Improve your digital photos and scans with our image enhancement tutorial.

AmigaOne-XE G4
Find out all about this feature-packed Zorro card inside.

We preview the fastest PowerPC motherboard in Eyetech’s range.

Photo Editing
Improve your digital photos and scans with our image enhancement tutorial.

For Amigas, By Amigans, On Amigas!
Editorial

Welcome to another bumper 52-page edition of Total Amiga! As I write this the production of this issue has gone very smoothly and it looks like it will be out on time.

Amiga OS 4 has largely been made possible by all the people who contributed to this issue, as there are several different authors and a wide variety of subject matter.

PageStream for Amiga OS 4

Grasshopper LLC has announced that they will support AmigaOS 4 with a new version of their professional DTP package, PageStream 4. As regular readers will know, PageStream is a powerful Page Description Language and I think most people will agree, one of best Amiga applications currently in development. Apparently PageStream is running on a beta version of OS 4 already and the developer plans to continue to update it to take advantage of new OS features.

Other recent PageStream news has included the release of a Linux version that sorts a beautiful anti-aliased text display. Hopefully this feature may be added to the new Amiga OS version too.

The standard retail price of the full version of PageStream has been reduced to just $99 (approximately £65) making it much more affordable. There is also a new professional edition which costs $149 (£97), this edition is based on the same program but includes the TextFX, Gary’s Effects and Borders 1 & 2 plug-ins plus Paper Direct and Home & Office templates which were previously available as extras. An upgrade to the pro version is available for $50 (£33).

About Total Amiga

Total Amiga is published quarterly by South Essex Amiga Link.

Editor: Robert Williams
Design: Robert Williams

Proofreading: Sean Courtney, Sam Byford, Sharon Sutton

Contact Us

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

E-mail: editor@totalamiga.org

Web: http://www.totalamiga.org

Post: Total Amiga, 26 Wincote Drive, Binfield, Reading, Berkshire, RG42 6JH.

Hardware: Home built i86 PC AMD Athlon XP 2000+, nVidia GeForce2 MX400 256MB RAM, 400GB HDD.

Software: AmiOS 3.9 by Amiga PageStream 4.1 by Softdog ImageFX 4.5 by Nova Design Perfect Print 2.93 by Georges Halvadjian

Photogensis 5 by Paul Nolan Final Writer by Softdog Ghostscript 8.00 from artofcode ported to AmigaOS by Whoosh777.

There are also some essential utilities we couldn’t live without: Directory Opus 5, Grida, MCP, Turbo Print 7, MaximUS.

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

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

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: Total Amiga is produced by the editor and contributors in their spare time. While we 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 Total Amiga covers our costs and nothing more, we don’t make a profit from it.

If you wish to contact a contributor send your message to one of the addresses in this section.

The text body of Total Amiga is set in 10pt Normal as supplied with PageStream, the heading typeface is Forgotten Futurist by Ray Larabe. Take a look at Ray’s huge range of free fonts at http://www.braylanfonts.com and his commercial font family at http://www.topdogfonts.com

Advertisements

For more information and to order on-line visit the Grasshopper site at: www.grasshopperl.com

The Linux version of PageStream sports this slick anti-aliased display; hopefully Grasshopper will implement it for Amiga OS 4 immediately.

An upgrade from Amiga PageStream 4.1 to the OS 4 version costs $40 (£26) and the full AmigaOS 4.0 package costs $99 (£65) as mentioned above. If you buy PageStream 4 for OS 4 before it is released the 68k Amiga version will be supplied immediately with a free upgrade when the new OS is available.

AWeb and KHTML

Little visible progress has been made on AWeb since the original developer, Yvon Rozijn, released the source code for 2002. Plans are afoot, however, to kick-start the development by adopting an alternative HTML rendering engine. This approach should help overcome the problems small development teams tend to have in keeping up with the latest web technologies. In a recent announcement the AWeb open source team say they are considering the KHTML engine developed for KDE’s Konqueror browser on Linux. KHTML was recently selected by Apple to form the core of their Safari browser for Mac OS X so the teams are keeping good company with their choice.

Unlike the current version of AWeb, and indeed the other Amiga browsers, KHTML is fully HTML 4 and XML compliant and supports Cascading Style Sheets and the Document Object Model. By using just the HTML rendering engine it should be possible to retain an Amiga look and feel without porting a complex user interface from another platform.

To read more and find out how to contribute to the development effort visit: aweb.sunsite.dk

KDE’s Konqueror browser uses the KHTML engine.

Legalease

AmigaOS 3.9 by Amiga

PageStream 4.1 by Softdog

ImageFX 4.5 by Nova Design

Perfect Print 2.93 by Georges Halvadjian

Ghostscript 8.00 from artofcode

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http://www.braylanfonts.com

http://www.topdogfonts.com

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All other trademarks mentioned are the property of their respective owners.
Since our review in issue 15, Dave Fisher has completed a comprehensive documentation for the release of IBrowse. Surprisingly, the documentation is presented in HTML format and includes plenty of illustrations. I have to say that this is the best documentation I have seen for any Amiga program in a long time. It covers all the program's features and has a good balance of reference material with short tutorials and step-by-step instructions. Many less obvious features of the program are pointed out, as are potential pitfalls. The documentation covers complex topics such as PostScript printing and fonts in a detailed and understandable way. Oh, and it has a quote from the T otal Amiga review on the front page!

Since the improved AREXX support in FroggerNG has led to a new GUI called Toad being released for the program. Unlike earlier interfaces, which just provided a comfortable way of setting command line parameters, Toad provides VCR-like buttons that can be used to control a movie as it is playing. Dave “T arghan” Video Amphibians

Pegasos II Plans Emerge

Genesi have released some further information regarding the release of their forthcoming Pegasos II motherboard. There will be an initial production run of 600 boards followed by a run of 5000 boards when the boards and MorphOS are considered to be ready for a wider market. 100 G4 Pegasos IIIs will be available for Pegasos I owners wanting to upgrade, the cost will be 200Euro plus a 35Euro handling charge which includes the return of the Pegasos I. Upgrades made through a

Johnathan Haddick contacted us with some additional information relating to his review of e3b’s Subway USB card for Total Amiga: “I’m pleased to report that the problems I mentioned in my Subway Review (TA15, page 36) have been overcome. IBrowse now recognises my compact drive. This was solved by installing the new input device as described in the documentation. The reason for my Keyboard problems is that, unfortunately, my keyboard was dying and has now died completely. This was not a problem caused by Poseidon just by my dodgy keyboard cable.”

E3B have also announced that, after selling out the first batch, another production run of Subway cards have been produced. So if you are interested it would be a good idea to order one as soon as possible before they sell out again.

E3B’s website has full details of all their products: www.e3b.de

Almost all the AREXX commands are provided with the port. New AREXX commands enabling more powerful GUIs to be created.

Toad is supplied with the port. On-line registration is available from the program web site via RegNet. Both Frogger and Toad can be downloaded from: frogger.rules.pl

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The latest version of Frogger, the movie player for AmigaOS, PowerUP, WarpUP and MorphOS by Sebastian Jedrzejukiewicz, adds more features and support for more video codecs. The key changes in the new version include:

- Support for AVI, ATI VCR1 and ATI VCR2 video codecs.
- More settings can now be saved in the preferences file (so they don’t have to be set on the command line).
- New AREXX commands enabling more powerful GUIs to be created.
- Seeking in ASF, WMV and WMA files has been added.
- Improved subtitle-rendering engine.
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Simple Mail Fights SPAM

The open source (under the GPL) mailer, Simple Mail, has added yet more strings to its bow with the latest 0.20 release. The major additions in this release are preliminary support for downloading from IMAP mail servers and, most impressively, a statistical spam filter. As usual there have also been a raft of minor bug fixes and other enhancements.

Many people’s email boxes are bombarded with unsolicited commercial email, commonly known as spam, often of an unpleasant or offensive nature, so Simple Mail’s new spam filter is a welcome addition. Rather than working on a set list of keywords or addresses of known spammers, Simple Mail analyses messages you have marked as spam and then that you mark as ham (genuine messages). From those messages it builds a list of words that characterise spam and another list that characterises ham. Two new buttons have been added to the toolbar, one which analyses the messages in your In box and marks those that look like spam and another that moves them to a new spam folder. If Simple Mail misses any messages or marks a genuine message as spam you can correct it; this improves the accuracy of the spam detection next time. Further anti-spam options allow you to set a black list of addresses that always send you spam and a white list of your genuine contacts. Because you train Simple Mail with your own messages in theory it should be much more effective in blocking spam than list-based methods.

Download the latest version from simplemail.sourceforge.net

Warp Datatypes

Oliver Roberts has expanded his range of “Warp” datatypes to support six file formats: BMP, JPEG, PNG, PSD (Photoshop), TIFF and the latest addition, PCX. Datatypes were one of the most innovative features introduced with AmigaOS 3, enabling applications to load file formats that didn’t even exist when the application was designed. In recent years Oliver’s datatypes have proven to be among the best offering wide format support, fast decoding, and configuration via a preferences program.

PCX is a bitmap format that originated with PCPaintBrush by ZSoft and is quite common on Windows. The new WarpPCX datatype supports standard PCX files and the more unusual formats that can be exported from Personal Paint on the Amiga. The datatype can decode 1 to 24bit colour and RLE compression. As with all his datatypes, Oliver supplies native versions of the PCX datatype for 68K Amigas (and emulators), WarpOS PPC and MorphOS. A version for AmigaOS 4.0 is planned when the new OS is released. After several years as freeware Oliver has now made the Warp datatypes package shareware. There is a single fee which covers all the datatypes and, currently, any added to the range in the future (users already registered got the PCX datatype when it was released for example). One registration covers all the CPU-OS versions too. The datatypes run with no restrictions for a thirty day evaluation period you can try them out, giving you plenty of time to register if you like them. Registration costs £15 and can be carried out on-line on the new WarpDT web site: www.warpdt.co.uk

Frying Pan is a new shareware CD writing application; early versions have been around for a while but version 0.3, a complete re-write, seems to be the first really usable release. Frying Pan has been designed to be logical to use with each of the steps required to burn a CD represented by a line along the top of the single program window. These stages include selecting files for a data disc, organising the tracks on the CD, settings such as the writing device and speed and finally writing the disc itself.

Frying Pan can build both audio and data CDs, it is able to read tracks from an existing CD enabling you to make your own mixes. When making a data CD, Frying Pan has an “ISO Builder” feature; this enables you to add files to the CD from your hard drive without creating the directory structure on disk. This powerful feature is not found in Make CD; the Amiga’s only other CD writing software currently in development. Frying Pan should work with most reasonably modern CD recorders and offers a full range of speed settings. Track at once, session at once and disc at once writing are all supported. Data can be written on-the-fly, if your system is fast enough, or you can create an image on disk and then burn it later. Burn Proof and similar technologies can be used on those CD writers that support them.

Registration is on a per CD-writer basis. The initial registration, including one drive, costs 10 Euro and each additional CD writer you wish to use costs another 6 Euro. Currently there is no on-line registration, you must contact the author on e-mail or ask your local bookshop to get you a copy of the latest versions of popular software.

Is your YAM looking a bit drab or are you just fed up with your current icon set? If so then Lorraine Design have a solution for you! The end result is a clean modern look in blue-grey shades, a nice change from GlowIcons. Lorraine Design have a section called the “MorphOS Developer Connection” for developers.

NEW WEB BITE... Poseidon Spider Support Ends

Chris Hodges, the developer of the Poseidon USB stack, is no longer accepting registrations from buyers of Ebox’s Spider USB PCI cards. This means that a newly purchased Spider cannot be used legally outside the short trial period of Poseidon or until Ebox supply alternative USB software. Chris cites differences of opinion with Ebox as the reason for his move and has published a long history of his communications with them on his web site: www.platon42.de/index2.html

Out of the Burner into the Fryer?

Frying Pan’s ISO builder lets you add files from any drive on your system to a CD.

The demo scene has always been an important part of Amiga “culture”. The Demo Amiga Scene Archive aims to collect together some of the best demos along with information about their release and what awards they won. Many Amiga users (ex-Amigans) no longer have hardware compatible with some or all demos (particularly the older and, ironically, the newer CD demos can be problematic) ADSA also holds screenshots of most demos. Some even have movie files so you can view the whole demo on any computer capable of playing back a video. For each demo you have the opportunity to submit a comment and read comments left by other users. The ADSA site is very attractive to look at with a dark understated tone that reflects some of the best demo productions. ADSA is a very impressive site, it’ll have you pulling that A500 out of the loft in no time!

http://ada.planet-d.net/

http://www.swaug.org.uk

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The star of the show is the reviews section which is updated regularly. Sometimes SWAUG members review Amiga specific hardware but their speciality is software. A feature that is not found in Make CD; the Amiga’s only other CD writing software currently in development. Frying Pan should work with most reasonably modern CD recorders and offers a full range of speed settings. Track at once, session at once and disc at once writing are all supported. Data can be written on-the-fly, if your system is fast enough, or you can create an image on disk and then burn it later. Burn Proof and similar technologies can be used on those CD writers that support them.

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Features

AmigaOne Update

Once again we drag Alan Redhouse, MD of EyeTech away from international commitments to bring us up-to-date on the AmigaOne.

AmigaOne Status

I am pleased to say that we have finally just about caught up with the backlog of AmigaOne orders and are on the point of being able to deliver to dealers ex-stock. This means that board orders should be able to be delivered, though it is around 6 weeks before ordering and bespoke systems in less than 4 weeks. However I am still surprised how strong the market for earlybird systems continues to be – I guess the reason is that now it is quite widely known that OS4 is booting on the AmigaOne.

High Performance CPU Modules

We have reached agreement with Hyperion and most dealers to make AmigaOne Earlybird boards available to registered OS4 beta testers at a 10% discount. If you are eligible and wish to take up this offer, please contact an official AmigaOne dealer – see the following page for contact details: www.eye-tech.co.uk/amigao4/dealers.php

Changes at Eyetech

Our under-cover agent is currently busy on a case, he will return in a future issue!
John Dandler is back with all the latest news on the OS everyone is waiting for.

It's been an interesting time since the last update of AmigaOS 4. AmigaOS 4 has now made many public appearances across Europe and North America. The tour organizers and Hyperion have received numerous requests from people about arranging similar tour dates around the world. The response has been positive and strong, and no doubt has contributed to continued demand for the AmigaOne EarlyBird systems.

Still, the official release of AmigaOS 4 is still very much when it's ready, with Hyperion keen to stress that after all the time and effort put into it so far, to rush the last few stages would be foolish. However, the public demonstrations have gone a long way towards quashing the rumours and speculations of what state OS 4 is in, and whether the whole project will ever see itself installed on the hard drives of more than the hundred or so developers and testers around the world.

AmiWest 2003

Of course, the big American event at the end of July was the AmiWest 2003 show. Disappointment was initially high due to the news that Bill McEwen would be unable to attend, but the situation was more than made up for with the surprise news that Ben Hermans of Hyperion would be available to discuss AmigaOS 4, as he was in the USA for business meetings with Mai.

As well as the Hyperion presence, AmigaOS 4 was well presented through the hard work of both Mr. Hardware and Dr. Ray Zarling. Ray's name is already unfamiliar to many in the Amiga community, but he is a strong Amiga fan as well as a professor of Computer Science at California State University. The presentations were well-received and formed an extension to the OS 4 on Tour events that have already made a valuable impression on Amiga users across Europe.

Ben's OS 4 presentation was also well-received, with plenty of positive feedback on clarity of presentation and good technical knowledge. The slides are available from the official OS 4 web (http://os.amiga.com) as a PDF and well worth a look.

An Ember Light For Blizzard PPC

In the last issue, mention was made that Hyperion were attempting to gauge interest in a port of OS 4 for the Blizzard PPC. It comes as no surprise to find that the response has been good and Ben Hermans confirmed in a recent interview with Amiga.org that the port would appear to have a reasonably viable market.

The Grim Reaper

One of the big things to be announced recently is the comprehensive debugging support included with the OS. While the functionality will be of benefit to the everyday user, AmigaOS 4 is shaping up to provide developers with a powerful development platform. No doubt the beta-testers will welcome putting this feature through its paces.

Segtracker-like capabilities have already been incorporated, thanks to the implementation of ELF binary loading as a shared library, giving debuggers the ability to rapidly pinpoint the source of crashes. It is just the first step towards full integration of the GDB debugger, arguably the most powerful debugging tool in use today. GDB allows developers a great degree of control when launching code and stopping code in mid-execution, examining program state and making changes for test and experimentation purposes.

The familiar Guru Meditation requester has been replaced by the Grim Reaper, which allows crashed tasks to be suspended, killed or debugged. Through the Reaper, GDB can be attached and the task restarted with the benefit of a full debugging environment. Screenshots of the Reaper and its Reaction-based UI have already been circulated around the Amiga community.

Compilers Galore

The official port of the ubiquitous GCC compiler has recently been supplemented by the addition of VBC, a compiler for the 68k. The compiler has already received much praise from the Amiga community. Support for development on non-AmigaOS platforms has also been noted, with complete OS 4 cross-packages now available for Windows as well as Linux and even MacOS X.

Font Support

As mentioned in the previous issue of Total Amiga, anti-aliased support was publicly unveiled on the OS 4 tour. Font support in OS 4 is via TypeManager, itself based on the latest version of FreeType. TypeManager is fully integrated with the OS, and thus applicative with all applications, and offers support for a rich variety of font systems such as Postscript, CID, TrueType / OpenType, PFR / TrueDoc, BDF, PCF and Windows fonts. Unicode support, which has actually been tucked away in AmigaOS for some time, is also present - a must for any modern OS.

What's Missing?

For the Amiwest presentation, Ben Hermans pointed out what functionality was originally scheduled for AmigaOS 4, but which has not been implemented. The list is fairly small and, with the exception of some ExeCG functions that are currently unimportant, primarily concerned with high-level fonts. The much-anticipated 3D API, based around OpenGL, is undergoing finalisation with a W32DOS wrapper under evaluation. An

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have just recently received my AmigaOne G4 800MHz motherboard. The reason I chose this over any other system goes back a long way... let me explain!

Back in 1991 when I was looking for my first ever “proper” computer, I was faced with the choices of an Atari ST 1000, or an Amiga 500 plus, a PC (a 386, if you remember correctly), or the dreaded Amstrad PCW. The Amstrad didn’t strike me as an ‘all rounder’ machine and there also seemed to be more Amiga software on the shelves than Atari, so I decided it was down to either a PC or an Amiga.

I remember looking at a PC that cost about £1100 and an Amiga costing £500. The PC had a 14” monitor (although I can’t remember whether it was included in the price) and 20Mb hard drive, but I recall the Amiga could be used with a TV if I could afford a monitor. The decision to buy the Amiga rather than a PC was not all down to cost factors, though I doubt I could have coughed up the amount of money I have spent over the years, but was also down to the fact that the Amiga Workbench looked like a far friendlier environment than the Amiga user interface was a sheer joy after seeing the DOS Brambor...? choice model? The Amiga motherboard I have used Amigas ever since and never felt the desire to “jump ship” to a different computer as it still does almost everything I want it to do.

As the years have gone by, other systems have gotten faster and prettier operating systems installed on them, but they still lack that certain something that the Amiga has. The Amiga may be lacking in the web browser software that the likes of PC’s and Apple Macs have, but the Amiga is still a far better machine to use even today despite the fact that most of the software running on it is using a 50 MHz (606) processor compared to, say, a 2.4 GHz Athlon. I use it on a daily basis at work and am not impressed. My wife had an Mac, and if I told her I could use it to access the internet and use MS Word then she would be far more impressed. Even the thought of using the Mac is enough to make my eyes water.

The AmigaOne XE motherboard

I thought it would be able to use the hardware with Linux, although there were problems with my opinion being the worst case scenario and very unlikely to happen.

So there you are, I shall stay with the Amiga, thank you very much, which means that an AmigaOne was on the top of my shopping list. I saw that Eyetech were doing pre-built ‘poled’ systems with a very good, fully loaded spec, but I decided that I could build myself a machine with the same specifications for less cost, and of course building your own machine also makes it a unique machine, which I think is what most people want.

I decided whatever AmigaOne motherboard I bought I had to have a plug in CPU so that I would be able to upgrade later on if required, and as the 800 MHz G4 wasn’t drastically more expensive than the 600 MHz G3, I thought I would go for that spec module. I now had to think about what other items were required to build my AmigaOne system: some memory, a good size hard drive, a floppy drive, a DVD-Reader, a CD-RW drive, a video card, sound card, and a decent computer case with sufficient power capacity to drive all the hardware and software I’m after. There was a lot of discussion about what RAM being ‘picky’ with AmigaOne motherboards, so I decided not to take any risks and ordered my 512Mb of RAM from Eyetech. I then discovered that a CPU fan was needed on the 800 MHz G4 (it isn’t required on the G3) and also that to my order to be dispatched at the same time.

The AmigaOne motherboard itself is an ATX form factor sized board with standard power connections that can be mounted in any standard computer case. The main board of the XE G4 system has a socket for a card fitted with a Motorola 7451 PPC CPU. The motherboard has built-in Eyetech’s own AmigaView graphics, which is plugged in and fitted with a card, the main RAM was wrapped up within the packaging. The board itself looks like a good build quality with no signs of poor quality soldering or bad tracks, and I can tell you I never knew someone could get so exited holding and looking at a board like this in their hands. The only components soldered onto it now I had the object of desire in my hands (don’t even go there) which first involves telling the AmigaOne to boot from the CD-ROM as detailed within Eyetech’s documentation.

It is time to install Linux (if you insist), which first involves telling the AmigaOne to boot from the CD-ROM as detailed within Eyetech’s documentation. Once this is done, the supplied Debian GNU/Linux (3.0.1 official PPC binary) takes you through a range of options based on what applications you want to work with. At this point you have to say which options you want to accept or decline, which I think is why I was never going to want to run it. I won’t go into great detail but will try to remember the main steps that have to be followed to get everything installed and configured.

First and foremost is the partitioning and setting up of the hard drive. This consists of selecting your primary master IDE drive and creating a Linux Swap partition, the main partition where all your programs and files will be stored. Once all this is done, it is time to configure your kernel and device modules. This is when you tell your machine what hardware you have installed such as graphics card, sound card, network card, etc. During this process you can also set your computer’s network address, tell it what type of mouse and keyboard you have, and configure whether you have a Postscript printer. There are other elements that are configured during the process, one of the important ones for me was the monitor settings. I have a TFT monitor, so I selected that and files will be stored. Once all this is done, it is time to switch on your machine and boot into your Linux OS (shame we all the hardware is put together correctly, it is time to switch on the computer and follow Eyetech’s instructions to install a basic Linux system. The documentation tells you where everything should be connected, what jumper settings to make, and how to check the CPU settings are saved into nonvolatile memory so they don’t have to be entered every time you boot the machine.

I decided to run at this setting, and files will be stored. Once all this is done, it is time to switch on your machine and boot into your Linux OS (shame we all the hardware is put together correctly, it is time to switch on the computer and follow Eyetech’s instructions to install a basic Linux system. The documentation tells you where everything should be connected, what jumper settings to make, and how to check the CPU settings are saved into nonvolatile memory so they don’t have to be entered every time you boot the machine.

The time you have been waiting for has arrived: it is time to switch on your machine and boot into your Linux OS (shame we all the hardware is put together correctly, it is time to switch on the computer and follow Eyetech’s instructions to install a basic Linux system. The documentation tells you where everything should be connected, what jumper settings to make, and how to check the CPU

Features

AmigaOne- XE G4 Preview

Mick Sutton gives us some first impressions of his AmigaOne and explains how he built up his system.

My AmigaOne-XE motherboard with G4 CPU module.

“Linux is okay to mess around with... but bring on Amiga OS4 and let’s have some fun!”

The AmigaOne, in my Suntek tower case, at a SEAL meeting.
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<th>Description</th>
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<tbody>
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<td>This excellent Graphics package available one again! Comes on CD and includes Texture Studio &amp; Image Studio.</td>
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<td>Image FX4</td>
<td>THE image manipulation package ! 100s of effects.</td>
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## Players

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<tr>
<th>Package</th>
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<tbody>
<tr>
<td>Moovid PPC</td>
<td>PPC version with both WARPUP® and POWERUP® versions. Comes on CD</td>
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<tr>
<th>Package</th>
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<tbody>
<tr>
<td>Inet Dial</td>
<td>Home server on your Amiga®. Includes Apache and Geek Gadgets.</td>
<td>£40.00</td>
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<td>AWeb Upgrade</td>
<td>Excellent web Browser. Upgrade from OS 3.5 or OS 3.9. Comes on Floppy.</td>
<td>£30.00</td>
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## Games

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<tr>
<th>Package</th>
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<td>PayBack</td>
<td></td>
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<td>Freespace</td>
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<td>The Feeble Files</td>
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## Utilities

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<tr>
<td>PFS 3</td>
<td>The fastest and safest file system available, up to 300 times faster than FFS.</td>
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<td>TaskiSMS</td>
<td>Send SMS to mobile phones from your Amiga®. Comes on CD.</td>
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Embrace Digital Living
Much like the Shakespearean tragedy, Romeo & Juliet, the Amiga household is split into two sides. On one side is the AmigaOne users and on the other the Pegasos users. Both have fundamental differences but at heart both are similarly excellent machines (I shall explain this reasoning behind that comment later). That which separates the two is not always clear and in some respects the main part of these people are those who feel these two sides are in competition against each other and what they want to be without interference. However, there are those who appear to like making war, and who take every opportunity to name call, belittle and generally drag the other side down. One thing is for certain: it’s gradually killing the entire platform.

Over the years battles have raged between various companies; Picasso Inc vs CyberGFX, WarpUp vs PowerUp, PC vs Mac, and each has had positive and negative impacts on both parties. Competition is healthy, it forces each side to better itself, to strive against its opponents and therefore gain the upper hand. More often than not though the negative impacts drive themselves to the fore and are what stick in peoples minds. We tend to more easily remember the bad experiences we have rather than the good ones, which far outweigh the bad ones. These negative aspects tend to influence us in future life and decisions.

As an example the WarpUp versus PowerUp PPC “war” - two different software solutions both designed to run on the hardware designed by PhaseS, one created by PhaseS themselves (PowerUp) and the other created later by Haage & Partner. Initially PPU had the only PPC software layer available so both programs were made to run that, but then WUP came along. This soon became very popular and (somewhat arguable) became the more popular software solution, especially on the upper handers. Yet some software houses stuck with PUP because a lot of programmers still preferred it, causing a rift in the user base and helping to put the entire PPC ecosystem in an early grave. PPC did not take off as it was thought it would, and today the few boards that are still around tend under their wings and made for their own, but each in slightly different ways. So although both boards may use different manufacturers and different chipsets as the initial on-board systems and both run different OS’s they are effectively brothers (and not an Amiga at all in some peoples minds).

Most people out there think of AmigaOS4 and MorphOS 1 as two entirely different beasts. I disagree - they are born of the same lineage, with the same mother and father and both have grown up in the same situations and conditions and have therefore diverged. Neither system is the “Classic” Amiga was but both have their roots firmly embedded in it. As they stand at the current time each is purely a camelion OS, and by that I mean that the authors are aiming to get the OS to such a level that any and all old Amiga programs will still run on their OS. Each side is, of course, trying to out do the other by adding in new features such as anti-aliased fonts, skins (MorphOS), a new library model (OS4) and enhanced Exec (OS4) to name a few.

As they stand at the moment the AmigaOne with AmigaOS4 is not at all that different to the Pegasos with MorphOS 4. People are now screaming at me and saying that I’m talking rubbish, but hear me out: both hardware systems have evolved beyond what we classify as a “Classic Amiga”. They have removed the need for dependency on chips (Alice, Budge etc) and instead use generic PCI or AGP cards for things like graphics, 16bit audio and USB, Firewire and digital sound. Some of these innovations have still been added to the boards themselves but each is upgradable. While these items may have been pioneered by the PI company both systems have taken them on board.

The Amiga One XE/G4 motherboard and the Pegasos I (opposite right). Similar hardware and both intended to run Amiga-like operating systems and yet the centre of so much acrimony.

Sam Byford puts into perspective the arguments between MorphOS and Amiga supporters that all-needed WOW feature will have both Pegasos and the PPC native OS’s come into being. For MorphOS this will approach the way that both the Box and the AmigaOS will become the other Pegasos users. Both are aiming to make the OS fully PPC native and will run 68k programs in emulation. The future will bring divergence and programs native to those OS’s, but in the near future they are not so different.

The thing which disturbs me is the massive split this all is causing in the Amiga user base. Naturally each system is somewhat different and therefore not totally compatible with the other but in reality the two systems are remarkably similar and it would take a lot of work to make a program run on both machines would be quite a small one, as long as it had a firm grip on the interface and the hardware. Now normally this slight incompatibility would not be a problem, each side would get on with what they are doing, working on the interface and trying to be one step ahead of their game and maybe even playing both sides.

However in the Amiga world we seem to have some of the most stubborn, but opinionated people I’ve ever seen. Linux users seem to close second with PC users just kind of rolling along on the back of the wave of the new technology. This is blindly sticking to one platform over the other.

The few spoil it for the many. On both sides!

While most of us are content to choose our platform or OS and to let others have the same rights there are those out there that think all those people who disagree with them should be beaten up and thrown into a dark, dark dungeon somewhere until such time as Pegasos and recently went into an interview on the subject and it was found that I use a Pegasos...

When a user stirs up trouble on a forum by posting insinuations, lies or slander what should the company concerned do? There are two options: stay silent and run the risk of the lie taking hold or hope that it is proved wrong and only speak when an official announcement is made. Some of; or they can stay in the public forums and confirm and deny any rumour put about.

I want to make one thing clear here - I am NOT singling out the AmigaOne users here. There are plenty of Pegasos users out there who are just as bad if not worse. They both are actually slightly louder in their ravings. Both sides have their zealots and both sides new individuals are making very hard work for both companies to work. To be brutally honest I think that both companies are actually headed up by very strong personalities and because of this cooperation between the two sides is made all the more difficult as neither side likes to stand down on any given subject!

The moral of my rant is that the rivalry is not healthy. I am NOT singling out the AmigaOne users here. There are plenty of Pegasos users out there who are just as bad and between the two sides is made all the more difficult as neither side likes to stand down on any given subject!
boot into the CD rather than the MOS that is on your hard drive. You then have two options: you can either perform an update using the provided install script which does everything for you and is quite easy to follow, or you can do a fresh install. The later is preferable as it means that you don’t have any unwanted libraries or conflicting files on your system. It’s fairly obvious, but make a backup of the 1.3 system first!

Once you have backed 1.3 up, delete it from the boot partition, then install 1.4 by copying the CDs contents to hard drive and then over the next few weeks put any new files and libraries that programs require, using SetupDos if necessary, to work on what is missing. 1.3 had a fairly major drawback, the most noticeable of which was the lack of a few basic programs – that of a text editor and a TCP stack. 1.4 introduces MosiED, a reimplementation of Goldberg written specifically for MOS. It was initially intended as a developer tool and has highlighting for most of the development languages but it soon became clear it would be ideal as the default text editor for MOS. With this now part of the Superbundle it means that users have a means of editing the user-startup file and other scripts (as well as C code and HTML pages etc.)

A TCP stack is still missing from 1.4 which means initially setting up your computer to access the outside world or your internal networks is still as much a hassle as it was under 1.3. The good news is that AmiTCP is currently being rewritten for PPC and has had a complete GUI overhaul, and the news on the grapevine is that the transition is almost complete. Therefore AmiTCP should be available in the next MOS upgrade!

**Integration**

Some of the core components of any OS have now been integrated into MorphOS. The most noticeable of these programs are JIT, TurboPrint and USB support but there are also smaller integrations which deserve a mention a bit further into the review.

Having TurboPrint integrated directly into the OS is a big bonus as it means that over 200 different printers (both parallel and USB) are supported internally. Currently however TurboPrint does not work on the majority of systems! The amount of email to the MOS mailing list regarding TP not working has been phenomenal, although in some cases people had managed to get programs such as WordSmith and FinalWriter to print. I myself can print from WordSmith just fine, albeit very slowly, but no other program will yield results, they either lock the machine up or throw out a blank piece of paper. This really does need to be fixed and as soon as possible. The preferences for TurboPrint have been added into the System prefs and it looks rather nice (see screenshot) as well as being quite easy to navigate. A lack of documentation might prove a hindrance to some users not used to dealing with TurboPrint. Any extra printer drivers that Iresoft bring out (I had to manually copy my Epson C40UX driver over from my own copy of TurboPrint) go into the draw at MOSSYS: TP/Printers/ and are immediately available for use. By now everyone in the Amiga sphere will have heard of and possibly even used Poseidon by Chris Hodges. This marvellous piece of USB software has now been successfully added into the heart of MOS.

Nothing (except a few minor additions) has changed so setting up the preferences based on your old settings should be quite a quick process. My only gripe when it comes to putting up to the release of MOS all 68k programs have been running on a standard emulation layer. With 1.4, JIT (Just-In-Time) emulation has been introduced by way of Trance. My knowledge of JIT is limited but from what I understand, as 68k code is run it is replaced with PPC native code “on the fly” which then caches for future use. This means the first time you run a specific bit of code there may not be any noticeable increase in speed, as Trance is having to re-write it as the program wants it. With each subsequent use of that same code Trance can just recall the new version and execute that, speeding up the entire process. So performing actions on individual pixels and mathematical operations would get markedly quicker with the second use, for example. As with other 68k emulations, basic 68000 or 640 code is much easier and quicker to translate than 060 code (which contain instructions only used on 060s) so reinstalling programs and using the 68000 version could improve the JIT emulation.

In issue 15 to test the difference AmiTCP should be available in the next MOS upgrade!

Bug Fixes

- MOS1.4 now supports DVI and Overlay for the Radeon series of GFX cards (except 8500) and 3D for the Voodoo2/3/4 series.
- Support for graphics tablets has been introduced as has the ability to reboot the machine via keyboard. I find this does not work if a program has hung the machine already, and the Reboot option in the HMB menu works only half of the time so you will still need to reboot via the Tower Case’s reset button! One very good change in 1.4 is that is it no longer a requirement to have a PCI 604 or 1030 Emulator in place for the Poseidon bootup. Until now if there was no PCI/2 mouse plugged in bootup would be delayed by up to 40 seconds, this “lag” has now been removed.
- Several new programs have been introduced to 1.4 including a calculator (with Advanced or Basic setup) and a zoom tool which are a must have. Given the size of some presentations a zoom tool where being able to see exactly what the demonstrator is doing is a necessity. A music player

MorphOS 1.4 superbundle

Sam Byford loads the latest version of MorphOS on to his Pegasos to give us the low-down on the changes and enhancements.

I last issue I gave my review of MorphOS based on version 1.3 and it get a favourable score. In late July version 1.4 was released along with the “Superbundle”, a collection of software made available for free by various companies and individuals. So how does MOS1.4 compare to 1.3? Well, it nudges the entire look and feel of the OS up by several notches but it still remains that it has a long way to go before the outside world would be willing to take it on as a replacement to the dominating mind that is Windows.

Installation of MOS 1.4 could not be any simpler. Once you have downloaded the new ISO, unarchived it (it comes in .tar.gz format) and burnt it to CD you...
JIT Speed

I conducted somespeed tests using ImageEngineer (an image processor currently only available as a 68k version) to see the difference between the static emulation and the JIT emulation (Trance) introduced in MorphOS 1.4. Note, times are shown in minutes and seconds.

<table>
<thead>
<tr>
<th>Program</th>
<th>JIT Static</th>
<th>Visual Border</th>
<th>Scratch</th>
<th>oilpaint</th>
<th>Bleed</th>
<th>Oilpaint (30)</th>
<th>Oilpaint (40)</th>
<th>Oilpaint (50)</th>
<th>Oilpaint (60)</th>
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<td>0:22</td>
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Ironically one of the more important new programs added into MOS 1.4 gets left till last: that is the TaskManager. A rather nifty little program, it shows a constantly updating list of all tasks and programs running on the system. It also displays the CPU usage in a graphical bar at the bottom of the window. Five columns are provided showing the Program ID, its name, priority and the CPU time and usage. By clicking on any panel, it can be closed.

This problem may well affect other programs too as I can not see how only these two would be adversely affected.

Opening the Way for New Bugs

As with any new release a surprisingly large number of new problems are bound to show themselves.

Considering the fact that 1.4 was held back for several weeks in order to squash bugs that the testers reported, it is just how many basic problems are instantly obvious upon release. It just proves that every system is different and not everything can be checked in one go.

The monitor preferences for Brainstorm/Gamma refuse to keep their settings when you close down the Graphical Game; SoftwareTycoon (Business Emulation Game); MorphOS SDK (Official Software Development Kit for MorphOS).

The Superbundle

For many people the Superbundle is a godsend. At the moment there is only a limited amount of programs available in the package but that number is set to grow. The list of available programs as of yet is as follows:

- ProStation Audio Titanium
- Sound/Music Mixer
- MorphED (Text Editor)
- fxPaint Lite (GFX Program)
- fxScan Lite (Scanning Program)
- VHI Studio Lite
- fxScript (GFX Program)
- BirdieShot (Fun Shooting Game)
- Freebie Files (Point and Click Graphical Game)
- Software Tycoon

To get access to the Superbundle you have to register on www.morphos.net and pay for your password which will allow you to access the files via browser or FTP. The Lite versions have certain restrictions such as a time limit after which they come out in the near future.

Although not actually part of the Superbundle I feel that it should be mentioned here. A DVD and movie player newly released by DET Nicolas and available at the downloads section of MorphZone. Able to play near everywhere on MacOS/UNIX/AIXs and MOVS this really is a wonderful program. I did a test using one of my MPEG movies in both Framer and Mplayer:

Framer maxed out at 100% CPU usage while Mplayer cruised along at 48%-50% usage on a G4 (0.7GHz). The higher end G4s or G5s this program will really come into its own. Well done DET Nicolas!

Firstly the release dates and times. The world consists of numerous timezones and saying that the release will be at such and such a time could mean that your time is quite a different one to when they actually mean!

They need to give an EET or whichever zone they intend to use and a specific time. Strange if it may seem some zones are 24 hours off. A day off work just so they could download 1.4 first, were disappointed when it does not come out in the near future.

Then there are the updates. A lot of the bugs reported on the previous list are minor and are reported as being fixed almost immediately. Why then is that fix not distributed via the FTP? We have sold it until the next full update (1.5) is out which usually is 4 or 5 months down the line. The reason given was we can’t afford to do it and of course take this bugfixes under its wings but why should we wait 5 months just to have the calculator work flawlessly when the fix was done 2 days after 1.4 was released?

Lastly, the bandwidth given over to the website/tftp is tiny. The backlogging on downloading the Superbundle and 1.4 update was impressive. We need to keep our bandwidth and please, guys, hassle your ISPs for more bandwidth!

Conclusion

As can be seen, the update from 1.3 to 1.4 is quite a big one with many, many new, much needed features.

New bugs show themselves too, that is the way of things with software and Genesi do not have a bug-hunting for eternity, the same as Microsoft. But they love it, and it is necessary. Sometimes nothing better than to point out what’s wrong and what can be improved. With the introduction of JIT almost everything flies and, as time goes on, more and more of the system becomes PPC native and that much nicer use. The mentioned things in the previous article is that someone writes a new installer program than can handle .4gb and works around old programs that refuse to see that there is actually enough hard drive space for installation.

For version 1.4 Ambient gains a handy panel for launching programs. The right-hand window is an example of MUI’s new gradient options.
Whenever you plan a journey to an unfamiliar destination it’s usually best to plan your route. Wouldn’t it be nice to have some software to do it for you? AmiAtlas is the only route planning software currently available for the Amiga since the demise of GB Route in the early nineties. This software has a graphical map display and is supplied with maps of several European countries including the UK. In this review I will concentrate on the UK map but will also try to give you an idea of what to expect from the other maps.

Installation
AmiAtlas comes packaged in a DVD case with a professionally printed cover and the CD itself is also colour printed. You can run the program from the CD or install it to your hard drive using the standard installer. During installation you select which country maps you would like to install. The program and the UK map need about 10 Mb, but if you want to install all the maps and data provided you will need nearly 600 Mb of disk space. The first time you run AmiAtlas it will load the German map, if you have it installed, if not a file requester opens for you to select one of the maps you have installed (a country file). Within the program you can save this as your default map.

Maps
The AmiAtlas window opens showing a map of the whole country, in our case the UK and Republic of Ireland. At this scale only county borders, motorways and a few cities are shown. Along the top of the window is a toolbar made up of icons for the major functions within the program. These include zoom buttons to magnify the map centred on the middle of the window. The view can then be scrolled using the scroll bars or cursor keys. You can also zoom in by dragging a box over the area you want to examine, as zooming in more detail is revealed, including “B” roads and smaller towns. The UK map does not include street-level mapping of towns and cities. All the roads are shown as straight lines between towns, some motorways are constructed from straight sections to give an approximation of their route. The towns are in the correct positions and the roads linking them are mostly accurate. Unfortunately we did find some major roads missing in our area! While the lack of road detail doesn’t inhibit the route planning ability of AmiAtlas the missing roads are a problem!

Planning a Route
Before you start planning any routes it is a good idea to configure AmiAtlas to suit your preferences. Depending where you live (or drive) you will need to set your preferred currency, distance measurement unit (kilometers or miles), and the speed limit on different types of road. If you want to calculate your journey costs you need to set the fuel consumption of your cars on each road type.

Once AmiAtlas has planned the route it can be displayed on the map. Notice the plain (green) flag at the start town and the chequered flag at the destination.

Along the top of the window you can see the tool bar which gives quick access to many program functions.

Editing
If you want to change your journey then you can select the destination town and, if needed, any towns you wish to pass through on your journey in the same way. Clicking the “calculate” icon opens a window that shows your chosen towns, you can also select the type of route you want to calculate (fastest, shortest, cheapest and pleasant!), the car you wish to use and the start and arrival times. Once you are happy with your selections click on the “calculate” button which opens the route planning window. In this window each stage of the journey is listed with town, road and distance. AmiAtlas also calculates the journey time, overall distance and distance between the three stages. AmiAtlas also calculates time and fuel consumption (based on the information you set in preferences) and fuel costs. All this information can be printed or saved to a text file. On my system with an Epson Stylus Photo 790 and Turboprint 7.2X I found the print output was not properly formatted and therefore unusable! Strangely on Roberts Amithlon system with the same Turboprint version but a HP Deskjet 1120C the printout was fine. I could work around the problem by saving the route and printing it from another program.

Results
We found AmiAtlas to be quite unstable on our Amihlon test system; the program would often hang the computer, usually during a zoom operation. We asked the author about this problem and he responded that other Amihlon users had reported similar issues. AmiAtlas ran flawlessly on our “real” Amiga and, apparently, runs well on UAE so this seems to be a problem within the Amihlon emulation.

We think this software has great potential and offers excellent value for money. It’s not perfect but with the great maps it offers and the possibility of purchasing more we hope that it will continue to improve. Hopefully users will help the developers improve the less detailed maps. Altogether AmiAtlas shows a lot of promise but there are still rough edges to iron out.

Conclusion
The basic route-finding engine at the heart of AmiAtlas works well and is flexible with the different route types, however for UK users the limitations of our map really let it down. It’s hard to trust the route selected when your not confident all the roads are there. Although we can’t judge the quality of the other maps many look much more detailed than the UK one. Hopefully users will help the developers improve the less detailed maps. Altogether AmiAtlas shows a lot of promise but there are still rough edges to iron out.
AmigaOne-XE  

Specifications:
- A Form factor PPC motherboard  
- Four PCI slots, one 2 speed AGA set on 2 buses  
- On board 10/100 Mbps ethernet on rear I/O panel  
- 2 USB connectors on rear I/O panel + 2 more on headers  
- 2 UDMA-66/100 channel (64 devices)  
- UBiQUcam with OS installed in socketed ROM, with non-volatile RAM for key memory storage  
- 32MB Memory, keyboard, PS2 Mouse  
- Dual G4 CPU modules, with dual G4 modules coming soon  
- 2 x SDRAM socketed up to 1 GB main memory  

Availability:
- From your local dealer, see our website or direct from Eyetech  
- Earlybird systems are now shipping, and will be available until the official release date of OS4 is announced. Therefore, OS4 will be a separately chargeable, non-optional item. Please see our website for further details.  

Please note that no technical support on Linux will be available from us, to purchases of Earlybird systems only. Further details can be obtained from Linux vendors at the time of purchase.  

Pricing:
- AmigaOne-XE motherboard with G4/800 1471 (461K, 1256K, 2M, 13)  
- £500 ex VAT (£567.50 inc VAT)  
- £850 ex VAT (£977.50 inc VAT)  

Earlybird offer: Buy now for immediate delivery with LinuxUAE and get OS4 FREE when released.
Hollywood was already an impressive program when I reviewed version 1.0 in issue 14. It fills an important gap in the Amiga's software library; it is the only multimedia program that works properly on a graphics card. An important point is that Hollywood does not have any user interface for designing presentations or multimedia applications — you must write a script with a text editor. Hollywood will then use the script to play a presentation in a Workbench window or on a separate screen. The scripting language is unique to Hollywood and not based on an existing language; however, if you're programmed at all in BASIC or ARexx, you'll soon get the hang of it. The language includes commands to display images or text and to play back sound. There are also functions that enable users to interact with your program, as well as many other features. If you would like a more detailed overview of Hollywood, take a look at my review in issue 14 and tutorial in issue 15. In this review I will cover the major changes in version 1.5.

Hollywood's GUI has been re-vamped and now uses MUI. As before the GU is used to configure the program and play scripts.

### New GUI

Hollywood does have a user interface, but it is only used for running and compiling scripts and making some settings, not for generating the script itself. For version 1.5 the interface has been completely revamped and now uses MUI. If you don't want to use MUI, you can run Hollywood from the command line. The new GUI has a settings window that gives you control over how a script will play. You can choose for the script to run on Workbench or on its own screen in a user-defined resolution. If the script runs on Workbench its window can be normal or borderless. Sound options enable the overall volume to be adjusted or for sound to be disabled altogether. The final set of options can tailor the speed of playback on your system. On slower systems you can set all CPU-intensive effects to be precalculated so that they are displayed more smoothly. At the other end of the scale, if you find that a script plays too fast on your system, you can limit the playback speed to a specified number of frames per second. Both of these options were available before, but only to the script author; now the user can modify them to suit his or her system.

The main Hollywood program is commercial software and therefore cannot be distributed. However, you can share your work, you can compile it or share it with a native Morphpexecutable on a 68k Amiga and vice versa. There is also a stand-alone settings tool that can be distributed with compiled scripts, enabling users to change the graphics, sound, and speed settings without needing a full copy of Hollywood on hand.

### Laying the Foundations

Probably the biggest and most complex feature added to Hollywood 1.5 is its layers system. If you enable layers in your script using the "EnableLayers()" function, every new object (such as an image brush, piece of text or animation) created will have its own layer, independent of all other objects. Unlike in some graphics programs, a Hollywood layer can only contain one object — you can't add several objects to a layer and manipulate them together. In version 1.0 if an object was placed over another object and then moved, the lower object would be replaced with the background, which doesn't happen with layers enabled.

The size of the script display is defined by its background image or background parameters. Each background can have its own set of layers. Hollywood remembers each set of layers even when a background is not visible. This means that you can set up a complex display using several objects on one background, and then move to another display with a different background, and then back to the first display, and all the layers will still be in place. Through the use of layers, objects can be placed outside the viewable area. This feature can be used to set up a display consisting of a number of objects and then have them all appear in one step rather than individually. Using the "DoMove()" method, it is possible to add layers to a background that is not contained in the script, enabling a new display to be prepared while another is being shown.

### Layer Features

Once you have a number of layers, you can use Hollywood's layer functions to manipulate the layers and their associated objects. All these commands can be used on a single layer without affecting any of the others. Layers can be moved to a new position inside or outside the display. Layers have to be moved using Hollywood 1.5's new "DoMove()" method, which I'll discuss later. If you find it necessary, you can move several layers (and, therefore, objects) together so that it looks like they are grouped to form a single object. You can also change the order in which a layer is displayed. For example, moving a layer down in the stack would make other objects appear in front of it and vice versa. Layers can be hidden at any time and then shown again without recreating their objects. When you have finished with a layer, you can remove it to free up memory; there is also a command to free all layers.

Like many other objects in Hollywood, layers are assigned numbers; you can't give them names that are easier to remember and therefore make the script more readable. The layer numbers always reflect the order of the layers, starting with layer 1 at the bottom (closest to the background). If you move a layer in the stack, the layers will be renumbered to take into account their new positions. With a complex script with lots of layers, you can see this getting confusing because you’d have to keep track of the order of each layer’s contents. In a future version of Hollywood, I’d like to see the facility to refer to all objects by user-defined names.

Other layer functions make the system even more powerful and enable some special effects to be generated. Layers can have a transparency set so the background and any objects below can show through the object. Hollywood's layer functions to manipulate the layers and their associated objects. All these commands can be used on a single layer without affecting any of the others. Layers can be moved to a new position inside or outside the display. Layers have to be moved using Hollywood 1.5's new "DoMove()" method, which I’ll discuss later. If you find it necessary, you can move several layers (and, therefore, objects) together so that it looks like they are grouped to form a single object. You can also change the order in which a layer is displayed. For example, moving a layer down in the stack would make other objects appear in front of it and vice versa. Layers can be hidden at any time and then shown again without recreating their objects. When you have finished with a layer, you can remove it to free up memory; there is also a command to free all layers.

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### Get Moving

In version 1.0, Hollywood had a simple but limited system for moving objects within the display. You could specify a start point, a finish point, and the movement speed. Then Hollywood would move the object smoothly between the points. This is easy to do, but only one object can be moved at a time, and no other effects can be applied to the object while it moves. Although you can still use the old method in 1.5, there is much more powerful system has been added with the "DoMove()" function.

With DoMove you can add a number of move commands to what's called the "move" function. The aquarium example script shows off the new animation and layer features. Each fish moves simultaneously and independently from the others.
The Algor is E3B’s followup to their successful Highway USB card. Like the Highway card, it is a Zorro II card that allows Amiga users to take advantage of a wide array of USB hardware devices, such as scanners, printers, digital cameras, webcams, and storage devices. Unlike the Highway, it has only three built-in USB ports instead of four, but it has a slightly faster USB chipset and an onboard 512Kb flash ROM.

The Algor allows you to use both USB1.1 and 2.0 devices, although it doesn’t support the high-speed mode of USB2.0. Software support is provided by Chris Hodges’ excellent Poseidon stack. Poseidon has been covered in detail in previous issues of Total Amiga, so I won’t go into too much detail there. Suffice to say, Poseidon is simple to install with the provided installer script, and provides support for USB mass storage devices, mice, keyboards, and backplates providing the 3 USB ports, a very high quality printed manual, a leaflet explaining how to install the Algor, and a registration card.

The Algor is not shipped with any disks. This is because the onboard flash ROM contains all the software you need to get the card running. Once your Algor boots with the card attached, a disk appears on workbench that you can copy to a real floppy for backup purposes.

The first thing I tried with my newly installed Algor was a USB2.0 128Mb memory stick. For comparison I also tried it on Windows 98, and Windows 2000. With the Algor, I simply plugged in the drive and it icon instantly appeared on the workbench. Windows 2000 detected the drive immediately, and then had to spend a minute or two configuring drivers before the disk became available, and with Windows 98, it failed to find any drivers, and I had to download some from the manufacturers website, so all in all the Algor was a lot easier and keester to get working with the memory stick.

The Algor requires report speeds of up to 500Kb/s when accessing a LaCie card reader, however with my USB memory stick, copying an MP3 from RAM achieved only 500Kb/s, so your mileage may vary depending on the device used. The second device I used with the Algor was a Fujifinepix flash ROMs in mind. This allows you to download the stack with your preferences to the Algor, and use USB keyboards, mice and mass storage devices available from different manufacturers, from RDB partitioned USB disks, or use a USB mouse in the early boot menu. Unfortunately I didn’t have an RDB partitioned USB disk or USB input device to test this with.

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The Algor also features a flash ROM for quicker loading of OS-resident modules. Version 1.5 adds to Hollywood’s already extensive range of example scripts. The existing examples have been adjusted to be 1.5-compatible and to take advantage of the new features. Many of the examples are very impressive and should complete with a bit of thought. Some of my favourite are "Aquarium," which has several randomly moving fish really showing off the DoMove system; "Lens," which maps mouse movement to a magnified image; and "WBSwatch," which demonstrates a non-rectangular window.

Pump up the Volume

Hollywood is the first and so far only Amiga presentation program to really support more recent Amiga hardware such as graphics cards. It’s nice to see that version 1.5 extends this support to sound cards too.

All sound, including playback of samples and music modules, is now passed through AHI, so it should work with any sound card that has an AHI driver. In version 1.5, support for some music module formats has been dropped; modules must now be in the ProTracker format. Hollywood now has a master volume control that enables the user to adjust the volume independent of the script being played.

Leading by Example

Version 1.5 adds to Hollywood’s already extensive range of example scripts. The existing examples have been adjusted to be 1.5-compatible and to take advantage of the new features. Many of the examples are very impressive and should complete with a bit of thought. Some of my favourite are “Aquarium,” which has several randomly moving fish really showing off the DoMove system; “Lens,” which maps mouse movement to a magnified image; and “WBSwatch,” which demonstrates a non-rectangular window.

Conclusion

If Hollywood 1.0 put you off because it was script-based, then 1.5 isn’t going to do anything to change your mind. If anything, some of the new features are more complex to script. However, if you already have 1.0 or are willing to put some effort into learning its language, the new features do add a great deal of flexibility to Hollywood. It is getting to the point where you could program quite complex multimedia-oriented Hollywood scripts. I would say the scale of the improvements easily justifies the modestly priced upgrade.

The Algor is shipped with 2 backplates providing the 3 USB ports, a very high quality printed manual, a leaflet explaining how to install the Algor, and a registration card. The Algor is not shipped with any disks. This is because the onboard flash ROM contains all the software you need to get the card running. Once your Algor boots with the card attached, a disk appears on workbench that you can copy to a real floppy for backup purposes.

I had a little bit of trouble installing the Algor in my Amiga 4000; with the card installed the Amiga would just display a blue screen and refuse to boot. In my Am500, the card worked first time, and showed a cool "Algor" icon with scrolling starfield and sound coming from the computer. It seems the A4000 problem was to do with an incompatibility with this intro, but a couple of e-mails to E3B later and the problem was solved. Hopefully this problem has since been sorted out by E3B, but if you have any problems they are very quick to respond to e-mails, and very helpful.

The flash ROM is managed by a piece of software called "Luciferin," which is named after a chemical substrate, and not the devil, according to the guide. Luciferin allows you to wipe the flash ROM, and put boot modules into it. The software is fairly straightforward, and with a couple of minutes I’d removed the driver disk, and intro modules, and downloaded my OS8 and blizkick modules. My computer now boots directly into a blizkick module enhanced OS3.9 without ANY reboots at all from cold! Poseidon stores its preferences in an executable file called "PsdStackLoader," which may seem an odd thing to do, but it is because it has always been designed with
When I last reviewed Perfect Paint (Total Amiga issue 10), it was at version 2.8, so you might be asking, “Why another review?” However, since the last review, Georges Halvadjian has made no fewer than nine upgrades/releases, many of which contain major feature enhancements. In fact, many of PerfectPaint’s point releases would have been considered a major upgrade to some programs on not only the Amiga but also other platforms.

As this is a review of the upgraded version, I won’t dive into too much detail about the basics of PerfectPaint. If you’re new to the program, why not take a look at my original review in issue 10 (which is still available as a back issue by the way)? If PerfectPaint started life as a freeware paint program in the mould of Deluxe Paint and Personal Paint. Over the years, many tools to help the less artistically inclined, including automatic text effects and “Alchemy,” which applies combinations of image processing operators to achieve certain effects. Later you’ll see that the range of “automatic” tools has been expanded since the last review.

**Magic Spray**

For those of us who don’t have an artistic bent, it is great to come across a tool that creates an impressive effect with little or no effort. With Magic Spray you can paint on a variety of brushes following a particular theme so, for example, your canvass could quickly be covered in bright flowers, iridescent bubbles, or realistic rocks. Magic Spray can use up to ten different brushes and numerous randomised parameters to give a unique look each time it is used. Because you spray on the effect, you can cover only certain areas of an image, making it great for borders around photos and the like.

In the Magic Spray preferences window, various parameters can be set that will be varied as each brush is sprayed on to your image. The size and rotation of each brush can vary as can each colour channel (RGB), the brightness, and the colour intensity. Each parameter has a check box that defines whether it will be changed and two sliders that define the range. For example, you could set the size to vary from 50% to 125% of the original. By default, each parameter will be moved gradually as you paint, so in this example the first brush painted would be at 50% and the size would gradually increase. For a more varied effect, you can also set a random option for each parameter, this picks a setting at random within the range you define with the sliders. The rotation parameter has an option to vary with the movement on the “Y” axis that has the effect of the brush orientation following your mouse movements. When you spray on, Magic Spray takes into account any transparent areas of the brush, and it is also possible to vary the overall transparency, although this is not a per-parameter feature. There is also a shadow option that adds a user-definable shadow to each brush as it is sprayed on.

The Magic Spray feature uses Magic Projects so you can easily load and save different styles. Each project consists of two files: a project that holds the Magic Spray settings, and a Magic Album that contains the brushes used. Several projects can use the same album of brushes, allowing you to save different settings for different looks. The Magic Spray tool itself uses a variable so the manipulated brush is varied as you paint. Creating your own album is also easy: just cut each brush from an image into one of PerfectPaint’s brush buffers, then save as a Magic Album.

If you don’t want to spend time making your own Magic Project with multiple brushes, you may still look up “your canvas could quickly be covered in bright flowers, iridescent bubbles, or realistic rocks.” 

**Making It Easier**

Perfect Paint has several features designed to help make more complex effects easier to achieve. These features are common in graphics packages on other platforms but not as common on the Amiga. While it’s great to have powerful tools that give you full creative freedom, sometimes you just need some fancy text or a nice image processing effect. In those cases, automated tools are very handy. New since our last review are the border tool and an HTML catalogue generator. The border tool, as the name suggests, will place a defined border of any shape and size around an image. The borders are of a single colour and can use the current

**Katalysator**

Katalysator creates thumbnail galleries of all the images in a selected directory. Here, the end result is shown in IBrowse. The preferences window and HTML templates control the look of the resulting pages. For those of you who don’t have an artistic bent, it is great to come across a tool that creates an impressive effect with little or no effort. With Magic Spray you can paint on a variety of brushes following a particular theme so, for example, your canvass could quickly be covered in bright flowers, iridescent bubbles, or realistic rocks. Magic Spray can use up to ten different brushes and numerous randomised parameters to give a unique look each time it is used. Because you spray on the effect, you can cover only certain areas of an image, making it great for borders around photos and the like.

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If you don’t want to spend time making your own Magic Project with multiple brushes, you may still look up “...sometimes you just need some fancy text or a nice image processing effect.” You find on the Internet without mucking about and without installing any additional software. PerfectPaint implements TrueType support using Grzegorz Kraszewski’s tenure/g library. Apart from availability, another advantage of using TrueType fonts is that Perfect Paint antialiases them beautifully, giving excellent quality at both small and large sizes. You can select fonts from any directory, and Perfect Paint keeps a list of the last ten directories you chose for easy access. Another new feature in the “Make Text” window is the “Select Character” button, which opens a window that shows all the characters in the selected font for quick selection of unusual characters. Two new text effects have been added to Perfect Paint’s already wide range: “Water” and “River.” As you can probably guess from the names, both give your string a liquid look.

**New Effects and Density Mapping**

The recent upgrades have added only a few new image processing effects to Perfect Paint’s armory, including “Simple Mosaic” and “TV Interfering.” This is a little like the oilpaint effect you see in many packages but is more muckery and without installing any additional software. PerfectPaint implements TrueType support using Grzegorz Kraszewski’s tenure/g library. Apart from availability, another advantage of using TrueType fonts is that Perfect Paint antialiases them beautifully, giving excellent quality at both small and large sizes. You can select fonts from any directory, and Perfect Paint keeps a list of the last ten directories you chose for easy access. Another new feature in the “Make Text” window is the “Select Character” button, which opens a window that shows all the characters in the selected font for quick selection of unusual characters. Two new text effects have been added to Perfect Paint’s already wide range: “Water” and “River.” As you can probably guess from the names, both give your string a liquid look.

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The density mapping window can be used to create subtle composites and effects without complex masking.
For all those people using some form of RTG display, NewMode is included to allow the promotion of the Mas-Player software to an RTG screen. Remember that the MAS-Player uses an overscan screen, so won't fit into many of the lower resolutions.

I would also suggest that SFS is between Perfect Paint sessions so you can quickly load images you were working on earlier. Perfect Paint can now show a ruler on the top and left sides of the image window calibrated in centimetres, pixels or inches. The measurements in centimetres and inches are based on the output resolution that can easily be adjusted. If you intend an image for print, this can help you visualise the final output.

Many of Perfect Paint’s more complex requestors now have an information (“i”) button. This button brings up a requester with a short summary of the requester’s function as well as some tips on usage. Again, Perfect Paint has many “hidden” features, so it is well worth taking a look at the requesters when they are available. For example, the info window for the image palette (at the bottom of the screen) informs you that if you hold down the shift key, image icons can be dragged and dropped to perform various operations.

The improved “Make Text” window showing an anti-aliased TrueType font. Perfect Paint remembers recently used fonts for easy selection. This window also demonstrates some of the GUI improvements included in the new version.

Interface improvements

Perfect Paint’s main downfall, in my opinion, is its non-standard and rather confusing interface. It is often hard to find out exactly what controls are available. Even when you know a feature exists, it may be hidden in a cryptic menu accessed by right-clicking on an icon. Although the fundamental interface concept has not changed in any recent releases, a number of features have been added that make Perfect Paint much more pleasant to use.

The new undo/redo window lists each action you take as you modify an image. This action could be drawing, applying an effect, or running an Affex script. At any point you can click on a step and Perfect Paint will instantly restore the image to the state it was in after that action. If you don’t perform another action, you can redo all your last steps simply by clicking the last action.

You’ve undeniably added some steps in your preferences limits the number of actions you can undo/redo in this way. The history window holds a list of recently loaded images so you can quickly load a recently used image without searching for it in a file requester. This window is a godsend if you’re working on a project consisting of several large images. It can also help to save memory because you don’t need to keep several images open to have them on hand.

Buttons in the history window show the images as thumbnails and remove images from the list that no longer exist on disk.

The history list is saved between Perfect Paint sessions so you can quickly load images you were working on earlier.

Conclusion

Perfect Paint has an excellent range of features, most of which are very well implemented. Magic Spray is fantastic, great fun to play with, and genuinely useful too. The many other new features in the recent releases are also very welcome, giving more features to play with and, importantly, improving the user experience. Perfect Paint is so powerful and regularly upgraded that it is hard to believe that the program is free and largely developed by one coder.

Download it now and spend a little time getting to grips with the interface – you’ll be glad you did.

Layerless

The big difference between Perfect Paint and the Amiga’s commercial image processing programs is its lack of layers support. While you can achieve many complex effects in Perfect Paint, its lack of layers means you can’t go back and alter one part of a composition without undoing (made easier by the new undo/redo window) and then redoing a lot of work. However, I find Perfect Paint ideal for simpler jobs, for example, if you want to create a quick card or flyer, its automated features such as text effects and borders make achieving an attractive result a breeze.

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Perfect Paint has an excellent range of features, most of which are very well implemented. Magic Spray is fantastic, great fun to play with, and genuinely useful too. The many other new features in the recent releases are also very welcome, giving more features to play with and, importantly, improving the user experience. Perfect Paint is so powerful and regularly upgraded that it is hard to believe that the program is free and largely developed by one coder.

Download it now and spend a little time getting to grips with the interface – you’ll be glad you did.

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Download it now and spend a little time getting to grips with the interface – you’ll be glad you did.
GummiSurf makes downloading whole sets of files, like these images, easy.

By Robert Williams

With the parameters set, a list of files to download can be generated in a number of ways. GummiSurf can send the list to the excellent shareware download manager Charon, reviewed in Total Amiga issue 11), provided it is running. In this case, the required files are added automatically to Charon's download list. You can then download the list of downloads to a file in one of three formats: a list to be loaded into Charon, an HTML list that can be viewed in any browser, or a plain text file. GummiSurf can add the downloads directly into the browser's download queue. Browse and Voyager do not support the setting of the download directory via ARexx, so that feature only works with AWeb and Charon. If you don't want to start downloading straight away, GummiSurf can save the list of downloads to a file in one of three formats: a list to be loaded into Charon, an HTML list that can be viewed in any browser, or a plain text file. GummiSurf is useful as it is, but a big improvement would be to allow it to pick up the URL from a browse window and automatically parse the URL working out the series number and number of digits. The author plans improvements along these lines for a future version.

In the mean time I have written an ARexx script that runs from a browser; it then runs GummiSurf with the appropriate parameters. I will make the script available for download from the issue 16 page of the Total Amiga site.

Tiny Invaders

The little PD game has got to be the most amusing I've ever found, a miniature version of the classic game of Space Invaders; the aim, as usual, to clear the skies of the horrible little beings trying to conquer Earth's skies. When you double click on the icon Tiny Invaders boldly appears prepared to take you where we've never been before! The title screen displays your hi-score and in order to reach the game all you have to do is press space. You are in control of the green "blob" at the bottom of the screen and move by use of the left and right cursor keys and shoot by pressing the space bar. The red bunnies provide shelter but are slowly destroyed by the aliens who are only too pleased to return fire at will (poor guy!). Once the aliens reach the bottom of the aliens but then another wave arrives and it all starts again. The game only ends when you loose all of your lives or the aliens reach the bottom. The sound effects are authentic to the arcade game but are somewhere annoying so you may wish to turn off your speakers. Overall, I'd say this game was good fun for the arcade addict!

By Jonathan Haddock

Review

Tiny Invaders

Developer: Peter Gordon License: Freeware From: http://www.petergordon.org.uk
Reqirements: MUI 3.8, Download utility: Charon, IBrowse, Voyager or AWeb

Welcome to the world of Tiny Invaders, a two-dimensional version of the classic Space Invaders game, but with a twist! In this game, you control a small green character, known as the "blob," which can move horizontally and fire bullets. The objective is to destroy all the aliens before they reach the bottom of the screen. The game features simple controls, engaging sound effects, and a novel twist on the classic Space Invaders gameplay. With its addictive nature and fun graphics, Tiny Invaders is a must-try for any fan of the original arcade classic.

Key Features:
- Simple controls: Use the left and right arrow keys to move the "blob" horizontally, and the space bar to fire bullets.
- Multi-level gameplay: The game offers a variety of levels with increasing difficulty.
- Alien invasion: Destroy all the aliens before they reach the bottom of the screen.
- Sound effects: The game includes authentic sound effects that add to the immersion.
- Adorable graphics: The game features cute graphics that are appealing to a wide audience.

The gameplay is straightforward yet challenging enough to keep players engaged. The sound effects add to the atmosphere, making the game enjoyable to play. Overall, Tiny Invaders is a fun and addictive game that pays homage to the classic Space Invaders while offering a fresh take on the genre. It's a great choice for players looking for a casual yet engaging gaming experience.
A TV card is a piece of hardware capable of receiving and showing (with the use of TV Software) TV channels. The TV card I am using is the WinTV Go made by Hauppauge. This is a PCI card that is compatible with the Mediator 1200 (and in theory all other Mediator models but I haven’t tested it on them). Using the TV card you can watch TV on your Amiga or connect other devices (video players, DVD players etc.) via the RF (aerial) or composite (phono) connections.

The inputs on the back of my card are minimal, RF (for the aerial) and composite for any devices equipped with a suitable output (most these days). There is also a sound out 3.5mm jack which is plugged into my SoundBlaster and provides the sound for the TV programme you are viewing. Some TV cards also come with a radio tuner such as the more expensive WinTV Primio FM card.

What programs use the TV card?
The only programs that I have come across are TV which is made by Elbox and SuperTV which is still being developed by Peter Gordon. Both packages allow for the use of my card and support the RF and composite inputs which are both of importance to me as I wish to be able to watch TV and view the output from my CDTV which I connect to the composite input.

TV is the software Elbox supply to control the TV card and can be launched from the provided channel icons or by command line parameters, something that is a bit long winded in my opinion! To configure TV you must first alter (or copy and alter) one of the standard channel icons. Altering them is easy and can be done with a text editor, as explained below.

First chose an icon (I have chosen CH1) and rename it to something more appropriate (e.g. BBC1); bring up a text editor (for example Editpad) and open the file for editing (in Editpad you can just use drag and drop to open the file). You need to add the relevant switch (such as:

- PLL: This is the number for the channel.
- Contrast: The contrast setting, I use 100.
- Bright: The brightness setting, I use about 160.
- video_src: the input on your card. On mine 0 is RF and 3 is composite.

So for my area, to view BBC1 I use the following parameters:

```
c:tv
pll=13307
video_src=0
bright=164
contrast=101
```

SuperTV provides a nice GUI for setting up and viewing TV and this is a very useful utility as I hated having to double click on a different icon for every channel (as you have to for the Elbox program). SuperTV is launched from the Workbench and presents you with a window (40-100%) on any public screen you like (that is available at the time) and first displays the last channel you were viewing. Set up is easy, especially if you know the channel number for each station in your area, and is performed by use of the GUI.

Channels are setup by clicking “add” and by providing SuperTV with the relevant information for that channel (Name, PLL number, input source, format). The input source for the picture corresponds to the input on the back of the card, in my case 0 being aerial (RF) and 3 being my composite in. Once you have setup the channels in SuperTV, double clicking them in the prefs window displays them (and their properties). Once the picture is up you can, however, press a number on your keyboard to choose a channel and this saves having to open thePrefs program again. The viewing area can be resized using the resize gadget but does not resize proportionally so I would advise use of the Size gadget in the GUI.

Conclusion

I would highly recommend this card but if you have more money then you could buy the TV/FM tuner version or the TV/FM tuner version with remote which Sam Byford tells me works with the Amiga. On the software side both programs can display from every input on my card and at my local Amiga club (AmiSEK) we found that the card and the software worked faultlessly on my setup. I prefer SuperTV as it is much easier to configure and has ARexx support; however, as TV is supplied with the Elbox Mediator multimedia CD needed to use the card and SuperTV is free you give them both a spin!

Mediator TV Card

Mediator PCI bus board and multimedia CD.

TV Card

www.hauppauge.com

SuperTV

By Peter Gordon

Freeware

www.petergordon.org.uk

WinTV Go

Reviews

Johnathan Haddock gets a TV card for his Mediator and finds an alternative to the Elbox software.

With SuperTV you can configure your channels using this easy GUI interface. It also includes ARexx support.

Mediator TV Card requires Mediator PCI bus board and multimedia CD.

Mediator www.elbox.com

TV card requires Mediator PCI bus board and multimedia CD.

TV Card www.hauppauge.com

SuperTV By Peter Gordon Freeware www.petergordon.org.uk

In association with Eyetech

www.amigaworld.net

Amiga World is a website and IRC chatroom dedicated to delivering the latest news and a place for discussion.

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Amiga World Staff will carefully monitor the comments posted on the website so that any undesirable elements attempting to start a flame war or cause an offence are firmly dealt with. This will ensure that ordinary decent users and developers can feel free to participate without having to worry about being insulted by undesirable others.
**Scumm?**

Scumm is the name of the scripting engine that Lucas Arts used for most of their adventure games. It stands for ‘Script the Unimaginable: Munificent Creation Creation Utility’. It was originally created in 1987 for the use in that game and its sequel, The Secret of Monkey Island. Over the years it advanced into more mature versions and was used in more modern games like Monkey Island 3.

ScummVM is a virtual machine, capable of running most of the games created with Scumm. It was started about two years ago as an open source project to revive classic adventure games on modern hardware. Since it is released under GPL, Amiga users can benefit from the great work of the ScummVM Team.

Since ScummVM has been in development for quite some time now, it has evolved into a very usable, stable and compatible Virtual Machine.

The built-in GUI lets you configure each game. Ports rely on its source code and therefore are updated at a later time. You can download the latest version for your system on the ScummVM Page at sebelinteractive.de.

### Getting Started

To try out ScummVM you need some data files and demos. If you have none of the supported games at hand, you can download some demos from the official ScummVM Website.

Some of the supported games are also cheaply available at certain PC dealers. For example the collection ‘10 Adventures’, consisting of Monkey Island 1-2, SCUMM and a few others, is just fine with ScummVM and is available for little money on eBay every now and then.

Unfortunately, there is one game that can’t be purchased. The 256 colours version of Zak McKracken was only released for a Japanese console called FMtowns, to the best of my knowledge it never made it to the PC market. To get these data files you might need to use for example a P2P Client like Kazaa on Windows.

There are different ways to get ScummVM up and running. After unpacking your favourite port you can simply start it in a shell and use the provided GUI to add the games you have on your hard drive to the list. You can then select some options for each game, i.e. if it should open in full-screen or as a Workbench window. Unfortunately, the GUI seems to have problems with directories that include lots of files, so if you’re unlucky, choosing the paths to the games might not work for you. But there is always the second possibility, running ScummVM directly from shell. All you need to specify is the name of the game you want to add to your list. If you’re unsure about the name, invoke ScummVM with the argument ‘-z’ and if you give it a list of currently supported games. A call of ScummVM to start Indiana Jones from the command line could look like this:

```
$ scummvm -z DATAPATH=/Games/Indy4/
```

### Tooltips

The following hot-keys are also handy: Shift-[0-9] quick-saves the game in slot 0-9, and if you give a list of currently supported games. A call of ScummVM to start Indiana Jones from the command line could look like this:

```
$ scummvm -z DATAPATH=/Games/Indy4/
```

```
      1) The MorphOS port of ScummVM playing “Indiana Jones and the Last Crusade” on the Ambient desktop.
```

### Mode

The GUI supports all important hot-keys and Command Line options you might want to read the provided PDF manual.

### How’s it looking?

Once everything is set up, you can start ScummVM and enjoy it. If you are experiencing speed problems however, you might need to deactivate the anti-aliasing. Since most of the original Adventures were played in resolutions of around 320x240, the graphics look rather blocky on big screens. That’s why ScummVM has an option to scale it to 640x480 and interpolate the missing pixels. This looks pretty good, but unfortunately it takes up a lot of GPU power on slower machines. Because of this, there are different scalers available, to give best performance on every machine. You can select the different scalers by pressing Alt-1, or if you have unchangeable 1x1 pixel size display, and 4 gives you the best possible anti-aliasing algorithm.

The following hot-keys are also handy: Shift-[0-9] quick-saves the game in slot 0-9, Ctrl-[0-9] quick-loads the game in slot 0-9, Space pauses the game, F5 pops up the save game requester and Alt-Return toggles between window and full-screen mode. For more information on the hot-keys and Command Line options you might want to read the provided PDF manual.

### Tales of Tamar

Tales of Tamar is a turn-based strategy game which is played on-line via Email (although the workings are hidden by a beautiful hand-drawn interface). For full details take a look at Sam’s review in Total Amiga issue 13 or visit our game’s web site at www.tamar.net.

#### Autumn 2003

In the final part of this series Sam Byford starts producing some luxury goods.

#### Introduction

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#### Reviews

Markus Castro finds a great way to relive classic adventure games on AmigaOS and MorphOS.

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#### T Tales of Tamar

In the final part of this series Sam Byford starts producing some luxury goods.
Support box at the bottom of the screen type in how many units you wish to give the people next season. If I had 500 units in storage and they wanted 250 units then I could give them 250 which would keep them content or I could give them anywhere up to 500 making them very happy indeed (you are giving more than they requested). You need to check this screen every turn as the allocated amount will be given every turn until you either run out or you set a LG back to zero.

Your people will want more of one type of LG than another (depending on different factors). If you are smart you will buy plenty of stock of all items because the people luxuries will boost confidence and popularity, therefore giving them twice as many units of an item they do not want too many of makes more sense both financially and economically. For example: my people need furs as winters are harsh but they care little for gems or myrrh. Fur traders are hard to find, and expensive but gems are plentiful and cheap. If I needed a confidence boost I could give my people twice the amount of gems that they request and at little cost. They still need fur but at some point in the future the price will drop and I can buy as many units of fur as I need.

Luxury goods have been introduced slowly and carefully, currently they do not have as big an impact on events as they will later as there are not many products that are required. Confidence modification is set low and luxuries are not needed as often but when the

modifications are properly introduced confidence levels will raise and fall much more dramatically and LGs will have more effect. Small land owners need to decide whether to stay small and produce luxuries, or try to grow bigger but lose the ability to make luxuries.

Producing the goods

If you are small enough to make LGs (you must have only one town to start making LGs though once started you can have more) you will be presented with a Bardstale with a story therein. A wanderer offers you knowledge of how to produce a LG (only one), you then have to choose which luxury you wish to produce. Choose wisely as the only way to change that item is to expand to such an extent that you can no longer produce that LG, then shrink again and hope to get the Bardstale a second time. Each LG requires different raw materials, most are fairly obvious as to which are needed (ivory requires lots of animal resources) so choose based on your lands production levels. In the Trade Registry screen the top section shows the amount of raw materials you have. To produce weapons and armour instead of keeping the raw materials set the tick-box on the right, labeled Raw Materials, to a cross. All resources will go to the blacksmiths and used by him.

The price figure in the target/price column tells you how much it will cost to buy a unit of the luxury once it is made and you should charge this to. You buy the luxury as you would weapons, from the market screen (left hand box). Each luxury you have in storage appears in the Trade List the same as all other items so can be sold as with all other goods. Note that the type of land you own will determine what resources you produce. On the map screen turn on raw materials to show three bars for every land hex you own. You want to have as much land producing the raw material you require as possible. You can of course buy raw materials on the open market, at a price, and usually that price is high!

So, whether you produce or buy luxuries they will soon become a way of life and a necessary part of life on Tamar. Make choices wisely and your people will become very content, choose badly and you might lose your Lordship faster than you can say “overthrown”.

That brings to a conclusion my tutorials on Tamar, I know that there are people out there who have not read the first few articles I wrote so I am still available via email, IRC or the ToT forums. Any help in the future then I am still available via email, IRC or the ToT forums. Enjoy yourselves and prosper!

Yours in the Tales,
Baron Deverry (Knight of the Round Table)

Make sure you choose wisely which luxury good you will produce! While making your choice you can admire the beautiful graphics. 

If you don't see what you want, just ask! Our range is always growing!
Setting the Black and White Points

Any device that captures images has a range of sensitivity called the dynamic range, this stretches from the darkest colour it can discern from black to the brightest colour that is not white. In a 24bit-colour system there are 256 steps between these two points in each colour component. Usually the device has some method to ensure that the image being captured falls within the dynamic range. If we take the example of a digital camera (or any camera for that matter) a short exposure on a bright subject whereas a darker subject would need a large aperture and a longer exposure. However good these systems the resulting image often does not completely fill the dynamic range.

To use a real world example if you take a photo on a bright day the darkest colour in the image may be lighter than black leading to a washed out look. On the other hand a dull day the slightest colour might be darker that white giving a dull greyed result.

To correct this problem many graphics programs allow you to alter the black and white points of an image. With this feature you can make the darkest colour in the image white and the darkest black.

Try again with less aggressive settings.

In some cases you may find it’s worth cutting off some tones to get more contrast on the subject of the image. Remember the aim is to get a pleasing image, there are no hard and fast rules.

When you acquire an image, for example using a digital camera, scanner or frame grabber there are often a number of steps you can take to improve the result of images. Sometimes the content of the image needs editing and sometimes the quality of the image isn’t up to scratch. In these cases it’s always possible to resolute a bad image you can often make big improvements. On the other hand, if you have an already good image, some adjustments may be able to make it even better.

In this tutorial I’m going to cover a technique for improving the contrast of images. The main tutorial will cover ImageFX, but at the end of each section I’ll explain how similar results can be achieved in other image processing packages including the freeware Perfect Paint.

Try with the white point since we have plenty of black in our image. Click on the white point marker and drag it to the left so its left edge is level with the edge of the graph data. Click “Okay” and ImageFX will process the colours in the image based on the new dynamic range. The end result should be a brighter image with much more contrast.

If you now open the “Filters/Histogram Equalization” window again. You should find that the graph fills almost the whole dynamic range, proving the job has been done.

The interesting fact is that the end result is much more like the real scene. My eyes were able to pick out much more detail. With normal brightness all the tones in the image are made brighter or darker using a single slider in the “Contrast” control. However good these systems the resulting image often does not completely fill the dynamic range.

To use a real world example if you take a photo on a bright day the darkest colour in the image may be lighter than black leading to a washed out look. On the other hand a dull day the slightest colour might be darker that white giving a dull greyed result.

To correct this problem many graphics programs allow you to alter the black and white points of an image. With this feature you can make the darkest colour in the image white and the darkest black.
Let’s see what applying that effect to the whole image would do. Click “Undo” in the toolbox to get the image back to its original state and change the selection to the whole image. If you can still see the join or it’s not in quite the right place simply “Swap” back to the alpha channel and re-draw your gradient box. If necessary you can also draw on more white or black too. Doing this it’s easy to see how flexible the alpha channel system is. If you have an image where an odd shaped area needs to be processed rather than the neat half-and-half scenario of this example you can use any of ImageFX’s other drawing tools to select the area on the alpha channel.

When you’re happy with the result you can of course save the image. To save the image with layers intact for future editing simply click the “Save” button and select “IFF24” from the list of image formats. If you want to save the image for use in another image program, on a web site etc. then you need to flatten the layers first. To do this just choose “Flatten Layers” from the “Layer” palette pop-up menu. With that complete you can save as a standard image format such as a JPEG or an IFF24.

Other Applications

Perfect Paint - While Perfect Paint doesn’t have layers you can use its masking feature to effect just part of an image, the density mapping option can create the smooth transition for you too. To access this feature, right click on the mask icon and choose “Density Mapping” from the pop-up menu. Select or make up a suitable density map and then click “OK”. Notice that the area that will now be effected by the processing is shown in the image bar at the bottom of the screen. Now you can apply the “Adjust Levels” effect to just the area you want.

Photogenius $ - Simply paint on the effect you require using any of the paint tools in Photogenius’ painting tools. A soft airbrush could be used to create a seamless transition.

ArtEffect - Use a method similar to that described for ImageFX creating a separate layer for the unprocessed portion of the image (the sky in this case). Reveal the layer below using the “Erase” tool. To see the alpha channel click on the “Tools” button in the toolbox, then choose “Alpha” from the “Alpha” palette again to turn off the light table and then click “Swap” also in the “Alpha” palette. You should see the detailed bright sky married fairly seamlessly with the significantly enhanced figures.

Conclusion

That’s all for this issue. Using those simple methods (which are a lot harder to describe than to do) I think almost all photos and scans can be improved to some degree especially if, like me, you’re not a professional photographer. I have plans for a second part of this tutorial for the next issue where I’ll cover editing the content of images.
coming to terms with a powerful language such as C.

At address 21 we have the letter ‘l’. Now, why did it take 24 addresses in our example to store a simple sentence? This is because each address refers to a memory location encoded as a byte or 8 bits (which gives us the possibility to differentiate between 2^8 or 256 combinations (0 .. 255)).

Why is it important to understand this? Well, there is a difference between an address of something and the value of something and if this is not clearly understood it is easy to get into a mess with C.

The “base” address of the whole sentence is “1”, the value is “I am a cat called Felix” - it occupies addresses 1 through 24. However the value of address 2 is ‘ ‘. Yes, the computer needs to store spaces too.

Part 4

AH
Libraries in OS4
Game part 2

Support

Support
Create a file called tutorial1.c and type the example above into it. Now compile it into a file called "tutorial1 tutorial1.c"

Now run this:
```
Work/Programming/Tutorial> tutorial1
```

Check the answers on a calculator, you never know!

**Introducing Strings**

Common user error 1: It is vital to understand what is coming next as most C bugs in the early stages are through failing to understand strings.

So, we have a new datatype, let us call it “sentence”. Instead of just returning a single value when you request the value of the address [1] it returns the entire sentence that [1] is the “base address” of. There is a problem, how do we know where the sentence ends?

Two solutions have grown up around us in programming, one is called “null terminated strings” (which is what C uses) and the other is called “length encoded programming”. Length encoded programming is easier to handle, but does not work for strings that contain the “sentence” which C uses.

The easiest scheme is length encoded strings, which is where the number of characters in the string is stored at the “base address” (starting address in our example 1) and the computer uses this number to find out where it ends.

```
[1][2][3][4][5][6][7][8][9][a][b][c][d][e][f][g][h][i][j][k][l][m][n][o][p][q][r][s][t][u][v][w][x][y][z]
```

You have told the computer you want the value of the string stored at address 1, it reads the number 24 and combines the next 24 characters for you.

There is a limitation here, the maximum number of characters you can store in the computer is 256 characters. If we define the scheme the computer uses as so, the first byte is the length of the string, then this byte is limited to 255. Characters long could we increase this by making it double byte (16 bit), then when we reach this limit double byte (32 bit) etc.

Null terminated strings are more powerful for the simple reason that they do not require a length specifier. The end of the string type is a special character such that when the computer has found this character it knows it is at the end of the sentence, this is known as the NULL TERMINATOR (or ‘\0’).

```
[1][2][3][4][5][6][7][8][9][a][b][c][d][e][f][g][h][i][j][k][l][m][n][o][p][q][r][s][t][u][v][w][x][y][z][\0]
```

Therefore, in our program we have the string type which is enclosed in the “string” which is enclosed in quotation marks “"""'. For character assignment we need to use single quotation marks ‘"'”.

**But what happens?**

The programming language behind the scenes is requesting storage of a certain length (the number of bytes it takes to store the value) from the computer, the computer then returns a “base address” (starting point) to the language and the language binds that starting address to the symbol.

In our case the symbol is defined as “balance”, the type is float which the programming language knows, takes 4 bytes (32 bits) of storage to hold the value – it asks the computer for 4 bytes of storage, the computer allocates (and manages) it as owned by that program for the duration it is running the storage and returns the address.

The programming language then stores the value “-2.50” in an encoded format into the storage at the address the computer returned. Every time the program refers to the symbol “balance”, the language knows it means the address the computer gave it!

A pointer is simply an address whose value contains the address of something else. It is, in fact, a built in type of C that is designed specifically for this purpose. Pointers refer the computer to another address (like saying, “for pension inquiries, call this number”). The sheer power of this will become evident later on.

Strings and Characters

Take a deep breath! Remember we talked about C having a string type which uses the null termination technique? This was a total lie. Sorry, it has no string type. What it does have is a variety of functions (small programs) that accept the address of a string (such as address 1 which is the start of “I am a cat called Felix.”) and will search the whole string for the end of the string. A non-exhaustive list of C built-in types is shown in the "Variable Types" box-out.

```
char b;    unsigned char fx;    float hiThereMum;
```

Support

Autumn 2003

We know that “I am a cat called Felix.” is stored as a sequence of characters. However if we used the “char” type on its own we would instead use the “pointer to char” type: “char *sentence”=“I am a cat called Felix.”. This does not mean “multiply the type char by sentence which must be equal to the string “I am a cat called Felix.”. It is important to throw away mathematical terminology when dealing with anything other than numeric types in C. In fact, the meaning of the symbols “*” and “;” changes with the context of where it is used.

The instruction stores “I am a cat called Felix.” into the computer returns the base address (in fact the address of “I”) as normal, in this case our symbol “sentence” is a pointer to something of type “char” (the “*” makes it a pointer). In this pointer is automatically stored the address of the “I” part of the sentence.

However..."char sentence="I am a cat called Felix;..." would result in an error, because on the left hand side of “=” we are defining the symbol sentence to be tied to an address which contains a C data type (char), on the right hand side of “=” we are trying to assign to it a different type – the string type which is not “char”.

For character assignment we need to use single quotation marks ""'".

There is a function called “printf” (see Tutorial 1 which illustrates it for the time being) that expects a pointer to a char as an argument and will display the data stored in the computer at the address in that pointer to the next occurrence of “\0” on screen.

However, we did not put a “0” in our declaration – how can the computer know when to stop? This is automatically inserted when using what are called “string literals” – such as “I am a cat called Felix.”. It is implicitly appended by the programming language at compile time so that what really gets stored is “I am a cat called Felix;0.”

In this program, we therefore have the following statements:

```
char *sentence="I am a cat called Felix;0;
```

Referring back to our original example, the computer stores the string literal “I am a cat called Felix,” address 1 through 25 (for the null termination characters).
System stores the “sentence” symbol at address 28. Why? Because it wants to.

So when address 28 gets passed to the “printf” function, it knows that this is a type pointer to character, the function has been implemented to deal with ‘null terminated strings’ as implemented in C and so reads from the address referenced at address 28 (which is address 1) until it finds the ‘null terminator’ (‘\0’) and displays the characters on screen in the sequence it encounters them.

This principle of only passing the address of data to be used by functions (sub programs) is the key to understanding how C works.

Example 3:

```c
#include <stdio.h>

int main(void)
{
    char sentence;    sentence="This is a precious diamond, guard it well.");
    printf(sentence);
}
```

Create a file called tutorial3.c and type the example above into it. Now compile it into a file called “tutorial3”:

```
Work:Programming/Tutorial> gcc -o tutorial3 tutorial3.c
```

It will fail with a compilation error. Study it hard and correct the error. Once you have eliminated the error run it like this:

```
Work:Programming/Tutorial> tutorial3
```

This takes 8 characters. To fill this array with a string we use a function called “strcpy” (string copy) which has two arguments, the first being the destination string and the second being the source string:

```
strcpy(test,"Fido");
```

This is fine, it will copy the literal “Fido” into the 8 bytes like so:

```
[F][i][d][o][\0][ ][ ][ ]
```

How about when we want to store a longer string, like “picture8”?

```
strcpy(test,"picture8");
```

This will fail, even though it is 8 characters long and we have assigned space for 8 characters. It fails because we forget that the null terminator that automatically gets added to the end of string literals by C also needs to be stored. The failure causes what is known as a protection fault, an attempt to write to an area of memory we do not own and the program will cause a groom error on an Amiga.

```
(char)[0][0][0][0][0][0][0][0] + [0]
```

Overrunning the end of storage allocated to your program can have two effects:

1. Protection violation (attempt to write memory you do not own)
2. Instability (you own the storage but it belongs to another variable and you overwrite the contents of it unexpectedly).

Example 4:

```c
#include <stdio.h>
int main(void)
{
    char sentence[12];
    strcpy(sentence,"This is a precious diamond, guard it well.");
    printf(sentence);
}
```

Create a file called tutorial4.c and type the example above into it. Now compile it into a file called “tutorial4”:

```
Work:Programming/Tutorial> gcc -o tutorial4 tutorial4.c
```

It will compile without error. Now ensure that you are not running anything important, because your machine may crash!

```
Work:Programming/Tutorial> tutorial4
```

The definition for symbol “counter” causes the computer to allocate 256 elements of storage sufficient to store a ‘long type’. The ‘long’ type is 4 bytes in size, so that is 14 multiplied by 4 bytes (56 bytes) of storage used.

The definition for symbol “percentages” causes the computer to allocate 20 by 4 by 200 elements of storage sufficient to store a ‘float type’. The ‘float’ type is 4 bytes in size, so that is 20 by 4 by 200 by 4 which is 16000 total bytes of storage used.

To show the potential pitfalls we can get in with fixed size allocation let’s look at the definition of an array of characters we will give the symbolic name of “test” to:

```
char test[8];
```

This is fine, it will copy the literal “Fido” into the 8 bytes like so:

```
[F][i][d][o][\0][ ][ ][ ]
```

What about right at the end (255,255) ?

```
char rubiksCube[3][3][6];rubiksCube[0][0][0]='r';rubiksCube[0][0][1]='g';
```

OK, now for the final example of this quarter’s episode:

```
Example 5:
#include <stdio.h>
int main(void)
{
    int plank[2][2];
    plank[0][0]=4;
    plank[1][0]=4;
    plank[0][1]=1;
    plank[1][1]=1;
    printf("Elements: [%d][%d][%d][%d] \n",plank[0][0],plank[1][0],plank[0][1],plank[1][1]);
}
```

Create a file called tutorial5.c and type the example above into it. Now compile it into a file called “tutorial5”:

```
Work:Programming/Tutorial> gcc -o tutorial5 tutorial5.c
```

```
Elements: [4][0][1][1] \n
```

That is all well and good for a two dimensional array, but what about a three dimensional array:

```
char rubiksCube[3][3][6];rubiksCube[0][0][0]='r';rubiksCube[0][0][1]='g';
```

OK, now for the final example of this quarter’s episode:

```
Example 5:
#include <stdio.h>
int main(void)
{
    int plunk[2][2];
    plunk[0][0]=4;
    plunk[1][0]=4;
    plunk[1][1]=1;
    printf("Elements: [%d][%d][%d][%d][%d][%d] \n",plunk[0][0],plunk[1][0],plunk[1][1],plunk[0][1],plunk[1][1]);
}
```

Create a file called tutorial6.c and type the example above into it. Now compile it into a file called “tutorial6”:

```
Work:Programming/Tutorial> gcc -o tutorial6 tutorial6.c
```

It will compile without error. Now ensure that you are not running anything important, because your machine may crash!

```
Work:Programming/Tutorial> tutorial6
```

Fixed Length Storage

We have already discussed the theory of how C interprets declarations (remember: It requests that the computer allocate enough storage for the type and uses the symbol as an alias for the address ) with the format:

-<type> <symbol>;
-e.g. char * sentence; long counter; float balance;

And we have discussed how assignment works with what are called “literal values” - ones that C automatically allocates storage to hold:

-<symbol> <literal value>;
-e.g. sentence = "I am a dog called Rover"; counter = 14; balance = 5.81;

However, what if the size of storage required (and this is especially important with strings) is not known at the time the program is written? There are two ways to handle this. C provides an array type that allows you to implement the first method, dynamic but bounded storage (fixed length):

The format is:<type> <symbol>=<size of array>;
char sentence[256]; long counter[34];

You can define multiple dimensions to your array (like a mathematical matrix or a table):

long enemyMap[256][256];
float percentages[20][4][200];

Explanation:
The definition for symbol “sentence” causes the computer to allocate 256 elements of storage sufficient to store a character type. The “char” type is 1 byte in size, so that is 256 bytes used.

The definition for symbol “counter” causes the computer to allocate 14 elements of storage sufficient to store a ‘long type’. The “long” type is 4 bytes in size, so that is 14 multiplied by 4 bytes (56 bytes) of storage used.

The definition for symbol “enemyMap” causes the computer to allocate 256 by 256 by 256 elements of storage sufficient for the long type, which is 4 bytes of storage so that is 256 by 256 by 4 which is 262144 bytes of storage.

The definition for symbol “percentages” causes the computer to allocate 20 by 4 by 200 elements of storage sufficient to store a float type. The ‘float’ type is 4 bytes in size, so that is 20 by 4 by 200 by 4 which is 16000 total bytes of storage used.

To show the potential pitfalls we can get in with fixed size allocation let’s look at the definition of an array of characters we will give the symbolic name of “test” to:

```
char test[8];
```

This is fine, it will copy the literal “Fido” into the 8 bytes like so:

```
[F][i][d][o][\0][ ][ ][ ]
```

How about when we want to store a longer string, like “picture8”?

```
strcpy(test,"picture8");
```

This will fail, even though it is 8 characters long and we have assigned space for 8 characters. It fails because we forget that the null terminator that automatically gets added to the end of string literals by C also needs to be stored. The failure causes what is known as a protection fault, an attempt to write to an area of memory we do not own and the program will cause a groom error on an Amiga.
The screen-shots this issue show Amiga OS 4.0 running a variety of 68K Amiga software under emulation.

In the shot on the left you can see Directory Opus 4.x and SnoopDOS under emulation along with the new OS Notepad and AmiDock utilities.

Below is the MUI based YAM emailer again on OS 4.

Above is the new Partition Wizard tool showing the attractive Reaction look present in the latest screen-shots.

Sam Byford’s MorphOS 1.4 desktop (be sure to check out his review on page 18) running IBrowse under emulation, AmIRC and MPlayer (in the borderless window).

The processed image after histogram equalisation and a slight gamma adjustment; this highlights the sky and reveals the detail in the foreground.

A more complex image featuring an unprocessed sky with a heavily brightened foreground.

You can download the images for this tutorial from: http://www.totalamiga.org/issue16.html