Issue 6, Autumn 2000
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ADSL
Monitors and Scandoublers
Heretic II
Virtual GrandPrix
Top Tips
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Hard Drivin’ Part 2
And much more...

For Amigans, By Amigans, On Amigas!
Welcome to the biggest issue of Clubbed ever! The extra three pages of editorial in this issue have been made possible by two well known Amiga companies, Eyetech and Analogic, agreeing to advertise with us. I would like to reassure you that this additional advertising will not bias us in any way, nor does it mean that Clubbed is turning into a profit making publication. All revenue received from advertising will be used to improve and enlarge the magazine. If you have any tips you think other readers might find useful please send them in for inclusion in “Top Tips”.

Support

Chairman

Chairman

Amiga Users than no show at all, and in fact due to the low table costs involved, companies attending are likely to make considerably better profits. Also the end user benefits with low entry fee (£1), but still with all the hardware and software available that might have been at a larger show.

Now don’t get me wrong, I love WoA and all the atmosphere that comes with a large show, nevertheless, these shows take an enormous amount of planning, organising and a lot of finance to materialise, and without major input from user groups and the like, last year’s show just wouldn’t have even happened! So if we can help organise such a major event then we should be able to run a smaller show of our own.

With the combination of low user base and lack of news with this year’s WoA and the apparent success of K3 (Kickstart show 3), we (SEAL) decided that yes, the time was right to do a show of our own, and if our show is nearly as successful as K3 we will be happy bunnies indeed.

In these frugal times it would be better to have a couple of small shows run by Amiga Inc letting us have a couple of magic packs and various freebies to give away as door prizes, Analogic (put deal details here), Blittersoft hopefully exhibiting the Boxer Amijoe and MorphOS. If we can help organise such a major event then we should be able to run a smaller show of our own.

We’d like to make Clubbed 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.

thank you to all the contributions that helped me with this issue, and to Sharon who checked the avalanche of articles in record time. Despite the lack of time we’ve got some interesting articles in this issue. Mick has been playing Hyperion’s first product, a port of the magical romp Heretic II that will push your PPC and BVision to the limit! I’ve reviewed PageStream 4, as used to produce Clubbed, and Gary Storm has been speaking to Gary Peake, head of developer support at Amiga. New in this issue is the Top Tips section, the idea behind this is that there are many hints that don’t really merit a complete article in themselves. If you have any tips you think other readers might find useful please send them in for inclusion in “Top Tips”.

Do The Write Thing

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Polish hardware maker Elbox have announced the first fully functional PCI bus board for the Amiga, the Mediator. PCI (Peripheral Component Interconnect) cards are the standard in the PC world and thus a wide variety of cards are available at very low prices compared to Amiga specific hardware. Typical PCI cards include SCSI controllers, parallel and serial ports, Ethernet, sound cards and of course graphics adapters. One slight problem is that many PC graphics cards now use the dedicated AGP (Advanced Graphics Port) slot but PCI versions are still available in most cases.

Initially two versions of the Mediator will be available both for towered A1200s. One version connects to Apoll0's Z4 board which will allow PCI and Zorro slots in one machine. Also available will be a stand-alone busboard for those who don't need Zorro. In the future versions for big-box Amigans may also be produced.

Vision Factory Developments have announced that they will be supporting graphics cards on the Mediator with their CyberGraphX software. The free version 3 will ship with the bus board and drivers will also be available for the commercial version 4. In a later announcement Vision Factory said that they already have a S3 Virge based PCI graphics board working with CyberGraphX and the Mediator and that drivers for 3DFX's Voodoo 3 cards are currently in development. For those who don't keep up with PCI hardware the S3 Virge is quite an old graphics chip, it was used on the Phase 5 CyberVision 64/3D. However very cheap PCI cards based on this chip are available so a Mediator/Virge combination could well undercut other Amiga graphics card options. The 3DFX Voodoo 3 while not at the top of the heap for PC graphics cards should offer 3D performance well in excess of anything currently available on the Amiga including the Permedia II based C/BVision PPC cards.

Elbox has produced a simple website at http://www.paulnolan.com/ where Paul notes on his website that his work for Amiga should not effect the speed of Photogenics' development.

If you have any queries suggestions or want to contact us for any reason please use one of the following:

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WWW: http://www.seal-amiga.co.uk/
Post: Clubbed, 26 Wincoat Drive, BENFLEET, Essex, SS7 5AH, ENGLAND.
Telephone: +44 (0) 1268 569937 (19:00 - 22:00 GMT only please).

Only Amiga Made it Possible

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Clubb3d.info

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Clubb3d is designed and laid out using:

Hardware:
Amiga 3000
CyberStorm PPC/060
CyberVision PPC
64Mb RAM, about 80Gb HDD space.

Software:
Pageant III 4 by Softlogic
ImageFX 4 by Nova Design
Photogenics 4 by Paul Nolan
Final Writer by Softlogic

There are also some essential utilities we couldn't live without: Directory Opus, Magellan II, TCP, Turbo Print 7, MakeCD.

Our thanks to the creators of this and all the other great Amiga software out there. Clubbed is entirely created on the Amiga, no other machines are used at any stage of the design or layout process.

Legalese

The views expressed in this magazine are those of the author of each piece, they do not necessarily reflect the views of the editor, other contributors or SEAL.

Please Note: Clubbed is produced by SEAL members in their spare time, while we will always strive to produce the magazine on time and include all the advertised contents this is not always possible due to other commitments. The price you pay for Clubbed covers our costs and nothing more, we don't make a profit from it. If you wish to contact a contributor please send your message to one of the addresses above and we will pass it on.

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Soldier of Fortune

Prolific games developer Hyperion Software (who have just released their first title Heretic II, reviewed on page 36) have added Raven Software’s Soldier of Fortune to their list of forthcoming ports of popular PC games. SoF is a first person perspective story-based action game that pits you, as the soldier of the title, against a fanatical terrorist group. There are 10 covert missions which cover 31 levels all set all over the world. In addition to the single player game there are also a wide variety of multiplayer options. Soldier of Fortune is expected to be ready early next year.

Hyperion are at: http://www.hyperion-software.com/

Perfect Paint 2

Perfect Paint started out as palette based paint program a bit like a more modern version of Deluxe Paint. However the author, Georges Halvadjian, soon added 24bit support and with version 2 this is turning into a very useful little program, especially if you want something to work with both palette based (1 to 8bit) and true colour (24bit) images. Here are some of the new features in version 2:

- Sorry for AGA users, but this version works only with graphics card and CyberGraphX or Picasso 96.
- Improved GUI.
- More Arexx commands.
- Add brush effects with real time pre-view.
- Improve zoom with real window.
- Convert pictures, animations and brushes to CMAP or RGB.
- Added several tools to add your mask: magic wand, lasso, polygon, elliptical marque etc.
- TurboPrint support.
- Colour and Gamma correction.

Best of all PerfectPaint is freeware and can be downloaded from: http://gothic.fr.free.fr/amiga/

TurboPrint 7.12

Another update to the popular printing package is now available, this time with improved quality drivers for HP DeskJet 930, 950, 970 (1200 / 2400dpi) and higher speed drivers for the Canon BJC 1000, 2000, 6xxx, 7xxx and new Epson printers. To use 7.12 you must have the paid 7.10 upgrade. 7.12 can be downloaded from the IsreeSoft website at: http://www.isreesoft.com/

Kickstart Shareware Registration Service

Kickstart, the well known Amiga user group based in surrey is now offering UK based registration facilities for a number of shareware products. So far they have signed up the following titles:

- Morrowid
- RIVA
- Frogger
- SoftCinema

Kickstart hope their service will benefit UK Amiga users because it should be easier, quicker and cheaper than sending money abroad. This in turn will hopefully lead to an increase in registrations for the shareware authors. Kickstart are actively seeking shareware authors who would like their products to be available via this service.

Kickstart’s website also hosts the support information for Digita’s popular word processor Wordworth, this includes an FAQ. An upgrade from Wordworth 7 to 7.01 is available for download. Kickstart are at: http://www.kickstart-amiga.co.uk/

SoundFX 4.00

This modular audio sample editor is now up to version 4. It boasts over 50 effects each of which has many parameters and can have complex modulations applied. Some of the effects available:

- Sound Synthesis (AM, FM, ...)
- 3D-Cube-Parametermodulation (Mix, Equalize)
- Effects e.g. Hall, Echo, Delay, Chorus/Phaser, Morph, PitchShift ...
- Operations e.g. Resample, ZeroPass (FadeIn/FadeOut), Middle, Amplify, Mix, DeCrackle, ConvertChannels ...
- 2D/3D-Spectrumanalysis
- Very good filters and boosters with resonance!!!

Nearly every parameter can be modulated in the following ways:

- Curve : fades smoothly from one value to a second with variable curvature
- Cycle : oscillates between two values with different waveforms, frequency and phase are adjustable
- Vector : envelope editor.
- User : a sample buffer modulates the value, contains several mappings, can even grab for modulator volume or pitch-envelope.

Multiple samples can be loaded and you can work with them in memory or on disk. A wide variety of file formats are supported for loading a saving. Samples can be played through Paula in 8bit, 14bit and 14bit calibrated qualities and AHI is supported for sound card owners.

SoundFX costs £20 and can be registered on-line via RegNet. Much more information and a demo version is available on the SoundFX home page at: http://www.imn.htwk-leipzig.de/~kost/soundfx.html
Amiga & Palm

Version 2 of Ralph Torchia’s Spitfire Palm Desktop for the Amiga is available. Spitfire replicates the 3com Palm or compatible) hand held computer’s Date Book, Address Book, To Do List, and Memo Pad applications on the Palm device using a MUI interface. Spitfire allows the data in the Palm and on the Amiga to be synchronised via a HotSync, the Palm’s cradle is connected to the Amiga via the serial port. Spitfire can also be used to upload data file and install third party applications onto the Palm device. The major new feature of version two is the HotSync Manager utility which runs in the background allowing a HotSync to be performed by simply pressing the button on the Palm’s cradle. Spitfire is shareware and costs 25USD (about £16), on-line registration is available at http://www.windspire.net/~torchia/spitfire2.html.

Amiga One

In a surprise announcement Amiga have committed to producing (or at least commissioning the production of) a new desktop Amiga machine to be called the AmigaOne. No details have been made available at the moment although Bill McEwen did mention in a recent executive update that it would feature processor options from 500MHz to 1GHz! As Amiga have recently signed a deal with graphics card maker Matrox it seems a strong possibility that the new machine will feature one of their chips.

Amiga SDK Released

The new Amiga company, formed by Fleecy Moss and Bill McEwen at Christmas has released its first product, the Amiga Software Development Kit (SDK). The SDK runs on top of Linux (Redhat’s 6.1 distribution is recommended) and a version that runs over Windows is expected in the next month or so. The final version of the Amiga Environment will be able to run hosted on another OS, as the SDK does today, or stand-alone. The initial release of the SDK contains little Amiga specific content and is mostly to let developers get started with Tao’s Elate OS, the basis of the new Amiga environment. Future SDK releases should slowly gain more Amiga specific features as the debut of the first new Amiga systems approaches.

Amiga World Issue 3

Amiga have released issue three of Amiga World, their magazine designed to give Amiga users information “from the horse’s mouth”. The new issue includes a summary of the recent AmiWest show in held in Sacramento, a look at Haage and Partner’s plans for the new Amiga and an interview with Dean Brown (the man behind DKB who made many Amiga expansions) who Amiga have recently taken on as their Director of Hardware. As usual Amiga World is available on-line or as a PDF file for printing. The Amiga website is at http://www.amiga.com/.

The official Amiga website: http://www.amiga.com/
Czech Amiga News: http://www.czechamiga.net/
AmigaFresh: http://www.amigafresh.co.uk/

Amiga Inc. News

In simultaneously good and bad news, Thorsten Stocksmeier has released his previously commercial Usernet news reader FFNews as freeware. The sad news is that he has ceased development in part due to piracy. The freeware version is not supported but fortunately FFNews seems to be quite a mature product. It offers most of the features you would want from a newsreader including on and off-line reading, EMail support and plenty of configuration options. It also boasts an attractive MUI interface complete with extensive context-sensitive on-line help.

The freeware version of FFNews can be downloaded from http://www.flavour-technologies.de/
Gary Storm talks to Amiga's head of developer support.

Firstly Gary, congrats on working at Amiga. You must wear forever, and I know from how straight forward and honest you've been on the Team AMIGA mailing list over the years that you wouldn't 't work for any company just because they were called Amiga'.

I came to work for Bill McEwen because he is genuinely interested in the Amiga and in taking to it in a point that it should always be better and not as it is. I wasn't able to see that upgrades had been made over the last ten or so years.

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You had to move your entire family from your home in Texas to Amiga HQ in Snoqualmie. Alot of trust and a pretty heavy lift to have the family think of their new home and your new job?

Actually, the trip went fairly well. My Linda, as well as Jonathan and Jennifer are still aw in the beauty of the Washington scenery.

When did you get the call, what exactly are you responsible for and why do you think they chose you over everyone else?

Actually, when Bill McEwen left Gateway, I knew he was going to be heading in the direction of buying Amiga. Neither of us discussed my employment with Bill if he did buy Amiga from Gateway though.

I got the call and offer quite unexpectedly and was asked a week later. I never asked why he chose me, only what it was he expected of me.

You have a printing background. What skills did you bring to the job of developer support, and what have you had to have a crash course on to aid you?

Actually, I come from three generations of newspaper people. My personal experience is with newspaper people. My personal experience is in newspapers, auto dealerships (Parts, Service, Marketing, and even running one or two for a major manufacturer), and I even running one or two for a major manufacturer), and lastly support for a national US company who did printing for major corporations all over the world.

What was your first mission on arrival at the HQ?

Survive a crash on Seattle’s highways, and alot of interest in the VP/OS.

This is not from us going out and seeking coverage. News agents are contacting us asking what we are doing. The SDK has been released for a couple of months now. How have the sales been going? At least one retailer in the UK has only sold a few copies.

Undoubtedly sales are limited by the amount of developers that have the right system set up. Sales are ahead of projection at this point and we feel that as our Dev Boxes and Windows hosted SDK gets out that more developers will come on board.

It is hard to ask a developer who has a system set up for development on a particular video card to change everything he/she is doing just to develop for us. The more platforms we cover, the greater the opportunity there is for the Amiga platform to gain some really broad developer support across the board.

So when can we expect the next version (with Windows hosting ability?)

30-45 days.

Just to clean this up once and for all Gary, what exactly are the royalty and licensing details for software written for the next Amiga?

See the amiga.com web site (http://www.amiga.com/corporate/071800-mcowen.shtml), I think Bill spells it out below.

Below is an extract from the page quoted by Gary on the Amiga.com website for those not on the Internet,

Secondly, the End User Licence Agreement that made it into the SDK is in error as a result of a legal misinterpretation. There is NO Royalties will be paid for any application either created within the SDK or run on Ami. Amiga will be creating a scheme in which third parties can pay a royalty to Amiga for the software they produce from the Amiga certification, branding and promotion. This provides a revenue stream to Amiga and a value add for the third party. This scheme is entirely voluntary.

Initially, Nvidia was chosen to be the graphic card partner and they are the leaders at the moment with their Geforce2 chip. Why did you change to having Matrox (with the much older G400 card) as your development partner?

No, we were looking at Nvidia. We decided to go with Matrox because they are looking at the same 3D, games, and professional video targets we are. I do not think Nvidia and Matrox is a second best choice. Quite frankly, one gets much better screen imagery and no heat up and shut down problems with the G400. I think it is an excellent developmental video system and what they have coming will be even better. Amigans deserve quality at an affordable price and we think we can get there with Matrox’s support and assistance.

You've seen what Matrox have to offer for their next generation gxf cards, haven’t you? What your impression, what kind of memory are they using (the new Fujitsu memory?), and what kind of 2d and 3d performance?

Sorry. I can’t discuss any part of Matrox’s plans. They are exclusive. They are all of us, at Amiga Inc. are very excited by the direction they plan to take 3D in their future products as well as with professional video.

A major ingredient for the success of the new AmigaOne are the level of quality of applications and games. How many and what is being ported to or written for the VP? Are many big software developers actively involved in professional video.

In Team AMIGA, a number of initiatives were pursued to get the Gateway’s future (ha-ha) Amiga products. Of special interest were the efforts to create a dedicated Interfaz. No real face and feedback, voice recognition (for blind people), etc., and also the piracy protection research. Have any of these been continued and are Amiga interested in trying to perform and implement them?

Privacy and special needs are always important issues.

I’ll take that as a yes then :) Yes, these issues are on Fleexy’s mind and he is developing the technology behind what we are doing. I truthfully think this is our last best chance to make it happen.

Of all life is about compromise. What have Amiga had to compromise on in the development of the AmigaOne?

Nothing that I am aware of so far. Our developmental process is unlike any other. Everyone contributes, everyone works, everyone believes. It makes it much easier to reach finished product that way.

I know you probably won’t tell me, but what is left to be done before a product can be shipped? :) I take it that your ESP is back working again?

Not well enough or I wouldn’t have to ask you the question in the first place :) You are in control of developer support. What about the user groups, is anything being done in helping to help Amiga?

I am in charge of all support for Amiga Inc. actually. We have a user and developer site almost finished. The site got good reactions from developers, any team in now working behind the scenes to bring in all the options necessary to run dev support under the old system.

The user and user group support sites will be totally open to all without any password protection. They will be open soon.

Do you foresee any difficulties when the AmigaOne range do get released?

For real? I try to be a realist, my cup is always half full. We are doing this because we believe, Watch what we produce and then criticize if it isn’t up to your standards, but don’t criticize what you haven’t seen. And always check rumours before spreading them. We will gladly answer any questions about any remarks.

What is Amiga’s opinion of projects like the BoXeR? Is it a possible competitor, or an ally? And what about promising developments like the QNX one?

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Gary Peake Interview

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The first public beta version of MorphOS is out, could this be the future of the “Classic” Amiga?

For the past few years many Amiga users have been looking for the next step on from the current Amiga. The new system announced by Amiga Inc. has given many people a lot of hope but it is clear it will be quite different from current Amigas as we know it today, even if it is in the same “spirit”. This very change means that devices based on the new Amiga environment may not provide what everyone wants from their computer. However, as many of us are painfully aware the current Amiga hardware is quickly getting further and further out of date to a stage when many modern applications are not possible on the Amiga even if the software were available.

Over the last few years the concept of porting the existing AmigaOS to an alternative processor has been suggested on numerous occasions. However it has always seemed unlikely that such a major project could be undertaken unless it was by Amiga themselves (who of course are now committed to the new Tao based OS). There is also the legal problem that such a port would probably require access to the original source code, and even after the port was completed, software would need to be re-compiled to run on the new processor.

But now Ralph Schmidt (the guy behind Phase 5’s PowerUP software) and a small team have produced the first beta version of MorphOS, which runs AmigaOS purely using the PPC processor on a PowerUP board. MorphOS side-steps the legal and software compatibility issues by running the existing code, both the OS and third party programs, designed for the Amiga’s 68k0 series processor under emulation. Parts of the OS can then be ported to true PPC code over time while maintaining compatibility with existing programs. The first beta comes with PPC versions of some key OS modules including Exec and the utility and maths libraries. The clever part is that the existing 68k modules of the OS and applications can seamlessly work with other modules even if they have been ported to PPC and vice versa. This means that one module (which could be a library device or program) can be ported at a time and all the programs that use it will benefit. In fact all as programs use services provided by the OS to some extent they will get some speed benefits as more of the OS is ported even if they are never ported themselves.

Installation

The beta version is supplied as either a tar archive compressed with bzip2 or an iha archive. Once decompressed the files have to be manually installed onto an existing system partition with AmigaOS 3.x installed. The only new files that need to be installed are in two drawers called morphos and qptar. Morphos contains the core files of the OS and qptar contains a 68k program that restarts the Amiga into MorphOS and debugdumdump which, as you might guess, dumps debug output to a file if MorphOS fails for any reason.

It is quite easy to setup a boot drive which can be used for both MorphOS and your standard Amiga usage, even if that includes WarpUP PPC software which is incompatible with MorphOS. Programs run from scripts like the startup-sequence and user-startup can be disabled when MorphOS is running by enclosing them in the following if statement:

```c
if WARN 68k mode ; start the hacks endif
```

Several libraries and datatypes which have several versions, say WarpUP and 68k, if you want to use the Warp version when running standard AmigaOS you can also install another version for use with MorphOS and add the suffix .elf. MorphOS’s library handler will always load a library or device with a .elf suffix if it is available. This mechanism allows MorphOS only versions of various OS modules to be installed alongside their 68k counterparts.

True PPC versions of several libraries and programs are provided with this beta, the most important of these is CyberGraphX version 5. To use this and hence really to use MorphOS you need to have Cyg 4.2 pre release 7 installed. The version 5 libraries and drivers can be installed alongside the 68k versions as described above although a slight change has to be made to the startup-sequence to prevent the PPC monitor drivers being loaded when booting in 68k mode.

Other true PPC programs supplied with this beta include GIF, icon, ILBM, PBM, PCX and picture datatypes, 81N device, newicon library and Iha (although the version in the archive is broken).

Once everything is in place a script is provided which runs the startup program, after a few seconds the Amiga reboots and, all being well, comes up in MorphOS. If, as in my case, everything works the only difference you will notice is a pulsing of the power light which shows the MorphOS Exec is active (this can be turned off if you want).

Compatibility

The stated aim of MorphOS is to be compatible with all Amiga programs that run reliably on a CyberGraphX system and in my experience so far they are already a long way to fulfilling that aim. The docs warn of some hacks and patches that should be removed and list some applications that currently cause problems, however in general use I found my favourite applications ran without a hitch.

For example I used PageSteam 4 to work on several of the pages from this issue under MorphOS. I was able to connect to the Internet via Miami, browse with iBrowse and read my EMail with Thorn. In fact it was so good it was almost an anti climax, my Amiga went on working as normal.

Performance

On a purely subjective basis I would say 68k programs running on MorphOS reach roughly 040/04MHz speeds on my 233MHz CyberStorm PPC. They are certainly considerably slower than the ’060 I am used to but in general performance is very usable. This speed assessment is backed up by several speed comparisons run by other users. This sort of emulsion speed is an impressive achievement especially when you consider that the processors on the PowerUP cards are now several years off the state of the art and that the dual processor design meant several compromises in performance had to be made including the omission of level 2 caches. On faster PPC systems with cache and further optimisation faster than ’060 speeds would seem possible.

Reports seem to suggest that most PowerUP PPC applications run at about the same speed under MorphOS as on the same system under AmigaOS. At first this seems odd, you might expect them to be faster under MorphOS as so much was made of the task switching overhead with the PPC and 68k processors combined. However under MorphOS all the 68k OS functions have to be emulated using PPC CPU time whereas under PowerUP commonly the PPC was only being used for one PPC task.

Secondly many PowerUP programs, such as the the s3 Mpeg movie player, also have a component simultaneously running on the 68k which of course has to be emulated under MorphOS.

Limitations

The major limitation with this first beta release is that it does not support the Blizzard PPC’s SCSI controller (the CyberStorm/PPC controller is supported) so those people with their hard drive or other important devices connected to their Blizzard are currently out of luck. Most hardware devices should still work with their existing 68k drivers running under emulsion, however this timing critical area seems to be where most incompatibilities occur. Several devices are listed in the documentation as causing problems under MorphOS including the A9900 SC513 controller, A1200 PCMIA hardware and the Fastlane Zill SCSI board. A patch is provided for the Aranellow device enabling it to work correctly (which it does). The docs also state that most DMA hardware is likely to cause problems.

On the software compatibility front apart from software hitting games and older applications the main problem is lack of support for WarpUP which mainly effects the new breed of 3D PPC games from the likes of Hyperion and Digital Images. While the majority of PPC based applications and utilities are available for both PowerUP and WarpUP with the remainder being pretty evenly split between the two standards games developers have come down strongly in favour of WarpUP and the Warp3D 3D hardware drivers. Ralph Schmidt has stated that he will not develop WarpUP support for MorphOS but that it is probably technically possible, hopefully a talented coder will get on the case!

Conclusion

This initial beta of MorphOS is a fantastic achievement, it is remarkably stable and the 68k emulation shows a good turn of speed. At the moment it is very hard to say how successful it will be in the future, if MorphOS were ported to modern PPC hardware I can see many Amiga users, myself included, being very tempted by the thought of a fast, cheaply upgradeable machine running the software we love. However at the moment there is a distinct lack of such machines on the market. With IBM’s POP (PowerPC Open Platform) boxes in an almost Bx909 like state of “just a few weeks away” for the last six months Apple is the only company shipping PPC hardware in volume. Unfortunately Apple are known to very cagery over the specs of their systems so MorphOS on a G4 Mac may not be possible without extensive hacking. The other avenue is the proposed PPC only accelerators for current Amigas but with Amijoe not expected until early 2001 will a big enough market still exist?

To find out more and to download the beta visit the MorphOS website at: http://www.morphos.de
Robert Williams gets and urge for more POWER!

It's hard to find any computer user who feels their machine is too fast, especially if they've been adding to it for a while. Frighteningly you soon grow used to a machine that seemed lightening fast when first fired up, and after a while you're craving for more speed.

With no new Amigas available we can't buy a new system as many PC users do, so many enterprising companies (and even Commodore themselves) developed accelerator cards which held a central processor to speed up existing Amigas. In addition to a faster processor many accelerators also provide various other features. This feature aims to explain the basics components of an accelerator to help you decide which combination of features is right for you.

CPU

The key part of any accelerator is the Central Processing Unit, this is the micro chip that runs your software and controls the rest of the machine. Various Amigas over the years, below are summaries of the main 68k processors used in Amigas and their accelerators.

68000

A Motorola 68000 CPU running at 7.14MHz was the heart of the Amiga 1000, A500, A2000/1500, A600 and the CDTV. Several accelerators which replaced the original processor with a faster unit usually running at twice the speed, 14MHz were available. The Supra Turbo 28 for the A500 and 2000 had a 68000 running at 28MHz. All these accelerators gave a mild speed increase as they were running at the 7MHz memory on the motherboard.

68020

The '020 was the first full 32bit CPU in the 68k line and was used in few Amiga acce- lerators as the '020 was available by the time the market really took off. Later the embedded controller version of the 68020 was used in the A2000, which was cheaper accelerators. Unlike the '020 the '032 version only had a 24bit address bus limiting it to 16Mb memory. It was really designed to drive applications like washing machines which don't need all the 32bit features.

The '030 was an evolution of the '020, it added a built in MMU and was able to run at higher clock speeds. All versions of the '030 have a 32bit address bus giving them 4GB of address space. The '030 was very popular with accelerator manufactur- ers, 130 accelerators exist for every Amiga (except perhaps the CDTV).

68040

This processor marked a major step-up in performance for the 68k family, it offers about four times the raw performance of an '030 running at the same clock speed (hence a 25MHz '040 is still about twice as fast as a 50MHz '030). The full '040 has a built-in MMU and FPU, integrating the FPU with the processor also lead to significantly increased performance over the 68881/2 FPU's used with the '020 and '030. The main drawback with the '040 is its high power consumption and heat output, this means that 68040 based acce- lerators are best suited to big box or tower Amigas. Having said that, '040 accelerated systems have been produced for the A1200 and even the A500 and can be quite successfully used in the desktop case, however adequate ventilation must be provided to prevent over heating and usually an enhanced power supply will be required as the standard unit cannot cope with the increased power requirements of an '040 and other vital peripherals such as a hard drive!

68060

Apart from the 68010 which is a very slightly optimised 68000 the 68060 is the only 68k series processor not to be fitted as standard to an Amiga by Commodore, they've been using that it didn't become widely available until the big C's demise in 1994. The '060 offered another big step in 68k performance, its fast clock speed (starting at 50MHz) and improved design made it 3 to 4 times faster than a 33MHz '040. The '060 opposed to the 5V used by all previous 68k chips which makes it much cooler run- ning than the slower '040. By the time of the ways these speed increases were realised was to reduce the number of FPU instructions available, the '040 had less than the '8862 and the '060 less than the '040. However this can cause a problem with older programs and development before the '040 and/or'060 were released as they continue to use instruc- tions that are not available in the FPU. When one of these instructions is encountered it has to be emulated using a combination of available instructions which forces the CPU into supervisor mode. In this mode multitasking is temporarily dis- abled, all windows are closed and the move- ment and also slows the processing down. To remove this problem Phase 5 intro- duced an FPU accelerator which tries to patch these programs which use the FPU as they are loaded replacing the most used instructions with a combination of the 6862 instructions to do the same job. This eliminates or greatly reduces the jerky mouse pointer and speeds up the applications. For users without phase 5 accelerators a commercial program called OxPatcher is also available which does a similar job.

Remember that any program that has a version optimised for the '040 or '060 will not benefit from these patches as it will continue to use the faster instruction. The memory Management Unit is part of the processor which allows the mapping of both virtual memory and physical memory to addresses. The AmigaOS does not require an MMU and very few programs make use of it, however if your machine has a full 68k chip with MMU you will use any missing FPU instructions.

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68k Processors

The following 68000 series processors have been used in Amiga accelerators. There may have been a few others but this should cover the vast majority.

Processor FPU MMU Avail.

68000 X X 28

68020 O O 16 33

68020C O C 16 33

68030 S S 16 50

68030C S C 16 40

68040 S S 25 40

68040C X X 25 40

68040CX S S 25 40

68060 S S 50 60

68060C S C 50 75

68060CX S C 50 75

Key

S = Standard O = Optional X = Not Available
both faster and cheaper to make (sounds good huh?). Sadly Phase 5’s G4 offerings seem to have hit the wall as the processor has plenty of free time to prepare the data for writing while other data is being written. The other options are a PICO (Polka Dot input/output) controller, these use the processor to move data from the SCSI chip into memory and therefore use much more CPU time during data transfers.

### Additional Features

#### SCSI Controller

Many accelerators come with a built-in SCSI controller or the option of a SCSI add on, this can be a very useful add-on. A SCSI allows you to connect up to 7 devices to your Amiga and can drive each one at the maximum speed of that device or the SCSI bus, whichever is slower. Attaching a slow device does not slow down faster ones connected to the same bus. Numerous internal connectors and expansion devices are available including hard drives, CD-ROMs and CD writers, various back up devices (such as Tape and floppy disc backups) and scanners. Most SCSI controllers are directly connected to an accelerator card offer a superior performance than those connected to other interfaces (such as Zorro II or the PCMCIA slot) because they can be directly connected to the fast processor bus. The performance of a SCSI controller depends on two factors, its maximum transfer rate and the method of data transfer from the SCSI controller to the computer’s memory. The maximum transfer rate is a multiple of 16MB/s, SCSI-I and SCSI-II both operate at 5MB/s, this is the most common standard for older Amiga SCSI controllers and SCSI-II cards for the A600. SCSI-II Fast has a maximum rate of 10MB/s and is available on some accelerators and PDS cards for the A500. The Squirrel. SCSI-II Fast has a maximum rate of 10MB/s and is available on some accelerators and PDS cards for the A500. The Squirrel. SCSI-II Fast has a maximum rate of 10MB/s and is available on some accelerators and PDS cards for the A500.

### Graphics Card

The only accelerator-specific graphics cards that have actually been produced, as far as I know anyway, are the A and B boards used with the Phase 5’s like the Squirrel. SCSI-II Fast has a maximum rate of 10MB/s and is available on some accelerators and PDS cards for the A500. The Squirrel. SCSI-II Fast has a maximum rate of 10MB/s and is available on some accelerators and PDS cards for the A500.

### To DMA or not to DMA

With A DMA SCSI controller data is transferred directly from the SCSI chip to the Amiga’s main memory with little intervention from the processor. DMA has much more free time to get on with other things while data transfers are ongoing, generally keeping the Amiga usable during data transfers. DMA is also a big boon to activities like on-the-fly CD writing as the processor has plenty of free time to prepare the data for writing while other data is being written. The other option is a PICO (Polka Dot input/output) controller, these use the processor to move data from the SCSI chip into memory and therefore use much more CPU time during data transfers.

#### Accelerators with SCSI

Most (ex)Phase 5 accelerators have either built-in SCSI or a SCSI option, all Phase 5 controllers are DMA and therefore they are fast and reliable. However make sure you get the latest version of the ROM with the controller updated to fix any problems with CD writing. Many GVP accelerators also come with a DMSA SCSI controller built-in or as an option, even more so than with the Phase 5 controllers it is important to get the latest ROM revision to cope with modern drives. For some GVP controllers a new ROM called the GuruROM with software by Andrew Guru Ralph Bajpe shows that using a different type of drive to the GVP and SCSI modules available for the Apollo range of accelerators not only are these faster but they are also capable of working poorly with SCSI devices other than hard drives, for example scanners and graphics drives. Most Amiga accelerators on the market today also have PICO SCSI which is far less demanding but a DMA controller is well worth it for applications which rely on fast, reliable data transfer such as CD-R, audio and video work.

### Conclusion

An accelerator will benefit almost all serious applications on the Amiga and many games too. There are many choices, and to a large extent how much you pay reflects the speed increase you get. It’s well worth considering the long term implications before investing in an accelerator. If you want a good speed increase for your modern hardware the best option is to buy a PPC accelerator. The A2000 is very similar in motherboard design to the A4000 and has a similar limitation when an ‘040 or ‘060 accelerator is used with the motherboard memory which is also limited to 16MB. The fast slot was introduced for the A3k and thus most fast slot accelerators can be fitted. The main problem with the A3000 is lack of space inside the case, particularly above the fast slot. The tray that holds both the power supply, hard drive and floppy drive after the board is removed is then the fast slot. Anything projecting from the top of an accelerator such as a heat sink or SIMM card for example will foul on the drive tray. Even if an accelerator does fit there is precious little room around the processor and SIMMs for air circulation.

A few things are worth watching for when you’re buying an Amiga accelerator, particularly on the second hand market.

### GVP RAM

The American company GVP (Great Video Products) made many accelerators, particularly for the A2000, while the majority of these are fine products and were highly praised in their time they do have one significant problem. GVP decided to use custom 64pin SIMMs in their products, at the time memory was so expensive that there was little difference in price between a GVP SIMM and a standard 72pin SIMM (as used by most other accelerators). However now that RAM prices have dropped sharply the unusual GVP SIMMs are still very expensive. This makes the accelerators that use them pretty uneconomic to expand, so unless you buy one with all the memory you want already installed be sure to take the price of upgrading in to account when you buy. As an example a standard 16MB 72pin EDO SIMM can be found for about 20 pounds, a 16MB 64pin GVP SIMM will cost you at least 75 pounds. A few later GVP products have 72pin SIMM sockets or even both types and so don’t suffer from these problems.

### Check Compatibility

It’s unusual but check that your new accelerator is compatible with your current software. For example there are some older A2000 accelerators need special ROMs to work with OIS 3.1 ROMs and the CISA 12 gauge 100 for the A1200 doesn’t work with 3.1 at all.

## SysSpeed 2.6

By Torsten Bach

WWW: http://www.alien-design.net/ Aminet: util/moni/syspeed26.ha

### Licence:

Freeware

you have installed your new accelerator’s human nature to want to find out just how much faster it is than your old one (and than your friend’s Amigas!). What you need for this is a speed testing program that supports modern hardware. Both AIBB and SysInfo used to be (and still are) very popular speed testing programs but do not support more recent processors like the ‘060 and therefore can give misleading results. SysSpeed on the other hand supports most modern processors and has tests for graphics card speeds as well.

In addition to raw speed tests such as processor MIPS and memory speeds, SysSpeed are currently offering a set of evaluation based tests which should give a much more realistic view of a system’s performance. These tests include running the main files into having applications with AdPro, Image Studio, various text operations in CygnusEd and GoldEd and crunching and crunching files with various archives. The only limitation with these tests is that you must have the programs involved setup them, however there is also the facility to setup tests using any external programs of your choice.

Once the tests have been carried out you can save your results as a modular file, enabling you to reload it later and compare the results after you have bought some new hardware or made some optimisations.

The program has an attractive GUI interface which is dominated by the Test Results list view. Here you can see the results of the four modules, selected in preferences. The Compare column gives you the percentage comparison of the two tested modules, chosen from a pop-up menu. The statistics window shows the comparison in the form of a bar chart, again comparing results with up to 4 other modules. A System Info window is also available providing quite an extensive set of information about the Amiga’s configuration and the programs currently running.
ADSL (Asymmetric Digital Subscribers Line) technology is now being widely available in the UK, it enables the service provider to use existing telephone lines (twisted pair) as a high speed data path, thus changing a network that was limited to voice/fax/modem to a impressive data transmission media, allowing excellent access to the internet and other new services such as video on demand (FMV), bi-directional video conferencing and remote LAN access.

This sounds wonderful but there are restrictions apart from the cost, as this technology is pushing the limits of a twisted pair of wires, between your home and the telephone exchange, the viability can depend on the distance and type of cable, (telecommunications cables vary in diameter and conductivity). So basically you need to be within 4km of the exchange, and if your over 6km then there is little chance of it working.

Once installed you are permanently online, so no more dialling up via a Modem.

The ADSL provides three channels:
1. A high speed data channel from the Exchange to your home. (downstream)
2. A lower speed data channel from your home to the Exchange. (upstream)
3. A voice channel for your normal phone calls. (POTS)

You can use your telephone to make a call while you are surfing the net, at the same time, that's magic!

The word ‘Asymmetric’ is related to the fact that the downstream speed and upstream speed are not the same, the reasons for this are complicated, but simply a signal attenuates over a distance in a cable, the higher the data rate / frequency the greater the loss. Also crosstalk or overhearing occur when cables of very different signal levels are close together. So if we try to transmit at a high rate upstream it will cause crosstalk in other circuits.

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ADSL uses a lot of processing power at the Exchange and equipment to enable use of complex algorithms which in turn give full use of the available bandwidth and to adjust these algorithms for varying line conditions such as noise and interference, this is made possible with the use of a Digital Signal Processor (DSP). Forward Error Correction is used for optimal performance and is based on Reed-Solomon coding.

ADSL uses Rate Adaptive Technology to adjust the data rate throughput in its current environment this is mainly done by the use of Discrete Multi Tone (DMT) signalling.

DMT can be described as dividing the available bandwidth into a number of sub-channels in fact 256 channels in the downstream each 4kHz wide, channel 64 is a pilot and is used as a clock for the receiver. The maximum theoretical throughput is 15bits per sub-channel: Number of sub-channels (256) x Number of bits per channel (15) = 15 Mbit/s downstream.
The number of bits vary per channel and would normally be much less say 5 bits.

There are 32 sub-channels in the upstream (channel 16 is reserved as a pilot). DMT can use the channels to transmit data and is able to move data so that the usage of the sub-channels is maximised. If a channel cannot be used it can be switched off. All sub-channels carriers are multiples of one basic frequency.

DMT on initialization it determines the maximum reliable throughput, this is done by measuring the line characteristic by sending an equal value tone down all sub-channels (picture 2).

The receiver measures the multi-tone signals thus gathering information about the line, this optimized distribution information is returned to the transmitter back down the line at a safe low speed. With this information the transmitter knows how much data can be put down each of the sub-channels and what power level is needed for each sub-carrier.

The line adaptation of ADSL means the number of bits given to each sub-channel can be changed or the transmit power adjusted to aid performance without interrupting the flow of data. The line conditions are measured on at regular intervals and any adjustments are made depending on the resulting changes in line conditions.

The DMT channels are modulated by Quadrature Amplitude Modulation (QAM) this uses two high frequency modulation carriers of the same frequency but with a 90 degree phase shift (quadrature) and are each amplitude modulated to carry information (data) down a sub-channel.

The data is sent in frames synchronized at 4000 baud DMT symbol rate (ADSL) and a sync symbol is added to each superframe = 68 ADSL data frames that are encoded and modulated into DMT symbols.

Well that last bit lost me!

By the way Ping times for ADSL are between 2 and 20 ms, and the term ADSL was named by Bellcore in 1989.

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PageStream’s interface isn’t particularly beautiful, in many places it is not font sensitive and uses the dreaded Topaz, however it is functional and doesn’t require an add-on GUI engine like MUI or ClassAct (which may or may not be a good thing depending on your point of view). The main document window shows a WYSIWYG view of the current page of your document and there are several floating palettes which you can choose to have open to control various aspects of the document. The action bars around the toolbar which controls the current mode of the document, there are options for the edit pointer, text mode, and several drawing tools. Along the top of the screen (by default) is a user defined button bar. Initially there are buttons for loading and saving documents, cut copy and paste, undo and redo, and other operations, you can add buttons for almost any function in the Preferences window, however you can only have one button bar and it is always a horizontal strip.

You will probably want to have the edit palette open all the time you are using PageStream. It provides a different set of options depending on the current edit mode and the type of the current selection. For example if you are in text mode and have the cursor in some text it shows the current font and size and allows you to change it. If you are in pointer mode and have an object selected the object’s current size and position are shown and can be edited. Most numeric values in the edit palette have nudge arrows which you can click on to increase or decrease the value in small increments, however in my opinion this is odd and a bit hit and miss.

PageStream 4 offers three types of style, character, paragraph and object. A style character style holds all the information about how a character looks, for example its font, size, colour, whether it is bold or underlined etc. A named character style can be applied to any text from one character to several paragraphs. A paragraph style applies to one or more blocks of text, this block will contain the settings such as the line spacing, whether the paragraph has a drop cap or is bulletted etc. Object styles apply to objects rather than text (as the name might suggest) and allow you to easily apply common settings such as border and fill to objects. The great thing about styles is that once some text, paragraphs or objects have been assigned a particular style you can change that style all you want. For example if you had assigned all the body text of the main text of articles is probably better written in an editor or word processor and then imported into a document. It is possible to enter text directly into PageStream but it is noticeably slower than text entry.

In Use

When you first start PageStream or if no document is loaded the navigator window appears, this has buttons allowing you to start a new document, load an existing one or Quit. Also shown in this window is a random tip, most of which are actually quite detailed and useful. The File menu also contains these options and a handy list of recently loaded files (one of the few Windows features I wish more Amiga programs would “borrow”). If you are in a new document a requester allows you to select a page size, layout (single or double sided, facing pages) and margins. You are then presented with a blank page (except for a grid and a few guides) on which to build your document.

Portraiture’s interface isn’t particularly beautiful, in many places it is not font sensitive and uses the dreaded Topaz, however it is functional and doesn’t require an add-on GUI engine like MUI or ClassAct (which may or may not be a good thing depending on your point of view). The main document window shows a WYSIWYG view of the current page of your document and there are several floating palettes which you can choose to have open to control various aspects of the document. The action bars around the toolbar which controls the current mode of the document, there are options for the edit pointer, text mode, and several drawing tools. Along the top of the screen (by default) is a user defined button bar. Initially there are buttons for loading and saving documents, cut copy and paste, undo and redo, and other operations, you can add buttons for almost any function in the Preferences window, however you can only have one button bar and it is always a horizontal strip.

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At some point during the development of PageStream 3.x the spell checker stopped working, fortunately (especially for me) it has now been reinstated in version 4. Unfortunately (for those of us in the UK) there is currently only an American English dictionary, still it’s better than nothing and helps spot the worst of the typos in headings and the like which can be easily checked in another application.

Portraiture’s interface isn’t particularly beautiful, in many places it is not font sensitive and uses the dreaded Topaz, however it is functional and doesn’t require an add-on GUI engine like MUI or ClassAct (which may or may not be a good thing depending on your point of view). The main document window shows a WYSIWYG view of the current page of your document and there are several floating palettes which you can choose to have open to control various aspects of the document. The action bars around the toolbar which controls the current mode of the document, there are options for the edit pointer, text mode, and several drawing tools. Along the top of the screen (by default) is a user defined button bar. Initially there are buttons for loading and saving documents, cut copy and paste, undo and redo, and other operations, you can add buttons for almost any function in the Preferences window, however you can only have one button bar and it is always a horizontal strip.

You will probably want to have the edit palette open all the time you are using PageStream. It provides a different set of options depending on the current edit mode and the type of the current selection. For example if you are in text mode and have the cursor in some text it shows the current font and size and allows you to change it. If you are in pointer mode and have an object selected the object’s current size and position are shown and can be edited. Most numeric values in the edit palette have nudge arrows which you can click on to increase or decrease the value in small increments, however in my opinion this is odd and a bit hit and miss. Text can be added to the page in two ways, firstly you can select the text frame tool then draw a text frame on the page. Then you can import text to fill the text frame.

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PageStream offers extensive PostScript features that allow you to create long and complex documents. A document can be split into chapters each of which can be a different page numbering convention. Master pages can be used to define common elements which appear on every page, for example, page numbering, headers, and footers. The master page also controls the page size and layout for the page so you could have a master page with a 3 column layout and another with 2. Multiple master pages can be created so, for example, you can have different headers and layouts within a document as well as print a different number of pages to a single page. PageStream also supports 12bit colour. If you have TurboPrint or Studio installed things are better due to the optimised drivers for modern printers, but they still only have 12bit colour data to work with. Apparently this is due to the built in RGB to CMYK conversion routines and some example output I have seen bears this out. I cannot go into this area in any more depth because I do not have much knowledge of these topics, however, if you intend to output from PageStream to a local printer attached to your Amiga you must use 40USD (ea. or both for 60USD) IFF-ILBM bitmap files.

As I have mentioned in several places, Softlogic also sell a range of add-on modules to PageStream these include:

Borders and 1 and 2
(40USD ea. or both for 60USD)
Two packs of specially designed rectangular bitmap frame designs are available such as line, box, polygon and beizer curve. A variety of line and fill styles is available including gradient fills, there is also a choice of arrow heads and other decoration. The T rueT ype font engine, JPEG I/O module and Wordworth document module which all used to be extras with PageStream 3 are now included with version 4.

Drawing Tools

In addition to the text facilities PageStream also has a powerful set of drawing tools allowing you to add structured graphics to your document. All the common tools are available such as line, box, polygon and beizer curve. A variety of line and fill styles is available including gradient fills, there is also a choice of arrow heads and other decoration. The TrueType font engine, JPEG I/O module and Wordworth document module which all used to be extras with PageStream 3 are now included with version 4.

Graphics

Graphics in a wide range of formats can be imported and embedded in PageStream documents and loaded into memory while the document is being edited reducing the file size and memory requirements. The default resolution of the FPD can be set in preferences and adjusted for a particular image in the Information window. PageStream therefore has the option to output a single external image can be fully loaded if you need to see it on screen at full quality. Another advantage of keeping images external is that if you edit the entire page and save it over the top of the old file the changes can immediately be seen in PageStream. Version 4 has a new export for output feature that allows all the external images used in a document to be collected into a single directory and you can then use this image directory to speed up document editing although you can’t have images displayed if your image directory is switched off as you can in Final Winter.

Once imported images can be sized (either keeping or ignoring the original size) and rotated to fit so layout is a snap. An easy to use dialog allows you to find important features such as color management which tries to automatically create a mask from the image background, but I found this only works successfully on simple images. I found it best to create complex compositions as a single image outside PageStream (often in ImageFX using layers) and then import the end result.

Any structured drawing that can be displayed in PageStream can be dissolved into its separate objects and edited within PageStream using a variety of tools. This can be very handy if you need to make minor changes to clip-art. Adobe Illustrator and FreeHand files can be viewed and edited within PageStream, other EPS files are displayed as a crossed box and can only be printed to a PostScript printer.

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Computers are good at remembering things, something that this human, and I suspect most others to some degree, are not good at! The job of a database is to store up information in a structured way and allow us to recall it quickly when needed. Because the Amiga has been primarily a home and creative computer few databases have been created for it over the years, in the heyday of the late 80s and early 90s there were some powerful products like Superbase but sadly many of these are now looking their age if they even work on a modern Amiga. Fiasco is a database designed along the lines of a modern Amiga programs and unlike some of its other PD and Shareware siblings it offers a good amount of power too.

Fiasco has two modes, Mask mode is used to setup the database, you can design the layout of the record window and define the fields you want, their type and options. Once the database is designed Record mode allows you to enter data into the database and then perform various operations to extract the data you want. You can drop into Mask mode at any time to adjust the structure of the database, Fiasco warns you if any change you make could corrupt your data.

In Mask mode you can add new fields to the database by selecting the field type from the Field menu or a cycle gadget in the control window. A cursor, which can be moved with the mouse or cursor keys, shows where the new field will be placed, this is achieved by pressing Return. A requester with the options for the selected field type then appears. After the options have been set, the field then appears in the Record window. The fields in the Record window can be simply reorganised by dragging them with the mouse, and double clicking on a field opens its options window for editing. Fields can be multi-selected by holding the Shift key and/or with a drag box which makes editing the layout quick and easy. One slight annoyance is that a label is not added to each field as it is created so you have to add them manually using the special "Text" field type.

Fields

A wide selection of field types are available in addition to the standard ones like string (a piece of text up to defined number of characters) and number. The date and time fields ensure that dates and times are always input in a consistent format and can be used for date based calculations. The Boolean (Yes/No) and Cycle fields types are particularly nicely implemented as a check box and a cycle gadget in the record window which makes the final record window look like a "proper" Amiga application. In a similar vein the Variable Text field type that allows you to add longer pieces of text to a record, ideal for notes and descriptions, is implemented as a scrollable text box, like a mini editor. The datatypes field type is one of the most interesting, the only data actually held in the database is a reference to an external file, which is then shown in a scrollable of the record window using datatypes. Probably the most common use for the datatypes field will be to add images to a record, however because datatypes are available for so many file formats you could also include other files like AmigaGuide documents even sounds.

Similar to the Text field type, the Button type does not actually add a field to the database, it is used to add an action button to the record window. Buttons can be used to run any program that can be launched from the shell or an AREXX script. As the actions of an AREXX script are entirely up to the user, it could make changes to the database using

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**Product Information**

- **Developer:** Nils Bandener
- **E-mail:** nilsb@amigaworld.com
- **WWW:** www.amigaworld.com/support/fiasco/
- **Address:** Uhlenbruch 30, 33098 Paderborn, GERMANY.
- **Price:** 30DM (about £10)
- **Paid by:** Cash, EuroCheque or Bank Transfer.

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The dictionary says that Fiasco is “a complete failure”

Robert Williams thinks different!
Relationships allow you to link databases.

In this example I linked each product to its supplier, there for I only have to enter each supplier’s data once.

Fiasco’s AREXX port or control an external program. With buttons, along with the other field types you can use Fiasco to make a complete database application which looks very similar to any style-guide compliant Amiga program.

Defaults

All field types allow a default value to be set and Cycle type fields can be used to limit the choice to a defined list of options. Fields can also have their value calculated by a formula. If a formula is added to a field it will be used to set the default value when a new record is created, and if it uses values from any other fields in the record, will be updated if those fields change. A formula generated field can also be set as virtual which means its contents are never stored on disk and always generated on-the-fly. To help you create formulas Fiasco has a very nice formula editor window where you can pick from lists of the available operators (+, -, *, /, etc.) functions (including string handling, statistical and date related), fields and user defined constants. It even checks your finished formula for errors before accepting it!

Printing

Choosing Print from the Project menu opens a blank window very similar to the Record window, you can add the fields from the database that you want to print and place them in any order. If you so desire you can put fields on several lines to fit them all on a page. When you print each record it is printed using the layout you have set-up. There are options to add headers and footers to the printed database but I couldn’t find any way of adding variables like page number, print date etc. Printing is plain text only so you are reliant on the only simple formatting (bold, underline etc.) and the fonts built into your printer. An AREXX script is provided to output to the Text formatting system (commonly found on Unix systems) but you have to install and configure it yourself. For many jobs the basic text output is fine and you can always export data from Fiasco then use the mail merge function of a word processor for more complex formatting (Wordworth is particularly good as it allows multiple records per page).

Relationships

A simple database with one set of data, for example names and addresses or album details is commonly called a flat file database because it resembles a file with a card for each record. Fiasco is a fine and flexible flat file database but it can do much more than store a flat file of data. Relationships allow you to link several sets of data together. First you have to find a field which is common in both the sets of data, then when the databases are linked, a record in one database will be related to all the records in the other database where the linking field contains the same data.

Time for an example I. If you were running a business you might keep a database of orders received. Instead of entering the customer details each time an existing customer placed an order it would be nice to pull them straight out of a customers database. To do this the orders database could be linked to the customers database with a relationship, for example the linking field might be customer number. When a new order is raised the customer number would be entered and the customer’s details would automatically appear from the customer database. If the customer’s details ever changed all the records in the orders database would automatically show the updated information. The previous example is a many to one relationship, many orders can be from the same customer. Fiasco also supports one to many relationships, in our example you could add a list view field to the customer database showing all the orders that customer had placed.

Although Fiasco does not offer as many options with its relationships as large scale database software like dBase for example you cannot choose to have an average (or other calculated result) of all the matching records in a one to many link but other platforms they are very useful and add a lot to the program.

Data Entry

All data is entered through the Record window, while in Record mode. The Tab key can be used to move between fields and PageUp/Down short-cuts can be assigned to checkbox and cycle gadgets to allow them to be accessed from the keyboard. There are also short-cuts for moving between records and adding new ones so you don’t have to take your fingers off the keys when doing a lot of data entry.

Indexing, Sorting, Finding and Filtering

Once you have designed your database, created any relationships and actually entered some data you may actually want to retrieve it! Fiasco holds the database on disk and only loads the records you are currently working on into memory. To speed up working with large databases Fiasco allows you to create indices for the fields you commonly search, query or sort on. An index is a list of values in those fields which can be kept in memory for quick searching. Usually while the full records reside on disk.

There are several actions you can perform to manage your data and find particular records. The sort function can be used to sort (surprise, surprise) the records into ascending or descending order based on any field. You can have as many sort criteria as you have fields, so in our example orders database above you could sort on customer and then by date.

Find allows you to search for a particular record in the database, for example you could look for records where with a particular surname in an address database. The first match to a search is shown in the Record window and you can use the Find next and previous menu items to step through all the matching records. You can search on multiple criteria (where the sir name is Williams and the first name is Robert for example) and you can use logical operators for example where the surname is not Williams or where the order value is greater than (or equal to) 1000.

The Filter window is very similar to the search window because they perform a similar function. Filtering limits the database to display only the records which match the criteria you specify which again can use logical operators. Filters and searches can be saved once they have been defined and can be recalled easily from a pop-up gadget in their respective windows.

There is also a Statistics window accessible from the Database menu which gives general information on the current database like the number of records and the number loaded into memory.

One feature of Fiasco you have to get used to is that, like some EMail programs, records are not really deleted from disk when you click the Del button. Physical deletion takes place when you select Reorganize from the Database menu. Another slight oddity is that a Fiasco database is not one file, when you save a filename.fdb file is created and then a drawer called simply filename which holds all the ancillary files, which include saved searches, indexes, filters and print layout files.

When moving a database or backing up you have to make sure you get all the files.

Aside from Fiasco’s own format a flexible export module allows databases (or just marked records) to be saved in a variety of ASCII formats. The field separator, string delimiter and record separator characters are all freely configurable so it should be possible to export to almost any database or other applications such as word processors and spreadsheets. Likewise most databases on the Amiga and other platforms can output suitable ASCII files for Fiasco’s importer which is similarly flexible.

Fiasco comes with very comprehensive Amiga Guide documentation including a reference section which covers all the windows and menus. The right section for the active window or menu item can be quickly accessed by pressing the Help key. The documentation starts with an introduction to Fiasco and basic database concepts. It then carries on to explain how these concepts are implemented in Fiasco and how they can be used. This part of the documentation is helpfully split into sections for simple and more advanced uses of the database so if you only want to create a simple address book you don’t get bogged down in unnecessary details.

Programmability

If you have more complex requirements than can be satisfied by the built-in functionality Fiasco has an AREXX port with a wide range of commands. AREXX commands can be used to retrieve data from the database, perhaps to pass to other programs, and to add new data. They can also be used to control various aspects of the user interface. Custom functions for use in calculated fields can also be written.

Conclusion

Fiasco is an excellent and flexible database for all sorts of home and small business uses. It has some surprisingly powerful features with printing the only area that feels underdeveloped, fortunately this can be worked around. Relationships, a comprehensive AREXX port and powerful functions mean it is possible to develop full fledged database applications in Fiasco. For all the powerful features it is also ideal for simple address book type projects where you want to be in control of exactly what data you keep! Although it does take a bit of learning, especially if you are not familiar with databases, the excellent manual is very helpful. With a registration fee of only about 10UKP it represents great value too!
Elliott Bird and Mick Sutton both review their SVGA monitor and Scandoubler combinations.

The first thing I did to check the Scandoubler was to boot the Amiga with the two mouse buttons held down to get to the early start-up screen (not forgetting to switch the BMON to AGA mode of course) to make sure all was well and indeed it was! One of the things I noticed was no horizontal black lines, as I used to have when I used the Microvitec monitor in AGA modes (yeppe! Games are going to look much better). So now time to carry on booting and get stuck into my favourite AGA games (TFX & SlamTilt) and wow what a difference, clear and sharp at last.

By Mick Sutton

.ScanMagic External

At £69.95• (01234) 851500 • http://www.powerc.com/

Without the irritation of the flickering. You’ll also be able to do without MagicTV, so you’ll also be able to run your workbench in more than 16 colours, as MagicTV2 restricts you to 16 colours.

But you’re not just restricted to the standard Amiga PAL screen modes. You can also use MultiScan:Productivity, "DBLPAL", and a few others, as they run at higher frequencies, which are displayable on an SVGA monitor (providing you have these modes in your “DEVS: Monitors” drawer, along with the “VGA only” mode), and the ScanMagic scandoubler will let these modes pass through, untouched. But ScanMagic doesn’t seem to like "Super72" at all, and I don’t think it’s exactly a popular screenmode anyway.

The obvious one being that it’s “See Through”, so you can see all the chips inside, that double the scans. You will also notice two lights inside, the green one tells you that the flicker fixer is working to stop the flickering of a laced screen. The lights obviously won’t come on if you are running in a screen mode of a higher frequency, which is obviously normal. You may notice a switch on the back of the scandoubler unit, which adjusts the sync delay, to make it com-

The internal scandoubler fitted (The PDMCA slot is at the bottom of the image).

SVGA monitor and Scandoubler combinations.

W hen my Microvitec 1701 Amiga multi-sync monitor died earlier this year I was absolutely gutted, it was a very nice monitor indeed and cope with all screen modes both graphics card and AGA output with no troubles whatever, and it had cost me £350 at the 1997 World of Amiga show!

So a replacement had to be found, and when I spotted the 17” Sony Multiscan 210 ES in PC World for £249, I thought to myself oh well just gonna have to buy myself a new monitor so here goes.

THE MONITOR The monitor is approximately the same physical dimension as the old Microvitec with a diagonal viewable screen measurement of 405 mm (17”) and a depth of 405 mm (17”) from the very back of the monitor to the front, so as you can see plenty of desk space is required!

Like pretty much all monitors it sits on a swivel and tilt base enabling you to set up the monitor to your viewing requirements, it has an on/off switch (very handy) and four buttons on the front (more on this later).

Round the back it has a kettle style socket which gave me my first minor problem, because I didn’t have any spare socket outlets available, and my last monitor had a lead which was hard wired at the monitor end and plugged into the power pass through in the back of my tower, and therefore didn’t require a free socket outlet. So a quick trip to Maplins and I got myself a lead with a kettle style male end, female the other so I could just plug the female into the tower and the male into the back of the monitor. One thing that strikes you about this monitor is the screen looks dead square and totally flat vertically, with only a slight curve to the screen horizontally (like all Sony Trinitron tubes).

The technical specifications of the monitor are quite good with a maximum resolution of 1280 x 1024 and an aperture grille pitch of 0.25 mm (the Microvitec was 0.28 dot pitch). Refresh rates (the number of times per second the display is redrawn) of up to 120 Hz are available well above the 70 Hz minimum recommended.

The monitor is controlled by an on-screen menu system accessible via the four buttons on the front of the monitor. Contrast and brightness can be instantly accessed for quick adjustments that are needed (must see those sinister dark areas in Quake!) all other options are in the main menu. A wide variety of options are available including the usual screen size and positioning, but there are many others that you can fiddle to your hearts content such as pin cushion (screen edge curvature), key balance (to keep the display square), rotation, zoom (scales display with aspect ratio fixed) and colour (allows adjustment of RGB values to match printed colours).

My normal screenmode is set (in CgX mode) to 1024 x 768 at 75 Hz which I find suits the monitor and gives me a stable and clear display. I must confess definitely recommend, maybe the old monitor dying wasn’t the worst thing to happen after all, just expensive!

By Mick Sutton

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Sony Multiscan 210ES

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By Mick Sutton
The external ScanMagic scandoubler is your monitor into the VGA type port on the scandoubler, and there you go, ScanMagic does the rest of the work for you, it could’nt be easier.

There are a few flaws with ScanMagic.

Marks, set, GO!

Virtual Grand Prix

The thing that the Amiga is lacking in, is a decent racing game. Although there were lots of them released in the miggy’s heyday, including MicroProse F1, they are rather outdated, compared to todays standards. But we really need more racing games, preferably for high end Amiga users, as well as the users with low end machines, i.e. a bog standard A1200, and Virtual GP is just one of the few games with this advantage. Although the minimum spec is an Amiga with an A4000, or an Enhanced A500, we still need more racing games, preferably for high end Amiga users, as well as the users with low end machines, i.e. a bog standard A1200, and Virtual GP is just one of the few games with this advantage. Although the minimum spec is an Amiga with an A4000, or an Enhanced A500, we still need more racing games, preferably for high end Amiga users, as well as the users with low end machines, i.e. a bog standard A1200, and Virtual GP is just one of the few games with this advantage.

Whoever said that a good driver, like myself, can then have help on the track, i.e. alignment corrected if you should skid or crash off the track.

One thing you may notice on the race track is the advertising and the drivers’ names. This is because the driver name has changed slightly, due to the fact that the game is not an official FIA licensed game, which is understandable, as it would’ve been rather expensive, and considering that this game is only £20, which is very good value for a game like this.

Virtual Grand Prix is based on the 1998 F1 season, and has pretty much the same 22 cars and 16 tracks, as a normal Grand Prix. Starting the game is relatively simple, you can run it straight from the CD, or you can install a small part of it from your hard drive and start from there. When you do start Virtual GP, you get greeted with an intro, (which only works on CD-ROM drivers of 16x and above, but it can be skipped by holding down your mouse button on the (Epic screen). Then you get an intro screen, where you click and get your game on.

Virtual Grand Prix menu (and an annoying womans voice).

You have the option of having a race, a tree practise, or a qualifying session. Then you have a choice of track, including Monaco, Silverstone, Melbourne, Monza, and many more. Once you have chosen your track, a screen will pop up, showing the track map, and it’s stats. You also have some commentary from a commentator who sounds just like Martin Brundle. From there you go to the pits, where you have the option of adjusting the game preferences, e.g. reducing the balance of your car, or you can just get on with the race.

Virtual GP is extremely configurable, so you can change anything on the car, such as tyres, teams, etc. Also even how you control your car, i.e. joystick (anologue or digital) or mouse, but joys-rick is preferrable. If you are a novice driver, like myself, then you can have help on the track, i.e. alignment corrected if you should skid or crash off the track.
Robert Williams gives his A4000 desktop a new home.

You can pack an amazing amount into an A4000 desktop, 2 hard drives, 2 floppy's, a CD-ROM, a PPC accelerator and graphics card all on top of the Zorro cards. Unfortunately before you get anywhere near its maximum capacity the interior gets very congested with cables, limiting air flow. For some time I've had my SCSI CD-ROM and 3D/Audio in an old Amiga 4000 tower using a SICSI III scan-}

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The graphics are simply stunning! A site to see believe me, and last of all (I think) is the Lightning shield that activates small spheres of energy that shock enemies when they get near.

So this game is just so good, I would recommend it to anyone who wants to experience some of the best graphics and gaming that is available on the market today.

Fun? YOU BETCHA!

I must admit I didn't think we would see anything that could top the offerings of Quake, but I was wrong, this game is just so good. Heretic has pretty much everything that people look for in a game, fast action, good graphics, excellent sound, and a really good story line.

The game comes packaged in a box and includes a manual (wow just like the old days) written in both German and English, and tied to a rope hanging from the ceiling (yes that is quite funny indeed). Which is very funny indeed.

The game has immense gameplay, so much in fact that once you start playing you don't want to stop (well for cups of tea and food occasionally), and the challenges you face to complete the levels are just right above the balance of difficulty. In other words they are not too hard that you feel the need to give up, but at the same time they do require you to engage your brain every now and then.

All in all, I would say this is one of the best games ever released to run an Amiga, albeit a very powerful one if you have ever considered that you may one day upgrade to PPP3D Graphics card territory and you like playing games, then this is the time to do it.
Robert Williams takes a look at two classic Amiga utilities which are useful in totally different ways.

**ProNET 3.4**

By Michael Krause

Aminet: comm/net/ProNET3.4.lha

GNU Public Licence

A choice of three different looks is available for menus. You can choose to leave them in the standard two colour, usually black and white, style of OS 3.x menus. The Old 3D look has a simple bevelled 3D style similar to standard Workbench windows and takes its colours from your Workbench palette prefs. The various symbols in the menus, for example the Amiga key symbol for keyboard shortcuts and the check mark, are replaced by small MagicWb style graphics which look very attractive.

The third choice is Multicolour 3D which gives the menus a soft bevelled border and separator bars. The colours of Multicolour 3D menus can be set independently of the Workbench palette.

You can set Magic Menu to use exclusively pop-up or pull-down menus or there is an option to use pull-downs when the mouse pointer is in the title bar and pop-ups at other times. A different usage method and look can be specified for pop-up and pull-down menus. There are various options available to fine tune the look and usage of the menus. Multicolour 3D menus can have a drop shadow which is displayed using real transparency on a 24-bit or 16-bit graphics card screen. Another really jazzy feature is menu transparency which makes pop-up menus translucent, so you can see the screen behind them. You can turn on just one menu to see what it looks like or you can turn on all the menus. Magic Menu 2.30 is a very professional product and useful utility, the additional features in this latest version add to its already excellent stability and compatibility and give you a few cool new options.

**Magic Menu 2.30**

By Martin Komodor & Olaf Barthel with artwork by Mario Cattaneo.

WWW: http://www.magicmenu.de/

Licence: *Giftware*

Magic Menu is a very well known utility that gives the pull down menus used by almost all Amiga programs a make over and work out! Although many users have probably come across Magic Menu at one time or another, I thought it would be worth taking a look at it as a new version, 2.30, has just been released.

The main feature of Magic Menu is pop-up menus that appear under your mouse pointer rather than at the top of the screen when you press the right mouse button. These are particularly useful if you have a high resolution graphics card or autoscroll screen as you don’t have to move the pointer all the way to the top to find the menus. You can also set Magic Menu to use exclusively pop-up or pull-down menus or there is an option to use pull-downs when the mouse pointer is in the title bar and pop-ups at other times. A different usage method and look can be specified for pop-up and pull-down menus. There are various options available to fine tune the look and usage of the menus. Multicolour 3D menus can have a drop shadow which is displayed using real transparency on a 24-bit or 16-bit graphics card screen. Another really jazzy feature is menu transparency which makes pop-up menus translucent, so you can see the screen behind them. You can turn on just one menu to see what it looks like or you can turn on all the menus. Magic Menu 2.30 is a very professional product and useful utility, the additional features in this latest version add to its already excellent stability and compatibility and give you a few cool new options.

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Please note: The image provided is not applicable to the content of the document.
Wordworth on Graphics Cards

If you find text does not show up in Wordworth documents when the program is running on a graphics card try adding the tool type “PICASSO=TRUE” to the WordWorth icon. This tooltype was designed with the original Picasso II graphics card software in mind, (hence the confusing name) but works equally well on graphics cards using either Picasso 96 or CyberGraphX.

SYS: Keyboard Mouse
Most Amiga users probably know that you can move the mouse pointer using the keyboard by holding an Amiga key and pressing the appropriate direction arrow, holding down shift as well speeds up the movement. Left Amiga with Left Alt simulates a horizontal movement, while these short-cuts can be a life saver if your mouse stops working or is faulty. There can also be very useful in normal Amiga use as they allow pixel perfect placement of the pointer.

For example if you want to arrange some windows first move them roughly into place with the mouse. Then exactly align them by holding down the left Amiga and Alt keys while the pointer is in the title bar then move the window a pixel at a time with the cursor keys. A similar technique can be used to accurately define shapes in paint programs and image processors, I find it particularly useful for neatly cropping images.

Cycle Gadgets
Did you know that holding down Shift while clicking on a cycle gadget goes backwards through the selections, handy when you accidentally click past the choice you wanted. Even better is the incredibly handy CycleToMenu window (if it has one) then choose Quit from the Project menu or select it in the Exchange list then click the Remove button. Most commodities that do not have a window also quit if you try to run them again by double clicking their icon.

Installing the Phase 5 060 libs

The latest Phase 5 libraries are available from the DCE website at http://www.dcem.com. Once downloaded they need to be copied into your [program:] directory. However the 68040.library has to be replaced by the dummy library that then calls the appropriate library depending on the processor that is installed. This installation is outlined in the 68040dummy.library notes file in the archive. As the description in that file is rather terse there is a table showing how the libraries should be installed. If you are upgrading to a newer version of the 68040 libraries take you maintain this setup (don’t for example copy over the 68040.library from the archive without renaming it 68040new.library).

Original Name | Source | New Name | Size |
-------------|--------|----------|------|
68040.library | DCE-E  | 68040old.library | 54 KB |
68060.library | DCE-E  | 68060.library | 104 KB |

Note that the library sizes are approximate and may well vary slightly depending on the exact version you are installing.

As an aside old versions of the 68040 libraries can cause problems with PowerPC software on the Phase 5 PowerUP boards, when you install new versions of the PPC libraries (or FlashROM) in the case of the 68040 libraries.

The Workbench Information window showing the tool types of a typical commodity.

Did you know that holding down Shift while clicking on a cycle gadget goes backwards through the selections, handy when you accidentally click past the choice you wanted. Even better is the incredibly handy CycleToMenu window (if it has one) then choose Quit from the Project menu or select it in the Exchange list then click the Remove button. Most commodities that do not have a window also quit if you try to run them again by double clicking their icon.

Donotwait
You should specify this tooltype if you want to place a commodity in the WBStartup drawer so it is started each time you boot your Amiga. If you do not then the Amiga will wait for the program to finish and after a while issue a warning message.

CX_PRIORITY=n (where n is a number)
If several commodities are waiting out for a particular key press the one with the highest CX_PRIORITY setting will intercept the key press. The default is 0.

CX_POPKEY NO
If this tooltype is set to YES then the program will open its window at startup, once you have a program setup and in your WBStartup you will probably want to set this to NO.

Commodities Exchange
Also in the Tools/Commodities drawer you will find the Exchange program, this is a utility for controlling the commodities running on your system, it also is a commodity itself. Exchange lists the commodities running on your Amiga in the left hand side of the window and allows you to show or hide the interface of the selected one. You can also temporarily deactivate a particular commodity using the cycle gadget.

One common mistake made with commodities is to assume that when you close the window the program has quit like a standard Amiga program. With a commodity closing the window just hides the user interface, the program is still running. To quit a commodity call up its window (if it has one) then choose Quit from the Project menu or select it in the Exchange list then click the Remove button. Most commodities that do not have a window also quit if you try to run them again by double clicking their icon.
Dive Kennedy discovers that there’s more to the OS3.5 update than pretty icons...

I upgraded my operating system to the latest version of Workbench (Wb 3.5) quite a while ago now, and I haven’t looked back since. There’s something about what they’ve done to this OS that’s quite subversive. In other computing realms, a new operating systems tends to mean a whole new learning curve, looks held above both style and content, and a bride of bundled-in programs just to keep the users sweet (and the competition at bay). With OS 3.5 things are different. Refreshingly so.

After installing 3.5 and using my Amiga for a while, things started to become even more intuitive than usual. This is a feeling. It’s impossible to tell you exactly which new features or enhancements make this so - its just that the whole system is greater than the sum of its parts. Articles like this can’t really do the new OS much justice. So try and help me out; picture each of the elements that I have drawn attention to as part of a unique whole. A co-operative experience not unlike your current Amiga relationship, but a bit smoother, a bit more in tune, and even friendlier.

Now lets take a look inside. In a minute we will look at each drawer, one by one, but first well look at the new interface options as well as the new menu system options.

The first thing most people will notice about OS3.5 is the colourful icons that “glow” at the edges when they are selected. These new icons (not to be confused with the PD NewIcons system) are not just a pretty face, the Amiga icon format has been redesigned. The trouble with the old icons was that they did not hold any palette information, they just picked up the colours you chose for Workbench. This was fine for simple four colour icons but now users have the graphics card and more memory they want colourful icons. The new format holds the palette data in the icon, and will render each one to its best using the colours available. The new icon system still supports old style icons and also NewIcons (the PD ones this time) without running the patch.

Using the keyboard with the interface is a breeze. For instance, if you have a window selected, using the arrow keys will scroll the contents around. Hitting [Tab] will select one of the icons in that window - then you can select any icon by just moving around with the cursor keys again. To activate or open an icon (e.g. to run a program) just press [Right A]+[O]. If no windows are selected, this works the same for the workbench itself - a broken mouse need never be a problem again.

Several seemingly small additions make the OS 3.5 Workbench much more pleasant than earlier versions. When you scroll the contents of a drawer they move with the scroll bar so you don’t have to guess how much to drag. When copying and deleting large files Workbench now has a progress bar to keep you informed on how its going, although it’s not multithreaded so you have to wait for the operation to complete before doing something else. Moving and copying files via drag and drop has also been made easier as you don’t have to keep Shift held down any more. There is a gauge at the left hand side of the top level window of each partition so you can tell at a glance how full it is. In addition to these gems there is a natty little preview display. With the new ARexx port, users will be able to automate almost every aspect of Workbench something that is not possible without extremely dirty hacking in previous Workbench versions.

CacheGDFS prefs; allows FULL control of how your CDs are presented to your system. There are lots of features that enable you to read CDs that were originally prepared for only another operating system. All the other preferences editors have been given the Reaction treatment which makes them look much better than 3.1 versions which were stick with the dreaded Topaz.

Docs
Full OS 3.5 documentation in HTML format. The first update for OS 3.5, BoongBag number 1 (available from http://www.amiga.com/3.5/support.html and cover CDs) include a useful utility called Nicer which converts the original 3.5 documentation into smaller pages for much easier viewing! The documentation consists of manuals for Installations, Workbench, AmigaOS and AREXX. Only the Workbench manual was supplied as stand alone with the A1200 so the others...

S (Scripts) Drawer
This drawer includes an ARexx example that assesses the new Workbench ARexx port; CloseAllDrawers.rexx, which unsurprisingly closes all the drawer windows open on the Workbench. With the new ARexx port, and ARexx manual - the more adventurous users will be able to automate almost every aspect of Workbench something that is possible without extreme hacking in previous Workbench versions.

Oh, and there’s a browser and email information will be very hard for many people.
Getting the best from your hard drive.

By Robert Williams

A Word of Warning

If you use a hard disk greater than 4GB with either a direct SCSI file system or via an NSA device with OS3.5 then you need to be careful when setting up and working with your hard disk.

The boot partition must be located within the first 4GB of the hard disk as it must be accessed before any software patches are loaded.

NOTE: For several years after the demise of Escom time limited beta versions of the updated scsi.device, FastFileSystem and NSDPatch were available from Amiga. You can patch these to get around the time limit and use them with OS3.5. However, I would recommend buying OS3.5 as the best way of getting these updates, versions of all the OS utilities that work on large disks and supporting the people who developed them.

EIDE '99

Ebox's EIDE '99 software, supplied with their FastIATA (PowerFlyer) and 4 way buffered IDE interfaces, splits hard disks greater than 4GB into several logical drives of 4GB in size plus one logical drive for the remainder. This means that if you have a 10GB hard disk you can use the whole drive, the only real limitation is that you couldn't make a partition greater than 4GB. The split mode can be disabled incase you would rather use a different method of accessing the large disk.

Direct SCSI

Some third party file systems, including some versions of FFS and SFS, use a direct SCSI version of these file systems send commands to the hard disk (which can be either ISC or IDE) and thereby do not have the need for data support in the device driver. This is by far the easiest way of using large disks on an Amiga, however beware that the OS3.1 and earlier scsi.device is limited to a maximum of 8GB even with a direct SCSI file system.

Reverting to the old PFS name he produced a new version, PFS 2 which was followed up by the recently released PFS 3.

PFS has a number of advantages over FFS, the most noticeable is that it is considerably faster at almost all file operations, reading, writing and creating files show some improvement but the main gains are in deleting files (which is practically instantaneous with a file size and directory listing). However several versions of PFS are supplied; a standard replacement for FFS, a direct SCSI version for disks greater than 4GB and many universal file controllers, a version for use on floppy disks and mpvFS which has multi-user capabilities. PFS is designed to be more secure than FFS, with FFS if your Amiga crashes or is switched off while writing a file to the hard disk that partition becomes invalid and the file being written is often corrupted. With PFS the worst that could happen is that the file being saved when the crash happened will not be there once the Amiga has rebooted. If the file was overwriting another the old one will still exist.

In addition to speed and security PFS also offers some useful additional features. Because it is based on an older drawer called .del, in this drawer the last 100 (by default) delete files are available to be backed back from the dead simply by copying them to another drawer. PFS lets you define roll over files, these are limited to a certain size, when that is reached the start of the file will be trimmed. This is useful for log files which are constantly added to.

The main criticism levied against AFS and SFS was that these file systems were not designed to work on large datasets and the flexible partitions used on a disk all partitions including the initial boot partition can be formatted with a third party file system.

PFS 3

The Professional File System first appeared as a PD file system for floppy disks quite a few years ago. It was developed by AmiFileSafe and sold commercially by First Level Developments. Although AFS was a good product (there were a few bugs at first) that was not matched by FLS's service giving AFS a bit of a mixed reputation. FLD eventually went out of business and the developer of AFS, Michael Pelt got the distribution rights back.

OS 3.5

With AmigaOS 3.5 support for disks bigger than 4GB is built into the OS.

This is provided by a new versions of the scsi device (43.x) and FastFileSystem (45.x) both supporting the NSD (New Style Device) standard. The SetPatch command, run at the beginning of the start-up-sequence, can now patch existing device drivers to comply with the NSD standard and thus support large disks. This patching is controlled by the NSDPatch.config file in /Devs/. The support for future new and updated device drivers should comply with the NSD standard without requiring the patch.

NOTE: For several years after the demise of Escom time limited beta versions of the updated scsi.device, FastFileSystem and NSDPatch were available from Amiga. You can patch these to get around the time limit and use them with OS3.5. However, I would recommend buying OS3.5 as the best way of getting these updates, versions of all the OS utilities that work on large disks and supporting the people who developed them.

WARNING!

Fiddling with your hard drive settings can seriously damage and destroy your data.

Make a backup of all your data before you change any settings or options, as it is possible to corrupt or make inaccessible data on your hard drive.

Breaking the 4Gb Barrier

As I mentioned in the last issue, the largest hard disk you can use with a stock OS 3.1 or previous Amiga is 4GB. However, if you want to use a bigger drive there are a number of solutions including the new AmigaOS 3.5. There are two factors which limit the size of disk that can be used with your system, the controller’s software (often known as the device driver) and the file system (which manages the data on the disk). If either of these do not support large drives any data saved to a partition partially or entirely on a drive over 4GB will be lost and data on partitions below 4GB (which will otherwise work normally) could be corrupted. If data below the 4GB limit is corrupted in this way it is possible that the Rigid Disk Block (RDB) at the start of the drive could also be overwritten. It is worth remembering the details of all the partitions on the drive and if it is wiped none of the partitions can be accessed. To see if this is important to ensure that your system is correctly configured before you start using a large disk in anger.

I don't need more than 4GB of space but I can't buy a drive that small!

This is a common problem, with most Amiga programs and data files being pretty compact many Amiga users do not need huge hard-drives. 10GB drivers are common in the PC market so smaller drives are just not available any more. Fortunately this doesn’t need to worry us because you can just partition a bigger drive up to the 4GB limit and it will work fine with no additional software or upgrades.

SFS

The Smart File System is developed by John Hendriks, currently freely available for public beta testing. Although developed independently of FFS SFS is still a work in progress and will take some time to fully mature and provide a clean solution to the problems associated with FFS.

SFS is designed to be more secure than FFS, warn users whenever a file is being saved when the computer crashes and files will not be lost after a crash.

SFS is designed to be more secure than FFS, warn users whenever a file is being saved when the computer crashes and files will not be lost after a crash.

Overall I like PFS and have found it to cause less problems than FFS.
What’s coming your way in issue 7?

Features
We look at the scanners available for the Amiga and review the available software.

Reviews
We hope to be reviewing ArtEffect 4, Amiga Writer 2 and the latest versions of Vaporware’s Internet programs.

Support
Startup Problems - we help you get out of those sticky situations when your Amiga just won’t boot.

Plus all the latest news and more...

Clubbed Issue 7 is planned for December 2000

NOTE: This is a provisional contents list and is subject to change without notice.

Next Issue
Keep Up-to-Date with the clubbed-announce Mailing List
Clubbied now has its own Internet mailing list to keep connected readers better informed about the magazine. The mailing list called clubbed-announce is hosted by the OneList service.

We will post a minimum of one update on the list per month but your mailbox will not be flooded because this list can only be posted to by the editor.

How To Join
Subscribing to the list is free, just send a blank EMail to: clubbed-announce-subscribe@egroups.com

Or go to the list page on the OneList website, if you subscribe on the website you will need to register (if you haven’t already for another list): www.egroups.com/group/clubbed-announce (all one line)

We hope the list will keep you better informed about Clubbed and encourage you to join.

NOTE: This is a provisional contents list and is subject to change without notice.

For details see our advert on page 2

Visit our new-look website: www.analogic.co.uk
Heretic 2

Heretic 2 has some fabulous and varied locations. Read Mick Sutton’s full review on page 36.

In the Mag

Magic Menu (page 39)

Version 2.30 of Magic Menu sports these cool translucent pop-up menus on hi and true-colour graphics card screens! The effect is of course optional!

Photogenics 5

Paul Nolan has recently added some more of his brilliant tutorials to the Photogenics website. This image is the result of the tutorial on the ContourMap effect. Anyway take a look for yourself at: www.paulnolan.com

Wanted

Your work for the Gallery of Clubbed issue 7.

If you have something, created with your Amiga that you are proud of and would like to show to other Clubbed readers please send it in to the normal address. We are interested in any visual work, for example it could be a website, poster or an image, so go on send something in!

http://www.seal-amiga.co.uk/