staffordshire NHS Trust are using the service in their children's department with a character called Ed the Doc. They believe it helps the children relate more easily to what's going on in a user-friendly way. One example is how the programme shows children what will happen to them in the

Haematology department – they get an idea of what to expect and it makes the experience less foreboding. The Hospital has the information system in 39 of their departments, nine of which have an Amiga 1200 with a genlock so they can add their own messages over the video programme.

GOOD RESPONSE

The reaction so far has been very good indeed. Over 40 Health Authorities, Boards or Trusts have been supplied with the equipment this year alone, and it's still increasing. In all there are over 1,000 locations in the United Kingdom currently using the service.

The Health Channel also supplied an Amiga as part of the Royal College of Nursing's interactive display stand at the Party Political Conferences – and it won the award as Best Stand!

The project is expanding into the private hospital sector too where patients are able to select their meals from the daily menu displayed on their bedroom TV sets. Hotels are also finding a use, and in conjunction with Thorn Business Communications, a trial system has been installed into the local hotel. "It's already making them money" director, Philip Teare, remarked. The hotel

Simon Maisey explains how the doctors like the scheme because the Health Authorities have editorial control



links the Amiga to the televisions in the guests' bedrooms. He cites an example: "One evening the restaurant was packed out, so they put a message into the bedrooms suggesting that if their guests came down at a later time they would receive a complimentary half-bottle of wine – it worked and made them money because it's in their interests to keep the guests in the hotel."

IMPRESSIVE

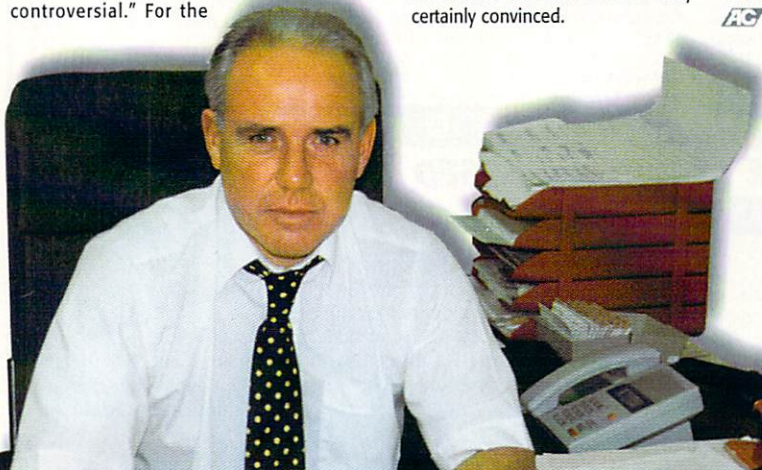
Teare explains that a lot comes down to pricing and their clients are impressed with how inexpensive and reliable the system is. "This is especially true for independent hotels. It's cost-effective – they can easily afford to buy the A1200. There is huge potential here with each hotel having an Amiga 1200 installed."

Some hotels are also considering using advertising from local amenities to fund the projects, although this was not suitable for the health authorities. Simon Maisey, director explained: "It may affect the impartiality, plus many of the surgery staff would get hacked off with repetitive jingles all day," He continued: "the doctors like it because they know the Health Authority have editorial control so the content is guaranteed to be accurate and not controversial." For the

"The Hospital has the information system in 39 of their departments, nine of which have an Amiga 1200 with a genlock so they can add their own messages over the video programme"

future, Maisey hopes to be able to persuade all authorities to take up the scheme. He would also like to involve touch screens in some way, although response on this aspect has been slow. However, the project has gone down very well so far – it certainly beats how doctor's surgeries have operated in the past. Patients definitely want to take control of their health and they realise that the responsibility of good health ultimately lies with them. It's good to see Health Authorities living up to their duties in providing this information, especially in such an innovative and cost-effective way – we're certainly convinced.

AC



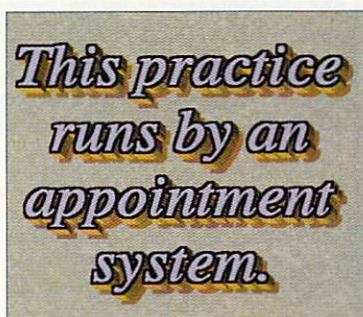
Philip Teare explains that his clients are all very impressed with how inexpensive and reliable the system is



Health promotion messages and diary events form part of the video



Scala MM400 is used for the main presentation

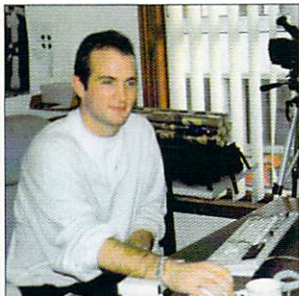


Each surgery can have the video customised to their requirements

IN-HOUSE PRODUCTION

Despite producing over 6000 videos a year, there are only two people in the production department, Richard Budd and Mark Fleming. They produce the video from scratch, from taking the photographs to creating the graphics. They both use an Amiga 4000 to create the videos and use Scala MM400 for the main presentation. They are also aided by Opal Paint, DPaint and PPaint. They use Adorage for the animations.

Budd demonstrated the Cannon ION Camera: "This has definitely made our work a lot easier" he claimed. The Camera can store around 50 pictures to disk and then project them straight onto a computer screen. "It saves waiting for pictures to be developed and we can see immediately whether they've worked or not" he continued. The recent purchase of a Zip

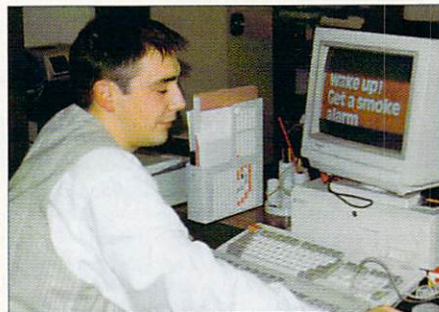


Richard Budd is one of the in-house production team and is pleased with how well the Amiga copes with the projects

drive also makes things easier as they can store a lot more information at low cost, also offering the possibility of selling the client a Zip drive for maybe a two-hour presentation.

Their job varies from sourcing the relevant health information from authorities to creating the still pictures needed for a presentation. Their language skills are also required as some videos need voice-overs adding as well, such as where the text and voice occasionally need to be in Urdu, Hindi or Welsh. However, most request the soft background music.

Budd explained why some prefer to have the A1200 actually there as well as the video: "It depends on the client and whether they need to edit the script or not. We've written some extra software which makes it easy for them to do this."



Mark Fleming busy at work on the Amiga! Their job varies from finding out health information to designing graphics

He was keen to express how well the Amiga copes with this sort of work: "It would take so much longer to do this on other machines. I used a Mac when I was doing my degree in design but after using the Amiga I would never go back to it!"

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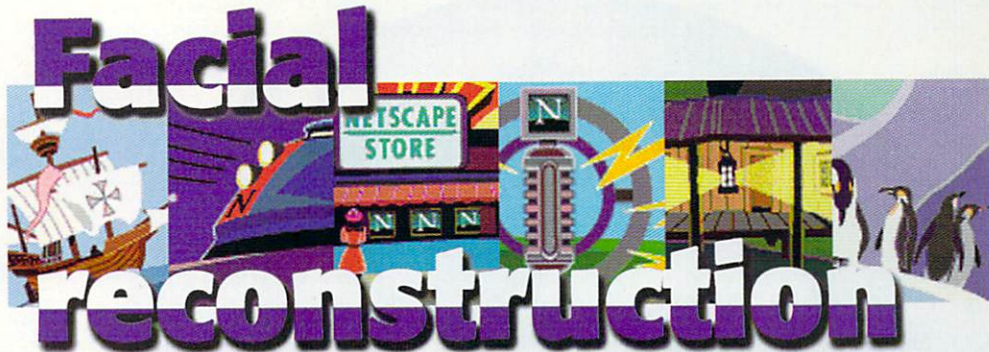
MUI 3, apparently you either love it or hate it. Either way you cannot escape the fact that MUI interfaces look damn lovely. Though with astounding ease you can create butt ugly abominations.

Magic User Interface is a completely object-oriented graphical user interface. This basically means that the 'look' of any program's interface is tolerable to the user's tastes. MUI makes it possible for you, the user, to specify exactly what each part of a program's interface should look like.

The object-oriented part of MUI allows you to choose what graphic a gadget should look like, so it is possible to use either one of the supplied scalable gadgets or if you want, why not just run DPaint and draw your own. MUI will accept any Data Type supported graphic format.

This is all very good and useful, but critics of MUI have always slated it for being too processor and memory hungry. It is true that if you start splattering background patterns, and use lots of custom gadgets on an A500, of course you are going to be left wanting in the processor stakes. As the machine desperately gasps for more clock cycles, the window's redraws can slow to a snails pace.

In practice, the new version does seem to give a speed improvement over the older version, with windows and list views redrawing and scrolling faster and more cleanly. With the new version being completely compatible with



the older one, you will not see any other change in your programs. The thing that has changed, however, is the way MUI is put together.

The new version is completely modular. New modules can be added to MUI at a later date, and the new preference program will automatically allow you to configure this new function.

MODULES

Two extension modules are already available in MUI 3 and come with the package, even though no programs can currently take advantage of them. The two in question add a scrolling busy bar similar to the one used on the Mac, and a hierarchical tree structure which allows you to peruse a directory-style listing – again in a Mac-like way. This new modular structure does help to reduce the total memory usage of MUI, with the system only loading a specific graphic, gadget, or function module.

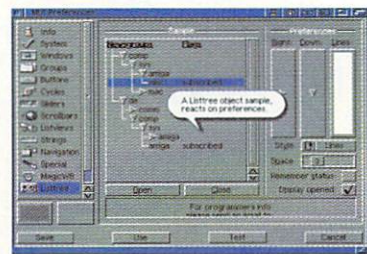
Fairly straightforward memory tests show that just loading up the new MUI preferences takes 350k while the peak memory usage – this is a MUI set-up with lots of 8 colour patterns – will hit around 700k. Only 50k is ChipRAM, the other 650k being FastRAM used by all the programs, extra libraries, and other screen data.

So is it worth upgrading, or getting? Currently, if you want to access the Internet there is no choice, you have to have MUI.

Pronouncing itself smaller, faster and better, the latest MUI incarnation should be good. **Neil Mohr** sees if it can cut the GUI mustard

AMosaic, the eagerly-awaited iBrowse, and MuiFTP all require MUI, along with a good many other Internet programs. The Amiga Tech Internet pack may change this, but currently you do not have a choice. To be fair, MUI 3 does seem to give AMosaic a speed boost, but then again AMosaic couldn't get any slower.

For non-Internetters, if you use MUI programs regularly then it is worth upgrading. Interfaces are smaller and do seem to be redrawn more efficiently, and it seems until Amiga Tech can find an easier way for programmers to quickly knock up nice user interfaces, MUI will stay the choice for many PD programmers, so will stay on many people's hard drives.



The new MUI 3.1 preference program is a little daunting at first, but in practice it works much better than the old one

NEW FOR MUI

Along with the new program structure, MUI also introduces a few new features that can be used in both old and new MUI programs.



New drag and drop functions allow you to simply share data within a program and between MUI programs. One use is within the MUI preference program. A global temporary buffer allows you to store a texture and then drag and copy it to other buffers in the program



This is a button to adjust a background color or pattern. Click it to open an adjust window or use drag/drop facilities to copy from or to another background gadget.

Leave the mouse lingering over any gadget you do not recognise and a balloon appears giving a short description of what it does

Instead of just having the iconify icon, MUI 3 introduces a number of others, allowing you to run the MUI preferences to adjust specific program settings, snapshot the current window's position, or provides a menu allowing you to choose any of them



One new MUI extension that comes with MUI 3 is the List Tree, allowing a new way of viewing and traversing a hierarchical list, such as a directory listing. This, again, is very reminiscent of how the Mac's directories works

Bottom line

REQUIREMENTS

RED essential BLACK recommended

2 Mb

RAM

1 Mb of

HD space

4 Mb

RAM or above

020 processor

PRODUCT DETAILS

Product	Magic User Interface 3.1
Supplier	Paul Jewell
Price	£15
E-Mail	jewell@savanna.exnet.com

SCORES

Ease of use	80%
Implementation	80%
Value For Money	90%
Overall	80%

This time it's personal



I know, I know. It must seem like a bit of self-promotion to be reviewing something we are offering to our readers, but Cloanto's Personal Suite will be available to buy from your normal high street dealer at some point, it's just that we have an exclusive on it for a limited time. Anyway, it's still a new product, so it's just as valid for me to review this as anything else.

When Personal Suite was first announced it seemed like great value for money. It should have come with the 'Personal' series of programs from Cloanto; Personal Paint, Personal Write and Personal Fonts Maker 1 & 2. Even just for these, the CD is a bargain buy, the only downside being that all the documentation is on disc rather than printed.

The upside of all this is that the CD contains more than just these four programs – it also has Superbase Personal 4, the latest version of the all-time best-selling Amiga database, and Kara Blom's superb colour fonts. You know the ones. You got Granite when you bought DPaint. Well, there are 27 normal colour fonts included on this CD and one animfont –

Bullion.

In case you aren't sure exactly what an animfont is, the letters for bullion are all animbrushes and get drawn onto the screen as though they are rotating about their vertical axis 90° to face the front. As the letters rotate there is a highlight that travels across the face of each letter as though it were reflecting a light source. It's a lot easier to see than to explain, though, so have a look at the screenshot.

ANIMATION CITY

As if this wasn't enough, you will also find most, if not all, of Eric Schwartz's animations in both their original MovieSetter and Fantavision formats, as well as in soundless Anim5 files, along with animations and pictures by Jim Sachs and Karl Bihlmeier, a renowned German artist. There are also some animations by 'Dr Chips' which weren't created on the Amiga and must have been quite impressive ten years ago. Now, though, they just look dated.

And so we continue to trawl through the CD's contents and find we are also given Cloanto's PNG toolkit and datatype. PNG is the graphics format supposed to replace GIF. It is a lossless compression format capable of up to 48-bit colour resolution and it supports all

An exclusive review of Cloanto's CD bundle by **Ben Vost**

sorts of funky features. So, is that all? Nope, there's more.

Cloanto have obviously trawled the Gutenberg Project's archives because there are ASCII text versions of 45 different out-of-copyright books including Hardy's *Tess of the D'Urbervilles* and Edgar Rice Burrough's *Tarzan of the Apes*, along with four Amiga-specific titles detailing AmigaDOS commands and AmigaGuide document creation, among other topics. One last goody completes the line up on this CD – a program called DirDiff that compares directories and generates a checksum, particularly useful for people producing software, especially on CD.

So let's have a closer look at each of the programs on offer on the Personal Suite CD and see if they really are too good to be true.

PERSONAL PAINT v6.4

Personal Paint has been around for quite some time now. If you are a regular reader you will have seen a mini-review of PPaint in the Amiga Bundle round-up we did in December's issue. If you didn't see that issue, or you've only just bought your Amiga, then here's the lowdown on PPaint.

Basically, PPaint started life as a poor DPaint clone but, unlike Deluxe Paint, Personal Paint is still being developed and keeps getting better. Although it still offers no HAM6 or HAM8 facilities you can use Personal

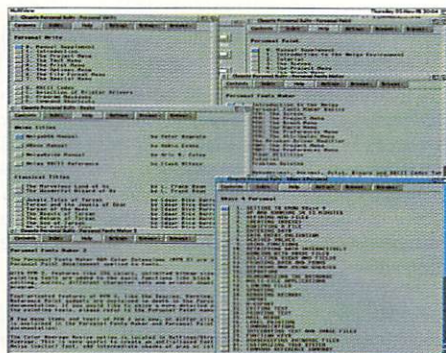
Paint in any register mode up to 256 colours.

Personal Paint is the only non 24-bit paint package I know of on the Amiga that also supports RTG graphics cards (the others all do nasty tricks that involve ChipRAM), which is a definite bonus now that there are more and more people out there with Picasso's or CyberVision64's. Personal Paint has all the usual tools you would expect in any paint package of note. Oblongs, circles, text, freehand painting and filling are all performed without fuss, but PPaint really starts to

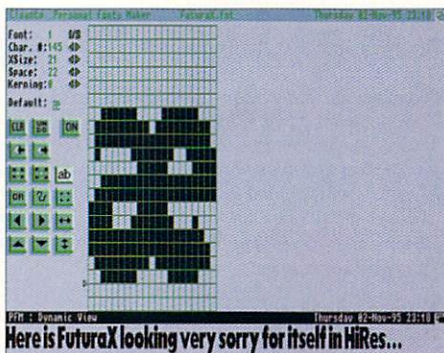
shine with its little touches like the curve tool, which, rather than DPaint's simple single parabola, actually uses handles like any bezier curve and gives you a double parabola.

CONVOLUTIONS

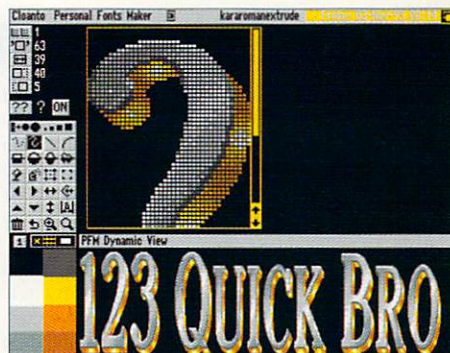
However, this is nothing compared to Personal Paint's image processing functions. Personal Paint can apply its convolutions on brushes, the whole screen, or a user-



🔗 The Personal Suite CD doesn't come with manuals, however, the AmigaGuide versions are complete transcriptions



🔗 Personal Fonts Maker 1 + 2...

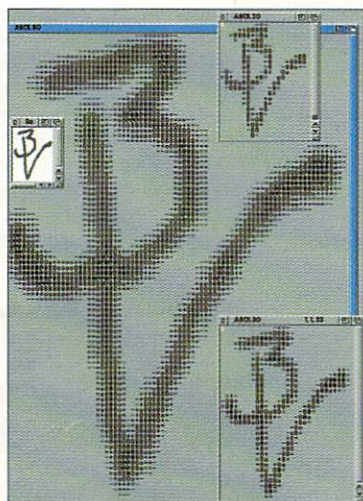


🔗 ...the only choice for bitmap font editing on the Amiga

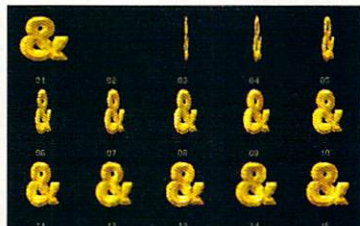
RINGING THE CHANGES

There have been several changes made to Personal Paint in the update from v6.3 to v6.4:

- New loaders and savers. You can now save an image in ASCII text and load and save PNG format files. Also, there is now improved colour reduction for converting 24-bit files into 256 colour pictures which is also faster than in previous versions.
- All requesters have been rewritten using a new user interface library and soon, all of Cloanto's products will use this new library. Visually it hasn't changed very much, but one of the most important additions to it must be the availability of a size gadget, particularly for file requesters. Also, the filter edit requester has been re-organised making it more user-friendly.
- Animation can now use virtual memory for frames.
- You can now animate on RTG boards which do not support double-buffering. In some cases this is not as smooth, but in most cases goes unnoticed, and in any case allows the creation of 256-colour animations where no other piece of software would (e.g. for ECS users with a Picasso).
- PPaint's ARexx interface has also been improved, although no documentation is presented for it. Cloanto say that the next version of PPaint will probably have all the ARexx stuff explained.



🔗 Personal Paint's ASCII save allows you to create pictures out of text. You can vary the width that PPaint outputs to achieve the scale you require.



🔗 The animfont taster that comes with Personal Suite is called Bullion



🔗 Amiga artists doesn't clown around

definable area. These convolutions will blur or sharpen the chosen area, emboss it, texture it, or even convert it into a stereogram image. Personal Paint is also unique in the fact that it can produce stereogram animations (there are some examples on the disc), a feat no other Amiga package is yet capable of.

The animation features aren't quite up to scratch yet, however. There is no motion panel à la DPaint and animbrushes are not yet supported (although there will be a patch made available to add this facility). It does,

however, have a nice storyboard function which displays a thumbnail of each frame in an animation. Frames can be cut, copied and pasted to new positions within an animation, and can be inserted or deleted where necessary.

INDIVIDUAL FRAMES

Personal Paint also supports frame timing so there is no need to make copies of individual frames to insert pauses. PPaint will even take animations that have

multiple frames and optimise them by removing duplicated frames and simply adjusting the length of time the frames in question are displayed.

The brush handling is splendid in contrast to the weaker animation side of things. PPaint can hold up to nine brushes in memory at once and, as previously stated, can apply its image processing effects to them. Brushes can have unused bitplanes chopped to save memory and can be outlined in a variety of ways.

S BASE PERSONAL 4

Superbase, or SBase as it is now known, was one of the best coverdisks Amiga Computing has had. I know, I was responsible for dealing with all the updates where I was working at the time. So many readers sent their upgrade offer to us that we actually had to take on a temporary member of staff to help with the demand. Therefore, I would imagine that plenty of you already own a copy of Superbase 2.

But SBase 4 does add some new features to the old dog. For a start, you now have the ability to create forms for your database, a feature only previously available with the professional version of Superbase. For the uninitiated, SBase is a relational database with extremely good functionality. It has its own programming language and although its looks aren't exactly modern, it is still the best database available for the Amiga. Use it for your video collection or for your clients names and addresses, its up to you.

SBase has the unique ability to link multiple databases together into one, so you can have a product database linked to a stock database linked to a customer database, all with one front-end designed in the Form Designer. SBase's documentation is something more than adequate, although the pictures in the AmigaGuide document should have all been cropped appropriately.

So, in short, SBase is still king of the hill when it comes to power and configurability, although its looks are somewhat out of date.

PERSONAL FONTS MAKER 1&2

They shouldn't really be called PFM 1 & 2 as they aren't different versions of the same program, they are actually two separate font creation utilities. PFM deals with mono bitmapped fonts and printer downloadable fonts, while its erstwhile brother lets you create fonts in up to 256 colours and actually has more in common with Personal Paint than with PFM.

Both suffer from the same 'innovative' interface design and need bringing into the nineties. But once more, Cloanto have come up with a really good product. Although the time has passed when everyone relied on dot matrix printers and bitmapped fonts, there are still people who need to use font bitmaps, and PFM and its brother are there to supply the goods.

PFM is more geared towards producing printer downloadable fonts that you can send into your dot matrix or inkjet printers memory and then use just like any other built-in font. Your only limitation with this is the same as it would be for any other built-in font, it's difficult, to switch fonts mid-document. There's nothing much you can do about this, but at least you can jazz up your

documents with something more stylish than courier.

PFM also has a built-in macro language and recorder to allow you to automate repetitive tasks like converting a whole font to italics or bold, or changing the baseline for each character, and it also supports the full ASCII character set. You can use PFM to develop typefaces for foreign alphabets which run from right to left rather than the normal Latin fashion.

FONT FEATURES

This can cause a problem with a lot of programs though, so be warned. PFM can export fonts in the standard Amiga bitmap font format or as PFM fonts. Quite why you would want to do this is beyond me, but I guess it's nice to have the option. Finally, PFM also makes use of the font flags described in the Amiga developer kits and can ascribe attributes to a font with a simple visit to the menu bar.

PFM2 is a long overdue replacement for the Calligrapher program by Inter/Active Softworks which was the only program available for a long time that

could produce colour fonts. It was incredibly unfriendly to use and very unstable, but people swore by it (and at it probably) for making anti-aliased fonts and colour fonts for video work. PFM2 looks more like a paint package than a font designer and has most of the tools appropriate to one like an airbrush and a curve tool. Even the documentation for PFM2, such as it is, refers you to the manuals for PFM and PPaint.

PFM2 shares many of PPaint's brush handling features like being able to chop unused bitplanes from a graphic and being able to change the transparency colour for the brush. It lacks PFM's macro facility, but then colour fonts aren't designed to be churned out, each one is supposed to be a work of art. Either of them comes in very handy if you have a font that is just missing a character or two, and you can use parts of other characters to help fill in the gaps. Scala's FuturaB font doesn't have any standard mathematical symbols so my workbench calculator had blank buttons. A quick trip to PFM soon sorted the problem and now I have a customised FuturaB font.

PERSONAL WRITE

Personal Write has never been very popular in this country. Whether this is because it has a slightly nonconformist approach to word processing or simply because not enough people knew about it, I don't know. Suffice to say that if you don't mind a somewhat odd method of working, Personal Write has some very good features, as you might expect from the team that brought you Personal Paint.

Personal Write is one of the most comprehensive text editors I have yet seen on the Amiga, with support for different character sets, like those used by the PC and Macintosh – and even the Commodore 64 set! It also has the ability to automatically insert true quote marks (you know the ones, they look like 66 and 99) when you have used standard shift-2s. Personal Write will check various things while you are typing, such as case and repeated words, and warn you in case they need correction.

Its printer support is quite phenomenal, giving you control over printer codes and postscript functions – you can even send a Postscript 'kill' command to the printer after it has finished downloading your document and it will stop the printout before it happens. Now, I know for a fact that Personal Write is the only bit of software that will do that on the Amiga, and very handy it is too.

But Personal Write does have quite a few problems. The first is the dreadful user interface it labours under. Non-standard keyboard shortcuts only make matters worse; having no Right-Amiga-q shortcut for quitting and having to deal with using the function keys for cutting, copying and pasting text makes me shudder and think back to Article Editor, the text processor that came with ProPage which used similar keys.

Personal Write also makes use of a very ugly custom file requester and gadgets. But back on the plus side again, Personal Write will save out text in a number of formats including ANSI, ASCII, FTX and compressed. You can also encrypt saved text using a strong

Jargon box

PNG format – when Unisys told Compuserve that it had to pay royalties for using the GIF graphics format, the search was on for a free replacement. PNG is a compact graphics format that can handle up to 48-bit colour, compression, alpha channels and may other features. The only software to support PNG so far on the Amiga is Cloanto's Personal Paint. Cloanto have also released a PNG datatype into the public domain.

HAMB/8 – one of the ground breaking features of the Amiga back in 1987 was the fact that it could display as many as 4096 colours on the same screen. This mode is only really suitable for pictures and animations, but gives very good results with the right software. HAMB was introduced with the AGA Amiga in 1992 and can display up to 262,144 colours on the same screen. HAM is an acronym that stands for Hold And Modify.

RTG – RTG is an acronym for ReTargetable Graphics. RTG is a standard by which the Amiga's workbench and other screens can be run on a third-party graphics card.

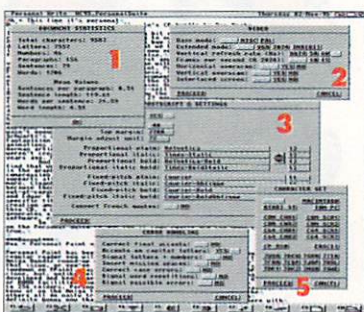
Convolution – convolutions are matrices applied to images to provide effects. They are a little difficult to explain, but transparent in use, so you won't need to worry about creating them.

FTXT – the FTX format is part of the IFF standard as applied to text. FTX stands for Formatted Text and is an Amiga ASCII-type document format.

key encryption system which will prevent even the most determined user from accessing your secrets.

In keeping with the secrecy facilities of Personal Write you can also destroy documents from within the program. A file requester will appear asking you to select a file to destroy. You will be given a final chance to change your mind and then the file will be completely removed from your hard drive. Personal Write doesn't simply delete the file from the disk, it actually overwrites each byte so that the file cannot even be recovered using something like DiskSalv or AmiBackTools.

Personal Write can open as many document windows as you have memory for, and a print spooler ensures that you don't have to hang around for your text to print. You can actually insert pictures into a Personal Write document, but don't think that this is a WYSIWYG program. It's actually more like ProText and shares some of that program's additional features such as its extreme speed of operation.



Personal Write's requesters: 1 shows your document statistics including the most important factor for journalists – a word count; 2 shows the video preferences settings; 3 shows just one aspect of the Postscript settings; 4 shows just some of the ways PWrite will help you with your writing; and 5 lets you choose from several character sets to ensure that your text isn't rendered into gobbledygook when transferred to another machine

OVERALL

So what do I think of the CD? It's great value for money, even if you only ever use Personal Paint, the layout of the CD is clear and the online manuals are easy to use. The only downside with the package is that you are obviously not supposed to copy the programs onto your hard drive – they are only supposed to be run from the CD. This does mean that there are different language versions for all the programs and documentation, but it does make it awkward if you are the sort of person who'd rather have all your programs in one place. However, these are only small niggles and it's nice to see more CDs coming out that are actually useful.

Bottom line

REQUIREMENTS

RED essential BLACK recommended



CD-ROM drive

1 Mb

RAM

PRODUCT DETAILS

Product	Cloanto Personal Suite
Supplier	Amiga Computing
Price	£39.95
Tel	01625 878888

SCORES

Ease of use	80%
Implementation	80%
Value For Money	90%
Overall	83%

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Digita Organiser 2 is the second in the series of Personal Information Managers. After the first was released back in July, it was difficult to believe that such a package could be improved upon. It may not have had the portability of a real filofax, but for features and extensive options you couldn't go far wrong.

Digita are renowned for using their typical GUI that featured on all their past products. The same icon display and menu system is used as in Wordworth which also became extremely popular because of its ease of use. Obviously, Digita firmly believe that this display system is the most user-friendly. It allows you to see everything you can possibly access, so there are no windows hiding in the background and you don't have to re-arrange your desktop just so you can view various parts of your information.

The actual display simulates a real filofax with real pages to turn, handy bookmark tabs at the side of each section, and even rings in the binder. As you turn the pages, a small, quick animation of a page turning comes into effect, which just proves how realistic they want to make it.

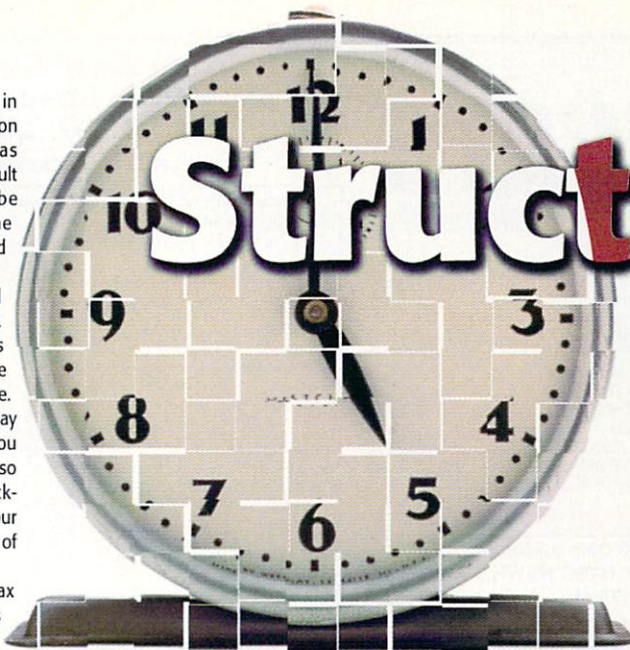
The idea behind this is to present the PIM in a way most people are used to. There's no point in designing an easy GUI if you're going to have to sift through pages of the manual just to work out how you get it running. People who've owned filofaxes previously will be instantly familiar with the layout, and transferring data from a normal, everyday, ring binder to the Amiga couldn't be simpler.

COLOURS

The tabs on the side of the filofax are all different colours so you don't have to turn your head to read the print. The features consist of Calendar, Diary, Tasks, Address Book and the Supplements. The supplements are right at the back of the book and contain 'loose leaves' which are blank sheets of paper to write down notes and any other bits of information that wouldn't usually belong in any of the previously mentioned categories.

Digita Organiser 2 includes some new features which could have come in very useful to owners of the previous package. For instance, you can create links between various categories, so making a link between somebody's address and their birthday can be carried out at the click of a button. These categories would normally be separated and couldn't be connected together.

If you buy Digita Organiser 2 you will receive another product called the 96 Plus Pack which contains over 100 supplement additions and



Andy Maddock

looks at the first update to Digita's computer organiser

20 new Diary Themes including Sport, Disasters, National Days, Computers, Gardening, and many more. All these can be placed at the back of the filofax as an instant reference section. The disk can be installed on to the hard drive along with the organiser package, and by dragging the various supplement icons across to the 'Supplements' drawer you will be able to access them as the program starts up.

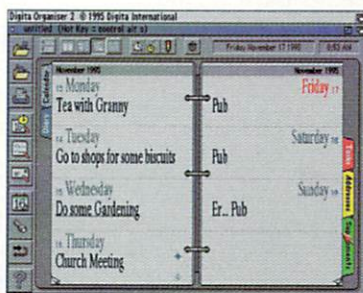
The whole package is thankfully complemented by an AmigaGuide tutorial which has

an extensive reference section for explanations of various commands and topics, along with other information. The guide will inform you about installation instructions as well as an in-depth tutorial which, step-by-step, will take you through the entire package.

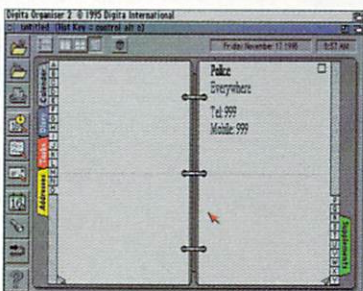
From what I saw of the first version, the second version doesn't really contain any other noticeable features that stand out. If you already own the first Digita Organiser then you can upgrade to the second version for £14.99. Although this price still seems quite expensive for the amount of features, it will provide you with more power and speed to almost certainly improve your day-to-day organisation.

The 96 Plus Pack containing all the new supplements is an excellent purchase at only £9.99. The supplement disk would undoubtedly make your filofax bigger if yours is lacking in content, and it also contains various topics of information such as corresponding births and deaths.

If you are looking for a comprehensive, fully configurable electronic filofax then look no further than Digita Organiser 2. As most of the Personal Information Managers are on offer as Public Domain and Shareware, despite the price, Digita Organiser 2 would be an excellent purchase if you happen to use an Amiga for work purposes.



You can select the Diary by the colourful tabs that stick out from the filofax itself



The address book is nice and easy to use, with the alphabet listed down the right-hand side

ACTING ON RESPONSE

The new features in Digita Organiser 2 may not be immediately noticeable, and may not add any cosmetic differences, but after a while they will become impossible to live without as they increase the power and speed immensely. It's difficult to come to a conclusion about this product as I'm not sure the new features actually warrant a second edition. However, I'm sure many people will argue that the package should have contained these features when it was first released, although in Digita's defence, they have listened to all their existing users and acted upon the response which many companies would undoubtedly deem far too time consuming.

Bottom line

PRODUCT DETAILS

Product	Digita Organiser
Supplier	Digita International
Price	£49.99, upgrade from v1 £14.99
Tel	01395 270273

SCORES

Ease of use	90%
Implementation	80%
Value For Money	70%
Overall	85%

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3785 Dosman-Everything about DOS-WB1.3+	
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3819 Photogenics Demo AGA	
3822 Excellent Card Games Five great games ECS/AGA	
3838 Galleons Scorched Tanks on Water?	
3842 Mortal Kombat 3 - Street fighter with fruit	
3843 Util. Disk-Diskmatter v1.14 Memorymonitor v1.03	
3854 TERM V4.4 + LOCALE	
3755 TERM V4.4 030 VERSION + LOCALE	
3756 TERM V4.4 EXTRAS + LIBS	
3870 Shapesifter V3.0b	

NEW REKO CARDSSETS

3723 DREAMGIRLS 2	3745 NEW ROSES
3756 EROTICA	3757 FRACTALS
3764 REN + STIMPY	3768 DOOM 2
3679 Nightmare Before Xmas	3696 RECORD
3697 STEPHANIE SEYMOUR	3698 BASKETBALL
3699 OCEAN	3700 PB COVERS
3701 KYUE	3737 ST GENERATIONS
3808 PAM ANDERSON	3825 MASK
3826 STARWARS GALAXY	3839 Manga-Japanimation
KL019 Erika Eleniak	KL015 FITCHIX
3840 Beavis & Butthead "This one kicks ass! he he," yeah!	

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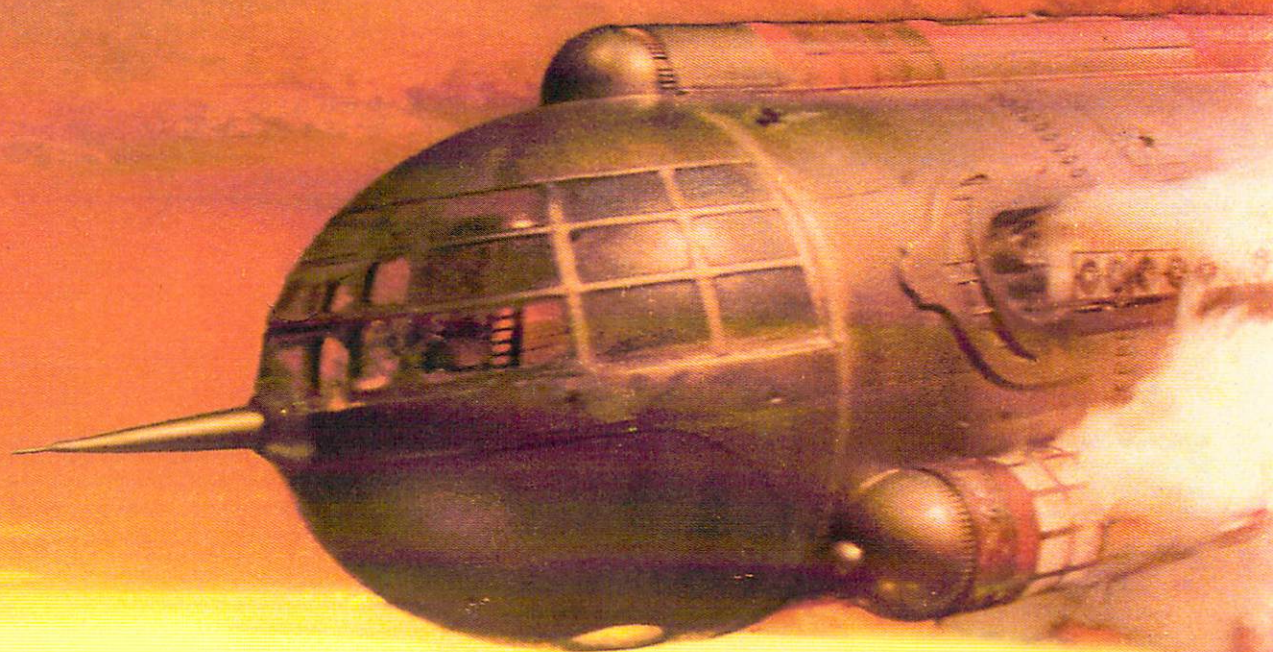
F1-044: Black Board v3. A full featured image processing

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The future

starts here



A new year and a new look for **Amiga Computing**. But what about the Amiga? Will 1996 be the renaissance of **Commodore's** baby? Over the next few pages you will read about our suggestions for the next revision of **Workbench**, what industry pundits think of the year ahead, how the world's best Amiga show went in **Cologne** and just how the **PowerPC** chip will change the Amiga for the better.

Another new year: a time when most of us instinctively look to the future with greater vigour and optimism than usual, whether that be the result of wishful thinking or a chronic excess of alcohol over the Christmas festivities.

This time last year, though, no amount of looking on the bright side could change the fact the Amiga's chances of a revival were rather slim. And even following Escom's takeover in May, it's been hard to banish doubts arising from the lack of news about more products, the virtually none-existent advertising campaign, and delayed supplies of the machine itself. So how come the Amiga community is feeling so much more optimistic about 1996.

The simple answer is that news is finally coming through about plans for Amigas that will not only compete technologically with the best machines the rival platforms can offer, but maybe even leave them behind.

COMMITTED

As reported in our special Cologne show report, (see page 42) Amiga Technologies have taken the plunge and committed themselves to developing a new range of Amigas based on the Power PC RISC chip. At the same time, Phase 5 have developed a Power PC board that will be compatible with the current Amigas, allowing current owners to take advantage of the vast benefits that RISC



The path ahead

1996 is make or break time for the Amiga.

Gareth Lofthouse looks to the future and assesses **Escom's** chances of pulling off the most remarkable **comeback** in the history of computing

processing will bring. The still distant, but more concrete, hope of actually seeing a RISC Amiga made has been backed up with a fairly busy release schedule from Amiga Technologies in the meantime. As usual, however, the announcement has given rise

to a whole new set of questions, not least of which is 'Who's still going to be developing for the new Amigas when they finally appear?' *Amiga Computing* spoke to long-time supporters with differing views on the machine's future prospects.

SCALA

Scala have always been in the vanguard of serious Amiga development, but having successfully diversified into the PC market with their new multimedia package based on MMOS, are they sufficiently impressed by Escom's latest plans to continue developing on RISC-based Amigas?

"It represents no technical problem for us," said Barry Thurston, Scala UK's joint MD. "I think developing for Power PC Amigas would be very good timing for us. There was some debate over whether or not we'd port MMOS back to the Amiga as it is now. But I imagine that going with the Power PC environment would suit the MMOS environment better, and certainly we'd be able to get a lot more functionality."

Thurston points to the fact that a Power PC Amiga would be able to run Windows 95 as well as AmigaDOS which is a distinct benefit arising from this development: "With products like Scala MMOS being cross platform, it could make a nice link between different environments on a network, for example."

Turning to the near future, and the Amiga's chances in 1996, Thurston is bullishly confident: "Where the Atari ST failed, and where the Archimedes hasn't been successful, I think with the Amiga it will be different," he asserted. "I think we will see an Amiga resurgence - you only have to have seen the interest shown at the LIVE show."

With so many years spent behind him pushing the Amiga as the multimedia machine, is Thurston tantalised by the possibilities a Power PC Amiga might offer? "Absolutely," he replied, sounding more like an enthusiast than a businessman. "It always has been the perfect choice for multimedia." The next stage can only increase its potential.



Scala UK Joint MD Barry Thurston, excited by the multimedia potential of a RISC-based Amiga

DIGITA

Another company that's made itself into an Amiga institution, Digita have recently come up with the goods to make up most of the software in the Magic Packs. Asked for his reaction to the Power PC announcement, MD Jeremy Rhyll was fairly positive.

"Power PC is a logical step forward," he commented. "Like Apple, Amiga Technologies must move away from the 68000 chip family to gain a competitive price/performance ratio, and then they can successfully follow the Apple model. Provided we receive timely development systems, the tools and documentation, and the full support of Amiga Technologies, we will develop for it. Wordworth would be a logical place to start!"

Digita, like many other companies with Amiga backgrounds, have diversified into the PC market, and their flagship product is actually the PC-based *Taxibility Pro*. However, Rhyll sees the coming year as a chance for a change of fortunes for the Amiga: "Yes, 1996 will be better. There will be better machines and, hopefully, a higher awareness that the Amiga is back in the UK. The launch of Wordworth 5 in January will inevitably help focus attention, but our other future plans... are largely dependent on the performance and support from Amiga Technologies."



Digita's Jeremy Rhyll: Future development will depend on Amiga Technologies' support

RISC VERSUS PENTIUM

First things first, the Power PC chip has nothing to do with PC computers. Confusing, I know, but new PCs are based on Intel's Pentium CISC processing. Now, Pentiums are fast, with the top of the range speeding along at 133 MHz. Our Technical

Editor, Neil Mohr, estimates, however, that a Power PC RISC Amiga would be the equivalent of having a 200Mhz Pentium PC! Incidentally, the 604 Power PC chip will also be about 150 times faster than your basic A1200.

CALENDAR FOR THE COMEBACK

There have been rumours muttered both on and off the record that Escom were only interested in the Amiga in the short term and that they had no genuine plans to develop the technology.

"A rumour said that the Amiga is just a quick shot for the Christmas season and that the project would be

dropped shortly afterwards," said Escom boss Manfred Schmitt recently. "This is most certainly a dream of the competition!"

Only the appearance of the promised products and developments will fully dispel the doubts, however. Here's what's in the pipeline:

Amiga Technologies

Product:	Release schedule	Description
Q-Drive	Jan 1996	Quad-speed IDE CD-ROM, £229
Amiga Internet Pack	Jan 1996	Modem and Net software 'plug and play' bundle
060 Board	1st Quarter 1996	Accelerator board for current range
A1200+	May 1996	030 40Mhz/ Coldfire upgrade A1200 with SIMM sockets
RISC Amiga	1st Quarter 1997	New high-end machine based on Power PC 604 chip
Black Box	?	Set top box sounding suspiciously similar to CD-TV concept

Other key releases

Phase 5 Power PC Board	Jan 1996	Power PC-based board for developers use with existing range, should be backward compatible with old software
Digita Wordworth 5	Jan 1996	Latest release for Amiga wordprocessor
Cloanto Personal Paint 7	Spring 1996	Paint Package
TurboCalc 4	Spring 1996	Spreadsheet
Optonica MME	Dec 1996	Multimedia presentation software

OPTONICA

Despite their long-term commitment to the Amiga multimedia field, Optonica never seem to have had anywhere near so much coverage as their rivals of Scandinavian origin. Those who only know them as developers of the Insight CD series or InfoNexus might therefore be surprised to hear of some of their recent multimedia triumphs in the corporate market.

Take, for example, their contribution to Britain's most popular national sport. They have already introduced huge video walls into Wolverhampton FC's football stadiums, and they're currently building similar projects at West Ham, Man City and Glasgow Rangers. All of them will be driven by Amigas when completed.

So are they more confident about the Amiga's prospect in the light of recent developments? "Yes, I think so," replied Optonica MD Lee Gibson. "Over the past 12 months we've been sitting on a lot of assets in terms of development because of the state of the market place. Now we want to give it a bit of a kick start."

DISAPPOINTED

They are not, however, completely impressed by Amiga Technologies' approach so far. "To be perfectly honest," said Gibson, "we've been a bit disappointed with what they've done. They've got the product back on the shelf, which was their first priority. But the way they've worked with the developers and the information that's got through to them, we've been very disappointed with that." Whether they will develop for the Power PC line, then, will very much depend on Amiga Technology improving its communication lines and a revival in the market's confidence. "It's really a suck it 'n' see type of scenario," he concluded.

Jargon box

CISC - Complex Instruction Set Computing. To me, that means slower.
RISC - Reduced Instruction Set Computing. That is, lots faster than CISC.
MIMOS - Scala's object-oriented multimedia operating system.

future amiga



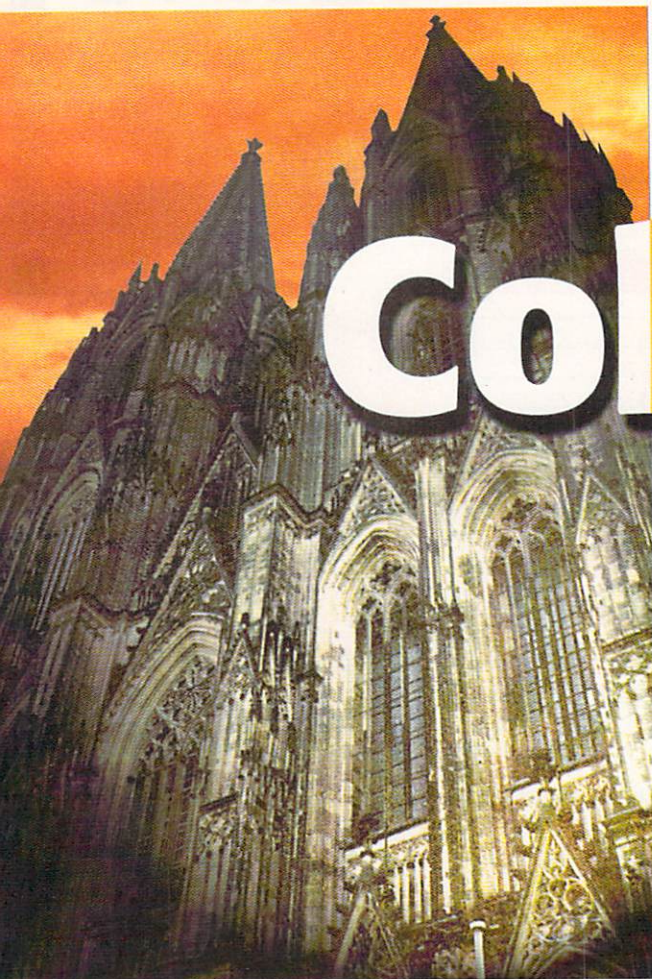
LAST DITCH FIGHT

The Amiga is now looking healthier than it has done in a long, long time. Few doubt that if Amiga Technologies can produce the promised products at a competitive price, we will have a range of computers to be reckoned with.

It is clear from speaking to the industry leaders, however, that there are huge challenges to be overcome. It is unclear as yet, for example, how much damage software incompatibility with the Magic Pack Amigas has had (see our news story). And communications with, and support for, software developers will also have to improve, although Amiga Technologies are already taking significant steps towards addressing this matter.

Certainly even those companies that have successfully diversified into the PC market would hate to see the demise of this legendary machine. It is to be hoped that 1996 will be just another chapter in the Amiga's on-going history, rather than a tragic ending to an extraordinary enterprise.





Cologne carnival

The **World of Amiga** show in Cologne has always been popular. It's back as Computer 95 and busier than ever. We sent **Ben Vost** to look around

Blimey! I've been to the Cologne show for the past five years (bar last year's show) and never thought I would see it as busy as it was when the A3000 was launched. But fighting my way through at least 20,000 people on a Saturday morning to get to the stands I wanted to visit put the lie to that idea. Attending the exhibitor's party the evening before probably wasn't all that good an idea as I was fighting a thumping headache in addition to the crowds, but when in Cologne...

If there was ever any doubt about the fact that the Cologne show is the most important Amiga event of the year, this show was guaranteed to dispel it. Although it is now a general computing exhibition, more than half the stands were Amiga-related, and although I only saw a few people wandering towards the exits arms laden with PC or Apple goodies, there were plenty lugging Amiga Magic packs or the new Amiga monitors around with them. If you

are into 3D stuff, then there was a lot going on for you at the Cologne Show. Amiga Oberland were demonstrating a new version of Reflections which will finally be available in English in February '96 (they hope). Maxon were showing off their latest add-ons for Cinema 4D – namely a tree generator and fractal landscape generator, which both looked quite nice.

Andy Jones from Activa UK was there showing off his skills with Real 3D which will be entering a new revision shortly, and he was proud to announce a deal between Activa and AntiGravity Products (a name which will no doubt be familiar to all our Stateside readers) to distribute their products in Europe. This means you will no longer have to place a call to the States to get hold of Humanoid, Snap Maps or any of AntiGravity's other highly regarded products.

Also attending the show, representing the British contingent, were HiSoft, showing off their Squirrel Mpeg prototype which was getting a great deal of interest (especially as it was showing Star Trek 6 on an



A typical scene at the end of a show day, knackered punters clutching their Amigas while they take a breather

"Maxon were showing off their latest add-ons for Cinema 4D – namely a tree generator and fractal landscape generator, which both looked quite nice"

enormous Sony TV – guaranteed to draw a crowd!), and Digita, sharing the Macro Systems stand showing off a beta version of Wordworth 5 (which looks absolutely splendid, the screen update is phenomenally fast).

Gasteiner also had a stand offering their usual cut price bargains in the hard drive and memory department. The Cologne show is always popular with people in the know who are in the trade, so, although they didn't have stands, there were representatives from Power Computing, GPSoft, Cloanto, and many other companies wandering around looking for new products to distribute or sell.

Video users were also well catered for with both Electronic Design and Hama present exhibiting their genlocks and PAL encoders to an eager audience, and for the higher end, the aforementioned MacroSystems stand was also replete with VLab Motion demonstration systems showing off the power of their £1000 non-linear editing solution. If you were in the market for broadcast quality output, however, your only choice was to visit MOM Computersysteme who were showing off their Broadcaster Elite machine which offers true broadcast quality output for a lot less than on platforms like the PC Mac or SGI.

But acceleration was where it was at at Computer 95. Micronik, MacroSystems,

GAMES

There wasn't much to get excited about on the games front. Although Electronic Arts and Microprose both had enormous stands, they were showing PC software for the most part, and there were even some stands showing off the admittedly brilliant Playstation and its range of titles. There were no Amiga-specific games companies there, which is a shame, but it seemed as though more people were interested in more serious pursuits than joystick waggling anyway.

Looks crowded huh? Well this is just the entrance hall, the show itself is much busier



THE DEVELOPERS CONFERENCE

Escom played host to a packed room filled with dealers and developers from around the world, all present to officially announce their intention to use the PowerPC chip again and to answer questions from the floor. On the top table with Petro Tyschtschenko and Gilles Bourdin were Manfred Schmitt, making a welcome appearance, Fred Fish, the father of Amiga PD libraries, Horst Brandl, the head honcho at ICP Verlag, publishers of Amiga Plus which was the official sponsor of the show, Johnathan Anderson, head of Amiga Technologies UK, and various other Amiga Technologies staff including Peter Kittel and Andreas Hohmann.

We all listened as plans were outlined for next year. Most interesting of these was the fact that an updated A1200 (possibly called the A1200+) is in the works and due to be previewed at CeBit in Hannover in March next year. The A1200+ should be

on sale by June/July and will be powered by Motorola's ColdFire or 68030 processor. It will have SIMM sockets on the motherboard which are user-accessible and should come with an internet software bundle. This bundle will also be available for any Amiga user and should be plug and play according to Petro Tyschtschenko.

Developers should be a little happier after the announcement that AT's first priority is to restart Commodore's developer support program, and they are going to concentrate on using on-line services like their ftp server to provide support. Mr Tyschtschenko said that people and companies who were registered developers with Commodore would have to re-register with AT because a) AT don't have a developer database and b) developers would need to sign AT non-disclosure agreements. Both Petro Tyschtschenko and Fred Fish reiterated the importance of public domain developers

to the Amiga. If you are a non-commercial developer you can join up with AT's developer program for \$100 a year – commercial developers have to pay \$300 a year. This entitles the developer to access AT's ftp server and get advance copies of Workbench, special pricing on development systems, and so on.

In the Q&A session, one of the questions asked was about the lack of any marketing strategy, particularly for the UK market. Gilles Bourdin replied that there was very little budget for Amiga marketing this year and that people shouldn't confuse AT with Escom who are busy advertising their PCs left, right and centre. He also said that AT didn't want to make Commodore's mistake of pitching the Amiga solely at the games market and that serious thought had to be given to the sort of advertising campaign that they would eventually do.



Dr. Peter Kittel, head of OS development

Phase5, MLC (the creators of the Apollo cards and A600 accelerator), and M-TEC were all showing off speedier machines than the norm. Micronik had a joint accelerator and bridge-board running a Pentium P75 on a single card, MacroSystems had their DEC Alpha co-processor board sitting in a Draco machine. This card isn't so much an accelerator as a co-processor. Programs have to be written specifically to take advantage of its massive computing power, and already there has been widespread demand in the 3D software company camp for development boards.

SPEED BOOST

Phase5's contribution to the speedfest was the new Blizzard 1260 board which saw an Amiga 1200 powered by a Motorola 68060 (look out for a review soon). But more importantly, they also had a prototype accelerator running a PowerPC604 chip. This chip is the next generation of Motorola's chip family and is



Jargon box

ColdFire – Motorola's hybrid RISC processor. It understands the 68040 instruction set, but runs as a RISC processor. It should be about as fast as an 040 for 030 prices.

TIMELINE

Dec 95	QDrive CD-ROM drive available
Jan 96	Internet bundle for all Amigas
March 96	Preview of A1200+ at CeBit
1st qtr 96	O60 A4000T available
June/July 96	A1200+ on sale
3rd qtr 96	Set top box on sale
1st qtr 97	PowerAmiga on sale

The big news at the show – Phase 5's new Power PC accelerator

incompatible with the 680x0 series. Phase5 are going to be supplying boards to developers in January so they can create programs that will run native under the PowerPC.

Why are they doing this? Well, Motorola aren't going to be making any further additions to the 680x0 line, so if you want a faster Amiga this will be the only way to jump. In addition, completely independently, Amiga Technologies announced the decision

to make future Amigas based around the PowerPC chip at the recent VideoToaster Expo in America, and reiterated that commitment at the developers conference on the Saturday evening of the show.

All in all, the Cologne show was the best proof for a jaded journalist that the Amiga was still a viable concern, and seeing all the new products available from stands the show wide helped to reinforce that opinion. The Cologne show really is the best Amiga show in the world and I strongly encourage more English Amiga developers to take stands there next year.

The language barrier isn't a big problem, most German Amiga users know how to speak at least a little English, and the effort is really worthwhile. And I know it can be a bit expensive for Amiga users to go all the way to Germany just for an Amiga show, but it really is the best there is and flights and hotels don't have to be that expensive. Hopefully, Escom will try to duplicate their efforts in Cologne with a similarly sized endeavour in the UK so that you don't have to traipse halfway across Europe in order to buy your favourite machine.



Cheap, cheap, cheap – this stand is selling an Amiga pack and monitor for around £470!

OTHER MACHINES

There were several stands devoted to other computing platforms at Computer 95. Without exception they were all less busy than the Amiga Technologies stand – the IBM stand running a continuous demonstration of OS/2 having particularly poor attendance (perhaps due to the fact that the real star of the show has been multitasking for years).

Oddly, although there were plenty of PC products for sale and being demonstrated, there was no huge Microsoft stand. Perhaps Bill Gates and co. realised the futility of trying to brag about Windows 95. Apple had a huge stand with machines surrounding an inner sanctum where deals were no doubt being done, and Acorn had an open lattice work affair filled with machines performing some quite impressive tasks, but few people watching them.

One of the constant criticisms directed at Commodore, the former owners of the Amiga, was the fact that there were all these funky things like networking and CD-ROM support available on other machines, and none at all for the Amiga except through third-party software. The situation has worsened over time until, at this point, Workbench seems incredibly under-powered compared to the offerings for the PC and Macintosh. And it is.

Amiga Technologies are going to have to do an awful lot of work in a very short time in order to bring the Amiga back into the forefront of computer/human interface technology. The progress that needs to be made is difficult, cross-linked with other parts of the Amiga that need improving, but it must be achieved. In this respect, I humbly submit some of my suggestions, as a user of Windows (and Windows 95), the Macintosh System 7.5, and Workbench, for

the improvement of future releases of Workbench.

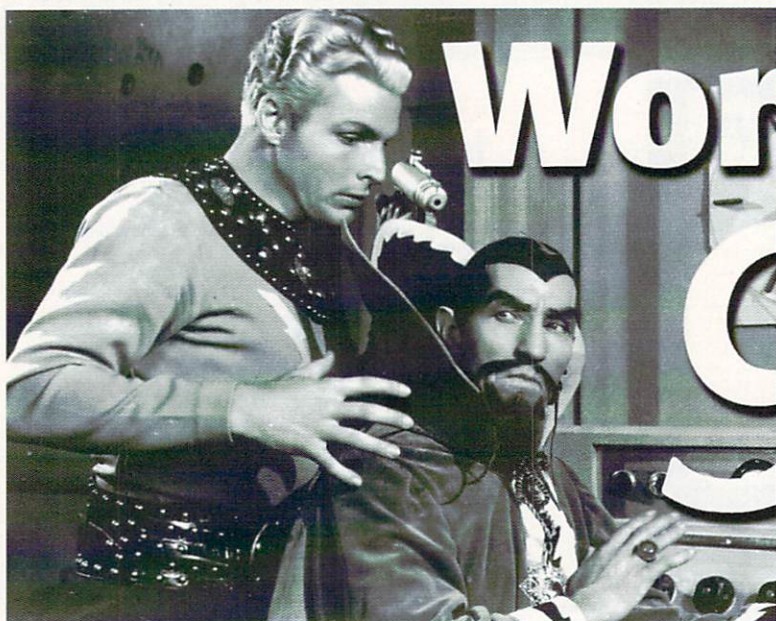
There are further considerations than just taking account of software. The Amiga's hardware is currently a bit of a bodge, too. Floppy drives that will only read high density disks at half speed and that click incessantly, stupid screen modes that no-one will ever use, an IDE interface as standard, a memory subsystem that is fatally flawed on the Amiga 4000 and limited to a laughable, by today's standards, 16Mb RAM, no real-time clock on the A1200, and so on.

POWER PC

A future Workbench can only survive on new and updated hardware, and Escom have announced that they plan to use the PowerPC family of processors in future machines, but right now work needs to be done for the 680x0 family, which Escom will still be using until at least next Christmas. So,

what should we expect from an entry level machine?

In my opinion, I think a machine with a 68030 running at at least 25MHz, but preferably 50MHz, would be cheap enough to exist as a beginner's machine. It would need to be furnished with an MMU as standard, but it could have a user-accessible socket for an FPU chip which could be pre-fitted on a 'deluxe' version of the machine. There is no question that the Amiga would have to come with a reasonably sized SCSI hard drive as standard - 250Mb would be plenty to start with - and I think that a 4Mb memory machine would also be a good start, preferably in a user-accessible SIMM socket in the machine itself. Since the improvements required to make the Amiga great again are multi-faceted, I'm going to separate them into different categories and will list all the sources for inspiration for each improvement in brackets after the suggestion.



SOFTWARE

WORKBENCH IMPROVEMENTS

The most important thing to be done is to make Workbench complete. Don't offer cut-down versions with particular machines, give everyone everything. Offer the operating system on a CD, if possible, so that Workbench installation is as painless as possible. The installation process should be intelligent, and check for system hardware before installing high-end facilities in a low-end system.

INTERNAL

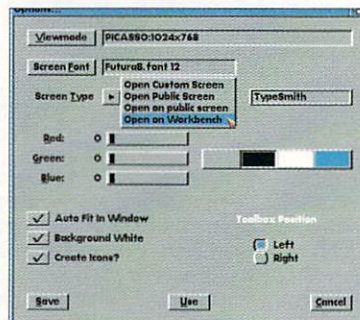
■ Make WB properly multi-tasking. At the moment you can't copy a file using WB and still do anything else. For copy (or multiple

file deletion) operations, a progress bar with a cancel button should be added to Workbench which gives the names of the files as they are copied (or deleted). (System 7, Windows 95)

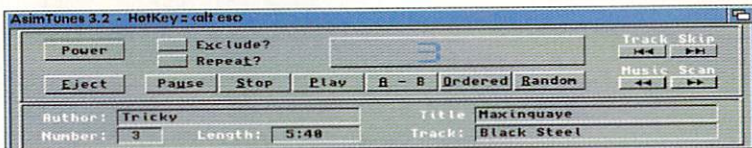
■ Make sure that some system of RTG is included in WB (probably CyberGFX). Ditch all the stupid screenmodes that no-one uses like Super HiRes and incorporate a pseudo 24-bit emulation whereby WB dithers down any image to match the screen colour resolution automatically. (System 7, EGS)

■ Replace cycle gadgets with pop-up menus. (Cycle2Menu, TypeSmith)

Ben Vost gazes into his crystal ball and comes up with a plan for an updated **Workbench** to blast all other operating systems out of the water



Pop-up gadgets make a lot more sense than cycle gadgets, particularly when there are a lot of options



■ Make CD-ROM an integral part of Workbench (including the ability to boot from CDs) and include an audio CD player and, possibly, a PhotoCD viewer. (AsimCDFS 3)

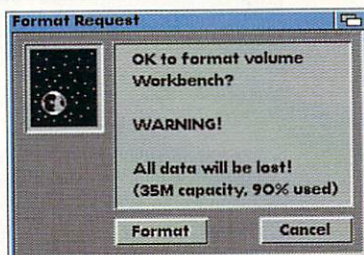
■ Copy and Paste ought to be systemwide and in interfaces, not just fields or text files, so that you could clip the name of a program, an icon, a picture, a sound sample and so on and then paste them wherever appropriate. There should also be a scrapbook program like the Macintoshes where you can keep clips when you reboot the machine. (System7)

■ Add a tcp/ip stack to Workbench (to encourage networking as standard) (System7)

■ Make file notification systemwide so that if you copy files into the RAM disk in a file manager, an open RAM window on workbench should reflect the change, etc.

■ Cut out all the bitmap fonts and CG Fonts and go for systemwide Postscript or True Type. This will cut down font deduplication and frustration caused by not having the right font in the right format. There is already an ATM-type type1 manager for the Amiga available as shareware.

■ Make system requesters respond to return and Esc for OK and cancel respectively (and initial letters in case of more than two



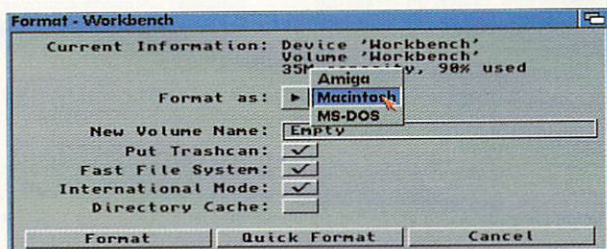
choices). (ARQ) If the Amiga is supposed to be such a multimedia machine, then some sort of system support for animation should be taken for granted. A chunky pixel format screen is far better suited to the playback of colourful animations than the Amiga's bit-plane approach, which only really shines when there are fewer than 16 colours on screen. If a 68030 base machine is a possibility, then the pussyfooting around should stop and serious work done on improving the performance of WB in this field. It has only been held back at the present time by the large proportion of 68000-based machines in the marketplace.

Now that there are more A1200s out there, people are trying things which tax the system more, but even more could be achieved with an even more powerful entry level machine. There could also be libraries for 3D graphics, sound, and picture manipulation that would work systemwide. If this was the case, newer

AsimCDFS's audio player could do with being font-sensitive and a bit smaller, but it's better than nothing

■ Hitting Return will activate the Format button and Escape will cancel the requester

■ Perhaps a future format requester might look something like this? It should, of course, be completely font-sensitive and not this mix of fonts

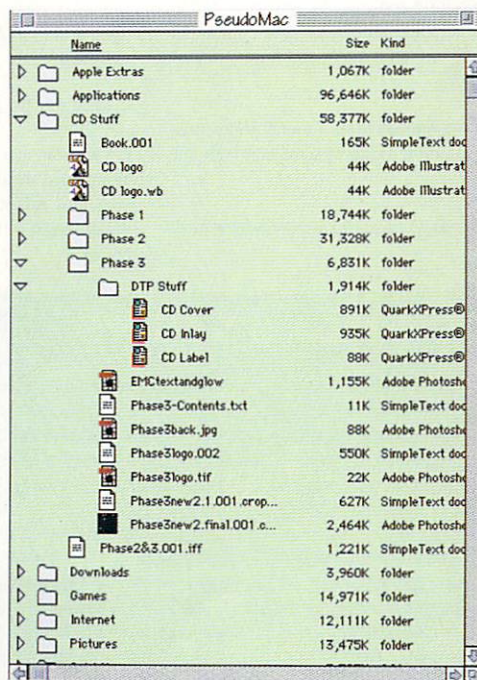


MENU

■ Incorporate the drag and drop facilities offered by SwazInfo into the standard WB Information requester. (SwazInfo)

■ Change the way the 'View By Name' item works in the Windows menu on WB. Rather than having the sort functions in the menu, make it so that users can just click on the headings across the top of the window to change the way items are sorted, and implement a Macintosh-style list where drawers can be opened inside the same window rather than opening a new one. (This is pretty difficult to explain, but if you have ever used a Macintosh, Windows 95, or the MUI Web Browsers you will know what I mean.

See the picture, it's pretty much self-explanatory). (System7, MUI 3)



■ The way the Mac shows directory windows by name is highly efficient. Notice that folder sizes can be automatically calculated and that the list is sorted according to the heading that is underlined. You can change the sorting by clicking on a different heading

future amiga



versions of these libraries could be supplied as they were improved. This would mean even less reinvention of the wheel and more system-friendly games.

■ Add support for 24-bit printer output and rewrite the printer drivers that Workbench offers. (Consider incorporating Wolf Faust's Studio system)

■ Incorporate CrossDos and CrossMac into Workbench and change the way disk icons are shown. From now on, there should only ever be one icon for a floppy disk on Workbench, and the Format requester should have a pop-up gadget so that the user can choose whether to format a disk as AmigaDOS, MS-DOS or Macintosh compatible. (MultiFileSystem)

"If the Amiga is supposed to be such a multimedia machine, then some sort of system support for animation should be taken for granted"

CONS

■ Maintain the snapshotting of the RAM disk icon transparent (it could be put into envarc: as default_ram.info).

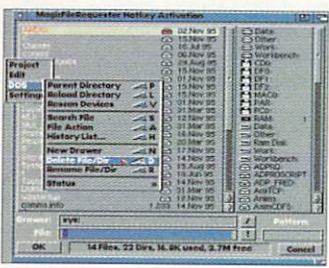
■ Consider incorporating a program's icon into the body of the file, rather than having a separate .info file. This would reduce confusion and speed certain operations up. (System7)

SHELL

■ Institute * as the default wildcard character instead of #. (MS-DOS)

FACILITIES

- Create an ARexx interface for Workbench itself, possibly with a macro recorder to make systemwide repetitive actions more simple (QuickKeys)
- Ensure that the system file requester



➔ **Magic File Requester** shows the way the ASL file requester should have been with menu items to rename and delete files

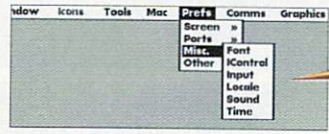
offers the options of creating new directories, deleting files and renaming them. (MFR)

- Create a systemwide trashcan that sits on the Workbench rather than having a trashcan for each individual disk (System7)

- Add a system tools menu. (System7, ToolsDaemon)

- Add a systemwide titlebar clock (TitleClock)

- Stop people fiddling around with the Shell so much and add a GUI for the editing of the user-startup so that people don't have to type in instructions they may not feel comfortable with (assignprefs)



➔ **ToolsDaemon** allows you to add as many new menus to Workbench as space will allow

- Increase the amount of options for disabled people, including changing the mouse buttons over for left-handed users and a built-in magnifying glass. The options to change font style and size are splendid and are not offered by many other operating systems

- Include some kind of system manager in WB so that programs which have failed can have their processes, screens, and windows shut down (and memory



freed if possible). This should be an automatic process, but there should be a user interface for expert users.

- Extend exchanges abilities (more like the MUI Exchange).

- Extend GadTools to allow user definable/selectable gadget outlines.

- Add a screengrab function systemwide that will deal with any screentype (especially handy for us journo's). (System7)

MULTIVIEW

- Add a new drawer in DEVS: for added tools to use in Multiview, like video or sound digitisers. If Multiview is made into an UrApp (the basis for other applications) then it can be built up into a powerful multimedia tool.

- Change the sound datatype for Multiview so that it includes a scalable view of the sample and the ability to position the cursor anywhere in the sample and add playback gadgets like any normal sample player.

- Change Multiview so that not only can datatyped files be saved as their IFF equivalents, but also as any other format. Incorporate copy and paste in Multiview.

- Make Multiview HTML compatible with appropriate navigation tools (this would also mean adding the ability to have inlined images in a Multiview document) with a view to replacing AmigaGuide with HTML. Change the way datatypes work so that they too no longer rely on there being Chip RAM to play with.

- Also make them resolution and colour independent so that people with 24-bit displays won't need to use a different file viewer.

This will require a systemwide dithering tool which should be extremely fast and available to any program that requires it. This will also increase the memory overhead for machine operation so it should not be available on machines with low RAM. (These machines should not be allowed to use 24-bit displays at all)

HARDWARE

MACHINE FEATURES

- Incorporate the PCI bus into future Amigas in preparation for a complete changeover to PCI in future machines.

- Add user-accessible SIMM sockets to all machines and make sure they can take a wider variety of SIMMs than current machines. If possible, allow mixing and matching of memory types (i.e. a mix of 1Mb and 4Mb SIMMs in one machine)

- Consider ditching the Amiga's custom chipset and going for emulation of it in a modular VGA-type system which can be painlessly upgraded to offer better features such as 24-bit screens, 3D graphics manipulation and faster window updates

- Add an internal speaker which can be controlled from a sound preferences program to make sure that any Amiga can have sound of some sort with any monitor.

- Return to a hardware flicker fixer (if necessary) to ensure compatibility with all monitor types

KICKSTART

- Incorporate features like filename completion and a scrollbar history into kickstart so that the shell may have them even when started with no startup-sequence or user-startup.

- Extend the Early Boot screen to include WBStartup programs and device drivers, so that they may be disabled where necessary, and, at the very least, allow a mouse button or key press to disable the WBStartup drawer without having to rename it.

- Make sure the Amiga can be booted from a CD.

- If Kickstart can be put onto a flash ROM it could be updated through software, saving the material cost and effort of having to send out new ROMs each time Workbench hits a major revision.

CONCLUSIONS

As I said in the intro, Amiga Technologies have their work cut out for them. But Apple have managed the transfer to the PowerPC chip admirably, if not fully efficiently. All the things that made the Amiga great even as recently as five years ago are increasingly liabilities and things like the custom chipset and Workbench are woefully out of date.

Amiga Technologies have restarted the developer support program that was one of Commodore's best features and are actively recruiting developers that have moved to other platforms, or who have never programmed for the Amiga to come onto their new platform, so, with luck, the software situation should improve dramatically - but it needs to get better in the right way.

One of the biggest problems facing Amiga Technologies is the fact that the Amiga is in almost as bad a position PR-wise as Skoda and Lada are in the motor car industry. People with experience of computer platforms other than the Amiga look down on our machine as a games comput-

er, an impression cultivated in this country by Commodore circa Steve Franklin. A sea change has been long overdue, and can only be resolved with a long-term publicity drive.

Like Skoda, the Amiga is now seen as the cheap end of the market, with nothing going for it other than its price. The fact that you don't have to buy a monitor or hard drive for it is not an advantage; people will happily buy a monitor and a hard drive when they upgrade to a PC (a serious computer). But the PC won't be the competition for the Amiga in the next few years, it will be the Mac. With Apple agreeing licensing deals with companies all over the world, the Mac is the ideal replacement for the Amiga, much more so than the PC, but is not well-known enough yet.

As a dedicated Amiga owner who has spent a great deal of time, effort, and money on his computer system, I wish Amiga Technologies all the best and hope that at least some of my suggestions will be implemented for what I believe would be a world-beating Workbench.

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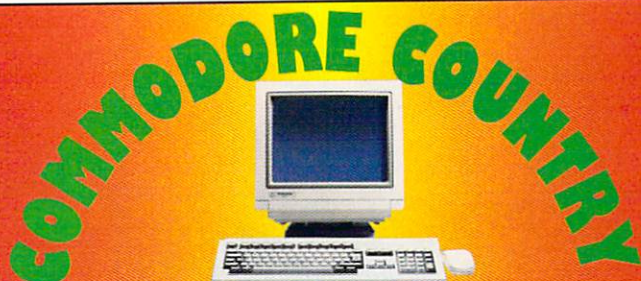
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PowerPC 604™



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Amiga Technologies
have announced **the**
future of Amiga
Computing, and that

future is the
PowerPC. Neil Mohr
checks out the
MPC604 processor

On the 2 November at the Toaster Expo, Amiga Technologies announced that the processor to be used by the next range of Amiga computers will be the PowerPC MPC604 processor. For most people the fact that new Amigas will be powered by a PowerPC processor was no real surprise, the choice of the MPC604, however, was a little surprising.

Released just before the end of 1994, the MPC604 is a new processor design, and running at a 100Mhz delivers over ten times the processing power of an A4000/040. This sort of power will give a Silicon Graphics Indigo 2 a run for its money.

RISC design is the key to the MPC604 speed, a simplified instruction set allows engineers to optimise the processor design and therefore get instruction processed in the minimum amount of time. With the CPU split into separate processing sections, the MPC604 is capable of executing multiple instructions simultaneously, in fact up to six separate instructions can be dispatched and executed in one clock cycle.

With three integer units, a floating point unit capable of executing a double precision instruction in a single clock cycle, and an advanced dynamic branch prediction unit along with a load/store unit, the 604 packs a lot into a single chip.

All these sections work independently

from one another, with the load/store unit helping to co-ordinate instructions run out of sequence, buffering early results and instructions until they are ready to be moved into registers.

The 604 comes with two 16Kb caches for instructions and data. This is eight times larger than the 040's copy back cache and

allows the processor much quicker access to recently used data and instruction, therefore giving a considerable speed advantage.

They also allow what is known as cache 'snooping.' As the 604 is designed to be used in multi-processor systems, data in each of the processors must be kept coherent, otherwise you would get errors cropping up in results, and when errors occur your looking at a system crash.

There has been no word from Amiga Technologies whether any future Amiga

Jargon box

The one little problem when it comes to computers is the huge number of brain numbingly complex terms that get thrown about. The prolific ability of computer engineers to invent and give birth to new words and acronyms can have even the most hardened techy's faces glazing over in confusion and bewilderment.

If you are having problems understanding what some of the terms and acronyms mean, here is a short description of some of the more important ones.

RISC - an acronym that stands for Reduced Instruction Set Computer. A processor that can be described as being RISC has been designed with the goal of minimising the time it takes for instructions to be executed, typically one clock cycle. This allows the processors execution path to be aggressively optimised.

CISC - Complex Instruction Set Computer. This describes a processor which has been designed to put as much flexibility in the instruction set, so a large number of instructions are available. CISC instructions can take many clock cycles to execute, as opposed to RISC instructions.

Pipeline - conventional processors can only execute a single instruction at a time. During this time the processor has to work out what the instruction is, what it is doing, and what it is doing it to, before the instruction can be executed.

One of the first things introduced into RISC design was pipelining. A basic pipeline acts as a simple buffer, pre-fetching instructions for the processor, so when the processor wants another instruction it can get it instantly.

More complex pipelines actually decode and process instructions. Therefore, instead of just having a single instruction being worked on by the

processor, this pipelining actually lets you have a number of instructions being processed.

This splits the processing of instructions into sections, helping to greatly increase the speed of RISC processors - therefore a number of instructions can be worked on with the minimum of delay.

SuperScalar - a SuperScalar processor has been designed with more than one pipeline. This allows it to process instructions in parallel, or at the same time. This is not the same as a pipeline, as a SuperScalar processor can have many pipelines processing at the same time.

The MPC601 has three pipelines, an integer unit, a floating point unit, and a branch unit so it can execute up to three instruction at the same time, while the 604 has six pipelines allowing six instructions to be executed simultaneously.

"Currently, Amiga Technologies are understandably hesitant about commenting on what a future RISC Amiga will be like"

advantage of doing this is that it will allow developers to get into gear and produce native PowerPC versions of their programs.

In fact, it appears that a developers-only board could be ready as soon as the end of January, along with a cross compiler. This would allow developers to start porting their programs and produce new ones in readiness for the release of the PowerPC accelerator board, and when the new Power Amiga finally arrives, there should be a good selection of native utilities and games ready and waiting for the buying public.

It looks like 1996 could see the Amiga catapulted into the fast lane, and finally being able to take on top-of-the-range Pentiums head to head for raw processing power. Just imagine Workbench, which currently runs very nicely on your old A1200, having access to a PowerPC. My conservative estimates put a PowerPC-driven A4000 to be running around 12 times as fast. Your humble A1200 could scorch along at 140 times the speed, and for you poor old A2000 owners, how does running Imagine at around 300 times the processing power sound?

will be multi-processor. Such a system would have huge advantages over current systems, and considering that the P6 will have been out for a while by 1997, having a multi-processor design would allow the Amiga to stay ahead of the pack.

Currently, Amiga Technologies are understandably hesitant about commenting on what a future RISC Amiga will be like – their announcement at the Toaster Expo simply stating that we will see a Power Amiga in the first quarter of 1997. This will be a high-end system with a new version of AmigaDOS that should finally see network and memory management added as standard.

SYSTEM VARIANCE

You should then expect to see entry and mid range systems appear after this initial launch. It even looks like the low-end systems will be 604 equipped. I did have a few reservations about this because the 604 is still a little expensive and the 601 or 603 may have been used instead, as these are completely compatible with the 604 and still provide Pentium trouncing power but at a lower price. It does seem, however, that the 604 could be used throughout the range, because a larger volume could be bought, and therefore reduce the overall price.

In conjunction with Phase 5, a PowerPC board is also planned for late 1996, which will plug into your A4000/3000 and an A1200 version is planned as well, letting you get early access to all this power at an early stage. A big

Jargon box

IU - Integer unit. This executes any instructions that are not floating point or branch instructions.

FPU - the Floating Point Unit, executes floating point instructions. These are instructions that can deal with fractional or very large numbers that come in this special floating point form.

BP - Branch Prediction Unit. By handling branch instructions separately the processor tries to predict whether a branch in the program will occur or not. If it gets the guess right another speed increase is gained. If it gets the guess wrong then nothing is actually lost – processing would be the same as having no BP.

MMU - a Memory Management Unit is found on full versions of the 030, 040 and 060 processors. An MMU allows the operating system to have functions such as virtual memory, memory protection, and resource tracking. Workbench 4 here we come!

Cache - a small amount of memory in the processor that can be accessed very quickly. Data and instructions that are stored in cache are accessed considerably quicker than if they are stored in main memory. Try turning your A1200's instruction cache off and you will see the difference a cache can make. The larger the cache the greater the speed increase.

PrEP - PowerPC Reference Platform is a system standard dreamed up by IBM. Basically it states what hardware should be on every PowerPC computer, allowing PrEP boxes to run the same software. Apple did not like it so...

CHRP - the Common Hardware Reference Platform was invented and Apple like it. CHRP is based on PrEP and defines a number of hardware standards PowerPC-based machines should have. Any CHRP software will run on any CHRP machine. Currently, it is not clear whether a Power Amiga will be a CHRP machine or not. If it were you would be able to directly run MacOS or any other CHRP OS such as Windows NT and UNIX.

future amiga

HOW THE MPC604 LINES UP

Processor	Clk	SPECint92	SPECfp92
MCP 601	80	80	105
	100	110	130
MCP 603	80	75	85
	100	120	105
MPC604	100	160	165
	133	200	200
Pentium	100	100	80
68040	25	12	10
PA-7200	120	168	270
R4400	250	176	165
SGL Onyx	200	142	143
Alpha	233	177	215

POWER PC HISTORY

Back in the middle of 1991 IBM, Motorola and Apple got together to decide on a new processor architecture that would be used to power future desktop computer systems.

Each company had their own motivations – IBM wanted a new processor line to replace their ageing POWER multiprocessor system, which is used in their desktop machines; Apple was looking for a RISC processor they could use to replace the terminated 680x0 line; and Motorola needed a new mass market processor line. With the end of their 680x0 line, and the fact that Apple were not looking interested in their 88000 RISC, they decided to take the chance and jump in with IBM and Apple in producing the new PowerPC chips.

So in July 1991 the PowerPC processor architecture was revealed. As IBM wanted to keep compatibility with their range of current desktop, the instruction set

was based on a cut-down version of their POWER architecture, with 38 instructions dropped to cut the cost of design and production.

With PowerPC processors lined up to appear in everything from laptops to mainframes, the initial design goals called for a range of processors that could accommodate the different parts of the market.

RELEASES

The first PowerPC processor to be released was the MPC601 back in 1993. Aimed for mid-range computers, the 601 provided Pentium power at around half the price. These were quickly snapped up by Apple for use in their first range of PowerPC-powered Macs.

Towards the end of 1994 the MPC603 became available. Sporting a new caching system and an improved fabrication, the 603 provided a slightly improved performance over the original 601, but with

tiny power consumption. This was perfect for use in those PowerBooks that Apple users love so much.

The MPC604 quickly followed, just sneaking out before the end of 1994. With new pipelining, an improved superscalar design, larger cache, and higher clock rates, the 604 provides a large improvement over the previous PowerPC processors.

There is a fourth design being worked on by IBM called the 620. This is meant to be a top-of-the-range Alpha crushing design, aimed squarely at the high-end and mainframe community. Unfortunately, the current benchmarks being released by IBM are not too encouraging, placing the 620 firmly at the bottom of the mainframe league, and only slightly ahead of its younger brother the 604. Rumours are circulating that IBM might not even bother using it in their systems. Perhaps a radical crank in processor speed will see the 620 back in contention.

Asim CDFS is one of those products that hasn't been too popular (or well-known) since its release back in 1992. To be frank, while it was OK back then, it wasn't actually all that good and most of the other CD solutions did the job better. However, the advent of the new version, version 3, is set to reverse the trend. In short, AsimCDFS is now a splendid purchase if you run a CD-ROM, and quite possibly should be included in Amiga Technologies' Amiga bundles in the future, if not incorporated directly into Workbench.

So what's so good about it? For a start, there's no faffing around to install it. You won't need to edit any mountlists or check what SCSI device you have. AsimCDFS does all that technical-type stuff for you. All you need do is point it in the right direction. Once you have installed AsimCDFS you can start playing with whatever CDs you have. Even if you haven't got any data CD-ROMs yet, you can actually still have some fun using AsimCDFS with music CDs.

AsimCDFS comes with a music CD player called AsimTunes and that's not unusual as most CD file systems come with an audio player, but where AsimTunes scores is in the fact that you can edit the names of the tracks on the CD, which then gets carried across to Workbench. This means you can have a CD icon on your Workbench screen called 'Weight' (the name of a great album by the Henry Rollins Band) and if you double-click on it you will see six drawers labelled CDDA_LeastSignificant, CDDA_MostSignificant, AIFF_Stereo, AIFF_Left, AIFF_Right and MAUD.

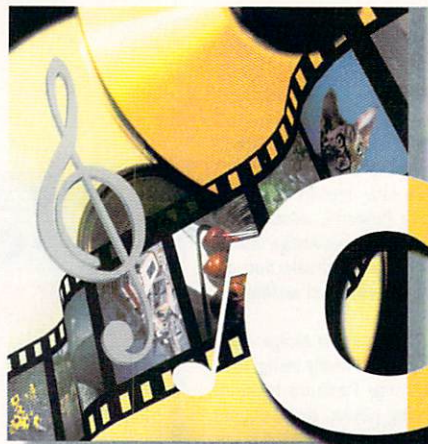
FORMATS

If you open one of these drawers you will see icons with the names of the tracks on the CD. These icons are actually complete samples of the tracks in whatever format the name of the drawer they are in says. The CDDA formats are both raw data as they're stored on CD, the three AIFF formats are 16-bit samples in the multi-platform AIFF standard, and the MAUD format is used by MacroSystems' Toccata card.

It is a shame that there isn't an 8-bit sample format so that the CDs tracks can easily be



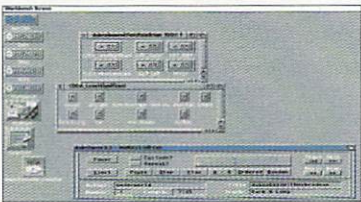
PhotoCD images are automatically converted by AsimCDFS to IFF when you load them into a paint package



incorporated into Octamed or something similar, but that would mean having to process the information on the CD and resample it down at a lower rate, a difficult task. You could use the SoundFX program we put on last month's coverdisk to convert the AIFF samples down to standard Amiga 8-bit samples, but you would need about 50Mb of memory to edit a whole song! Fortunately, Asimware have added an element to the DiscChanger program supplied with AsimCDFS that allows you to select a section from a track rather than the whole song. Even so, a two second sample in stereo AIFF format can be as much as half a meg in size.

Our tests with SoundFX and AsimTunes didn't prove wholly successful, however. For some reason whatever format data we took into SoundFX was played back at around half-speed. Obviously, you can just move the sample up an octave, so it's not too much of a problem, but it shouldn't really be necessary. Naming tracks can pose a bit of a problem too as AsimCDFS only allows you the standard 25 characters for a filename to name your tracks in, a bit of a bummer when you got a CD with 'Itsy bitsy teeny weeny yellow polka dot bikini' on it (well, you might have).

Still, enough of the audio side of AsimCDFS, something that most CD file systems come with. Onto the PhotoCD viewer, something that most other CD file systems



Audio CDs are treated just as nicely by AsimCDFS, but you are limited to only 25 character filenames

Until now, Amiga users who wanted a CD-ROM drive had to scratch around for utilities.

Frank Nord examines the alternative

solutions

Jargon box

PhotoCD - PhotoCDs are special CDs you can have your films developed onto. It's still an expensive and time-consuming process, but you can fit more than one film's images onto one PhotoCD, thus bringing the cost down. This will also save you from having to buy a scanner.

don't come with. AsimCDFS takes the same innovative approach with PhotoCDs as it does with audio ones.

Rather than having to have a separate program to load in the pictures from a PhotoCD (assuming you actually have a PhotoCD loader), Asimware's solution is to simply give you the thumbnails for each image as icons in the directory window for the CD. The same directory structure exists for PhotoCDs as for audio CDs, with the different resolution images being stored in directories named for the resolution. AsimCDFS automatically creates a thumbnail icon so that you can see what your images are without having to load them into a separate program.

CONCLUSION

AsimCDFS is a very nice piece of system software that has really been carefully thought about. There are still a couple of niggles with it, like the fact that although you can rename the tracks on a music CD through Workbench, you can't snapshot a CD's icon without using Forcelcon. But overall the quality of this package is not in doubt.

Bottom line

PRODUCT DETAILS

Product	AsimCDFS v3
Supplier	Siren Software
Price	£49.99
Tel	0161-796 5279

SCORES

Ease of use	85%
Implementation	85%
Value For Money	85%
Overall	85%

SOMETHING FISHY

Just so you have immediately got something to play with when you buy AsimCDFS, the publishers have kindly included the FishMarket CD-ROM containing unarchived copies of Fish disks 260-1000. While not particularly up to date, there is guaranteed to be at least some software of use to you on this disc, and anyway, what are you complaining for? It's free, isn't it?

DUTCH DOSH

**£50
PRIZE LETTER**

As a dedicated Amiga user (I own an A2000, an A3000 and a CD32) I read a lot of

magazines and keep back issues. Every now and then I pick up one of the older mags and re-read it. And yesterday I picked up an *Amiga Computing* from December 1989 and saw an ad from Silica. This ad shows an unexpanded A500 which could be yours for £399. And we're only talking about a simple A500 with Kickstart 1.3, 512K of RAM and a humble 68000 processor. This was a price we all paid without complaining and I dare say loads of current Amiga users started off with this machine.

Now it's 1995. Six years later. Silica had an ad in the November 1995 issue of *Amiga Computing* offering an oh so beautiful A1200 at exactly the same price as the A500 in the previous ad. But this machine offers a much better processor (68020), more RAM (2Mb), more expandability, 32-bit technology, Kickstart 3.1, bags of colours, and a really good software bundle.

So I don't understand all the complaints. I agree with the fact that personal computers are falling in price, but bear in mind that those specifications are not as massive as they seem. I know many Amiga users who love the idea of having 4Mb RAM in their machines, but settling for a 4Mb PC means a really poor PC. Not really able to multitask (Windows 95 needs at least 8Mb RAM to run WordPerfect 6.0 and a really small game), a pain in the neck when it comes to user-friendliness, and that nice PC salesman who smiles as he offers you a free 200Mb hard drive isn't being that friendly – the disk will be full within two or three weeks.

I agree that the good old A4000T is too expensive, but look at its specifications (68040/25, 2Mb Chip, 4Mb Fast, Kickstart 3.1, bags of colours, 1.2Gb SCSI hard drive, SCSI controller and the tower case) and it doesn't seem so expensive. Just remember the old days (back to 1989) when a humble A2000 would set you back a massive £1259 with 1Mb RAM, Kickstart 1.3 and a 68000. To get it up and running you needed at least a RAM expansion to get it to 1Mb Chip and 2Mb Fast, you needed an A2091 SCSI controller card and if you wanted that size hard drive it would set you back an awful lot of

esp

The man with the name that reminds you of *surfing poets* is back with this month's letter-filled mailbag



Keep those letters coming! If you can't be bothered to find a bit of paper and a stamp, why not e-mail us? Simply point your mailer to: ESP@comp.demon.co.uk There's a £50 pound prize for the best letter printed as an incentive

money. I'm sure it would even exceed the A4000T price of £2199.

I'm not saying the A4000T is a gift. It really is a lot of money, but I think that people in business would pay it. For example, take the great 3D modeller Real 3D. The PC version of this product costs around £800. Add to this the cost of a PC with at least 16Mb RAM and I think you will agree, the A4000T is worth considering. Don't forget that the Amiga really multitasks and in less RAM than a PC, and RAM makes machines expensive.

LAUGH

Windows 95 looks good, but is actually worse to use than Workbench 1.3. Just laugh at all your PC-owning friends. Ask them what they have paid to be able to connect their PC to a video, then tell them what an Amiga to SCART cable costs. Just ask them the price they paid for their soundblaster and turn on your machine and play an eight track MED song while saying that the Amiga doesn't need anything to be able to make music. Show what your computer can do, show them the excellent document publishers, the awesome drawing tools, the perfect music programs. But don't just show them, let them use your machine and see how easy it is.

So, Amiga users – stop crying and start

buying. Show Escom they were right to buy Commodore. Show the world that the Amiga is capable of things the PC is only just starting to do. Show them that we were multitasking when they were still looking at green screens. Show them that multimedia was invented in the '80s, not the 90's, and take out your Amiga magazines. Read them on the bus, on the train, in the park, and let them see the name of our computer.

Bert Volders, Den Anel, Netherlands

The crowd roars with approval! Bert, have you ever thought of going into politics? That last bit was definitely reminiscent of the "...We will fight them on the beaches..." speech by Churchill. What you say is quite correct. I, for one, was quite disappointed when I learned of Escom's pricing policy for both machines, but, on reflection, you are still getting one hell of a bang for your buck.

Everybody always compares Amiga hardware pricing directly with PC hardware pricing, but as you say, the hardware is only the start of it. When it comes down to it, the machine you buy should reflect what you want to do with it. The Amiga is also in the enviable position where, thanks to hardware like Emplant and software like ShapeShifter, it can emulate other machines and provide the best of all possible worlds. I hope you can get something for your Amiga with the £50 prize that should be winging its way to you shortly.

ANTIQUE COLLECTOR

My large Amiga software collection includes many ancient games like 'Empire – Wargame of the Century', 'Aaargh!', 'Kampfgruppe' and 'Battle Tech'. I've completed them all and they are now just sitting on my shelves gathering dust. This is a real shame because all are in mint condition with their original boxes and instructions still in tact.

A good friend has since told me that old games in such great condition can fetch up to £50 each if resold to other Amiga software collectors because they are so rare. Many of them, I'm sure, cannot be found in shops and may have even been permanently deleted from the relevant companies' product lines, so they should be worth quite a bit of

money. Is this true or have I been told a pack of lies about their true worth?

David O'Conner, South Yorkshire

I think your friend has been pulling your leg. While some of your games might be considered classics, I think it unlikely that people would want to pay large sums of money for them.

However, if you keep them for, say, 40 or 50 years, then they might be worth as much as some Dinky toys are now to the right person. By the way, Empire, what a game!

AMIGA ADD-ONS

After reading most of the Amiga magazines over the last year or so it has become obvious that if you want add-ons for your machine but don't own an A1200 or higher, you are not important. All peripherals seem to be carried out on an A1200. There are a lot of A600 owners about and I'm sure that I am not the only one who looks to the press when looking for peripherals, but how do I know how, or even if, they will perform on my A600? For instance, another magazine tested the HiQ multimedia Powerstation, but on an A1200, even though the A600 also has a PCMCIA slot.

Just to be different, why not review peripherals on all compatible machines listing any problems that might occur with those that are not hooked up for the test. That way you won't end up with a magazine called *AMIGA COMPUTING IF YOU HAVE AN A1200 OR A4000*.

I am very happy with my set up (A600, 2Mb RAM, external floppy drive, Citizen ABC printer) and I will expand this one piece at a time as funds allow. Anyway, while I have your attention, I was reading the December issue of *Amiga Computing* and came across an advert from Gasteiner which included an A600 accelerator. Can you please tell me if this is ever going to be reviewed in *Amiga Computing*? Finally, will the HiQ Powerstation with CD-ROM actually work on an A600 and if so, with what limitations.

Adrian A Taylor, Staines

I am glad you are happy with your A600. In these fast-moving times, it sometimes pays to remember that we should each have a machine that suits our needs and a lot of people don't actually need a 4000T, graphics card and VLab Motion. As for what you are saying about the lack of A600 information in our reviews, I think we have to be careful. If a product will definitely only work with one particular type of Amiga then we will say so in our product box at the end of every review, otherwise you can pretty much figure on it working with any machine as long as it fulfils the rest of the criteria laid down in the aforementioned box.

It isn't always possible for magazines to review a product on every machine that has ever come out, we tend to restrict it to the machines we have up and running (which still includes a 4000, 1200, 3000, 3000T and 2000) because there just isn't the time in our hectic schedule. If a product looks suitable for use on your A600, why not speak to the people who sent it to us for review? They are going to know just as much as we are likely to be able to tell you, and I would hope that they would know more. By the way, have a look in this issue for that A600 accelerator review.

FULL MOTION AMIGA

I am seriously thinking of buying a new Amiga 1200 with hard drive. At the moment I own a CD32 with FMV cartridge. Will I be able to connect my CD32 to the Amiga 1200 and still be able to run CD32 software? Also, will I be able to run normal Amiga CD-ROM software this way? Would I be better off selling my CD32 and buying a new CD-ROM drive (will I be able to buy an Mpeg card so I can run Video CDs and Photo CDs?).

Thank you for your excellent magazine and keep up the good work.

Mr S Bhogal, BFPO

If you were to buy an A1200, it might be better for you to stay with the CD32 for now. You will be able to connect the two machines using a serial cable and the software SERnet. This will allow you to access data CDs like the Aminet CDs, but not program CDs. However, you will still be able to use the CD32 as it stands, so you will be able to run programs CDs on that.

If you do decide to ditch the CD32, your best bet would be to buy a CD-ROM drive that comes with a Squirrel interface. If you do, then, when HiSoft's new Mpeg expansion comes out, you will be able to plug that into your CD-ROM drive.

NEW YEAR, NEW MACHINE?

I wonder if you can help me out. I have owned an Amiga 500 since 1988 and am content with it. However, my internal disk drive is going out and the 1084 monitor flicks to black occasionally, so I would like to upgrade to a new system. The problem is, I need to do things that my old 500, as configured, won't do, and I only have so much money.

Now, what with Windows 95, I've been looking closely at a Pentium system and been studying how they work, realising the advantages of things like 'EDO' RAM and pipeline-burst cache' as compared to the 486. What I don't know is what it all means in comparison to the Amiga. Even so, I am awfully tempted to buy one of those Pentiums.

However, I like to consider myself a loyal Amiga man and would prefer to stay with that machine. So what can I get for less than \$3000 that will enable me to do the following things?

- Hook into the Internet
- Communicate with the IBM world; read and write their disks, send e-mail, etc.
- Translate Deluxe Paint and Kindwords files to the Windows OS
- Capture full frame motion video from a variety of sources including S-VHS and output same
- Let us use our existing hardware, mainly a ProGen genlock
- And, of course, all the usual things like a CD-ROM drive and a monitor with a little propeller on top that turns when it heats up. Get the idea?

The main uses for the computer that we have are to publish our science-fiction fanzine dedicated to the work of Philip K Dick, and to output video straight to tape for broadcast on Public Access TV and straight to VHS. We also use the Amiga for general word processing and games, but we plan on moving our act online so will need to open certain of our files to public scrutiny as well as present a pleasant image.

So, can you suggest an Amiga setup that will let me do all this for less than \$3000?

Dave Hyde, Kokomo, USA

So, Dave, you want to buy a new Amiga? I'm going to have to go by UK pricing for this answer, but I reckon we can build you quite a nice machine for \$3000. Probably your best bet, given your requirements, would be to buy a second-hand A3000. Don't go for a 16MHz machine, you should be able to get a 25MHz machine for around \$950 with at least 6Mb RAM. This leaves you with enough cash to choose your next purchases carefully.

You could buy a graphics card and big monitor or, alternatively, you might want to buy a VLab Motion. The VLab Motion will allow you to capture live video at 30fps and play it back direct from a SCSI hard drive. You can add audio capabilities to the system with the Toccata card – the pair cost around £1500 or 2400 bucks, but you would have near-broadcast quality, non-linear video editing. The closest equivalent on the PC, I am told, is a product which costs somewhere near \$6000.

You will also be able to upgrade the Workbench on the 3000 to 3.1 which would give you the ability to read and write PC floppy disks, and, if you're lucky, you might actually get an A3000 that comes with a high density floppy – quite a few in the States do. As for your word processor and paint package files, you can save Kindwords files out as ASCII, and DPaint files will need to be translated through a different package, but there is so much shareware out there to do the job, you shouldn't have to spend any further cash on the job.

As for the Internet side of things, nearly all the software you need for the Amiga is free or shareware, so you shouldn't have too many problems with that either. My modem recommendation would be the US Robotics Courier v.everything one that most Internet providers use.

Finally, it sounds as if what you want to do can still be best done on an Amiga, so you'll still be better off sticking with Amigas whatever you choose to do.



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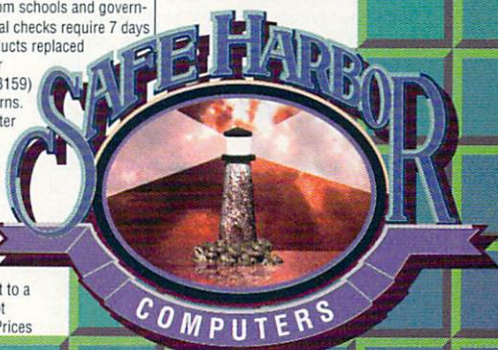
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QUESTIONS QUESTIONS

? I have an A600 with 2Mb of Chip RAM and Workbench 2.05, and have a few questions.

In my PC slot (we cannot be bothered saying PCMCIA anymore) one of the pins has broken off and one is bent. Is there any way of fixing it?

Can I upgrade my Kickstart version to 3.0 so it is the same as an A1200?

Is there any interface like the Squirrel that will work with the parallel port because I already have a couple of things which I keep switching over?

Are there any accelerators which will work with my A600 or do I have to buy an A1200 to get one?

Would I be better off if I bought a CD32 and connected it to my A600, or to buy a CD drive for it. I have considered the CD32 because you can add a FMV card to it.

If you had the option of getting a second hand CD32 now and a Zip drive for Christmas, or saving your money until Christmas and then getting an A1200, which would you choose?

Also, what is the best and what is the cheapest way of connecting a CD32 to an Amiga? Is there a program which can trick my A600 into thinking its got an AGA chipset while actually accessing the AGA chips from a CD32 which is connected?

In what format are PhotoCD pictures and which, if any, art packages can you load them into?

Which port in the Amiga will the new Zip drive plug into, and does the Zip drive act as a disk drive or a hard drive? Will it be able to run hard drive installable games?

What is the cheapest 3D package I can get. I already have Expert 3D Junior but don't think this is very good. Also, are there any PD disks which have any models that can be loaded into Expert 3D Junior?

When I create an AmigaGuide I cannot get my text to word wrap - how can I solve this problem?

J Chapman, Cambridgeshire



Hang on aren't you our production editor? No seriously, I will answer you're questions in the order they came.



Not really, it would be pretty tricky to just replace the PC slots. When we needed one of ours repairing, Wang just replaced the mother board.

No you cannot upgrade to 3.0, but you can to 3.1 which is slightly improved over the A1200's version. Blittersoft are currently the official suppliers.

There is an Australian product that allows you to fit a SCSI interface via the parallel port, but currently it is not available in this country - perhaps it will appear in the future.

An 020 accelerator is going to be released for the A600 by Gasteiner. This will be an 25MHz 020, but if you want to go faster than this you will have to buy an A1200.

As for your CD32 questions, the only way to use the CD32 with another computer is to connect it via the parallel port, using some thing like Connector. This is always going to be slower than a dedicated SCSI CD drive. Using this set there is no way you can get the A600 to use the AGA chipset, and if you could your programs would run horribly slowly.

If you are looking to upgrade your OS and get an accelerator, you really should consider upgrading to an A1200. The new software pack has a ton of high quality software with it.

Doing this you get the OS upgrade, an accelerator, and the AGA chipset in one package. You also have a much greater range of options when it comes to future upgrade options. If you want a SCSI interface you can get a Squirrel or plump for one of the accelerators with a SCSI

Another bunch of **worried cases** get their Amiga-related problems ironed out by **Aunty ACAS**

interface option. Surprisingly, PhotoCDs are in PhotoCD format. Basically, the main feature of PhotoCDs is that a single picture comes in a number of screen resolutions ranging from 192x128 to 3072x2048.

You normally get a software PhotoCD viewer when you get a CD drive, which should allow you to save off an IFF image. There is also a datatype available, but only for Workbench 3 users and up.

The Zip drive is a SCSI device, so you will need to get a SCSI interface, and the correct leads, before you could use it. Basically, the Zip drive is a removable hard drive and the way AmigaDOS works, disk drives and hard drives are both the same things, apart from the interfaces they use. So yes, you can run hard drive installable games from a Zip drive.

Well Imagine 2 and Real 3D v1 have both turned up on a certain magazine's cover disk that we sometimes pain ourselves with reading. If you missed them you should be kicking yourself. Cinema 4D is a very nice package for £199, but you really will need to think about an accelerator, whatever package you want to use.

Putting the keyword @WORDWRAP near the beginning of your AmigaGuide cunningly cures your problem, but that only works under Workbench 3. Is that it, no more questions?

DEVIOUS DEVICES

? I am having great difficulty in making my A4000/EC030 recognise and mount an internal Toshiba XM-5301B CD-ROM drive I have just installed. The ID of the CD has been set to 2 to avoid any conflict with the IDE drive which seems to be set-up as zero.

The SCSI interface I am using is the GVP A4008 SCSI card and I have used the AmiCDRom program to set-up all the necessary system files and auto mount the CD-ROM as CD0; and the CD is terminated.

On booting the system, the CD's busy light flashes six times and then the CD-ROM handler produces an error saying 'Cannot open scsi.device' unit 2'. On aborting, the rest of the system loads in fine. I have checked the board and

all the connections, but everything seems fine.

Reg Bartle, Hull



You have done everything correct apart from one tiny little detail. The GVP board does not use the scsi.device. When you used the installer with AmiCDRom there should have been an option to use the gvp SCSI device. This is the correct device to use.

You can either alter the current CD0: DOS drive, or reinstall the AmiCDRom software. Another useful piece of software is SCSI mounter. This lets you view what SCSI devices are attached to a specified device driver, and will help you clear up any similar future problems.

UPGRADE

? I currently looking to upgrade my system and would like to know a little more about big box Amigas. Ideally, I would like an A4000, but even to buy a standard one is out of my price range. However, a second-hand A1500, A2000, A3000 may be possible.

What I would like to know is that when using A3000 AGA, is necessary if you use an RTG card such as the Cybervision64 or the

WORKS OF ART

? Where can I get CGM clipart from? I have Wordworth 3.1SE and am fed up with the poor, jagged print quality of bitmap graphics in my documents. I am aware that Digita sell CGM clipart but feel this is expensive compared to the amounts of data that can be stored on a CD. Do you know any CDs that have CGM clipart on them? I also have lots of EPS clipart, but as Wordworth 3.1SE doesn't support it, is there any way to convert them all?

Secondly, where can I get a colour VGA monitor from, and how much will it cost? I currently use a colour television but am fed up with the poor picture quality especially when doing DTP work.

Gareth Moyle



Perhaps a little idea there for Digita – put all your clipart onto CD. E.M.Computergraphic are about to release their Phase 2 CD which will include CGM clipart, along with a lot of other DTP-related material.

As far as I know, there is no program that will convert EPS to CGM.

Your only option would be to convert the EPS to a bitmap, but this really misses the point of having the EPS files in the first place.

You could buy a VGA monitor from any Amiga or PC shop – just make sure it accepts the Amiga DbIPAL scan rates and you get the correct leads. You would really be best off getting one of the Amiga-specific monitors because you are assured of getting a monitor which will work properly.

Picasso II, and now the Blizzard 2060 is available what, if any, are the advantages of owning an A4000?

The main idea is that as funds become available, I will be able to improve my system. I do not play games much but would like to be able to do some good quality graphics works and ray tracing, along with a few other minor things.

I do remember reading that an A1200 tower will have the Zorro III slots needed to use RTG cards. If so, is this another option I could consider, or have I got the wrong end of the stick?

Colin Reeve, Lincoln



It is important when considering such an upgrade that you now exactly what you will want your new system to be capable of. The A3000 is not AGA, but the main disadvantage in not owning an AGA machine is that you will not be able to play AGA games, or use programs that make direct use of the AGA chipset – the two main programs being DPaint and Scala.

If you are considering using the Cybervision 64 you will need to buy a machine with Zorro III slot, which would restrict you to an A3000 or A4000,



Do you have a problem? Do you sometimes find yourself poised over your Amiga with axe in hand, spouting profanity at the stubborn refusal of your software or hardware to behave properly?

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. Alternatively, e-mail us at ACAS@acom.demon.co.uk

Well, calm down and swap the axe for pen and paper, jot down your problems, along with a description of your Amiga setup, and send it off to Amiga Computing Advice Service, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. Alternatively, e-mail us at ACAS@acom.demon.co.uk

but if you are planning to buy a 060 accelerator such as the Cyberstorm, a plain A3000 is not big enough – only an A3000 tower will fit the bill, and these are very rare.

An A2000, along with a Blizzard 2060 and a Picasso II, would make a pretty awesome set-up for a graphic artist. You will need to make sure you have Workbench 3.1, so you can have a 256 colour Workbench, and a Megachip upgrade would also be very handy, allowing you to have the full 2Mb of chip memory. The only advantage gained in owning a A4000 would be having Zorro III slots and the AGA chipset.

If you can live without these then a A2000 would be just as good an option. The A1200 tower only comes with Zorro II slots, but will give you a similar set-up to having an A2000. However, you automatically have an IDE interface on the A1200 mother board, the AGA chipset and, of course Workbench 3, so it is an option you may want to consider.

QUESTIONS QUESTIONS II

? I have a standard A4000/EC 030, and while my system has one version of Setpatch and the colourwheel.gadget, I have come across others. My version of Setpatch is 39.6 while the other version I have come across is 40.16.

When run, there seems to be a large difference in what the newer version actually does. What are the enhancements and would I notice?

I have a Star LC-10 printer and would like to know how to get MultiView to print out in colour?

Why doesn't someone develop a cheap graphics board to gives the SVGA capabilities you get on the PC. All I want is a stable resolution that is the same for everything – games, requesters and applications. The A3000 had something like this, did it not?

Will the AGA machines be upgradable in all areas such as audio and video in future specifications, short of changing the motherboard, and might it be a cheaper option?

Who decides upon the titles that appear in your journal and where do they get their inspiration from?

Tom Haslam, Leicester



The 39.6 version of Setpatch is the original one you get with Workbench 3. This new 40.16 version comes with 3.1, but was also distributed along with the Commodore developer disks. As far as I know, Setpatch is freely distributable, and as you state, even if you use the patch you probably will not notice the difference.

Generally, you should use a newer version of any file, but this does not necessarily mean you will see any difference. The main use of Setpatch is to correct bugs or mistakes in the operating system, so it can potentially correct

some vital bug. Also, if you have an AGA machine, one function performed is to kick in the extra features of the AGA chip set.

How do you print in colour? Well, if selecting Colour in the PrinterGfx preferences does not do the trick, I cannot really help much more.

The main reason that a SVGA will not be specifically produced for the Amiga is that the company would probably go bust. The Picasso is the closest thing you will get to a cheap SVGA card on the Amiga. The plain fact is that PC cards get a much wider distribution and there is a lot more competition which has driven the price so low. You should also remember that you normally get software thrown in with Amiga boards.

Currently it seems that Amiga Technologies will be fairly busy developing a new RISC based Amiga. This will involve porting the Operating System to run on the new processor.

If a new chipset is developed I doubt there will be an upgrade path for A1200 owners. On the A4000 front it maybe possible for a card to be made but it would mean Amiga Technologies would have to use some of their resources developing an upgrade card, and those resources would be better spent on any new machine.

As for the A3000, it had a flicker fixer built in as standard, not a graphics card. It would have been very handy if the A4000 came with one, as you could use standard PAL/NTSC modes in Hi-res laced without the annoying flicker. Commodore however side-stepped this by employing the scan doubled software solution which gives us the very slow DbIPAL screen modes.

Normally the writer of the article is inspired by copious amounts of alcohol while down the pub. This helps them think up a hilarious headline which is then savagely and mercilessly chopped and changed by our lovely production editor.

Well, it's another packed PD column this month, and as I always seem to find myself saying, it's good to see that the uncertainty over the Amiga's long-term future isn't affecting things too badly at grass roots level. To kick off things this month...

GFXLAB 24

Programmed by: Rodrigo Reyes
Available from: Pixel Digital PD

GFXlab 24 is another shareware image processing package with a range of features rivalling commercial market-leaders Image FX and Art Department Pro.

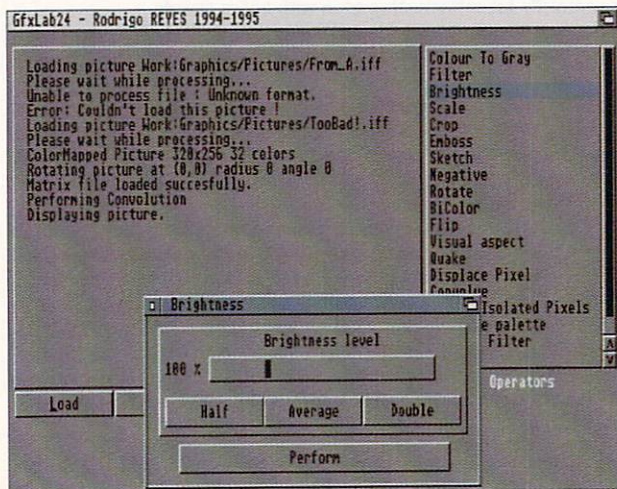
French author Rodrigo Reyes has included 20 different effects ranging from the standard (crop, rotate, adjust brightness) to the unusual (quake, whirl, disperse pixels). A library of convolves can also be applied.

Other features include AREXX support for the automation of tiresome image conversions or similar processes, and support for a wide range of image formats. GFXlab also enables you to use a hard drive as virtual memory, meaning not as much RAM is required as with, for instance, ADPro.

If all this sounds a little familiar, that's because ImageStudio 2.2, the latest version of another popular shareware image processor, can do exactly the same things. So is there any difference between them?

Well, my tests seem to suggest that ImageStudio has the edge in terms of speed and file formats supported, and it's got a more pleasant interface with floating requesters, more progress bars, and so on. However, GFXlab does boast some fancy effects that ImageStudio does not currently have, and it supports multiple 'banks' or screens.

At the end of the day therefore, whilst ImageStudio still comes out on top, GFXlab is a promising new challenger and a worthy purchase. It costs 90 French Francs to register. Bear in mind that you could buy registered versions of both image processors, and you'd still have shelled out only a fraction of what it would cost to buy ADPro.



It's not much to look at, but GFXlab24 could work wonders on your image collection

Performing some simple effects is quick and painless with GFXlab24

More low-priced lovelies come under **Dave Cusick's** critical eye...

ULTIMATE MANAGER v1.1

Programmed by: Craig Smith
Available from: Your Choice
Disk No: GA 599

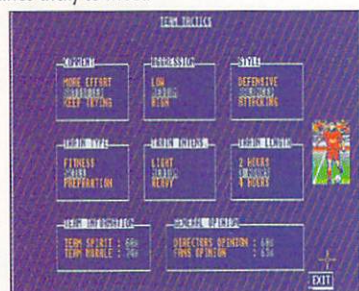
Whilst it's over two years out of date in terms of team information and it's certainly not Championship Manager, this is a great game that football management fans will love.

Everything is included, from training and team selection to ground improvements and player transfers. Real-life players are featured, although the fact that these are not up-to-date (for instance, Andy Cole is not at Manchester United... actually, he's not even at Newcastle!) does detract from the things a little.

Presentation is unspectacular, with everything taking place against a hideous striped background, and practically no graphics throughout. But what's really important is the addictiveness, and as with so many other management games, Ultimate Manager is extremely engaging. It's disks like this that can make magazine copy deadlines tricky to meet.

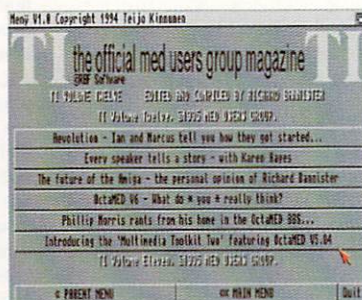
Matches are dealt with quite well. The game clock ticks away rather quickly, but it can be paused at any time to enable changes in team tactics or the odd substitution. All matches taking place in that competition on that day are shown on screen simultaneously, so you can keep track of the progress your rivals are making - a nice touch that even the king of the management sims, Championship Manager, doesn't boast.

The registered version of the program, costing £7.50 and available from the author, includes a player and team editor, and is not restricted in any way (this version only allows you to play for two seasons). It's written in Amos, too - but don't let that put you off.



Ultimate Manager even includes a complete tactical section, which allows you to tailor everything, right down to the amount of aggression your team display and the severity of your team talks

TOTAL IRRELEVANCE #12



Total Irrelevancy issue 12, in full four-colour glory

The twelfth issue of this popular disk magazine includes three OctaMed modules for your listening pleasure, and the usual range of readable articles. There are musings on the future of the Amiga, opinions on OctaMed version 6, and anecdotes about the trials of purchasing suitable loudspeakers. A

Produced by: The Official Med Users Group
Available from: Seasoft

review section includes assessments of Power Computing's CD-ROM drive and a range of PD music modules. There are also the results of a competition which I wish I'd known about in time to enter, because the prizes are pretty impressive (hand scanners and LCD televisions, for instance).

For the truly dedicated OctaMed fanatic (or the merely curious), there are even articles recounting how several Med Users Group members got started with tracker music. Actually, to be honest this is probably the least interesting section of an otherwise fairly impressive magazine.

Even if the subject matter won't appeal to everyone, this is a well produced effort, in which it is clear a lot of time and energy has been invested.

YOUR FIRST PONY

Produced by: Greendell Technologies
Available from: Seasoft

Horses are expensive beasts to buy and maintain, and caring for them requires a lot of commitment and dedication. It's helpful then that such informative disks as this are available.

Learn about choosing a pony, feeding and grooming it, keeping it in good health, and even protecting it against theft. Your First Pony is a hyperbook product, combining colourful (if a little grainy) pictures with text to produce a bright, simple and effective interface.

The colourful pages contain boxes of text and images which, if clicked on, lead to other parts of this non-linear book. This sort of design is employed in many educational products these days, including Greendell Technologies' own Spitfire and Messerschmitt disks (reviewed in issue 90).

The latest version of a product which first



If you tire of the educational aspect of Your First Pony, you can always follow these instructions, load up DPaint and play pin the accessories on the pony. Great fun - well, Andy Maddock enjoyed it anyway

appeared two or three years ago, Your First Pony has now been made shareware. If you make regular use of it, you're asked to send the princely sum of one pound to the authors.

GLORY BOX

I want to hear from you if you have any program, whatever its purpose, which you consider worthy of review. Whether it will be freely distributable public domain, shareware or licenceware, if you feel it's of sufficient quality to merit coverage then stick it in a jiffy bag or padded envelope and send it in with all haste. Although Public Sector receives too many submissions to cover them all, I promise I'll at least look at your work - even if it's yet another Lottery program or Klondike cardset. It does make my job a lot easier though if disks are clearly labelled. Please also include a cover letter detailing the disk contents and price, and giving some basic instructions. The magic address is:

**Dave Cusick, PD submissions
Amiga Computing, Media House,
Adlington Park Macclesfield
SK10 4NP**

DMC GOLD

Programmed by: Andy Gibson
Available from: F1 Licenceware



Innocent unsuspecting PD reviewers (such as yours truly) could soon be inundated with diskmag - and it will all be DMC's fault

DMC stands for Disk Mag Creator, and this Gold edition, available for £7.49 (including P&P), is capable of producing some really impressive results. It's supplied on two disks, one of which contains the actual program and accompanying gubbins, whilst the second contains

various helpful extras. Creating your own magazine is basically a process of editing the various ASCII index files on the first disk, and writing your own articles. Fancy effects such as coloured text and embedded clip art images can be incorporated using various special codes in the text (a bit like the World Wide Web's HTML codes, only simpler). It's also possible to create split-screen articles, which are displayed in two columns instead of a single column, and secret articles, which can only be accessed by those who know a special password.

As you'd expect, DMC supports fancy introductory screens and lets you have ProTracker modules playing in the background. However, an added bonus for those keen on making their production look unique is the option to redesign the user panel at the bottom of the screen.

The extras on the second disk include some examples to help get you started, and a cruncher program for compressing articles. Called CrunchMania, it's capable of compacting files to around 50 per cent of their original size, which obviously means that a lot more articles can be crammed onto a floppy. There's also a really useful Article Tester. This can display files you've

already crunched without the need to load the main program. It can also convert single column files to split screen format, and perform a few other effects which might otherwise require considerable editing of the original text file.

The whole package is supplied with a really useful manual which demystifies the magazine creation process. It's well written and highly informative, and runs to 28 pages.

Why bother going to the trouble of writing your own disk magazine engine when DMC is capable of producing such excellent results?



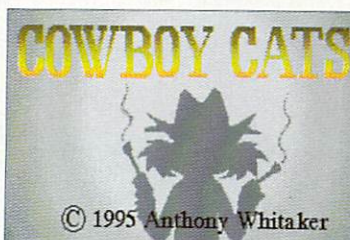
Subtle advertising...

CHARLEY CAT 12: COWBOY CATS

Produced by: Anthony Whitaker
Available from: Roberta Smith DTP

The latest of the excellent Charley Cat animations, this six-disk epic features our feline friend in a Wild West adventure. As ever, the animation and sound are superb and you could easily be forgiven for thinking you were watching a cartoon on television.

Mr Whitaker thinks the animation should run on all A1200s. However, if you've got sufficient extra memory and hard drive space I'd definitely recommend copying all the disks onto a partition, making a few assigns, and then running the animation from there. Running the cartoon from a single floppy drive means plenty of disk swapping and some lengthy loading times. It's really



Charley the Cat's back for his twelfth animated adventure



Think up something... bank and horse

worth the effort of setting things up, because this is one of the best animations I've seen in a long time. If you like the cartoon (and I certainly think you will) then

please send the two pounds shareware fee the author is requesting, as this is the sort of production we definitely want to see again in the future.

THE CLIP ART SLIDE SHOW

Produced by: PD Power
Available from: PD Power

This is a slideshow of 99 clip art images on one disk. The quality of images ranges from excellent to pathetic, and the subject matter veers from cartoon characters (the Flintstones and other Hannah-Barbera stars through to some Disney creations) to maps, and even Christmassy stuff. The problem here is that there's no attempt to organise the images in any way. They are presented one after another in no obvious order, so when images do catch your eye you've got no idea what the file name is, or even whether it's the only picture on that theme. Looking at the disk directory later in the hope of some revealing file names will prove fruitless – the images are numbered from C00 to C98, so trying to actually put these pictures to practical use is going to involve carefully going through the disk, renaming and reorganising the files after you've viewed them.

Anyway, if you've got the time and the inclination to go to this sort of effort, this might be worth getting hold of. It's not the only PD Clip Art disk guilty of such lack of organisation (indeed, most of them do!) but the fact that there are 98 other images here for that important one to hide amongst can prove frustrating.

PD GOLD VOLUME 1

Compiled by: V12-PD
Available from: V12-PD



Wormz – sorry, MASH. Not at all like Lemmings, either. Honest



It's all been seen and done before, but Nicky 2 still impresses

Three top games on four disks for just two quid. Isn't PD marvellous?

Here we have MASH, Nicky 2 and Chaneques. MASH is a Wormz variant (or, according to the author, Wormz is a MASH clone). One person can play against the computer, or two chums can pit their wits against one another – either way, the objective is to destroy your enemy's base. At your disposal you have tanks and spuds, the latter being small mobile ground troops with a wide range of weaponry and abilities. MASH has decent graphics, passable sound, and enough excitement to hold the attention for a while.

Then there's Nicky 2, which I'm sure used to be available commercially. This is a polished platformer with stylish graphics and animation, suitably cheesy sound effects and plenty of runny-jumpy-blasty gameplay. It's not going

to set the world on fire, but it's a bargain at this price and will provide plenty of entertainment.

As for Chaneques, I can't really give a considered assessment because I got completely stuck on only the second level. Suffice it to say it's a platform puzzler which is vaguely reminiscent of Lemmings. You control three individual characters with differing abilities and have to negotiate various screens, collecting objects by pushing them into convenient extra-dimensional gateways. It's bizarre, but it looks quite good – if only I could see what lies beyond the second screen.

Anyway, V12-PD seem to think this package represents pretty good value for money, and I'm inclined to agree with them. They're selling their 2-disk catalogue for just 25p too.



How many games can boast flying duck rides? Nicky 2 can!



Chaneques: my brain hurts

HAUNTED BY YOU

Another lottery program, I'm afraid. Challenge Logic's Cop The Lot Pro has reached version 3.0, and the registered version, complete with an attractive presentation box, costs a fiver. For your money you get a database of numbers drawn so far, a fun predictor called Skeptic Skeav, a random number generator, and plenty of letters from people who are already using the program. It's all nicely done, and apart from the irritating need to disable CPU caches before running it on AGA machines, this is one of the better predictor programs.

Finally, back in issue 92 I reviewed issue one of the Extreme Amos disk magazine, and stated that it can be obtained from public domain libraries around the country. In actual fact, it can only be obtained from Carl Drinkwater at the moment, and cheques for £1 should be made out to him. Issue two is now available as well.

SOMETHING HOT IN A COLD COUNTRY

Challenge Logic

31 Lindley Street, Mansfield,
Nottinghamshire NG18 1QE

Carl Drinkwater

9 Eldercroft Road, Timperley,
Altrincham, Cheshire WA15 7HT

F1 Licenceware

31 Wellington Road, Exeter, Devon
EX2 9DU
Tel: 01392 439580

PD Power

15 Lovetot Avenue, Aston, Sheffield
S31 0BQ

Pixel Digital

Unit 6, Laurel Business Centre, 15
Laurel Road, Liverpool 7
Tel: 0151-259 4017

Seasoft

Unit 3, Martello Enterprise Centre,
Courtwick Lane, Littlehampton, West
Sussex BN17 7PA
Tel: 01903 850378

Roberta Smith DTP

190 Falloden Way, Hampstead
Garden Suburb, London NW11 6JE
Tel: 0181-455 1626

V12-PD

PO Box 14, Louth, Lincolnshire LN11
8LF
Tel: 01507 450114

Your Choice

39 Lambton Road, Chorlton,
Manchester M21 0ZJ
Tel: 0161-881 8994

Probably since the dawn of mankind, people have looked up at the night sky in wonder at the points of light hanging there in the blackness. Greek philosophers like Aristotle waxed lyrical about the ether, and the generally held belief was that the earth was the centre of the universe and that every other body revolved around it in the heavens. By 1348BC, Hipparchus had managed to catalogue some 850 stars and in AD150, Ptolemy created a 13 volume epic called *Mathematike Syntaxis* which expanded on Hipparchus' work and was to be the foundation of all astronomy for the next 1400 years.

Then, in 1543, Copernicus dared to question the established belief that the sun and all the other planets and stars revolved around the earth. Unfortunately, his premise relied on the parallax effect we know so well from computer games, which could not be easily observed with the instruments of the time. But in 1608 a Dutchman named Hans Lippershey invented a tool called the telescope and astronomy really exploded.

Gallileo is probably the most famous astronomer for trying to confirm the Copernican theory of heliocentricity (object revolving around the sun, rather than geocentricity, where objects are revolving around the earth). But he was forced to renounce his theories by the Inquisition and placed under house arrest until he died in 1642.

SPACE RACE

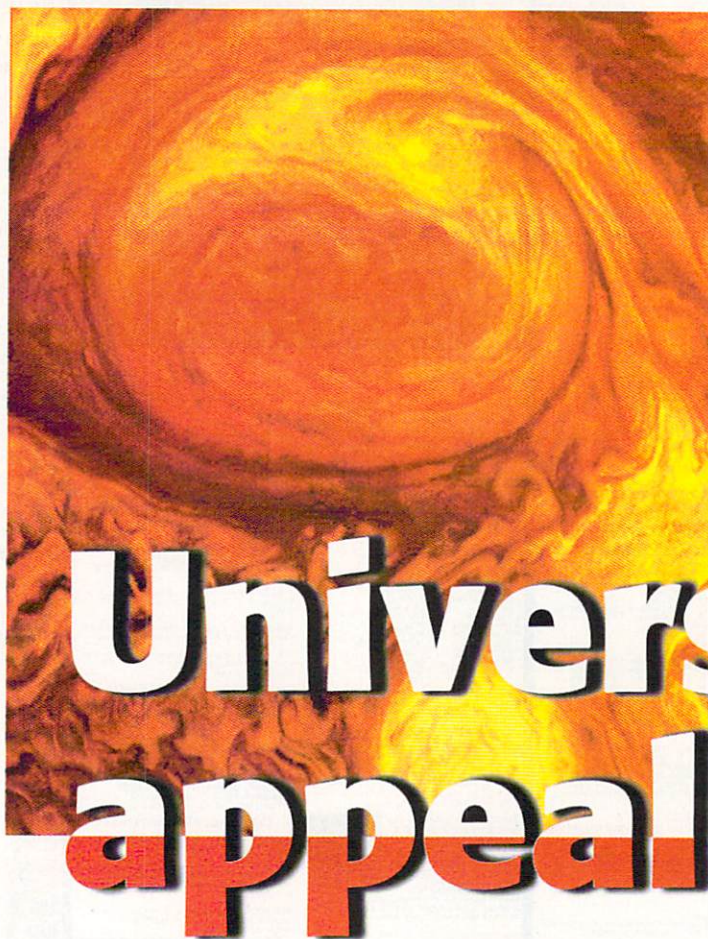
The progress of astronomy has been rapid ever since, with names like Kepler, Newton, Herschel, Einstein and Hawking, and the discovery of Uranus, Neptune and Pluto, quasars and black holes. The Hubble Space Telescope, with its inherent advantage of being unencumbered by gravity and the earth's atmosphere, is already bringing us pictures of unequalled clarity and data from the furthest reaches of space. Ten years ago, if you wanted to image data from space you had to book extremely expensive time on a mainframe computer. Now there is Digital Universe for your Amiga.

I'm not going to say that Digital Universe is like no other package on the Amiga because the pedants among you will point out the fact that Distant Suns is also an astronomy package. However, the depth of detail in Digital Universe far outstrips that in Distant Suns as I shall endeavour to explain.

For a start, I believe that Distant Suns comes on a grand total of five disks, a figure somewhat swamped by Digital Universe's



An atmospheric anomaly in Neptune's frigid and thin atmosphere



Ben Vost
boldly goes
where no
man has
gone before

JARGON box

Datatype - Datatypes were introduced with Workbench 3.0 and are modules for loading different file types. In theory, any program can use datatypes for loading files, thus creating a system-wide translation tool.

PNG format - when Unisys told Compuserve that it had to pay royalties for using the GIF graphics format, the search was on for a free replacement. PNG is a compact graphics format that can handle up to 48-bit colour, compression, alpha channels, and many other features. The only software to support PNG so far on the Amiga is Cloanto's Personal Paint. Cloanto have also released a PNG datatype into the public domain.

Parsec - (I know I haven't mentioned it in the review, but I just wanted to let you know what it was...) A parsec is the distance at which 1AU (astronomical unit, the distance from the earth to the sun) appears to cover an area 1 arcsecond (that's 1/360000th of a degree) wide. Cool huh?

fourteen (yes, you do need a hard drive). This is mainly because Dan Charrois, the author, has decided to map the planets and moons in our solar system to the best of his abilities and the available data. This means that rather than looking at a static bitmap when you zoom into Jupiter, you are actually looking at the mapped surface of the planet itself (yes, I know that it isn't the surface you see through a telescope but clouds, but you get the idea. Perhaps I should have chosen Mars?) which will rotate in time. You can actually watch Venus' almost interminable day take place (equivalent to 243 earth days and actually longer than its year of 225 earth days), at an accelerated pace of course!

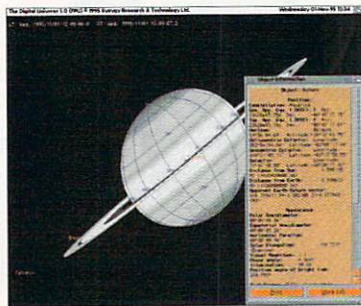
All these bitmaps for the planets' surfaces are one thing, but another expense in terms of hard drive space is the on-line encyclopaedia which gives details about pretty much anything you could wish to know. This

encyclopaedia alone would be worth the price charged for Digital Universe, so it's an added bonus to get such a good looking planetary package to go with it.

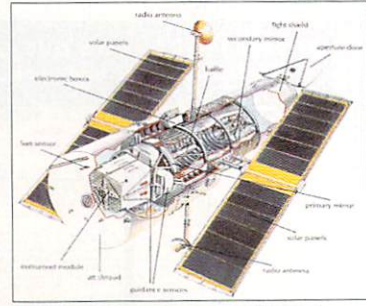
If, like me, you don't much go for reading vast amounts of text off the screen, you could always stump up the extra \$55-odd you have to pay for it. What you get for that money is a ring-bound, 700-page volume delineating all that is in the AmigaGuide online encyclopaedia, but presented in a manner that would allow you to browse it on the train.

SECTION GUIDES

The encyclopaedia is split into several main sections detailing the history of astronomy so far, general principles, laws and guidelines used by astronomers today, a detailed guide to every planet and moon in our solar system, all the spacecraft that have thus far been



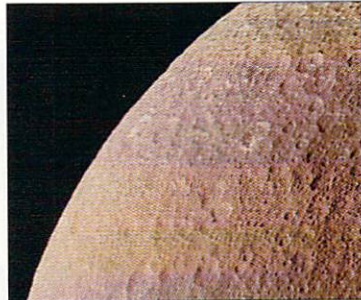
Saturn's rings, moon and surface in beautiful detail courtesy of Digital Universe



DU's encyclopaedia gives you details of every space mission there ever was



DU's encyclopaedia also has a plethora of surface images - this one is Mercury



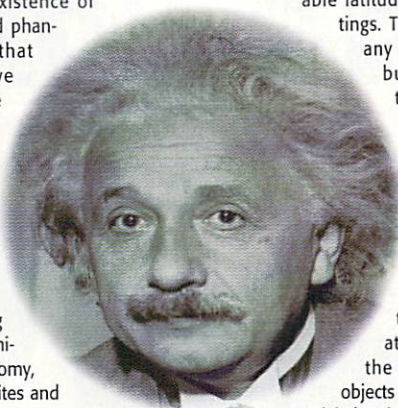
Rhea - one of our solar system's prettier moons, orbiting Saturn

launched (and their mission details), including Cassini which is due to launch in 1997 and is set to explore Jupiter.

There are also speculative chapters on the possibilities of the existence of extra-terrestrial life and phantom planets that astronomers have thought to exist - like the counterweight star or planet Nemesis. It then goes on to examine other objects in the universe in quite some detail and finally, there are appendices dealing with astronomical definitions, people in astronomy, and the brightest satellites and asteroids in our skies. As you can see, that's quite a features list for a text book and I could have filled the entire spread for this review detailing the chapters that go to make it up.

So how does the program itself compare to VRLI's offering? Well, on first appearances it stacks up pretty well. Digital Universe uses all the latest theories on planetary motion (VSOP87) which means it is accurate to within 1 arcsecond (1/3600th of a degree) - important at great distances. Digital Universe also accurately calculates the orbits of all our solar system's planet's moons.

If you are worried about not having enough to look at, fear not, Digital Universe contains, as standard, the Yale Bright Star catalogue, the Smithsonian Astrophysical Observatory catalogue, Messier's deep sky objects, the NGC 2000.0 catalogue and databases for cometary orbits, asteroid orbits, and earth orbiting satellites. Now that gives you a total yield of well over a quarter of a million skybound objects

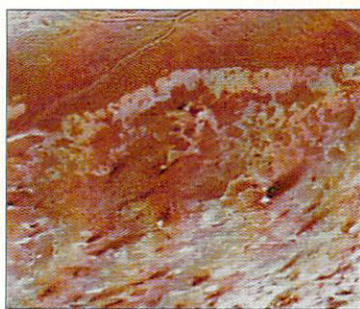


I still think that Digital Universe should have the picture of him sticking his tongue out

to peer at. If that isn't enough, you can call me Charlie, strap me to a Saturn 5 and send me into orbit.

In addition, Digital Universe has user-definable latitude and longitude settings. These are essential to any astronomy package, but Digital Universe takes the process one step further by also asking you for the altitude and air temperature of your location. This is a consideration if you want to deal with effects like the refraction caused by the atmosphere distorting the true location of the objects you are looking at.

Digital Universe can also correctly deal with precession and nutation, which both deal with the slight wobble that all planetary bodies are subjected to by the gravitational pull of other objects; proper motion, which deals with the fact that the constellations we can see change over time due to the fact that they are changing



Triton - the most godforsaken outpost of the solar system, there isn't even a MacDonalds

COLOUR LIMITATION

One aspect that is a bit of a let down is the quality of the images that come with Digital Universe. Rather than the supplied 16 colour or HAM files, it would be much nicer to have 24-bit pictures saved in Jpeg or PNG format, which would then be degraded by Multiview's Datatypes to a colour resolution which best exploits each individual machine, rather than aiming for the lowest common denominator. This would bump the install set even further, of course, but if you are willing to install 17Mb of files, I'm sure you wouldn't mind installing 25Mb.

But why not go the whole hog and release the software on CD? Then you wouldn't have to be limited by a floppy distribution, and this software is so good I'm sure anyone with even the vaguest interest in astronomy would be willing to buy a CD-ROM drive in order to use it.



their relative positions to one another because they are all moving; and aberration, a correction applied due to the difference between the speed of the earth's motion through space and the light reaching us from space.

Digital Universe isn't yet perfect, no matter how glowing a review I have given it so far. It would be great to have off-planet views like Distant Suns has had for quite some time, and its speed isn't quite up to scratch. On another front, the only time I could get Digital Universe to crash was when it was running on a Picasso screen, which doesn't bode well as Digital Universe is the sort of program that would really shine given a higher resolution screen and more colours to play with.

AC

CONCLUSION

Digital Universe is a nova in the heavens. It is by far the most professional piece of software I have seen for a long time and for a first version it is incredibly complete. It is a bit slow on the update, particularly when you have lots of objects in the sky, but with more and more people having an accelerator these days, it shouldn't pose too much of a problem.







I would love to see future revisions of the software ditch the floppy install set and proceed directly onto CD-ROM (it would probably be cheaper too), which would open up the way for more, better quality images and even animations. Finally, I would say that Digital Universe is probably the biggest bang you are likely to find, especially for your buck.



Bottom line

REQUIREMENTS

RED essential BLACK recommended

		
Hard drive	RAM	Kickstart
		
6 Mb RAM	68030/040	68882

PRODUCT DETAILS

Product:	Digital Universe
Supplier:	Szyzyg Research & Technology Ltd.
Price:	£89.95 incl p&p
	Optional encyclopaedia £47.95 incl p&p
	CAN \$149.95 Optional encyclopaedia \$69.95
	US \$129.95 Optional encyclopaedia \$64.95
e-mail:	sales@syz.com

SCORES

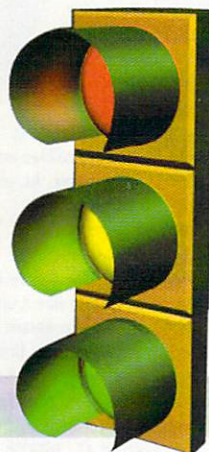
Ease of use	82%
Implementation	93%
Value For Money	98%
Overall	91%

Can you see the light?

Ben Vost takes a look at three new CDs for LightWave users

Now that the world and his wife all seem to have CD-ROM drives, there has been a surge of people collating information to put onto CDs. With the Toaster 4.0 distribution set available on CD and LightWave available for most platforms also on CD, it's not surprising that there are now quite a few CD collections of objects, surfaces and scenes suitable for LightWave users. Three such collections have recently fallen into my lap, so I now present Light-ROM 3, Replica Technology's Interior Design Collection and Model Masters' Model Monger Foto Real collection.

The 3D Model Mech Kit is just one of the themed object sets on LR3

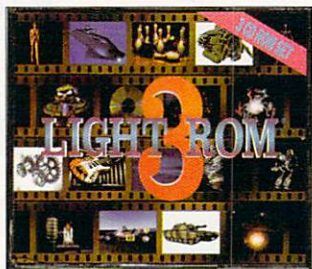


LIGHT-ROM 3

Light-ROM 3 is a massive collection consisting of three CDs, the first of which is dedicated to LightWave objects, scenes and animations, the second is given over to objects for other formats, while the third disc is filled with over a thousand DEM files, or Digital Elevation Maps, which cannot be used in LightWave directly, but could be used in Vista Pro, Scenery Animator or World Construction Set in order to generate backdrops (animated or otherwise) for LightWave.

Out of the three collections on offer here, Light-ROM 3 is the only one that uses the public domain as a source for the models on the discs. There is a wide variety of models on several themes, from the ubiquitous range of spaceships to some nice architectural models. Unfortunately, most of these models weren't created in LightWave, so have all the modelling finesse of most Imagine models – triangles everywhere and no sense of scale. Even models that are quite famous for originally being in .DXF or .3DS formats have been translated into Imagine format before being converted finally to LightWave.

In its favour, the models on Light-ROM 3 have all been converted with Interchange which at least tries to



replicate an object's surface coloration when translating from one format to another. Unfortunately, this still doesn't make up for the fact that you are going to need to spend a good deal of time editing the objects to make them as efficient as possible for LightWave use, converting triangular polygons into multi-sided ones, scaling the object correctly, and re-editing the surfaces to your taste.

Light-ROM 3 does come with thumbnail renderings of all the objects on the CDs, so you don't have to muddle through looking for an object to suit your requirements. There are also over 50Mbs of DEM files that have been translated into 3D object formats to save you the trouble, and a variety of shareware programs to help with 3D generally.

For some reason, although the PC programs are all unpacked, the Amiga ones are all still archived which necessitates using LHa. On the second disc there are also 820 Jpeg'd textures which have either been algorithmically generated or frame grabbed from live video. Some are very good but very few are repeatable, limiting their usefulness in most situations.

You just can't complain about the cost of Light-ROM 3. If you don't have access to the Internet and, in particular,

the Tomahawk object archive, then this CD bundle is splendid value for money, all the more so if you actually have one of the aforementioned fractal landscape generators as well. The documentation accompanying the package has a useful list of resources you might wish to look further at, such as details for various magazines devoted to 3D modelling and rendering like 3D Artist and LightWave Pro.

Bottom line

PRODUCT DETAILS

Product	Light-ROM 3
Supplier	Blittersoft
Price	£39.95
Tel	01908 261446

SCORES

Ease of use	60%
Implementation	55%
Value For Money	90%
Overall	68%

INTERIOR DESIGN COLLECTION

This CD has a sticker on it saying it is a Windows version, but as far as I am aware, there is no specific Amiga version. This is the root cause of all of this CD's problems. Because it was compiled with PC users in mind, the filenames are all 8.3 and when you 'load from scene' the pathnames that come up (because LW can't find an object or image) are all in the 'Can't find D:\objects\stuff\object.lwo' format. Not very user-friendly and not acceptable in a 'professional' CD title.



houses, although they are all fairly simple detached homes, and the interior fixtures like the staircases, skirting boards and fireplaces (mainly because it is these features that are so often forgotten when interior scenes are rendered).

The furniture itself is completely forgettable in as much as the design work that has gone into it seems minimal, although there is a nice range of similar types of objects, such as five different sorts of desks. However, when it comes to choosing which of the five you are going to want to use for your scene, that has to be done by trial and error because there are no preview images for each individual object. This is not helped by the cryptic naming conventions forced onto the Interior Design Collection by the aforementioned 8.3 naming standard.

Considering that this CD is only about half full, I think it would have been more professional if Replica Design had just included separate scene files for Amiga users that directly accessed the CD-ROM, and also individual preview images in somewhat less compressed form than the current Jpegs. All in all, I don't think I can recommend this

CD to anyone but the most intent LightWave user who needs to be able to rustle up architectural walk-throughs in the least amount of time possible, and who isn't concerned overly with the quality of the objects he is using.

Bottom line

PRODUCT DETAILS

Product	Interior Design Collection
Supplier	Replica Technologies
Price	\$350
Tel	001 716 337 3887

SCORES

Ease of use	35%
Implementation	65%
Value For Money	30%
Overall	42%

MODEL MONGER INTERIORS 1, FotoREAL



The problem inherent in object CDs that aren't created solely for LightWave is the lack of proper surfacing details - the image on the left is scanned from the leaflet accompanying the Model Monger CD, the image on the right is the same object rendered straight from the CD

Phew, what a long-winded name. The Model Monger CD comes in two versions, the FotoReal - where every object is absolutely smothered in polygons - and the LowReZ version - useful to act as stand-ins for your models until you need to do a full-on, high resolution final render. The number of polygons in the FotoReal versions of the objects on this CD really is quite phenomenal. Can you imagine a bed and mattress containing over 10,000 polygons?

Part of the reason for this is again the fact that these models haven't been created with LightWave in mind, so the models on this CD are made from triangles again. And because there is no standard for the scale of objects in different formats, you will find a 60 metre wide sofa and a pair of scissors taller than a jumbo jet.

Now this CD hasn't been prepared with LightWave in mind exclusively, so you can forgive these excesses of scale, but these objects are on a professional quality CD so maybe these factors should have been addressed. After all, just what is the point of supplying LightWave-specific versions of the objects when any sensible 3D modeller already has an object converter to convert the no doubt identical models from the .3DS versions included on the disc into LightWave format himself - unless those objects have truly been converted, including reducing the polygons and adjusting the scale.

This object database is again an Interchange production with the converted objects needing a lot of work to make them usable in LightWave, so yet again my search for a usable model database has been thwarted.

Bottom line

PRODUCT DETAILS

Product	Model Monger Interiors 1
Supplier	Antigravity TV Products
Price	\$149.95
Tel	0181 4025770

SCORES

Ease of use	65%
Implementation	45%
Value For Money	65%
Overall	60%

Jargon box

8.3 - PC compatible machines have always had a problem when it came to naming files. The reason for this is that MS-DOS (and thus Windows) restricts the number of characters you could use to eight for the main part of the filename, and three for the extension. You can't add spaces to filenames (or a number of other characters Amiga owners take for granted) and you have to add a three character file extension saying what the file's type is (such as .txt for a text file). This is slowly changing with the advent of Windows 95 which allows for a 255 character filename, but with the majority of users still working with older versions or Windows, companies will have to maintain the crippling 8.3 limitation.

Digital Elevation Map (DEM) - DEMs are created by geological and cartographical societies like the Ordnance Survey from satellite imagery and a variety of other sources in order to map terrain accurately. The files consist of contour points at varying levels of resolution and there are several programs on the Amiga (the ones listed in the main text being some examples) which can take these files and render lifelike images from them.

.3DS - the format in which objects are saved in the PC 3D rendering program 3D Studio.

OVERALL

Overall, the quality of the objects on the two professional CDs isn't in doubt and the vast majority of the objects on the LightROM 3 are also quite impressive, but none of these CDs really address the needs of the LightWave user. Replica Technologies CD is the only one to provide dedicated LightWave objects in the correct scale and with proper surfacing, but it falls down in the value-for-money stakes, its concentration on the Windows market (when the number of Amiga users of LightWave far outnumbers the number on PC) and its lack of picture previews of the objects.

The other two CDs both fail to have properly converted objects and in the case of the Model Monger series this is unforgivable, especially since any work you do to the objects has to be saved to your hard drive, thus obviating the advantages of having the CD-ROMs in the first place. Oh for a decent LightWave object database, you'd think there would be the demand for it.

A 600 owners must be feeling a little fed up when it comes to expanding their machine. Having been left in the accelerator back waters for a good few years now, you must be thinking it is about time your A600 got a good old speed injection. Well finally there is an option available – the Apollo 620.

Tens years on, the A600 is still running as fast, or should that read as slow, as the original A1000. It amazes me the number of Amiga owners that complain about programs that will not run on their machines, which then turn out to be eight-year old A500s with 1Mb of memory. If a PC got up and moaned about how their 8086 with 640k could not run Windows 95, they would simply just get laughed at.

The unfortunate side of this is that software companies will still write their software to conform to this minimum standard. A larger proportion of games have only recently become hard drive insatiable, and most of the recent Doom-type games only cater for a minimum specification A1200. This ends in a vicious circle that no one bothers to upgrade, and conversely there are no great improvements in software as it still caters for the minimum specification.

Bit of a large bee in my bonnet there I think. Alright, so there are lots of very good reasons to upgrade your machine, and at the end of the day it is you that will benefit. The Apollo is a slightly over-clocked 020 processor running at 25MHz. An over-clocked processor is one that is being run at a higher clock rating than it is supposed to. In theory this reduces the life expectancy of the processor because of the extra heat generated, but as the Apollo is only running at an extra 5MHz I cannot see this being any problem.

NO EXTRA COSTS

A floating point unit is included as standard with the board, so there is no necessary extra expense, and the board pulls a reasonable 0.7 MFlops. Therefore, any A600 user that has ever wanted to dabble with raytracing will have a much happier time, rather than continuing to struggle with their old 68000, sweating cobs trying to pull off all those complex instructions.

As with every Amiga accelerator, the Apollo is pretty much useless unless you add FastRAM to it. Actually adding FastRAM allows the Apollo to run over 6% times faster than it other wise would.

You should really consider going for a 4Mb SIMM if you want to run things like Wordworth or Final Writer, and anyone wanting to do raytracing should go for the

8Mb option, which is the maximum amount the Apollo can handle. Fitting an 8Mb SIMM will, however, disable your PC slot, so any squirrel users will have to stick with a 4Mb SIMM.

Fitting the board is a little tricky. Caused by the fact that the A600 never came with any processor upgrade route, the only option available is a board that plugs onto the 68000 chip in the A600.

This requires you to open up your A600 and remove the protective shield. If you have an internal hard drive fitted this has to be removed and will sit on top of the accelerator board. There is a plastic cover and some Velcro to assure that no electrical shorting occurs.

SURFACE MOUNTED

Once you have ripped the innards out of the A600 you can then fit the board. As the 68000 in the A600 are surfaced

Jargon box

AIBB – Amiga Intuition Based Benchmarks is a program that allows you to test the performance of your Amiga

8086 – one of Intel's earliest processors used to power the earliest modern PCs

68020 – Motorola's first 32-bit processor. Introduced in the mid '80s it is used to power the A1200 and the Apollo 620

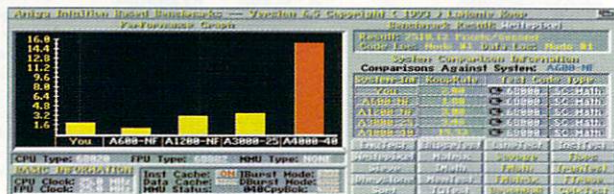
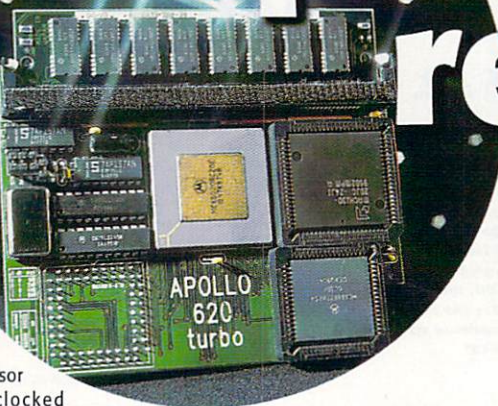
mounted, a plastic connector on the board is 'glued' into place onto the A600's processor via a sticky pad inside the connector. This means the Apollo cannot be removed once in place, and I would not recommend you shake your A600 too much after the board has been fixed in place.

The Apollo lines up quite nicely in the speed stakes, coming in just under eight times as fast as an A600, and is virtually as fast as an A3000. One thing of interest is that due to the A600 still having 16-bit graphics memory, the accelerator has a much smaller effect on graphic operations compared to numerical only operations. This is borne out if you compare some of the graphical benchmark tests in AIBB, the Apollo only usually producing a doubling of speed over a conventional A600.

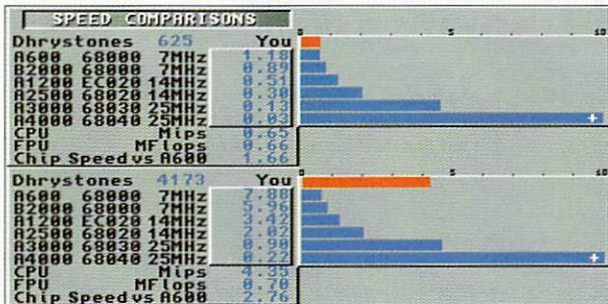


Rapid response

An actual upgrade for the A600. **Neil Mohr** checks if it's worth shelling out for



Due to the lack of 32-bit graphics memory the A600's graphic functions benefit little from the Apollo



SysInfo demonstrating nicely the difference that FastRAM can have

EASY OPTIONS

Overall, the Apollo would make a good alternative to an A1200, and is half the price, though you would need to add on the cost of a SIMM and you are still stuck with the old chipset's display range. At the end of the day, if you want to accelerate your A600 the Apollo is your only option, and it does provide a good turn of speed. For any A600 owners, this board would be a revelation.

Bottom line

REQUIREMENTS

RED essential BLACK recommended

SIMM

4/8Mb

PRODUCT DETAILS

Product	Apollo 620
Supplier	Gasteiner
Price	£209
Tel	0181-345 6000

SCORES

Ease of use	60%
Implementation	55%
Value For Money	70%
Overall	75%

The one thing that puts your Amiga above rival home computers is its versatility, power, and ease of use, and certainly its most attractive feature is Workbench – the Amiga operating system's graphical user interface (GUI). Both Apple Macintosh and Microsoft have, and still are, desperately trying to emulate Workbench but have consistently failed miserably.

You may have noticed the recent Microsoft advertising campaign in which punters gasp in awe at Windows 95's multitasking capabilities. Well, your Amiga has been equipped with true multitasking since day dot and, unlike Windows, doesn't crash every five minutes. With all this power at hand, it is surprising, though, that many new and old Amiga owners still don't fully appreciate or understand the true capabilities and user-friendliness of their machine's front-end.

What this article will do is explain the many hints and tips that will make your relationship with your Amiga a personal and rewarding one. With perseverance

beginner's guide

Part 1

these techniques should eventually become second nature, and I guarantee you will find working with Amiga Workbench quicker, more flexible and, more importantly, fun. The different subjects have been provided in such a way as to provide you with a quick reference to particular topics without having to wade through heaps of non-related text.

Turbo-charge your way around Workbench and Amiga DOS with **Steve White**, revealing hints and tips for true Amiga harmony

WINDOW DRESSING

When you first load Workbench it looks rather dull. However, the real powerhouse behind Workbench is its flexibility of design, allowing you to change its appearance to suit your personal requirements.

You can change the look of icons and indeed the Workbench backdrop and windows by running the appropriate program in your Prefs drawer. Drawing icons in IconEdit isn't a good idea though and it's quicker to design them in a paint package such as Deluxe Paint.

Two icons are needed – one for when not selected and another for selected. Grab each icon as a brush and save them to the RAM Disk. You can then load them into IconEdit as images in the indicated selected and non-selected slots. All you then need to do is save it by selecting the program you want the icon for in the save requester, and clicking Okay. Remember that



Ⓒ Rather than design icons in IconEdit, it is more advisable to use a paint package which features more drawing tools than the former

there are different icons for different file types. You must select the appropriate icon type from the Type menu in IconEdit before you save it. A full list and explanation of icon types is available in your Workbench manual.

The WBPatten program is slightly different in that it doesn't allow you to design backdrops, only select them. You can use your paint package again here in

order to create a suitable image. There are two ways you can design backdrops – full screen or brush. Full screen is just that, a full screen backdrop, and brush is simply a section of the screen that is grabbed as a brush and tiled by WBPatten over your Workbench or windows. The benefits of brush pattern tiling are obvious as they don't take as much hard drive or floppy disk space as full screen patterns.

BETTER ACCESS

Workbench is initially neatly tucked away in drawers but as you become more confident you will find yourself calling on certain programs time and time again. Wading through drawers every time eventually becomes annoying but Workbench offers an easier way to access commonly used programs.

You can keep any icon type out on the Workbench desktop by simply clicking once on the icon and selecting Leave Out from the Icons menu. This doesn't move the icon but simply instructs Workbench to show it on the desktop rather than the previous location. You cannot delete an icon while on the desktop so you need to put it back where it came from by clicking it once and selecting Put Away from the Icons menu.



Ⓒ If you're tired of wading through drawers for a program simply move it to the desktop with the Leave Out menu option

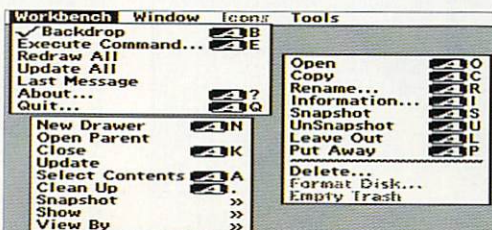
NEAT AND TIDY

A tidy Workbench is a happy Workbench and a happy Workbench is a happy user. Once you start creating your drawers and copying and deleting files, you'll realise that Workbench can soon become cluttered, especially drawer contents.

You can keep your desktop and window neat and tidy by selecting all the icons and then selecting Snapshot All from the Window menu. Snapshot fixes the icon to the position you specify. A better way to do this is to use keyboard short-cuts which allow you to

perform functions without needing to use the mouse.

All keyboard short-cuts are accessed first by holding down the right Amiga A key to the right of the Space bar and pressing the appropriate key (keyboard short-cuts are also known as Hotkeys). You can find all the appropriate short-cuts alongside the menu item they represent. For example, right Amiga A and . (full stop) cleans up the contents of a window, right Amiga A and A selects all the files in a window.



Ⓒ They're not just there for cosmetic purposes – keyboard short-cuts increase your speed when working with Workbench

NOW YOU SEE IT...

When you open a drawer on Workbench, programs and further drawers are shown by their attached icon. But not all programs and drawers have icons and initially, these don't show up.

If you find yourself looking for a particular item which doesn't appear to exist select the Show - All Files option in the window menu. The result of this is that Workbench attaches temporary icon images for any files and drawers that don't have an icon of their own. You can then interact with them in the same way you can with normal icons. If you snapshot the drawer with the Show - All Files option selected it will stay this way permanently, or until you change it back to Show - Only Icons.



Not all files and drawers have icons but they can easily be viewed by choosing to Show - All Files from the Window menu

ICONS

When you create a new drawer Workbench automatically attaches an icon to it - this is also what happens when you format a disk. Thankfully, these icons aren't written into the Amiga's chips and can therefore be changed to other icons of your choice.

These icons, known as default icons, are read by Workbench from the Sys directory (drawer) which can be found in the Prefs/Env-Archive. All the default icons are preceded by def_ and end with .info (indicating an icon) - for example, def_drawer.info, def_tool.info, def_disk.info etc.

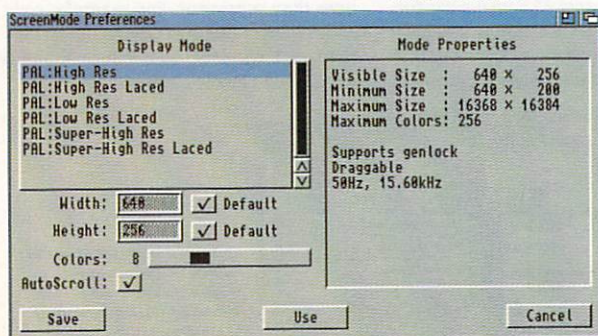
With this knowledge, you can create a new icon as explained in the Window Dressing section, select the correct icon type, and then save it over the original def_icon in Prefs/Env-Archive/Sys.

INTUITION

Not only does your Amiga have a Workbench but also Intuition, used by Workbench to communicate with you, the user. It consists of windows containing different types of buttons, gadgets and images that allow you to interact with Workbench comfortably and with relative ease.

Most of your Intuition experience will be involved with clicking buttons and entering text. A quick way to delete text in a gadget is to use the keyboard short-cut right Amiga A and X which will delete all the text at once. The only other alternative is to tap away at the Delete or Backspace key until the text is erased.

The Amiga's Intuition capability is far superior to any rival computers and allows you to interact with your Amiga



TRUE MULTITASKING

Unlike other home computers, the Amiga has boasted true multitasking since it was first released many years ago. Multitasking may not appear very useful to the beginner but as your experience increases it soon becomes a powerful ally.

Multitasking allows you to run several programs at once without your Amiga choking and eventually crashing. You can switch between programs by clicking on the depth gadget at the top-right corner of each screen, but a far simpler and quicker way is to use the keyboard short-cut right Amiga A and M. This switches between program screens without you having to use the mouse.

RUNNING

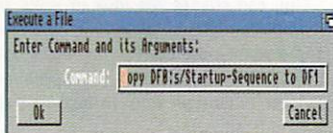
You will notice a drawer on your Workbench disk called WBStartup. This drawer is used to automatically load programs every time Workbench boots (loads).

Therefore, if you want to run a particular program of your choice when Workbench loads, simply drag it into the WBStartup drawer using the mouse. In order to load successfully, the program you drag into WBStartup must have an icon attached.

SHELL

The Shell is your interface to the Amiga DOS (Disk Operating System) and is located in the System drawer. If you are exploring Amiga DOS you may be interested to know that you don't have to load Shell up every time you want to enter a DOS command.

If you look in the Workbench menu on your desktop you will notice an option entitled Execute Command. By selecting this, Workbench provides you with an Intuition window in which you can type any DOS commands just as you would in the Shell. Execute Command is so useful that I rarely use the Shell anymore.



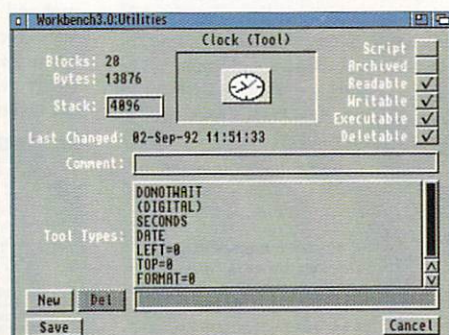
The Execute Command... function in the Workbench menu is a quick alternative to the Shell

USE YOUR TOOL

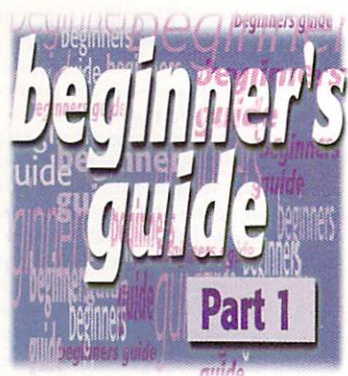
Most programs that come with Workbench utilise ToolTypes. If you click once on the Pointer program's icon and then select Information... from the Icons menu you will see a list of ToolType definitions below the icon image.

These ToolTypes are used by the program and also by Intuition to control how the program works. If you have copied a program to the WBStartup you may have noticed that when Workbench loads, a requester appears stating that the program ??? has not quit yet.

To stop this in the future you need to add the DONOTWAIT ToolType to the programs icon. Repeat the process mentioned for the Pointer icon above, click the New button to add a new ToolType, and then type in DONOTWAIT. Press return and then click on the Save button to store the new ToolType. When you reboot again the program will load without a hitch.



Tool Types can be accessed by clicking on the icon once and selecting Information... from the Icons menu



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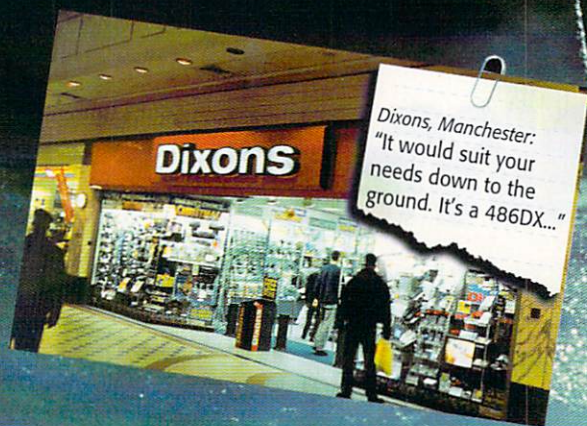
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It was a wet Thursday morning in November when I went out searching for an Amiga in the shops local to Macclesfield, ones that should be familiar to people the country over as sources for technological equipment. I donned my trenchcoat and hat, checked the batteries and tape in my hidden tape recorder, loaded my SLR camera with film and slung it out of sight under my coat, then I walked out my door. I proceeded (presumably in an orderly fashion) into Manchester.

The first shop I came to was no help at all. I walked in and boldly stated my purpose: "I want to buy an Amiga. Have you got any?" to which the man behind the counter replied, "No". When I asked him why, in a shocked tone of voice, he merely replied: "This is a fishmongers, sir." Alright, alright, I know it's a crap joke and one of the oldest in the book, but unfortunately, I may as well have been in the fishmongers in Manchester for all the luck I had trying to get an Amiga.

My first, and best, port of call was the Silica Shop in Debenhams in Manchester's Arndale Centre. After wandering around the shop for a bit admiring the jerky scrolling on the Windows machines, I discovered the Amiga 1200 accompanied by a Microvitec 1438 monitor. The monitor was switched off, but in turning it back on I found the Amiga was on and running a demo of Virtual Karting.

When the sales assistant had finished dealing with the other customers in the shop, I approached him and gave the same story I used at every other shop, namely that I was a poor, starving student engaged in a graphic arts course at university and needed a computer to do 2D graphics and hopefully output to video, and 3D graphics later on. I explained that I only had a budget of £500 and that what I really wanted was a machine that would do what I needed and which I could expand at a later date when I got some more money. I also stated that I didn't care about the make or compatibility of the machine.

Without fail every one of the shops I went into started by offering me a 486 for

Undercover Amiga

Ben Vost went into the big wide world to see whether anyone would sell him an Amiga

Quote from Tandy's:
"As soon as you mention video work, it's not within the budget you're spending"

TANDY

Quote from Escom:
"You won't be able to upgrade that [the Amiga]..."

could use Windows' Paintbrush.

I shunted the conversation towards the Amiga in what was by now becoming a slightly desperate attempt for somebody, anybody, to recommend Escom's new baby to me, but to no avail. The salesman's eyes just glazed over when I mentioned the Amiga and he frantically tried to cover up the complete lack of knowledge that he had about the machine. When asked if the Amiga ran Windows, the salesman didn't think so, and when I asked him about the specification of the machine he tried to look on the box, a job I could have done (the Amiga Magic bundle makes no mention of the machine's specification on the box).

He couldn't even tell me the price of an Amiga without having to consult another employee. I said that the PC was too expensive to start with and I just wanted a machine which I could expand at a later date, to which the man from Escom said that the Amiga was categorically not expandable. I turned on my heel and walked out.

I'd had my fill of Manchester. I trudged back along Market Street despairing of any of Manchester's citizens being persuaded to buy an Amiga in these PC-dominated days. Maybe my luck would be better nearer to home, in Stockport.

Quote from Silica:
"Babylon 5, [seaQuest] DSV, they're all done on the Amiga..."

around the £900 mark (including VAT). Obviously, they all needed a slight nudge in the right direction, so in each case I mentioned the fact that one of my friends had an Amiga and it looked quite good. In Silica Shop, as soon as I mentioned the Amiga, the sales assistant (who was their PC bod) realised that the Amiga would actually be quite a good choice and told me that the graphics for Babylon 5 and seaQuest DSV were all produced on Amigas.

I kept up my act of wide-eyed innocence and said that that was quite an impressive track record, at which point the sales assistant said that he didn't know very much about Amigas apart from the fact that they were very easy to use and could be hooked directly up to a video, etc. He suggested I wait for his colleague, the Amiga expert, to return to get the full gen, but he was himself far more enthusiastic about the Amiga's capabilities than his erstwhile comrade.

PERSISTENT

My next visit was to Dixons in the Arndale Centre. I waited to see the computer expert, rather than deal with someone who only knew about stereos and once he was free, he came over and started to sell me a PC. Unfortunately, once more, the budget that I had fabricated of £500 was again exceeded, this time by about £150 in the form of a PC that wasn't going to be able to do what I wanted out of the box. I pushed in the direction of the Amiga (Dixons don't actually sell Amigas at the moment), but the salesman seemed uncertain as to the availability of the machine and suggested that they were no longer in production.

Thus discouraged, I decided to cheer myself up by going to visit the Escom shop in John Dalton Street in Manchester. 'After all', I told myself, 'Petro Tyschchenko said that Amiga Technologies were going to place the Amiga in Escom shops because of the high rate of Amiga experience in the staff running the shops.' I wasn't lucky enough to get one of those shops though.

I walked around the showroom for a bit taking in the mini-towers, desktops, and full-size towers that littered the workbenches (no pun intended!) around the room. The only sign of an A1200 was a stack of three empty boxes in the window. I told my tale to the nearest salesman and he suggested I buy a... PC. His cheapest PC was about £620 and came with practically nothing by way of sweeteners. When I asked about a suitable paint package, the Man from Escom told me I

So into the shopping centre I went, hoping for a better performance. I went into Dixons and approached the first guy I saw in the computer department. "I'm looking for a computer." "What specification do you want?" "I want it to be cheap. I only have about £500." At this point in the exchange one of the Dixons staff sniggered to his colleague: "He's hoping! A computer for £500!"

At this point I was tempted to just walk out, but I persevered. I explained my situation and gave all the cues for them to suggest I try Tandy who do stock Amigas. But no, I was told that I should come back when I had the requisite, and by now familiar, figure of £650 to spend on a PC. As I left the shop I could hear the salesman and his cronies laughing behind me.

My last hope was Tandy, not a name to inspire confidence. I walked downstairs to the computer showroom where, notwithstanding the Amiga box on display in the window, there were only PCs to be seen. It was in Tandy that I suffered most at the hands of the PC bigots.

SOLIDARITY

Unfortunately, my cover story as a starving art student was spoiled somewhat by the fact that the guy trying to sell me a machine had just finished a course similar to the one I described, so he was at pains to try and show me some solidarity. He told me of the joys of owning a PC and showed me a machine that was £250 over budget.

While he demonstrated the amazing benefits of PaintShopPro, a shareware image processing and paint package, he told me that a PC was the machine I needed. I told him I had seen an Amiga at work and was quite impressed and he said: "The Amiga is nothing like this whatsoever." The guy at Tandy has to be congratulated though for pointing out some of the more serious deficits of the Amiga.

He said that there wasn't much transportability of files (yes you can write to a PC disk on the Amiga, but you can't save out a document in Word format), you might not be able to get a suitable printer driver (actually he said that you can't even get a cable for a printer to connect to an Amiga), and you can't buy what software there is anywhere. He also advised me that I could upgrade my PC a bit at a time as I could afford it and end up with a far superior machine than the one I bought, relatively cheaply.

CONCLUSIONS

Unfortunately, things don't look too hopeful from what I've written, but the staff in the shops weren't entirely to blame. For a start, the Amiga doesn't appear to offer all that much for £399 compared to what the PCs offered for £650. It might seem like a huge jump in cash terms, but remember when you buy a PC you are also getting a monitor, 4Mb RAM (at least) and a sizeable hard drive. It's no wonder that shops that do carry Amigas don't try to sell you them, when selling a PC system is so much easier to justify to a potential punter.

Some of the blame must also rest on Amiga Technologies' shoulders, particularly the fiasco in their own shop. Not enough people are aware of the fact that the Amiga is back in production and by a company who are supposed to be different to bad ol' Commodore. In the

death, people will only go into shops asking for an Amiga if they know about it and see its benefits. Unless Escom are willing to put some time into promotion (it doesn't have to mean expensive advertising campaigns) the Amiga is still going to sink into a bottomless pit. Shops won't carry it because they don't sell, they don't sell because the shop staff persuade people to buy PCs, then people who want to buy an Amiga can't find anywhere to buy one from so they buy a PC too, and so it goes on.

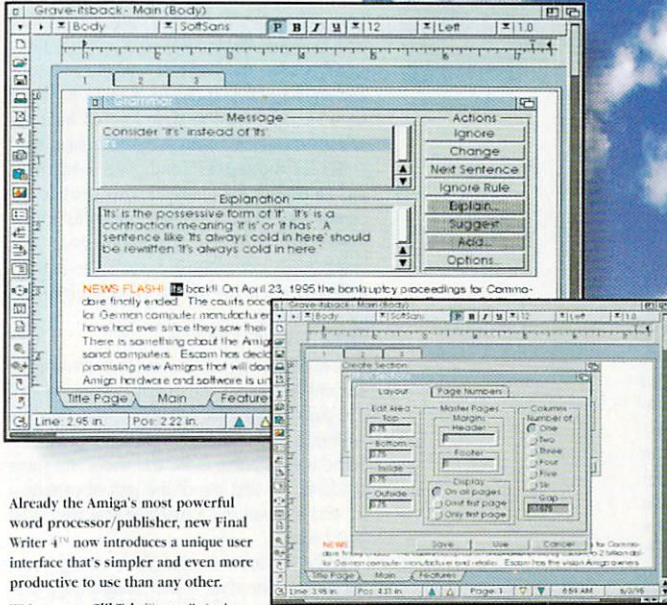
The solution to all the above comments is of course to make friends with your local independent retailer. He is in a position to be able to sell you an Amiga and support it too, and much of the Amiga's massive success (along with its future success) has been thanks to the small computer shop owner.

AG

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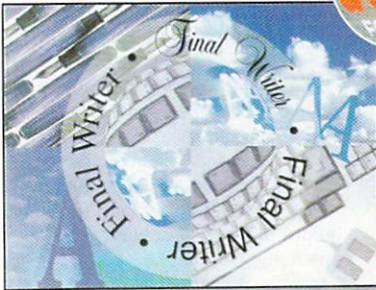


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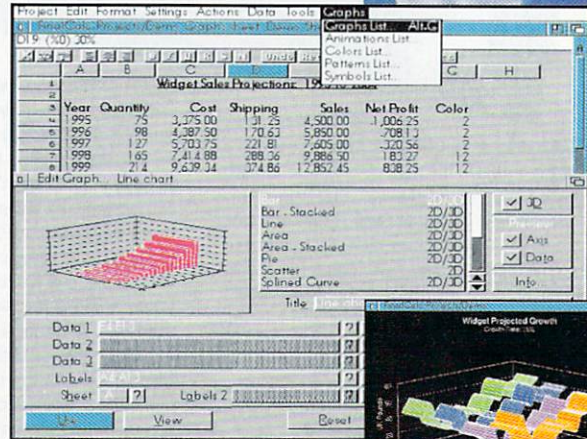
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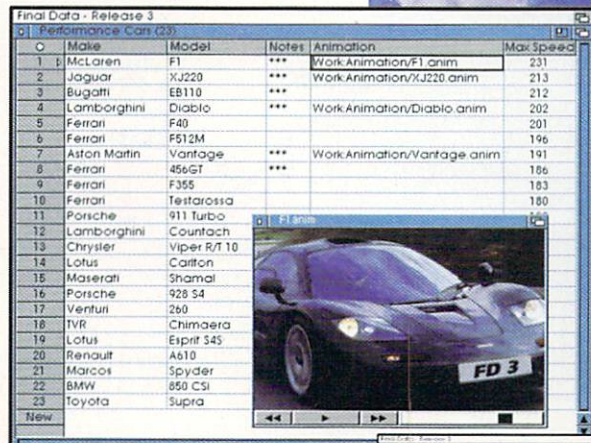
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Reviewed

Coala

Helicopter adventures are here courtesy of Empire. Are you brave enough?

Citadel

We investigate yet another Doom-style game and weigh up the best of the rest

Pinball Mania

The one that made it into the Amiga Magic Pack. System take a look at 21st Century's latest

Thomas the Tank Engine's Pinball

Another pinballer, but this time aimed at the younger end of the market

Leading Lap

Andy Maddock is bowled over by this latest 3D race-'em-up from Kellion

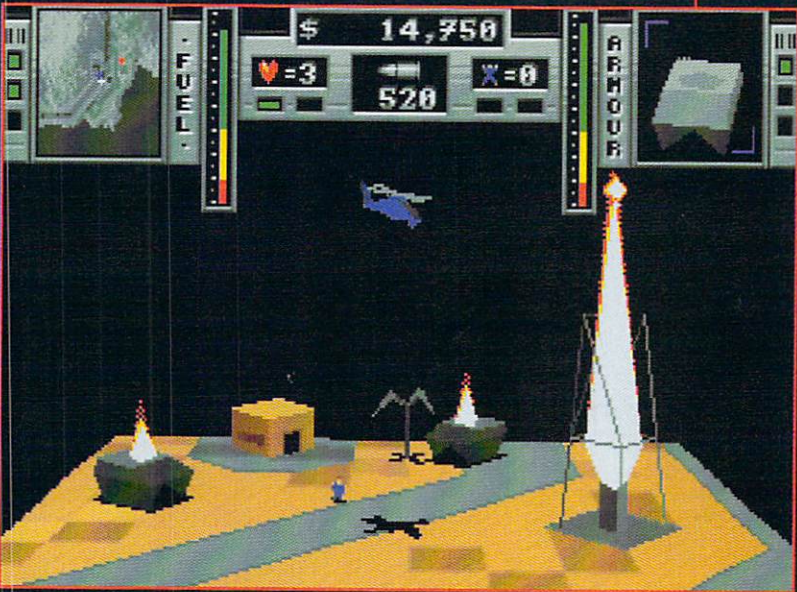
Team

We take a look at this sub-standard football sim which aims to be the next SWOS - and fails

Previewed

Zeewolf 2

The eagerly-awaited sequel to Zeewolf is nearly ready. We take a sneak preview

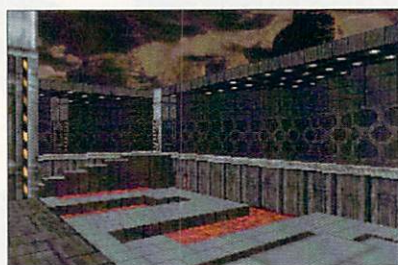


By Andy Maddock

Ooh! I'm knackered

Now, before you start yawning, please don't. I'm just as sick of all these Doom clones appearing on the Amiga as you are. When one comes out, another supersedes it. What are you supposed to do? Well, I suggest you keep one eye on the market and one eye on these very pages for news of a brand new clone.

It's being developed by an Italian company by the name of Fields of Vision. Breathless is its name, and impressiveness is



As you can see from the detail of the sky, Breathless is going to be the best Doom clone in terms of graphics

undoubtedly its game. It will feature 256 colours, variable textured windows, floors, walls and doors, plus a 'bouncing movement' which allows you to jump up and down to platforms you otherwise wouldn't reach. There will also be a fog lighting effect which will probably have a similar effect to that of Hexen on the PC. It's looking like being the ultimate Doom clone, shutting the door straight in the face of Fears, Gloom and Alien Breed 3D. Personally, I'm holding my breath! Hoo.



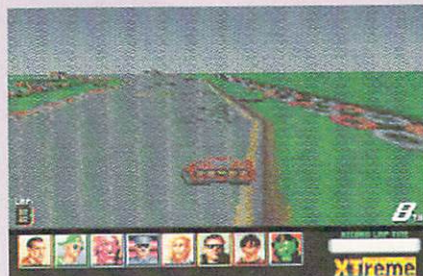
The title screen sums up just how many hours have actually gone into developing the ultimate Doom clone

Extreme-ly leisure-ly

Guildhall Leisure are back following their successes with Gloom and Fears with a 3D, Mario Kart-like Amiga racing game to feature one to eight players, four on a single machine and links via a serial plus or a modem link. There will be eight different cars to choose from including a Ferrari, Police, and VW Beetle, and will feature many different cars to race against and lots of tracks to race around, including a water world and a radioactive world, as well as normal roads.

There is a battle mode included, and those who are familiar with Mario Kart on the SNES will know how much fun this is. It uses a four-player split screen, and although this seems like your view will be greatly reduced, it actually works very well. The graphics are small yet surprisingly well defined, and the tracks contain all sorts of twists and turns.

If you own an accelerator then you're going to be in for hours of fun because it races at a terrific speed. Altering the screen mode and size will change the speed and look of the game so you can race how you want to - there are no restrictions. Extreme Racing looks like a close version of Mario Kart, and if the gameplay can match, Guildhall will begin the year with an instant success. We'll hopefully have a deeper look next month. Meanwhile, have a look for yourself.



Guildhall Leisure could be onto a real winner if they can maintain the quality from their two previous releases



There are lots of different cars to choose from as well as lots of tracks to race around. It certainly doesn't lack content!

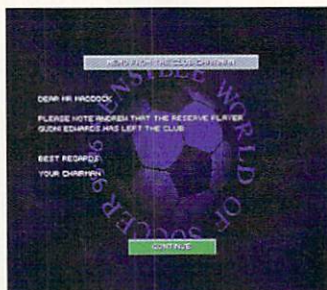
Suicide is painless

M*A*S'H is not to be confused with the rather bizarre American comedy series and Worms by Team 17. Although it may have the same idea, I don't want to be caught up with the who's idea it was, or who 'copied' who debate, because frankly, I don't care.

This game is another which, I think, surfed around the PD scene a while ago and is now set for a full commercial release. I'm a little worried about all these games being programmed from some guy's bedroom and being released at full price, because they may be quite adequate as a Public Domain release, but it's a very big step challenging the likes of Virgin, Time Warner, Empire, Team 17 and Ocean - you can't expect the games to be of outstanding quality.

Having said that, all programmers and developers have to start somewhere and Chris Gregan seems to have got himself started on the right foot with M*A*S'H. The best way I can describe it is a Worms/Lemmings-like game full of constant action with tanks and little spuds battling away. It will be available on mail order directly from Chris himself. Hopefully, we can squeeze in a full review next month to give you a low-down on how much this compares to Team 17's highly acclaimed, Worms.

Time Warner gets Sensible



You can see that one of the options is training which adds a new dimension to testing new players against your 'A' side

When Sensible Software announced they were going to bring their long standing relationship with the Amiga to an end, the world were captured in great scenes of sadness – nearly. Their leaving present to the Amiga faithful was none other than Sensible World of Soccer, and maybe the world

didn't want another game – ever.

Shortly after the release of SWOS, and after riding high in the charts following millions of sales last year, it began to crumble. People became unhappy as minor complaints filtered through and more and more players were left disappointed with the bugged and crash-tastic SWOS.

After the complaints, Sensible Software came out for an encore to much surprise and offered a bug-free version for absolutely free. All the annoying features had been ironed out and, despite the extra disk, it managed to claw its way back to being the greatest ever football game on the Amiga.

Time Warner Interactive have decided to update SWOS further, adding small features

that will undoubtedly inject some life back into it. We have already seen a preview version, and although the actual game part looks identical, there are subtle touches which, if you go back to your old version, you will not be able to live without.

Basically, all the teams are going to be re-vamped – new players, kits and managers –



The actual in-game bit looks identical apart from one thing – look where their hands are!

and you can also manage your A team who compete in the league and your B team, which contains all your up and coming youngsters and reserves whom you can call up at any time during the season. You can add aftertouch on ground passes, the international manager's position is now included, and there are animated crowds, a new rating system with stars and lots more.

Although it may not sound much, it does make the game that little bit better. Even the display of players' names in the corner of the screen adds a little more excitement as you now know who you are controlling and which computer player has the ball. We'll bring you a full review, along with an in-depth look at all the special features to see if the best has just got better!

Building an Empire

After the success of Coala which has received a very healthy 90 per cent in this issue, Empire are going to try and further their success with a huge football compilation featuring some of the best football games ever released.

First up is FIFA International Soccer which is still remarkably popular, especially on the console formats. For those of you who don't know, it's the unusually isometric viewed game which looked mightily impressive and realistic.

Kick Off 3 – European Challenge also makes an appearance. This didn't continue the same gameplay and graphics as the first Kick Off series, which was a let-down, but after a few hours it became so absorbing, nobody could put it down.

On the Ball was probably one of the finest graphical football management games ever,

combining a unique adventure-like interface with real football-like situations. These contributed efficiently enough to the industry to warrant a World Cup edition, which in turn superseded the league edition. The league edition contains all the Premier and First division data as well as all the features of training, sponsorship, press conferences and running commentary on the matches.

Finally, to finish the compilation off, Empire have selected one of the finest football management games ever, Premier Manager 3. This is the latest in the series from Gremlin, and needs no introduction whatsoever as it received 91 per cent right here in the pages of System.

Soccer Stars '96 will retail at £34.99, and for four excellent football games, that could well be one of the bargains of the year – already!



Soccer Stars '96 contains Premier Manager 3 which in my mind is the best football management game ever

Inhale... Exile

Audiogenic have been relatively active on the old gaming front, especially with releases like Odyssey, Graham Gooch's Cricket '95, and now a re-released version of the old classic Exile. I can remember this appearing quite a few years ago. It was like an in-space arcade adventure which began inside your own space ship, with you



pressing buttons and dropping grenades and basic space-type things. The game was fairly big with plenty of puzzles to solve, crews to rescue and monsters to battle against.

On the A500, it proved to be one of the most taxing and enjoyable games to be released. The new version for the A1200 and CD32 are about to arrive and will contain advanced graphics and sound, taking advantage of the AGA chipset. It will also be re-released on the A500, so if you've never played it before, it wouldn't be a waste of your time to check it out.

review

GRAPHICS

60%

SOUND

60%

GAMEPLAY

55%

OVERALL

60%

The four tables in all their glory: Tarantula, Jailbreak, Jackpot and Kick Off



The Tarantula table looks quite good, but it is one of the least interesting to play



Jailbreak is overseen by a judge who deals out harsh sentences



Jackpot works quite well by providing a fruit machine mission



The Kick Off table looks the most dated and seems out of place

Pinball Mania

Reviewed by Tina Hackett

‘It’s not the sort of game that you’ll want to play for hours on end. Disappointing to say the least,’

Before you all say ‘I’ve seen this reviewed before’, you have, but because it came bundled in the new Amiga Magic Pack, it only got a miniature-esque review squeezed into the main pack evaluation. Now, however, it’s available as a standalone product and therefore deserves a review all to itself. And here it is.

As you’ve probably gathered, it’s the latest pinball sim from 21st Century, the publishers renowned among pinball wizards for releasing some of the best sims around. However, there’s one big difference this time and one that has left me with my doubts about this title. The developers of the previous games were Digital Illusions, and the games were then converted to the PC by Spidersoft. Now, however, Digital Illusions have been left out of the equation altogether and development left in the hands of Spidersoft. It’s a big mistake and all too obvious that Pinball Mania is not up to the same standard as Amiga Illusions, Pinball Dreams, or Pinball Fantasies.

The game provides you with four tables (one more than Illusions, admittedly – but it’s quality not quantity that counts) and each has a different theme, with various missions related to them. One table, for example, has a football-style topic and provides missions such as spelling Kick Off to start the penalty shoot-out mode, or shooting the ball trap to reach the next round of the league. Jailbreak, the most atmospheric of the tables, uses a sinister theme with an evil judge overseeing the proceedings. You can start a riot, sentence a suspect, or spell Law to advance to the bonus multiplier value.

Although the themes have been well thought out, the graphics do nothing to create realism and are far from impressive. The game is AGA only, although you wonder why when you actually see and compare it to Pinball Illusions – it looks decidedly poor and out of date.

All this could have been forgiven if the playability was up to scratch – unfortunately, though, it’s not and fails to keep the player interested. There’s no elusive ‘addiction’ ingredient that should be there to keep you returning for just one more go. Realism should also be an essential factor in a game such as this, but again this was absent. The flippers felt sluggish and even at full power, the ball minced around the table like a snail on dope.

The sound worked quite nicely though with an appropriate tune for each table, and sound effects gave it some atmosphere.

Final word

See? It does have its redeeming features but the poor gameplay factor still remains. The problem seems to be that we’re all still spell-bound by 21st Century’s last pinballer, and this just seems like a step backwards rather than continuing the trend of quality by improving it with each release.

It does play okay for a while and there are a few nice touches such as a fruit machine on the Jackpot table, but it’s not the sort of game you’ll want to play for hours on end. Disappointing to say the least.

PUBLISHER
21st Century

DEVELOPER
Spidersoft

PRICE
£29.99

DISKS
3

HD INSTALL
Yes

SUPPORTS
A1200/A4000

Absolutely Fabio

How did you come up with the idea for *Virtual Karting*?

I am extremely passionate about karts so it was a must to do an extremely realistic and playable karting game.

How long has it taken to develop *Virtual Karting*?

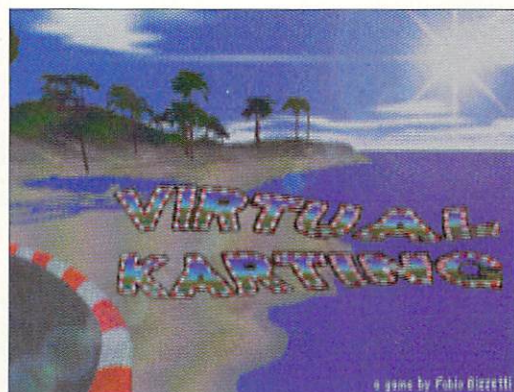
Well, more than a year, but I also made my HLA programming language which is like an expert system. Because of this and my knowledge from *Virtual Karting*, the next one should take less time, the next one even less, and so on - every time with considerably improved quality. My next project, *StarFighter*, is a massive jump ahead from *Virtual Karting* already.

How did you first start programming on the Amiga?

Like every hobbyist I think. I bought an obsolete Vic20 when I was 13-years old and learnt the Assembly language. A year later I bought my Amiga 500 and continued my hobby from there. This would have been impossible if I had bought a console and I believe it would have been inconceivable to learn Assembly programming on a PC. I would have needed thousands of books just to learn about every sound board that comes out.

What do you hope to do next?

Simply to use my know-how in programming to make the Amiga great. It's not a hope, it's definitely possible. My next project is *StarFighter*, a game with features I haven't seen on the PC or consoles yet - and it's only for the Amiga. *StarFighter* is still a game idea for an unexpanded A1200 and I will continue to respect the hardware standards of the Amiga, but an upgrade of the machine would be a very wise move. I believe the only thing the Amiga lacks to compete with Pentiums is some FastRAM and a faster CPU. The Amiga architecture has no rivals - it needs less resources to do a better job.



What advice would you give to people trying to compete with Pentiums is some FastRAM and a faster CPU. The Amiga architecture has no rivals - it needs less resources to do a better job.

What advice would you give to people trying to compete with Pentiums is some FastRAM and a faster CPU. The Amiga architecture has no rivals - it needs less resources to do a better job.

System talk to the games programmer **Fabio Bizzetti** to get his views on the Amiga, the market and his game.

ing to break into the industry?

If they are hobbyist programmers, the advice I can give them is to aim at the best quality possible and then approach some reliable publishers. I think the Amiga games market is still promising. If you want to make a hobby and a good job at the same time, it can be your future.

Do you think Amiga Technologies will lead a revival for the Amiga?

I really hope so but at the moment I am cautious about giving a reply. Surely they will need to upgrade the future machines: in the next era of PowerPC computers, the Amiga could get a respectable market only if it is a high performance computer at a low price. It would be a

bad idea to sell only the Operating System of the Amiga to PowerPC users. The Amiga philosophy could still have a great future - Commodore had engineers that were ingenious in their job. It's all in the hands of Escom - if they give the will and the money to invest in the next generation of RISC Amigas (I hope using an evolution of the Hombre project, but very expandable), then we can begin to smile.

Do you think enough has been done to deter piracy in the industry?

Nothing will ever change the mind of the crackers. In Poland the price for programs and games are really unfair. The best crackers are Polish people, so you can imagine they feel 'justified' for their actions, and I won't argue about this. But the same cracked programs come over to the rest of Europe, where many people that could easily buy the originals prefer to buy the pirated one.



Bizzetti's love of go-karting led to this 3D driving game

“ A great future for the Amiga philosophy is still possible - Commodore had engineers that were ingenious in their job ,

SYSTEM review

GRAPHICS

62%

SOUND

70%

GAMEPLAY

63%

OVERALL

70%

PUBLISHER

Kompart

DEVELOPER

Arrakis

PRICE

£29.99

DISKS

5

HD INSTALL

No

SUPPORTS

All Amigas 1Mb+



Yeurk, lots of green scary stuff and horrid computer things. Mummmeeeeey...

Poor Andy, the guy seems to have done nothing but review Doom-clones since he started here. And feeling rather generous, plus wanting to get all my copy in early so I can dash off on my exotic Winter holiday, I decided to review the first game that came out of the morning's post. It was Citadel, and rather than palming it off on Andy because, let's be honest, I don't know my rocket launcher from my rifle, it was time to brave the Doom clones.

After a cinematic-style intro, you are plunged into the thick of the action with no weapons, no thermal vest, and left with only your wits to survive. Things look pretty horrible already, with dismembered bodies hanging from the rafters and nasty sharp-toothed baddies all clamouring for



One scary, angry looking monster, close-up. I'm outa here...



Change the screen size according to your machine - the smallest window is a bit useless though

‘The puzzle angle is quite nice, but there were far too many niggles here to make me want to carry on playing’

your blood. First thing on your mind, if you're to get out of this hell hole in one piece, is to find some sort of a gun. Then you must kill all the enemies, destroy the Citadel, and make a hasty exit. To do this you must find the six pieces of an annihilation bomb scattered around the levels, put it together, and Bob's your Uncle, so the expression goes.

This was all rather alarming to me. Please bear in mind, this is my first confrontation with these new Doom clones, and what became even more alarming was that as I tried to move around my new surroundings, I was being penalised for doing so.

Well, put it this way, every time you touched a wall, banged into a blooded corpse or other such obstacles, you lost some of your precious life energy. This doesn't happen on Gloom, Fears or Alien Breed 3D, so why have they decided to do this here? If they wanted to make things doubly hard for the player, I'm

Tell me a story

Set in space, in the future (yawn), you are the last remaining survivor of Scout 01, and have been sent to investigate some of the weird goings on happening at a space base called Citadel. Now your companion has been destroyed by a missile and you're left on your own.

The base you are exploring was originally a communications and defence system set on a distant planet. However, following a galactic expansion the military base there lost significance and became just a fuelling point for galactic travellers, but because the colony was miles from anywhere this did not last,

and it was soon turned in to a penal reform colony.

Some time later, the colony was officially closed because it lay in the path of a meteor storm - it was later found that this was pure fabrication from the Military Galaxy Council who had other plans for it. Laboratory equipment was shipped over and the inmates were subjected to dangerous experiments.

In 2305, however, communication between the planet and Earth ceases so it is decided that a ship should be sent to find out what has happened. And that's where you come in.





The cinematic intro sets the scene well



Mmm, a dismembered body increases your pants-filling factor

Citadel

Reviewed by Tina Hackett

sure they could have found another, less irritating way.

However, when you get used to this, you do find it's not a bad game. You can change the size of the windows and select the detail level to configure the game to your machine – even with high levels of detail on you still get quite a fast game. There is an Easy or Hard option and also a training mode for those who need a bit of practice.

Weapon-wise there is a good selection that will keep even the most hardened gun fetishist happy. As well as your standard gun, you can collect a flame-thrower, rocket launcher and a machine gun. You can also find First Aid Kits and even beer which will affect your character's balance.

As usual, as well as dealing with the enemies, you will also have to solve puzzles which include finding the right magnetic cards to open doors, moving walls, blockades, and various teleports. Enemies are of different intelligence, so creating fighting tactics is also possible. Graphically, the game is up to the same standard as the other Doom games. There is a good



The puzzle element gives you a bit more of a challenge such as finding cards for doors

cinematic intro, though, which launches you into the plot nicely and the corridors are clear enough to walk round and actually see what's going on. The atmosphere is enhanced with dramatic tunes throughout and the usual explosions, gunshots and yelps.

Final word

Citadel is a good game in its own right – the problem arises however, when you compare it to the other Doom games that have gone before it. This looks the part but unfortunately, because you are continually damaged by walking into walls (yes, even though this is realistic) it does nothing to enhance the gameplay and just continually aggravates the player.

The puzzle angle is quite nice, but there were far too many niggles here to make me want to carry on playing. Continual disk-swapping is also very tedious. Try the other first-person perspective shoot-'em-ups on the market first because although this is by no means the worst game, it's definitely not the best.

Clones

Doom, Doom, Doom. Just in case you're not sick of hearing about it, here are the previous clones on the Amiga.

Alien Breed 3D 91%: Alien Breed 3D is and always will be one of the finest Doom clones on the Amiga.



Gloom 81%: As soon as you fire a bullet at one of the opposing soldiers they will burst into little bits and leave an awful mess on the floor.



Fears 92%: The atmospheric sounds are fantastic, truly setting the scene and preparing you for a trip into the unknown.



Behind the Iron Gate 64%: I will warn you that if you decide to invest you will be wishing for Doom as you play it.

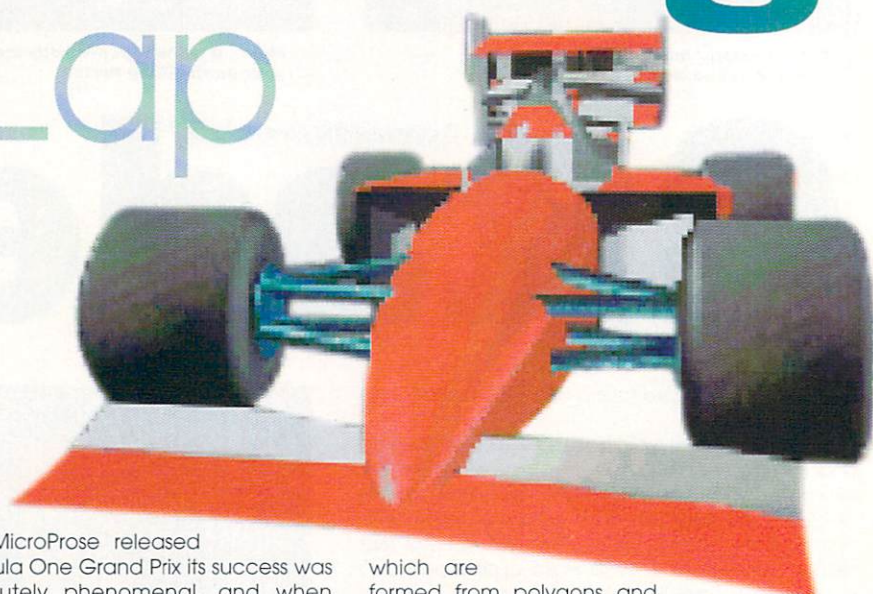


Yet to see
Speed (won't be ready for a while yet)
Ubek (a Polish release, or so I'm informed)

Yeurk, dead already! A screen which you'll become all too familiar with

Reviewed by Andy Maddock

Leading Lap



GRAPHICS

91%

SOUND

84%

GAMEPLAY

88%

OVERALL

90%

After MicroProse released Formula One Grand Prix its success was absolutely phenomenal, and when they announced that they were working on Formula One Grand Prix 2, it was something to look forward to for racing fans. What they failed to mention, however, was the fact they were developing it exclusively for the PC and an Amiga version would never follow – ever.

I don't know whether Kellion Software knew this at the time, but they've certainly made the right decision in filling the hole that F1GP left with their new 'virtual' racing game, Leading Lap.

Leading Lap MPV features what's called Moving Point of View which acts like virtual reality. For instance, when you take a corner, the driver's head turns slightly to make it look more realistic than Formula One GP. It's difficult to notice when you're challenging for first place, but if you sit back and watch someone else, it gives it that little bit extra to look at.

There are three cars to choose from – the Formula One, Rally, and the Endurance, all of

which are formed from polygons and look very realistic – right down to the brake lights at the rear. The cars are hugely detailed and unlike many other racing games, they actually look like cars.

The main objective is to illegally race around different courses from around the world and try and win the league championship by beating four other competitors. You can select any of the cartoon-type drivers and any of the three cars. Each car has various attributes that have to be taken into account, for instance, a very bendy track may suit the Formula One car as it's good at taking bends and has a steady top speed.

When Leading Lap first arrived in the office, I noticed the graphics, in particular, were looking very professional. The polygons were shifting at a horrific rate and were generally looking fast and

Professional sounds

The sound effects are pretty average, although there's isn't much difference in the quality of the engine sound. However, there is the screech of brakes and a bloke that continually shouts things at you while you complete a lap. Unlike many other Amiga games, the music is actually done by a professional working guitarist who's worked with the likes of Tina Turner and Bon Jovi. Having said that, be prepared – it's very Metallica-like. So if you're into anything like Oasis, it's a cue to turn the volume down or, better still, turn it off.



The opening screen looks remarkably like that of MicroProse's Formula One Grand Prix – still, nice picture

PUBLISHER

Black Legend

DEVELOPER

Kellion Software

PRICE

£29.99

DISKS

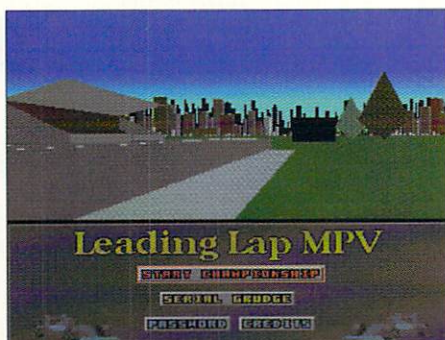
2

HD INSTALL

Yes

SUPPORTS

A1200



The title screen displays the options as well as the action continuing above as a car shows off all its angles on the demo



You can see here that all the attributes of the drivers are shown and occasionally they can be the difference between you finishing in first place



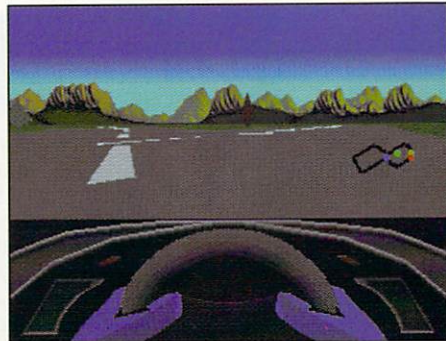
The detail levels can all be adjusted, so if you like you can switch between clouds on or clouds off - important that!



You can see how close you can get to the other cars. This race in particular looks like a close one



The league table is shown at the end of each race and as you can see, each driver is awarded points depending on their performance



The tracks are all completely different to each other. There is a crossroad section in the middle of this one - could be quite dangerous if you're not careful

unbelievably smooth. So many times the Amiga's hardware has had to sacrifice speed for graphics and vice versa which, in most cases, usually leaves people disappointed. Virtual Karting by OTM - reviewed in the November issue - was faster than most racing games, although to compensate, the graphics were truly awful - they don't look in the least bit as professional.

The backdrops in Leading Lap are suitably drawn, giving you an instant feel for place and time of day. Incidentally, if you should take too long racing around a track, finding cars lapping you, the sky will become darker and darker until it's virtually impossible to see where the bends will come up.

The tracks are of a good variety and you'll always get a couple of useful tips on them before you even set off. These inform you of tight corners, obstacles to avoid, and places it may be handy to use that brake pedal. This gives you an idea of how to plan out the race - where to overtake and what to look out for.

There's a password option so you can continue the game later and take some of the pressure off the need to finish in first place. Thankfully, the passwords are nice and short and don't require you to type in about 3,000 lines of complete gibberish for you to carry on where you left off.

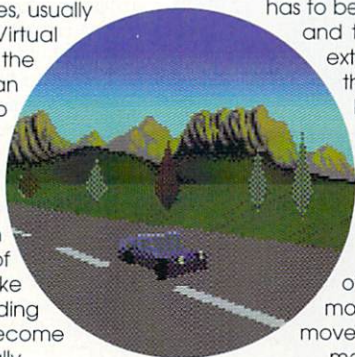
There's an extra option for those who have got Amiga-owning friends because two-players can link up through a serial cable and race against each other. This is always the best way of sparking up a bit of friendly rivalry. You can select the detail

and distance level, and switch between internal and external views via the keyboard. The best view has to be the internal because of the speed and the control. Using the zoomed out external view restricts your control of the car and, even if it does look that little bit better, it doesn't always pay to be fancy. You can also alter the angle of the external view which makes it impossible to control but, again, a good view for a bit of showing off.

There's a circuit map to the right of the screen and instead of the cars moving around the map, the map moves around the cars which looks far more interesting than a standard boring graphic.

There are five drivers to select from, although be careful because they will all try different tactics to beat you. There's Snake Kelly, Wall, Claudia Powers, Bud Nuke and Harry Lucini. They all drive their own specific cars so

you will instantly be able to recognise who's in front and behind.



The external view can be seen from any angle, although it does occasionally like to wander off the track and into a tree - that's probably just me though

Final word

Overall, Leading Lap looks and feels like a very professional product, featuring aspects that we all know the Amiga can produce. If software like this can continue at such high quality then not only will Kellion Software undoubtedly find themselves ranking high in the list of leading software developers, they may even find themselves high in the charts so soon after Christmas.

‘The main objective is to illegally race around different courses from around the world and try and win the league championship by beating four other competitors’

Reviewed by Andy maddock

Coala

This game was previewed in the June issue of *Amiga Computing* and back then it was looking like becoming one of the definitive flight simulators. Obviously with a name like Coala, you'd expect myriad jokes about Koalas, Australians or eucalyptus. However, most of those were spawned back in June and they've all been exhausted, so I just can't think of any more.

As you've probably already gathered Coala, is spelt with a 'C' and you'd be right in thinking that it doesn't have anything to do with that furry thing

down under. In Empire Interactive's words... 'Coala. Cute name but don't be deceived.'

If you can remember a game called Thunderhawk, cross it with EA's Desert Strike and you can possibly form an idea how Coala looks and plays.

What makes Coala stand out from the rest is the virtual realism that features so strongly. For instance, during a flight, what would you do if you heard a hellfire shooting off and it didn't belong to you. It'd be too late to toggle between external views to find out who it came from - as you'd be plummeting thousands of feet towards your death. However, in Coala, if you should hear the whoosh of a missile being unloaded, possibly in your direction, holding down the right mouse button will enable you to look out of the window to see where it's coming from. If you do happen to be unlucky enough for it to be hammering in your direction, then careful triggering of a Chaff or a Flare will soon confuse it and give you the time to get out of there. It's all to do with quick thinking, and Coala makes it that little bit quicker.

To make things a little different, instead of being part of some squadron or another

GRAPHICS

91%

SOUND

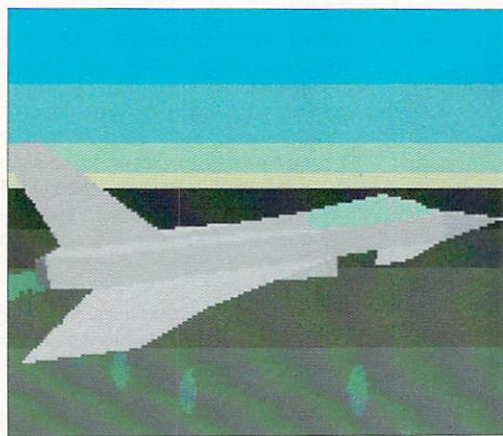
89%

GAMEPLAY

90%

OVERALL

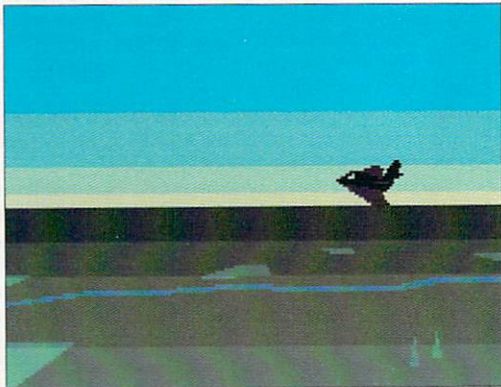
91%



This is the EFA program where you can manipulate all sorts of objects by rotation



This is one of the many objects that features in EFA. It's a superb program to show off the speed of your Amiga



The Stealth Fighter here is not to be confused with the Stealth Bomber as they are completely different, thank you

PUBLISHER

Empire Interactive

DEVELOPER

Biffusion Virtual Realities

PRICE

£34.99

DISKS

2

HD INSTALL

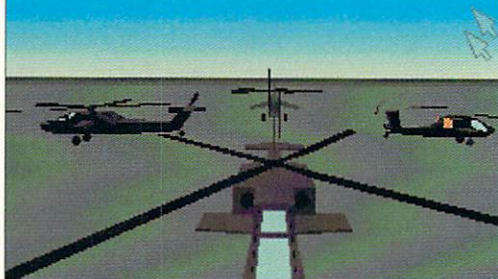
Yes

SUPPORTS

All Amigas

AH-64A APACHE

THE MOST ADVANCED WESTERN GUNSHIP
CURRENTLY IN SERVICE



You can select any helicopter apart from the Coala, because that's the best and you're not allowed it! Well, you can after you've got a few more points

disciplined air force, your helicopter doesn't actually have any markings, so it is completely unrecognisable by everyone else. This means you can take anyone's side and help them blow up the opposition. Not only will this be great fun by pretending to fly with the opposition and then blowing them out of the sky, but you will be able to repeat the missions and support the other side. The only downside for this is that once you do take a side, the opposition won't take too kindly to you hanging about and will try anything to get you out of the sky.

The flexible view controls are very useful, unlike in many other flight sims where they were only good for showing the game off. You actually need them for landing, viewing other planes, and escaping missiles.

All the function keys represent the views as usual, and the F1 key brings up your on-board computer, whereby you can view your mission objectives, targets, find out the damage to your helicopter, and see the aircraft that is entering your vicinity.

There are many detailed scenarios which you can battle through, each one posing a completely different objective, and it will take more than an ounce of strategic knowledge to complete. You can also configure the object, world, surface detail levels, switch between shaded horizons and the Amiga's special copper shading to suit how you would like to view it.

You are able to take part in battle during four different times of day - dawn, noon, sunset and



When you return to your base, you are given an opportunity to reload your weapons and refuel

A steady hand

Now you may be wondering how the control system works because of the amount of eternal views and options. Well, you control the helicopter using the mouse. Pressing the left mouse button will release the weapon you have loaded, and pressing the right button will enable you to look out of the side of the helicopter - this all works out so your flying position doesn't change. Basically the best control method is to hold the

mouse in one hand and keep your fingers hovering above the keys on the keyboard that you are most likely to use.

Overall, it's a very comfortable method, and by altering the mouse sensitivity it turns out to be the most effective. The joystick would have given Coala an arcade feel which wouldn't have done it justice, making it feel too arcadey and letting it down in terms of simulation.

HALL OF FAME

POS	NAME	RANK	PTS
01	MYD MIKE	WESTERN SECOND LIEUTENANT	050
02	RICARDO	ODG OF WAR	045
03	TACO	WESTERN SERGEANT MAJOR	040
04	WILD WIZEL	EASTERN SERGEANT MAJOR	035
05	BUBBA	EASTERN SERGEANT MAJOR	030
06	MIKE T	ODG OF WAR	025
07	KWARK	WESTERN SERGEANT	020
08	MARC D	WESTERN SERGEANT	015
09	THE Z FALLO	UNKNOWN	010
10	ORLINDEN HARRY	WESTERN CORPORAL	005
TODAY'S HIGHEST SCORE			-999

This is the great hall of fame where you can enter your name to achieve a high status - especially amongst your 'plane spotter' chums

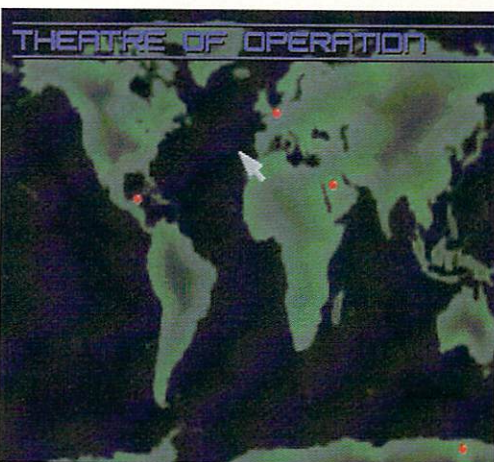
night. Obviously the night is going to be difficult because of the dark, although, your special Pilot Night Vision System (helicopter headlights) can be switched on.

To help you weapon-wise, there's a wide range of armament for selection. Obviously the sidewinders, hellfires, flares and chaffs are the norm, followed by a series of other well-known missile types that are completely new to me.

The missions themselves are all designed by ex-NATO personnel and even the codes have a special ex-NATO defence system feel about them because you have to enter the special password for that particular officer - or should I say, staff member of Empire!

Not only do you get Coala for your £25, you also receive two products that should be quite

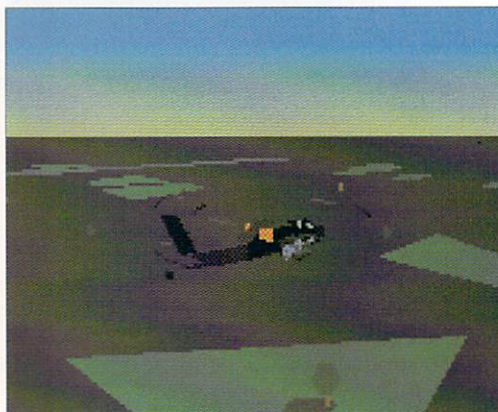
‘The flexible view controls are **very useful**, unlike in many other flight sims where they were only good for **showing the game off**’



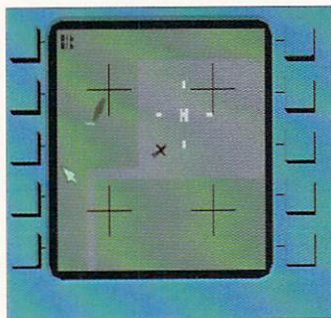
This is the map. At the moment there are three campaigns to choose from, and they all have various sub-missions to complete



As you can see from this external view, Coala is graphically superb and it plays as good as it looks



You can choose from many various external views which all help in attacking the enemy



You can call up your on-board computer to see various camera angles of your position - these can be particularly helpful when you are ready to land

familiar to anyone who's explored the Aminet series. The first is Navigator which is basically a virtual world creator - this is the actual engine which was used to produce Coala. Although you can't create your own worlds, you can, however, load up some of the objects used in Coala, zoom in and out, rotate through 360 degrees, and generally manipulate them in any way you wish.

The next is called EFA, which is a simple program whereby you load up any of Coala's aircraft and just fly them around different types of scenery - Empire thought this would be an added bonus. If you get bored of flying a helicopter in the actual game, you can then move on and whizz around with EFA, flying high-powered jets, or even bi-planes. The speed of EFA is outstanding, providing high speed thrills - even though there's nothing to shoot.

Coala features complete artificial intelligence between the two competing sides. For example, you can stay on the ground and miss out on all the fun and still win - because all the other pilots will battle it out in the skies above you. The only problem with this is that you won't receive any

points because you are awarded for what you shoot down and consequently you won't proceed any further.

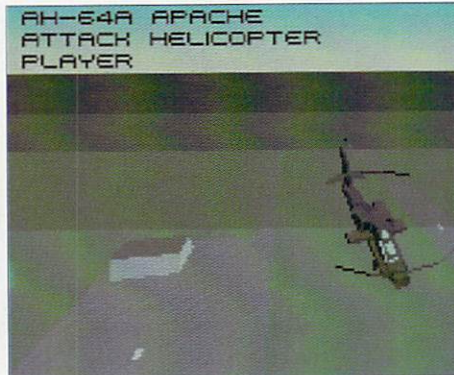
The graphics featured in Coala are truly superb, especially with the virtual reality which makes you feel as if you really are there. The intelligence of the other sides is set perfectly, so you can fly around stalking other aircraft rather than getting blown out of the sky every few minutes. The sound effects of other helicopter's blades whizzing by are excellent and the copper shading on the horizons adds that little bit extra in terms of realism. The whole presentation aspect is superb - the graphics and sound are nothing short of what we expect from the Amiga.

Final word

Coala should be all boxed and ready to hit the shelves before Christmas, and when it does I can see it being a huge success. It's been a long time since we saw a flight simulator of this quality on the Amiga, and I can guarantee you won't be disappointed.



The preferences will enable you to alter the way Coala plays and looks



When you are flying high above the ground, you are far more vulnerable in the air



You can view the action from an Audi - if you really want to that is!

by far the best addition has got to be the new vehicles which you can control, each having their own unique set of weapons,



You will be able to blow up new styles of building which will add variety

The new scanner system will be implemented meaning that dead vehicles now disappear



A 3D perspective will work well with the style of game

Remember Zeewolf – we certainly do. It arrived in the office and we played it to death, giving it a well deserved score of 90%. Well, now it's back, its sequel is anyway, and it boasts a whole host of new features and improvements on some of the criticisms levelled at the original.

Developed by Binary Asylum, Zeewolf 2 is both a helicopter shoot-'em-up and a simulator. Set over a huge 32 levels, you are set a number of missions to complete, which, incidentally, you can play in any order. They vary from Seek and Destroy where you must find a building, vehicle or person and err, shoot them, to the 'nicer' missions like Airlift, a fun addition where you must winch friendly units to and from the battle zones.

The story so far, for those of you who don't know, is that Ecliptico, an evil corporation, have launched attacks on the planet in a bid to take over the world. The good guys, the Zenith corporation, are the only ones that stand between them and world domination. However, Zenith are armed only with a Zeewolf helicopter and some remote control battle-field craft.

The Ecliptico are better armed and Zenith have a tough job ahead of them...(dramatic music, roll camera...)

One thing the designers have considered this time is how to make the game settings more interesting. They have done this with four new landscapes which are European, Arctic, Desert and Toxic, and each has their own features and trees, etcetera which give you something a little different to fly over each time.

Buildings have also been improved with inclusions such as oil rigs, wellheads, and town halls. But by far the best addition has got to be the new vehicles which you can control, each having their

Previewed by Tina Hackett

own unique set of weapons. By remote control you will be able to take charge of a Patrol Boat, Battle Tank, VTOL fighter, and Transport helicopter, and according to the particular mission, they all allow for different tactics. The weapons vary from vehicle to vehicle too so, for example, the Patrol Boat has torpedoes and the battle tank has a heat-seeking shell.

The game has also been speeded up considerably and Binary Asylum reckon that the difference when playing the new version on an A500 compared directly with its predecessor will be obvious.

This version also implements the scanner, although they have made it so that dead vehicles now disappear from it and it can also be cancelled out by going too near the enemy's radio tower.

A password system will also be incorporated and, rather than giving it out every four levels, it will be extensively playtested to find out when to give it on the later levels. If for example, a mission takes 40 minutes to complete, they will provide you with a password then – it's good to see companies using their common sense over password systems for a change!

Final word

The game should be available in December, will run on all Amigas, and be priced at \$29.99. We'll bring you a full review soon, but already it's looking like being a fresh challenge for old veterans of the game as well as keeping it accessible for those who are new to it. We look forward...

The 32 missions can be played at random giving you a great deal of freedom in how you play the game



SYSTEM review

GRAPHICS

51%

SOUND

59%

GAMEPLAY

47%

OVERALL

48%

PUBLISHER

Impact Software

DEVELOPER

In-house

PRICE

£24.95

DISKS

1

HD INSTALL

No

SUPPORTS

All Amigas



The main menu is quite simply the most blandest effort ever. Anyone know any different? Nope, didn't think so



The City boys are in full effect and ready and willing to put a couple or few past the Blackburn. Well, it might happen! They did last season

Team

Reviewed by Andy Maddock

Believe it or not there's actually been a slight decline in the amount of football games recently. The last decent one we saw was Player Manager 2 and that was a good few months ago.

There have been some management sims in between, but none of them proving too special.

Impact Software are the latest 'team' (hoo ha) to have a dabble in the football world, and let's hope the amazingly bold statement on the back of the box will ring true. 'Probably the best football game EVER!!!!' may sound a little out

of context, considering that Team - at its best - could quite possibly be the poor man's SWOS, although now Sensi Soccer is cheaper, it's more like a rather rich and very stupid man's SWOS.

On the back of the box there is all sorts of blurb that certainly doesn't quite ring true. In fact, you'd be forgiven for taking a second look at the box after a minute or two of playing - probably thinking they've put a different game in the box. Then, following the humiliation of the retailers confirming your misery, you'd have to go home and squeeze £25's worth of entertainment out of it.

My idea of reviewing a game is to play it to absolute death until I've managed to scrape down enough advantages and disadvantages as to why you'd spend a good £25 on that particular game. Well, Team did come up with many disadvantages, but I couldn't actually think of any advantages - at all. This is quite disappointing because I tried so hard too. The nearest I came to an advantage was the music - which is only just above average in quality - along with the collision detection between the ball, boards,

Manual! What manual?

To give you an example of what Team contains and how many options there are, the manual that comes with the game has only four black and white printed sides. It's actually difficult to call it a manual as it could quite easily be mistaken for a pamphlet of some description. So, not only have you made

one trip to the shop to see if it's the right game, you're probably going to go back again and ask for the manual, and unsurprisingly, more humiliation will follow: 'Look there it is, it's hiding behind that rather more prominent and colourful piece of advertising rubbish that no-one ever reads.'



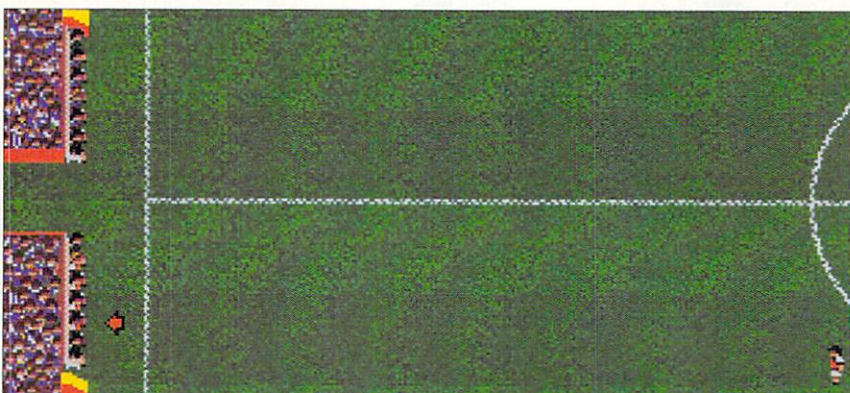
You get to edit all the teams, so you can put big Stan in yourself! I don't know why he wasn't included anyway



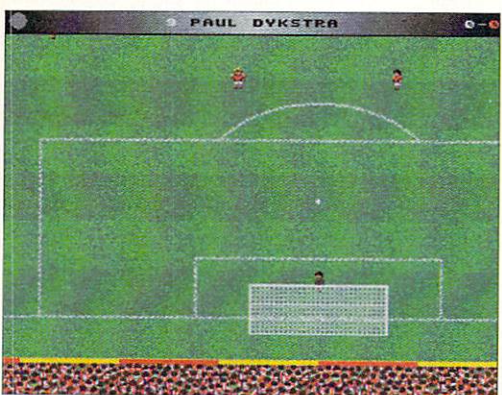
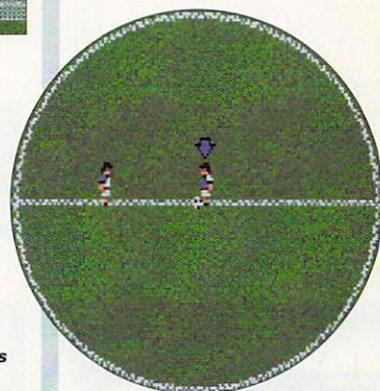
Ready for kick-off at Ewood Park, let's hope Bally's got a few tricks up his sleeve. Squeak, squeak indeed



Ian Marshall, ooh he's the best player in the entire world. He'll certainly score that - right in the top corner no doubt!



The manager's bench is probably the most direct copy from Sensible Soccer ever seen. Well, if it works, why not use it



Paul Dykstra? Right, that's it! He's not a striker, he's left the club, and once more, his name isn't Paul... Jeeesus

“as soon as you kick off, the opposing striker will **receive the ball** and run all the way to your goal, **hammering it past** your keeper every time”

players and the goal. There are too many disadvantages to mention. Oh, alright then.

The player sprites are absolutely awful. It's unbelievable to see the sprites crawling across the screen with a slight flicker that is supposed to be them running quickly. If there is one aspect that does make it look good then it's the scrolling - it's fast and smooth but doesn't really stand out because of the appalling sprites. It really is unplayable as far as football goes.

The idea of football is obviously to score more goals than the opposing team but as soon as you kick off in this game, the opposing striker will receive the ball and consequently run all the way to your goal, hammering it past your keeper every time - well, until the final whistle gladly rings out to signal the end of a 25-0 thrashing. It seems a bit ironic for this to happen because the

actual title of the game is 'Team.'

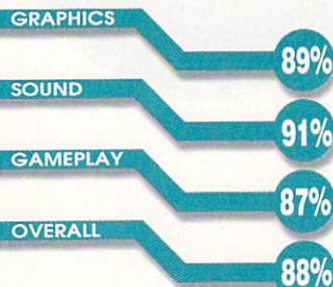
You can play a league, cup, or simply a friendly, but for a football game today, this simply isn't good enough. The major fault of this setup is that there isn't anything to aim for or any reward at the end.

Final word

I can't really, and don't want to, explain how this compares to Sensible Soccer, I think Impact Software would do well to re-think their strategy and make plans for a sequel that would help us forgive and forget. To be fair, they've got the basics, so if they can improve on them, who knows. However, as it stands, it's just one of those games that will probably disappear into nothing - never returning. Hurrah!

Thomas the Tank Engine's Pinball

Reviewed by Andy maddock



After a season of Thomas the Tank Engine repeats, the famous steam engine's career must almost be at a close. The only thing left after years of showbiz fame is the inevitable drink – or daytime television. But no, none of these will ever happen to him. Not because he's simply an animated character who has no real existence in the world, it's because he's coming to the Amiga. Not only has he already featured in a racing game, he's following it up with one of the most unpredictable of titles, Thomas the Tank Engine's Pinball.

Yep, Thomas, James, Percy, Toby and that bus are all coming to the Amiga in a series of titles from Alternative Software. We can't wait!

I was never a big fan of TTTE because I never used to get home from school in time to see it. However every Christmas, sure enough, under the tree there would be a large, book-like package with a small bulge in one corner. It had to be, and was, a Thomas the Tank Engine colouring book with about three crayons stuck to the front cover. Ooh, it was endless hours of fun, and this is the exact point where my hate for the show began.

The most annoying fact about the cartoon was that it was one of those alliterated animated titles such as Percy the Pigeon that's supposed to make

cartoons more fun to watch – so they say!

It's difficult to believe that so many people were captured by a blue train trundling around all day doing absolutely nothing useful apart from trying to find little Percy. Why did he always go missing! He must have been working for British Rail or something. Not only that, but why did the hardest and most arrogant train, James, kick up a fuss all the time and end up doing something naughty and dangerous. And what's that fat bloke all about... jeeeeez. You can give me Tom and Jerry any day

Universal appeal

I can't see a point in explaining the rules of Pinball and the actual object because I know deep down you don't really care. However, I have to admit that I did find playing TTTEP quite enjoyable because of the excellent novelty effect. It says on the box it's for age three and upwards years, but it'll probably appeal more to the older amongst you because of the authenticity of original theme music, along with the eight-player option and the three levels of difficulty.

PUBLISHER
Black Legend

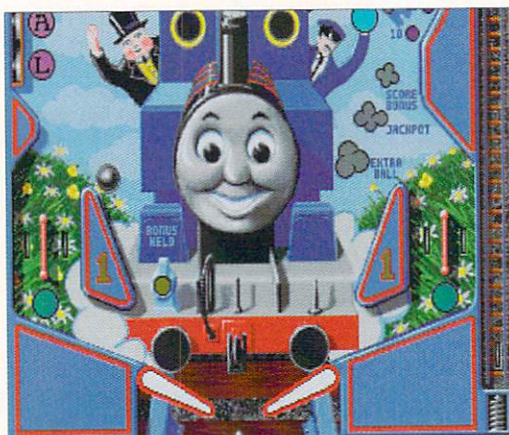
DEVELOPER
Kellion Software

PRICE
£29.99

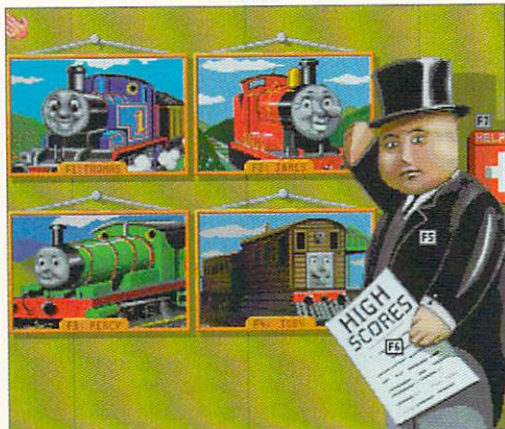
DISKS
2

HD INSTALL
Yes

SUPPORTS
A1200



On the Thomas Table, not only will you have to put up with the tinkly piano theme tune, but also a big cheesy face from Thomas himself!



Each table has its own character and respective colours. James is red, Percy is green, Thomas is blue and Toby is brown



The options screen actually contains some little icons and graphics which makes it far more interesting



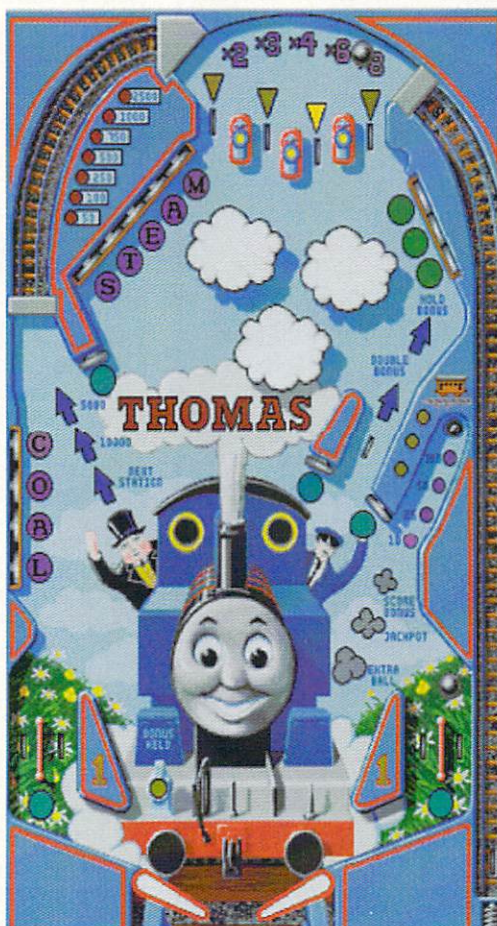
The in-game graphics are surprisingly good, although it may not be as polished as *Illusions and Obsession*

of the week! The idea behind this rather promising title is to bypass the oh so, cool and trendy feel which was *Pinball Dreams*, *Fantasies*, *Illusions and Obsession* – apart from the fact they all sound like famous fragrances, although 'Thomas Tank' the new fragrance from a famous French company could well spark up some interest. I wonder what it would smell like? Essence of steam engine? Hmm.

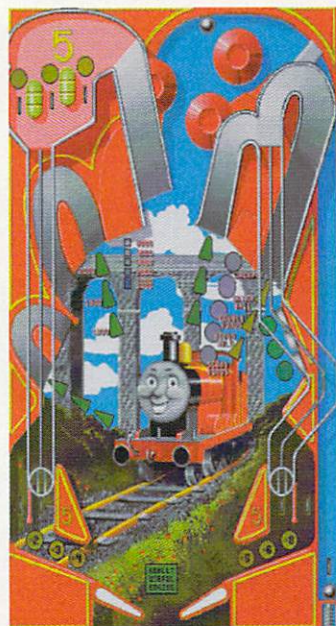
I suppose I'd better let you know now that I'm not the greatest lover of Pinball – I believe it's a dreary old game that's for less than popular individuals who prefer to hide away in a dark corner of a drinking residence gladly plunging their coins into what seems like an arcade machine with about three inches sawn off the front legs. It seems fitting that once, some guys had 100,000 steel balls drop on them from above after the main machine upstairs had overloaded! I hope that persuaded them to try something far more worthwhile.

Right, back to the subject in hand. As usual there are these tables with funny buzzers and things, and the idea is to spring a steel ball into the main area and blast hell out of it with these oddly shaped bats – collecting as many points as you can in the process. There, I summed that up quite well, don't you think?

You can play on the Thomas, Percy, James or Toby Tables and each one has its varying amounts of buzzers and point scoring bonuses. As there are only four tables, more experienced players will



The Thomas table, as you can see, contains lots of buzzers, tubes, and other bonuses for you to hammer the ball against



James' table contains more tubes than buzzers and generally looks more fun than the other three

‘I have to admit that I did find playing TTTP enjoyable because of the excellent novelty effect,’

become bored after a short while. Other than that, TTTP features some excellent presentation along with gameplay, and should offer you a new novelty feature which is far more enjoyable than the other Pinball creations.

Final word

Just take no notice of the age range on the box. It doesn't matter how old you are, you'll still get your money's worth – it's all a matter of personal opinion. If you really are a massive fan of Pinball, then the other series of *Fantasies*, *Illusions and Dreams* would probably suit you more – probably because it feels more like real Pinball. However, if you're looking for something a little different with a novelty effect, look no further than Thomas the Tank Engine's Pinball – it's a treat!

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Graphic Impressions.....	43
Hammond Photographic.....	86
Paxtron Corporation	26
PD Soft	55
Premier Mail Order	96
Safe Harbour Computers.....	49
Silent Paw Productions.....	43
Software Hut.....	2, 3
Softwood Inc.....	OBC, 66, 67
Tristate Computers	18, 19
Turtle Lightning	11
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AMIGA GUIDE



Frank Nord continues his beginners guide to floppy disks – the do's and don't's

88



Paul Overaa's Assembler column also has a beginners feel to it

89



Not a lot of people know that Ed has great AREXX interface, but Paul Overaa does

90



Phil South delves into the vast storehouse of graphics-related Web sites

91



Are you in breach of copyright? Frank Nord assesses the risks

92



Mouse and joystick routines in this month's Amos column, presided over by Phil South

93



Paul Overaa reviews a useful MIDI patch tool – the FT3 Patch Commander Plus

94



Special effects, fire and lens flare can all be generated easily in a 3D package

95



Gary Whiteley brings his series on fonts and video to a close with this final installment

97

Frank Nord does keep going on and on about floppy disks...



Happiness is a formatted disk

So, formatted any disks while I've been away, then? Do they work alright? Good. But I expect you'll be wanting the low-down on what the other options mean in the format requester.

We've already covered the naming of disks and the trashcan, so now we delve deep into the depths of the disk filing system. The buttons remaining are listed as follows: Fast Filing System (or FFS), International Mode and Data Caching, or DCFS. If you have a machine with Workbench 3 or higher, you'll see all these options, if you're using Workbench 2.1, you'll have them all apart from DCFS, and if you are running Workbench 2.04 you'll only have an FFS option.

So what do they all do? Let's look at FFS first. Back in the infancy of the Amiga, when Workbench 1.3 ruled the roost, there was only one file system. It gave you 836K on a double density disk and could be made to boot. When Workbench 2.04 came along it came with a new filing system, FFS, which gave you 878K on a standard floppy.

You could boot from an FFS disk on a Workbench 2 machine, but since there were still an awful lot of Workbench 1.3 machines out there (and still are), most companies still formatted disks for their software without FFS enabled for the sake of compatibility, losing the extra speed and 42K that FFS offered. Even now, a lot of companies still use OFS formatted disks as they are now called, although most serious users have upgraded to at least Workbench 2.

When Workbench 2.1 was released, a new option was added to Workbench - foreign lan-

I know we used this picture last month, but it is still valid, honest!

guage support. It was at this point that Commodore noticed there was a slight problem with case sensitivity for international characters like ß or ü in the disk filing systems that were currently in use, so added the additional international mode for formatting floppies.

INTERNATIONAL

In my opinion, seeing that any disk you format might end up overseas, there shouldn't really be an International button - your disk should always be formatted that way. After all, we're all Europeans now, aren't we? (Apologies in advance to any Americans reading this who might take offence.) Neither International Mode nor FFS formatted disks could be used under Workbench 1.3, yet another incentive to upgrade your Amiga which was still ignored by a minority of recalcitrant 1.3 users.

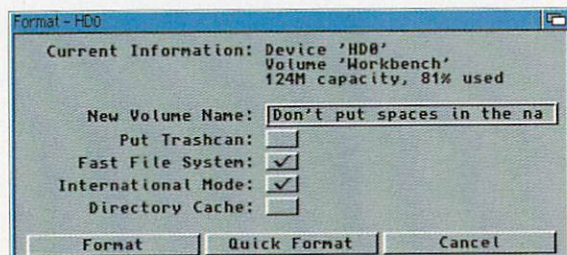
The last option when you are formatting Amiga disks under Workbench 3.0 or higher is Directory

caching. Directory caching can be applied to your hard drive with a bit of faffing about, but it's dead easy to format floppies under DCFS. So what does it do? Basically, exactly what it says it does - it caches the directories on your disk. This means you lose a bit of space on your floppies, but does result in noticeably faster reads and writes on floppy disks.

It actually probably isn't worth applying DCFS to your hard drive as hard drives are now up to a speed where DCFS makes no difference, and using it will only lose you some of the space you might otherwise use more productively. If you do format your floppy disks with DCFS turned on, you should know that you are not going to be able to give your disks to anyone using anything less than Workbench 3, as DCFS was only implemented in that version of Workbench.

So that's pretty much it for the formatting of floppy disks. Basically, all you need to remember is to name your disks without spaces, turn off the trashcan, turn on FFS and International Mode (if you are using Workbench 2.04/5 or 2.1), and turn on DCFS as well if you are using Workbench 3.0/1 - unless you need to have full compatibility with all versions of Workbench, in which case you should leave everything off.

Next month, we will be looking at icons, tooltypes and what they all mean, but for now it's sayonara baby and see you next month.



WHO ARE YOU CALLING DENSE?

High density disks can pose something of a problem for Amiga users. With the vast majority of Amiga owners only having a standard double density drive, high density disks are just formatted to half their normal capacity. While this doesn't pose a problem if you are going to be giving these disks to other people who have standard floppy drives, if you were to give a high density disk which has been formatted to double density to an A4000 owner, it

would appear to be unformatted or corrupt.

There is an easy solution to this dilemma that doesn't involve making a new set of floppies; the A4000 owner simply needs to put a bit of sticky tape over the hole on the opposite side of the disk to the write protect tab. Unfortunately, for obvious reasons, the operation is not commutative - you can't put tape over the high density hole to allow you to read high density disks on a standard drive!

Paul Overaa explains why assembly language is so popular among Amiga coders

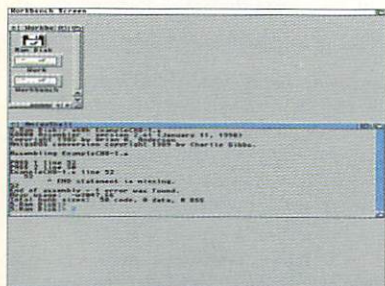


Thinking of learning assembler?

Most people cut their 'programming teeth' using Basic-type languages which on the Amiga usually involves Amos, Blitz Basic, or HiSoft Basic. Many then move to C and from there start to make what is often a fairly painful transition to low-level coding, i.e. to 680x0 assembly language. Despite the difficulties assembly language coding on the Amiga presents, this subject is actually growing in popularity and there are a number of reasons for this.

To be honest, it was once thought that the only reasons for using an assembly language was to get maximum speed, minimum code size, or absolute control over a system. It turns out, however, that the benefits are more subtle than this because an understanding of assembly language enables programmers to gain an appreciation of things such as how high-level languages work.

In many ways it's a similar situation to driving a car - if you don't know roughly how the gears work then you might wonder why you can't pull away in fourth gear without stalling the engine. Plenty of driving will convince you that this is indeed the case, but no matter how much you drive, you will never actually find out why this is so. Learn a bit about the internal mechanics, however, and it will become



Charlie Gibb's A68K assembler provides a useful low-cost pathway into Amiga assembly language

COUNTING THE COST

Assembly language, once mastered, will certainly allow you to write extremely efficient or extremely compact programs, but such programs will always take far longer to develop than their high level counterparts. That, unfortunately, is the price paid for taking the low-level path.

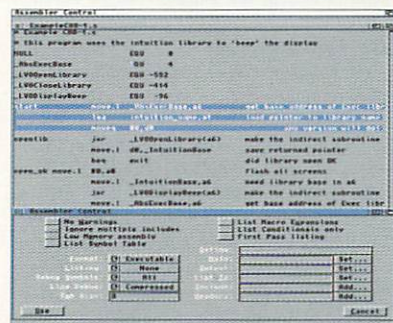
Despite the potential pitfalls, assembly language programming still appears to be as popular as ever and most programmers eventually decide to learn something about it (even if most of their coding is done using high-level languages). You can of course mix high-level code with assembler patches and get the best of both worlds, and this is a subject we looked at in this column only a few months ago.

As far as specific assemblers are concerned there are two main choices: One is to use Charlie Gibb's freely distributable A68K assembler and this is available from nearly all public domain libraries. This low cost route is fine for taking your first steps but you will, at some stage, probably need to purchase the official Amiga include files (these contain standard definitions which you'll need once you get into Intuition coding and so on).

The alternative is to purchase HiSoft's Devpac assembler which is without doubt the best, and most popular, assembly language programming environment available on the Amiga. One benefit of following this latter path, incidentally, is that you get the official Amiga include files as part of the package!

obvious very quickly. Learning a low-level language is not, however, a task to be taken lightly but, having said that, it is possible to minimise many of the difficulties which assembly language programming presents. How? Simply by tackling the program design problems separately. If you take care not to start writing low-level code until you're sure of exactly what it is you are trying to do, then life for the assembler coder is not too bad.

Logical difficulties aside, the other main problem with learning assembler is likely to be the fact that you'll need to understand quite a bit about the Amiga's operating system and Intuition interface. I'd be less than honest if I said that this didn't take time!



HiSoft's Devpac assembler - simply the best!

GETTING IN THE FAST LANE

As far as code creation goes, the types of performance improvements that can be obtained as you move from Basic interpreters to Basic and C compilers, and finally to assembly language, can be quite dramatic. Since it is useful to have an understanding of why some languages are 'faster' than others, I'll explain in some detail why this is the case.

Even with an identical source code file, the final runnable code produced by one compiler may vary greatly from that produced by another. A compiler (and an interpreter come to that) looks at your program and then generates suitable low-level instructions.

Speed, or the lack of it, in the final program is due to one thing - the efficiency of the resulting

code - and there is a common misconception here that needs clearing up: Compilers are rarely either 'efficient' or 'inefficient'. The truth of the matter is that they usually tend to be a bit of both.

One particular compiler may, for instance, be able to produce very efficient fragments for structured loops, but may fall down by producing inefficient switch structure code.

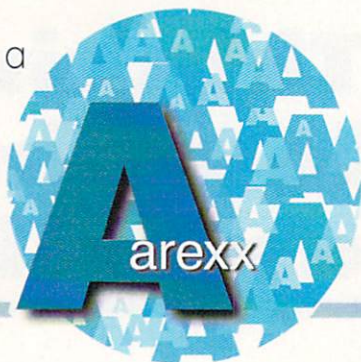
Some optimisers can eliminate unused variables, move invariant loop calculations outside the loop, re-arrange flow control schemes and even re-order the operations you've written. Compilers can also choose when to store data in locations which can be rapidly accessed (primarily processor registers).

One of the benefits of understanding assembler

programming, of course, is that it becomes possible to 'tweak' such compiler-generated code. All compilers, irrespective of the language they are working with, have to make compromises, so their generated code will rarely be perfect. As an enthusiastic low-level coder, however, you'll get the chance to correct this situation!

Most assemblers can also make optimisation changes but here, changes are limited just to the replacement of slightly more efficient forms of certain instructions. Needless to say, the effects on the code you've written are much less dramatic (which means, incidentally, that any speed/performance differences between the code generated by different assemblers is always going to be minimal).

Paul Overaa takes a look at the ARexx side of Amiga DOS's Ed text editor



Ed's ARexx connection

Ed has never been a particularly friendly text editor to use, but in recent years a number of improvements have been implemented. Mouse control has been added along with menu and function key support, a proper file requester, customisable configuration files, and even a close gadget.

Perhaps the most important addition, however, was the inclusion of an ARexx interface, yet few people seem to make any great use of this facility. The reason? It's probably that Ed, as a text editor, is still regarded as a relatively primitive piece of software and most people do in fact use it only for creating and viewing short text files, or for carrying out simple text editing jobs.

Okay, it's true. Even the improved version of Ed leaves a lot to be desired but the ARexx connection is worth experimenting with. Ed, as many of you will doubtless know, provides two types of commands called 'immediate' and 'extended.' In immediate mode, Ed executes its various keystroke-based commands straight away. In extended mode you press the ESCape key and then enter the extended command at the bottom of the window when the asterisk prompt appears.

All immediate mode commands have extended mode equivalents and this is important because it is the extended command set that is used to provide Ed's ARexx control. Many of Ed's extended commands can be used via ARexx, and table 1 lists some that are particularly useful.

You'll find all these commands, and others, listed in the Editor section of the AmigaDOS manual that came with your machine. Bear in mind when using these ARexx facilities that you do not need to use the ESCape key character prefix (as is necessary

Table 1: Some Ed ARexx commands

B	Move to bottom of file
D	Delete current line
I//	Insert a line with specified string before the current line
J	Join current line with the next line
M	Move to line n
N	Move to next line
T	Move to top of text

```
/* linenum.rxx */
```

```
ed=Address()
address value ed
'B' /* go to bottom of the file */
'RV/file_info/' /* collect file_info stem parameters */
line_count=file_info.line /* number of last line (i.e. a line count) */
'T' /* go to top of file */
do x=1 to line_count /* for each line... */
  prefix=left(x|'|',8) /* create line number prefix */
  'I/'||prefix||'/' /* insert prefix as a new line */
  'J' /* then join lines together */
  'N' /* do next line */
end
```

Listing 1: An Ed-based line numbering macro

AN EXAMPLE SCRIPT

Listing 1 shows an Ed macro that adds line numbers to a text file. It works by setting the cursor to the end of the file being edited and executing an RV command using a stem variable that I've called *file_info*. Since the cursor is at the end of the file, the returned line number represents the number of lines in the file. After moving to the top of the file, a loop is then used to add a padded string, containing a line number and a colon, to each line in the file.

Note, incidentally, that Ed, when running as just a single copy, will have its ARexx port called ED. If, however, further copies of the program are started while the first version is still running, other copies will be given port names of ED_1, ED_2 etc. The easiest way to ensure that an ARexx macro started from a particular version of Ed makes the right communications connection is to use this type of code:

```
ed=Address() /* get ed's address */
address value ed /* and identify it as current host */
```

In order to see the macro in action first copy the macro from the cover disk to your rexx: directory and then use Ed to open or create the file you wish to add line numbers to. With this text file still open, hit the ESCape key and enter this type of extended command:

```
rx/linenum.rxx/
```

The macro will then number all the text lines in the file currently being edited, and return you to Ed's Immediate mode in readiness for saving the file or further editing!

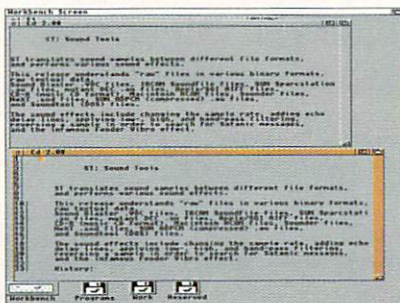
when issuing extended commands at the keyboard). For example, the 'move to bottom of file' instruction - listed in the above mentioned manual as ESC,B - would need, in an ARexx script, to be written as the string 'b' or 'B'.

To allow ARexx scripts to collect information about various file characteristics, Ed provides a

command called RV which subsequently provides a set of data items as a compound variable set (based on a script-specified stem). In short, you issue an RV command using your chosen stem and from that point on, the pre-defined compound variable tails shown in table 2 can be used to extract any required information.

Table 2: Information that can be made available using Ed's RV command

s.BASE	window base	s.LEFT	left margin
s.CURRENT	text of current line	s.LINE	current line number
s.EXTEND	extended margin value	s.LMAX	max visible line
s.FILENAME	file being edited	s.RIGHT	right margin
s.FORCECASE	case sensitivity flag	s.SEARCH	last search string
s.LASTCMD	last extended command issued	s.TABSTOP	current tab stop
		s.WIDTH	screen character width



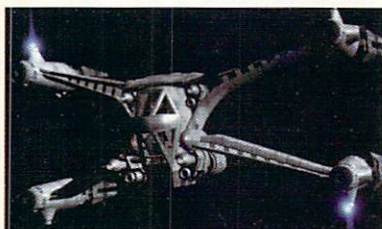
At least ARexx makes Ed a little more respectable as an editor

Phil South dips into the infostream and comes up with a gooey handful of graphics-based sites



The big catch

It's easy for outsiders to assume that simply because you don't hear much about the Amiga these days (which isn't true actually since Escom and Tandy started stocking the Amiga in their stores) that the Amiga community is not really very active these days. Of course we



proved that with our recent round-up of Web sites in issue 93, and this means that on almost any Amiga topic there is somewhere warm on the Web to meet up with like minded people and share information.

There are Amiga groups and Amiga Web sites with FTP etc. But what about one of the biggest areas of interest for Amiga users, that is to say graphics? The Web is awash with Amiga-based sites all about graphics, especially LightWave and 3D, so let's trawl through a few and see what we can find.

Babylon 5 Space Station object and Star Fury object from the Tomahawk site, rendered using LightWave 3D



SITES FOR SORE EYES

LightWave/Toaster HTTP server

<ftp://tomahawk.welch.jhu.edu/pub/LW/>

This is the second home of LightWave, where all the contributors to the LightWave mailing list and Usenet groups contribute objects, surfaces, tips, utilities, plug-ins for the new LightWave 4.0 program, and oh so many other things like pictures and Mpeg files for you to look at. This is the first stop for all LightWave fans.

Virtual Lightwave Demo

<http://cse.unl.edu/~mohrt/lightwave>

An interesting experiment in how to make a multimedia program on the Web. A trifle slow, but hey there are about 16 million Gbs of pictures in every screen. If you are not familiar with LightWave, here is the way to find out how it works.

PENTAGRAFX PRODUCTIONS

<http://www.cs.mcgill.ca/~desm/>

Very nicely put together graphics site giving hints and tips about 3D techniques, which although mainly for SGI users, can be applied to just about any 3D program with the right additions. Slow but very good.

Dean Scott Home Page

<http://users.aol.com/dscott5663/simagic.htm>

A nice home page, but more importantly a gallery of great images created by Mr Scott using LightWave. Notes on how each image was created are included giving you an idea how you can re-create the effects.

One And Only Media

<http://chelsea.ios.com:80/~oaomedia>

Creators of Macroform, a great curvy modelling tool, present details about the program, plus Get product information on MacroForm! Soon registered users will also be able to access MacroForm It!, a new e-zine dedicated to the advancement of the MacroForming and LightWaving arts!

Blevins Enterprises Vertisketch

<http://bei.moscow.com/>

Top notch 3D digitiser for the Amiga version of LightWave, and home of some really big digitisers too. One model allows you to drive a car into it and grab its curves. Now that is something I'd really like to see in my Christmas stocking, except my feet aren't that big.

Desktop Images Home Page

<http://www.DesktopImages.com/desktop/>

Makers of the best video tutorials about LightWave. Although the tall and handsome Lee Stranahan no longer produces tapes for them, they have a new line-up that includes NewTek's Brad Peebler, Colin Cunningham, and of course the big man himself, Ron Thornton of Babylon 5 fame.

NewTek Inc

<http://www.newtek.com/>

The true home of LightWave, and as we speak undergoing an overhaul. It used to be a lot of black pages with a few pictures on it. Now it's a lot more black pages with a lot more pictures on them. Lots of advertising puff, but no software or a huge amount of cool images... as yet!

Richard G. L'Hommedieu, Jr.

<http://www.pb.net/~limg>

A friendly chap who's gone to the trouble of assembling a wicked set of 3D and graphics links for us all to enjoy. You could spend the next month just following these up.

Worley Laboratories

<http://www.worley.com/>

Steve Worley has changed the

name of his company from Apex Software to Worley Labs. The provider of the neat procedural textures and the maker of Imagine's Essence textures. Not much on here at the time of writing, but I heart that it's due for big changes real soon now.

3DSite

<http://www.3dsite.com/3dsite/>

A comprehensive site for CGI artists, from people who just dabble to people who do it for Spielberg. Lots of links for CGI and Animation Literature, References and Discussions, Conferences, Distributors, Entertainment, FTP Sites, Hardware Firms, Hardware Products, Images and Movies, Job Offers, Labs, Newsgroups, Organizations, Production Houses, Production Support Services, Projects, Software houses Software Packages, Virtual Reality, VRML, and even WWW-VR, the 'virtual reality on the World Wide Web' site.

The Rendering Plant, Inc.

<http://www.portal.com/~corsa/>

Download the latest LightWave demo from the Rendering Plant. See what a professional company who uses Lightwave looks like on the Web.

Frank Nord delves into the murky and misunderstood world of copyright law



Code violator

Continuing our commercial publishing theme this month, I thought we might take a look at copyright law and how it affects the DTP'er. Although you might think that no-one is interested in whether or not you use copyrighted images, sounds or text, this is usually only due to the fact that you might have a very small circulation for your work. However, as famous cases prove (particularly in the Music Industry), people are willing to strenuously fight for the right to be credited (and paid for) their own work – you would feel the same way if someone was ripping you off. Although copyright law is pretty complex, fortunately, as long as you stick to the basics, you should be alright. The basics in this instance are that copyright law is founded on one major principle which is to protect the products of someone's skill, labour or time.

Something you might not be aware of is that there is no copyright in facts, news, ideas or information, but there **is** copyright in the way they are presented. So, although you can print that a television programme or a football match will be on at a certain time, you can't print a whole schedule of TV programmes or football fixtures, because you would have to make use of a list prepared by someone else. Normally, it is in the television companies' interest to supply TV scheduling information to newspapers because of

the publicity they need in order to get adequate viewing figures, but companies that exist to make a profit from such schedules will often have to pay for the information; TV listings magazines and pools companies are particular examples.

Copyright exists in anything you produce (whether it be written, photographed, painted, played or any other form of creative work) from the moment you record it and exists for fifty years from the **end** of the year you die. This is where most PD companies fall foul of copyright law by selling scans of images taken from books, fantasy artwork by artists like Chris Achilleos, Boris Vallejo and Frank Frazetta being particularly popular with people. It is, however, unlikely that any of these companies will be prosecuted because it can be in the interest of the body holding the copyright to allow violations like these for the purpose of disseminating their work to a wider audience who might not come across it any other way.

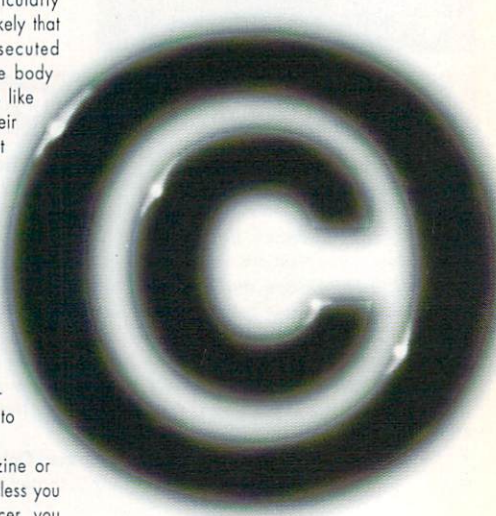
LETTERS

Another example of everyday copyright law exists if you've written a letter to Amiga Computing. In this instance you still retain the copyright of the letter and we have the right to print it once, but we could fall foul of copyright law should we reprint it in a collection of letters or give it to Amiga Action to print (because it was sent to AC).

If you are creating your own magazine or newsletter, you need to be aware that unless you specify it in your contract with a freelancer, you only have what are known as 'First British Serial Rights', which means that you are entitled to print the article once, after which copyright reverts to the author. You can get around this by making them sign your terms and conditions which specify that the magazine you are editing should

COPYRIGHT FREE?

There are a few sources of copyright free information, music being a particular example, but the major one is any information made publicly available by act of parliament such as the Highway Code or any of the innumerable citizens' charters.



AMIGA

COMPUTING

Our magazine's logo is covered by the 25 year copyright law covering 'typographical arrangements', so think twice before you use it...

PAGESTREAM PROGRESS

PageStream 3.0h2 landed on my desk some weeks ago now and I've been playing with it ever since. Why 3.0h2? The reason for it is the fact that SoftLogik didn't name it 3.0i and then make 3.0i into 3.0j because they told people that 3.0i was going to be the last version before 3.1. But they hadn't added all the features they wanted to make it worth calling 3.0h2 3.0i. See? Well, no matter.

Anyway, what's new? For a start, one of the biggest changes is the fact that you can now use TextFX, an optional add-on. TextFX has already

received quite a lot of press, so here are the basics. With TextFX you can take a piece of frameless text and wrap it around a circle or distort it simply by clicking on a button. And as if that wasn't enough, you can actually add your own TextFX shapes using PageStream's ARExx interface.

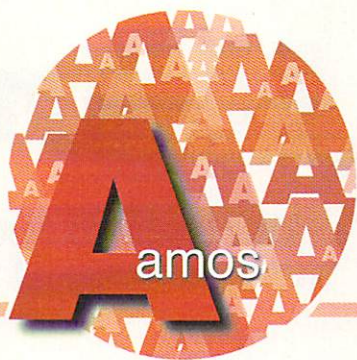
Most of the rest of the new version's updates are simply bug fixes or improvements in speed and efficiency, but separations are still not fully implemented, which is the biggest limit on PageStream 3's usefulness in a professional capacity.

retain all worldwide rights to the work produced by the freelancer.

Obviously, if you are writing a magazine and you are reviewing something you will be allowed to sample sections of whatever it is you are reviewing, whether it be a book, film, play or piece of software, without breaching copyright. After all, if you couldn't, you would have a hard time printing your review! Even so, you must make sure that you don't overuse your source material; quoting an entire chapter from a book would be a breach of copyright, a single paragraph wouldn't. In any case, you should always acknowledge your source and any quotes you make must be entirely accurate – no paraphrasing allowed.

Lastly, copyright exists on what are vaguely termed 'typographical arrangements'. Logos, mastheads and product labels are an example of this. This copyright exists for twenty five years from the end of the year in which the 'typographical arrangement' was first introduced.

Phil South starts up his Amos program and shows you more coding hints and tips



Code warrior

To emulate your favourite arcade games it is essential that you get good control of your ships, aliens and other flying things. A lot of people find it hard to get their brains around making a control mechanism which provides you with control for both the mouse and the joystick, but help is at hand because here is a routine which will do both very elegantly.

First we start by making a bob:

```
Bar 0,0 To 10,10
Get Bob 1,0,0 To 11,11
```

Having grabbed the bob we clear the screen of all distractions:

```
Hide : Curs Off : Cls 0
Double Buffer
```

and then we are off. The double buffer command in there is to make the sprite movements a bit smoother.

The routine works like so: The mouse and the joystick can move anywhere between _TOX,_TOY and _BOX,_BOY, in this example 0,0 to 320,200. The variables _DOX and _DOY govern the X and Y speed of the bob across the screen. _SOX and _SOY govern the initial position of the bob on the screen. So we set up these variables:

```
_DOX=1 : _DOY=1 : _SOX=160 : _SOY=100 : _TOX=0 :
_TOY=0 : _BOX=320 : _BOY=200
```

Then we are ready for the main loop:

```
DEEPLY:
If Joy(1)
If Jup(1) and(_SOY>_TOY)
Add _SOY,-_DOY
End If
If Jdown(1) and(_SOY<_BOY)
Add _SOY,_DOY
End If
```

These two commands check for the up and down movement and move the bob up or down 1 Y unit. Next:

```
If Jleft(1) and(_SOX>_TOX)
Add _SOX,-_DOX
End If
If Jright(1) and(_SOX<_BOX)
Add _SOX,_DOX
End If
```

We do the same for the X moves of left and right, and if they are detected, then we move the bob 1 X units across the screen. If no joystick moves are detected, we sense for the mouse, like so:

```
X Mouse=X Hard(_SOX)
Y Mouse=Y Hard(_SOY)
Else
_SOX=X Screen(X Mouse)
_SOY=Y Screen(Y Mouse)
End If
```

This turns the mouse moves into moves for the bob, and sends these co-ordinates to the bob. Finally we can move the bob itself:

```
Bob 1,_SOX,_SOY,1
```

which takes the _SOX and _SOY co-ordinates and sends them to the bob to move it to that position.

Then with a return to the front of the routine we can start the whole process again:

```
Goto DEEPLY
```

This happens a lot every second, so you always get an update and the bob follows wherever you point the joystick or mouse.

This is the version of the routine which works as a subroutine, i.e. if you replace the GOTO at the end with RETURN, then you can call it from a subroutine. If, however, you replace the GOTO loop at the end with END PROC, and feed all the data to the routine via the Procedure call, like so:

```
Procedure DEEPLY(_DOX,_DOY,_SOX,
_SOY,_TOX,_TOY,_BOX,_BOY)
If Joy(1)
If Jup(1) and(_SOY>_TOY)
Add _SOY,-_DOY
End If
If Jdown(1) and(_SOY<_BOY)
Add _SOY,_DOY
End If
If Jleft(1) and(_SOX>_TOX)
Add _SOX,-_DOX
End If
If Jright(1) and(_SOX<_BOX)
Add _SOX,_DOX
End If
X Mouse=X Hard(_SOX)
Y Mouse=Y Hard(_SOY)
Else
_SOX=X Screen(X Mouse)
_SOY=Y Screen(Y Mouse)
End If
Bob 1,_SOX,_SOY,1
End Proc
```

then you can use the routine anywhere in a program, and just call it as if it is a function of Amos. To call the process all you have to do is add a line:

```
DEEPLY(1,1,160,100,0,0,320,200)
```

and the proc will run. (Be sure to call it every time the program does a loop or you won't be

Bob Control

Use the mouse or the joystick to control the bobs

An easy-to-use joystick control routine

checking for the joystick.) There you have it, a modular, easy-to-use joystick control routine which you can re-use anywhere.

I would be interested if anyone can construct a routine which reads the mouse and pointer and joystick, but uses one pointer for the mouse in one area of the screen and another for the ship on the screen, like having a menu on one area of the screen (using LIMIT MOUSE) for the mouse moves, and another area of the screen for controlling the ship. Or you could have the mouse used to aim a gun and the joystick to control a character on screen, meaning you could move and shoot in any direction at the same time. This is not hard and a simple variation of this basic routine.

WRITE STUFF

If you have any other Amos programs or queries about Amos, please write to the usual address, which is: Phil South, Amos Column, Amiga Computing, Media House, Adlington Park, Macclesfield SK10 4NP.

Please send routines on an Amiga disk with notes on how the program works on paper, not as text files on the disk. Make the routines short enough to appear in print, i.e. no more than about 30-40 lines of code and, if possible, make them use no external graphics, or if they can't be used without them then be sure to provide them on the disk in native IFF format, and the same goes for sound files. Follow these guidelines and you'll be sure of making me a happy man if nothing else.

Paul Overaa takes
a look at a handy
Midi gadget from
Forefront
Technology



Hand signals

Most musicians, as they get more and more into Midi, find they start to collect all manner of extra bits and pieces – through boxes, mergers, switchers, extra sound modules and so on. Those of you who are this far down the Midi trail and are looking for something a little different may therefore like to know about a little box called the FT3 that can be used to generate various Midi messages and modify Midi data as it passes through the unit.

The FT3 is manufactured by Forefront Technology and is a hand held, battery driven (9v PP3) device that measures just 120mm(L) x 66mm(W) x 39mm(H). Control-wise it's a pretty simple affair – there's a top panel which contains a 12-key keypad (plus led indicator) and a side panel containing an on/off switch, Midi In and Midi Out terminals. There's also a mini-jack socket which is used to connect an optional external footswitch.

One of the most popular uses of the FT3 is as a program change generator for Midi-based musicians who are not using sequencers. A guitarist, for instance, might use an FT3 for remotely selecting echo/reverb effects on a Midi controlled digital delay unit. Now, for an Amiga-based musician running a sequencer, this particular sort of use is unlikely to be of much interest since program change commands are best added directly to the song sequences themselves.

Where the FT3 starts to become of more interest is with some of its other functions. You can

check Midi leads to see whether they are faulty or not and in fact, the same function can be used on a whole chain of Midi gear to confirm that it is all properly connected. Rapid system checks can also be carried out by sending Middle C Note on and Note off messages on every channel.

There's an 'input activity' mode that provides a

visual (led) indication that Midi messages are arriving at the FT3's Midi In terminal, and the unit can be set to respond to either any Midi message or messages on a specific channel. Needless to say, these sorts of things can be handy during fault finding. In addition to this you can also rechannel incoming Midi data and perform 'keyboard split' type operations on incoming Midi data – so that notes on a given channel above a user selected Midi note get retransmitted on a Midi channel one higher than the original channel.



Forefront
Technology's FT3

FILTERING

It's also possible to use the FT3 for Midi stream filtering. Real time messages (clocks, start, continue and stop), active sensing, system reset, tune request, Midi Timecode, song select, song position and sysex messages can all be selectively passed or filtered as required. There's a channel filter mode as well. Note on/off, channel and poly aftertouch, program change, pitchbend, controller and all note off messages can again all be selectively filtered or left unchanged on a given Midi channel.

You can, incidentally, also turn running status on or off and this can be useful with certain types of older Midi equipment that doesn't recognise this type of short message format. (Running status is the technique of using 'implied status bytes' to reduce the amount of traffic on the Midi lines). In addition to this, the FT3 can act as a Midi clock generator – you just switch the unit to its Midi clock generation mode and key in a bpm (beats per minute) value. After starting clock generation you can use the unit's 'M' key to alternately send start and stop messages (or you can use a footswitch attached to the program increment jack to trigger the start/stop commands).

THERE'S MORE

There are also a number of more esoteric functions provided by the FT3 including the ability to send raw Midi data, i.e. send messages that you create by entering the appropriate decimal numbers for each byte of the message (particularly useful to programmers who write their own Midi programs).

Of course, if you're into any sort of programming, even Basic or AREXX, you can actually use the FT3 as a remote Amiga controller for almost any purpose imaginable. It's easy enough to open the serial device from AREXX and read bytes of Midi data sent by the FT3, and that data could be used to trigger the running of programs, display of pictures and so on.

While the FT3 is not something that most Midi musicians would need to use on a daily basis, it is a flexible device that is particularly useful for the more advanced Midi user. I've certainly found it to be an invaluable gadget to have around on many occasions!

Bottom Line

Product:	FT3 Patch Commander
Price:	£79.99
Supplier:	BCK Products
Phone:	01992 524442

Ease of Use	8
Implementation	8
Value for money	8
Overall	8

Become a 2D special effects wizard and learn how to make your designs end with a bang



The big bang

The process of creating graphic images is much like the process of creating a modern movie. From storyboard, the image then goes into production, and finally the special effects are added. I've covered the basics of storyboarding and image production, so this month I'll be explaining simple special effect techniques which can breathe life into your designs.

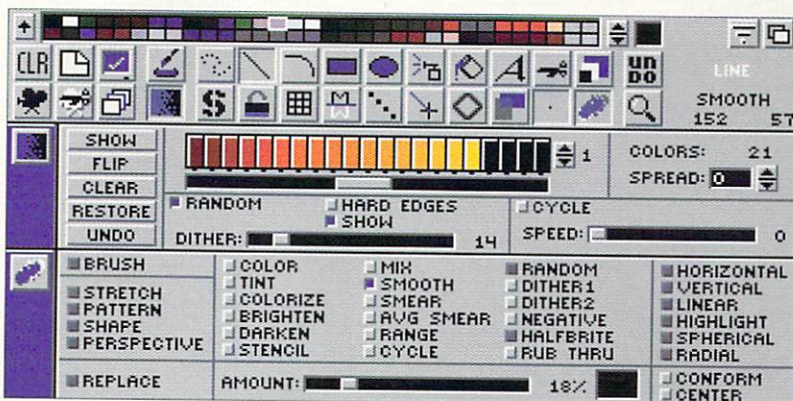
To create realistic special effects you need to understand what the effect actually looks like, how it happens and how it affects the other elements in the picture. As an example, let's take a look at good old rain - something we're all familiar with.

The only reason we actually see raindrops is due to light entering them and then being reflected. As a side effect of this union, any objects covered by the raindrops appear to be brighter in colour. We now have a fairly good understanding of raindrops and also a clue to emulating the effect in a paint package - brighten. Read on.

The special effects you use depend heavily on the type of image you are creating and the general subject matter. Using last month's city scene as an example, I needed to create an unobtrusive rain effect as well as a glow around lights simulating a wet and polluted atmosphere. With an understanding of the raindrop effect described above, I realised that an adequate simulation of rain could be achieved by simply drawing it over the background using the Brighten draw function.

On the Spare page, I simply drew a few short lines at an angle, grabbed them as a brush and painted it down continuously till I had a

Brilliance's wealth of effect modes. DPaint is equally well-endowed but you'll have to use the menus



downpour. I then grabbed the entire page as a brush, enabled the Brighten effect with a setting of 10 per cent, and stamped the brush over the background. Voilà - perfect rain!

The Brighten tool was then used again to create the glowing light effect. A circular red light was first created on the spare page then, using the filled circle tool with a Brighten setting of 15 per cent, I drew a circle larger than the light to create a glow on the background. The red light was then placed over the centre of the glow with the anti-alias effect enabled. Drawing more, smaller brightened circles just off the main glow, I was able to simulate a lens flare. You can put the Brighten effect to many more uses, smoke for example.



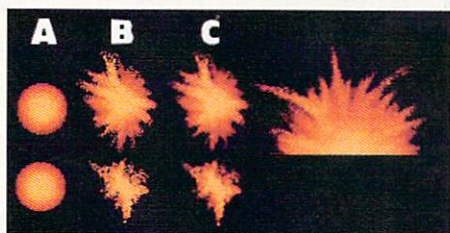
Glowing lights and rain made easy with the Brighten function. You can even simulate lens flares reasonably well

PLAYING WITH FIRE

The next effect demonstrates how easy it is to build new special effects by combining your paint package's tools together. Remember, the best designs come by way of experimentation and not by sticking to the rules.

One of the most difficult effects to create is that of an explosion or blast. Obviously being rather chaotic, it's not the sort of thing you can plan on paper, so a series of effects are needed to give it that chaotic edge. The first thing to do is think of the colours and create a suitable spread (transition) of colours - probably yellow, through red to black - and the more colours you have the better it will look. You should then set the spread dithering amount to between 15 and 40 per cent so that the final explosion doesn't look too pixelated.

Now you can begin to lay down your explosion. Select the filled circle tool and set the fill mode effect to Spherical. Enable the anti-alias so that it is smoothed with the background and



Superb explosions can be created by combining just a few of your paint package's tools together

then paint the circle down, placing the spherical angle at the very centre. You should end up with a circle, yellow in the centre and changing through red to black as it expands.

This effect is pretty good in its own right but still looks too contrived and pixelated. To finish the explosion, use a large pen with the connected draw mode, switch on the Smear effect,

and then drag arms of fire outward from the outer area of the circle. Finally, select filled rectangle with Smooth set at 100 per cent and draw a box over your explosion. When you see the finished effect you should be pleasantly surprised.

You could easily make the explosion occur on a flat surface, such as a road, by simply cutting the bottom half away after smoothing. You can see this type of explosion on the diagram.

With effects such as explosions, it's worthwhile building up a collection of different special effects to save time with future projects. Also make notes of any effect values you use so that you know exactly what settings do what.

From next month I'll be leaving static images alone for a short while to take a look at animation techniques. If you have discovered any useful special effects, send them in to Amiga Computing and I'll endeavour to include them in future articles.

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The final part of Gary Whiteley's look at fonts and their applications in video



Fonts and video

PART 3

Over the last two columns I've outlined the different types of font available to the Amiga user, how to convert them to formats more suited to your needs, something about basic font styles, and a few pointers to sensible font use. This month I'm going to conclude the series with a look at different uses of fonts in video titling and a couple of hints and tips.

In case you didn't know, there are a variety of different techniques under the general heading of video titling – these include captions, titles, subtitles, scrolls, and crawls. Which technique you use could help determine both the size and design of the font/s best suited to the job in hand – though don't forget to also consider the context of the production when making your choice.

The simplest way to video title is 'page-flipping', where a sequence of stills is slowly displayed one

at a time to reveal their contents. You can even do this with Deluxe Paint (or other animation programs), so a video titling package isn't strictly necessary if this technique is all you need.

There are almost no restrictions as to how you use fonts with this technique, beyond keeping style and content within sensible limits. Big, small (but keep it readable by viewers), mixed styles, graphics, whatever. Page flipping can be used for titles, credits, captions, and subtitles, but you'll need proper titling software for successful scrolling and crawling.

For subtitling and captioning you probably won't be able to use a large type size, since you'll need to convey the required information within the length (timing) of the shot – therefore, you may need to use small(ish) lettering to achieve this. You'll also need to leave plenty of palette Colour 0 on screen so that we can see the actual subject of the subtitle or caption after genlocking. In practical terms, this generally means sticking to sizes which are usually less than one-sixth of the total screen height (think in lines instead of the usual 'points').

Scrolls and crawls bring their own problems. For crawls (where a single line of text moves horizontally across the screen), follow the guidelines for captions and subtitles. For scrolls, you'll need to work out the best way to lay out your information in context with the images they may be combined with. You'll have to experiment to discover how many characters will fit across the screen in a particular typeface. You'll need to design how the performers and technicians are described, and the run-

ning order. You'll also need to use a font or two (but usually no more) which can be read at the speed of the scroll, yet still provide all the information required within the time allowed.

These are the basic techniques, but they aren't the only ones. Scala owners will already know that they can use a wide range of wipes and effects to introduce their text and graphics onto screen, and video users can easily incorporate such presentation techniques into their video titling. Most good video titling programs also allow for at least a limited range of effects, such as teletype (where letters are typed onto screen one by one) and a variety of wipes (parts of the screen are electronically 'wiped away' to reveal the next graphic or caption).

BIG SCREEN

Although not always necessary (for instance if your video will have a 'letter-box' crop) it is usually best to work in a PAL overscan resolution, preferably one around 768 x 580 (programs vary) so that text flows smoothly on and off screen. Lower resolutions produce chunkier images and probably won't look slick enough for classy work, but they do have their place, especially if your Amiga is very basic.

Video titling has a lot of scope, and once you've got a good font and software collection you can start coming up with new styles and methods for your titles. Perhaps the best place to get new ideas for using fonts with video, and to see the classic styles, is to study the idiot box in your living room. There are lots of professionals at work on what you see, so why not learn from them? There's more to good television than just actors and directors – and sometimes it can be the graphics and captions which just help that bit more, but not always.

IN CLOSING

If you can, use kerning to space the letters more neatly, and use margins and tabs to keep your text tidy. Don't crowd a page. Use borders and drop-shadows for clarity. The information is there to be read, so let it be that way. Balance style and content, impact and information and you'll be on the right track.

Next Month: Video titling for beginners.

You can e-mail Gary Whiteley as drgaz@cix.compulink.co.uk

HOT COLOURS

Okay, now some warnings. However much you might be tempted, be very careful about using strong colours when working with graphics and video – especially avoid pure reds and blues and vivid greens and oranges. If you must use these colours, you'd be advised to enclose them within dark or light borders, otherwise they will have a tendency to 'bleed', particularly where low-end video formats such as VHS are being used, or the output from your Amiga is via a modulator or a cheap and nasty genlock (not that I'm saying cheap equals nasty, because it isn't necessarily so).

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- Supports Seven SCSI devices, one can be mounted internally and powered!	
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A2000 68060 @ 50MHZ !!!

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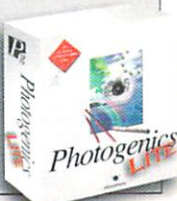
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