TOTAL AMIGA

Issue 11, Summer 2002

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Three x86 Amiga Emulators Reviewed

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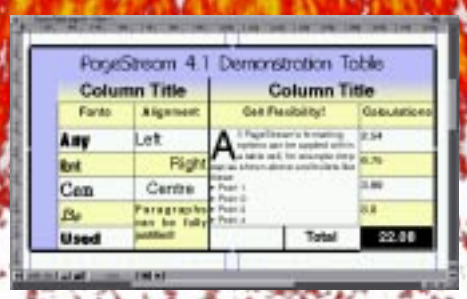

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TOTAL AMIGA
Issue 11
Summer 2002

Contents

Editorial

Welcome to another issue of Total Amiga. This issue is really packed, not only are we back to 48 pages thanks to a bit more advertising but we also have more pages of tutorials than ever before. In fact things got so tight that we had to drop our regular Top Tips and PD Paradise features, they will return in issue 12.

Regular readers will know that we are aiming to move from quarterly to bimonthly publication during 2002. This issue has taken about three months to produce so we're on time but not early as we had hoped. We are gradually getting more writers for the magazine (I think you'll find this issue is already a bit more varied than previous ones) so we will try to get the next issue out in 10 weeks. Our aim is to be publishing bimonthly by the end of the year when hopefully there will also be some new Amiga hardware and software to write about too.

On the topic of new software and hardware it has been a pleasant change to have a regular flow of information about OS 4's development coming from Hyperion and Amiga. The new OS is sounding very exciting, you can read all about it in our update on page 10. On the hardware front we have an exclusive column from Alan Redhouse which will bring you up to date with news of the Amiga One and their plans for future versions. We also know the developers are hard at work readying MorphOS and the Pegasos for release but they're keeping pretty quiet about it so maybe we'll see something on that front soon too.

Another interesting development since issue 10 is the release of the developer version of the first USB stack for the Amiga, Poseidon. This seems to have really caught the imagination of developers and drivers for several types of USB peripherals are already in development, other developers are working to make Poseidon work on a variety of USB hardware. Take a look at the news item on page 6 for more information.

One of the biggest happenings in the Amiga market last year was the release of the AmigaOS XL package of two fast Amiga emulators for the x86 PC. Because no one in the core Total Amiga Team owns a PC up to running the emulators at a decent speed we weren't able to look at the package in detail. However Eyetech very kindly loaned us a PC system at the Alt.WoA show so we have now been able to look at AmigaOS XL and Cloanto's latest Amiga Forever 5 in detail. We found that each emulator has its pros and cons which one suits you is really down to your personal needs, skill and the equipment you have available. So in the feature we've tried to give a good overview of each emulator so you can decide for yourself. When the feature was largely complete Bernie Meyer, the developer of Amithlon, made a statement about some potential legal problems with the AmigaOS XL distribution so please bear in mind the news item on page 7 when reading the x86 emulation feature.

Well I think it's about time for me to sign off, so I'll close with my customary request for feed back and contributions. Please let us know what you think of the mag, in particular we'd like to hear what tutorials you would like to see in the future and what you think of the current ones. If you fancy writing an article for Total Amiga (which can be large or small and on any Amiga related topic) please get in touch.

Enjoy the mag,

Robert

Write On!

We'd like to make Total Amiga more "interactive" so we need your input!

Got a question you'd like answered or an opinion you'd like to share? Write to us and we'll include it in a letters page.

Got a tip for other readers or even an article up your sleeve? Send it in and you could very well see your name in print.

Got a suggestion or comment on the magazine? Let us know and we'll try and make Clubbed better for you.

About Total Amiga

Total Amiga is published quarterly by South Essex Amiga Link. For subscription details please contact us at the address below or visit our website.

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Only Amiga Made it Possible

Total Amiga is designed and laid out using:

Hardware:
Amiga 3000
CyberStorm PPC/060
CyberVision PPC
128Mb RAM, about 13Gb HDD space.

Software:
Amiga OS 3.9 by Amiga
PageStream 4.1 by Softlogik
TypeSmith 2.5 by Softlogik
ImageFX 4.5 by Nova Design
Photogenics 5 by Paul Nolan
Final Writer 5 by Softwood
Ghostscript 6.50 from Aladdin Enterprises

There are also some essential utilities we couldn't live without: Directory Opus 5, SGrab, MCP, Turbo Print 7, MakeCD.

Our thanks to the creators of this and all the other great Amiga software out there.

Total Amiga is entirely created on the Amiga, no other machines are used at any stage of the design or layout process.

Fonts

The body text of Total Amiga is set in Triumvirate Normal as supplied with PageStream, the heading typeface is Forgotten Futurist by Ray Larabie. Take a look at Ray's huge range of freeware fonts at http://www.larabiefonts.com and his commercial foundry at http://www.typodermic.com.

Legalese

Alt.WoA Show Report 2002

After last year's successful Alt. WoA show (which was the first in the North of England for a long time) SEAL were looking forward to this years show. Unfortunately this year we could only muster three members for the trip to the show, never the less we started out bright and early (05:30!) for the show not knowing about the severe weather forecast (due to Mick's nonfunctional car radio!). Fortunately apart from a minor snow blizzard or two we arrived unscathed, in plenty of time and even had time to stop for a mega breakfast!

The venue had been laid out differently from last year's show, as before the commercial exhibitors were on the lower level but the usergroups were moved to the first floor above the bar on the intermediate level. A new feature was a series of presentations which were held in the attic above the usergroups.

On arrival the SEAL team (Mick, Robert and Elliott) set up our two tables, one for SEAL and one for Total Amiga. For the first time at a show since WoA '99 we had Amigas running on the SEAL stand as opposed to our machines being used in the games arena. Mick ran Freespace on his A1200 PPC/BVision and through the day had many people tried their hand at this fantastic game from Hyperion, the demo tied in with Mick's review in Total Amiga issue 10. Robert used his A3000 to demonstrate Pagestream and ImageFX which we use to produce the magazine. When either Mick or Robert were busy or away from the stand the machines ran a slideshow about SEAL and Total Amiga. We sold many subscriptions, single issues and back issues of the magazine and a large number of these were due to the hard work of Elliott Bird who often manned the stand while Robert and Mick were away on club and magazine business... honest!

Other usergroups represented were ANT (Amiga North Thames) who were publicising the forthcoming WoASE 2002 show which SEAL will be helping to organise. The Mediator support team and GAG (Gloucestershire Amiga Group) had several Mediator systems up and running with TV cards and other interesting add-ons. Once again Matt Morris and the Blackpool Amiga Group came up trumps with loads of Amigas running different games, we noticed Napalm and Payback amongst several others. Barry Riddiford ran the ever popular Sensible Soccer tournament projected on to a big screen. Also in the usergroups area were the Scalos team who demonstrated their Workbench replacement system running on a rather cool black TFT LCD monitor.

Mick's A1200 and Robert's A3000 on the SEAL stand.

Down on the main show floor many of the UK's key Amiga dealers were represented. Eyetech had the biggest stand and seemed to be doing good business, they had a working Amiga One motherboard on the stand but as it had only arrived that morning they only managed to get it to the "BIOS" screen (more on this later). They also had an AmigaXL system for punters to try and their usual selection of useful hardware and software to buy. Mick bought a cool wireless optical mouse and EZMouse adaptor which you will find

reviewed later in this issue. Foreматt Home Computing had their wide range of Amiga software and games and were demonstrating their CD-ROM based monthly magazine, 100% Amiga. Ray from Kicksoft was up to his usual antics of “persuading” people to part with their cash for his ever growing range of software products. We saw him demonstrating PageStream 4.1 and a number of other products. Also exhibiting were Weird Science, Classic Amiga, Stellar Dreams, Cartridge Club and Datatech DTP.

Amiga Inc. Had a separate area of the show floor called the Amiga arena where several companies had a stand. Unfortunately Fleecy Moss was unable to attend due to the bad weather (he was turned back by the Police) as were Computer City from the Netherlands who were due to attend. However the Amiga arena still had three interesting exhibitors, Zeo Neo displaying their AmigaDE games, Cloanto with the latest version of Amiga Forever. Last but not least a representative of Hyperion demoed Quake II on a CyberStorm PPC/Voodoo III machine (unfortunately we didn’t catch the guy’s name), Mick had a go and says it kicks arse!

There were several presentations during the show including sound with Don Cox, networking with Neil Bothwick and Amithlon with Bill Hoggett. Next was the presentation we had all been waiting for (for many months or even years!), Alan Redhouse on the AmigaOne! As we’ve mentioned there was a working system at the show, but Eyetech had only just received it from the developers. According to Alan they have run the system using Linux but with the limited time available at the show they were unable to get it running. So the system is ready and waiting for OS 4 and Alan said that they could get it into production in about six weeks.

Alan Redhouse gave a presentation that outlined that changes to the AmigaOne specification over the last few months. He called the current design the Amiga One point Five. The major change is the move from a custom chipset to using off-the-shelf north and south bridges (the north bridge is the chip that interfaces the processor with memory, PCI and AGP buses etc. And the south bridge is the chip that gives many basic services such as IDE, I/O ports, USB etc.). This means that the AmigaOne will have many more integrated peripherals including AC97 sound, Ethernet and legacy serial and parallel ports. Other improvements are a 133Mhz system bus and ATA100 IDE. Because of all the integrated peripherals there will now be only four PCI slots, but with the AGP (now 2x speed) slot for a graphics card we think that will leave ample room for

The Mediator Support stand, these were just two of the many Amigas running at the show.

Understandably Eyetech’s AmigaOne pre-production system was the highlight of the show.

expansion. The A1200 connection logic has been moved onto a separate PCI card that will now be an optional extra (about £50), the A1200 will be connected via a ribbon cable allowing a much wider choice of case. The first AmigaOne boards will ship with a 600Mhz G3 CPU soldered on to the board, a slightly more expensive version with a CPU socket will be available later allowing faster CPUs (including G4s) to be fitted. And finally... The price for the initial board including the CPU will be around £350 plus local taxes, which is certainly much less than we were expecting!

For further information “from the horses mouth” take a look at Alan Redhouse’s column on page 8 of this very issue.

The turn out for the show was considerably lower this year but it seems this was mostly (or maybe entirely) due to the adverse weather conditions, many roads were shut and the weather forecast advised people not to drive unless the trip was essential! However just like last year the show had a great friendly atmosphere and we all had a really good time. Thanks to HAUG for all their efforts!

A Solid Mirage

Elbox have added a new member to their range of popular tower cases sold in the UK as the Power Tower by Power Computing. The new Mirage 4000 Pro is a tower conversion kit for the A4000 Desktop that includes a Mediator 4000 busboard, PCI logic card and the Multimedia CD with drivers for graphics, sound, TV and Ethernet PCI cards. The Mirage tower itself is a new design that is a bit more interesting than the normal beige box. It has three 5.25” drive bays and seven 3.5” bays one of which is externally accessible. The busboard has 6 Zorro II/III slots, 1 video slot and 5 PCI slots although the PCI slots are in-line with Zorro slots so a full length Zorro card will block the coresponding PCI slot. The tower is fitted with a 300W power supply to keep things running smoothly even with all those slots and bays filled!

The Mirage 4000 system has a list price of 379.95Euro not including VAT so in the UK we anticipate it will be just under £300.

The full specifications are available on Elbox’s website along with lists of compatible PCI cards:
http://www.elbox.com

Let's Boing Again!

Haage and Partner and Amiga Inc. have released another update for OS3.9 in the form of BoingBag 2. This time there are quite a number of tweaks to fix bugs and improve the functionality of the OS.

Amplifier has been given a Reaction GUI and a number of minor improvements such as supporting ZIPed skin files. Other bundled utilities that have been improved include Find which gets an updated interface, new features for RAWBInfo, more archive formats are supported by UnArc and BenchTrash has been given a Reaction GUI too. Finally CDPlayer can now download the track names of your CDs from the CDDB database if the cddb.library (included in contributions) is installed.

A really useful addition is that the sound datatype now supports AHI, this means the system beep and many other programs that play sounds using datatypes can now work on an AHI device such as a 16bit sound card. To enable this function you have to set an Environment variable so be sure to read the docs. Another small but useful change is the addition of a command history to the Execute Command window so you can recall previous commands using the up and down cursor keys.

A preferences program for the picture datatype has been added, with this you can set which programs support the new v43 features (chiefly greater than 256 colour support) and also disable dithering for 16bit screens which can slow down image rendering and is not really needed for photographic images.

There have been many changes and improvements to the shell including:

- Running programs in the background using “&”
- *Job control
- *Easy display of multimedia files
- *Extended script support via #! and ;!
- *New and improved shell commands: Ask, Path, PopCD and PushCD
- *Many other bug fixes.

The upgrade of the OS’s disk related tools has been completed with full support for disks greater than 4Gb across the system. HDToolBox’s reading of geometry data should now work properly on more large disks and the diskcopy command has been updated to support large disks too.

In addition the main archive you can also download some new and updated contributions and locale archives for 19 different languages:

You will need OS3.9 BoingBag 1 installed to perform the update which can be downloaded from:
http://www.haage-partner.de/aos39/index-e.html

Amiga Office?

An effort is under way to port Open Office, a popular open source office application suite, to the Amiga. Volker Grabbe recently posted a request for developers interested in helping him with the port. Open Office is an open source project based on Star Office which is a cross platform office suite that was bought by Sun Microsystems in 1999. Sun then decided to open the Star Office source allowing a wider community to contribute to the product, this lead to Open Office. Future official Sun versions of Star Office will be based on the Open Office source.

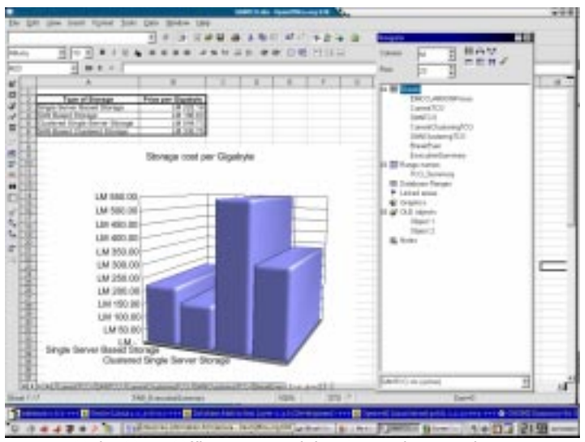
Here are some of the key features of the Open Office Suite:

- Compatibility with many file formats including Microsoft Office (including the latest XP version) for both import and export.
- All the applications have an “Auto Pilot” features to help you with complex commands.
- **Writer** - Word Processor
- Mail merge support
- Sophisticated layouts possible
- Indexing and Bibliography functions
- **Calc** - Spreadsheet
- Natural language formulae
- StarBasic macro language
- Multiple worksheets
- **Draw** - Vector drawing
- Shape text
- Quick creation of 3D shapes
- Bitmap tools and effects
- **Impress** - Presentations
- All the effects and graphics tools from draw
- Slide transitions

If you have a computer running Linux, Windows or Solaris you can download a copy of Open Office and try it for yourself from:
http://www.openoffice.org

We don’t currently know the status of the port although given the short time elapsed it is sure to be in its very early stages. However Hyperion have mentioned that they hope to see it available for OS 4 in the future and Hans-Joerg Freiden, one of Hyperion’s key programmers, is acting as a technical consultant for the project. Given the importance of good office application to any computer platform this sounds like good news.

For more information on the Amiga port of Open Office visit:
http://openoffice.vgrabbe.de/



Calc, OpenOffice’s spreadsheet, running on Linux.

Don't Miss: Latest on OS 4: Page 10
Exclusive AmigaOne News: Page 8

USB Stacks Up

E3B have revealed that the stack for their imminent Highway and Subway USB cards will be a new development called Poseidon which has been written by Chris Hodges. But even better news is that the stack won't be limited to the E3B cards, it has been designed so that drivers for all sorts of hardware can written. Poseidon is not a port from another platform and has been designed specifically for AmigaOS, a MorphOS version will also be available. The author has stated that there is no reason why Poseidon shouldn't run on OS4 but Hyperion have confirmed that a different stack for the new OS is already well into development so they won't be using Poseidon.

As we've mentioned before a USB stack and supported hardware is no use if you don't have drivers for USB peripherals . Fortunately Poseiden already includes drivers for several classes of USB device. These include basic support for Keyboards and Mice, printers and mass storage devices. We guess the printer support will be in the form of a parallel device replacement so this may mean that you can hook up an existing printer that has an Amiga driver by its USB port. USB mass storage support is one of the most interesting developments because this standard is supported by many storage devices. For example some digital cameras support this standard as do most USB memory card readers. So we hope that without additional drivers USB mass storage support should enable us to access all kinds of different memory cards and other USB storage devices without needing specific drivers.

Poseidon has already generated a great deal of interest from Amiga developers. Innovative (who have recently changed their name to IOSpirit) have announced that they are developing USB drivers for their VHI Studio package. These will support USB web cameras for video grabbing and USB digital cameras with several Kodak models being the first supported. Isreesoft have announced that they will support Poseidon in future versions of TutboPrint so there is a chance we will start to get drivers for USB only printers. Vision Factory development (of CyberGraphX fame) have developed a hardware driver that enables Poseidon to work with a PCI USB card in a G-Rex PCI bus board and a MorphOS driver for the built-in USB ports on the bPlan Pegasos motherboard. They have tested a USB webcam and USB Zip drive using the drivers supplied with Poseidon.

Developer documentation for the stack is available, for more details visit the E3B website: http://www.e3b.de/usb/developer.html

Papyrus is the Future?

Titan computer are porting Papyrus Office to the Amiga. Papyrus is a suite of office application programs developed by the German company ROM Logicware. We understand MacOS, 68k Amiga and MorphOS versions are planned, there hasn't been an announcement about an OS4 version yet. Papyrus is a well established product and is now on version 9 which is available for Windows, OS/2 and Atari TOS operating systems. The suite consists of an integrated Word Processor, DTP and Spreadsheet program and a separate database application. On the ROM Logicware website the developers are proud to point out that the complete Papyrus suite fits on three high density floppy disks without sacrificing functionality so it sounds like this should be a light weight Amiga style application.

Here are some of the key features of Papyrus Office:

- Extensive DTP functions
- Graphics import
- Tables
- Full spreadsheet functionality in tables
- Powerful rich text format import and export for compatibility with other applications including table and image support.
- Auto correct
- Footnotes
- Full relational database with multimedia functions

The full version of Papyrus Office for other platforms costs 129Euro, about £80, it remains to be seen what Titan will charge for the Amiga version.

The ROM Logicware website has details of the suite's features: http://www.rom-logicware.com/

Titan have a page on their site with some initial information on their ports: http://www.titan-computer.com/ami/papyrus/index.html

New IBrowse At Last

Development was on hold for a long time but work is now continuing apace on a new version of IBrowse. 2.3 is expected to be a free upgrade for 2.x owners and Amiga have announced that a special version will also ship with OS4. The exact features of the upgrade have not been revealed but posts from the developers and beta testers on the mailing list suggest it will be quite substantial. In particular the Javascript engine is known to have been heavily improved greatly enhancing website compatibility. There have been many posts to the IBrowse mailing list saying "this site doesn't work in version 2.2" and the vast majority of the time the answer comes back that it now works in 2.3.

In a recent post Stefan Burström, the author of IBrowse and the key programmer, said that they hope to have the new version ready for release by the end of May. Currently the feature set is frozen and they are working to fix the major outstanding issues. To give an idea of the size of the upgrade Stefan mentioned that there have been over 220 changes, bug fixes and features added!

Well I for one can't wait, as there isn't currently an IBrowse website the best way to keep in touch with developments is to join the IBrowse mailing list at: http://groups.yahoo.com/group/ibrowse

Getting Flash

With many digital cameras abandoning the slow serial port connection for faster USB ports it is becoming increasingly difficult to find current cameras that are Amiga compatible. The sensible route has always seemed to be getting a memory card reader attached to your Amiga and then any camera using the supported type of memory card would be compatible. The problem with this idea is that only expensive and difficult to source SCSI readers have been available for the Amiga.

That was until Torsten Jager released cfd to Aminet, this package contains a device driver that allows your Amiga to read a compact flash memory card via the PCMCIA slot. To make the connection you need a compact flash to PCMCIA adaptor and an Amiga with a PCMCIA slot (that's an A600 or A1200 folks)! As a compact flash card is already very similar to a PCMCIA card the adaptors are simple and inexpensive at about £10. The package consists of compactflash.device and a CF0 dosdriver, you will also need the freeware Fat95 file system (reviewed in the last Total Amiga) installed as compact flash cards use an MSDos style file system. Once these components are in place you can read the image files from you flash card using Workbench or a directory utility just as if it was a hard disk.

While compact flash is only one of the memory card standards available it is popular among manufacturers of cameras and other mobile devices and the cards are less expensive than the other types. If anyone out there has an adaptor for a different memory format to PCMCIA it would be interesting to try it with compactflash.device as I think there is a change other formats would work. However don't go out and spend money as this is only a chance.

You can download cfd from any Aminet mirror, disk/misc/cfd.lha, you'll also need fat95.lha from the same directory.

Subway... Highway...

Norway

E3B have been taking notice of the survey they ran for potential users of their USB interfaces the Highway (Zorro II) and Subway (Clock port). The most popular add-on requested for the Highway was an Ethernet card and E3B already have a 10Mb/s module in the works called the Norway.

The card will attach to the expansion connector of the Highway card. It features an NE2000 compatible Ethernet controller with 16Kbytes of buffer memory. The card is fitted with an RJ45 connector for the unshielded twisted pair cable used in most modern networks. SANA2 drivers will be supplied so the card can be used with existing Amiga TCP/IP stacks and other network applications. The board has been tested with 030, 040, 060 and PPC accelerators.

For further details including extensive compatibility testing of the Highway card take a look at the E3B website: http://www.e3b.de

You can pre-order a Norway card from KDH, a German Amiga dealer at 59.90Euro (about £38), other dealers have not yet been announced: http://www.kdh-datentechnik.com

The Norway pre-production prototype.

Icon Overload!

Mason Icons is a project to create a common set of application images for Amiga programs based in the glow icons style. The auto Martin Merz has made a set of common images and then uses them to make new button bars for Amiga programs giving them a common look, rather than the icon sets which have been available for years these are images used for buttons and icons within a program. This is possible because many programs have customiseable toolbars or load the images they use from disks. Sets of icons are available for over 50 applications and utilities from AWeb to Voyager! Martin releases new and updated image sets all the time and his work really does make your Amiga look more co-ordinated.

To see if your favourite applications are supported visit: http://mason.home.bei.t-online.de

AmigaOS XL Legalities

A recent statement from the main developer of the Amithlon, Bernie Meyer, has cast doubt on the legality of Haage and Partner's Amiga emulator package AmigaOS XL. The emulators AmigaXL and Amithon are included in the package along with AmigaOS 3.9, 3.1 ROMs and other software. In his statement Bernie says he has received an EMail from Amiga Inc. and that they consider the distribution of AmigaOS XL to be in violation of their intellectual property rights and thus illegal. It seems that Amiga are in dispute with Haage and Partner over their right to distribute some or all of the Amiga owned components shipped with AmigaOS XL. Bernie has asked Haage and Partner to stop distributing Amithon as he is allowed to in his contract because he is personally responsible for settling any intellectual property disputes over the software he provided for AmigaOS XL. Bernie stresses that he has no way of knowing if Amiga's claims are justified but he had to act to minimise his personal legal risk.

As far as we are aware Haage and partner is continuing to sell AmigaOS XL. Although there has been no official statement from them one of H&P's employees, Martin Steigerwald, has made several postings to the Amithon mailing list that they are trying to clear up the situation and that Haage and Partner guarantees that all users will get an officially licensed product.

As Bernie has requested that H&P stops distributing Amithon this puts potential buyers in a difficult position which so far has not been clarified, hopefully there will news soon.

You can read the full statement from Bernie on his Amithlon website at: http://www.amithlon.net

Amiga One Update

By Alan Redhouse

Here is the very latest news on AmigaOne straight from Alan Redhouse, managing director of Eyetech

The first issue of Total Amiga was published just a few days before the Alt-WoA show at the end of February where the AmigaOneG3-SE made its first public appearance. We had been working on this new board for a considerable length of time under strict confidentiality wraps and the new AmigaOneG3-SE was clearly a surprise to show attendees - it must have been one of the best kept secrets in the Amiga community. And there's been plenty more happening since then. But first, for those of you who missed the presentation I gave at Alt-WoA, here is a brief summary.

The AmigaOneG3-SE

The first model in our AmigaOne range is the AmigaOneG3-SE. This is in effect a 600Mhz G3 Amiga accelerator with built in 10/100 ethernet, USB, PCI/AGP interface and memory slots for up to 2GB of SDRAM. As well as being many times more powerful and at (UKP350/USD500/Euro600*) around half the price of the previously most powerful Amiga PPC accelerator (the phase 5 Cyberstorm PPC 604 240MHz), in my mind the most remarkable thing about the AmigaOneG3-SE is that it comes with a free, built in computer! This means that you no longer need an attached A1200 or special tower case if you only intend to run retargetable Amiga applications. (For hardware-hitting applications an interface card to connect an Amiga 1200 motherboard to the A1G3-SE a PCI card interface will be available from Escena). The A1G3-SE also comes with a full range of legacy peripherals, and will run PPC Linux (and PPC UAE) in addition to running the new PPC-only OS4 natively.

In this new design we have opted to solder the cpu direct to the motherboard. This not only keeps costs down, but significantly increases reliability by minimising trace lengths between cpu and SDRAM memory, particularly in comparison to the original 'Slot-1 cpu module' we proposed for the original AmigaOne-1200.

We took orders for developer boards (for testing OS4, developing software and for dealers to demonstrate - the boards are actually the same as the end user versions) towards the end of March. Most of them should have been delivered by the time this issue hits the mailboxes.

The board has also attracted a lot of attention from the Linux-PPC community, and we have had some of the best developers from that OS - and of course from the Amiga developer community - order the developer boards and subscribe to the closed developer mailing list. This list is moderated by Amiga and Linux-PPC developer Ole-Egil Hvitmyren, a name which will be familiar - if totally unpronounceable - to those subscribed to the AmigaOne mailing list at Yahoo Groups (www.yahoogroups.com/group/amigaone).

Finally it is important to note that the AmigaOneG3-SE is fully quality-validated and licensed by Amiga Inc to run OS4, with all licence fees/royalties paid. AI's licence terms also stipulate that all boards capable of running OS4 must ship with an OEM version of OS4 and must have built-in hardware protection to keep OS4 piracy to a minimum, and this has been built into the AmigaOneG3-SE from the outset.

A list of dealers who have already ordered demonstration/familiarisation boards is posted on our web site (www.eyetech.co.uk/amigaone/dealer). Don't worry if your favourite dealer is not listed - several have either missed the ordering window or decided to wait until the end user boards and OS4 is shipping. These dealers will be added to the list on our website at the time they order end user boards from us.

Although we are advertising the A1G3-SE as an entry-level machine, have no doubt with OS4 installed it will really fly. The 600Mhz 750CXe cpu that is shipped with it is effectively that fastest G3 cpu generally available and some PPC experts reckon it is likely to deliver several hundred times the performance of an '030/50 with many applications.

Whats next?

Those of you will who have been paying attention will have noticed that I said that the A1G3-SE was 'the first' in our AmigaOne range. So what, I hear you asking, will be following, and when, what spec, how much and, inevitably, is it worth waiting for?

Well I can't answer all those questions definitively now, but I will give you a taster of what we have planned for an up-market (read more flexible but more expensive) addition to the AmigaOne range. One of the prime requirements is to provide a socketed cpu module so that user-upgradable performance enhancements can be made as and when faster and more complex chips - and operating system enhancements that use them - become available. I mentioned above that the Intel Slot-1 socket is not really suitable in this context, and in fact both the Intel Slot-1 socket and the Apple ZIF cpu socket are now obsolete and no longer manufactured.

So for the next version of the AmigaOne, the AmigaOne-XE, we have borrowed the latest cpu socket technology from Apple in the form of the purpose-designed 'Megarray' socket. This means that we can make low cost, tightly coupled cpu modules using either G3, G4, dual G4, (and possibly G5) technology - for use the same motherboard. Upgrading cpu power therefore only needs a simple module exchange. The prototype socketed AmigaOne-XE board and the associated plug-in G3 and G4 modules hve already been built. Look forward to some more details in the next Total Amiga.

But before you rush off and cancel your pending AmigaOneG3-SE orders to buy the AmigaOne-XE instead, bear in mind that this extra flexibility will come at a price, and until OS4 supports the G4's Altivec coprocessor, without much performance benefit either. And at the moment, unless you are Apple, G4 cpu's are on very tight allocation, which means that it will be several months before

they are available to us at a reasonable price for use in the AmigaOne-EX cpu modules. At the moment the target price for the AmigaOne-XE board with the single G4 700MHz cpu module is around UKP200/USD300/Euro350 more than the AmigaOneG3-SE - and possibly less if Apple's demand for these cpu's drops significantly.

So does this mean you should cancel your existing AmigaOne-G3 order and wait a few more months? Not at all. We anticipate a high private resale value of used AmigaOneG3-SE boards, but to take the uncertainty out of the process, we, and the majority of other AmigaOne dealers, will underwrite a trade-in value of your AmigaOneG3-SE during a period of 6 and 12 months after its purchase against the purchase of a new AmigaOne-XE with single G4 cpu module.

So if you've been sitting on the fence wondering whether to buy an A1G3-SE or to wait until an upgradable G4 AmigaOne is available, you can now have the best of both worlds. Get a new, low cost AmigaOneG3-SE now and upgrade within 12 months. What are you waiting for?

Full details of this upgrade offer will be posted on our web site shortly.

Thats all for this issue.

Alan

Fleecy Speaks

Amiga's Chief Technology Officer gives us a taste of what to expect in AmigaOS 4.

Not much seems to have happened in the many years since the demise of Commodore. We've all done it. Scouring the websites for news, reading the ever diminishing number of Amiga mags from cover to cover and becoming more and more depressed as promises have been made, deadlines have slipped, companies have vanished.

Which is why it gives me great pleasure to share with you the wonderful news that has occurred in the time since the last issue of Total Amiga.

Not only has the AmigaOne been seen (running PPC Linux) but by the time you read this 200 very lucky developers should have actual AmigaOne developer boards in their possession, with AmigaOne consumer systems only a few months away at most.

Our partners at Hyperion have also been able to release actual screenshots of the new AmigaOS4.0. (I hope that they are in the magazine somewhere, but to see them in all their glory, surf over to the hyperion website (http://www.OS4.hyperion-software.com). Although most of the work for OS4 is under the hood, and we haven't planned that much of a revamping in the interface arena, I'm sure you'll agree that it looks very nice and will allow Amigans to put their new 40 inch plasma monitors up against OS X and XP users and feel pretty smug.

More importantly, what all of this good news means is that the Amiga Power Platform is about to be reborn, a system of elegance and simplicity for those who need the power of a desktop and beyond to render their 3D movies, layout their publications, create their next music hit or destroy that alien spaceship and all its 60,000 polygons.

Whilst we are all excited as hell, we must also be realistic and realise that this just the first step in a long journey. The Amiga Power Platform is starting out in a very deep hole. Developers will only write new and compelling applications for our platform if they can see it makes commercial sense, which means seeing a sustainable market. Correspondingly, users will only come to the platform if they see the applications. It is a vicious circle and one in which community spirit is going to have to count like it has never counted before.

We know we have the dedicated Amigans who will buy the new platform. Our next target after that must be all our Amiga friends, those who tried to stay with us but finally gave up the ghost a year or so ago. We all know many of these people and we need to get them interested and back into the community. This will start to bring numbers up, which will interest developers, which will allow Total Amiga to go to a monthly format, which will start to bring new users to user group meetings, and so on and so on.

It won't happen overnight. It will take time, but if Amigans are anything, we are patient. Sometimes we have been sorely tested, and I won't pretend that we as a company haven't made mistakes that

has pushed many of you to the edge but we said that somehow, sometime, we would get a new Amiga to you and it looks like, working together, we are so close as to almost be able to taste it. Congratulations to us all.

On a sadder note, my heart goes out to the people of HAUG, who worked so hard and tirelessly to put on their show, which was then decimated by the one thing not in their control, a monster of a snow storm that froze up the entire north of England. I, along with many others, were really looking forwards to the event. Don't give up. We all want to see you next year in Huddersfield and they'll be plenty of new additions.

News

AmigaOS 4 Update

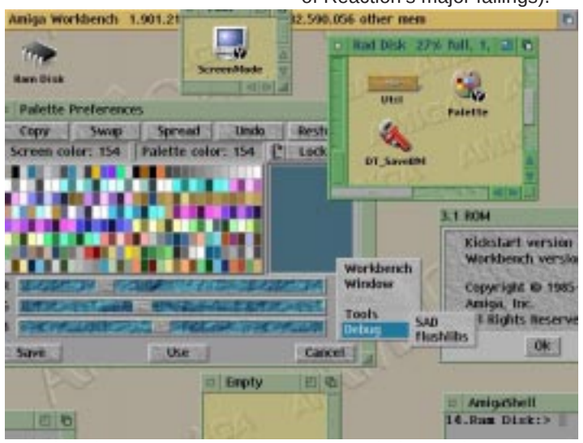
The signs are good, OS 4 really seems to be on its way and the developers are even telling us about it! Robert Williams tries to sum up all the news since the last issue!

Since the last issue quite a lot of information has been made public about the development of OS 4, both by Amiga themselves and by Hyperion who are in charge of the OS development. In particular Ben Hermans of Hyperion has been active on Amiga news websites and discussion boards explaining aspects of the new OS and quashing the wilder rumours and speculation. In this article I will try to distil the numerous announcements and comments to give you an idea of what to expect from the new OS.

The new OS 4 TCP/IP stack, being developed by Olaf Barthel, has been tested and benchmarks suggest it will be the fastest stack yet seen on the Amiga. The stack will also include SSL version 2 so secure connection support can be built into network programs easily without relying on a third-party solution like Miami SSL.

As I mentioned in the last issue there will be a new PPC native version of the Amiga's Fast File System which will support long filename and hard disks greater than 4Gb. Repair and data salvage tools will be shipped with the OS which will work on FFS2 and the popular freeware Smart File System (SFS). In addition to the new FFS2 there will also be PPC native CD-ROM filesystem this will support Rockridge and Joiliet extensions so CDs from Windows and other platforms should be fully readable. THE CDFS will also handle multisession, Video CD and CDDA (audio) discs. We don't know yet whether the CDDA support means that the audio tracks will be presented as files on the disk for ripping. The developers also hope to support mixed mode and HFS (Macintosh) format CDs too.

Reaction will remain the official GUI engine of OS 4 and work is being done to make it more flexible and powerful. Many new classes (these are the basic elements from which a GUI is built such as gadgets, windows etc.) are being developed, drag and drop support is being added throughout the system (the lack of d 'n' d has always been one of Reaction's major failings).



In this shot you can see some custom window gadgets in use along with another menu style.

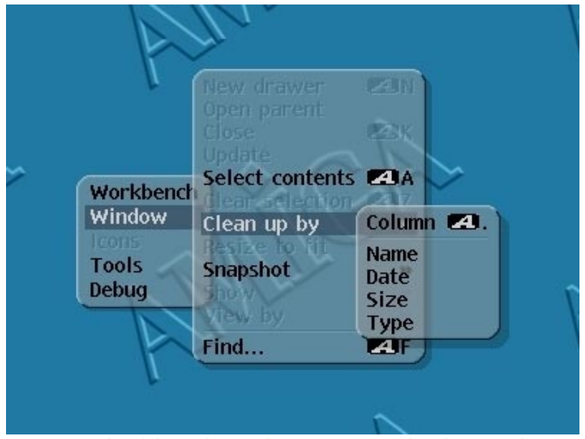
The overall look and feel of the OS is being worked on by a team including the designer of GlowIcons, Matt Chaput. Amiga say they intend the OS to look "modern and unique" and we believe this make-over will include new system icons (in window borders) and probably much more.

Massimo Tantignone, the author of the popular Visual Prefs package, is working on enhancements to Intuition the noticeable results of these changes will be configurable window boarders and a new menu system amongst others. The new system is said to incorporate the functionality of the popular utilities birdie (patterned window borders), Magic Menu (pop-up and customiseable menus) and Visual Prefs but built into the system rather than as hacks which can cause instability. The first screenshots of OS 4 were published on the Internet recently and they show some of the changes to Intuition. The examples include pop-up menus some with transparency and several different window gadget design. When you look at these pictures remember that this is not the final default look that will ship with OS4 (which will include the Matt Chaput designed graphics I mentioned earlier) and that the whole point of these changes is that you will be able to change to look of the OS to your taste. You can see some of the screenshots on this page and in colour on the back cover. One interesting fact to note is that the shots show windows overlapping the edge of the screen which is not possible on the current AmigaOS without a hack... whether this will be a feature of the new OS remains to be seen.

Users of OS 3.9 will be pleased to hear that a PPC native version of AmiDock, the program launcher that rapidly gained favour with Amigans after 3.9's release, is in the works for OS 4. Other areas that will be enhanced and made PPC native include the shell (we probably got a taster of the changes with OS43.9 Boing Bag 2) and the Datatypes system. Oliver Roberts is working on PPC native datatypes which will be included with the OS. In the initial release the datatypes system will be an upgraded PPC native version of the existing system, but in 4.1 or 4.2 a major overhaul is planned, Hyperion will to work with Amiga to take advantage of datatypes work done for AmigaDE. We anticipate that the 4.1/2 datatypes will include support for streaming media such as movie and music files.

Amiga Input is a new feature for OS 4 which will provide software developers with a common way to access input devices such as joysticks, mice and keyboards however they are attached to the computer. This should prove a boon particularly to game developers who will be able to give users access to the myriad of available controllers without supporting each individually. It is also important for supporting new hardware which won't have the standard Amiga joystick and mouse ports. On the new machines Amiga Input will be able to access USB devices via the stack previously announced.

One of the weaker areas of the AmigaOS has always been font support, with the native system only supporting Comugraphic outline fonts many applications have gone



An example of the enhanced menu system showing translucent pop-up menus with rounded corners. This will all be part of the OS, no hacks required!

their own way for font support. In OS 4 TrueType (very popular as they are used by both MacOS and Windows) and OpenType fonts will be supported. The core libraries that make up the font system "diskfont.library" and "bullet.library" will also be re-implemented and reworked hopefully improving their speed. 12 TrueType fonts will be included with the OS4.0 under a contract with Agfa, we understand some of these mirror the standard Windows fonts which should help in document Interchange. OS 4 should also see the introduction of some Unicode support with full support planned for 4.1. Unicode enables a greater number of characters to be represented and should improve support for languages which don't use the standard Latin characters used in western Europe.

Some of the most interesting and surprising announcements of recent weeks have been about the software that will be bundled with OS 4.0 rather than parts of the OS itself. A new version of IBrowse, 2.3, will be included with the OS. The new version has been in development for some time and Ben Hermans has stated that it will be more stable and have much better JavaScript support than previous releases. According to the developers on the IBrowse mailing list a cut-down version of the full 2.3 release will be included with OS 4 but it will still be a useable browser. IBrowse 2.3 will still use the Magic User Interface and along with the 2.3 announcement came the news that a PPC native version of MUI will ship with OS 4. The OS 4 release will be compiled from the latest MUI sources and should have some new features over the current 3.8 release version, the shareware status of the included version has not been announced. It should be noted that this does not make MUI the GUI standard for OS4, that's still Reaction as mentioned earlier but this move should mean that the many MUI applications available are all improved and accelerated under OS 4. Another surprise was that Hyperion have acquired the rights to further develop Directory Opus 5, a PPC port is expected but exactly how this will be included with the OS (or not) has not been announced. Finally OS 4 will also ship with a "lite" version of the sound editing application Audio Evolution.

The development environment for OS 4 will be the open source GCC C and C++ compiler with full debugger support. It has also been announced that Olaf Barthel is working on a new edition of the ROM Kernal Manuals (RKMs) which were Commodore's bible for Amiga developers but were last updated for AmigaOS 2! Another exciting development on the coding side of things is that Thomas Richter is working on a rewrite of AREXX which he calls PREXX, this is excellent news as AREXX was not developed by Commodore and there were rumours that C= did not own the source code to make an updated or PPC version possible. With a complete rewrite this should no longer be an issue.

The 68k emulation that will be used to run existing Amiga applications and parts of the OS which have not been ported to PPC has been announced, it is called Project Petunia and is being developed by Álmos Rajnai. Some initial benchmarks for the emulation running on existing PPC hardware under WarpOS have been published and are already impressive with up to twice the speed of an 060/50Mhz being achieved on a 233Mhz 604e. Bearing in mind that this is running on a CyberStorm PPC which has relatively slow RAM and is still suffering context switches to the 68k this is impressive and bodes well for performance when no 68k processor is available, it should really fly on a system like the AmigaOne which has a much faster processor and memory bus.

In addition to the software announcements Amiga have been clarifying how OS4 will be distributed. While the OS will be available to buy for those with existing CyberStorm and Blizzard PPC accelerators in the main it will only be available with new hardware. Amiga have decided they must take measures to ensure that AmigaOS 4, the hardware it ships with and the support provided by the supplier are of top quality. The support will include the delivery, replacement, repair and turnaround that the supplier can provide. Amiga Inc. will review the capabilities of the product and the supplier before granting them a license to ship OS4 with their product.

To ensure that OS4 is not shipped with unapproved products and to reduce piracy Amiga will insist that OS4 specific ROM extensions are included in the hardware's boot ROM. All devices that ship with these ROM extensions will have to be sold with a copy of AmigaOS 4. That said it will be possible for manufacturers to omit the Amiga extensions and sell the same hardware into other markets without OS 4. Eyetech have said that they hope to sell the AmigaOne G3-SE (under a different name) to Linux users in this way, they say an OS4 and ROM pack may be available in the future to allow these users to purchase to OS4.

The news about OS 4 is now getting really exciting and I know a number of Amiga users (including myself) who are feeling more confident than they have in a long time that something good is about to happen to our favourite platform. While things do seem to be taking a little longer than originally expected (which is hardly surprising given the scope of the work to be done) the regular updates mean that we can all see that things are happening and it will be worth the wait.

Wanna Know More?

For more information keep your eye on the Amiga news websites and take a look at these pages:

Information about the Petunia 68k emulator and the benchmarks I mentioned:
http://www.amiga.hu/amigos/rachy/petunia.html

Bill McEwen's executive updates on OS 4 progress:
http://www.amiga.com/corporate/041202-mcewen.shtml

Download the MP3 recording of a news conference with Ben Hermans of Hyperion at Amiga Expo in the USA:
http://vgr.tc3net.com/hyperion/Amiga-Expo-2002-hyperion.mp3

Amiga, who's the moron?

Does Amiga's recent agreement with Microsoft spell the end of our favourite name in computing, Michael Carillo, Total Amiga's new promo man, doesn't think so! (and by the way, it's not Gordon!)

Many of you will have heard or read by now the shocking news that Amiga have jumped into bed with Microsoft. A company so reviled by the Amiga community at large that should a Microsoft Employee attend an Amiga show, nothing would be left of that person except perhaps a few blood stains.

If like me, when you heard the news officially, your blood pressure must have jumped several points. Speaking for myself, I was so incensed I emailed Fleecy Moss and Gary Peake directly and uttered words of pure venom. (Well not quite, but you get the picture). As a result of the announcement a few not so well known Amiga related websites and user groups have decided that they no longer want to be associated with Amiga and have removed all links from their sites.

It's easy to see why, many Amiga users see that Amiga have decided to concentrate their "core" time and investment on their Amiga Anywhere (tm) products.

For many in the Amiga community this is tantamount to a betrayal of the beliefs and the loss of the moral war against the mighty Beast from Redmond. It is a sacrifice too far for the Amiga community, i.e. us, who for years have suffered dwindling numbers, products, retailers, and more importantly the computing limelight.

Thanks to the incompetent board of Commodore we are now perceived as the computing world's equivalent of the Flat Earth Society. After having our hopes dashed by Escom and Gateway. Now all our hopes are pinned on the current Amiga owners, previously known as Amino developments.

However, the current Amiga owners just don`t seem to give a damn about us, we are only getting the AmigaOne and AmigaOS4.0 via third party contractors.

It's with a big thanks to the Eyetech Group and Hyperion Entertainment, who have taken a huge financial risk by financing the projects themselves with no backing from Amiga at all. All Amiga are contributing temporarily is the licensing rights to the brand name, allowing these third party companies to produce the goods and for Amiga to get a cut from sales. Nice.

Once upon a long ago, the name Amiga, was the byword for a fast and elegant, compact, multi-tasking machine. Sadly those days are long, long, gone. "What's an Amiga?" Is the most common reaction I get when I am out shopping for a generic computing peripheral. Most annoyingly still, is the little smirk on some smart-ass shop assistant's face when the word "Amiga" is brought up.

Take the Amiga 500 and 500+ a wonderful ground breaking machine for the masses. In reality Joe Public only viewed it as a technological jump from the Commodore 64, Spectrums etc machines of the time. They didn't know about it's wonderful multitasking capabilities. All these machines were used for was to play floppy based games on. Face facts, to the vast majority of Amiga owners, the Amiga was only a games machine. The nearest they ever got to using the wonderful, multitasking Workbench was to format a floppy!

When Sega and Nintendo brought out their instant loading mega licensing games to the public, the Amiga, thanks to Commodore (whose marketing was inept to say the least) was yesterdays's news. Despite some successes with the A1200 (won't mention the A600 disaster) and the CD32, users were won over by the games consoles and by the MS/PC alliance.

Wisely perhaps, the new owners of Amiga looked at the current market and decided that, with the current amount of existing users, re-launching the Amiga into a virtual monopoly marketplace that is Sony-Playstation/Microsoft PC/X-Box is tantamount to suicide. Just to get the number of Amiga users to the same levels as, say, the Apple Mac or Linux Markets, would require more capital in advertising hype than the national debt of Mexico and possibly the whole sum worth of Imelda Marcus's infamous shoe collection. - Which is way more than the tuppence and ha' penny that Amiga currently have.

Let's talk candidly here, how many active Amiga users are there left in the world? You and me? 5,000? 10,000? 100,000? 1m+? (If you said 1m+ please go and have a full frontal lobotomy right now.) No sadly, I don't know the answer to that one myself, but I do know that most Amiga retailers and developers put the figure at an optimistic 10,000 active users, by that, they mean people who are willing to occasionally buy something.

The gulling thing is that most companies, especially games companies, struggle to sell at least 1000 copies of any single product on the Amiga platform. For example it is widely believed that companies like Hyperion struggle to reach sales of 1000 copies on most of their products. How sad is that? Clearly from Amiga's point of view, investing in the current Amiga market would be like buying shares in Enron or Marconi right now.

Another indicator of how successful a computing platform currently is, are by the number of magazines available to buy at the moment in a shop. For the PC and Consoles -dozens, you can't move for them, even the Mac and the Linux communities also have magazines on sale and on the shelves. The Amiga has none in the UK and at most, one in other non English speaking countries. The last world wide mass circulation Amiga magazine, Amiga Active had to change name and direction just so that the publisher could stay afloat. At the close, Amiga Active was losing monies on a mere circulation of around 4000 or less.

Time to wake up and smell the coffee.

Let's be brutally honest, Amiga are not going to get rich or indeed turn a profit from the AmigaOne or AmigaOS4.0 royalties, it's not a sustainable market and anyone who thinks it is, is purely under a misapprehension. Having spoken to those in the know, if Amiga get between 20k-50k back from the current Amiga market for AOS4.0 and AmigaOne, they will be lucky.

Amiga haven't necessarily abandoned the Amiga we all know and love, they are using a two pronged attack to achieve their means to an end. By promoting their Amiga Anywhere product (which if you have seen the Bill McEwen's, TechTV infommercial is very impressive) to the masses, it gains Amiga the advantage of brand recognition. This in turn will lead to more developers wanting to work with Amiga because they have been given the "royal" Microsoft ascension. Providing Amiga a very much needed revenue stream to develop OS4.x into the combined AOS5.0 and Amiga Anywhere (tm) technology.

Deep down most of us, apart from a few idiots, realise that the classic Amiga architecture, with a few exceptions, is dead. It's too old, too limited, and too tied down to what was once awe inspiring hardware. The Amiga zealots (myself included) who want a brand new dilithium matrix, holographic computer are leaving in dreamland. This is not to say that Amiga probably don`t have very radical plans for both Hardware and software, rather they need the money to develop them, and to move forwards with OS5, where both products, OS+Amiga Anywhere (tm) will be merged into one seamless environment. In other words, Amiga Anywhere (tm) will be merged so deep within the AmigaOS5 core that the difference will be unnoticeable, pretty much like clicking on an Icon in OS3.9 right now to and running Wordworth, DrawStudio, Photogenics etc.

The plus point for Amiga and it's users is that there should be plenty of ported applications for Amiga Anywhere (tm) and later, Amiga OS5, from the top names in computing, thanks to the Amiga/Microsoft tie up deal. Many of us may not like the tie up, but when you think about it, it's a good idea, it's a means to an end because as I have stated before, with Amiga getting the MS approval, other companies will talk to them directly without fear of reprisals.

For now the path to a new future has been laid down with the eagerly anticipated PPC based releases of the AmigaOne and AmigaOS4.0. In the future Amiga will be looking to sell their products in pretty much the way Sun looks at Java and Solaris. The AmigaOS5 will be a standalone product that runs on many different types of desktop/workstation and servers - it won't run on top of other OSs - just like Solaris. Amiga Anywhere (tm) will continue to be a total content solution - it isn't designed to be a workstation or server capable product and Amiga don't intend to mess with it.

The trick here is to ensure that the "masses" i.e. Joe Public, will not think of Amiga Anywhere (tm) as another "Games Machine" or environment, thus dooming Amiga to repeat the mistakes of it's predecessors.

So finally, we come full circle, who are the morons? The Zealots like myself who wish to see only an AmigaOS and a new Amiga machine, whilst anything else is blasphemy? Or is it Amiga for wanting to deliver us from all the mistakes the computing world has made in the last 15 years?

Acknowledgements

The author of this article would like to publicly thank the person(s) who contributed to this article. As requested names have been withheld.

Cables, Cables all Around?

Is your case congested with ribbon cables? Paul Qureshi has the answer.

The end result looks good and should improve air flow.

In the world of overclocking, people will do anything to get the last bit of speed out of their systems. The biggest problem they face is overheating, and so cooling becomes very important to them. In particular, air flow in a cramped and packed tower case can be a problem, not least because of all the large flat ribbon cables needed to run hard drives, floppy drives, CDROMs and more.

To get around this problem, a few brave people started to round their ribbon cables off. This proved to be a reliable way of improving fair flow, so it soon became very popular. While the average Amiga user has far less to worry about in terms of heat, cable rounding is still useful for those of us running Voodoo cards and PPCs. Having rounded cables also looks quite neat and makes routing all those connections a bit easier.

So, what do you need to create a rounded cable? Well, obviously you need a cable, and almost any will do, be it IDE, SCSI, floppy or almost anything else. You will also need a craft knife, and some cable ties.

Start by straightening the cable out and laying it down flat. To make the cable round, you have to cut the ribbon into strands. It's usually best to have two or three wires to a strand, but you can have more. Cutting out individual wires is not recommended, because the cable will then be prone to breaking and it's also a lot more work! Carefully position the knife blade over the gap between two wires, and gently push down. The cable should split easily. Make a cut about one or two centimetres long, and you should then be able to remove the knife and pull the two parts of the cable apart with your fingers. Don't split it all the way along just yet, but finish cutting all the other strands apart first.

Splitting the cable is easy as long as you take care.

Once you have finished cutting, carefully look at the cable from both sides. Make sure you have not split the wires, if you can see any bare parts just cover them with electrical tape. With a little practice you should be able to do an entire cable without splitting one wire. Once you are sure everything is okay, pull the strands apart as described above, all the way to the ends of the cable where the plastic connectors are clipped on. At this point your cable will look like a complete mess, so use some cable ties to hold the strands together.

What you do next is up to you. You could simply use cable ties to hold everything together, or you could try for a more pleasing look by using some tubing. There are two kinds commonly available, a wrap type and a split tube type. The wrap type is okay, but the tube type provides better protection and is my personal preference. It comes in various sizes and costs around 50p per meter from car audio shops.

Features

x86 Amiga Emulators

Amiga emulators are no longer a laughing matter, efficient JIT 68k CPU emulation running on fast inexpensive hardware is a compelling combination. Robert Williams finds it's time to get serious!

It wasn't long ago that Amiga emulators running on x86 based PC systems were seen by the Amiga community as a toy for retro gamers, and a bit of a joke for serious applications. At that time, emulations were so slow that the fastest PC system had trouble competing with an '030 based Amiga. However with the release of a Just In Time (JIT) 680x0 emulation engine for the most popular emulator, UAE, all that changed. Put simply JIT emulation caches code which has been translated for the host processor so it only needs to be translated once. As most programs consist of similar blocks of code run over and over again this technique greatly increases the speed of the emulation. Even on relatively lowly and thus inexpensive PC hardware the JIT based emulators can achieve speeds several times that of an '060 based Amiga and in some cases can exceed the speed of PPC compiled software on the current PowerUP cards.

Amiga Chipset Emulation

There are two approaches to Amiga chipset emulation. The one that is used by UAE and most of the earlier emulations is to emulate the Amiga hardware as closely as possible. This enables most programs including those which access the hardware directly, avoiding the OS, to run under the emulation. However emulating the Amiga's complex custom hardware is a time consuming business which steals CPU time away from the processor emulation. In UAE some of the more processor intensive emulation features, for example paula sound emulation can be disabled to speed up the processor emulation. The other approach is to only emulate those aspects of the Amiga hardware that are necessary for the OS to run, this is how Amithlon works. As graphics and sound can be supported by retargetable systems such as Picasso 96 and AHI respectively both these areas of the chipset emulation can be removed. This approach leaves more processor time to the emulation, speeding it up, but has the disadvantage that programs requiring the chipset, for example older games and video applications will not run.

Emulation Approaches

Getting the AmigaOS to run on generic PC hardware through emulation directly would be a major and continuing challenge due to the very large number of PC component manufacturers in the market. There are more producers of major components like motherboard chipsets, graphics cards and sound cards not to mention more minor peripherals than you can shake a stick at and to make matters worse new models are being released all the time. So all the x86 Amiga emulators run on top of an existing operating system and that deals with compatibility with the underlying hardware. UAE is an open source project that has been ported to many types of hardware and operating systems. Amiga XL and Amiga Forever which use UAE to provide their emulation run on top of QNX and Windows respectively. In this way they not only take advantage of the hardware support of the host OS but also allow users to access its native software. Again Amithlon uses a rather different approach, although it does run on a Linux operating system it only uses a modified kernal (the core of an operating system which interfaces the basic hardware and controls services like memory management), the only program running is Amithlon and you can't run other Linux applications.

The extent to which the host OS is used is one of the factors that controls how close the emulation comes to feeling like a real hardware Amiga. For example both Amiga XL and Amiga Forever don't allow much direct access to the PC's hardware. This means you can't run Amiga scanner or CD burning software because they have to access the hardware they control (a scanner or CD writer) directly. Similarly Amiga XL and Amiga Forever let the emulated Amiga access a network or the Internet via the PC's connection so you can't run an Amiga TCP/IP stack like Miami or Genesis on them. Amithlon on the other hand allows all this Amiga software to be used so it feels much more like a real Amiga. However this also means it has some of the Amiga's disadvantages, only hardware supported by Amiga drivers or drivers especially written for Amithlon will work well with it (there are some exceptions which I'll discuss in more detail in the review).

Graphics

One of the key features that was added to UAE and helped it to become a useful product for serious Amiga users was support for Picasso 96. Before this support the emulator could only display Amiga chipset screenmodes, with Picasso 96 the emulation can make full use of the host platform's graphics card. With Amiga XL and Amiga Forever Amiga screens are displayed via the host OS's graphics card drivers meaning a whole range of cards are supported, some far more powerful than those found on the Amiga. The only limitation is that there is no 3D support as the card isn't being accessed directly. Again on Amithlon things are handled a little differently, for best performance you must have a graphics card that is supported by the emulation. Other cards will work but you are limited to one screenmode per session.

Kickstart ROMs

All Amiga emulators require a copy of the Amiga's Kickstart ROM (which holds the basic routines needed to boot the machine, access floppy and hard disks etc.) in the form of a file. All the emulators we review in this feature include the ROMs you need as part of the package. If you download the free UAE then you can dump your ROMs from a working Amiga with a supplied utility. Also needed is a copy of the AmigaOS, just like a hardware Amiga you will need the correct ROMs for the version of the OS you wish to run.

Floppies

Amiga floppy disks use a format that cannot be read by standard PC floppy disk controllers so none of these emulators directly support reading Amiga floppies. They can read PC formatted floppies if a suitable file system is installed on the emulated Amiga. UAE and therefore Amiga Forever does allow floppy disk based programs can to be loaded, including those such as games distributed on bootable disks. This is achieved by converting the disk to a file called an ADF (Amiga DIsk File) on a real Amiga and transferring the file to the PC. The emulator then allows an ADF file to be associated with each floppy drive and the emulated Amiga will think the disk has be inserted. Because it doesn't have so much of an underlying OS Amithlon does not support floppies in this manner but as it also doesn't support the chipset which is needed for most programs that need to be booted from disk it isn't so important.

Hard Disks

UAE itself gives the emulated Amiga one or more hard disk partitions each of which maps to file on the PC's drive. This approach is taken by Amiga Forever and Amiga XL. Amithlon requires you to setup a partition on the PC disk for the Amiga to use. Both Amiga XL and Amithlon also offer the option of plugging in an existing Amiga formatted hard disk and using it directly. One interesting point is that all the emulations benefit from the fast IDE interface built into modern PC's so you can use inexpensive large hard drives at speeds unheard of on Amigas without a fast DMA SCSI controller and expensive SCSI drives.

For other types of drive such as CD-ROMs Amiga Forever provides support through Windows, its host OS where as Amiga XL and Amithlon use a device driver and file system.

Reviews

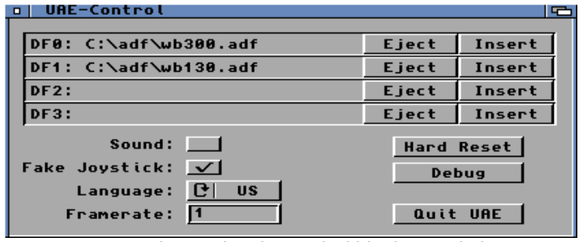
So now we come to the review of the two commercial emulation packages, Amiga Forever 5 from Cloanto and AmigaOS XL from Haage and Partner. Eyetech has very kindly lent us one of their ultra compact SpaceWalker PC systems to review these x86 emulators, it should be noted that while this system is fine for running Amiga Forever and Amiga XL it is not ideal for Amithlon as several of its components are not supported by the emulation. Fortunately by adding a compatible network card we were able to get it to work well enough to review, I have tried to take into account these problems in the Amithlon review. Take a look at our mini review of this system on page XX to get an idea of how it compares to your PC system (if you have one).

Amiga Forever 5

To describe Amiga Forever 5 as a bundle of the Windows port of the open source UAE emulator and a licensed copy of AmigaOS would be an injustice although those are the main parts of the package. The first thing that strikes you about AF5 is that it is very professional, from the slick packaging to the extensive on-line documentation. When you insert the CD into a PC running Windows an attractive launcher window opens allowing you to install the emulator or run it directly from the CD.

The launcher reveals the first unique feature of Amiga Forever, it includes several versions of Kickstart and Workbench so you can easily boot the Emulator into a compatible version for the software you want to run. Four default configurations are available, 1.3, 1.3 without sound, 3.1, and 3.1 without sound. The without sound configurations are available because sound uses lots of processor power to emulate. In addition to 1.3 and 3.1 the package also includes OS versions 1.0, 1.1, 1.2, 2.0, 2.04, 2.1 and 3.0 which you can configure manually so whichever version you'd like to revisit or your software requires it will be here. Amiga Forever doesn't include the latest 3.5 or 3.9 versions of the AmigaOS but there's no reason why these couldn't be installed on the emulated Amiga.

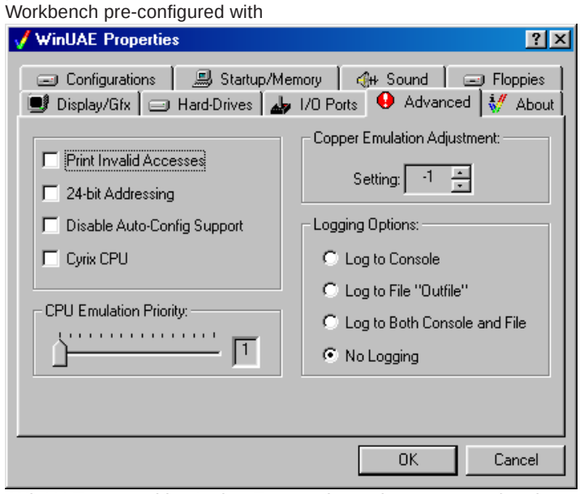
When you start AF in one of the 3.1 configurations you are presented with an attractive Workbench pre-configured with



Some options to be changed within the emulation.

Glow Icons, a backdrop picture and a Tool Manager toolbar for easy access to the pre-installed software and utilities. If you're happy with this ready to roll configuration, fine, otherwise there are tips on moving an existing Amiga system to Amiga Forever in the documentation. The 1.3 configurations boot up from a Workbench 1.3 virtual floppy disk file (ADF), providing you with the standard 1.3 environment.

The WinUAE emulator used by Amiga Forever includes a wide range of options in an attractive configuration GUI. This allows you to tailor many aspects of the emulation to your requirements, for example the CPU type that is emulated, the amount of memory available and the trade off between accuracy of emulation (required for software that "hits the hardware") and speed. An excellent feature of the GUI is that you can set up a number of saved configurations and then easily choose which one you wish to boot into when you start the emulation. This is how the Amiga Forever launcher provides its different OS version and performance options.



WinUAE as used by Amiga Forever has a huge range of options. Luckily a number of preset configurations are supplied.

Once in the emulation a utility called UAE-Control is included which enables you to change a subset of the settings without dropping into Windows. These include the ADF file that is "inserted" into each of the Amiga's 4 floppy disk drives, whether sound is enabled and what keymap is in use. There are also buttons to perform a hard reset within the emulation or quit it altogether.

Directories on the PC's hard disk can be made available as a device on the Amiga, for example Art: could map to C:\Graphics\Art\ on the PC, it is also possible to access PC removable devices in this way, for example CD-ROM: could map to D:\. However when devices are mapped you have to take into account the different limitations of the Windows and Amiga file systems. For example different characters are invalid for within filenames, some Amiga protection bits are not supported and the maximum filename lengths are different. If you want something more like a "real" Amiga hard disk you can make a hard file, this is a file on the PC's hard drive that looks to the Amiga like a separate hard disk partition and thus does not have any foreign filesystem limitations. The disadvantage to this is that it is not so easy to access from Windows. All these issues are explained in detail in the documentation and most people will probably end up with a combination of the two types.

Network access uses the uses the Windows TCP/IP stack so you can run Amiga network applications without launching a stack like Miami or Genesis on the Amiga. This means you can use network applications on Windows and within the Amiga emulation simultaneously, for example surfing the web in Internet Explorer while downloading EMail in YAM. The emulated Amiga can be configured to print directly to the

PC's parallel port but it won't take advantage of Windows printer drivers so you'll still need the proper driver for your printer installed on the emulated Amiga.

Amiga Forever includes a the very useful utility, Amiga Explorer. This is designed to let you access an Amiga connected to your PC from within Windows. As the name suggests the program uses an interface that is very similar to the Windows' Explorer file manager with a list tree of the available disks (both local and on the remote Amiga) down the left hand side. Amiga Explorer can connect to the remote Amiga either via TCP/IP (over Ethernet for example) or via a null modem cable connected between the serial ports of the computers. One major problem for anyone with an Amiga with less than AmigaOS 2.1 is that they have no way to read PC disks, in that case how are they to get the Amiga parts of Amiga Explorer on to their Amiga? Very cleverly Cloanto have worked out a way to transfer the Amiga parts of AE to the remote Amiga without additional software, all that is needed is a null-modem connection and a Workbench disk for the Amiga. In addition to transferring files from the remote Amiga's disks (floppies, hard disks, CDs etc.) Amiga Explorer can also create ADF files from the disk in the Amiga's floppy drive, making the attached Amiga into a, somewhat complex, Amiga compatible disk drive for the PC. Another useful feature of Amiga Explorer is that it can connect to the emulated Amiga, allowing you to access the hard files that cannot normally be read from Windows.

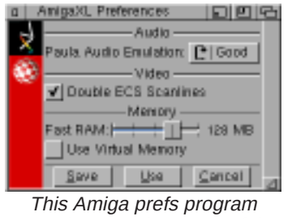
Running on top of Windows does seem to produce a few problems when working with Amiga Forever, as you might expect if you're multitasking other applications and disk swapping occurs this can slow things down. One annoyance I found was that because Windows doesn't support true "screens" when Amiga Forever is running full screen and you Alt-Tab back to Windows to run another application, closing that application will flip back to AF unexpectedly. This is just because Windows sees AF as the previous application and makes it active when the current app closes, it doesn't care that it is running full screen. When installing some applications directly from CD-ROM I did find some problems due to the filesystem issues mentioned earlier, mainly with files having the incorrect protection bits set.

In addition to UAE, AmigaOS and Amiga Explorer the AF5 package includes a number of other goodies on the CD. There are full versions of Cloanto's art program, Personal Paint 7.1, Directory Opus 5.5 and a number of useful utilities. A video interview with Jay Miner and Dave Haynie's Death Bed Vigil video about the last days of Commodore are both supplied in MPEG format, both are great for anyone interested in the Amiga's history. Although not supported by the launcher, versions of UAE are also provided for the Mac, PPCAmiga and 68k Amiga, basic setup instructions for these emulators are included.

Overall Amiga Forever 5 is an excellent and very polished product, in particular the readable and detailed HTML documentation deserves a special mention. There are only a very few minor problems which, to be honest, are inherent in Windows and not something Cloanto could do anything about. The package adds a great deal to the basic open source UAE emulator, not to mention the all important licensed ROMs and OS. Although it seems much cheaper than Amiga XL it is important to remember that Amiga Forever does not include AmigaOS 3.9. Running on top of the most common OS in the world does have many advantages but it certainly won't be for everyone.

AmigaOS XL

The AmigaOS XL package from Haage and partner contains two emulators, Amiga XL (note no "OS") and Amithlon. The emulators are supplied on a single CD which also includes



This Amiga prefs program controls several aspects of the emulation.

AmigaXL in action looks just like any other Amiga. Notice all the screenmodes available in screenmode prefs.

licensed copies of AmigaOS 3.9, Picasso 96, Amiga Writer 2.2, Art Effect 3 and Storm C 3. Also included in the package is a CD to install the QNX real time platform OS which is used with the Amiga XL emulator.

Amiga XL

For most people the first step in installing Amiga XL will be to install the QNX operating system on their PC. QNX's support for PC hardware is somewhere between the pretty universal support of Windows and the very limited set that works with Amithlon, it should work with most systems and you can check the compatibility lists on the QNX website. If you have Windows installed on your PC QNX has the option to install its boot drive as a file within windows or on a separate partition. The installation instructions on the AmigaOS XL CD (supplied in PDF and AmigaGuide format) suggest that a separate partition should be used, this can be either on its own drive or alongside another OS. If you have a free partition you can go ahead with the installation, otherwise the hard disk must be repartitioned. As no partitioning tools are supplied the manual suggests buying a tool like Partition Magic which can resize existing partitions without deleting all their data. Once a partition is prepared the operating system can be installed from the QNX CD supplied in the package. This is performed by booting from the CD and following a on-screen prompts. Most of the installation is automatic, you have to choose which partition you would like to use, there is also the option to install a boot loader that will let you choose which operating system you want to boot if you have an existing OS installed.

Once QNX is up and running you can install the Amiga XL emulator itself, the installation is carried out by QNX's Package Installer utility which is the way all programs are installed on this OS. Once installed the emulation can be started from the shell, added to the Shelf (the QNX equivalent of AmiDock) and be set to run at start-up if required.

The installation creates two Amiga partitions for the emulation, Workbench and Work, which are mapped to directories in the QNX file system. This means Amiga files can be accessed from QNX but you can't access the QNX drive from the Amiga. According to Amiga XL's developers the QNX file system is reliable a resistant to errors so using it in this way means that the emulated Amiga benefits from these advantages too. Amiga XL also supports normal RDB formatted Amiga hard disks connected to the PC via IDE (SCSI may also be supported but it isn't mentioned in the docs) although you cannot boot from them as they are mounted by a special command (MountAmigaHDDs) in the start-up-sequence. CD-ROM drives and the PC floppy drive are accessed via the standard Amiga DOSDriver and filesystem combination, this means that for example all the Amiga protection bits are supported on CDs. As I mentioned earlier Amiga floppy disks are not supported and the documentation warns that even PC floppy support is currently buggy with disk changes not being recognised properly.

When you start Amiga XL for the first time it's nice to see that it is fully setup with an OS 3.9 installation on the System partition and the bundled programs installed on Work. A preferences program is provided which lets you alter several aspects of the emulation. The memory maximum available to the emulated Amiga can be changed, it is recommended you don't set this to more than half the RAM in your PC unless you opt to use virtual memory. This lets the Emulator take advantage of QNX's virtual memory system and swap unused areas of memory out to disk, however using virtual memory does slow the emulator down. Because virtual memory is handled outside the emulation it is completely transparent to Amiga applications. The accuracy of emulation of the Amiga's Paula sound chip can be controlled to balance quality and speed, or even disabled if required. Amiga XL comes with an AHI driver which interfaces with the QNX audio drivers this uses minimal CPU and is preferable if you have software that supports AHI.

Network access is via the QNX TCP/IP stack, this supports LAN connections via Ethernet cards and dial-up connections with a modem. Setup uses a GUI utility on the QNX side and simple instructions are provided for configuring a dial-up connection. Anyone who has setup networking before shouldn't have any problems. Once the network is online, network and Internet programs work on the Amiga just as if you were running a native TCP/IP stack.

A utility is provided on the emulated Amiga that can run programs under QNX, for example an icon is supplied that you double click to run the QNX web browser (which confusingly is called Voyager). QNX programs run in this way don't appear on the Amiga screen within the Emulation, they open on the QNX desktop. However when Amiga XL is running an Amiga like title bar and screen depth gadget is added to the top of the QNX desktop so you can swap easily between the two, this is a neat compromise.

Arguments can be passed to QNX programs called from the emulation enabling, for example, a movie file on the Amiga to be played using the QNX media player. The only limitation to this is that files must be on the emulated Amiga's virtual hard disk (not a CD-ROM or directly connected hard disk) for the QNX program to access them.

Compatibility with modern software seems to be very good, it ran all my commonly used programs. It is also possible to run programs like Scala and games that need the Amiga chipset. Unlike Amiga Forever you don't have the choice of different ROM and OS versions and there is no way to boot from a virtual floppy so Amiga XL isn't compatible with software that won't run from a hard drive or won't run on Kickstart 3.1.

In use we found Amiga XL to be slightly faster than Amiga Forever but significantly slower than Amithlon. It also felt smoother and more Amiga like than AF which may well be down to the light weight, real time nature of QNX. One area that was disappointing was the speed of the graphics card display, which felt slower than AF5 and the CyberVision PPC on my 3000. Moving large windows and scrolling graphics intensive web pages was a bit sluggish. I can only put this down to the QNX drivers for the graphics chip in the test PC not being as highly optimised as the Windows equivalents.

Amithlon

Of all the emulators Amithlon is the easiest to get started, you just set your PC to boot from CD, pop in the AmigaOS XL disc and switch on, after a few seconds a bouncing boing ball appears and in a few seconds more (assuming your hardware works with the emulation) a fully installed Workbench 3.9 appears. However at this stage the boot drive is located in memory so any changes you make will be lost with a reset. If you have an Amiga hard drive you can just plug it into the PC (both IDE and SCSI drives are supported) and it will be accessed by the virtual Amiga. If the hard drive has a bootable partition with a priority of 0 or greater the emulation will boot from that rather than the included RAM disk. If you want to boot Amithlon from hard disk rather than CD-ROM it rapidly goes from being the easiest to the most complex to get installed! Basically you need to end up with a bootable partition on the hard disk which will load the Linux kernal for Amithlon and then either a separate Amiga formatted hard disk or a partition on the main disk that is partitioned in such a way that Amithlon can use it as an Amiga disk.

This setup process is made much harder because the AmigaOS XL CD is severely lacking in any documentation on Amithlon, there is a short introductory readme which is repeated in the PDF documentation but not much else. To get it installed on hard disk and to find out about the setconfig commands in the start-up sequence which control many aspects of the emulation you need to visit the Author's website at http://www.amithlon.net. Even with the information there you'll need to be fairly confident with the Amiga and PC hardware to get it all working, the Amithlon mailing list on Yahoo Groups can also provide a lot of valuable assistance.

Because Amithlon only uses the kernal of the Linux operating system it needs Amiga drivers for many pieces of hardware that are supported automatically by the OS underneath the other two emulators. On the graphics front two families of boards are directly supported with drivers inside Amithlon, nVidia gForce 2 (gForce 3 isn't currently supported) and Matrox cards. AGP, PCI and integrated versions all work. Most other graphics cards will work (technically the card must have a VESA 2 fall back mode for it to work with Amithlon at all) but you are limited to one screen mode per session, which can be limiting especially if you have software that requires a particular screenmode. Unsupported cards do not benefit from hardware acceleration so they don't perform as well as supported cards either.

In other areas what hardware works is more cut and dried, sound is only supported via AHI, two drivers are supplied one for Sound Blaster 128 PCI cards and the other for the AC97 audio that is built into many motherboards using a VIA chipset. Realtek 8029 chipset based Ethernet cards are the only ones supported, fortunately this is the chipset used on many inexpensive 10Mb/s network cards which are widely available. Drivers for the built-in parallel and serial ports are included so printers and external modems can be used with the emulation. A utility called NallePUH is supplied that routes paula sound through AHI. This works with most programs and is handy if you have sound software you can't live without that doesn't use AHI. However while NallePUH is running no programs can access AHI to give sound output so it really is only a work around and

To run Amithlon all you need is to set your PC to boot from the AmigaOS XL CD. Installing it onto a hard disk is rather more difficult.

not something you would leave running all the time. On the Amithlon mailing list Bernie Meyer, the main author of Amithlon, has mentioned that a major update is being worked on that should include more drivers and better functionality on unsupported graphics cards.

At this point in time you have to be careful when buying a PC to use with Amithlon, all the supported components are widely available but you have to be careful to buy the right things.

Once Amithlon is up and running it feels very much like an Amiga with a graphics card, there is no sign of the underlying Linux kernal. Device access is available via the amithlon.device, Amiga software can “talk” directly to devices on the PC IDE ports or SCSI controllers. This means Amiga programs like MakeCD or ScanQuix will continue to work with Amithlon. You access your Internet provider or network via an Amiga TCP/IP stack with powercom.device for the PC’s serial port and powerne2k.device for the Ethernet card. Software that requires chipset screenmodes will not run but you can run a mode promotion program to force programs to run in the available screenmodes. Just like a real Amiga this process will work for some programs but not for those that “hit the hardware”.

On our test system Amithlon was clearly the fastest emulator by a very noticeable margin and for all the processor intensive operations we tried it stomped all over an ‘060 based “hardware” Amiga using ordinary 68K applications with no changes. On the unsupported graphics card of our test system the display was the slowest of the three emulators but still useable. In fact some operations like opening and moving windows were very quick but others like scrolling large pages and depth arranging windows were quite sluggish. I’m sure these problems would be resolved on a supported card where hardware acceleration would be used.

Conclusion

All the emulators we’ve reviewed here have their advantages and all of them run current Amiga applications very well, at speeds you won’t see on a real hardware 68k system. If you have a system with Windows and want an easy to install an emulator then Amiga Forever 5 would be a good choice. It is a very polished product with an excellent install procedure and very thorough documentation. The Amiga Explorer utility is also excellent and the way it can connect to an Amiga without copying software on Amiga disks is almost magical! The fact that AF5 runs on Windows will be an advantage to some people and a problem for others, but if you need Windows compatibility this is a great way of keeping your tried and trusted Amiga applications to hand. Although according to our benchmarks AF5 is slightly slower than XL it is not a significant amount.

Amiga XL is a fine emulator and works well and integrates better with QNX the AF5 does with Windows. The main problem is that QNX is rather like the AmigaOS in that it is limited in the software available, it seems to me that if you’re going to run on top of another OS it might as well be one that offers many additional applications you can’t get on the Amiga.

Amithlon has several negative points against it, it doesn’t emulate the chipset, supports far less PC hardware than the others which run on top of another OS and it is also pretty complex to install from scratch, especially alongside another OS. One big problem is the lack of documentation supplied with AmigaOS XL but even following the amithlon.net site it’s pretty tough. However once you get it installed on supported hardware the speed blows the other two away, it really brings a smile to your face when your existing 68k applications burst into life! Amithlon is the most like a real Amiga running on x86 hardware so if you like your current Amiga software (and it runs on a graphics card) and just wish it were faster then this is the one for you. Just be prepared to spec a PC for Amithlon choosing compatible components and take your time getting it setup.

SpaceWalker PC

Mini Review

We wouldn’t normally review PC hardware in Total Amiga but as Eyetech were kind enough to lend us one of their SpaceWalker PC systems for our x86 emulators round up we thought it was only fair to take a quick look at the system and its suitability for running these emulators.

The first thing you notice about the SpaceWalker is its diminutive size, it is only 2cm wider than a CD-ROM drive and about three times as tall. The case is also much shallower than a normal tower. The case is made entirely from aluminium which looks attractive and is also relatively light, Even the front panel is solid metal, a pleasant change from most plasticky cases.

Despite its size the system has a CD-ROM, floppy drive and a, 3.5” hard disk all built in. It is also well supplied with connectivity, USB, Firewire, 10/100Mb/s Ethernet, parallel and serial ports are all built-in to the motherboard as are the AC97 sound and S3 Savage 4 graphics chips. The down side of the small size is that expansion is extremely limited. There is only one PCI slot which on our review system was filled with a modem. With no AGP slot it will be difficult to upgrade the graphics card.

Emulator Compatibility

Starting with Amiga Forever, as you would expect all the system’s features are supported by Windows and therefore there are no problems running AF5 on the SpaceWalker. For AmigaXL again things work very well, the underlying QNX operating system supports all the Motherboard features including graphics, sound and USB and the emulator benefits from this, for example you can use a USB mouse. As far as I know the only feature not supported by QNX is Firewire. As I mentioned in my review the QNX drivers for the on-board graphics do seem slower than their Windows equivalents.

Amithlon is a very different kettle of fish, for a start the graphics chip is not supported meaning you can only have one screenmode per session. The sound is compatible but the Ethernet is not. With such limited expansion options it’s not even really possible to cure these problems by adding compatible PCI cards. Finally the review system was equipped with a Celeron processor when a full Pentium or Athlon is recommended for best Amithlon performance.

If you need a PC that will take up minimum space and will run Amiga Forever and AmigaXL in addition to other x86 operating systems then the SpaceWalker works well. However it is not suitable for Amithlon. It looks very attractive and feels solid and well built. While it doesn’t have a very high specification it is more than enough to run the emulators well and to handle productivity applications and Internet browsing.

Specifications

Processor: Intel Celeron 800Mhz
Memory: 256Mb SDRAM
Graphics Card: S3 Savage 4 Integrated
Sound Card: VIA AC97 Integrated
Ethernet: Realtek 10/100Mb/s Integrated
Hard Disk: 20Gb, 5400RPM

SpaceWalker systems are available from Eyetech with various specifications, see their advertisment on page 25 for details.

Reviews

.info

Developer
Grasshopper LLC
www.grasshopperllc.com

Distributor
Kicksoft
www.kicksoft.co.uk
+44 (0) 1737 219280

Price
Full Version.....£199.00
Upgrade from 4.0 ...£39.00
Upgrade from 3.x....£79.00

Version Reviewed
4.1.3.4

Compatibility
Requires:
Amiga OS 2 or later
8Mb RAM

Recommended
040 or 060 processor
32Mb RAM or more
Graphics card

Test System
A3000
CyberStorm PPC/060
CyberVision PPC
128Mb RAM
OS 3.9 Boing Bag 2
CyberGraphX 4.2pre11

PageStream

It's been a long wait but Robert Williams can't wait to get stuck into the latest version of the Amiga's top publishing application.

Total Amiga readers shouldn't need an introduction to PageStream, the Amiga publishing program used to produce the magazine and also for many years now, the only one of its type in the Amiga market. It's good to see that even though PageStream is now multi-platform the Amiga version is still heavily developed and right up to date with its PC and Macintosh counterparts. So here we are with the very latest version lets take a look at what it has to offer over 4.0 which we reviewed in issue 6.

Turning the Tables

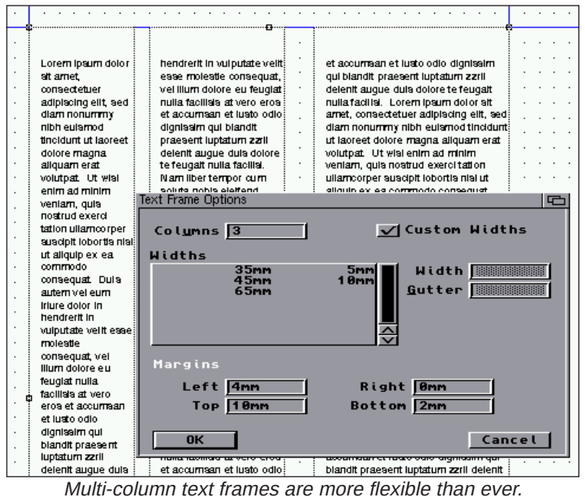
The biggest new feature in version 4.1 is the tables tool. In earlier versions of PageStream you had to create a table of data by hand, either using tabbed text or many separate text frames, this could be a long winded process especially if you ever wanted to make any alterations such as adding a new column. To add a table with the new table tool you just drag out a box on the page, initially the table is a simple 4 column by 4 row grid giving 16 cells in all. Text is entered into cells using the text tool, each cell works very much like a standard PageStream text frame so all the program's character and paragraph formatting options can be used within a table.

If you select the table using the object tool (the standard pointer) changing the line and fill options changes the table as a whole. The line weight and colour is applied to the border of the whole table and not the gridlines between cells, the fill is applied to the whole table. However, the fill only shows through behind cells which don't have their own fill colour set. Using the reshape tool you can select individual cells within the table, when a cell is selected the edit bar changes to a new table mode which displays the options for the selected cell. You can edit multiple cells by shift-clicking on them, but there's no way to drag select a group which can make formatting large tables rather slow going. With one or more cells selected there are options to adjust the line style of each cell border individually and the cell fill. The line style of each side of the cells in the selection has to be edited individually, this is another factor that slows down table editing. A good tip I found here is only to set the left and top styles because the right and bottom borders are usually obscured by the adjoining cell borders anyway. Cell border and fill use PageStream's standard line and fill requester with all its options available so, for example, you can have dashed cell borders and gradient fills if you so desire.

In table mode the edit palette also offers options to change the layout of the table. To start with you can add rows and columns to your table adding to the initial size, of course rows and columns can also be deleted. The width or height of the column or row respectively containing the selected cell can be changed, but this is only possible by entering a width in the edit palette, you can't drag the column borders with the mouse. Changing size of a column or row is accommodated by changing the overall size of the table, it doesn't effect the rest of the table layout. The size and

Above: an example showing some of the powerful table features.

Below: the edit palette in table cell editing mode, note the formula in the string gadget.



Multi-column text frames are more flexible than ever.

position of the whole table can be manipulated with the object tool, in this case you can use the mouse or the edit palette. Changing the size of the whole table causes all the cells to be scaled equally, keeping their proportions. A powerful feature is the ability to merge any rectangular selection of cells so it becomes a single cell, a merged cell is treated just like any other and can be split back into its component cells.

Finally tables can be used to perform calculations much like a simple spreadsheet. For calculations to work the values must be entered into each cell using a text field in the edit palette, the text tool can't be used. You can then enter a formula in the text field for another cell. Formula begins with an "=" sign and the format will be familiar to anyone who has used a spreadsheet, for example the formula "=F1+F2+F3" would add together the values in the 6th column of the table on rows 1, 2 and 3. Some functions are also available for more complex formulae, and you can specify ranges of cells using a colon so for example =sum(F1:F3) would be another way to write the formula mentioned earlier. Sadly the available functions are not yet documented, in addition to sum() I found that average(), min() and max() all work and there may well be others too. Again like a spreadsheet once the calculations are in place changing the values they use will cause the result to be recalculated. For this to work you must edit the values using the edit palette and not with the text tool, if you forget this it is possible for the values displayed not to match the calculations. The calculation engine seems to be the least developed aspect of tables support the main problem with it is that there is no way to set number formats, so you can't choose a set number of decimal places or whether values should have a symbol. This makes calculations involving currency, probably one of the major areas where this feature would be used, impossible to layout properly.

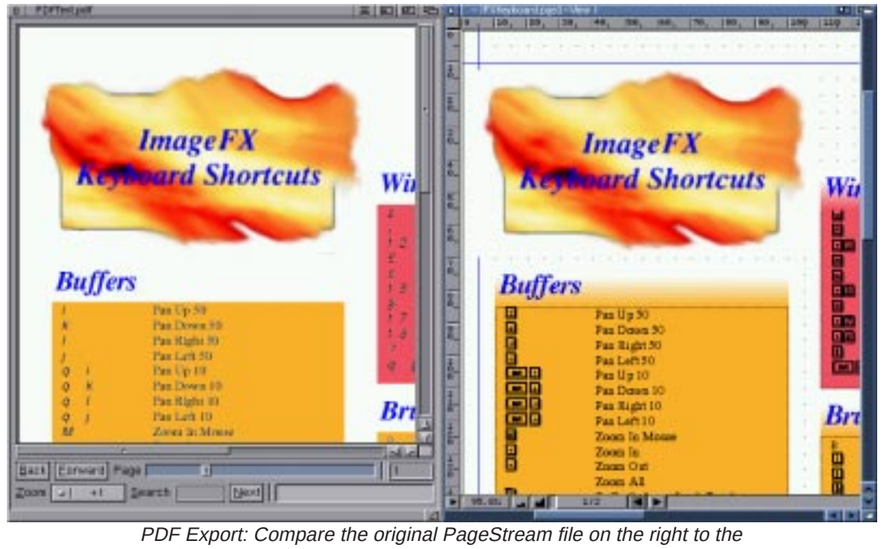
To sum up, the table editor is a very powerful feature and is streets ahead of any other Amiga program, if you've been disappointed with the limited tables in Final Writer or Wordworth then you'll almost certainly find PageStream's implementation will do what you want. I do feel more could be done to make it quicker to work with, currently formatting a large table is a rather laborious process, more mouse editing options would be a welcome start. That said it is still a big improvement over constructing the same layout by hand. The calculation features are a nice idea but for most uses I feel they need some further development, being able to edit values using the text tool would make it much quicker to work with and should remove a potential source of errors.

Text Column Borders

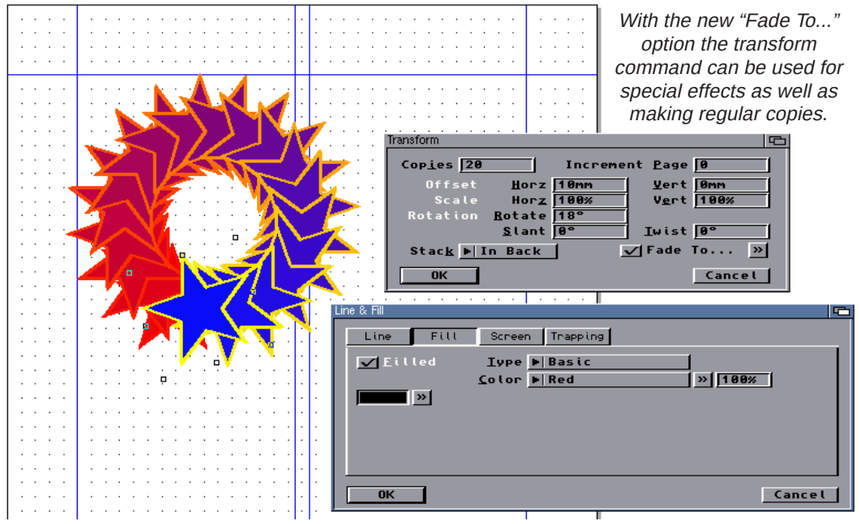
Text frames are used in PageStream to hold the main body text and therefore form the central part of any document, in fact the text you're reading now is laid out in a text frame. PageStream's text frames were already quite powerful, with multiple column support within a single frame but it's nice to see them getting some more attention in this update. Text columns within a text frame can now have an internal margin so the text in the column is spaced away from the edge, the margins can be set independently for each side of the column. This feature allows a border and background to be added to a column of text much more easily, before this feature a separate box had to be used with the desired line and fill settings unless you were happy for the text to be right up against the border. Multi-column text frames can now have a variable size columns and gutter (the space between the columns), previously all the columns were the same width and had the same gutter, this allows more complex layouts without using separate text frames which have to be manually linked. All these new features are accessed from an "FX" button in the edit palette when a text frame is selected.

PDF

Version 4.0 of PageStream was the first to offer Portable Document File export. PDF is a format intended to let documents be exchanged electronically while keeping their design and layout intact when viewed on a variety of computer platforms. The PDF exporter has been improved in version 4.1 to offer control over image compression so exported PDF files can be smaller with only a slight loss



PDF Export: Compare the original PageStream file on the right to the generated PDF document on the left. Notice the missing gradient fills and special fonts.



With the new "Fade To..." option the transform command can be used for special effects as well as making regular copies.

in the quality of images used in the document. The default path for the PDF output file can now be set in prefs saving some file requester work. Unfortunately some of the deficiencies of PageStream's PDF export still haven't been addressed. The biggest problem (for me at least) is that PageStream does not embed the fonts used in the document into PDF file. This means your document won't look as expected if the person viewing it doesn't have all the fonts you've used installed on their system. Another problem is that some objects are not included in the PDF file, these include gradient fills and EPS graphics. You can get over these problems by printing the document to a Postscript file and converting to PDF using an external utility like GhostScript of Acrobat Distiller (on a PC or Mac), but it's a pity the export doesn't support these features as it is much more straightforward.

Transformer

The transform tool is used to make multiple copies of selected objects, you can choose how the copies made are arranged. For version 4.1 copies can be made onto different pages so transform can be used to copy an object onto several document pages. You can now set the fill and line style of the last copy and PageStream will "fade" the colours in the intermediate copies. In combination with the new duplicate behind or in front option the fade allows you to make special effects using transform such as shadows and pesudo 3D. It's worth experimenting with the various transform options and different shapes as you can come up with some interesting results.

Mail Merge

Mail merge, which up to now has been implemented as an AREXX script, is built into PageStream 4.1. Mail merge takes a database of information and allows you to print documents based on that data, the most common use is to take a database of names and addresses and to create personalised letters based on a single template. This feature has been implemented using PageStream's variables system. First you create you template document and insert a variable wherever you want database information to appear, the variables can be named whatever you like. Once the template is ready you open the print window and select the new Mail Merge tab. Here you can choose the database file (I tried comma and tab separated files and both worked) and link the fields you want to include with the appropriate variable you created earlier. With that complete the document can be printed and a copy will be generated for each record in the database. It is possible to limit the merge to a range of records in the database but you need to know the record numbers in the database file. One important advantage of having mail merge built in is that it can now use PageStream's imposition features to print sheets of customised mailing labels, badges or business cards.. To do this you just set the page size to that of a single label (or card, whatever), setup the mail merge and then, on the Imposition tab of the print window, tell PageStream to print multiple copies across and down to fit the label sheet you're using. One gottcha I did find in mail merge is that your database file must have a blank line at the end of the final record won't be printed (someone almost didn't get their magazine last issue!).

Minor Marvels

A number of more minor changes and improvements have been made to PageStream in this upgrade. Text can now be selected with the keyboard using the arrow keys with shift held down. Undo has been improved so it now works on many more actions including deletion of complex objects, resizing grouped objects and moving pages in the document. Support has been added for character sets other than the standard Roman/Latin characters used in the UK, US and most of western Europe. Font encodings and keyboard mappings are supported and a number of mapping tables are now included and a new option in preferences allows you to select your character set.

Conclusion

Some of the new features in PageStream 4.1 are slightly rough around the edges but even so they are still useable and very useful. Both the table editor and the new text frame options add functionality that will probably be used by most PageStream users. Deron Kazamier at Grasshopper is actively working on PageStream and new versions with bug fixes and minor improvements are released regularly. Deron is also available on the PageStream mailing list and usually answers questions within a few days, there are also a lot of experienced users on the list to help out too. Altogether PageStream is one of the best supported Amiga applications. So to sum up this in my opinion this upgrade is already very worthwhile and there is a good chance that the minor grumbles I've had will be cleared up in the coming months.

Results

Pros
+ Powerful Table Editor.
+ Handy improvements to text frames.

Cons
- Table editing long winded.
- PDF export still needs improving.

Pretty Good!

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Charon

Charon continues where HTTPResume left off... it's a full download manager for the Amiga. Robert Williams warms up his modem!

You don't have to use the Internet for very long before you experience that sinking feeling when your connection drops ninety percent of the way through a large download! Most servers web (HTTP) and FTP servers on the Internet support resuming a download, this means a partially completed download can be continued from where it left off. Resume has to be supported by the downloading program as well as the server, on the Amiga it is supported by most FTP programs, on web browsers IBrowse 2.2 definitely resumes, I couldn't get it to work in AWeb (and resume is not mentioned as a feature in the docs) and I can't get the current beta of Voyager to download at all! Even if you have download software that supports resume there are still annoyances with big downloads, what if you want to switch off the Amiga and continue downloading another day? To do this you have to find the original URL, get it into your software, start the download again and make sure it resumes. Wouldn't it be easier if there were a utility to take care of this for you, a central downloader that remembers all your downloads and resumes them for you until they are done... Well there is and it's called Charon!

.info

Author
Andrija Antonijevic

Website
http://www.bigfoot.com/~TheAntony/Charon/

EMail
TheAntony@bigfoot.com

Price
15 Euro (about £10)

Registration
On-line via "Share It!"

Requirements
MUI 3.8
TCP/IP Stack

Version Reviewed
1.98

Interface

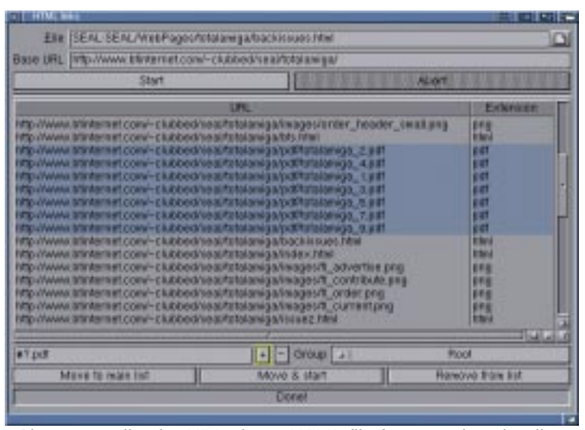
Charon uses MUI for its interface so you will need to have it installed along with NList and NListTree custom classes. The main window contains a list of the current downloads, and information about their progress and status. Below the list is a toolbar of seven buttons for quick access to the common operations, like adding a download, starting, pausing or editing existing ones. Other features are available in the pull down menus.

Starting a Download

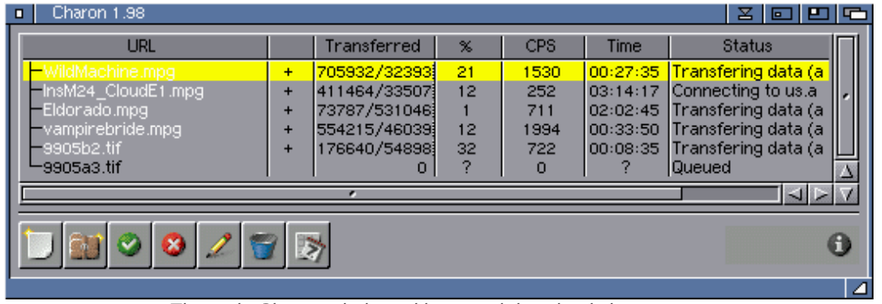
There are several ways to start a new download with Charon. Firstly you can enter the URL in the Edit URL window. If you have the URL of the download on the clipboard (for example from an EMail or webpage a button allows you to paste it in, there is even a menu option to start a new download from the contents for the clipboard without opening any additional windows. Probably the most common source for a download will be a link in a webpage, to make this as easy as possible an AREXX script is provided that can be configured in your web browser to add a selected URL to Charon's download list. The script will start Charon if it isn't already running. In the three most popular Amiga browsers you can assign the script to a pop-up menu function so downloading with Charon is as simple as popping up the menu for a link and selecting "Download using Charon" (or whatever you decide to call the option). In the preferences window you can select the default directory where downloaded files will be saved, if you setup a download using the Edit URL window this default can be overridden for particular downloads. Although it isn't immediately obvious Charon can be used to download files from FTP servers and websites that require authentication (log-on with a username and password). The username and password must be included in the URL as shown in this example: http://username:password @www.domain.com/file.lha. While this works well enough I think it would be clearer to have username and password fields in the Edit URL window and maybe a user/pass requester that pops up when a file cannot be downloaded due to authentication failure.

If you have a partially downloaded file that you started with another program Charon can continue downloading it. Many programs store the URL of the files they download in the file comment, if this is the case you can select the file in the Edit URL window or drop the file's icon over the Charon window and it will read the URL from the comment and resume downloading. If the URL is not in the comment then you will need to enter it by hand or paste it in from the clipboard.

When you add a download to the list it can be either active or paused, active downloads start downloading straight away until the maximum number of simultaneous transfers you set are taking place then they are queued until one of the current downloads finishes. You can use drag and drop in the list to set the order in which the files will be downloaded. Downloads added to the list in the paused state have to be started by clicking a button in the tool bar before they start downloading. You can also pause a an active file, if it is downloading at the time the next active download in the queue will take over. This means you can pause a long download, quickly download a file you're immediately interested in and then resume the big download.



Charon can list the URLs in an HTML file for easy downloading.



The main Charon window with several downloads in progress.

Schedule

Downloads can be scheduled to take place at a later date and time, the schedule window has a nice calendar display where you can choose a date (including year!) For the download to start, you can also specify the time (to the second!). I can see this being very handy for those with internet connections which are charged at different rates at different times of day or who would like to do their downloads when they are away from the computer.

Groups

A useful option is to organise downloads into groups, most of the settings can be set independently for each group. So you could make a group for downloads from a particular server that requires specific settings. When you start a new download and select a group in the URL Edit window the download picks up the group's settings, if you move a download into a group you have the option of applying the group's settings. Another advantage of groups is that they are shown in a list tree in the main Charon display, by selecting the group you can apply actions such as pause, start or edit to all the downloads in the group.

Download Options

As it is a tool purely for downloading files Charon can really go to town on download options, enabling you to tailor the process exactly to your needs. You can configure the number of attempts that will be made to download a file if it fails for any reason. The most common reason for a download failing would be your ISP dropping the line but with Charon you can make the download fail and be retried for other reasons. For example if the download stops for over a set length of time or if it drops below a definable download rate. Different settings for time out and minimum download rate can be set for resumable and non-resumable servers, as you might not want to re-start a non-resumable download just because it had got a bit slow. A proxy server (a server usually run by your ISP that caches downloads by all their users to speed up downloads on commonly requested files) can be used and it is even possible to configure different proxies depending on the ISP you use to connect. On some Amiga file systems very long file names (greater than 30 characters) can cause a problem, so the option to limit filename lengths is welcome, you can also set it to automatically replace characters in a filename, so spaces become underscore (_) for example.

Charon seems to be very compatible with different HTTP servers, I found a couple that IBrowse wouldn't resume worked fine with Charon. If necessary the options are there for it to "spoof" as a web browser by changing the User-Agent header and you can also set the Referer header so it looks to the server as if the downloads are being requested from a webpage. On the FTP side Charon can use a passive connection (PASV) so it will work behind a firewall.

If the built-in options aren't enough you can get Charon to run a program of your choice when a download starts and/or ends and when the program itself loads and/or quits. As an example these options could be used to put your TCP/IP stack on-line at the start of a download, when all downloads are complete Charon can be set to quit automatically so the program quit command could then be used to take the stack off-line. In combination with the scheduling functions you could get Charon to do your downloading while you are out, or during cheap rate times.

Extra Features

Built into Charon is an Internet search facility which can use three different search engines to find files which can then be downloaded like any other file. Aminet search provides the ADT search found in several FTP clients although unfortunately it doesn't include the description field so it can be tricky to tell what the listed files are. MP3Box searches for MP3 music files at the site of the same name. There is also a Lycos FTP Search option but I couldn't get this to work so I think this service may have been stopped. Once you have a list of search results you can select those you want to download either using the mouse or by entering a wild card string based in the file name.

The HTML links option will scan an HTML file on disk (so you would have to download a webpage first) and present you with a list of all the links on the page. Like the search you can then select the files you want to download and add them straight to the download list. An AREXX script is provided for use with AWeb that will perform this function on the currently displayed page.

AREXX

Charon has a particularly powerful AREXX interface that is ideal for linking to it from other programs, setting up new downloads and performing batch changes on existing ones. Some sample scripts are provided and I was able to quickly knock up a script to change the username and password on several downloads overcoming my minor quibble mentioned above. A useful addition would be an AREXX menu where user scripts could be added for easy access.

Conclusion

I've had Charon for a few months now and It's been totally reliable and has integrated very well with my other Internet software. Anyone who downloads files of any size from the Internet would benefit from Charon, I used to think that IBrowse's download options were all I would ever need but now I've got Charon I find downloading with IBrowse frustrating. For me the best feature is that I can select several files to download, then later turn off, go to bed, and continue downloading them the next time I'm on the 'net with no bother. A tenner very well spent!

Results

Pros
+ Saves download list across sessions.
+ Useful extra features.
+ Excellent AREXX interface.

Cons
- No visual progress display.
- Authentication handling slightly awkward.

Top Notch!

AmigaWriter 2.2

Mick Sutton and Robert Williams find out whether the new commer has the form to take on the established favourites.

.info

Developer & Distributor
Haage and Partner
www.haage-partner.com

Price
45Euro (about £30)

Test System
A1200
Blizzard PPC/060
BVisionPPC
AmigaOS 3.9 Boing Bag 2
CyberGraphX 4

Version Tested
2.2

It has been a long time since a new word processor package has been released on the Amiga, when AmigaWriter was announced back in (1999) I thought to myself "at last!" I have been using Final Writer version 5 since 1996 and it is a very good all round package (heaps better than Wordworth in my opinion) which I get on very well with, but it is always nice to try out something new. Also the benefits of Word document support was too much to pass up, whether we like it or not 95+% of the computer community use programs like Excel and Word and it is better to have some compatibility than none at all.

One thing I have noticed recently is that I find it hard to keep a focus on screen text (must be getting an old git), and have found this program's anti-aliased font display to be a real bonus. True type fonts are smoothed on screen and therefore easier to read!

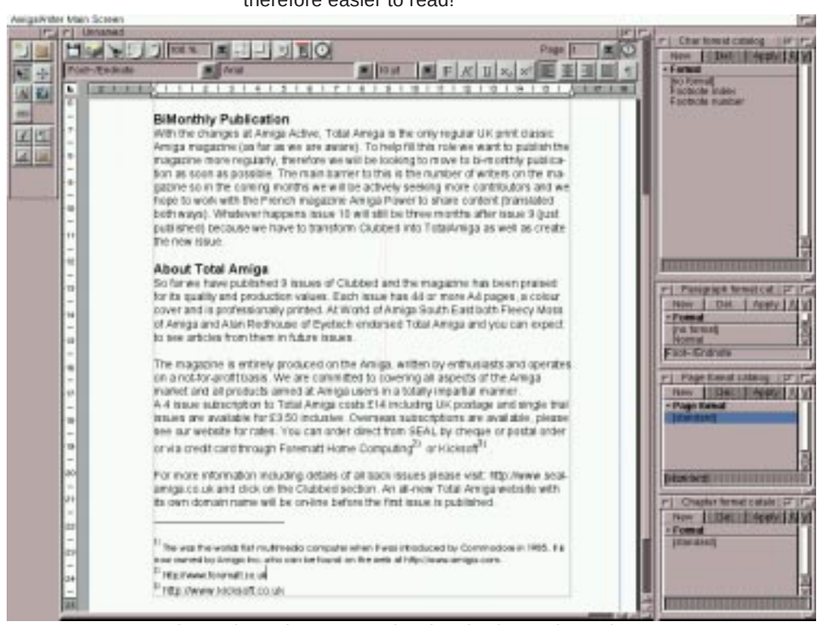
Installation

The program comes on a CD-ROM and is installed via the standard OS 3.5+ installer and takes about 11 Mb of hard disk space. The spell checker of your chosen language is installed separately, the languages included are: English, German, French, Italian, Danish, Netherlands, Swedish and Czech.

Interface

By default Amiga Writer opens on the Workbench screen, if you want it to open on it's own screen you will need to have a separate utility, Storm Screen Manager, running before you start Amiga Writer. You can either install this in your WBStartup drawer or run it before Amiga Writer (manually or with a script). When the program starts it opens a toolbar window that has buttons for opening or creating a document, various editing modes and opening formatting windows. When you create a new document or open an existing one the main editing window opens. Multiple document windows can be opened, each one has the document display, rulers and two toolbars with common functions (cut n paste, save, print, zoom and insert element) and formatting controls (font, size, alignment, bold italics and underline etc).

The document display itself deserves a special mention, because Amiga Writer is the only Amiga word processor that anti-aliases it's text display. Anti-aliasing uses shaded pixels between the fort and the background to smooth the text display removing jaggies. The end result is that text is much easier to read and the display looks even closer to the final (no pun intended) printed output. Anti-aliasing is only supported on Truetype fonts but as these are very common this isn't a problem.



The AmigaWriter screen showing the formatting palettes.
Note that this document is showing numbered footnotes at the bottom of the page.

File Formats

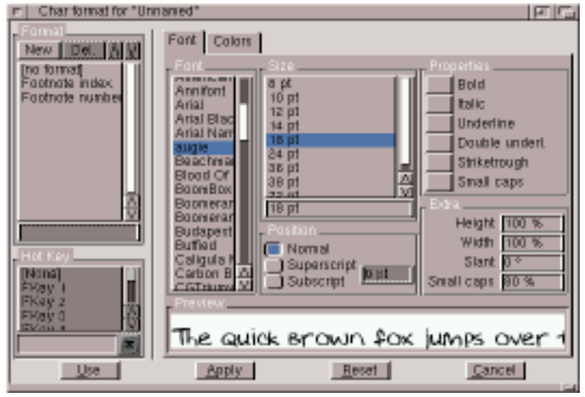
AmigaWriter can import documents in FinalWriter, Wordworth, RTF, ASCII and Microsoft Word formats. With these formats AmigaWriter can usually load the text of the document and retain most of the formatting such as text styles, fonts and tabs. If the document contains fonts not available on your system AmigaWriter prompts you to choose and alternative. Some mappings for common fonts such as Arial in Word documents are already set but you can still install the correct font. No graphics or other objects are imported, and no text could be imported from one complex Word document we tried. On the other hand simpler documents, consisting mostly of text, came across very well and closely matched the original when the fonts they used were installed.

Documents can be saved in AmigaWriter's own format or exported as Rich Text Format or ASCII. RTF is supported by most word processors, it retains font and formatting information.

Text Formatting

Multiple page formats can be defined within a document, the page format controls the page margins, number of columns, and the size of headers and footers, a single page size is used for the whole document. Page formats can be applied on a page by page basis. You can also set the default page formats which will be used for each chapter, different formats can be selected for the left and right hand pages of a double sided document. The defined formats are listed in a palette so they can be quickly applied to the current page or pages.

Basic formatting can be applied to the selected text from the document window toolbar, but for more advanced settings you need to open the Character Format window. Here you can select double underline, strike through and small caps styles and alter the height, width and slant of the font. A colours tab has options to change the colour of the text and underline. Colours are selected from a list but you can define your own. The window can be left open while you work, an Apply button is used to apply the settings to the currently selected text.

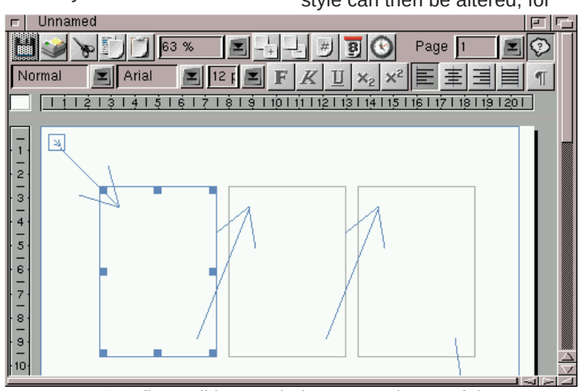


A wide range of character formatting options are available.

The Paragraph Format window contains settings that are applied to the paragraph that contains the cursor or the paragraphs in the current selection. Like the Character Format window it has font and colour tabs, in addition there are tabs (the window kind) for tab (the spacing kind) and paragraph specific settings. On the paragraph tab you can set the alignment, inter paragraph spacing and whether the paragraph should start a new page or chapter. The tab settings include the option to generate tab stops at a user defined interval and you can have tab leaders, where the tab space is filled with dots or dashes for example:
Cheese Burger..... £1.99

Again the Paragraph format window can be left open while you work.

Character and paragraph formats can be stored as a named style in the document so they can be quickly applied to different areas of text. The style can then be altered, for example the font size or the line spacing changed, and the changes will be applied to all the areas in that style.



Text flow editing mode is easy and powerful.

While you cannot save formats and styles and then load them into a different document, you can save a template document and base new documents on it. When you start a new document a list of the available templates is displayed, they can be organised into categories if you wish. A template holds all the details of a document including the styles, page size and layout, the only area not saved is the printer settings. This almost makes up for the fact that you can't change the default document settings, styles etc. Looking at the configuration files it seems you should be able to change the defaults by editing them manually.

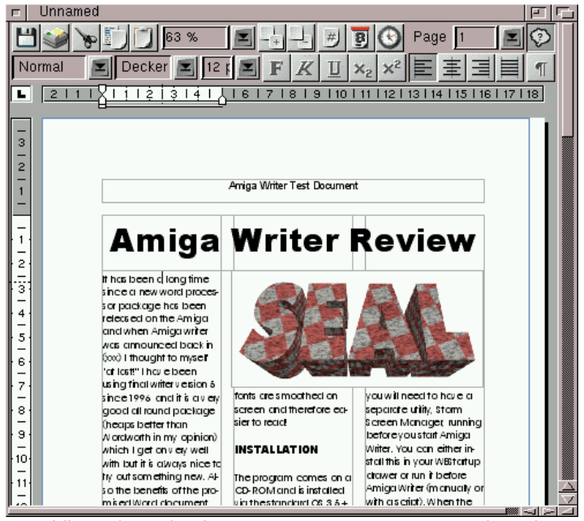
As mentioned earlier, AmigaWriter supports Truetype fonts which are very widely available both free and commercially because it is the standard format used by Windows and Mac OS. It also supports both Compugraphic and Amiga bitmap fonts, the only major format you can't use is Postscript. AmigaWriter can load fonts from multiple directories anywhere on your system, you can choose whether bitmap fonts are displayed in the list.

The spell checker can check the current selection, chapter or the whole document. When an unrecognised word is found a small window opens where you can correct the error or choose from a pop-up list of suggestions. If the word is actually correct you can choose to skip it or add it to the user dictionary. A nice feature is that you can edit the document whilst the spell check window is open. We did find some oddities with the spell check. It doesn't recognise words with an apostrophe (isn't, doesn't etc.) and you cannot add them to the user dictionary, the only work around is to add the part of the word before the apostrophe, for example "doesn" for "doesn't" but this could mean as genuine typo is missed. A more serious problem is that on our test systems AmigaWriter sometimes hangs when the spell check reaches the end of a document. A grammar checker is not included although for many people this won't be a great loss.

DTP

In AmigaWriter each page item, including text and graphics, is contained in a box, so by default a text box is created covering the whole page and if you only want to create a simple document you never even need to know it's there. For more complex documents you can add multiple text boxes and choose how the text flows between them. There is one main text flow through the document and this can go through any number of boxes on the page allowing you to make any kind of layout. You can also have stand alone boxes for captions and boxouts, these can be linked in a separate text flow but the links cannot across onto another page.

The text flow editor is particularly well designed, you link text boxes by dragging from one box to another in the direction of text flow, the link is then shown by an arrow. The main text flow in the document starts from an icon at the top left of the page, which is linked via any number of boxes on the page to another icon at the bottom right corner which passes the flow onto the next page. This is much more



While AmigaWriter isn't a DTP program you can make quite complex page layouts like this one.

complex to explain than it is to do, it's a really well implemented feature.

The colour and thickness of the text box border can be set as can the background colour. The width of the margins inside the box can be independently set so the text is offset from the border. The combination of these features allows you to make easy boxouts.

A picture box lets you add an image to your document, the image is held in an independent box that can be moved and resized (holding shift retains the aspect ratio while resizing). Images are loaded at 72dpi which sets their size on the page, as soon as the image has loaded a picture editor window appears where you can edit the image size by choosing a new dpi, size in cm or a percentage scale. Image loading uses datatypes so all formats for which you have a datatype installed are supported. There is no support for structured graphics such as EPS or CGM. As with a text box images can have a border, however it encroaches on the image so a thick border can cover a significant portion of the image.

Both types of box can be stacked so one box overlaps or is hidden behind another, as the main body of the document is a text box you can easily put images or even text behind it (for example as a watermark). By default text runs around any boxes placed above it, you can override this so the text goes underneath all overlapping boxes. One limitation is that text always flows around both sides of a box, you cannot set it to flow only around one side or for the flow to break for the image. Boxes cannot be moved from one page to another (we tried drag and drop and cut and paste) which can be annoying if you have to make major changes to an existing document. A really annoying bug is that any text or picture boxes you add are removed without warning if you choose a new page format and this action can't be undone!

In addition to picture boxes images can be inserted into the text flow where they act as like a large character, for example the justification options can be used to set their alignment on the page. The picture editor can be accessed by double clicking on an inserted image so you can edit its size.

All these features give you the ability to make quite complex page layouts but it's no DTP program, in particular there are no drawing tools (lines, circles, polygons etc) whatsoever which is a basic requirement of a "proper" DTP program. Also there is no tables facility and because you can't draw lines it is almost impossible to make up your own tables manually. The lack of structured drawing import compounds these problems as you can't easily use an external program to produce the graphics.

Advanced Word Processing

AmigaWriter has some powerful features for more complex and technical documents. Multiple chapters allow sections of the document to have different master pages and page numbering styles. Footnotes or endnotes can be added to show a note on a piece of text on the page. Footnotes are shown at the end of the page, endnotes can be either at the end of the chapter or document. As you add footnotes they are automatically numbered relative to the other notes on the page and if the text linked to the note is moved to a different page the footnote goes with it. In the document settings you can choose the type of notes you want (only one type is allowed per document) and one of four numbering styles.

Printing

The OS 3.5/3.9 printer system and TurboPrint are directly supported by AmigaWriter for full 24bit printing. In our experience the print quality of text and graphics is excellent and the output is also very fast compared to Wordworth or FinalWriter using TurboPrint either directly or via Ghostscript. AmigaWriter does not support PostScript printing but as the direct output is so good this will only effect those people with true PostScript printers (mostly lasers). If the document is set to be double sided you can choose to print the odd and even pages separately for manual double sided printing. On a negative note in the Print window your specify the page size in the printer, this defaults to A4 (great for us Europeans) but you can't save a different default if you usually use another paper size.

There are a few other features missing from AmigaWriter that we should mention in case they are vital to you. There is no word count or document statistics which can be vital for some writers. The lack of an insert special character window could also be annoying if you're writing technical documents. We also had a few hangs and lockups during testing which is unfortunate on a product that has had several releases to iron out the bugs.

Conclusion

AmigaWriter has some really excellent powerful features and feels as if it's basic "engine" has been well thought out. The antialiased screen display is fantastic and makes documents much easier to read on-screen. One other factor to bear in mind is that AmigaWriter is the only Amiga word processor currently in development, it is also very reasonably priced. There are some fairly major limitations, which we have mentioned in this review, but whether they effect you will depend on your intended use of the program. We found it quite frustrating that AmigaWriter is only a few, fairly small, features short of greatness, but some of these features will be vital for certain users. So having read the review, we hope you'll be able to decide whether it's for you.

Results

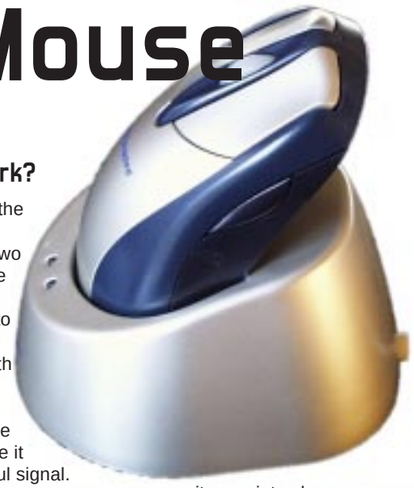
Pros
+ Powerful document layout and formatting.
+ Reasonable price.
+ Good printing.

Cons
- Poor spell check.
- Frustrating bugs.
- Important features missing.

Okay

Cordless Optical Mouse

Mick Sutton was fed up being tied to his desk, so he got errr... tailless!



It wasn't that my old mouse (Logic3 pilot PS2) was broken or anything, it was just getting annoying to keep pulling on the lead every time when it got snagged on anything. Picture the situation, there you are working on an image in Photogenics, zoomed up to the hilt just putting the final delicate stroke of whatever brush or effect, when you go to move the mouse and it's stuck! The damn chord has wedged itself under the edge of the printer again.....grrrrrrr! Due to the sheer lack of space on my desktop (the wooden variety) this seems to happen more often than I would like, so I decided to do something about it.

What... No Tail?

I was at the Alt WoA 2002 show when the RF (Radio Frequency) optical mice on the Eyetech stand caught my eye, these were being sold on the day of the show for £55 including the EZ Mouse adapter which is required to take advantage of the mouse. My last mouse was being used in conjunction with a Punchinello MK 1 which wouldn't work with this rodent (is it a rodent if it hasn't got a tail?) unfortunately. Now I know that £55 seems a lot to pay for a mouse but when you consider it's the most interactive part (apart from a keyboard possibly) of a computer and tends to be a very personal choice of what suits you (sir!), then it's worth paying out for something that you are really going to get on with well.

.info

Developer
Maxxtro
maxxtro.com.hk/info.phtml

Distributor
Eyetech
www.eyetech.co.uk
+44 (0) 1642 713185

Price
Cordless Mouse £44.95
EZMouse w/mouse...£15.00
EZMouse alone £18.95

The Techie Bit

On arrival home from the show I couldn't wait to try my new mouse, but after opening the packaging and reading the blurb I discovered that the mouse batteries required at least 8 hours charge before use... bo**ocks! This is where I ran into a little problem, as on inspection of the contents of the packaging I realised that the mains charger unit was missing... bo**ocks again, I don't believe my luck! A quick phone call to Eyetech who were very helpful and sympathetic and it arrived in the post the very next day, well done Eyetech. The mouse system which is made by a company called Maxxtro consists of several parts, the mouse, 2 Ni-MH rechargeable batteries, a USB to PS2 adapter (the mouse receiver is a USB device), the mains charger unit (or not in my case) and the receiver/base unit.

The mouse itself is 12.5 cm long by about 6.5 cm wide, has a total of 5 buttons, a scroll wheel (that forms the middle button also) and a light source and optical sensor underneath to detect movement. The base unit (that receives your mouse signals via radio frequency) plugs into your Amiga mouse port via the EZMouse adapter which in turn has the USB to PS2 adapter plugged into it. The base unit is moulded into a shape that holds your mouse when not in use, it also has the power unit plugged into it, so that when you are not using the mouse it keeps the batteries (fitted inside the mouse) charged, with a neat little LED to let you know charging is taking place.

The base unit can be pretty much wherever you want it to be as it does not need line of sight to the mouse to work. This is very useful to someone like me who has lots of clutter and no space on his desktop as I mentioned earlier, because you can for example place the base unit under the desk on top of the computer casing or wherever you want it.

Does It Work?

Before initial use of the mouse you have to select which of the two channels (the mouse transmits and the base unit receives) to use and press the initiate button on both the base and the mouse, this makes the green LED on the base unit flicker once it receives a successful signal. The mouse from here on actually works straight out of the box as an ordinary two button mouse, but if you require use of any other buttons or the scroll wheel, (and lets be fair, you will) then the supplied "WheelDriver" has to be installed (I put it in the WBStartup drawer). Also supplied is another utility called "FreeWheel" which lets you set up various options with your buttons and wheel usage but I found it to be a bit quirky with strange behaviour in some programs, in particular MUI based programs. There is a file on Aminet that you can download to fix scroll-wheel usage in MUI applications called MuiWheel that can be installed and it works a treat.

Move That Mouse

Okay we have the hardware and software installed how does it perform? The mouse is shaped well to fit the hand (both left or right) and feels comfortable to use, it glides freely across the mouse mat or whatever surface you use it on and seems very responsive. When moving the mouse itself, the scroll wheel or pressing any of it's buttons a little green LED on the base flickers to indicate that a signal is active to confirm that something is happening. I must say from the very off I fell in love with this little device, it is absolutely brilliant in use. No more snagging cords or fluff to clean out of the under belly (button), it is quite smooth in operation (420 dpi) and can work up to about four or five metres away from the base unit believe it or not. After 90 seconds or more of not using the mouse, it goes into sleep (hibernation) mode, and only the scroll wheel or mouse buttons re-activates it. When in this sleep mode the bright red light emitting from the under side of the mouse is extinguished to save power, this is handy as sometimes you may forget to put the mouse back into it's charging base and therefore this prevents the batteries from totally discharging. But having said that the mouse works for several days without a charge, I know because I have been guilty of leaving it out totally disregarded (like I do with my clothes my wife tells me)!

Conclusion

Other than the lack of a cable the mouse behaves just like any other and I must say that a scroll wheel is a very useful tool, especially when browsing the Internet and loading long pages on websites. Having used it for several weeks now I can't imagine computing without it! The only down side I can think of is the price, I have no doubt that with time the price of these new generation of rodents will drop as I stated earlier it is a personal thing and down to whether the individual thinks it is worth it.

Result

Top Notch!

Reviews

NewsCoaster

.info

Developer
Mark Harman

WWW
http://newscoaster.tripod.com

Aminet
comm/news/

License
Freeware, source now available under the GPL

Requirements
MUI
Custom Classes
(supplied in full archive.)
TCP/IP Stack

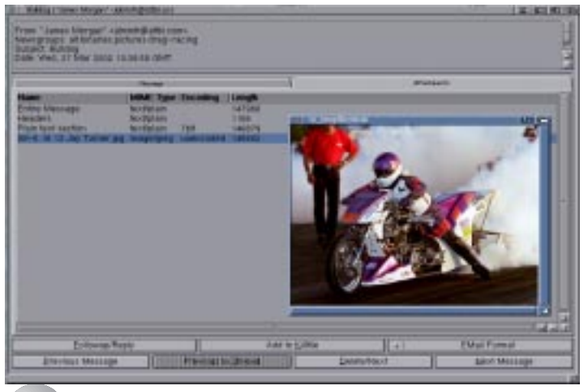
Version Reviewed
1.50beta
(1.51beta was released as we went to press)

Robert Williams is pleased to find a news reader that is still in active development.

In these days of mailing lists and web-based discussion forums good old Usenet doesn't seem to get much of a look-in. However it does have many advantages over other non-realtime discussion system, for one Usenet newsgroups tend to get a wider audience than mailing lists and unlike web based forums it allows you to use the software of your choice rather than on often slow and awkward web interface. The Amiga has been blessed with a wide range of newsreader software but many of these programs have been dropped by their authors or at least show very little development. An exception to this trend is NewsCoaster which has been constantly developed by Mark Harman over several years and although the program has recently changed from Shareware to Freeware status development continues. I'm reviewing version 1.50beta that was released in the middle of March 2002.

Before I get into the nitty gritty of NewsCoaster some people may be wondering what this Usenet lark is all about. Usenet is one of the oldest Internet services, it emerged in the early eighties. Usenet is a system which allows users across the world to discuss a wide variety of topics. The system is split into a large number of newsgroups each of which discusses a particular topic. Groups are organised into a hierarchy with general subject headings at the top, for example "comp" for computer related groups and "rec" for recreation related groups. There is also an "alt" hierarchy which is less tightly organised for free discussion on many topics. An example of a typical newsgroup would be comp.sys.amiga.hardware, the name tells you that this group is related to computer systems and is particularly about Amiga hardware. In most groups anyone can post a message (which is sometimes called an article or a posting), or follow up (reply to) an existing posting. When people reply to a post this forms a thread on a particular subject.

The read message window's attachments tab lists all the message parts, you can view them in a user defined viewer based on their MIME type.



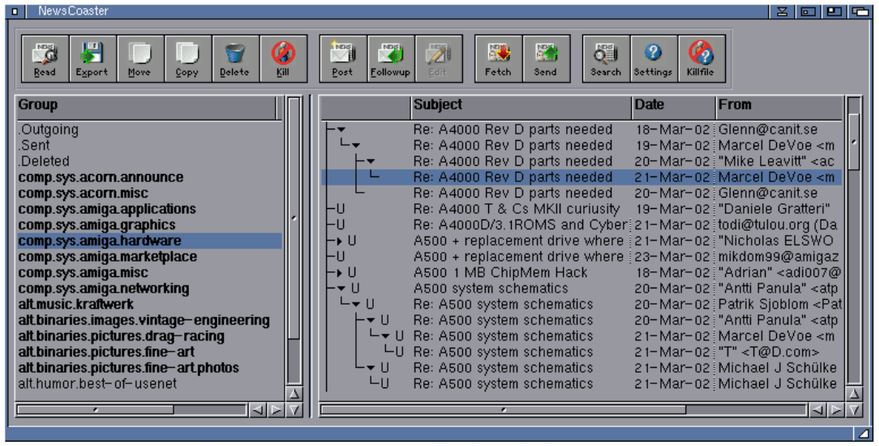
You access Usenet via an NNTP (Network News Transfer Protocol) server which is usually run by your Internet service provider, in all probability your server is called "news.yourisp.com" or something very similar. One interesting fact to note is that unlike mailing lists Usenet has no central server, new messages are passed from server to server across the Internet (or other networks) and gradually propagate across the world.

I thought this was supposed to be a review... Get On With It!

Setup

Before you can start reading news there are a few simple settings that need to be made, NewsCoaster needs to know your name and EMail address and you need to setup at least one server for sending and receiving news. You can setup more servers if you wish, for example some organisations have an NNTP server for just their local newsgroups. One server is set as the default and this is used by all the groups you define unless you select otherwise. For each server you can download a list of the groups available and once this is done (it can take a while, my server has over 40000 groups) you can update the list, downloading just the new groups. NNTP authentication with a username and password is supported for those servers that require it although this is unusual.

With the basic setup complete you can search for some newsgroups to read. If you know the name of the group you wish to add the New Newsgroup option lets you type it in and set some options. If you want to look for a group on a particular subject you can use the Groups Manager, this displays a list of all the groups on your server. Getting this window open can take some time (even on a fast machine) as the whole list has to be read in and displayed in a listview. Once it appears you can search for a word in the list by typing it in and pressing Return which scrolls to the first group containing that word. Although there is no button to "find next" I found that clicking in the text box and pressing return again does just that, finding the next group containing the selected word. This can be quite a long winded process so I think the group manager could be improved if a list were added to display all the groups found by the search.



The main window showing the threaded message view.

With a group selected you can set some options, this is where NewsCoaster starts to show some powerful features. You can set the maximum number of messages to download, skip messages which a longer than a certain number of lines and set it to automatically delete messages after a number of days to prevent disk space being used by an ever growing collection of messages. The most useful feature here are the download settings, firstly a group can be set for online or offline reading. Online mode is for groups you want to read while connected to the Internet in this mode NewCoaster downloads just the header of each article when you download news and only downloads the body when you go to read the article. In offline mode complete messages are downloaded so you can read them at your leisure without an Internet connection. These two reading modes are combined with a subscribe check box, when subscribed to a group its articles will be downloaded when you get news messages. If you don't check subscribe then you must manually download messages for that group when you want to read it.

I have found that this flexibility makes NewsCoaster ideal for a variety of groups, for example I have several groups that I read regularly so I subscribe to them and set them to offline so I can read them when I'm not on the 'net. I have other groups that I like to keep an eye on but only read them when I spot an interesting subject so I set these to offline but still subscribe so I see all the subjects that are discussed. Finally I have a few groups that I only look at very occasionally, by keeping these unsubscribed I can leave them setup but I don't waste time downloading messages I won't read.

NewsCoaster supports multiple users, each with their own groups, folders and preferences. If multiple users are defined a username and optional password must be enter when the program starts. Each user's data is held in a separate directory that you set in the User settings window.

Interface

In the main NewCoaster window there are two list views, one which show the groups that you have configured and the other showing the messages in the selected group. At the top of the window is a tool bar with some of the more common functions such as fetch and send news, post or follow up to a message, and some message control functions. Both the lists can be viewed either as a flat list or a tree view. In tree view the messages list is properly threaded so you can see which post was a reply to others making it easier to follow conversations. On the other hand the flat view has the advantage that you can sort it by clicking the headers so it is easier to see the most recent messages or messages from a particular poster. One option that I miss is to be able to expand all the branches in the tree view, on a thread with many replies a lot of clicking can be needed to see the whole tree. Another limitation is that you cannot hide messages that you have read (although there are markers that show which messages have been downloaded and which have been read) so it can be hard to find new messages at a glance. One final oddity is that subjects in the main list are limited to about 60 character, most of the time this is unimportant but occasionally some useful information is trimmed, you have to open the message (and therefore download its contents) to see the full subject.

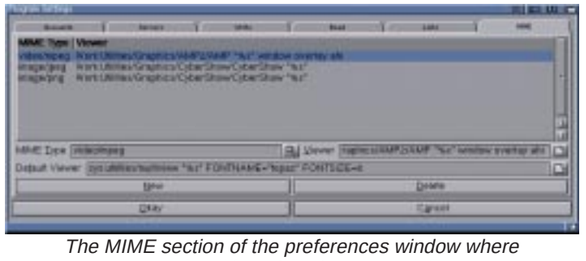
Reading News

When you double click on on a message or select Read the message is downloaded from the server, if it's not already available on disk, and then displayed in a separate window. There is an option to read with one or multiple windows, with the former double clicking a new message opens it in the existing read window and with the multiple option a new window is opened allowing you to compare messages (I suppose, I prefer the one window mode myself). The read window has a section at the top for the message headers which shows a user definable selection of headers (for example Author, EMail address, Subject etc.), a menu item allows the full headers to be displayed if required. The main part of the window is the body of the message, any quoted material is can be shown in two colours which helps to show which parts are from which quote. Formatting symbols such as *bold* and /itallics/ are rendered as text styles in the window. Usefully these features can be turned off for messages such as those containing code snippets where the symbols have other meanings. Although they are not marked in the text of the message you can double click on a URL in the message to open it in your browser, the link uses an AREXX script called gotoURL.rx in the NewsCoaster directory which you must first edit to set the path and type of your preferred browser, AWeb, IBrowse and Voyager are supported.

Reading many messages with NewsCoaster is quite a comfortable experience, once you're in the read news window the cursor keys can be used to navigate through messages, with up and down scrolling the current message and left and right moving to the previous or next message respectively. When in threaded view stepping through messages follows the thread nicely, but the thread display doesn't open up to reveal the message you're currently reading.

Follow Ups

In the read window you have the option to follow up the current message on the news server or you can reply directly to the poster via EMail. Either option takes you to NewsCoaster's write message window. Here you can type your reply, the signature of the poster is automatically removed so you don't accidentally include it. You have the option to include any one of eight signatures of your



The MIME section of the preferences window where viewers for different file types are defined.

own which are defined in the preferences window, each group can have a default signature related to its subject. One or more binary attachments can be added, they are encoded in the message in base64 format. You can set a unique reply to address for the message and choose for replys to go to a different newsgroup or to you by EMail using the follow up to option that pops up a list of groups to choose from.

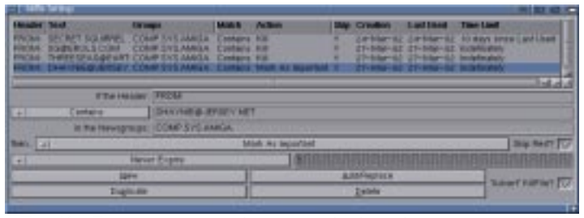
When the message has been composed it can be sent at once if you're online or placed in the outgoing folder to be sent the next time you connect to the news server. While it's waiting in the outgoing folder you can still edit the message. Outgoing messages can be put on hold so they are not sent, maybe while you find out some further information or decide if you really want to send that flame!

Once sent messages are moved into the sent folder (surprise, surprise!) but even here you still have options. You can choose to supersede a sent message, i.e. send an updated replacement, you can also cancel a message which you have sent. It should be noted that due to the distributed nature of Usenet these features are not fool proof, for example a cancelled message may not disappear from every server, but it is nice to see them easily implemented.

Binaries

Binary data is not allowed in posts to most newsgroups but their are some groups (mostly in the alt.binaries. hierarchy) which are intended for posting binary files such as images. NewsCoaster displays a list of the binary attachments to a posting on the Attachments tab of the read window. Attachments can be exported to disk or viewed in an external program by double clicking on them in the list. External viewers are configured from the MIME section in preferences, here you can select a different viewer for each file type. Also listed on the attachments tab are the entire message and its header and body sections, this allows you to examine them in a text editor (configured in the MIME prefs).

Various methods are used to encode binary files into a news



The Kill File can be used to highlight interesting messages too!

posting which are limited to plain text, NewsCoaster can cope with uuencoding, base64 and has basic support for the more recent yenc format. In my experience this range covers the vast majority of Usenet postings, in fact I didn't manage to find a complete attachment it couldn't decode. For longer files (for example movie clips or MP3 files) it is common for the files to be broken up across several postings. To deal with these NewsCoaster has an automatic join feature, you simply select all the messages that make up a multipart post then a window allows you to move them into the correct order (although it does a good job of sorting this out for you). Then a new message is created which is the sum of the parts and you can view the attachment in the normal way. For some reason the join process is rather slow, often taking several minutes to join messages totalling a few megabytes, another niggle is that it is also effected by the subject length limit which means occasionally the part number ([2/10] etc.) is trimmed off. Even at its current speed this feature makes dealing with multipart messages much less tedious than the previous option of joining and decoding using external programs.

Kill Kill Kill!

There are many very interesting and intelligent people contributing to Usenet but as in any community there are also a minority who seem hell bent on having pointless arguments or being unnecessarily obnoxious. To help avoid these messages NewsCoaster has a kill file, this stops it downloading messages from selected people in all or certain newsgroups. A kill file entry can be based on any message header, so you could avoid a particular poster by searching for their EMail address in the FROM: header or a particular thread by searching for its subject in the SUBJECT: header. When a message matches an entry in the kill file it will not be downloaded so you never see it or waste connection time on it. Kill file entries can be manually created or generated from the current message, in that case NewsCoaster gives you a list of common headers you might want to select in that message. You can also use the kill file mark a message as important instead of ignoring it, this is handy if you want to highlight posts from, for example, a particular poster. Kill file entries can be set as permanent or so they are deleted in a certain time period, which can be fixed or after the last post that matches the criteria. This option is good for kill file entries based on particular subjects which you want to disappear once a particular discussion is over.

Extra, Extra

Apart from the basic news reading features I've talked about above NewsCoaster also has a couple of neat tricks up its sleeve. The first is an excellent search facility which can look in one or more news groups for messages with your search term in a particular header, the body or complete message. The messages found are displayed in the bottom of the search window and can be opened by double clicking, very slick. The second is the statistics window, here you can see the number of posting in a group or groups from each person, subject or newsreader, not really useful but quite interesting.

I should also mention that NewsCoaster comes with comprehensive AmigaGuide documentation and makes extensive use of MUI bubble help, it also has an AREXX interface for customisation and external control.

Issues

There are a few areas in which NewsCoaster could use improvement, one is the menus which don't have the standard elipsis (...) to indicate items which open a window and are lacking in keyboard short cuts, this is especially noticeable when working with the groups and messages list in the main window as only a few menu items are replicated on the button bar. In threaded view options to expand and collapse the tree would be nice as would the different sort options that are already available in flat view. I have EMailed Mark regarding these ideas and he has replied saying he will consider them for a future version so hopefully I won't have to grumble for long!

Conclusion

NewsCoaster is an excellent news reader for anyone who wants a simple program with all the important features but doesn't want to get bogged down in too much complexity. Some people will find it missing the flexibility and power of programs like NewsRog but I think they will be in the minority, it certainly has everything I need in the newsreader. It is excellent if you want to mix online and offline reading in one program. The interface, in particular the threaded view and the menus could do with a bit of spit and polish, that would make the whole program feel slicker. Overall whether you're new to Usenet or an old hand I recommend you give NewsCoaster a try!

Results

Pros
+ Simple and logical.
+ Multiple Users
+ Mixed on and offline reading.

Cons
- GUI could be improved.
- Missing some advanced features.

Pretty Good!

Support

An Introduction to:

Scala MM400

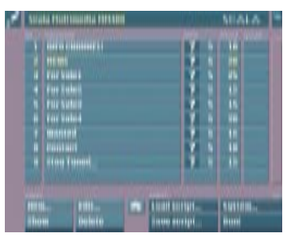
Our "Introduction to..." feature returns as Elliott Bird takes a look at the Amiga's premier multimedia package.

One of the Amiga's main strong points for some time, has been its Multimedia capabilities, and one of the most well known applications on the Amiga that demonstrated this was Scala. Scala is the premier software package for creating your own multimedia presentations and slide shows, as well as the ability to add music and text to your own videos!

This tutorial will introduce you to what Scala has to offer, and will help you to get started on creating your own simple, but perhaps effective multimedia presentations.

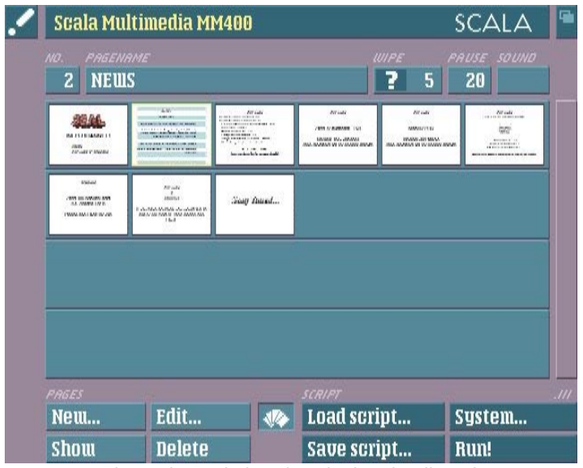
What's this I see?

When you first launch Scala, you will be faced with pretty much an empty screen with a few buttons, this is where Scala will present you with a list of pages in your script, where you can shuffle your slides into any order you like! At the top, on the left is where you click if you want to quit Scala or clear the script you were working on, or had loaded up. The button on the right is where you flick screens to workbench, or any other applications you may have running on their own screen.



The list view shows more information at once.

Then at the bottom we have "New" (pretty self explanatory), this is where you click to start, more on this a little later. The next button looks like a bunch of cards, this changes the slide view that you are currently looking at. If you click it then Scala will change to a view where you can actually see what your slides actually look like (preview). When you have your slides you can actually drag them about to change the order in which they show when you come to running the script. You can do the same in the other default view. "Load script", well that's pretty self explanatory too, it loads an existing scala script. And the System button is the actual prefs, which I must add there is rather a lot that can be configured, all though everything works fine on the defaults. There's three parts to the prefs, the user interface of Scala, here you can change the colours of the Scala GUI (nice!), how many colours you want to run Scala in and your presentations, the screen mode you want to run it in, depending on what you have in your "Devs:Monitors" drawer (AGA only unfortunately, and by default Scala uses a PAL screen mode, so have those 15khz monitors or scandoublers on standby!), and there's more you can configure too! The other two sections are "Scala EX" which adds more functionality to Scala, and your scripts (recommended for the professionals :)) and "Scala Buttons" which adds the ability to use buttons within your Scala multimedia script, to link with either other slides, other scripts, or possibly even to launch an application. And over on the right you have Scala's



The main Scala interface in thumbnail mode gives you an overview of your presentation.

three additional utilities: AnimLab, FixScript, and ScalaPrint. Below that we see (which is very handy) how much memory you have and how much is available, as well as how big your hard drive partitions are, and how much space is available. As well as the system information, you can also view the versions of each of the components Scala uses, and you can view who made Scala. :)

Right let's go!

OK, as we said earlier, to start creating your script, you click on "New" and you will be asked to select a background page, although this is optional, you may want to have a plain colour background instead, you can do this by clicking on OK without selecting a background. But if you want to select a background, then you can click on the "backgrounds" button on the right hand side, which will take you straight to the directory where Scala keeps your backgrounds. (convenient or what?) and you can select your background there. You will also notice the buttons for your scripts, music, sounds, etc. so that you can get to these directories at the click of a button, without rummaging through directories to find another directory or file.

Right, so Scala may ask you what screenmode you would like, how many colours to run it in, and whether you would like overscan or not. Once you've done this, you can start on your first slide. You can start typing in your text by just clicking wherever you want it, bearing in mind you can move it around, change the font and it's size, style, as well as the colour at any time, just like a word processor. Not only that, but you can add special transition effects to your text, so you can have them fly or dissolve in (cool!). And so I think it's time we had an example that we can put Scala to good use! Let's use the SEAL info channel I run at certain SEAL meetings as it's basic to follow and work from.

So we click on "New". We don't need a background picture, so we'll just click OK. Select a reasonable screen mode, along with colours (preferably in the region of about 64-256 colours, depending on how much memory you have). And set the overscan to "Standard", then click OK. And so you are presented with a colour palette, and various other buttons to edit your current slide. By default, Scala sets the background to blue if you haven't set one already. You can change it by going to "Palette", and change the background colour, by moving the RGB colour sliders, and it will change your background colour in real time. So if you wanted a blue background, you would put the red and green sliders at 0, and the blue slider to 255. If you wanted a red background, you would put the red slider to 255, and the other two sliders to 0. The same thing applies if you wanted a green background, the green slider would be set to 255, and the other two would be set at 0. And if you wanted a white background (as in this instance), you would set all three sliders to 255. However if you wanted a black background, you would set all three sliders to 0. You get the general idea!

OK, so we now want to put in that lovely 3D SEAL logo. You can do this by clicking on the "Load" button, which will bring up a small lister. Click on "Brush", then we select the SEAL logo from the appropriate location. (You can do this for any image you may want to insert). So now we need to place the image, preferably in the middle! Click on the area you want to place the image, if it isn't quite in the place you want it, then don't worry because Scala has alignment buttons (next to the text style buttons). Click on the center align button, and voila! You will notice that you can also resize the image too.

Now we need to put in some text. Click on the area where you want to place it, and select a font by simply clicking on the font button. (Where it actually tells you what font is currently in use, and what size) A lister will appear, full of fonts in one column, and the sizes available in the other column. Once you are happy with your choice, click OK and you will see the changes take effect. Let's put in some more text, this time with a stylish font, (Cascadia) and we'll add a shadow to it to make it stand out more, by clicking on the "Shadow button". You can change the colour of the main part of the text by clicking on the colour you want on the Palette, then clicking on the "Front" button. You can also do the same with the outline of the text, again by selecting the colour you want on the Palette, then clicking on the "Outline" button. You even have the option to add 3D to your text, even in different colours!

Now let's preview what we have so far, by clicking on "Show". Bit boring isn't it? Let's add some effects to the text. Click on the text you want to add the effect to, then click on the "in" button. A panel will come up with a large number of buttons, which are the effects of how the text come in on your slide. If you can't make up your mind, you can make it select a random one each time. (The button with the question mark in it) Once you've selected an effect, as usual click on OK. You might want to add an effect to all of your text to make it all blend in. Not only can you add effects to your text, but you can do the same to your images as well! And you can also change the speed of the effects too. Now preview your slide again by clicking on "show". Getting better isn't it?

OK let's make another slide, the news page. Any font that's readable will do, perhaps the Cascadia font will do for the "News" title. And then a reasonably plain font for the rest. OK let's add a background to make it look more interesting and eye catching. That's better!

You get the general idea on how to create your slides, and a multimedia presentation out of it, bearing in mind there's no limit to the amount of slides you can have in your presentation!

OK let's make the finishing touches to our presentation. Let's add some transition effects (wipes) to each slide. You can do this by going to the third button from the right, labelled "Slides", and it will bring up a panel (similar to the text effects one) full of various transition effects. Don't forget to set the speed, the default speed should do. The next button, labelled "pause" allows you to set the time you want your slide to be displayed for. Then the next button labelled "Sound" allows you to add sound effects or music to your presentation!

Once you've finished your presentation, and you're happy with it, save it! I would also recommend you to save your presentation while your working on it, in case things go belly up! (Scala can sometimes consume a lot of chip memory). Now you're ready to show your multimedia presentation off by clicking "Run!". Now sit back and admire! :)

Here are the two pages we'll build in this tutorial.

FAQs

Q: Can I use Scala to show off family, special occasion, or holiday photos too?

A: You certainly can, make sure you've scaled your pictures down to about 640x512, or thereabouts, so that they fit on the screen. Don't forget you can also add text, so you could give a short description for each picture.

Q: I want to add a countdown to my presentation, can I do this?

A: Yes you can, in the Scala backgrounds directory there are backgrounds with a different number on each one (9,8,7,6,5,4,3,2,1), use a different one for each slide. You don't have to add wipes for each one, but make sure you set them to equal pause time for each slide. If you've got any slides in the wrong order, you can easily drag them into the right order in the slide preview or slide lister. Then save what you've got.

Q: Can I get any more backgrounds for Scala?

A: Yes, you can either use your own you may have, or you could get the CD (available from most Amiga dealers), which contains a large number of backgrounds for Scala.

An Introduction to: MIDI On the Amiga

Geoff Milnes introduces us to the wonderful world of making music with the Amiga and MIDI instruments in the first part of this series.

I have been interested in music since I was about seven years old. This was about the time when I asked my parents if I could take piano lessons as I was confident that after a week or two, I would be fully conversant with the keyboard and be able to amaze everyone with my undoubted talents. Over fifty years later I am still learning although this time, I am combining my knowledge of music and the Amiga to make music, using a full orchestra and turning out sounds which make me wish I listened more closely to my piano teacher all those years ago. Sometimes the sounds are fantastic - other times I switch off the equipment and go to bed to sulk!

As my interests in computing range from Graphics through business applications - the 'Net - Video - DTP - to Music, I have an application for every mood. They all give me great pleasure and satisfaction but none more so than drawing notes on screen and listening to them play back through my Yamaha keyboard.

Several years ago, touch sensitive keyboards were so expensive you required a second mortgage to purchase one. These days, however, things are oh! so different! Technology has surpassed itself time and time again to produce cheap and efficient technology so that most of us can afford a little luxury now and then. The keyboard next to me cost just over 200 UKP and that was FIVE years ago - is general midi standard (I'll explain that in a moment) incorporating 127 different musical instruments and sounds PLUS a full drum kit - is touch sensitive (the harder you hit a note, the louder it sounds) - has a rhythm section of it's own - built in speakers with provision for piping through a hi-fi and it even works from batteries too if necessary!

These days a full size touch sensitive General MIDI keyboard is very affordable.

Attach this to the Amiga and you have your own orchestra ready to perform for you whenever you wish.

You don't even need musical knowledge to obtain fantastic sounds from it as the 'Net is littered with midi sites containing literally thousands of ready made files to download. These you can load into a sequencer and as well as play them, you can take them apart to find out what makes them tick (or screech or clang!).

Nor do you really need a keyboard or sound module as software such as GMPlay from the Aminet is capable of playing midi files using the Amiga's built in sound chips. Most sequencers allow you to allocate samples to the channels too.

Once obtained (or written by yourself), you can play these files along with graphics and animations in many of the multimedia programs available for the Amiga. This is especially useful for video applications as you can lay down the sound at the same time as the video track thus completing a set of titles all in one go.

Before going on to explain the workings of a sequencer, a little bit of background about midi itself without going into too much detail and boring the pants off you.

General Midi Standard.

(M)usical (I)nstrument (D)igital (I)nterface is a way of passing digital information both ways between a computer and a sound producer . The sound producer itself can be a sound card actually IN your computer or a separate electronic keyboard complete with notes and buttons.

At one time, all manufacturers of keyboards used their own settings for passing information via midi so a piece of music produced on, say a Roland, would sound totally differently on a Yamaha and vice versa. So, eventually, the manufacturers all got together and laid down a set of standards which meant that midi files could be used on different instruments but produce the same sound as the original. i.e. a piano on one instrument is also reproduced as a piano sound on ANY GM standard instrument.

Now, let's assume we are talking about an electronic keyboard rather a sound card. The keyboard is actually a dedicated computer built just to make sounds at the press of a key. By selecting a sound, all the keys will use that particular sound i.e. piano - strings etc. However, midi keyboards have what are called channels and each channel is capable of producing a DIFFERENT sound. The general midi standard states, amongst other things, that they have a minimum of 24 'voices' (instruments) simultaneously available which includes 8 for drums. This is called a multi-timbral instrument. (There is a possibility that some items I quote have changed as it is a year or two since I delved deeply into the realms of configuration, however the basics will still be the same.)

Your keyboard will also be capable of playing a number of notes at the same time and this is where the word polyphonic comes in. Say, for instance, that your keyboard is 32 note polyphonic with 16 channels, it means that over all the 16 channels you are able to play 32 notes all at the same time. So you could have channel 1 playing a piano sound using four notes, channel 2 playing strings using another four notes leaving you 24 notes to spread around the other 14 channels.

Strictly speaking though, this is not entirely true as one channel, usually channel 10, is dedicated to drum sounds effectively leaving you with 15 channels for other instruments.

Mega hardware isn't necessary for MIDI work all you need is an Amiga, some software and a MIDI interface.

Now for the other end.

Your Amiga runs software called a sequencer which will send data through the serial port and the attached midi unit to the keyboard. This also works the other way round to enable the keyboard to pass data to your Amiga. The midi unit itself is not directly attached to EITHER end even though cables connect them together. This is because the unit uses a LED to physically separate the computer and keyboard and literally flash signals over a gap to the gubbins inside the midi unit - translate it and then flash the signal to the outgoing cable. This is known as opto-isolating and it is possible to disconnect the midi cables from the unit and the keyboard without causing damage.

WARNING! This does not apply to the serial port - connection and dis-connection MUST be carried out with the computer switched OFF!

Putting it together is very, very simple. The MIDI unit connects to your serial port. The OUT socket on the MIDI unit connects to the IN socket on your keyboard and the IN socket on the MIDI unit to the OUT socket on the keyboard! There are other extra sockets on some units but these are usually extra OUT or just Pass-thru - the latter are not within the scope of this article.

What You Require

An Amiga (even the humble A500 is capable)

Some software.Quite a lot has been given away on Coverdisks over the years:

- Tiger Cub
- Music-X
- Sequencer One
- Dr T's KCS
- Bars & Pipes (available from the Internet for free download - I've forgotten where but if you mail me, I'll try and find out)
- Octamed Sound Studio

Hardware:

- A midi interface (around 25UKP) plus suitable cables.
- A sound producer preferably a midi sound module or a keyboard. (general midi compatible if possible but not essential)

Note: A sound module is a keyboard WITHOUT a keyboard! It is purely a sound producer and cannot be physically played.

...and that's it!

The Process

Before actually starting an article on MIDI and sequencers themselves, I thought I give you a run down of the way in which I produce an audio CD which, with a little adaptation, someone without keyboard knowledge could use to record their own audio CD.

My MIDI setup consists of an A1200 with Blizzard 030 and FPU / 32 meg RAM and a hard drive. This is not my main Amiga and even the specification of this is way over the top for MIDI! You could use an un-expanded A500 without any RAM or hard-drive and it would still work with Tiger Cub on a boot disk.... I know 'cos I used to do this years ago!

Anyroadup - the MIDI unit is hooked into the serial port of the Amiga with cables connecting this to the Yamaha keyboard. MIDI out to MIDI in and MIDI in to MIDI out. The keyboard headphone socket is then connected via an audio lead to the Line In on the soundcard on my PC - and that's it!

The software I use on the Amiga is Dr T's KCS and on the PC I use Soundprobe for recording audio. I used to use Soundprobe on the Amiga in both version 1 & 2 before it went PC so it is a little like welcoming an old friend. I would use my towered 060 Amiga for this process but for 2 reasons - one, it's expensive to obtain a soundcard for the Amiga (and when I already have one plugged into my

droid it seems a little extravagant) and point two is that I already have so much hanging off the back of my tower, it would probably fall over more often than it would work. I also believe in the principle of using whatever does the job best (whilst taking account of SOME personal preferences obviously...). However, some halfway decent software and an Amiga ONE should change this setup radically but we will have to wait and see!

So, here I am in my den, Amiga on, keyboard on and PC on. To do things the easy way, I could just load a MIDI file, click Record on Soundprobe, Play on the MIDI file and away we go. However, as I play keyboards myself, I make things a little more difficult by wanting to play along with the MIDI file and the way I do this is as follows:

In my sequencer on the Amiga, I locate the track which contains the melody and delete all the notes! I could just delete the track itself but there is a reason for not doing this - I want to start playing a piano sound and later change to strings, then an Oboe and finally, back to Piano again.One way of doing this is, at a certain point, push the button on the keyboard which says 'Strings' etc but sometimes it is better and easier to automate things a little so that when that particular point is reached, the sequencer changes the instrument and I can just carry on playing. This is called a Program Change in MIDI and, although all the actual notes have been deleted, it is possible to send other instructions to the keyboard i.e. tell it to play using a different instrumental sound.

A MIDI interface like this one connects to the Amiga's serial port. MIDI instruments connect to the 5 pin DIN ports.

Back to my recording session now... I simply click Record on Soundprobe on the PC, Play on my Amiga and start playing music accompanied by a full orchestra!

Never having had the opportunity to play with a group, band or orchestra in the past, playing with full orchestral accompaniment is brilliant and it is very possible to disappear into my own little world occupied by only myself and 70 other musicians contained inside my Amiga!

Just as an addendum to round off this article, my son Christopher is a singer and I have modified the above system to be able to record Christopher singing in addition to MIDI backing. The result is quite good, even though I do say so myself. With Christopher in another room with a microphone and wearing headphones, the audio from the mic is mixed with the MIDI and fed BACK through the headphones so he can hear himself as well as the backing track. Once balanced, this is fed into the PC and recorded.

Although this can be done all on the PC, I still find it easier and more comfortable to use the Amiga for the MIDI side of things. Having tried to use Cubase at evening classes several years ago, I found it very cumbersome and overfacing compared to the Amiga software - a little like driving into town using a double decker bus instead of my car! So, I stick to KCS...

The End Result

On the Total Amiga website are 2 audio (mp3) files and a MIDI file for you to download - a sort of "cover website" for the Mag ;-) and here is an explanation of them.

The one entitled 'Friends' is an audio recording I made with my son, as I described earlier in this article, which uses a MIDI backing and a live recording of the audio. I picked the MIDI file up from somewhere on the 'Net some years ago and it was quite an interesting experiment to produce this track - I am quite pleased with the result, although the original .wav file quality is superior to this, my first attempt at Mpegging. The original .wav file is around 34 meg in size so there is some advantage to compression!

The MIDI file, Fantasy, and it's equivalent Mp3 file shows the difference between file sizes particularly well with the MIDI weighing in at just short of 13k whilst the Mp3 is over 3 meg! Depending on the soundcard, the results can be either good on both or good on audio but rubbish as a MIDI file - the better the soundcard (and MIDI mapping) the more superior the results. Some soundcards are just not kind to MIDI files so I nearly always play them through my Yamaha keyboard which gives excellent results everytime.

Just out of interest, I remember once going to see the Syd Lawrence Orchestra in Huddersfield Town Hall and being told that Syd Lawrence had at the beginning of his career, re-written the original Glenn Miller scores by listening to original recordings and painfully transcribing all the band parts individually to gain the Glenn Miller sound! That, I thought, is dedication - or plain madness! 20 some years later I had searched the 'Net and all the other sources I knew for a Gerard Kenny song called Fantasy and couldn't find it anywhere. Guess what? It was my turn to play the nutter and transcribe the parts into a MIDI sequencer - it took ages but once I heard the sound starting to come right, I HAD to carry on. There were 3 parts I actually played on the keyboard - the electric piano, the oboe and the base guitar. Once these were done, I had to listen very carefully to the audio recording and piece together the rest of the arrangement but I have to say I am happy with the result.

If you have the inclination to download the files, I hope you enjoy them - if not, tough! You could always write your own...

So surf along to http://www.totalamiga.org Now!

Composing Images in Perfect Paint

Robert Williams creates a composition of images and discovers some cool features along the way!

Because Perfect Paint is not a layers based package, you need to employ different techniques when creating a composition. In particular, it is more important to start with a clear idea of the end result you want to achieve because it is very difficult to go back and make changes to completed elements, particularly if they overlap other elements or the background.

In this tutorial I will compose three different images onto a background, this will show you the basic process of composing images in Perfect Paint and some of the special effects you can apply. As usual I'll try to point out some of Perfect Paint's other features and throw in some tips along the way. Although I'll be using all these techniques on one image in "real life" you'll get a more professional look by sticking to one or two effects per image.

As a theme for this tutorial I'm going to use some of the photos I took (with my trusty Olympus Camedia 920Z digital camera) while on holiday in Bruges last year. The end result will be the sort of photo montage often seen in tourist brochures and the like.

Let's get started, load up Perfect Paint and select a nice 16 or preferably 24 bit screen (note that all recent versions of PerfectPaint require a graphics card). The first step is to find a suitable background, for this sort of image I wanted something not too obtrusive so the images composed over it would stand out. I chose a sunny picture of quiet wooded path. Most of Perfect Paint's global functions such as load and save are found in the toolbox menu, this is accessed by clicking on the down arrow button in the title bar of the toolbox. Open this menu then choose Load and select your background image in the file requester.

Tip: While you were in the menu you may have noticed that the keyboard short-cut for Load is "L". Users of Deluxe paint will recognise that this short-cut and many others are the same as the Grandad of Amiga paint programs.

The image is loaded and displayed in a window, notice that a thumbnail also appears in the image bar at the bottom of the screen.

Toolbar

Fade Away

We'll use the first composed image to get a feel for the general process of composing and just apply a simple fade effect, the next two will be a bit more complex. To compose a secondary image we need to load it at the same time as the first, Perfect Paint can load up to 10 images, each one is held in a buffer. The available buffers are shown in the image bar at the bottom of the screen, click in one of the empty spaces to select that buffer, the green bar indicates the selected buffer. The current image window disappears but that image is still held in memory. Now load the image you wish to compose using the L hotkey or Load command from the toolbox menu. A window with the new image appears and it is shown as a thumbnail in the image bar.

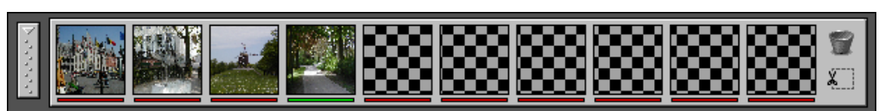
When I loaded my image (which happened to be of a windmill), I thought it looked a bit washed out so before I composed it I decided to apply some colour correction. To do this click on the pen and background colour display in the middle of the toolbar with the right mouse button. From the pop-up menu select Effects/Colour Correction. A new window opens with sliders to alter the colour balance of the whole image. Notice the preview on the left hand side, you can drag this with your left mouse button to check the effect on different areas of the image. I found I just needed to increase the combined colour slider (the fourth from the top) slightly to make my image a bit more vibrant. When you're done click OK to close the window and apply the effect.

The color correction window with its handy preview.

To compose the image onto the background we're going to cut it as a brush, click on the brush cutter tool and ensure filled box is selected (it should be by default). If you want to cut a different shaped brush you can do so by selecting one of the other filled drawing tools (make sure you select the filled version or you'll just cut an outline). Click on the image at the top left hand corner of the area you want to cut, drag to the bottom right and release the button. The brush should now be cut and follow your mouse pointer if you move it over the image.

Tip: If you want to cut the whole image as a brush or get right up to one edge it is a good idea to re-size the image window a little larger than the whole image. You should then see a chequer board background, Start dragging out your selection on the background to ensure you get right to the edge of the image.

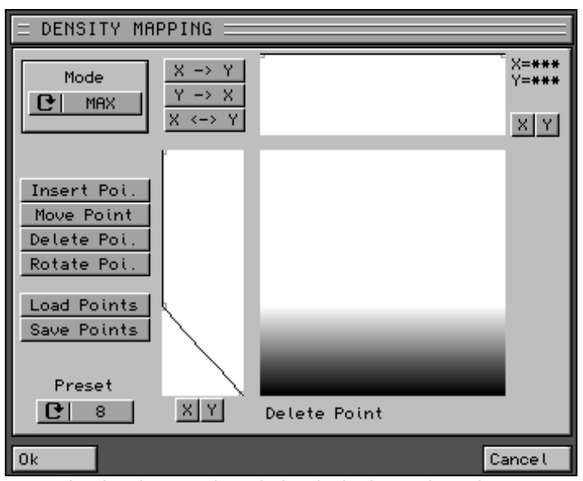
Note: If you don't see a brush when moving your pointer over the image check you do not have Prefs/Cursors/Precise enabled in the toolbar pop-up menu.



Now we have the brush switch to the background image (the first one we loaded) by clicking on its icon in the image bar. The background is displayed, if you move your mouse over it you should see the brush. You may need to scale the brush to fit in the composition, if so right click on the Cut Brush icon and in the pop-up menu select Custom from the Size sub menu. In the Picture Size window you can enter a new size either as a pixel value or as a percentage scale.

If you wanted to apply the image straight over the background with no special effects, you could just position the brush and click the left mouse button now. But that's boring, let's apply a fade so the bottom third of the image gradually blends into the background. To do this we'll use PerfectPaint's excellent density mapping feature. This is accessed by selecting Misc/Density Mapping from the Cut Brush pop-up menu. With density mapping you can create all kinds of cool transparency effects, to get an idea of what is possible cycle through the Preset options. Note that the effect shown will be applied to the whole brush, light areas will be rendered solid and dark areas transparent. We're going to base our effect on preset 8 so select that now.

First we need to alter the effect so the it fades from white to black vertically, to do this click on the right hand point in the top section and drag it up so the line is flat along the top, the larger preview section should turn solid white. Now click the bottom point in the left section and drag it to the right so the line goes from the top left to bottom right corners. Now the preview should show a smooth vertical gradient. This gradient is even all the way down so almost all of our image will be translucent to some degree, what we really want is for it to fade in just the bottom third. We can achieve this by adding another control point to the line in the left section. Click on the Insert Poi. button then click on the left hand line about two thirds of the way down, a new point should appear. Click on the Move Point button then drag the point across to the left edge. Now the preview shows that the top of the image will be solid and the fade will only effect the bottom third. When you're happy with the preview click OK to apply it to the brush's stencil (you won't see any effect until you paint the brush down).



The density mapping window is the key to lots of great transparency effects, make sure you have a look at the presets!

Tip: It's easy to accidentally add more points than you need, to remove them just click the Delete Poi. button then click on the point you want to remove.

Now position the brush over the background where you want to place it and click the left mouse button to paint it down, you should see the transparency now take effect. If it doesn't quite come out how you want just click the Undo button and try again. If you want to change density mapping you need to choose Misc/Reset Transparency from the brush pop-up menu first, otherwise the new mapping will be added to your existing one.

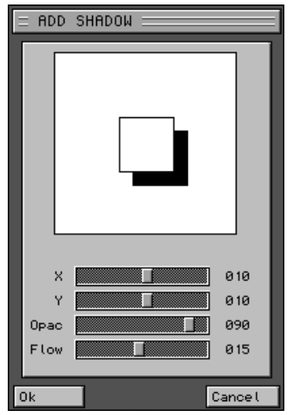
Note: Resetting transparency also wipes out any stencil that is applied to the brush (see the Crop section below for more information on stencils.)

Shadow

A nice simple effect for a composed image is a shadow so it appears to be floating over the background. Perfect Paint doesn't have layers or a shadow effect while painting but it can apply nice soft shadows to the stencilled area, with a bit of ingenuity we can use this feature to get the effect we want.

First load the image to be composed into a new buffer and cut it as a brush as we did before, this time I'm going to cut a round brush by selecting the filled circle tool after clicking the Cut Brush icon. When the brush is cut swap to the background image and scale the brush as required.

Now position the brush where you want it to appear on the background but don't click the mouse button just yet, instead press the J key on the keyboard. This swaps us to the spare page, this is another image exactly the same size as the background which can be used as a scratch pad or for certain effects such as rubthrough. Now without moving the mouse click the left button, this pastes the brush down on the spare page in exactly the right position relative to the background image. Now this is the clever part, the spare page shares its stencil with the background so we can set the stencil on the spare page, on an odd shaped brush like my round one this



Adding a soft shadow is easy as long as you have a stencil setup.

will be much easier as the spare page has a plain background. To do this choose Edit Stencil from the Stencil pop-up menu, make sure the magic wand is selected, drag the RGB tolerance slider down to 000 and click anywhere outside the composed image. After a few moments the background should be replaced by the chequer board pattern, now we need click Inverse so the background is protected. When you're finished the image should be covered with a chequerboard pattern, click OK to exit from the stencil editor.

Swap back to the background image by pressing J again. Now we need to reveal the image on the spare page, to do this right click on the Effects icon and select Spare Page from the Wrap submenu, this effect reveals (rubs through) the spare page where you paint. Select the filled box tool and ensure the stencil is switched on (the icon looks depressed). Draw a box over the whole area where the composed image will show through, don't worry if it's not that accurate just make sure you cover the whole of the composed image. When you release the left mouse button a Compose Requester may appear, if it does leave the opacity at 100% and click OK. If you want to take a look at the modes on offer by clicking the cycle gadget. Now we just need to add our shadow, first select the shadow colour you want by clicking on it in the palette with the left button. Select Add Shadow from the Stencil pop-up menu, in the window set the X and Y offset to get the size of shadow you want, the opacity and the flow (the higher the flow the softer the shadow will be). Then click OK to see the result. Remember you can always Undo and try again. If you want to carry on editing the image remember to turn the stencil off by left clicking the icon again.

Note: If you want to apply a shadow to a rectangular composed image you don't need to bother with the spare page, just make the stencil using the editor's rectangle tool right on the main image.

Tip: While you have the stencil switched on you can apply all kinds of effects just to the composed image, just switch on effect mode by clicking on the icon, right click to choose an effect from the menu and then draw over your composed image with the filled rectangle tool. You can set preferences for your chose effect by selection Preferences from the pop-up menu.

Crop

Once again load the image you want to compose into a new buffer, to make life easier crop the image down so that there is only a small border around the subject you want to cut out, Crop is in the Effects submenu of the toolbox menu.

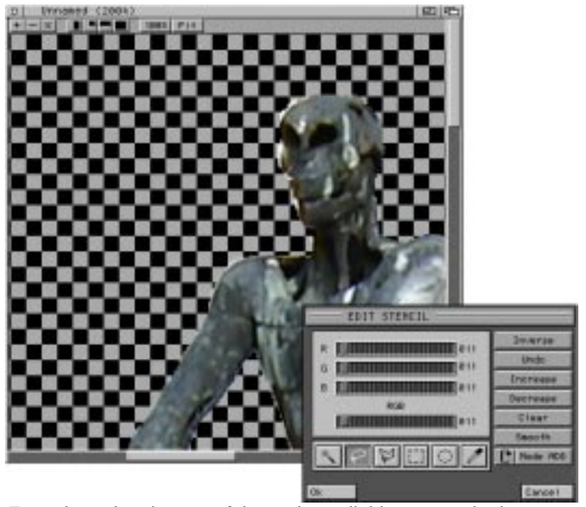
Now we're going to create a stencil for this image so the subject is protected from editing, select Edit Stencil from the Stencil pop-up menu. We actually need to cover the background with the chequerboard pattern but I found it easier to cover the subject and then invert the stencil. The key to this job is to choose the right stencil tool for your combination of subject and background. For example if you have a fairly plain contrasting background you can use the magic wand to select it automatically. Just click on the background and then use the four tolerance sliders so the correct area is selected. You can add further areas with the magic wand by clicking again, the tolerance just applies to the area selected with the last click. In my case the background is very varied so I am using the "lasso" tool to select areas manually. To help you do this accurately you can zoom in using the + button at the top of the image window, switch on the cross-hairs by pressing Space and use the Amiga's keyboard mouse control (hold down the left Amiga key, use the cursors to move the pointer, hold Left-Alt as well for a left button press). If you overspill and select more than you mean to set the Mode cycle gadget to SUB to remove areas from the selection using the tool of your choice.

The background to my sclupture is too varied for the magic wand.

If you've stencilled over the subject rather than the background as I did now's the time to click Inverse, then use Smooth which removes any stray pixels. Especially if you have inverted now is a good time to give the edges the once over and touch up any imperfections, the odd stray pixel will be Okay as we will blend the edges slightly later on anyway.

Tip: A lot of work can go into a stencil like this so it's a good idea to save it using Save Stencil in the Stencil pop-up menu, if you've cropped the original image remember to save that too or the stencil won't line up if you need to reload it.

Make sure the stencil is switched on, choose the Cut Brush tool and then the Filled Box tool and finally pick up the subject as a brush. You should notice that it has been cut away from the background using the stencil. Select the background image and scale the brush as required. If you need to you can flip the brush horizontally or vertically or rotate by ninety degrees using the commands in the Fast Rotation submenu of the Cut Brush pop-up. The keyboard short-cuts for these are X, Y and Z respectively again matching DPaint. To remove any pixelisation from the edge of the image we will now apply the Misc/Smooth Border option from the Cut Brush pop-up menu, I found that an Amount of 1 was enough to get rid of any jaggies without making it look too soft. To finish off position the brush over the background and paste it down, I have overlapped my cropped image with the other composed images, notice that the smoothing only takes effect when you paint the image down.



Zoom in and make use of the tools available to crop the image as cleanly as possible. I found inversing the stencil was helpful too.

Final Word

Hopefully this tutorial has demonstrated three useful variations on a composing technique with Perfect Paint, many things can be achieved with this program even if it doesn't have layers although they do require a bit more forward planning. I also hope it has shown you a few of PerfectPaint's less obvious features so you can carry on and experiment with it in other ways.

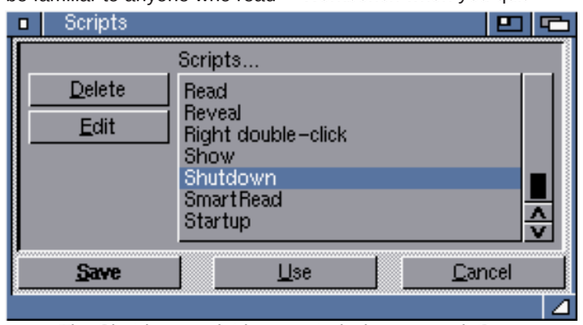
The end result, see it in colour on the back cover.

Directory Opus 5 Tutorial

Robert Williams kicks off part two of his Opus tutorial with a look at script events and then progresses to the file type recognition options.

Last issue I demonstrated several ways you could customise Opus to easily access internal and external commands, programs and scripts. Before we hit the main topic of this issue's tutorial, file types, I thought it would be useful to mention another way of activating functions, scripts. This feature is somewhat confusingly named, what the scripts editor actually does is to define what functions should be executed when a certain event occurs. If you open the scripts editor using the Scripts option in the Settings menu you will see a list of all the events to which you can attach an action. If you're not quite sure to which event each option actually refers, press "Help" on the keyboard while the window is active for a more detailed description.

By default you will see that the Double-click event is highlighted in white, this means it has an action attached. Looking in the help we can see that Double-click means double clicking on the background of the main Opus window (which is the Workbench background in Wb Replacement mode). To view the function select Double-click and click the Edit button. The Function Editor (which should be familiar to anyone who read the first part of this tutorial) appears and you can see that the default command is the internal Opus command "DeviceList New", this command displays a device list (a list of the volumes and assigns mounted on your system) and the "New" option causes it to be displayed in a new lister. If you never seen this feature in action before try double clicking on the background of the main Opus window, you should see a new lister appears and shows the device list for your system. If you wanted you could modify this function so something different happens when you double click. But rather than change this default let's have a look at setting up a new Script.



The Shutdown script is executed when you quit Opus.

Goodbye Opus... Hello Workbench

Sometimes it can be useful to load Workbench instead of Opus, for example you may have a problem and want to check that Opus is not the cause, or you might just want to try some of the new Workbench features that have been added in OS3.5 and 3.9. While you could always reboot and hold Shift to disable Opus, as I mentioned last time, another option is to set a script that automatically loads Workbench when you quit Opus using the "Quit" command in the "Opus" menu.

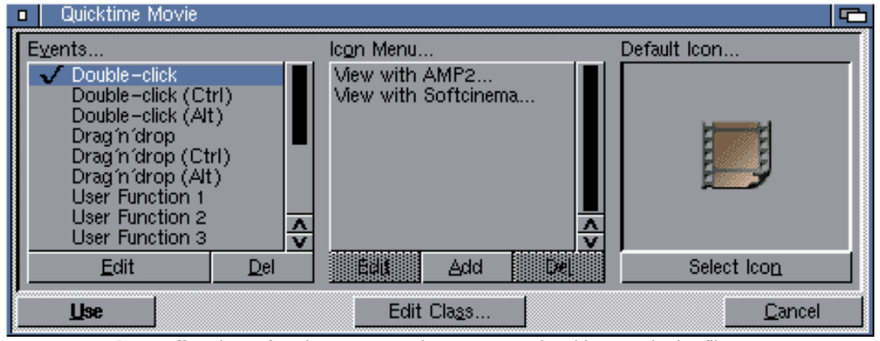
This function restarts Workbench without running the WBStartup items.

Note: Sam Byford EMailed to tell me that when he has installed Opus recently he's found that the installer has not backed up the original "loadwb" command to "loadwb_old", so there is no way to load Workbench. To check this take a look in your "C:" directory and see if the command exists. If it doesn't you can find the original loadwb on your Workbench floppy (OS3.1 and earlier) or CD in the OS-Version3.x/c directory (OS3.5 and 3.9). Copy "loadwb" into your "C:" directory but don't overwrite the existing file (which loads Opus) rename the version you're copying to "loadwb_old", you can do this in one step using Opus' "Copy As" command, found in the Lister menu.

If you scroll down to the end of the scripts list you should see an event called "Shutdown", this is called when Opus quits, all we need to do is tie the "loadwb_old" command to this event. Select "Shutdown" and edit it, in the function editor window "Add" a new line and choose the "AmigaDOS" type in the cycle gadget. Click on the file button and find your "C:" directory in the file requester, then choose "loadwb_old". If you have OS3.5 or later you can add the "SKIPWBSTARTUP" switch to the command; this will stop the programs in your WBStartup which have already been loaded by Opus being run again by Workbench. So the final command line should be: "C:loadwb_old SKIPWBSTARTUP". When you're happy press Return in the text box to accept the command then click "Use" in the Function Editor and "Save" in the Scripts editor. Now make sure that anything you're doing in Opus is complete then choose "Quit" from the "Opus" menu, after you confirm the request you should find Opus closes and Workbench loads.

Sounds Funky!

On reading about scripts above, you might be thinking that it would be cool to add sounds to some of those events, for example when a disk is inserted or a lister opened. You could achieve this using the scripts window to assign a sound playing command to each event. However with Opus Magellan a new feature was added to the Environment window catering specifically for this function. Just select "Environment" from the "Settings" menu and go to the "Sound Events" page, here you can assign a sound to an event more quickly than setting up a function in scripts. There are also facilities to test the sound and adjust its volume. The "Exclusive Startup/Shutdown Sounds" check box is used to prevent other sounds you have configured being played while the startup and shutdown sounds are playing.



Opus offers lots of options to associate commands with a particular filetype.

File Types

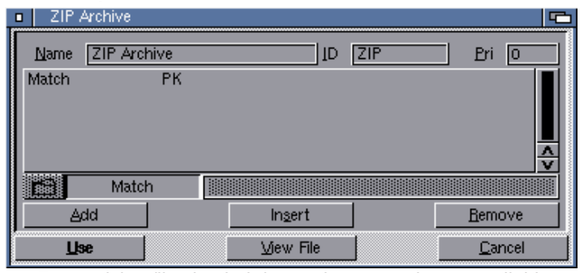
One of Directory Opus' most powerful features is the ability to recognise the format of a file and allow the user to customise how some actions will effect the file. The Filetypes editor is accessed from the "Settings" menu, in the window you can see a list of all the types currently active on your system. While you can define new file types yourself there are several sources you can check to see if there is already a predefined type available. The first is just to double click on a file of the type you want Opus to recognise. If Opus doesn't recognise the file, it will open a requester where you can choose to "Sniff!" the file, this function tries to find a suitable filetype in storage. If one is found you can choose to install it, however check first that the type is suitable as it is possible for there to be erroneous matches. If a suitable type doesn't come with Opus then there are some collections of predefined filetype which can be downloaded from the Internet (or found on magazine cover disks). Probably the most comprehensive is MagnumOpus, you can download this collection from http://www.magnumopus.co.uk. Magnum Opus contains 435 filetypes and should cover pretty much everything you're likely to come across. So here I will concentrate on the options you can give to a filetype rather than how to create a new one.

Tip: Install only the filetypes you think you will need as each one you add causes Opus to take slightly longer identifying the type of a file.

However, here is a quick guide to setting up a new file type. Open the filetypes editor and click "Add", two windows open, one allowing you to configure the actions available for this type (more on that later) and the other where you edit the class. The class is the definition Opus uses to identify this type of file. First you need to enter a "Name" and "ID" for the file type at the top, the name is the short description that will be shown in the type column of listers and the ID is a unique code up to 8 characters that Opus uses to internally identify this type. The "Pri" (Priority) option is used to resolve cases where a file matches more than one type, for example an AmigaGuide document is also an ASCII text file, as long as the AmigaGuide is set to a higher priority than ASCII (which defaults to -1) then it will "win" in the comparison.

The main body of the class editor is a list of the checks Opus will perform to identify the file, as with the function editor you can add as many checks as you like. The most simple way to identify the type of a file is by its file extension (.zip, .mpg etc.), to do this add a check, click on the file gadget and choose "Match Name" from the list. Then you can enter the filename to match using wildcards in the string gadget, for example "#?.zip" would match all files ending in .zip. For file originating from Windows PCs and downloaded from the Internet where file extensions are almost always used this is fine, however on the Amiga and other systems extensions are not compulsory. For more reliable identification of filetypes it is better that Opus actually looks at the structure of the file itself to find the type. In the class editor Opus provides a "View File" button so you can take a look at the contents of a file and try to identify some common characteristics which identify it.

Many filetypes start with a common identifier so the program loading them can recognise if it is valid, for example when I looked at several ZIP archives using "View File" it was clear they all started with the characters "PK". To match in this delete the Match Name check and add a new one, this time choose Match and enter "PK", this will look for those characters at the start of the file. If the common characters are a few positions into the file you can use "?" to mean any character, so if you found a file type which always had "ABC" as the third, fourth and fifth characters you could have the check Match ??ABC.



Recognising files by their internal structure is more reliable than using the filename extension.

Tip: When looking for common elements in files so you can define a file class make sure you check several files you know to be in that format, preferably from multiple sources, or you may create a class that only works on a subset of that filetype.

As you can see in the command list Opus offers lots more ways to identify a filetypes and allows them to be combined with "And" and "Or" logical operators, however I think any more depth is really beyond the scope of this tutorial, so take a look at your Opus manual for more information.

Click!

Once you have found a suitable filetype or set one up you can then decide what actions you want to be available for files of that type, you can also set the default icon that will be used in the icon view modes if the file doesn't have a filename.info. To edit the actions select the filetype in the editor and click "Edit", in this example I'm going to add some actions to the Quicktime Movie file type (which I got from MagnumOpus). In the window that opens there are three

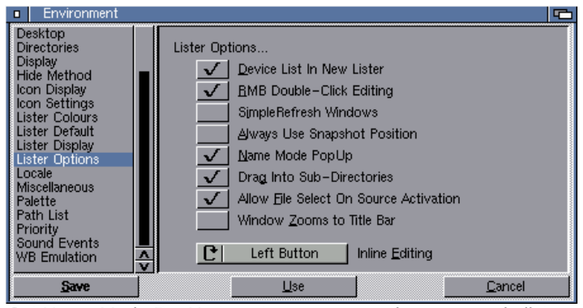
sections, Events, Icon Menu and Default Icon. First let's have a nice icon, just click the "Select Icon" button and find a suitable icon on your system. You'll find that some suitable ones are installed by OS3.5/9 in the ENV:Sys/ directory, I chose def_anim.info.

When you double click on a Quicktime movie it would be nice for Opus to launch it in a suitable player. To do this select Double-click in the "Events" list on the left, then click "Edit", this opens the "Function Editor" where we can choose the program to view the file. I'm going to use the wonderful AMP2 reviewed last issue which has been upgraded in its latest beta versions to support Quicktime (grab them from amidog.com). So click "Add" and choose "AmigaDOS" as the type and then pick your chosen viewer using the file gadget. Use the variables button ({ }) to insert "{f}" which will be replaced by the name and path of the double clicked file, then add any command line options needed by the viewer program. My final command line is: "Work:Utilities/Graphics/AMP2 /AMP {f} window overlay ahi". It is also a good idea to check the "Run asynchronously" option in the "Flags" list, otherwise the lister containing the file will be locked until you close the viewer.

Pop-up Menu

For some filetypes there may be more than one action you want to define, for example sometimes you want to view a file and other times you want to edit it. For Quicktime Movies I have two viewers that I commonly use, SoftCinema and AMP2 so it would be handy if I could pick between the two. As you can see from the list of "Events" it is possible to run a different command by holding the Alt or Control key while double clicking on the file. However I know I would soon forget what functions I had assigned so a better option is to add the choices to the icon menu. This menu pops up when you right click on the file in a lister.

First I'm going to add my default option, View with AMP2, to the menu. To add an item click "Add" in the "Icon Menu" section and define the function in the function editor, enter the title of the menu item in the string gadget at the top. For this item I can copy from the double-click function by opening its edit window and dragging the command line across. Add another menu item and this time set it up to run a different movie player, make sure you add the file variable, {f}, any command line options, and check the asynchronous flag. Another good use for these pop-up menus is to call the same viewer with different options, for example AMP can play the movie either in a window or on a new screen. Add another new menu item, then click on the View with AMP2 item and edit it, drag the command line from the AMP2 function editor to the new function, close the AMP2 function editor. Set the label on the new function editor to "View with AMP2 (screen)". All we need to do now is adjust the command line so the movie opens on its own screen, in my case this just meant removing the "window" and "overlay" options.



Set Name Mode PopUp to get popup menus in name mode listers.

Tip: To get pop-up menus in name mode listers check the "Name Mode PopUp" box on the "Lister Options" page of "Environment" settings.

Drag `n' Drop

Using the drag and drop filetype action on a movie file doesn't really make sense so for this example I'm going to use the ZIP Archive filetype that is supplied with Opus. ZIP files are file archives which are very common on the PC. To extract files from a ZIP archive you need an unzip utility, I'm using unzip from the archive "Unzip512x.lha" which can be found on Aminet in the "util/arc" directory. The unzip command from this archive should be copied into a directory on your path, usually "C:". Open the filetype editor and edit the ZIP Archive filetype. Select Drag 'n' drop in the Events list and click Edit. Add an AmigaDOS command and enter the following command line "C:UnZip {f}". Now we need to tell the UnZip command to extract the files to directory where archive was dropped. UnZip doesn't have a destination option, it extracts to the current directory, so to do this we just need to set the "CD destination" flag. We also need to set the "Do all files" flag so all the selected files will be de-archived if several are dragged at once, the "Rescan dest" flag so the destination lister will be updated to show the new files and the "Output to window" flag so we can see if UnZip reports any errors. Now drag 'n' drop will work on ZIP archives as it does by default for LHAs.

A final useful action to add to the ZIP filetype is to set the Double-click event to produce a list of the files in the archive. To do this add the following AmigaDOS command to the Double-click event: "C:UnZip -v {f}", set the Do all files, Output to window and Window close button flags.

Open With

If all that is too much trouble for you there is another trick up Opus' sleeve that can make opening files in different applications and utilities easier, the "Open With" menu. To access this right click on the file in a lister and highlight "Open With", if the program you want is already on the submenu just select it and your file will be opened in that program. If the program you want isn't there select "Other" and find it in the file requester, then the file will be opened. Next time you go into the "Open With" submenu you will notice that the program you just picked is now listed. Once the maximum number of items allowed in the submenu is reached the first chosen one will be discarded, you can set the maximum on the "Miscellaneous" page of the "Environment" settings window.

I received a few comments about the Opus tutorial in the last issue, all were positive, and a couple of old Opus hands even said they learnt something new. Thanks must go to Sam Byford for letting me know about the problem with loadwb not being backed up and for suggesting the Close Opus/Load Workbench tip. If you have any comments on this tutorial or suggestions for future instalments please let me know!

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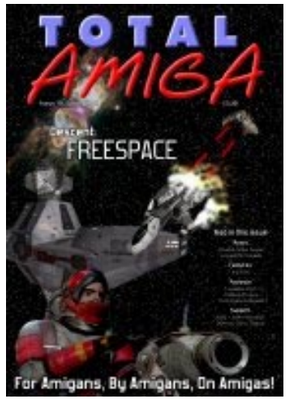

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- Column from Fleecy Moss
- Descent: Freespace Review
- Mediator 4000 Review
- ImageFX 4.5 Review
- Directory Opus Tutorial.
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Please let us know what features and articles you would like to see in the next issue!

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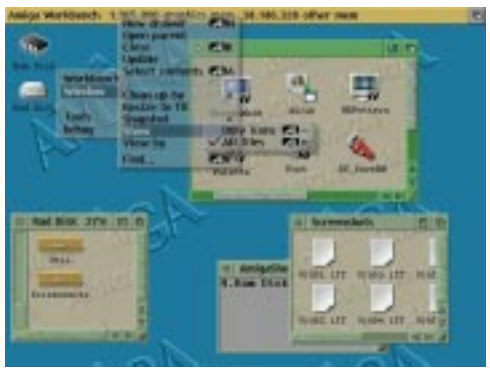
I11

AmigaOS 4 First Screenshots

Menus

Intuition also controls the Amiga's menu system. Here you can see that pop-up menus and a variety of display options have been incorporated into the system. These options will be part of the OS and won't require third party utilities.

These screenshots highlight some of the changes being made to intuition, the core of the AmigaOS user interface. In particular you can see some of the window customisations options that will be available.. Note that this is not the final default OS look just an example of what can be done.



PerfectPaint Tutorial

Here is the end result of the PerfectPaint which starts on page 41.