NEW

AMIGACTIVE

ISSUE **3**

DECEMBER 1999 £ 4.95
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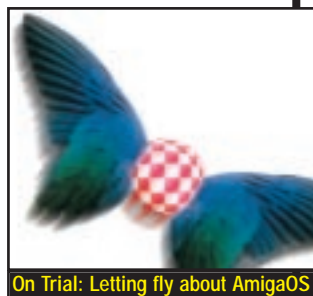**Email: sales@powerc.demon.co.uk**
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Regulars

On Trial: Letting fly about AmigaOS
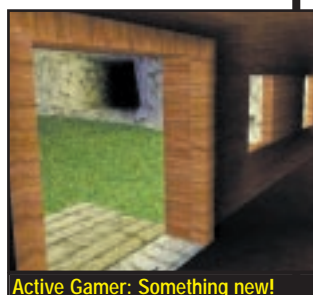
Active Gamer: Something new!

Retroactive: Something quite old.

Reviews

FXPaint: Does it take any liberties?

Top Gear: Hapy Christmas honey!

WipEout 2097: Reviewed as well!

Features

Broadband: It's not a bottomless pit

Networking: Is this the key to it all?

Masterclass: Keys of a different kind

AACD 3

This month's CD is packed with useful and entertaining material. Here are some selected highlights, but remember that half the fun lies in exploring the CD yourself.

• Experience WipEout 2097 with our exclusive playable demo. If you don't have the hardware required by WipEout, there are other top quality game demos for you including Exodus and Hell Squad.

• Mod and demo fans are guaranteed a good collection of audio and visual treats - this month and every month. The latest version of DeliTracker and a full range of players are included to ensure you get maximum enjoyment from our selection of music modules.

• This month we also have an audio track on the CD: "God" by Tony Horgan (we think it was that way around anyway) which accompanies our feature on audio hardware (see page 40).

• Image Engineer is a powerful image processing program... and it's on this month's CD for you along with an impressive range of Visual Engineering effects scripts.

• The Online section contains a demo version of STFax, reviewed last month.

...**but this is really only scratching the surface. Double-click the "Welcome" icon and have a good browse around the CD for yourself.**
Don't forget - there's an easy-to-use Search program if you're looking for something in particular. Have fun, and keep your comments about the CD coming in to aacd@amigactive.com
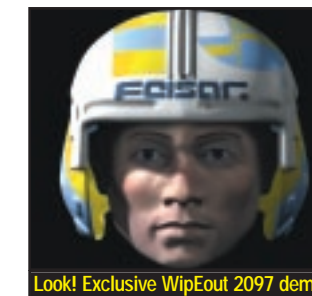
Look! Exclusive WipEout 2097 demo!

Broken Windows

US court declares Microsoft monopolistic and damaging to innovation.

The long anti-trust court action against Microsoft took a major step on November 5th with the release of a damning "finding of fact." The 60,000 word document from U.S. District Judge Thomas Penfield Jackson details the court's findings during the trial of Microsoft.

Concluding the case which ran from October 19th 1998 to June 24th 1999, the document details facts "proved by a preponderance of evidence".

Key to the findings was an analysis of Microsoft's development of the Internet Explorer browser, and the ways this was used to stifle Netscape's Navigator. According to the findings of fact, the main concern for Microsoft was protecting its monopolistic position in the OS market by limiting the potential of Netscape to provide an OS

neutral API environment which could erode the difficulties faced by any companies attempting to challenge Microsoft's monopoly.

The monopolistic position of Microsoft's Windows Operating System is explained in the document as being in large part due to what is termed the "Application Barrier to Entry" (ABE). A concept familiar to all Amiga users, this concerns the difficulties of using an alternative OS related to the limited number of applications running on the platform, and the chicken and egg problem of 'no development without consumers, no consumers without development.'

Central to the criticisms of Microsoft is the integration of Internet Explorer into the Windows '98 package. Despite claims from Microsoft that this was necessary to improve the OS, the court found that, "To the extent that browsing-specific routines have been commingled with operating system routines to a greater degree than is necessary to provide any consumer benefit, Microsoft has unjustifiably jeopardized the stability and security of the operating system." Further, the court finds as fact that Microsoft intentionally made it hard to delete browser-specific routines without crippling the OS.

Despite various attempts by Microsoft in the course of the trial to demonstrate that the browser integration was necessary, the court found that Microsoft had exposed Windows users who prefer the Navigator browser to security and privacy risks specific to ActiveX and Internet Explorer. They also point out that according to several benchmarking utilities that Microsoft themselves use,
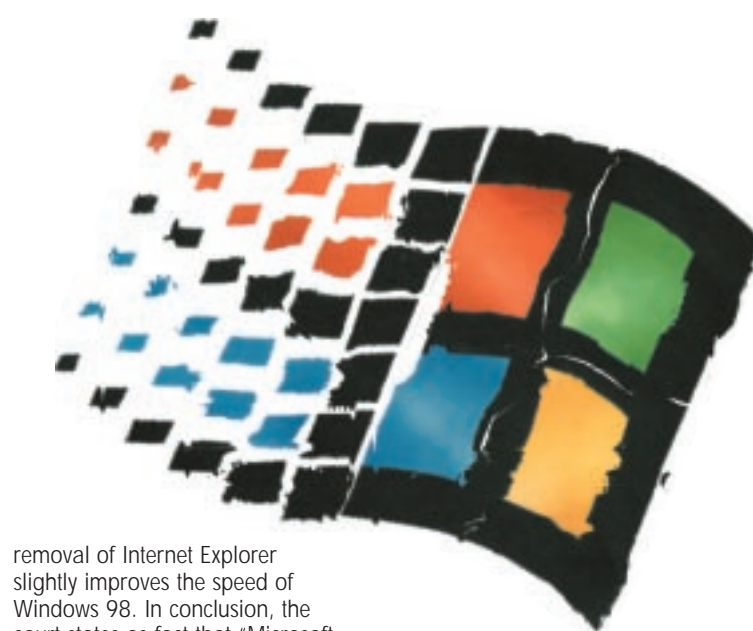
removal of Internet Explorer slightly improves the speed of Windows 98. In conclusion, the court states as fact that "Microsoft delayed the debut of numerous features, including support for new hardware devices, that Microsoft believed consumers would find beneficial, simply in order to protect the applications barrier to entry."

There are a number of other cases detailed in the document in which Microsoft used their powerful position to protect the ABE. Specific mention should be made of Sun Microsystem's Java, the subject of a prior court action against Microsoft. In that case Microsoft is found to have intentionally promoted partially incompatible Java development tools, which, according to the findings of fact, had the effect of limiting the chance of Java offering a compelling API that Microsoft did not control.

Significant emphasis was also given to the business practices of Microsoft that point to them

Judgement Day?

The court found that this monopolistic position allows Microsoft to set prices for political rather than economical reasons. In a sobering statement for those who consider Gateway's recent actions indicative of them being Microsoft lap dogs, the finding of fact specifies that, "Among the five largest OEMs, Gateway and IBM, which in various ways have resisted Microsoft's efforts to enlist

them in its efforts to preserve the applications barrier to entry, pay higher prices than Compaq, Dell, and Hewlett-Packard, which have pursued less contentious relationships with Microsoft."

The findings of fact do not represent a final judgement on Microsoft, but commentators have been startled by the harsh words of Judge Jackson. If, as he states in the findings of fact, "some innovations that would truly benefit consumers never occur for the sole reason that they do not coincide with Microsoft's self-interest," Microsoft are likely to find themselves in serious trouble for abuse of their monopoly under anti-trust legislation.

The Department of Justice has still to decide what actions to take based on the Findings of Fact, and there is a long process of claim and counter claim that means further proceeding won't really start until next year, and decision isn't likely until late 2000 at the earliest. The DOJ is considering splitting up Microsoft after the model of the Bell Telephone monopoly split, but ensuring that the "Baby Bills" would act as competing companies rather than simply being Microsoft restructured is no easy task. It is indeed widely speculated the Microsoft have already planned how to manage a split in such a way as to maximise protecting themselves, and may even try to pre-empt a harsher judgement by offering to split themselves four ways before the trial is concluded. Rival firms concerned with this possibility have urged specific measures to protect against this possibility - several companies have suggested that rather than hiving off different and potentially complementary companies, several 'clone' companies with access to Microsoft's IP should be set up in order to ensure internal competition.

Microsoft shares dropped sharply in after-hours trading following the Friday evening release of the Findings of Fact, and continued to drop at opening of trade the following Monday. A massive drop is not currently anticipated at least until the case goes somewhat further - Microsoft are currently at a strong point in their product cycle, with large profits expected from the upcoming release of Windows 2000.

STOP PRESS
keeping you right up to date

Literally as we were going to press, word reached *Amiga Active* magazine of a major announcement due to be made around the time of the Cologne show on November 12th - 14th.

Whilst we aren't at liberty to disclose any details until the announcement has been made, we are already working on a major feature which will be made available on our web site as soon as possible.

Keep an eye on our web site and subscribe to our announce mailing list (details on the site) where both the news and our reaction to it will be appearing.

http://www.amigactive.com

New developers buddy

Following on from the release of OS3.5, Haage and Partner have announced the launch of a new Developers CD. Designed to update the old files and supply developers everything they need to work on OS3.5 software, the new offering includes:

- Updated and revised `C' and assembly language header files and linker libraries.
- Updated and revised system documentation and tutorial texts.
- Example code covering the AmigaOS 3.0, 3.1 and 3.5 features.
- The NewIFF v39 package.
- The AmigaGuide and DataType documentation and example code.
- WarpUP (PowerPC) developer documentation and examples.

The CD also includes software development kits for many popular Amiga programs, full documentation of the new Reactor GUI toolkit, complete Amiga ROM Kernel manuals in AmigaGuide and HTML formats, tons of reference material and also a version of the integrated StormC programming environment. Priced at 49DM (£15.99), the Developer CD should be available by the time you read this. For more information, visit Haage & Partner's web site at:

http://www.haage-partner.com

PowerOS
replacement Operating System announced

PowerOS is a new operating system for PowerPC hardware. It is still at an early stage, but PowerOS expect to release a version for the A4000/PPC604e (and A3000/PPC) early next year. This will be followed by an A1200 version and, later, a standalone system. The A4000 and A1200 versions will also require a CyberVisionPPC or Blizzard VisionPPC graphics card.

PowerOS is not a new AmigaOS but it does appear to be heavily influenced by the good points of the original. PowerOS' developers say that running existing Amiga software should be possible through emulation. Amiga PPC software should be able to run via WarpOS emulation. This is an ambitious project, requiring the development of software to run on PowerOS as well as the operating system itself.

Software is planned, with some titles already in development. So far, very little information is available; the developer's section of their web site only contains a single diagram. Currently, only the German section of the site is available and development appears to be at a very early stage. Time will tell if this is a realistic alternative to the other potential operating system solutions for PowerPC equipped Amigas. For more information, visit the PowerOS web site at: **http://www.poweros.de**

OS3.5 updates?

A list dedicated to adding features to the next OS update is being compiled by *Amiga Active* reader Matt Sealey.

Including suggestions from many users and ideas of his own, the list is growing larger every day and includes:

- Font caching and other font type support
- Requester configuration for ASL
- Better large hard drive support (including proper support for TD64)
- Filetypes for use with default icons
- Multiview and datatypes to be updated (to include PowerPC datatypes)
- Various DOS and printer driver enhancements.

More ambitions requests have included implementing true Directory Opus style multithreading within Workbench (to stop it from locking out the user on file copies, for example) and such simple requests as minor layout tweaks to the Reaction GUI.

If you would like to participate with suggestions and ideas, or just read what other people are requesting, visit:

http://www.neko.u-net.com/ 35wish.html

TAKING ISSUE
proving that nobody's perfect

First off, the REBOL feature in issue two was attributed to the wrong Jason. D'oh! Needless to say we have undergone the necessary punishment from our perfectionist Publisher and have been threatened with the refusal of an invite to his Christmas party if such a mistake should happen again. So, without further ado, we would like to take this opportunity to apologise unreserverdly to Jason Hulance, the real author of the article, and wish him a very happy birthday. Sorry, Jason.

Furthermore, in issue one, we neglected to mention that connecting a 12 volt line to the fan on a BlizzardPPC accelerator might cause it to cease working, as it was designed to be powered via a 5 volt line. Your PowerPC won't be harmed as it has an automatic temperature cut-off point should it get too hot. Eyetech, however, provide a safer way of getting the required power to BPPCs. Call them on +44(0)1642 713185 for more info, and tell them we sent you.

Amiga
Anywhere?

A far-reaching agreement has been forged between Gateway and Internet giant AOL. According to the terms of the deal, AOL will become the service provider for Gateway's burgeoning and ambitious Gateway.net Internet services. AOL will be providing content and Internet backbone for more than half a million users of Gateway's ISP and portal service, which ships with all Gateway PCs. In exchange for the promotional cross-overs, Gateway will receive $800 million in investment and equities.

Most intriguingly, the deal specifies that Gateway and AOL will jointly market Information Appliances and develop related initiatives. AOL have been following a policy they term "AOL Anywhere" which closely parallels the vision of Gateway's Amiga department of a truly scaleable, Microsoft-free, Internet centric range of appliances. AOL, who purchased Netscape last year, own critical pieces for the application of the technology currently pursued by Amiga Developments, and a partnership of this type between Gateway and AOL has been anticipated for a long time by some commentators in the Amiga market. Gateway CEO Jeff Weitzen will not confirm that there is a partnership over the Amiga technology, but admits that it may well play a role.

AOL are developing Internet devices that are designed to offer access to the Internet via AOL to the currently closed market sector of non computer owners. They have already announced a partnership with Amiga technology partner Sun Microsystems for this and are expected to unveil something at Comdex in mid November. It can be speculated that the cancellation of the MMC may be connected with this. The integration of Gateway's Amiga Object technology into the AOL boxes would seem quite likely.

Potentially a real challenge to Microsoft would come through a combination of the Amiga APIs and the browser APIs of Netscape, functioning as a middleware API layer for local and thin client applications running on top of Linux on AOL boxes. However AOL's agreement with Microsoft to exclusively use Internet Explorer would stop this becoming a reality until the deal expires on January 1st, 2001. Whether such a development would offer anything of interest to the Amiga user (or even bear the Amiga name) remains to be seen.

Pixel perfect

I nnovative of Germany have made available a number of new products. The first of these is fxPAINT, a new painting and image processing program designed to support fully the abilities of OS3.5. fxPAINT seamlessly integrates with your existing hardware allowing a simple, but powerful, way to get images into your machine for further manipulation. fxPAINT also has full PPC and OS3.5 support, optimised printing via TurboPrint and the new OS3.5 printer functions. You can read a full review of fxPaint on *page 36* of this issue.

The second product is fxSCAN, designed to complement fxPAINT and work in conjunction with ScanQuix from fellow German company RBM. fxSCAN enables scanned images to be converted to a variety of formats. Printing is again optimised for OS3.5 and the front end is based on the same GUI system used for fxPAINT.

Lastly, VLRecNG is a powerful software package designed to work with any video or image grabber hardware currently supported by Innovative's new VHI standard. VHI establishes a standard interface and API's to most leading hardware, but is primarily aimed at users of VLab cards. VLRecNG is an update of the previous version of VLrec and has now had all the VLab specific code removed. More information is at:

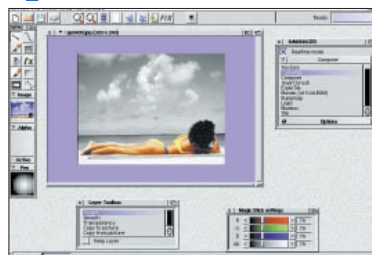**http://www.innovative-web.de**

Toasting the New Year?

A co-operation between Nova Design and several prominent Toaster/Flyer developers has produced the 'Millennium' collection. This software anthology package is presented by Newtek to update their Amiga range of high performance video editing and effects cards.

The Millennium package offers a vast collection of scripts, effects, fonts, backgrounds, software and other content designed to dramatically upgrade the Toaster and Flyer suites. It includes:

● A Wipe Studio, to create wipes and effects easily
● RenderFX, allowing more and more layers to be rendered.
● Numerous Flyer utilities.
● ProMix assisting in the updated production of audio tracks
● A huge collection of Arexx scripts and pre-built wipes and fades.

Shipped on 3 CD Roms, the Millennium upgrade suite is the largest update ever for Toaster and Flyer owners. Priced at $349.99 US, is available via Newtek. For more information, see:

http://www.novadesign.com or **http://www.newtek.com**

Open Source Operating System

M embers of the former 'Campaign to Save the Amiga' grouped together again this October to form the 'Campaign for Open Source AmigaOS'. Their aim, along with their partners at Convergence International and The Open Source Initiative, is to prove that, as with Linux, open source can actually be beneficial to AmigaOS.

They claim it could potentially involve developers from all over the world to work together in improving and sustaining AmigaOS - a model RedHat have shown to be feasible. It could also lead to AmigaOS being ported to other platforms and other processors.

COSA have drafted a case arguing for the release of the Amiga OS into the open source community. Amongst the key supportes of the project is Eric S. Raymond, guru of the Open Source movement. His article "The Cathedral and the bazaar", which explained software development as being either rigid and disciplined in the manner of a cathedral, or wild, open and free in the manner of the Bazaar. Needless to say he felt that the latter was the better option. No statement of intent as far as this project is concerned have been made by Amiga Developments LCC yet. Information, or support details are at:

http://survey.amigakernel.org

Phase5/QNX
Alliance Delays

P hase 5 Digital Products have announced that hardware supply problems may delay their G4 accelerator boards into early next year. Phase 5 state that they are unable to buy the MPC107 (Motorola 66MHz PCI bridge and 100MHz memory controller) chips in quantity at the moment.

While Phase 5 seek a quick solution to the part sourcing problem, they are also evaluating an alternative controller part from IBM. Apparently if they decide that the alternative part is feasible, it will allow them to integrate an AGP (Advanced Graphics Port) interface into the design. This would allow the adoption of a much wider range of modern graphics cards than PCI alone, as well as bring the benefit of faster bus speeds for moving 3D texture data. Phase 5 say they will be mailing everyone who has pre-ordered a G4 card some time in mid November outlining the final decision and product release dates.

Phase 5 additionally announced that they have received sufficient orders of the U2W SCSI and Fast SCSI II modules to ensure production. Production of the planned IEEE 1934 (Firewire) module and the UDMA ATA module has not yet been confirmed.
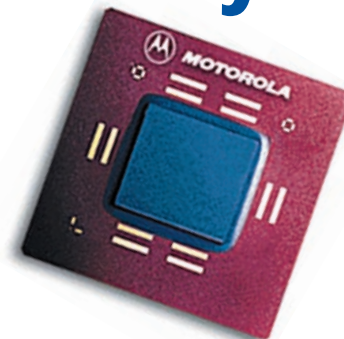
QNX Software Systems, who entered into an alliance with phase 5 to provide a version of their forthcoming Neutrino OS with the G4 accelerator cards have, understandably, not received boards from phase 5 yet. They are entering beta testing stage of the OS with a first beta featuring a self-hosted development environment running on x86 based computers.

The first beta, which goes out to a small group of initial beta testers, includes The Neutrino OS and Photon microGUI windowing system, with a suite of applications, tools, and drivers. The development environment includes GUI development tools as well as a GCC based environment for x86 compilation targets with GBD for debugging. PPC based development systems and PPC target development environments will presumably enter the beta testing phase when the hardware to host it arrives.

Editorial
State of Confusion

Y es, you're right, it does feel thinner. Eight pages thinner, in fact. Before you mutter about value for money, let me reassure you that there are just as many pages of editorial as there were last month, and more than there were in issue one. So where did those eight pages get to? Well, we had to find something to do with the pages used for the survey last month. There wasn't going to be a Cologne show ad, of course. Then a few smaller advertisers decided they weren't going to be able to advertise in this issue. When it became apparent we could make up for it by dropping eight pages without having to lower the editorial page count, it wasn't a hard decision to make.

So if things are beginning to look so interesting again, why are there less companies advertising this issue? Advertising in this market comes mainly from retail, and the retail market is having a hard time at the moment, getting squeezed between problems of supply and problems of demand.

The problem of supply is a thorny one. There are certain products - the BlizzardVision springs to mind but there are other examples - that are widely sought after, but currently out of stock everywhere. If you haven't got the products to sell, you can't make money. To exacerbate this, we are waiting on a lot of interesting and mostly delayed products, and you can't sell delayed products.

The problem of demand relates closely to this last point. The most requested feature and the most commonly asked question is "What's the best option?" People simply don't know what to buy, and are unwilling to take risks with their money until they can better judge whether it's a risk worth taking. Should they get a Z4 tower? Wait for a BoXeR, or an AmiRage? Buy an '060, or a second hand Cyberstorm PPC, or wait for a G3 / G4 card? It doesn't stop there. There's one important thing to remember - it's not possible to make a decision about something that hasn't shipped yet. There are simply too many variables in the market at the moment and it's no wonder that people are nervous about buying. As more specific information comes available we will be able to clarify the options, but until that time there are a few things you should keep in mind when considering your buying options.

Firstly, don't wait for a Next Generation system. Think of all the different pieces of software you use on your Amiga - how long do you think it will take for a machine released tomorrow to gather that much software? It will not replace your current Amiga over night.

Secondly, don't wait for marmalade tomorrow if you can have Jam today. I'm not advising you to spend recklessly and jump for the first option that comes to hand, but the Amiga market is not a stranger to long delays and cancelled producs. There's a lot to be said for a product you can actually buy. It happens all over (I've been meaning to buy a new amplifier for ages, and I keep waiting for reviews of newer products...), but there have been so many announcements and vapour in the Amiga market lately it's particularly tricky to judge the right option for you.

It's clear that the main problem is a current lack of any centralised focus or direction. We have at least seen something central and official in terms of future direction in AmigaOS 3.5, and it's interesting to note that initial signs seem very good - dealers have reported excellent sales.

Andrew Korn **A**

Back for the Future

Part Three:

Soul of a New Amiga

Above: Rene Descartes knew a thing or two about identity; "I boing, therefore I am(iga)?"

"...eliminate everything that can be doubted, and whatever is left must be true."

Whatever form the next generation of Amigas take, it will have neither the old Amiga hardware or the old Amiga software. So how will we know if it's an Amiga...?

It's a much - vexed question: what is an Amiga? Is it the OS, the custom chipsets, or the Motorola CPU? A computer that doesn't treat you like an idiot and does what you ask of it, one that combines affordability with power? Or one that's great at video work? Is it even anything to do with the machine itself, or is it community spirit? It has even been claimed in the distant past that it ain't a true Amiga if it doesn't have an Amiga 1000 style keyboard garage...

There are a number of different projects that have some kind of claim to being a next generation Amiga. Obviously there are the digital convergence systems being worked on by Gateway (although it seems likely that they are going to design something more to the taste of America On Line than Amiga aficionados), QNX and the Phoenix Platform Consortium, and Amino. There's AROS (the Amiga Replacement OS), PowerOS and various projects from Amiga enthusiasts such as Dolphin and KOSH. There's even the possibility of AmigaOS going open source and being developed in who knows what direction. The question is, will some kind of an "Inspired by Amiga" badge be enough?

The fact is that any of these projects will have something to prove. We're not idiots - we still use Amiga because there is something about them that we like. How can we be sure that any of these potential next generation systems provide the same experience? There's no simple answer to this. We all know that there are going to have to be some radical changes, but without some clearly defined understanding of what an Amiga is, how can the companies or individuals behind these projects be sure that the systems they develop retain that fundamental "Amiganess"?

The Philosophy of Amiga

Identifying the essence of "Amiganess" is really a question of identity, and it makes sense applying a traditional form of analysis. The question of identity in relation to self is one of the great philosophical problems, and philosophers point to the French philosopher Rene Descartes as the man who took the biggest step towards solving the problem. Descartes developed a methodology termed "Cartesian doubt." His basic principle was a simple one - eliminate everything that can be doubted, and whatever is left must be true. He observed that as our sense can be fooled, we cannot be certain of anything we learn from our senses. He thus concluded that the body, which we only perceive through these sensory data, is not necessary to the self. Thus, he concluded, the self was that part of him which thought, leading him to make his famous statement, *"Je pense, donc je suis"* - I think, therefore I am.

This same technique can be applied to figuring out what makes an Amiga. We take a possible aspect of the Amiga and ask ourselves the simple question: if we remove this, is it still an Amiga? In the case of the keyboard garage, this is easy enough to answer. The A500 had no keyboard garage, but who would doubt for a second that it was a true Amiga? Clearly, removing the keyboard garage does not remove the essence of Amiganess, so we can discount that from the equation. Let's try applying the same methodology to a few of the other common theories.

1. It's the custom chips

The idea behind this one is simple. What made the Amiga great in the first place was the custom chipset. By taking some of the workload away from the CPU, the custom chips allowed the Amiga to shine.

There's one very simple way of showing that this does not define an Amiga - there are lots of other things with custom chipsets. The Playstation has separate graphics and sound co-processors, but no one claims that it is an Amiga.

You could argue that the custom chips are a part of the equation but not all of it - what philosophers would call a necessary, but not a sufficient condition. However, the custom chip argument fails the "can you remove it and still have an Amiga?" test. The fact is that most Amiga users are upgrading their machines to bypass the custom chipset. My A4000t uses a graphics card to display screens and a soundcard to make noises. My A1200 uses the custom chipset for these tasks. Does that mean that my A1200 is an Amiga and my A4000t isn't? Of course not.

2. It's the CPU

As the 68000 series processor used in all production Amigas is no longer in development, it's a good thing that this one can be dismissed. Very few people would claim that a PPC Amiga was not an Amiga. Some have tried to encompass this by saying that it's got to be a Motorola processor, but IBM make PPC chips too.

The easiest way to dismiss this is to imagine a computer that was identical to a 68k Amiga except it ran on some kind of super processor under emulation. As it would be functionally identical to the Amiga, there is no reason that a user would ever even be aware that there was no Motorola processor in the box - so clearly the processor is not the font of true Amiganess.

3. It's the OS

OK, so if it's not the hardware, it's surely got to be the software? Or was Tom Schmidt, current president of Amiga Developments, LCC, correct when he said "I hope you'd agree that Amiga was never about a box. It was never about an operating system either."

The OS theory is the first one that scored any kind of hit on the "take it out and see if the Amiga remains" argument. Clearly if you remove your ROM chips and uninstall Workbench, your machine isn't going to provide the same experience. More to the point, as Shapeshifter and Fusion show, the Amiga hardware is capable of running MacOS. If you removed all trace of AmigaOS from your machine and booted straight into MacOS, would it still be an Amiga or would it just be some kind of mutant Macintosh? Clearly it would have none of the benefits the Amiga has over the Mac, and wouldn't provide the Amiga experience, so it looks like we have a candidate.

However it isn't as simple as that, because an OS is not a monolithic thing. You can certainly modify the OS without losing that sense of Amiganess - in fact most people would claim that this is one of the strengths of the Amiga, and most of us use OS modifications, be it PFS, Directory Opus, Visual Prefs or Magic Menus. So we can say that it isn't the OS per se, but there is some part of the OS that is an essential part of the equation.

"If you removed all trace of AmigaOS from your machine and booted straight into MacOS, would it still be an Amiga...?"

## Amiga Active Online survey

What is Amiga?

① We asked what the base price of a new Amiga range (excluding a monitor) should be, and these were the results. The £499 price point was easily the most popular, with those either side coming in about equal - the average worked out at just over £508. This figure seems pretty accurate for the history of the Amiga - the A500 and A1200 were never the cheapest computers out, but they were always affordable. Accounting for inflation, this looks quite similar to the £399 launch price of the old machines.

One interesting point is that the £499 price point certainly wouldn't sit well for a company launching an assault on the Digital Convergence market, where sub $200 and even sub $100 are major targets - although clearly these would be machines with a lower spec.
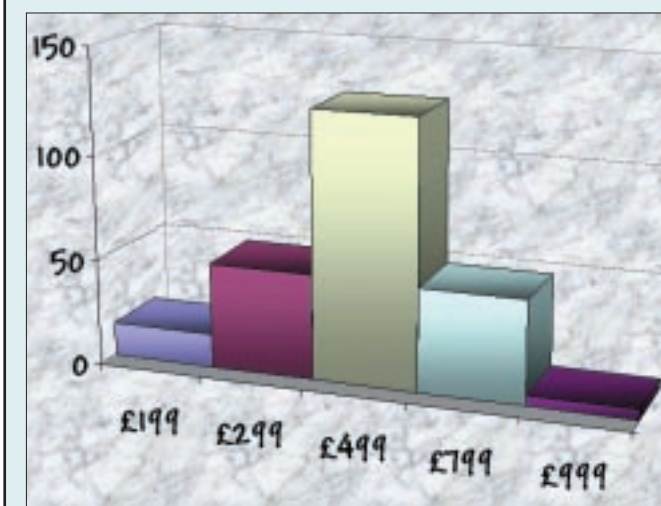
② Next, we asked what people thought should be the path taken to the next generation user environment. As you can see, developing OS3.5 is the most popular single option, but this is deceptive - 63% of respondents think it is time to rebuild from the ground up. Of those, there's a small trend in favour of keeping the old rather than embracing the new, with less than 20% favouring something radically and fundamentally different.
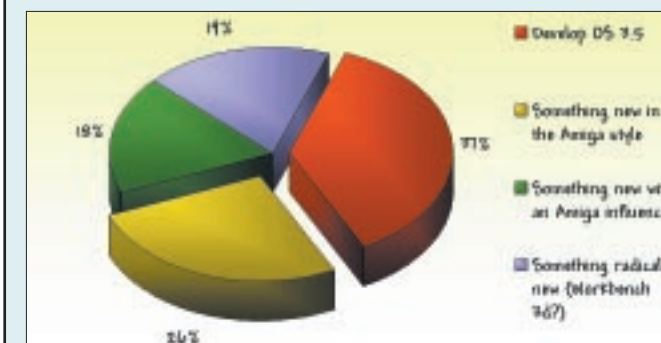
(continued...)

initial results

"Fancy the idea of a desktop computer that you can use within a second of powering up?"

4. It's the community
A lot of people have claimed that it is the helpful, enthusiastic and cultish Amiga community, with all that goes along with it. The Aminet, the developers who recognise the importance of elegant and efficient code, the demo scene, the keen DIY spirit - this, they say, is the Amiga.

It's a nice theory, but it doesn't quite work. Many millions of Amiga users never had anything to do with the Amiga community. If you use your Amiga on a desert island and never speak to anyone or use the Internet, it doesn't somehow magically cease to be an Amiga.

5. It's the name
The simple answer - Amiga is a brand. If it's got an Amiga brand on it, it's an Amiga. Technically speaking this argument is undeniable, but it isn't very useful - after all, the name does not make the experience. If you replaced every instance of the word Amiga in your OS with the word Apple and stuck an Apple logo over the Amiga badge and Amiga keys, your Amiga would not become a Macintosh. Similarly, if Gateway were to sell PCs with an Amiga badge on them, they would not be Amigas - they would merely be Amiga branded PCs.

6. It's about putting you in control, behaving the way you want it to behave, and combining power and efficiency with great ease of use and openness.
Ladies and Gentlemen, we have a winner (of sorts). There's little doubt about it - it's something that every Amiga can boast, and no computer without these properties could ever really be thought of as an Amiga.

However clearly this isn't all it takes to make an Amiga. Let's put this in perspective. Imagine that Sony release the Playstation 2 with a keyboard, mouse, hard drive and supply a really nice, flexible, fast and efficient OS. Is it an Amiga? Some people would argue that in a way the answer would be "Yes." I'm not saying that it would actually be an Amiga, but you could argue that if it satisfies you in all the ways using your Amiga does, then it is a true successor in spirit.

Getting it right
The conclusion we can draw from all that philosophical analysis is that there is no single answer to our question. For any new system to be an Amiga, it has to be efficient, elegant and it must put you in charge.

These are of course dependant on the Operating System, and it is fair to say that the OS must therefore either reproduce those elements of the current Amiga user interface that provide this, or replace them with similar features. Clearly having the Amiga name is an important point as it creates a clearly defined upgrade path. This would ensure that those elements of Amiganess that exist as a product of the "Amiga community" remain, although we could look at the Phoenix Platform Consortium as a model for bypassing this necessity.

So what can those companies seeking to produce a next generation Amiga take from this? The answer is simply that there is a lot to learn from the Amiga experience. The fact that the Amiga is still a compelling computer today indicates just how valuable some of those lessons are. Identifying the exact featureset that needs to be considered is, alas, no easy task.

There are many quite subtle things about the Amiga that go to making that unique experience, and inevitably no two people are going to be 100% in agreement as to what they are. What's more, it isn't necessarily either useful or possible to apply them all as is. Let's take a couple of examples.

One unique feature of the Amiga is the right mouse button controlled menus. The reason why this feature is unique is that it is patented - one of the reasons why Windows uses a window based menu system rather than a screen based one. This would prove no stumbling block to a company that owns or licenses the original Amiga patent, but that doesn't mean they should follow the technique slavishly anyway - after all, many Amiga users replace their standard menus with the Magic Menu hack. One advantage of the Amiga menu system over the Windows one is that you don't need to place the pointer accurately to call up menus, but then Magic Menu's pop-up system removes this problem anyway.

There are a few other nice touches such as multiple item selection, but are they necessarily implemented perfectly anyway? Perhaps we should be looking harder for new, Amiga inspired innovations. For example, the key innovations of the original Amiga menu system derived from the decision to use a two-button mouse. Apple thought that more than one button would get confusing, but the Amiga showed that the second button was more than worthwhile. Now that three (or more) buttons and scroll wheels are common in mice, maybe it would best serve the aim of following up on the Amiga to see what these mice can do with menus. Perhaps a scrolling menu using the mousewheel would be the best system.

Another feature of the Amiga is how quickly it boots up. One of the main reasons the Amiga is still used in industrial applications today is that Amiga systems rarely fall down, and when they do, they are back up in moments. It is probably fair to say that a successor to the Amiga needs to pay heed to this. There is no advantage to the user in a slow boot-up, it's just frustrating. If someone wants to build a truly user-friendly machine, very fast boot

times would be a major asset. If they want it to scale into the general consumer market in set-top boxes, PDA, games consoles etc., it is essential. This does not necessarily mean looking at the Amiga technology at all. With a small, compact OS, it would be possible to build a sufficient amount into ROM to launch the machine, with just a few disk accesses to read preference files, additional libraries and so on. Flashable ROM is cheap enough now to make this a realistic option. Fancy the idea of a desktop computer that you can use within a second of powering up? I think a lot of people would.

The people who know
A full analysis of these points would be a major undertaking, although one it would be good to see someone take. However, as everyone has their own opinions, it makes sense to ask around. A couple of weeks before writing this, we set up a survey with some carefully targeted questions on our web site aimed at discovering what Amiga users in general see the Amiga as being all about. The survey will run for a little while yet, so if you haven't done so already, you could make your way to www.amigactive.com and click the "surveys" link. When we compile the final results, we will make the data available to all the companies in question.

To date we have had around 250 responses, and we have compiled some of the preliminary information. Obviously the final results could change, but there are some interesting results already - see the preliminary results running down the sides of these pages.

There are problems with a survey of this nature. One relates to question four (opposite), the answers to which don't give a whole lot away. A "Dynamic Desktop" can offer massively more in a networked environment than simply a user-tuneable, super Opus Magellan experience. Such a desktop would not simply use user-selectable graphic elements to represent the data structures of a traditional disk operating system, it would also allow elements or areas of the user interface to interact with remote sites. In the simplest case this could mean adding a desktop clock that refers to an on-line time clock rather than your computer's internal clock, but it also offers a means to countless other and more sophisticated ways of integrating on-line digital content and thin client applications. What's more, a scriptable desktop allows the environment to be quickly replaced. Not only would this let the user set up several totally different environments, but also offers the possibility of event triggered scripts, which could for instance allow a certified web site to totally (temporarily) alter your entire desktop environment to suit the activities available on the site. Alternatively, a set-top box OEM could easily write their own custom environment for their own requirements.

The results presented here are by no means complete and are certainly open to interpretation, but at the end of the day it will, of course, be down to the punters to decide whether a new machine is really a new Amiga. We can all help people produce something that does satisfy us by telling them what we want, but the acid test will be sitting down in front of one of these next generation machines and seeing if "Inspired by Amiga" is enough. Only time - and new machines to try out - will tell us if that intangible Amiga feeling will still be there.

Andrew Korn

survey
What is Amiga?

...continued:

❸ We asked "Do you like the idea of a 'dynamic desktop,' a Workbench that is scriptable and skinnable to allow the user to create totally custom desktops?", and as the graph below shows, there was much positive feeling about the concept but little in the way of extreme opinion. I think that above all we can conclude from this that Amiga people are keen on being able to make their desktop environments their own.
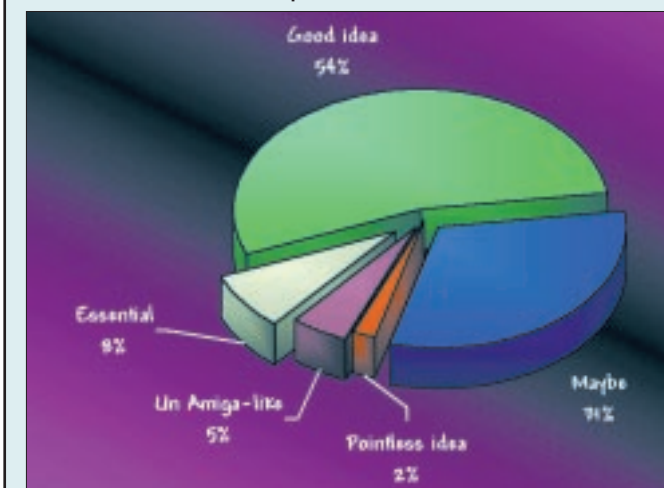
❹ Lastly (for the moment), which tools are considered essential by Amiga users? The real value of this graph (below) is that it illustrates which features of the Amiga its users would like to see changed, and which features they consider most important and wouldn't want to see touched with a bargepole.
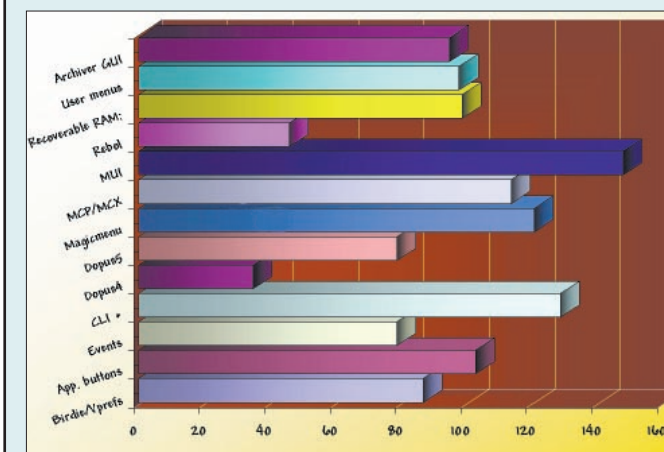
It's no surprise to see that MUI is the most popular - all that goes to show is that people want applications with a more powerful GUI. Interestingly, a CLI shell with enhancements such as drag and drop support is rated as the second most essential item.

Magic Menus in third place indicates people want to see more functionality from their menus, while a seventh place for User menus reinforces this. It's interesting to see how highly rated the importance of event scheduling is, and a static RAM (Random Access Memory) drive also proved highly popular.

initial results

Inspired by AMIGA?

On Trial — Open Source Amiga OS

Holding court this month, Judge Jason Compton exercises judicial review over the current clamour for Gateway to release the AmigaOS as open-source.

"There are few people who can handle the intense pressures of maintaining an open source project..."

Gateway has all but given the great kiss-off to the existing Amiga technology. Some enterprising Amiga owners have decided it's only fair that Gateway should simply place the entire AmigaOS source code into the open source domain, under licensing terms favourable to independent developers. Calling themselves the "Campaign to Open Source AmigaOS", they have already petitioned Amiga Inc. with the endorsement of open source front-man Eric S. Raymond.

We put Gateway and Amiga Inc. under the microscope: Should they accede to the Campaign's demands? Or is this just another short-sighted, all-talk-and-no-action user initiative that they'd do well to shrug off?

Case for the Prosecution

"We strongly believe that the time has come for the AmigaOS to be released as open-source, under terms similar in spirit, if not in wording, to that of Linux. Amiga LLC would be freed from pressures to continue development of the Amiga Classic line, yet be in a prime position to exploit their name recognition by bundling manuals and support with the final product - all at no cost to them!

"We are prepared to state in court that which was left unsaid in the Campaign's own petition: Gateway is doing precious little with the OS and, in fact, has very little to lose. Haage and Partner's OS 3.5 represents what can be achieved working within some serious market constraints, and their promised future upgrades may be rendered impossible by shrinking market share. An open-source AmigaOS has the potential to spread far and wide: to other 68000-based platforms (such as millions of Macintosh computers, strangled by the inefficient MacOS), and to new CPU platforms as well. We believe that the work that should have been done by Commodore over 5 years ago can still be done today.

"Amiga developers have already shown a great deal of ingenuity within the closed-source constraints of the past 14 years. Imagine what they could do by integrating their visions directly into the core of the operating system! We urge the court to order that AmigaOS be opened."

Case for the Defence

"The Campaign claims in their manifesto that open source is a public relations victory. This has been shown to be false, time and time again. Netscape's open source project is a browser that, for all its hype, is in many ways far inferior to current Amiga offerings. Sun's open source license for the Solaris OS has been roundly slammed. Even the GPL, the most popular open source license, is often criticised - even by those who benefit from it!

"When open source advocates speak of CPU migration, they very casually overlook application support, or use the facile 'we will recompile applications' as an escape. Most Amiga applications are closed-source, and their source is rarely available for recompilation. The Amiga PowerPC experience has shown that even when source code is available, there is no guarantee that recompilation will happen. Finally, witness the Linux experience: despite a multitude of supported CPUs, most apps are only available for x86 Linux.

"This is not an opportunity for Amiga Inc., as the prosecution would have you believe. It is a nightmare waiting to happen. Developers need support and co-ordination, and they will not be likely to get it from a disparate group of Amiga enthusiasts. There are few people who can handle the intense pressures of maintaining an open source project, and they're already spoken for."

The Verdict

After careful consideration, this court finds for the Campaign and order Gateway to release the AmigaOS source under a liberal license policy. However, the court has words for the open source advocates as well.

If the petitioners are expecting this to "save" the Amiga, we strongly suggest they rethink their goals. Open source is not a panacea. It does not guarantee success. While Linux has succeeded, there are dozens of open source and public domain operating systems that have gone nowhere. It will take much more than good intentions to make an open source AmigaOS thrive - it will take co-ordination and concerted development.

It is the belief of this court that this effort may well be best served in an open-source model, no offence intended to the efforts of current OS "caretakers" Haage and Partner. The court is, however, very troubled that the Campaign to Open Source AmigaOS does not address this important party, and recommends that the situation be rectified immediately.

Jason Compton *A*

Rants and Raves — Spam, egg and spam

It's against ISP rules of conduct, deeply anti-social and totally legal...

It's difficult to believe that so much aggravation and annoyance can be described by such a small word. To those of us that remember our school days, it had an entirely different meaning, but in today's society, of electronic mail and public forums of discussion, SPAM can mean much more than tasteless meat fritters covered in breadcrumbs.

Unsolicited mails, by whatever means of transmission, can be the most unwanted and uninvited things to grace the Internet, and can spoil a lot of its enjoyment. When you balance the plus points of being part of the online community against the minus, the scales are tipped very much in favour of the good, but there is always going to be some small-minded individual with genitalia smaller than his grape-sized brain about to spoil the day.

Now, spam has started arriving by ICQ, the communication protocol started up some time ago by Mirabilis. This just goes to show that these microbes will stoop to any level in order to push their services, most of which consist of Get-Rick-Quick schemes, and "secrets to success."

A favourite is: "Send me $25USD and I'll show you the secret of how to make a fortune in 3 months." Now, any self-respecting idiot might well think this plan would be fool proof, but stopping to think for a moment, anyone with any sense would realise that the secret is only too obvious. Sending out e-mails asking for money to learn the secret of money making is the secret. Simple eh? Perhaps we should all pretend to be millionaires, claiming to have made it in just seven weeks with the best money finding secret of all time, and e-mail it to every address in the central database of known spammers? Give them a taste of their own medicine?

Although in essence a truly wonderful idea, most would never get to see the mails, let alone be angered by them. All that's left, then, is giving them the inconvenience of having to find another service provider after their existing account has been closed for misuse. Oh, in an ideal world...

Simon Archer *A*

BeOS? I don't think so!

We all know how easy it is to look at the alternatives, but sometimes we forget just what we've got.

These days, it's not uncommon to catch Amiga users glancing wistfully in the direction of BeOS - and why not? It's a very Amiga like OS, but thoroughly modern, with a company actively pushing it, continual development and nice modern hardware. Maybe it's time to move over? Won't BeOS give us what we want out of our Amigas but without the dated systems and lack of development? Hardly.

Let's just take a rational look at BeOS. Nice OS, modern layout, quite Amiga like feel, companies like Metacreations and Maxon developing for it. It's even got a quite Amiga-like community. Unfortunately, it is simply way behind what we have as a platform for everyday computer use. True, Gobe Productive is a pretty tasty combined office package. We can get along pretty well with Wordworth Office or an equivalent Finalwriter based collection, though, and do rather better on the database front.

There are some pretty decent audio apps for Be, but again we don't do too badly with Octamed Sound Studio, Soundprobe and the like. On the graphics front, Amiga wins hands down with FXPaint, PPaint, ArtEffect, ImageFX, Candy Factory, Photogenics, TVPaint, DPaint, Wildfire, Fantastic Dreams. For 3D, they have Bryce and Cinema 4D in development, but currently just a few ported shareware apps to compete with Tornado3D, Aladdin 4D, Imagine, Monzoom, and older but still powerful versions of Cinema 4D and Lightwave. As for games - they've got Quake 2, but that's basically it. Would you trade all that Amiga Internet software for a browser that boasts SSL and PNG support as great new features? On a slight tangent, how many BeOS magazines do you see?

Don't get me wrong, I like BeOS a lot. If Amiga LLC do nothing, all the current Amigas burn out and QNX fall into the sea, it's good to know there is another alternative OS out there worthy of our attention. However there's a real grass is greener syndrome going on here - we've got a realistic alternative computing platform that can be and is used as a real, day to day computer system. Let's try to remember all the good things about the Amiga for a change, and put a little more time into enjoying (and buying!) all that great software that's available.

Andrew Korn *A*

Above: Yes, nice, but I think I'd miss Directory Opus Magellan too much.

Total Networking Solutions

No need for your computer to be lonely any more - networking offers many benefits, and it really isn't as hard as it sounds.

Much like the early days of the two-car family, we are now seeing the growth of the two-computer family (and often beyond). The reasons for having more than one machine can be vast. Perhaps you work from home? Maybe you upgraded and kept the old machine for the kids to play with? Perhaps you have a desktop computer and a laptop, or a mixture of different platforms?

My family is a classic example of where the modern wired family could be heading. We have three Amigas (an A3000, A4000 and an A1200) two PCs, one Apple Mac and two PC laptops spread among the various people and rooms in the house. However there is only one Internet connection (over a single phone line) and only two printers.

Now obviously this is an extreme example. You're more likely to have two or maybe three at most - although many small businesses will have more. The point here is that all these machines can co-exist quite happily on an individual basis, but problems would soon develop when you have several people wanting to use the machine with the modem or the one with the colour printer at once.

Sharing Resources

The way to solve these problems is to network the machines together - a single wire connection from one machine to the other, allowing each machine to communicate with the other in variety of different ways. For example, you can share drives, devices and Internet connections without having to physically connect them to each machine or take on the expense of buying duplicate peripherals, installing extra phone lines or having multiple cables trailing around the house or office.

Many games support multi-player modes, either over the Internet or locally between machines, while cable modems and the soon-to-be-launched ADSL service will offer an Internet connection fast enough to be worth sharing between multiple machines.

Certainly in the Amiga world, many homes have more than one machine. This often takes the form of one early machine (such as an A500 or a CDTV) and a more recent offering such as an A1200 or A4000. The former is often confined to the loft or the spare room given that in its current form it is both under-powered and hard to expand. Not so!

Networking doesn't have to mean Ethernet (a luxury not available to A500 owners without a lot of creative soldering). Other options are available that can allow a basic machine to take advantage of the modern equipment connected to a more recent model, such as Zip drives, CD-ROMs and high density floppy drives.

How do you transfer files from an Amiga to a PC or Mac? The chances are that it involves a DD floppy disk, the PC0: dosdriver and physically walking from one machine to the other. It doesn't have to be this way.

Parnet and Sernet networks

It's quite possible to connect two computers together without the expense of network cards and TCP/IP stacks. The Amiga features two built-in ports specifically designed for communication with other hardware devices (computers, printers, modems etcetera) - the parallel and serial ports.

Parallel networks use a parallel cable, called a Laplink cable in PC circles. Serial networks uses a serial cable known as a Null-modem cable. Both are readily available from both Amiga and PC accessory dealers. There are literally dozens of different Parnet and Sernet software tools on Aminet (with a collection

"Pronet ...certainly the best Parnet variant we have tested."

on this month's CD); most are freeware, but some are shareware.

Using this kind of network will let you share the drives of one Amiga between it and a second machine. Parnet solutions normally work on the basis of a master and slave machine, with the slave unit becoming the host for the drives to be shared while the master has remote access capability to the available drives via the cable link.

To create a Parnet link you need to install a driver on each machine (normally called parnet.device). These devices when launched create a gateway from one machine to the other with the port name of "Net:" or "Network:" - a set of assigns is then used to mount the slave devices on the master machine. Sadly, the vast majority of Parnet tools only support Shell access, rather than mounting the PC devices on the Workbench. One that does mount drives graphically (allowing drag and drop file management) is Pronet, which is certainly the best Parnet variant we have tested to date.

You also won't get particularly stunning transfer speeds from the connection, especially if you use the Amiga's own parallel port. Parallel transfer is incredibly CPU intensive so don't be surprised if your machine gets close to locking up during drive access over the link. The Amiga parallel port can reach up to about 40KB per second, if your CPU can keep up. Switch to a decent add-on port, and you should see these speeds at least double. Most Parnet packages now have the option to specify an alternative parallel device, so using a different parallel port should not be a problem.

Sernet is much the same, only using the serial port which does not suffer from the same CPU bottlenecks (though the Amiga's own port is not that spectacular in its performance). Software support is much the same as for Parnet, while optimised versions also exist for use with the CD32 and CDTV. Although serial is less CPU intensive, without an add-on card, it is significantly slower than parallel networks. A good add-on serial port such as the new Silver Surfer or the Whippet will happily manage 115Kb/s (14.4KB/s) and beyond. In theory, most A1200 clock-port serial cards should manage over 400Kb/s without breaking a sweat.

The other added advantage of a Sernet link over a null-modem cable is that many multi-player games (Quake, Doom, Skidmarks, and Stunt Car Racer for example) have direct support for link-up over it. Parnet is generally not supported because of the CPU overhead of such a link, which would slow the game down. Various packages exist on both Aminet or from Amiga dealers that also allow you to connect your Amiga to a PC in this way. By far the best is Network PC from Weird Science. It's a Parnet solution including both the software and the necessary cable, but unlike most Amiga Parnet versions, it is not
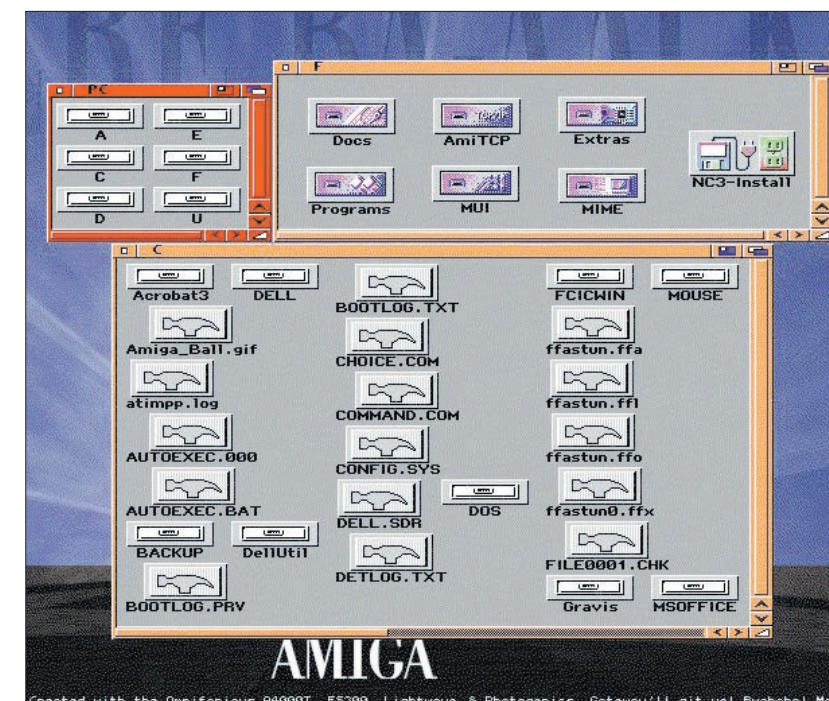
limited to shell access. Instead the PC (which is the slave unit in the link) is mounted on the Amiga as a partition, allowing both Drag and Drop and Shell access to its devices. Each drive on the PC is presented as a folder within the PC: partition. Most static and removable drives are supported, as are long filenames. Again, you will not get a blistering transfer rate using the Amiga's own parallel port.

Make Mine Ethernet!

The serious solution to networking is Ethernet, the network card standard. These can be used with any Amiga with Zorro slots or a PCMCIA card slot (A2000, 600, 1200, 3000 and 4000). The main options available are for Zorro users are the Ariadne-II (contact Blittersoft) and the Hydra (contact Eyetech). A1200 owners can locate their own compatible PCMCIA Ethernet card and use with the cnet.device drivers, or take a look at the nicely priced Power Computing Hyperlan, reviewed elsewhere in this article. White Knight Technologies are another good company to contact for networking hardware. If you are planning on networking your Amiga to a PC or Mac, you'll have to investigate the options there yourself, however we hava a word of advise - avoid the cheapest PC ISA Network Interface Cards, they are usually more effort than they're worth.

There are basically 2 different ways of connecting two machines with Ethernet cards together - directly, or through a hub. If you are connecting more than 2 computers together it makes sense to invest in a small hub - these cost as little as a few tens of pounds. All the computers on the network connect to the hub via an RJ45 patch lead, which has sockets rather like oversized BT 'phone plugs. Coaxial connections are cheaper but far more trouble if you are connecting more than 2 machines. The essential thing to remember with this kind of connection is that it isn't just a matter of buying a coaxial cable with BNC connectors and wiring the two together.

Above: Pronet allows access to a PC's drives via an Amiga.

Coaxial Ethernet connections are very susceptible to impedance problems. It is essential to use a cable specifically designed for the job, and it is essential to terminate it properly. For this kind of connection you will need two passive BNC terminators and two BNC 'T' adapters. The 'T' adapters are connected to the BNC sockets on the network cards in the two machines, and the cable is connected to one leg of each adapter. The terminators are then connected to the BNCs on the opposite end of the 'T'.

If you want to use Ethernet to connect two Amigas together you have one very simple solution - order Envoy 3 from Weird Science (+44 (0)116 2463800). It's pretty easy to use and supports the mounting of hard drives across the network as well as network printing. You can produce more complex TCP networks, but why bother? Unless, that is, you want to connect your Amiga to a type of computer than cannot run envoy...

The multi-platform LAN
Thanks to the development of such user-friendly TCP interfaces such as Genesis and Miami, it is easy to a multi-platform LAN either as a means to distribute an Internet connection or internal mail, or as the basis for file and printer sharing.

For this example, we are using the new version of Genesis supplied with Netconnect 3 to connect a two-machine network of an Amiga A3000 and a PC running Windows 98. The Amiga set-up information can also be used for configuring an Amiga-to-Amiga network as well.

After connecting your machines together with the appropriate cable (in this case BNC coax cable), it is necessary to identify your Amiga's network card to Genesis (if you haven't already done so). In Genesis preferences, select the Interfaces option and create a new entry.
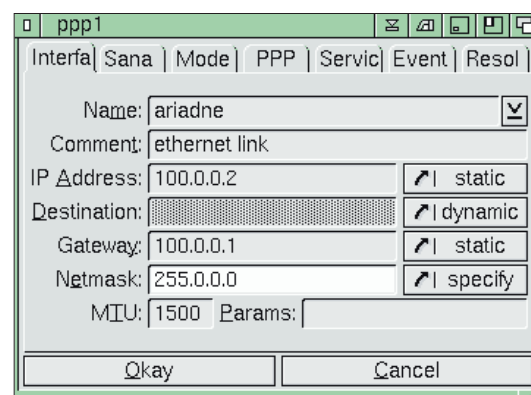

Here you can record various information such as the name and type of card, as well as setting an IP address (ensure that the number you choose does not clash with that of your PC or any static IP address you may be using for your Net connection). You also have the option of defining a Netmask (a decoy IP address that will be visible to the outside world but have no actual function). You can also define a gateway address, the source location on your network of your Internet connection, so that it too can be distributed as a network resource.

Onto the next tab (Sana II). Here you can actually select the network card driver to be used by Genesis for communications to and from your network card. Most install scripts place network card drivers in DEVS:Networks.
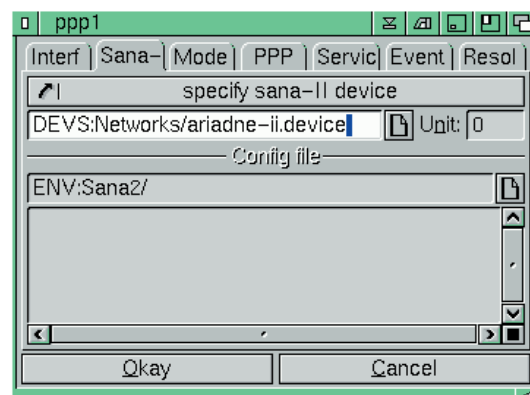
Onto the Services tab, where you can make sure your network starts as soon as Genesis launches. After doing this, select OK and your preferences will be saved. Now check the database settings, where information on all the available devices on the network is stored. In this instance we have the Amiga and a Windows 98 PC. You are also able to associate names with each network connection (as this is easier to remember than a string of numbers). Make sure that you select a unique valid IP address for the machines on your LAN - 100.0.0.x (as shown in the example) and 192.168.0.x are the two most commonly used.
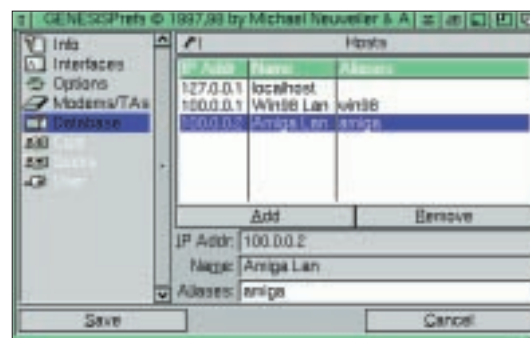
Over on the PC side of things, life is also very simple. Windows 95, 98 and NT 4 all handle network configuration the same way and it is just as

"...access native Amiga drives as if they were PC devices..."

straightforward. Your network card will already be defined to the system if it is Plug and Play; you just need to go into Control Panel/Network. From here select the networking device from the window and select preferences. Just as previously, you define an IP address, Netmask, Gateway, alias and auto-connection settings.

With this completed on both machines, you will now be set to communicate between each other. Use a utility such as Ping to test the link between machines - you can do this on an Amiga or PC shell by typing 'ping' followed by the IP address or alias of the other machine (assuming the ping command is in your path).

You can take the link further by file and print sharing. Various options exist to do this. For accessing the Amiga from a PC, I recommend Amiga Explorer, supplied as part of the Amiga Forever

emulation package from Cloanto. This is basically a patched version of the Windows Explorer file manager that allows you to access native Amiga drives as if they were PC devices. You can use the Network Neighbourhood to access any DOS partitions on the Amiga. For both sides, various mountlists and utilities are available on Aminet to mount each machine's drives on the other. The most powerful networking utility is the deeply user unfriendly Samba, which is a server that you run on your Amiga to allow a PC on the LAN to recognise it as part of the Windows 'network neighbourhood'. However, the complexity of Samba is such that it is beyond the scope of this article to explain it, you'll have to wait for next month.

It's not just about file sharing, of course. One of the most popular questions asked about networking is "Can I share an Internet connection", and the answer is yes. It is even just about possible over a serial

Network cards for the A1200 are nothing new, thanks mainly to its PCMCIA port and the glut of PC-targeted Ethernet cards designed for this interface.

Sadly, while these cards have been both cheap and in copious supply, the various repackaged cards with Amiga drivers have been both vastly overpriced and hampered by technical problems with the vast majority of motherboards.

The PowerLan pack consists of a cheap, basic but reliable Genius Ethernet card, freeware driver software and some demo networking software. All this is bundled together with a small hardware fix to correct the lack of a card reset signal to the PCMCIA port (unnecessary for the likes of a Squirrel, but essential to for an Ethernet card to reinitialise if the network connection is lost etc).

The supplied software consists of the freeware cnet.device, a generic PCMCIA Ethernet driver (available from Aminet) plus the necessary system libraries to support it. Power has created an install routine that gets it all into place and actually working first time. The machine we tested the card on already had the reset fix so it was just a case of installing and resetting. On restart I quickly had it talking to an A3000 across a peer-to-peer network at an acceptable 250KB/sec using Genesis. The Genius card offers both BNC and RJ45 connections on a single socket dongle.

This is fine for people still using desktop 1200s (that's what the card and connector dongle were designed for). For towered machines, it's a case of leaving a blanking plate off the back of the tower or fashioning a custom bracket to hold the dongle up to the back of the case.

Installed along with the drivers whether you want it or not are a demo version of AmiTCP 3 and the Samba file and print server. Apart from decompressing the two archives containing these files to a folder on your hard drive, nothing is actually done to help you in getting either working (and neither could be accused of being user-friendly straight out of the box).

Instructions are pretty dire, consisting of a readme file on the first disk explaining quite badly how to configure and finish installing AmiTCP and Samba, along with an ASCII diagram of where to solder on the Reset fix. Power say this package is not aimed at complete network novices, but experienced or not, if users are expected to take a soldering iron to their machines as in this case, they need the back-up of clear, well illustrated printed instructions. If you stripped out the Samba and AmiTCP archives and included good soldering instructions, this offering would be fine. Transfer speeds will never be stunning across this heavily CPU-intensive port, but it will be much faster and more reliable than any serial or parallel connection.
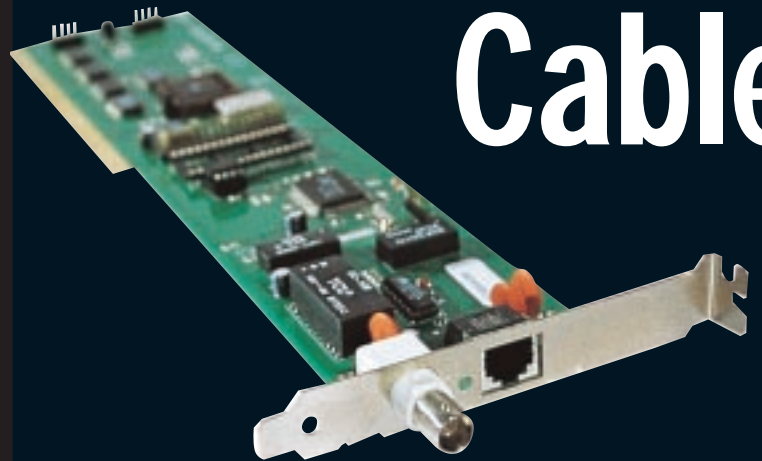
PowerLAN 7/10

SUMMARY: At last! A cheap, ready-to-go PCMCIA Ethernet card, only let down by the hastily cobbled together demo software and the lack of a decent manual to support the installation of the reset fix.

network, but ill advised. The most common scenario is that someone has a PC with net access (maybe the modem came with it, maybe it's in a different room, maybe it's connected to some service whose operators don't support the Amiga) wants to get that same access on the Amiga. The best solution we have found is an incredibly cheap and simple Windows shareware application called PPPshare (www.pppindia.com). All you have to do is run the server on the PC and tell your Amiga apps to use a proxy set to the IP address of your PC. HTML, FTP, e-mail, news, ICQ and so on are all supported, and, with a socks capable TCP stack on your Amiga, you can even use it for SSL.

In the near future, Ethernet will become even more attractive, as increasing demands are put on network speed. Take broadband Internet for example. If your modem is already giving your serial port a hard time, what's going to happen when you replace it with a high speed modem? The answer is that you'll be needing that fast Ethernet card just to talk to it. Just check out the box on ADSL and Cable modems. The ability to seamlessly connect and interact with other machines can not only inject new life into an otherwise unused piece of hardware or software, but can also open up new computing opportunities.

Chris Green,
with Jason Compton and Andrew Korn Ⓐ

Cable Modems
vs ADSL

Don't believe the "Windows 98, Macintosh OS 8.5 and above" hype. Almost any Internet-ready Amiga with an Ethernet card can easily be hooked up to a cable modem.

Cable modems operate over fibre optic coaxial cable traditionally used to carry television signals. Newer grades of cable allow for tremendous bandwidth to be transmitted both to and from households, so it was logical to put Internet data in the unused space. A cable modem separates the data from the video and passes it along to your computer.

A common knock against cable modems is a lack of security. Typically, a block of houses will be part of one bandwidth loop: in effect, a neighborhood LAN. This makes it easy to steal data from others, say the critics. But most intelligent cable modem deployments use encryption between the cable modem and the cable ISP router, which doesn't require any intervention on the user's part. And you shouldn't need to be reminded by now that the Internet is inherently somewhat insecure, neighborhood LAN or no.

It is fairly common for cable modem operators to limit upstream access to 128k. NTL currently caps downstream access at 512k-higher speeds are quite possible over fiber optic cable, but most service providers are proceeding with caution.

A more appropriate criticism is against the shared bandwidth itself. If all of your neighbors are conducting large downloads, your bandwidth is going to suffer. In part, that's why the cable companies are imposing bandwidth limits-to lower expectations, and help prevent a few rogues from taking up all of the network resources.

Most cable modem services do not assign static IP addresses, so a TCP stack that supports DHCP is critical. Keep in mind that the dynamic IP address will be a serious inconvenience to you if you had any plans of setting up a Web server on your Amiga.

Like a cable modem, the main barrier between your Amiga and high-speed access DSL (Digital Subscriber Line) is an

Ethernet card with a 10-Base T connector. Beyond that, feeding the basic configuration information into the TCP stack of your choice is generally enough to get going.

DSL transmits through standard copper wiring used for conventional telephone/modem service. It achieves speed far beyond a regular modem by exploiting a larger signal spectrum. It is not possible to deploy DSL until the phone companies install the necessary support equipment.

DSL comes in a variety of flavours-the most common, and least expensive, being ADSL (asymmetric DSL.) It is asymmetric in that the incoming and outgoing transmissions travel at two independent speeds. Typically, the upstream speed is a fraction of the downstream speed, sometimes as low as 128k bits per second.

In general, upstream speeds are locked and more or less guaranteed. DSL downstream speeds are directly proportional to your distance from the telephone company's DSL routing equipment-the closer you are, the better downloads you get. BT advertises up to 2 megabits per second, ranging down to 512k, but even this is not guaranteed, especially during peak periods. Typically, more expensive DSL options (such as SDSL, symmetric DSL) have guaranteed speeds, but at a serious premium that limits their appeal to businesses.

DSL modems have a continuous connection to your ISP once fully powered up, although that cycle can take 30 seconds or more, depending on the equipment. Initially, only select ISPs will support direct connections to their resources (such as POP/SMTP mail servers.)

Although DSL works over standard telephone wiring, it is not always the case that voice and data are shared over a single line. BT's ADSL implementation will supposedly use a splitter, to allow voice calls and data transmission over the same line, but in the US, where there are dozens of competing DSL providers, only some provide both.

Reviews Contents

NAME: NETCONNECT 3
DEVELOPER: ACTIVE TECHNOLOGIES
SUPPLIER: EYETECH
TELEPHONE: +44 (0)1642 713185
COST: £49.95 (upgrade packages available)
WEB SITE: http://www.eyetech.co.uk

NetConnect 3

The third incarnation of the Amiga's own "Internet-in-a-box" package.

Using an Amiga - or any other computer - on the Internet requires a number of separate pieces of software to work together. You can buy the various components separately and work out for yourself how to get them all to talk to each other, or you can let someone else do the hard work for you, leaving you time to enjoy the Internet experience.

NetConnect 3 is straightforward to install and set up. A single installer takes care of all of the programs in the package, as well as updating your MUI classes where needed. It then runs the Genesis Wizard, dialling into your ISP and setting up Genesis ready to connect you to the Internet. This worked faultlessly, although it would have been nice to have the e-mail settings in MicroDot configured from here or the installer. When you first run the Wizard, you have to type in your serial number. This is a whopping ninety digits long, and every one has to be correct!

NetConnect 3 is installed in a separate drawer, even if you are updating from NetConnect 2. You have the option to import messages, hotlists and configurations, but your old set-up is untouched. If anything goes wrong during the installation, or the new software clashes with your system for whatever reason, you still have a working NetConnect 2.

"...let someone else do the hard work for you, leaving you time to enjoy the Internet..."

Genesis, like any TCP stack, spends most of the time in the background. Its job is to handle the data and requests for data between your Amiga and the rest of the Internet, a job it does quietly and efficiently. The small Genesis window shows as much or as little information about your connection as you want. Most of the time all you need are the connect/disconnect buttons and maybe the online timer. You can iconify the window if you want no display at all - useful if you are controlling Genesis via its ARexx port. The online timer still has the limitation that it counts the time since the first interface went online, not the time for the current interface. If you have a LAN connection as well as a modem one, and the LAN is set to auto-online, the timer is virtually useless, effectively showing the time since Genesis was started.

Like other TCP stacks, Genesis keeps a log of the times each interface went on and offline. Unlike other TCP stacks, it is able to use this information to show you when you've been using the Internet and how much it's costing you. The Report window shows a list of calls made, with their costs, or a graph of your overall usage.

Mail & News

Despite the publicity given to the web, e-mail is still the most often used Internet service. The e-mail program in NetConnect 3 is MicroDot-II, which also handles Usenet news. Some people prefer to use separate programs for mail and news, but they have so much in common that it makes sense to use the same program for both. E-mail and news readers both download messages from the server for reading offline. Both programs have similar facilities for filtering, sorting, threading, replying and so on. Using one program, with one configuration to set up and one set of commands to learn saves time.
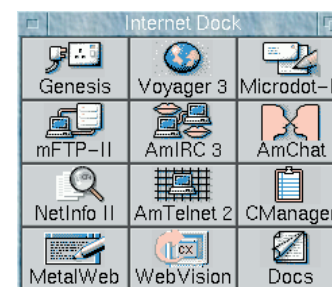
In keeping with NetConnect's aim of making Internet access easy, the emphasis in MicroDot is on ease of use rather than power features. It hasn't got all the bells and whistles of Thor or NewsRog, but MicroDot is much quicker to get started with. Once you've put your e-mail account details and server addresses in its settings, you are ready to go. Easy to use it may be, but this by no means indicates limitations - all the main features are there. Incoming messages can be filtered into separate folders, using a variety of methods.

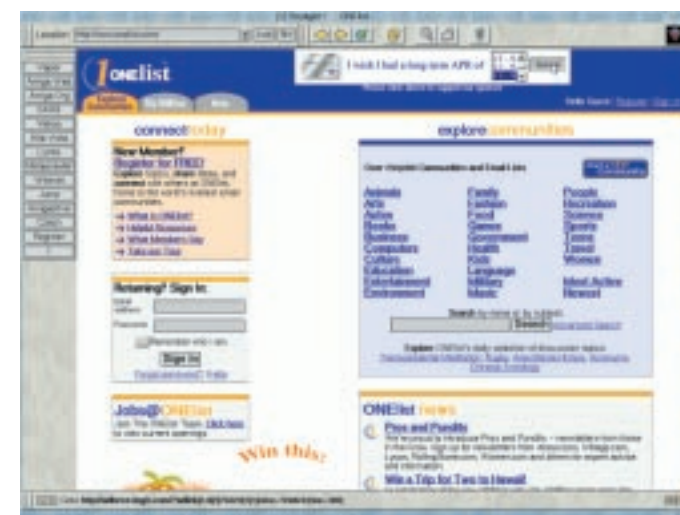This is essential when subscribing to mailing lists.

MicroDot has two modes of news reading. Offline mode downloads all new messages from your selected newsgroups, ready for reading offline. Online mode downloads the message headers only, you then select the individual articles to download.

Browse or chat

The version of Voyager 3 on the CD is not the finished version; that will be available for download from the Active Technologies (publisher) or Vapor (Developer) web sites when it's complete. However, this version is far more stable than the one we previewed in the October issue. There are a few bugs left, but nothing serious. JavaScript handling has improved, although it is still a little quirky at times. Table handling is much better than previous versions of Voyager, both in terms of speed and accuracy of layout. The tear-off system used for various GUI elements is a good idea let down by its instability - while it allows a great deal of configuration of the layout of the browser window, it does fall over at times. The Shockwave Flash plug-in now has a PPC version for increased speed and smooth animation, which is a welcome addition.

Above: Voyager's table handling is much improved - both faster and more accurate.
Above left: Octopus, the control centre of NetConnect 3.

NetConnect 3 has two chat programs. AmIRC is the definitive Amiga IRC program and received a glowing review last month, ICQ (pronounced eye-seek-you) is a newer method of online communication. ICQ lets you see when your friends are online, and provides one-to-one chat and file transfer. Multi-user chat is also possible, but is often better done with IRC. AmChat is a brand new ICQ program, challenging the more established (but harder to pronounce) STRICQ. It was only ready at the last minute, so there wasn't time to document it on the CD. Usage is largely self-explanatory, although the GUI isn't as intuitive as STRICQ's. It uses two windows for each "conversation," one each for send and receive, with the send window closing after each message is sent. This makes for a lot of mouse clicking when holding a conversation compared with the single window system used in other ICQ programs. It may be that there is a way to change this, but with no manual, it's impossible to say for sure.

Central programs

NetConnect 3 is an integrated suite of programs, not just a collection, so there has to be a central control point. It's called Octopus and is basically a dock panel to launch the various NetConnect 3 components. Octopus is fully configurable; you can change the number and layout of entries, the image for each one and the command to be executed when it is clicked. You could use it as a replacement for a ToolManager dock, or you could copy the settings from it to an existing DOpus or ToolManager button bar. There are some bugs with Octopus though. It sometimes cannot find the preferences program, although this can be cured by moving it from the Octopus drawer to the main NetConnect drawer. A more serious bug is that if you set a program to be run as a ▶

Getting online
Setting up a dial-up connection to your ISP couldn't be easier than with the Genesis Wizard...
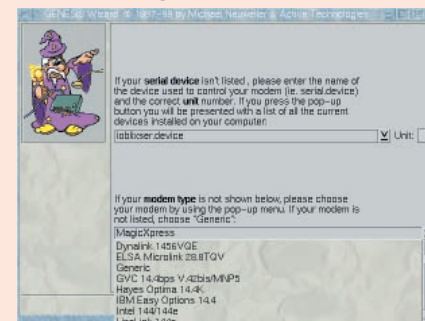
❶ Enter the name of your serial device and select your modem from the list provided. If your modem isn't listed, select 'Generic.' Press 'Next.' For most modems, the settings provided here need no alteration - so move onto the next page by pressing 'Next' again.

❷ Genesis needs three items of information to connect to your ISP. The telephone number to dial, your login name and your password. You should have been given all three of these when you opened the account - if not, ask your ISP. Enter them and press 'Next.'
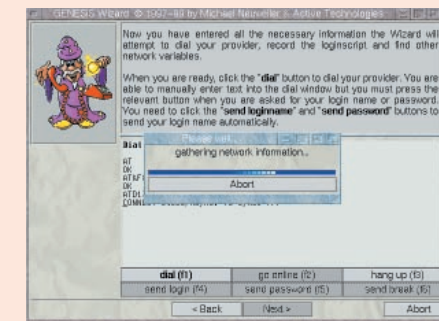
❸ The defaults given here should work with almost all providers. Press 'Next.' When you click on 'Dial,' the Wizard will connect to your account and retrieve all the extra information Genesis needs. It will then disconnect and save the settings for you automatically. That's it!

Your own web site in minutes, courtesy of MetalWeb...
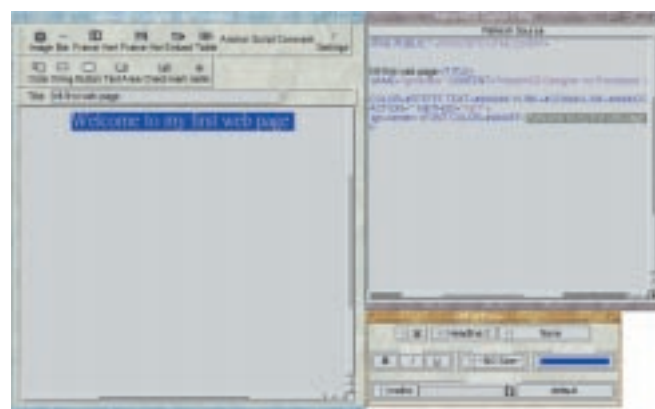
1 First, we give our page a title. This is only displayed in the title bar of the browser, so we need to add a headline to the page itself. Type your chosen title into the main window and highlight it by dragging the cursor over it. In the edit window, set the first gadget to "centred," the second to "headline 2" (a large font) and click on the 'Font Color' bar to select a suitably bold colour for your headline.

2 Type in some raw text - you can add styling later. Click the 'Image' button in the toolbar. Set the first gadget to "centred" and type a text label in the 'Alternate Text' box. Leave the 'Image Link' gadget empty. To add a list, type each item on a separate line, then select the whole list. Leave the text style set to "Normal," and set the top right gadget to "Unordered List." For it to stand out, set 'Font size' to "+1"
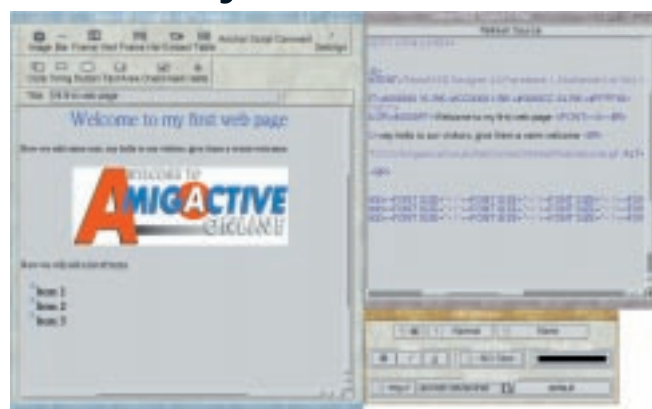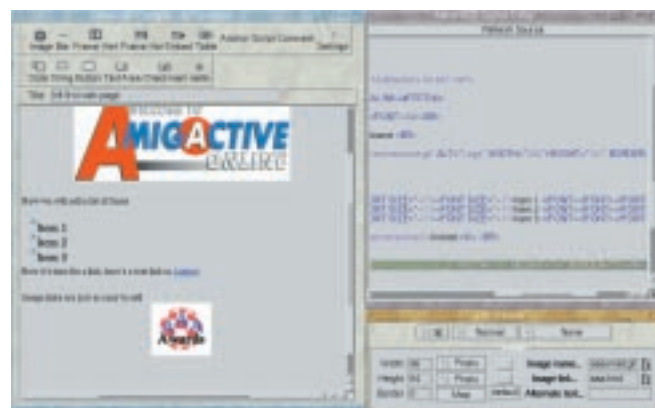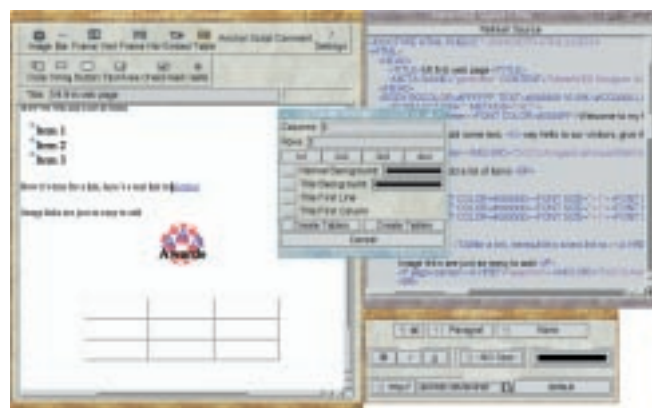
3 A web page without any links is very limited. To add a text link, select the text you want to be hotlinked. In the links options section of the Edit window, set the cycle gadget to "http://" and type in the address of the page you want to link to. An image link is just as easy to do. Set up the image as before, then type the URL to link to in the 'Image Link' gadget.

4 Tables are an important part of many web pages. To put one on your page, first create the table and then type in the text for each cell. Holding down the right mouse button over a cell will present you with a popup menu which will allow you to set various options for both the single cell and the entire table.
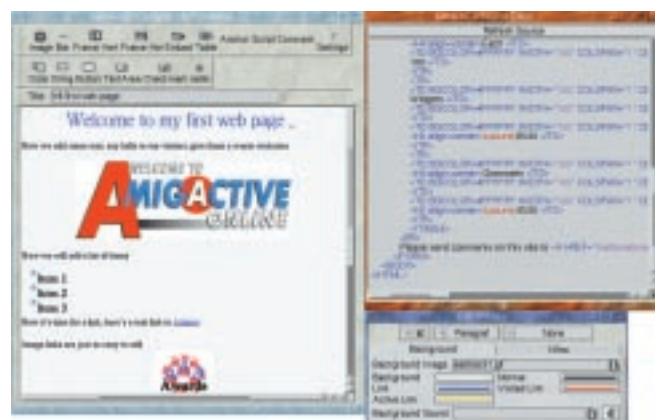
5 Two more things to add to the page. A link for visitors to contact you will give you feedback on the site. Use the same technique as the previous text link, except you set the gadget to "mailto:" instead of "http://", and type your email address into the box. Finally, we'll add a background image - click on the Settings icon in the toolbar and then click on the file requester button next to the 'Background Image' gadget.

That's it, your first web page. It may not win any awards, but it does show how easy it is to add the various elements of HTML to a page with MetalWeb.

▶ Workbench process, the program's executable file is overwritten. The standard set-up for all buttons is to launch programs as a CLI process.

Continuing the theme of centralised software, Contact Manager, a centralised address book, is available to all the programs in the NetConnect 3 package. Each entry can have a name, e-mail address, phone and fax number, web site, ICQ number, ftp site and postal address associated with it. Any Contact Manager aware program can use this information, saving the hassle of maintaining separate address books for each program you use. Some programs outside of NetConnect 3 can use a Contact Manager database too, such as IBrowse, STFax and DOpus.

There's more

NetConnect 3 comes with a selection of other programs, some updates from older version, some new. NetInfo is a useful tool for finding out about a remote site and your connection to it. It can trace the route data takes from you to the site, showing where a connection may be failing. The "whois" function will show you who owns a particular domain - this can be useful for complaining about spam or other abuses.

Telnet provides a direct connection to another machine over the Internet. It can be used for various maintenance purposes, although many servers now have a web interface for

this. However, you never know when you may need to use a telnet program, so it's good to have it available. AmTelnet is a good telnet program.

Previous versions of NetConnect included AmFTP for file transfers. This has been replaced with the new mFTP-II. We reviewed mFTP last month but this is a newer version. There are no extra features, but it does seem a lot more stable; notably the conflicts with the NListTree class seem to be completely cured.

Webcams are becoming increasingly popular. Every Amiga show has at least one, and there are plenty of others with more varied content. These are normally viewed through a web browser, a very inefficient way of doing it. NetConnect 3 includes the rather neat WebVision to display pictures from one or more webcams on your Workbench. Each camera has its own window and can be configured on how often to update the image, whether to only display them or save them too. If you lie awake at 3am wondering what's happening in Albert Square, fire up WebVision and check out the EastEnders webcam.

The last program in the suite is not for use on the Internet directly, although it was the most requested addition in a poll of NetConnect 2 users. MetalWeb is

a web page editor, designed to be used like a word processor. This is not a WYSIWYG (What You See Is What You Get) editor, there's no such thing. HTML is displayed according to the settings of the browser used; the page author doesn't have control over that. What MetalWEB does is to display the page in the way a typical browser would show it. You can write text directly onto the page, add images, create links, layout tables and deal with most other HTML elements.

While the main window shows the rendered HTML, another window shows the source. I found MetalWeb a bit quirky - changing the settings for one block of text could sometimes alter other text too. Adding links could sometimes result in a double set of link tags being applied. There didn't appear to be an easy way to remove such double links.

While MetalWEB has its limitations, it is good for those wanting to get started with HTML

without having to learn the various tags. The display of HTML source means that you would quickly gain familiarity with HTML while creating your own pages - see opposite for our mini-tutorial.

Is it worth it?

If you add up the cost of registering all of the NetConnect 3 programs separately, it comes to several times the cost of the package. Even if you only want two of them, say Genesis and Voyager, it's worth it. Some programs are a still a little rough around the edges, but development is continuing and updates are free. As a means of getting on to the Internet for the first time, NetConnect 3 is an excellent all-in-one solution. For those already online, it still represents good value for money: but just how good depends on the number of programs you would use.

Neil Bothwick A

Above: You can register Netconnect 3 online, but be careful with that serial number.
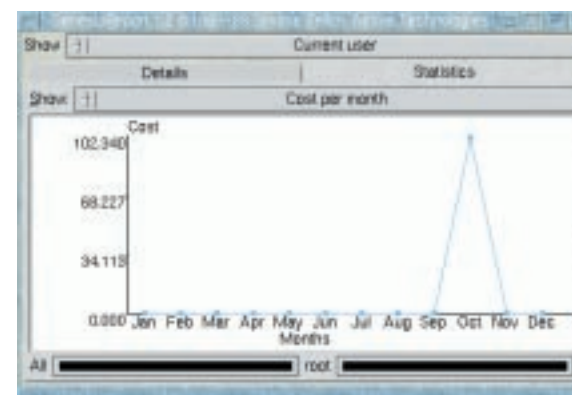
Above: Keep track of your online time and costs with GenesisReport.
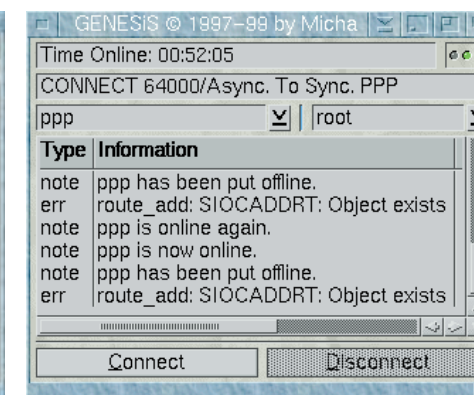
Above: Keep an eye on everything else in the main window!

NetConnect 3 **8**/10

SYSTEM: OS 3.0, MUI, 68020, 4MB RAM, CD-ROM drive

SUMMARY: NetConnect 3 provides an easy and economic way of getting on the Internet. Some of the newer programs need a little more work, but development is continuing.

FIRST EVER AMIGA MAGAZINE REVIEW

The Castlewood ORB

Up goes the storage capacity, down comes the price.

In the first issue of *Amiga Active*, we reviewed a selection of Zip and Jaz drives from Iomega. At the time, these devices were the only real contenders for the mass, removable storage device crown, at least as far as the Amiga was concerned. Now there's a new contender looking for market share in the portable media arena. Move over Jaz, make room for the ORB.

Castlewood, manufacturer of the ORB drive, was founded in 1996 by Syed Iftikar, former co-founder of Syquest (makers of the EZ135 removable media drive) and, before that, VP of Engineering at Seagate Technology where he developed the first 5.25" hard drive. With such pedigree, you'd expect the ORB to be first-class. Castlewood's web site proclaims it to be the "market's first high-performance, universal removable storage device." It comes in a number of varieties, of which three are Amiga-friendly - an internal EIDE and both internal and external Ultra SCSI units.

IDE like an ORB!

The first thing you notice about the internal IDE ORB drive is its size. From the front, it looks like a normal 5.25" unit with a bit of wasted space around the edges. That's because it's a 3.5" unit that comes pre-mounted in a plastic 5.25" tray. Take this off and it'll slide snugly into a spare 3.5" bay, making your internal floppy drive look (and feel) incredibly inferior.

Installation of the ORB mechanism into a spare drive bay only takes a few minutes, whilst in operation the unit is like any other storage medium worth its salt - nippy, reliable, and hassle-free. As with other removable media devices, it only takes a moment to set up the disk that comes with your ORB drive for use on an Amiga (see boxout), and within minutes you've access to enough disk space to archive half a year's worth of AACDs. Can't be bad.

Still not impressed? How about a more illustrative example: If you go online with a 56k modem it'll take you (assuming an uninterrupted download rate of 4,500cps) approximately three minutes to fill a floppy disk and six hours to fill a 100MB Zip disk. In true battery-powered bunny style, the modem downloading to an ORB disk will still be going five days later. Note: *Amiga Active* will not be held responsible for your phone bill should you attempt to put this example into practice!

Amigas in spaaaaace!

In everyday use, an ORB disk is as reliable as the filesystem you use on it. It may take you a few tries to get used to inserting an

on the label are "Do not drop," either. Still, you won't be playing Frisbee with it.

ORB disks also measure up remarkably well to the ageing floppy - about twice as thick and just slightly larger in surface area. Placed side-by-side with its nearest rival, the 2GB Jaz cartridge, you find out that both are of similar width and height, but the ORB disk is much thinner. Indeed, looking at one on its own makes you wonder where all two thousand megabytes of data can possibly fit inside the small, innocuous black casing. What's more, an ORB disk both looks and feels fragile compared to a Jaz cartridge, rattling disconcertingly when given an experimental shake. It isn't too reassuring when the first words you read

ORB disk into the device - if you push one in gently, it'll be spat back at you - it requires a firm "in and down" motion for a disk to be accepted. The mechanism then takes four or five seconds to spin up, flashing its LED from green to amber to let you know it's busy (and turning red if there's a problem, but that's only going from what the manual tells us - we didn't experience any problems whilst testing).

In practice, the IDE ORB drive didn't prove to be ultra-fast (see boxout), but this has a lot to do with the system we tested it on which lacked an enhanced IDE port along the lines of a Power Flyer. The maximum data transfer rate of the ORB drive as quoted in its technical specifications is slightly higher than that of its nearest rival, the 2GB Jaz drive from Iomega (12.2MB/sec as opposed to 8.7MB/sec), but don't expect to reach anything near these speeds on the Amiga's built-in IDE port. If you need the highest speeds possible, it may be worth investigating the SCSI version of the ORB - keep your eyes open for a review in a forthcoming *Amiga Active*.

Extra storage in minutes

Investing in some portable storage for your Amiga this Christmas? Expecting the delivery of a Zip, Jaz or ORB from Santa? Then you'll not want to waste time getting up and running. Just follow the *Amiga Active* step-by-step guide, based on the IDE ORB drive...

- Connect the ORB drive to the IDE cable and power supply. Turn on your system. Insert an ORB disk. Load HDToolbox - the ORB entry will appear as "unknown."
- Highlight the ORB entry and click "Change drive type" followed by "Define New."
- Click "Read configuration," then "continue." Don't worry about the negative values ("-1993 Meg") in the HDToolbox window - it's lying. Click "ok" - the Castlewood ORB drive now appears in the Drive Type listing (see below).
- Answer "ok" to the requester that pops up and you'll be returned to the main HDtoolbox window. The ORB entry will now appear as "Changed" under "Status," so click "Save changes to drive" and this will revert to "Not Changed."
- Now click "Partition Drive" to enter the partitioning window of HDToolbox. Delete the selected partition. Add a new one by clicking "New Partition" and then on the empty space. Highlight the second partition and delete it too, then expand the newly created partition the whole length of the disk.
- Change the name of the partition to "ORB0" and tick the "Advanced options" checkbox. Change the number of buffers (at the bottom left of the window) from 30 to 300.
- You can change the filesystem installed on the disk at this point, should you have a third party filesystem such as PFS
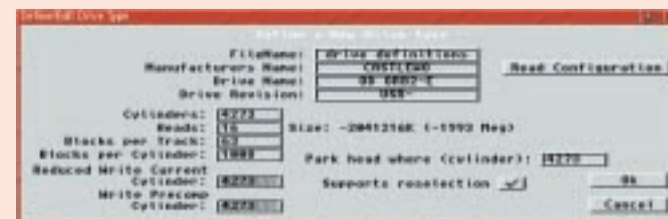
(reviewed in issue one of *Amiga Active*). Click "Okay" to return to the main window. The ORB entry will once again appear as "changed," so click on "Save changes to drive" again. You will be warned that committing to changes will destroy the data on the ORB disk.
- If you're sure you want to format your ORB disk for use on your Amiga, click "Continue" to change the status of your ORB drive to "not changed" once more. Finally, click on "Exit" and you will be informed that a reboot is required to make the changes take effect.
- Click "continue" and wait for your Amiga to reboot. Once it has, click once on the "non-DOS" ORB disk icon, and select "Format disk" from the "Icons" workbench menu. Give your ORB disk a suitable name and click "Quick Format." The "Format Request" window will pop up, asking if you are absolutely sure.
- Click "Format" to confirm your wish. Typically for this type of operation, you'll be warned again, so again, click "Format." The Format window will show "Initializing disk" and the light on your ORB drive will turn orange for a few seconds. Once initialized, the Workbench screen will refresh, showing a nice new disk icon for your ORB drive, which you can then position and snapshot at will.
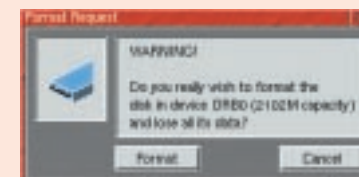
But the ORB's real selling point has to be the price-per-megabyte cost of storage space. At just £40 per 2.2GB, even the most productive Amiga users will struggle to break the bank. If you're after tons of removable media for backing up lots of data or storing a vast collection of MP3s or movies, look no further.

David Stroud Ⓐ

IDE ORB **8**/10

SYSTEM: Any Amiga.

SUMMARY: Tons of storage at an excellent price. Combined with a reliable filesystem and fast IDE port, you can't go far wrong.

How fast?

Wary of Castlewood's claims regarding the ORB's speed (as with any other manufacturer trying to convince you that their device is best), we ran a real-world test on the 2.2GB IDE ORB drive with a blank, FFS-formatted ORB disk.

We copied the CDTools directory from this month's coverdisc to a newly formatted (with the Amiga's native Fast FileSystem) hard disk partition and from there, copied it to several devices on the same machine, each of which was formatted with 300 buffers for consistency where applicable (i.e. excluding the RAM disk). The time taken for each copy

was measured in seconds, and each operation was performed three times, with the average being noted.

As you can see, the ORB wasn't a lot slower than the Zip... and bear in mind these speed tests were carried out with an FFS-formatted ORB drive on the Amiga's IDE port. Format an ORB disk with Professional FileSystem and route it through a Power Flyer and it should be nippy enough for most.
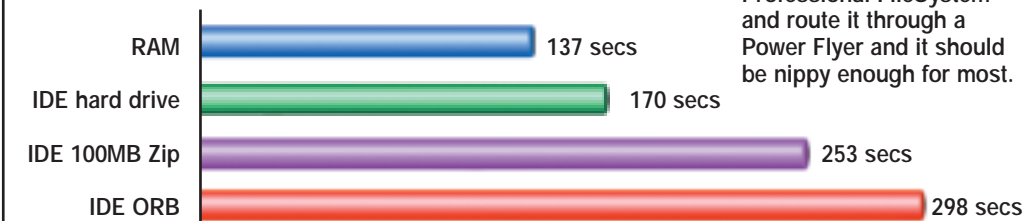
Device	Time
RAM	137 secs
IDE hard drive	170 secs
IDE 100MB Zip	253 secs
IDE ORB	298 secs

Houston, it's not a problem...

Apollo Z4 busboard

Give your A1200 more slots than Las Vegas with the addition of Apollo's Z4 busboard.

The A1200 has always been expandable to a certain extent, and more so with the advent of specially-designed A1200 tower cases a few years ago. Today, the beefiest A1200s can be kitted out with extra RAM, faster processors, graphics cards, sound cards, additional (and faster) serial and parallel ports, more (and much enhanced) IDE ports, SCSI devices, ethernet cards... even the humble clock port can now have a handful of devices hanging from it.

Zorro slots, however, form one corner of the expansion market that A1200s have never quite managed to grasp firmly. With the arrival of Apollo's Z4 board, that could all be about to change...

With the addition of a Z4 busboard, an A1200 is instantly endowed with five Zorro II-compatible slots (a video slot is aligned with the uppermost one for graphics cards which need it, but requires an optional enabler), two 96-pin nubus style "Z4" slots, and four clock ports (which should eliminate the need for a clockport expander to enable more than one such device to be installed). A floppy-disk style power connector is also provided

for BVision owners who need to supply extra power to their PPC cards in order to avoid problems with unstable systems due to lack of power.

Put a jumper on?
Installing the Z4 is quite easy with the provided pass-through for accelerators that already take up the A1200's expansion slot, although older accelerator cards may not work if their RAM clashes with the address space allocated to your newly acquired Zorro II slots. If you have an accelerator whose memory clashes with the PCMCIA slot, you will also find it incompatible with the Z4, but modern cards shouldn't cause any problems.

The Z4 busboard itself hangs from the other side of the accelerator passthrough, parallel to the A1200 motherboard. Supported (and held away from the motherboard) by a series of metal pillars in Power Computing's A1200 Power Tower, the Z4 busboard is powered via a pair of "standard" six-pin power leads. You may run into problems if you don't have such spare connectors hanging from your existing PSU - if your A1200 is in an ICS tower system, for example, you may find only four-pin power leads are

available. Standard PC power supplies on the other hand should have these connectors already fitted.

Provided on the Z4 busboard are a series of jumpers, explained in the accompanying manual. One is connected to the reset signal of the system and another three give autoconfig options to allow accelerator cards to work alongside Zorro cards, all of which have to be configured by the system on bootup through the A1200 trapdoor connector. This is not something it was designed for, so hats off to Apollo for the relatively simple end-user solution. Jumper selections for a small selection of accelerator cards are listed in the manual. The most interesting jumper on the board (if it isn't too geeky of me to say so) is the one labelled "Fast Z2." Enabling it will double the timing of the two uppermost slots, enabling faster cards to be used - when someone makes a Zorro II that can run in double speed mode, that is.

As a result of these slots being incompatible with existing Zorro II cards in double speed mode, and the provision of two Z4 slots, it is uncertain whether many fast-Zorro II cards will appear over the coming months. At the

Ports to starboard!

- **1 and 2:** Video slots for graphics cards like the Picasso IV.
- **3:** The first Zorro-II slot, aligned with the video slots.
- **4:** The second Zorro-II slot, which, along with the first, can be set to run at double speed for future Fast-Zorro II cards.
- **5, 6 and 7:** The other three (single-speed only) Zorro II slots.
- **8 and 9:** The two 96-pin Z4 slots for future expansion, including graphics cards and a planned Z4 version of the Power Flyer.
- **10:** Connector for optional Video slot enabler add-on.
- **11:** A fine selection of jumpers. Suit you sir.
- **12 and 13:** The source of all the Z4's power - a pair of six-pin power connectors.
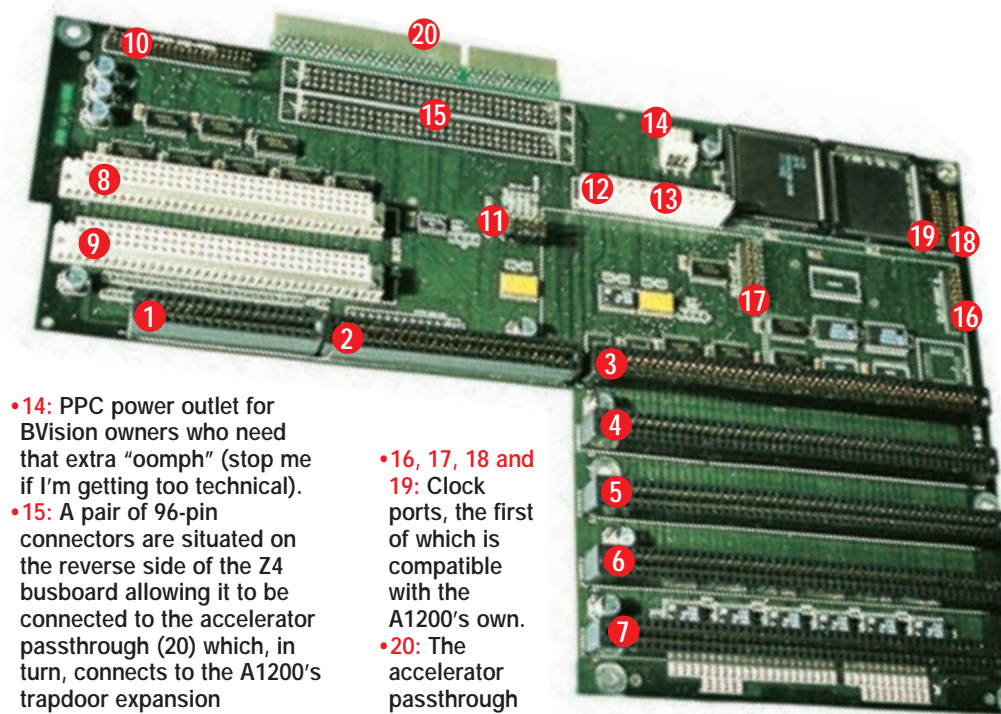
- **14:** PPC power outlet for BVision owners who need that extra "oomph" (stop me if I'm getting too technical).
- **15:** A pair of 96-pin connectors are situated on the reverse side of the Z4 busboard allowing it to be connected to the accelerator passthrough (20) which, in turn, connects to the A1200's trapdoor expansion connector.

- **16, 17, 18 and 19:** Clock ports, the first of which is compatible with the A1200's own.
- **20:** The accelerator passthrough connector.

moment, only a re-worked CyberVision 64/3D graphics card is close to release. Although it shouldn't cost any more than in its original incarnation, one has to question the potential of a graphics card with such outdated architecture - especially as the same card would still have about a third the memory access speed as it enjoys in a Zorro III slot anyway.

Z4 limited?
In use, the Z4 busboard behaves like the A1200's native expansion slot - you plug a card in, and it starts working immediately thanks to the autoconfig feature of Zorro cards. We transplanted an Oktagon SCSI card and Picasso II graphics card from the Zorro III slots in our A4000 to the A1200 via the Z4 board with no problems whatsoever.

Unlike native Zorro II and III, one of the limitations of the Z4 board concerns Direct Memory Access, or "DMA" - it doesn't have any, and it can't, because the A1200 trapdoor slot wasn't designed with it in mind. This means that Zorro II boards

installed in the Z4's slots won't be as fast as a big-box Amiga with native Zorro II capability or non-Zorro alternatives (a DMA SCSI add-on module for an accelerator card will beat a Zorro-II SCSI card installed in the Z4 board).

So what does the Z4 board provide for an A1200? At the moment, not a lot apart from Zorro II slots (albeit ones without DMA). Apollo are developing a graphics card which will use the new 96-pin Z4 ports and Elbox are working on a Z4 version of the Power Flyer (reviewed this issue on page 39) which will eliminate the requirement to attach it direct to the A1200 motherboard.

Seeing the future
Speculation is all very well, but buying the Z4 board for the Z4 slots alone at this stage would be akin to buying a fast car which needs a specially designed, yet currently non-existent make of tyre. It looks like it should perform nicely (although, despite the name, probably not up to Zorro III levels), but there's no

way of telling just yet. If you're looking for a Zorro-slot equipped Amiga, you may be better off scouring your local free ads paper or keeping an eye on Amibench (www.amibench.org) for a second-hand big-box Amiga with built-in DMA capable Zorro III slots, although this can get quite expensive as you'll need to replace your accelerator too. If your A1200 could do with some Zorro slots and you don't mind them being the slower variety without DMA, the Z4 board is the ideal solution. If, however, you're wanting to see just what will materialize to use the faster Z4 slots before deciding whether or not to part with your cash, you'll have to do the same as us - wait.

All of this means that, at the moment, the better half of the Z4 board is useless - there aren't any fast Zorro II or faster Z4 cards available, and only a handful are planned. Furthermore, for the extra clock ports to be of any use, new drivers will have to be written (or old ones modified).

Spending well over £100 to equip your A1200 with Zorro II

slots may be asking too much at this stage. As far as complete systems go, the Z4 will enable some moderately powerful A1200 towers to be built and sold by third-party companies. How many people there are out there who will want to spend upwards of £300 on an otherwise unexpanded A1200 with Zorro II slots and a Z4 graphics card is yet to be seen.
David Stroud Ⓐ

Apollo Z4   7/10

SYSTEM: A1200 tower with the correct power connectors.

SUMMARY: Plenty of potential, but little in the way of planned or existing Z4 or Fast Zorro II hardware. If you just want Zorro II slots for your A1200, look no further, but for fast Zorro (i.e. Zorro III), look elsewhere.

Parallel
Chillers
& Serial
Killers

HyperCOMmodity

The HyperCOM cards (made by VMC and available from Eyetech) come with a host of ports. The HyperCOM 4+ gives your Amiga four serial and two parallel ports, whilst the HyperCOM 3+ (pictured) gives you half this number, with the other ports still in place but lacking the required pins. In this kind of situation, it's usually worth spending that little extra to get double your money's worth, just in case you find yourself wanting to use a parallel or serial network in conjunction with a fast parallel printer or scanner (or both!) without needing to invest in a switch box (and then only being able to use one device at a time).

"...faster downloads theoretically equates to less time on-line and cheaper phone bills."

There's no need to put up with the Amiga's old, sluggish I/O ports any more. Print faster, surf with style... with the addition of just a little extra hardware.

The Amiga's internal serial port was designed many moons ago, with the unfortunate but unavoidable consequence that connecting to the Internet via a modem which utilises it is now a slow and laborious affair. But worry not, for there is light at the end of the information supertunnel.

The fact that the Amiga's internal serial port runs at a slower speed than more modern serial controllers are capable of is only part of the equation: DMA (Direct Memory Access) is the main issue. The internal serial port is quite capable of achieving speeds of over 4000 cps (characters per second) - adequate for downloading a few dozen e-mails of an evening. However, because both the graphics chipset and the Amiga's I/O circuitry have to compete for direct access to the Amiga's memory, data transfer speeds through the built-in serial port slow down when the native graphics chipset is called on to produce high-resolution and high-colour screenmodes. Needless to say, when you're surfing the web or downloading a large bunch of files, the Internet's own inherent latency (i.e. the fact that it can be dog-slow at times) alone is more than you should be putting up with. So what can you do about it?

DMA Designs.
One way to speed up web browsing and the like would be to use a 16-colour screenmode - but this isn't very helpful if you're looking at web sites designed to be viewed in more than 4 bit colour (anything other than Aminet, then). No, what you really need is a faster serial port that will free up DMA and download at top speed whatever resolution of screenmode you're using. It's not just about the

cosmetic difference of being able to view web sites as they were intended either - remember that faster downloads theoretically equates to less time on-line and cheaper phone bills. I say "theoretically" because what it usually means, in practice, is you spend less time doing what you need to do and more time looking up joke pages, cartoon sites and, well, we're sure you can use your imagination.

If you have an Amiga equipped with Zorro slots (that can include A1200 owners, thanks to Apollo's new Z4 board - see the review this issue starting on page 28), there's the Hypercom 3+, Hypercom 4+, IOBlix and Multiface3 cards. Meanwhile, for the Zorro-less Amigan, Power Computing's Silver Surfer will give your Amiga fast serial capability via the clock port.

The two HyperCOM Zorro cards are the same except for the number of ports; the 3+ has two serial and one parallel, the 4+ has double that. The Multiface 3 card is no longer available new but can make a good second-hand purchase. It has two serial ports, with a maximum speed of 115,200 bps (bits per second), and a single parallel port. The IOBlix, meanwhile, has four serial ports, up to 460,800 bps, and a single parallel port. An upgrade kit is available to add a second parallel port. The HyperCOM4+ boasts a similar specification, except that it already has two parallel ports. Although the serial ports on the HyperCOM4+ are able to handle speeds of up to 460,800 bps. Most modems only work up to 115,200 so the extra speed would only be of use in some rare situations, such as a serial network.

Hardware installation is fairly straightforward for all of the cards we tested. This is a good thing in the

case of the HyperCOM as the only installation instructions provided with our units were fairly brief - printed on an A4 sheet, in German. However, Eyetech assure us that this is a one-off, and that English instructions will be provided as standard with all HyperCOMs. No need to get out your German phrase book just yet, then. The IOBlix already comes with somewhat more detailed instructions (in English) and the Multiface card wipes the floor with its competitors on this score - it comes with a 92 page manual.
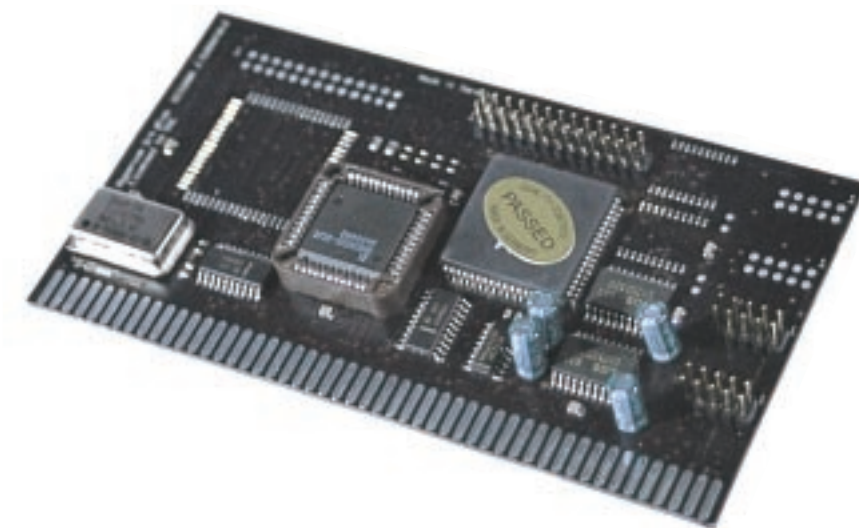
Each card is supplied with a disk of drivers and an installer script, making installation of the software quick and painless. As with most Zorro cards, the longest part of the installation was removing and replacing the case. Once the hardware and drivers are installed, it's just a matter of changing the device name in your communications software from "serial.device" to the appropriate one for your card.

Parallel evolution
All of the Zorro cards tested include at least one parallel port. If you use any program that prints graphically, as opposed to straight ascii (plain text), this will give an immense benefit. The parallel ports are not only much faster; they put far less load on the CPU when transferring data. This means your word processor or DTP program is able to get on with building the next page while the first is being sent to the printer. Printing a single page to a file from PageStream and copying it straight to the parallel

"...copying to the internal port resulted in a general sluggishness..."

port was almost twice as fast with all cards compared with the Amiga's internal port. More importantly, copying to the internal port resulted in a general sluggishness in operation of the rest of the machine - even the mouse pointer wouldn't move correctly - but there was no such slowdown when using any of the three Zorro cards. Exact speeds will vary depending on the printer, the software and the CPU. The parallel implementation on the IOBlix supports enhanced EPP parallel modes, which most cheap parallel scanners require (scanner drivers are, of course, a separate issue).

A1200 owners without Zorro slots can also benefit from the addition of a faster parallel port in the form of the IOBlix1200p, which attaches - you guessed it - to the clock port. Combined with its brother, the IOBlix1200s serial card and the Silver Surfer, these days there's no need to complain about the speed of your Amiga's internal parallel and serial ports. Both IOBlix cards are available from Eyetech (+44 (0)1642 713185), priced £49.95 each. If you're after a Silver Surfer, give Power Computing a call on +44(0)1234 851500. Availability of Zorro cards varies - as stated earlier, the Multiface3 isn't available new any more, so you'll need to keep your eyes peeled for a second-hand bargain. The Zorro II IOBlix is also available from Eyetech for £89.95, as are the HyperCOM 3+ and HyperCOM 4+ (£49.95 and £69.95 respectively).

Above: The HyperCOM 3+ Zorro card... plenty of ports, but still only half as many as the HyperCOM 4+!
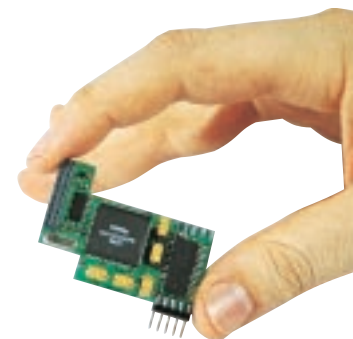
Above: The Silver Surfer from Power Computing looks a fiddly little beast, but it's easy to install and it won't take up a lot of room in your A1200.

Conclusion

The Amiga's internal serial and parallel ports are old and slow - there's no getting away from it. The good news is that you no longer have to put up with sluggish printing, serial or parallel networks, or affordable but incompatible scanners.

The web is the place where the most obvious benefit from a second serial port is realised - doing away with DMA allows faster, smoother, web browsing without investing in a faster modem. Extra parallel ports, meanwhile, are almost a necessity if you wish to use a printer and/or scanner in conjunction with a parallel network.

Finally, if you choose to invest in one of these cards (or need further reasoning for doing so), turn to our feature on networking on *page 16* to discover how you can use an extra serial or parallel port for networking purposes.

Above: The IOBlix 1200p parallel port from Eyetech.

David Stroud (A)

Testing, testing...

The tests were designed to test the throughput possible with the various types of data normally downloaded. Each test was repeated three times for each card, disconnecting and redialling between tests. The best result for each test was taken, to reduce any errors due to variable connection quality. In fact, the results were remarkably consistent for each card, even if initial connect speeds varied. Connect speeds ranged from 48,000 to 50,667, although the best results were often gained with a 49,333 connect.

All the tests were carried out using a Pace 56 Voice modem, flashed to V90, and dialling in on a Cable & Wireless phone line. The serial speed was set to 115,200 for the cards, 57,600 for the internal serial port. Setting the internal port to 115,200 resulted in unreliable connections and slower speeds. All of the cards were using the latest available driver software. The tests were conducted on an '060-equipped A4000 fitted with a graphics card. This gave ideal conditions for the internal serial port. Using a slower processor, or AGA particularly, would result in a reduction in speed for the standard port and an even greater advantage for the I/O cards.

The three tests were:

● 1) Download a 512KB LhA archive. This tested the download of compressed data, ruling out any effects caused by data compression on the modem. This is the sort of download you would encounter when fetching files from Aminet, or downloading graphics on a web page.
● 2) Download a 512KB text file, actually a mailbox file. E-mail contains a lot of compressible data, so this tests the port's ability to handle a data flow at a much greater speed than the nominal rating of the connect speed. This is the typical of the data downloaded when collecting email or downloading web pages.
● 3) Download 140 articles from the news server. This is compressible data once again, but in several streams. The news software was configured to open five connections to the news server, in order to fully saturate the connection.

The results:
(All speeds are in KB/s)

Serial port	Archive	MailFile	News
Internal	5.46	5.54	5.13
IOBlix	5.50 (101%)	5.93 (107%)	5.52 (108%)
Multiface3	5.49 (101%)	10.02 (181%)	9.48 (185%)
Hyper	5.58 (102%)	9.88 (180%)	9.52 (186%)

The percentage figures represent the improvement in speed over the standard (internal) serial port. They take no account of the lower CPU load and the advantages that it brings.

AWeb-II 3.3

The cutting-edge browser, updated for year's end.

Above: Our site looks fine, but the side buttons won't animate properly if you don't have image loading turned on.

I t's been well over a year since AWeb users were treated to an upgrade. Voyager and IBrowse were starting to catch up, adding their own JavaScript support among other improvements, and there were certainly some imperfections in 3.2.

JavaScript Follies
The good news is that JavaScript support has been cleaned up considerably and is now less buggy, generating fewer error messages. The bad news is that it's still nowhere near flawless, and there are still relatively plain JavaScripts that give AWeb fits. The one major, glaring flaw that has yet to be corrected involves animated buttons on JavaScript sites. When you move the pointer over a button, the associated animation plays. This works fine if you visit the site with image loading turned on, but if

you delay image loading, then click to load all images, AWeb won't pull down the associated button animation. Instead, it just flashes the static image at you. This has been a problem since version 3.1.

On the other hand, AWeb at least gives you some choices with JavaScript. It can be disabled altogether, you can trap all errors and choose to abort the script, or you can leave it running but opt to shut off JavaScript popup windows, the bane of anyone who's visited a web site hosted on a free server.

Secure transfer (SSL) support, only available via MiamiSSL, has been cleaned up and is much more robust. On my system, upgrading from 3.1 to 3.2 broke SSL, so I was glad to get it back with 3.3. The last version introduced a certificate verification process, which is meant to assure you that your secure transfers are truly with the right party. This is a fine idea,

and the PC/Mac browsers do the same thing, but AWeb seems overly sensitive - it issued authenticity warnings I could not replicate with any other browser, on an investment site I feel quite sure is genuine and secure. You can still opt to continue with a transfer you've been warned about, but false alarms can be dangerous.

Flexible Layout
The pull-down menu bars are now completely configurable - you can sort and modify existing options and keyboard shortcuts and even add menu headings. Unfortunately, a small bug surfaced on our test machine - the first menu bar was no longer wide enough to show the keyboard shortcuts!

You also have more control over the basic browser GUI. The toolbar is detachable (spawns into its own window), and the browsing buttons can now be turned off. The default quicklink buttons have been changed a little, and now offer easy access to a "Modes" settings window that is a shortcut to some of the most commonly altered browser settings, such as a JavaScript toggle and the "strictness" of the HTML interpreter. Also promoted in the button bar is FTPlus, Amitrix's extension to the basic browser FTP functionality that adds basic maintenance capability (like delete/rename), making AWeb a more full-featured FTP client. Configuring user name and password for new sites is somewhat clumsy, however. There should be a graphical interface, but instead you have to issue the hostname in "user@host:password" format.
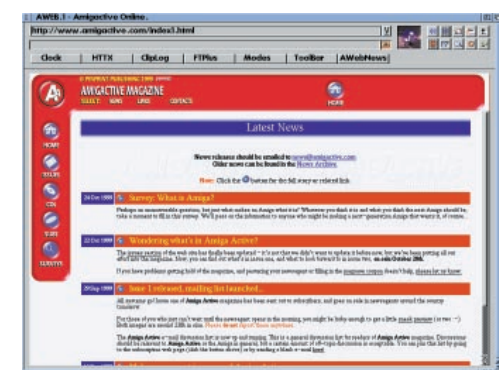
If I had one wish for something to be implemented in AWeb 3.4, I'd hope for all of the hotlist management to be finally integrated in one single interface. There are still three different ways to get at the hotlist: you can call it up as an HTML page or in one of two different types of window. Perhaps if the single manager had a button to "spawn HTML," we could finally streamline the process.

One quirky new feature is "save as IFF" which will render the entire length of a web page to a single image, without the AWeb interface. It's an effective way to take HTML screenshots, or if you take a fancy to having tapestries printed from your favourite online destinations, but the saver is fairly slow.

Registered users have little to fuss over: this is a free upgrade. If you're still looking to register your first Amiga browser, AWeb doesn't offer the rapid upgrades that Voyager has been enjoying, but is a well-rounded browser despite the fact it still hasn't quite mastered JavaScripts and leans on Miami for secure transfers.

Jason Compton (A)

Above: A very good HTML layout engine, but AWeb can struggle with some JavaScript.

Top Gear
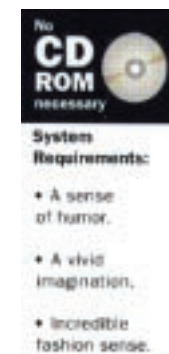
Fast, fashionable, funny or just plain cool - some more top miscellania for your perusal...

Blizzard Wizard

The Blizzard 1240 is more suited for installation into a tower system, but can be installed safely into a desktop A1200 thanks to the provision of an extra trapdoor cover. This has a circular hole cut out to allow unrestricted air from the fan mounted on the '040.

Covering the board with the provided trapdoor flap may prove frustrating if - like us - you are provided with one whose hole doesn't quite line up with the fan on the card. While this is a problem, it could be solved with the application of a file to enlarge the hole in the plastic cover (the fan on the '040 is very firmly mounted and wouldn't budge).

After installation, your A1200 will be boosted to nearly 30 MIPS (Million Instructions Per Second)

making your A1200 nearly 25 times faster than a standard 14Mhz '020 (normal benchmarking inadequacies permitting). The 1240 has a standard 72-pin SIMM (Standard Inline Memory Module) socket for installation of up to 64MB of RAM, rising to 192MB if a Blizzard SCSI kit (an excellent unit) is added to the board at a later date. The board also carries a MAPROM jumper, to activate the mapping of your Amiga's ROM into fast memory for slightly faster overall system operation. Board performance is class leading, and the original phase 5 manufactured version has proved nicely stable over time.

The 1240/40 can be upgraded to a top-of-the-line '060 accelerator at a later date, should you find yourself yearning for even more speed. Manufacturers DCE (who now produce several accelerators under licence from original developers Phase 5) will do this for you, although '060 chips are becoming increasingly difficult to come by these days. Still, an '040 running at 40Mhz should be enough of a speed increase for the casual A1200 user, and the price is right.

Product: Blizzard 1240/40 Turbo Board
Contact: Power Computing: +44 (0)1234 851500
Price: Tower model: £149.95. Desktop model: £159.95. SCSI-2 add-on module: £69.95

Slim 'n' Sexy

This slim CD-ROM drive from Power Computing boasts a quality not normally associated with computer peripherals: good looks. On the outside, it's sleek and sexy, whilst inside it sports an eight-speed mechanism - it may not set the world on fire, but it is sufficient for most needs.

It's an ATAPI (IDE) device, which means that it will connect to the IDE port on your Amiga's motherboard via a ribbon cable. An IDE splitter, IDE '97 software and cables are included in the price. This is an easy and effective connection solution, but leaves you with the problem of looping a ribbon cable out of your Amiga, which won't look quite as sexy. Neither will the requirement to power the unit from an external PSU - a problem you won't come across with a towered Amiga and an internal drive.

If you're serious about upgrading your system, you'd be better off investing in a tower and an internal CD-ROM, but this UltraSlim drive is a handy solution for anyone needing to add a CD-ROM to a less kitted-out Amiga. Whatever you decide, don't worry: Power sell towers too.

Product: UltraSlim CD-ROM
Contact: Power Computing: +44 (0)1234 851500
Price: £59.95 (with IDE '97, IDE splitter and cables)

Short 'n' ugly

You've probably never thought about Bill Gates in his underwear, but if you get this book you'll find out just what he looks like - in artist's impression only, thankfully.

In what must count as some of the worst taste ever to see print, author Chris Alpine has seen fit to produce paper dress-up doll booklet of the most disliked man in the computer industry, complete with cardboard cut-outs of Bill in several action poses.

This isn't the anti Bill vitriol that some might like - it's more Microserfs than Microshaft humour - but it isn't afraid to draw Bill Gates in oversized Windows boxer shorts and pink bunny slippers saying, "Microsoft doesn't restrict new companies from developing software. Why should we? We're going to own it eventually."

It made me laugh, and it almost made me heave (the cheerleader outfit... I don't even want to think about it). It's truly bizarre; exactly the kind of thing that would really annoy Bill, which makes it a good thing in my books.

Product: Bill Gates 99: Paper Doll Book by Chris Alpine. St. Martin's Press 1998. ISBN: 0312192258
Contact: Any good book store, or www.amazon.co.uk
Price: $9.99 / £6.05 (reduced to £5.45 on Amazon)

Thumping choons

'Techno' Tony Horgan goes vinyl! The Amiga's own hardcore tunebasher and journo recently released this rather superb 12" single, "Can't You Feel It." Yes, there's a quarter hour of thumping baselines and a fast tempo, but this isn't shallow, repetitive stuff that only makes sense at 4a.m. after an evening of Vodka and Red Bull. It's cleanly recorded, energetic and surprisingly intricate - unusually good for listening as well as raving. It is also, of course, made on an Amiga.

Can't You Feel It has an unusually light touch that puts me in mind of an upbeat Underworld, or possibly Rob Zombie meets Ozric Tentacles. There are even (and Tony may never forgive me for this) some distinctly Jarre-esque touches. Tony and I don't see entirely eye to eye in musical matters, but this record has seen plenty of action on my turntable. If you hate anything post-Coltrane I really wouldn't bother - on the other hand even an Opera buff will recognise that this is worlds apart from the likes of Annex.

Product: Can't You Feel It by Tony Horgan, published on the Ad Astra label.
Price: £5 from independent record shops.

Wrap up warm

What's this? *Amiga Active* stooping to using pictures of young female models to sell magazines? Wasn't Lara Croft in issue two enough? Not quite - it's just Amiga Wares making their way to the UK at last. The crop top and shorts videos certainly pull the crowds at the shows, but there's a lot more to this range than that. Baseball caps, T-shirts, fleece sweatshirts, polo necks and more are available in this range of Amiga wearables from Canada. Full details can be found on Randomize's web site or in The Pulse, the always-interesting catalogue of UK distributors Alive Mediasoft.

Product: Amiga Wares
Contact: Alive Mediasoft: +44(0)1623 467579, or Randomize of Canada: www.randomize.com
Price: Prices from under a tenner.

"...paint on the most processor intensive effects in real time..."

FXPaint

In case your artistic flare isn't satisfied by ImageFX, ArtEffect and Photogenics, here's a brand new addition to the Amiga's longest suit.

Above: FXPaint's auto blue screen in action.

Above: FXPaint's PhotoAlbum feature makes the creation of thumbnails a breeze.

FXPaint is a surprisingly extensive package for the first in the series. Compared to debut versions of its competitors it is extraordinarily feature-rich. It's not quite as surprising as all that, however. This all-new effects paint package is the creation of Felix Schwartz, whose UConv has been a shareware favorite amongst Amiga graphicians for years.

Although UConv and FXPaint do not share any source code, a lot of the filters and effects familiar to UConv users are available, but here they are given a full paint package style interface. FXPaint uses a system of paint layers which can contain either a colour or an effect, making it very similar to Photogenics 4 in general usage. It also shares the Photogenics techniques or left mouse button to paint and right mouse button to unpaint, a mask-based approach to area selection and a custom GUI with fold out button menus. Oddly, despite this it is actually the areas Photogenics is weakest in that FXPaint excels at, and vice-versa.

GUI Clashes

FXPaint installs easily with an intelligent standard installer. Instructions are in the form of an on-disk AmigaGuide file; they are clearly written, cover the ground well and a few useful illustrations are in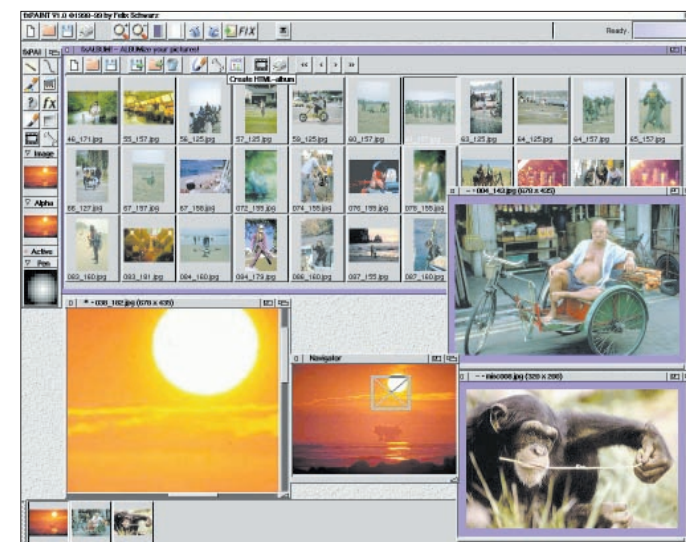cluded, but could have been presented better in another format like HTML or PDF. Unfortunately, here I ran into trouble - FXPaint simply would not go. After a large number of crashes and quite a bit of fiddling around with my system, I found that it was clashing with Magic Menu and parts of MCP. With these two switched off it worked fine (apart from the logical divide filter, which crashed my Amiga every time). FXPaint plays some clever GUI tricks and these seem to conflict with some other GUI tricks out there. This is the fault of the hacks rather than of FXPaint, but it's an annoyance considering that they are just about the two most common hacks in use on Amigas today.

FXPaint, like Photogenics, offers a heavily customised GUI with fold out media, image and alpha images in a floating toolbar, and another general toolbar across the top. The GUI looks very nice, with some well designed icons and pretty gradient buttons, progress bars and the like. It loses out on flexibility to Photogenics, however, lacking such features as tear-off palettes and scaleable windows. The latter is a particularly annoying omission, as the various floating palette windows you are likely to use are not of matching width, and are often wider than they need to be. This means you'll have trouble if you can't use a screen mode significantly larger than the image window. Fortunately, FXPaint is excellent at working on parts of an image at a time, with a navigator that lets you hop straight to every point by clicking on a resizeable thumbnail of the image.

FXPaint excels in image handling. It combines with ScanQuix software for direct input from a scanner, and comes with Wolf Faust's ICS colour synching system for better colour reproduction. It also has flame and fractal image generation built in, works with Felix Schwarz's own VLAB software for frame grabbing (a demo is included on the disk) and an internal screen grabber that shows a preview of the selected screen before grabbing.

A photo album feature allows thumbnailing of multiple directories for easy image selection and handling, and FXPaint can use these thumbnails for various tricks, including colour averaged pieces for creating one image from a mosaic others - a trick you may have seen in posters for The Truman Show or of Star Wars characters, for example. The album facility will also generate an HTML index with independent setting of JPG compression levels for the images and thumbnails, ideal should you want to browse a catalogue of images with a web browser or make a gallery of your work avialable on the Internet for others to view. There is a multi-directory batch file converter for general file conversion duties.

Paint Layers

FXPaint sees pictures as a 24-bit image, and applies modifications to the image in a series of 8-bit paint layers. There is no support for standard transparent layers though. Colours are selected from an RGB slider palette and scrolling swatch that would look more at home in an 8 bit paint package like PPaint - far less suitable to the painter who has to rely on RGB values or use the eye dropper. At least the RGB sliders are coloured to give visual feedback.

Just as in Photogenics, the paint layer is modifiable until you hit the fix button, so you can paint a mark and then change the colour of that mark if it isn't quite right. Alternatively, you can alter the mark from a paint mark to a filter effect, be it a 'Blur', a 'Replace Colour' or whatever.

An odd trick that FXPaint employs is what appears to be a pre-calculation of the entire layer. When you select any filter there's a pause as the software thinks, but painting is then very fast, as if you are basically rubbing the new layer through. Although this means you can paint on the most processor intensive effects in real time, it can be annoying when you hit some time intensive process and realise you forgot to fix your paint layer. As there is no key to cancel a change, you have to wait for the pre-calculation before jumping back to the effect you really wanted for that layer and waiting for that to calculate again too.

Brush management is more akin to ArtEffect than anything else, although it does not share ArtEffect's excellent brush profile editor. Brushes are defined according to preset forms (pencil, chalk, detail pen or two variant 'artpens') and have pressure and size built in. Not having the ability to alter pressure and size on the fly makes the painting or drawing process rather more fiddly than it is with Photogenics, as you'll have to define a whole bunch of predetermined brushes. On the other hand it can use selections for a brush, which

Some examples of FXPaint's many powerful effects... **Above:** Oil painting

Above: The supernova effect, applied only to the sky, can give an image a striking glow.

Above: Pixel spread applied just to the statue using the magic wand.

Above: The wave effect.

Above: Straw type noise applied only to the statue.

"FXPaint boasts a 'magic wand'"

Photogenics cannot do, and can apply various effects to a brush such as scaling, rotation, smoothing, glows etc. Brush size normally only goes up to 30 pixels, so you'll need to use scale for larger brushes. Text is also added to an image as a brush - the text input routine produces a bitmap in your brush bank for you to stamp down wherever you choose, using, of course, either a colour or an effect.

Magic Wand

FXPaint boasts a 'magic wand' selection tool, but this is really a specialised instance of the bucket fill. Area selection is done with masked paint layers, which can be filled with an effect of your choice, rubbed through to another image, used as a stencil or moved to a 24 bit alpha channel. FXPaint comes into its own with an excellent selection of compositioning tools - as well as simple composition you can use a second image as a texture, to colourise, to bump map, for auto bluescreening, rubthrough and so on. This feature depth is common throughout the range of filters and effects. There is a large range of effects - some new, some old with new touches - most of which run very quickly and are nicely controllable.

Odd omissions were a lack of predefined convolves such as sharpen or edge detect (although there is an option for general user defined matrix convolves), and the lack of a greyscale option (although you can force this with the colourise option).

This trend of having lots of extras while missing a few essentials is carried throughout the program. While there's complex image cataloguing, great image navigation and internal fire and fractal generators, there's no indication of current image zoom level. FXPaint supports CybergraphX scaling routines for faster scaling, faster general functionality through PPC with both ppc.library and WarpUp versions, graphics tablets, scanning and frame grabbing hardware, but it can't save GIFs. It has an excellent web image map maker, very fast batch conversion, 24-bit alpha, documented ARexx and plug-in support and colour correction, but the smear tool is slow and poorly done.

What FXPaint does, it does very well, but there are still a few omissions. Probably the worst flaw is that the undo only works on alterations to the paint layer rather than to the base 24-bit image. This means that anything which modifies the image as a

whole, such as smearing or rotating it cannot be reversed, and undo will not reverse a fixed layer. It is mostly as a paint package that FXPaint falls down at the moment, although most issues are minor and can safely be addressed in the next release. As a fast, general purpose, easy to use image handler, converter and manipulator, it's the first thing I've seen which I rate highly enough to use over Andy & Graham Dean's Image Studio, and is far more powerful into the bargain. Despite the flaws, FXPaint can be strongly recommended - it's worth putting up with the problems, especially as when you take into account how much you could benefit from the upgrades that a decent sales figure will convince Innovative to make!

Andrew Korn A

Above: You can see right through some of FXPaint's effects... (sorry!)

FXPaint   7/10

SYSTEM: OS 3.0+, '020, 6MB RAM. Faster processor and graphics card recommended. PowerPC supported.

SUMMARY: Impressively featured, easy to use graphics workhorse, but in need of refinement.

Above: A simple painted rubthrough of a secondary image.

Above: Zoom blur applied only to the statue using the magic wand.

Power Flyer Gold A1200

The fastest thing on Two IDEs? Power Flyer Gold is more than just a buffered interface.

The Power Flyer has always been the fastest IDE interface replacement for the A1200. In its new Gold incarnation, it now boasts support for an array of new and faster IDE transfer standards and a new-look CD file system.

The Flyer Gold comes in two parts. The main interface is a rather chunky circuit board comprising two empty ROM sockets, an assortment of socketed chips (allowing for easy upgrades), two 40-pin IDE connectors and a single 44-pin IDE connector (sharing the primary channel with one of the 40-pin connectors). The Flyer plugs into the two ROM sockets on the motherboard. Your Kickstart ROMs then plug in the two pass-through sockets on the Flyer itself. Once you have mounted your ROMs on the Flyer (or the Flyer on the motherboard), it

will be nigh on impossible to extract either, so if you still have 3.0 chips, use this as the excuse to upgrade to 3.1 versions (and OS3.5 while you're at it).

The Flyer has landed

Once in place, the Flyer sits over the centre of the motherboard. While the on-board interface is now redundant, having been completely bypassed by the Flyer, it still carries the hard drive activity LED line. A small flylead connects to this line (pin 39) to carry the signals from the Flyer. A smaller second piece snaps over the top of the Gayle chip (using an upturned PLCC socket). This piece then connects to the main Flyer unit using a small ribbon cable, while a pair of jumper pins on the Gayle module can be connected to a tower case Reset button.

While the Flyer will fit in a desktop 1200 case (albeit without the top shielding) you
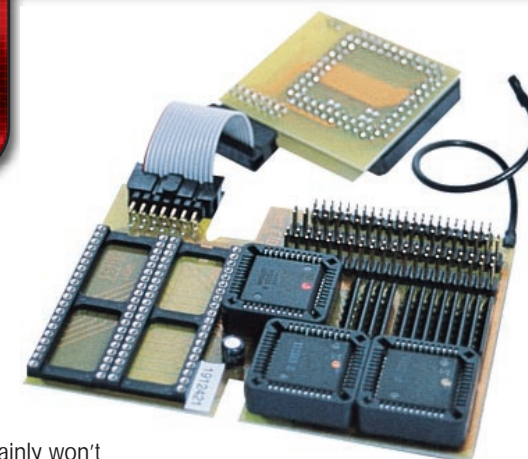
almost certainly won't have room for a drive as well, so this is of serious consideration to tower owners only. To ensure that it doesn't work loose when fitted to a towered motherboard, two cable ties are used to strap it tightly against the motherboard. It sounds very DIY-ish, but it does the job just as well as any custom bracket could.

Once it is in, you can start shacking it to drives. The combination of the Flyer Gold and its accompanying Allegro CD file system and IDE controller software supports all the main IDE transfer protocols, such as UDMA and PIO-3 and 4, which in theory should allow max transfer rates from compatible drives of 11MB and 16MB per second respectively.

In reality things are much different, as the type of drive and processor in use drastically affects IDE transfer speeds. We tested the Flyer on an A1200 using a 040/25MHz Blizzard PPC accelerator and two UDMA drives - a 5.2GB Fujitsu and a 4.3GB Samsung mechanism. As you can see in the boxout, the performance varies quite drastically. As the Power Flyer is not a true DMA device, CPU use will be intensive during read-write processes, hence the heavy dependence on the processor available. The ability to utilise the extra horsepower of a PPC co-processor would be most welcome, especially given the new CD file system support.

Amiga DVD - Almost

Allegro CDFS boasts one long-awaited feature - support for the UDF file system, the one used by DVD disks and drives. While it has been possible to use DVD

drives on the Amiga for some time, these mechanisms were only of use as standard CD drives, their DVD capabilities failing to be acknowledged by previous existing Amiga file systems and drivers. DVD can be used as a conventional storage medium like a CD-ROM, but offering up to 4GB of storage space (DVD discs can be double-sided or dual layered). However, the format is not particularly optimised for multiple files and is primarily designed for the streaming of large data files, normally audio or video.

The Permedia 2 graphics chip in BVision and CVision graphics board includes a cut-down hardware decoder, but it is unclear if this is actually accessible through the current hardware design.

In short, if you have serious IDE devices, particularly DVD drives or data-critical devices such as CD-R and CD-RW drives, then the Power Flyer is the only serious choice available. Its hardware-based 4GB hard drive size workaround is rather redundant now, but is a minor inconvenience in an otherwise excellent interface.

Chris Green A

Power Flyer Gold   8/10

SYSTEM: A1200

SUMMARY: It's the fastest IDE you can get, but the 4GB workaround looks clumsy now we have OS 3.5.

Mary Mary quite contrary,
How fast will your hard drive go?

We recorded the following speeds for the drives listed below when using the Power Flyer Gold:

Fujitsu 5.2Gb HD ....**4,736** kB/sec.
Samsung 4.3GB HD..**5,833** kB/sec.
Toshiba 5x DVD drive (4,095GB) ....**3,444** kB/sec.

Tips and Tricks for

Professional Audio

Making the leap from amateur mods and demos to professional records and soundtracks isn't easy, but Tony Horgan has a few pointers.

Rather than run through yet another OctaMED SoundStudio tutorial, I thought it would be far more useful to share with you some of the tricks and techniques I've developed on a wider scale. We all know how to lay down a drum beat on the tracker editor, how to cut up a sample and most of us will have at least toyed with digital track bouncing. Those are the basics of making music with SoundStudio, but however adept you are in those areas, it's still quite easy to make music that somehow just doesn't sound 'professional'.

First of all, I'll make no apologies for including outboard studio gear in this piece. This is an Amiga magazine, but it doesn't mean we have to be limited to talking solely about Amigas in isolation. If you're serious about making music professionally, some degree of outboard equipment is essential. In fact, it's the use of the external boxes that really make the difference in the final sound.

My point in a nutshell is this: get yourself some good MIDI sound sources, some good realtime effects processors, a mixer to channel it all through, and at least one compressor. Have a listen to the audio track on the CD and I'll tell you what gear I used for each part. Also, if you don't happen to be into this kind of music, do yourself a favour and listen to the production quality rather than the music. The same principals can be applied to all kinds of musical styles.

Below: The Yamaha AN1x keyboard.

1. Filtered synth loop
The first sound you hear is a Novation BassStation. This is a mono sound source, but it's been given a bit of stereo action in two ways. First, it's been passed through a THC-00 Resonator analogue filter. This splits the sound into three frequency bands, panning two to either side and keeping the other central. Another reason for passing it through the filter is to bring it up and out of the bass frequencies, to leave room in the mix for the real bassline. Next, some of the sound has been passed through a Zoom 1201 effects unit set up with a stereo echo/delay effect.

2. Drums
I've used my Novation DrumStation here. The bass drum has a lovely rich analogue-style undertone, with a little click at the start to help it cut through everything else. Next come the high hats and the hand clap. One reason the DrumStation is such a good tool is that it has six audio outputs, each of which can be assigned to different drum sounds. This makes it possible to have your high hats, claps and bass drum all on different channels of your mixer. This in turn allows you to adjust their relative volumes and EQ with the twiddle of a knob, instead of messing around with your software or even editing volumes in the tracker sequence.

Better still, it means you can pass certain sounds through effects and keep others 'dry'. In this case, the hand clap has been put through the same delay as the BassStation as well as some reverb via a Yamaha FX500 unit. This is one of the keys to getting that professional sound. The timing of the delay effect is quite approximate, which adds a bit of funkiness to the drums. The reverb gives the clap more presence. The high hats are dry but have been EQed up slightly in the higher frequencies. If I had a sweepable mid-range EQ, I might give them a little upper mid-range boost as well.

The Software
Although I used SoundStudio, you could use the same techniques with any MIDI sequencer or tracker with MIDI capabilities. Music X, Bars and Pipes, Sequencer One, Dominator and Camouflage offer better control over MIDI instruments, but don't handle internal samples as well. I find the best way to make use of an Amiga as both a MIDI sequencer and a sampler is to use SoundStudio in its old fashioned 8-bit Paula mode with MIDI enabled. This avoids risking timing problems that can arise if you put too much strain on the CPU by using the mixing modes. Integrating MIDI instruments into your OctaMED or SoundStudio songs is very simple - instead of loading a sample, you just name an instrument and set its MIDI channel and preset number using the sliders.
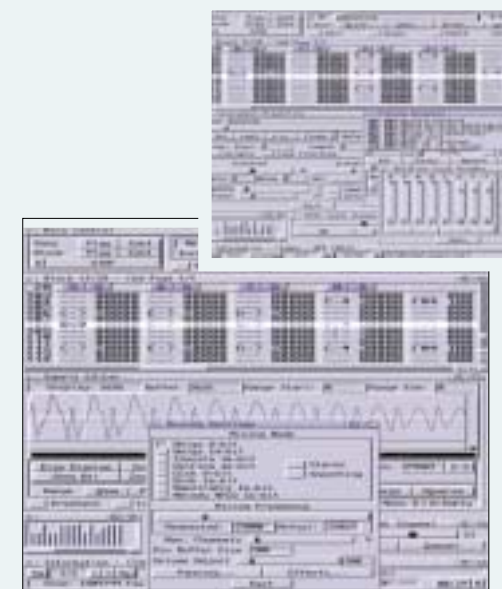
3. Main synth riff
A good modern synth like the Yamaha AN1x is excellent for providing riffs and hooks. This one is a bit cheesy, but again, I make no apologies. It was originally programmed as just a sequence of chords on one octave, but later I decided to underpin it with a duplicate played on the next octave down, which makes it sound a bit fatter. The AN1x's internal reverb and delay effects are used, which helps take the strain off the two outboard effects boxes.

4. Bassline
The BassStation pattern is supposed to act as a pseudo-bassline, adding rhythm but leaving the way clear for a simple one note off-beat bassline to do fill out the bottom end. This is taken care off with an 8-bit sample from a sample CD, chosen for its combination of deep frequencies and clicky front end.

5. Additional samples
At this point, there's also a sampled breakbeat in the background. It fills out the sound (perhaps a little too much) and adds a bit of punch after the drum roll. After the synth riff has looped for a bit, I've stoked it up a bit with a couple of other samples: an organ stab and an almost unintelligible vocal snippet. These are all 8-bit samples played in non-mixed mode.

6. The breakdown
It's a cliché but it works. Even the most banging music needs light and shade. Here the track is reduced to a strange sound from a Cheetah MS6 synth, a few gurgles from the BassStation and that vocal sample, before a second of silence.

7. The build up
You can't have a breakdown without a build up, so here it is! In effect you're just starting the song again, but this time you should bring in the elements in a different order, or introduce some new sounds. In this case, the synth riff is actually a slight variation on that used in the first half, and it's faded in by gradually opening a lowpass filter on the synth.

8. The fade out
If this was to put on vinyl, I would have gradually thinned out the music to the beats, and then dropped off one sound at time from the drums - this would have sounded good in the context of a continuous DJ mix, but not on its own. For that reason, I've just faded out at the end.

9. Compression
This is one very important part of the mix. A compressor/limiter is a signal processor which helps keep the overall volume in check, by reducing momentary peaks over a certain level. It levels out the volumes of different sounds and gives you a punchier final product. This mix was put through an Alesis NanoCompressor, which at around £80 is the cheapest you can buy. Some producers use lots of compressors. One very successful remixer even has a compressor linked up to every drum channel on his mixer! If there's one thing you could add to your system that would make it sound more professional, it's a compressor.

Tony Horgan Ⓐ

Above: An Alesis Nanocompressor, yesterday.

On the CD
I've recorded an audio track especially to go with this article. You'll find it on this month's Amiga Active cover CD. As you've probably guessed, it's a banging techno/trance type of thing. As this is all about sound quality and the subtleties of mixing, I suggest you listen to it through a good hi-fi rather than a pair of tinny monitor speakers. Whether or not you like the tune, it's the production quality that you should be listening out for. Have a listen!

Better?
The track sounds pretty clean, but it could be improved upon. For a start, it's a bit hissy. You can hear the background noise at the start, which seems to have been caused by a combination of things in the studio, including monitor screens, effects units, computers and the rat's nest of cables.

It could do with more compression - it would probably benefit from being run through a secondary compressor, as well as having its drums sent to a sub-mix to be compressed separately.

I didn't notice at the time of recording, but the BassStation line sounds a bit flat, as if it's slightly out of tune. Maybe it was pretending to be an old analogue synth and altering its pitch depending on how hot or cold its circuits were. Finally, if copyright infringement wasn't an issue, I'd probably have dropped in a vocal hook.

Active Shareware

Launching apps and bumping maps, converting images, saving screens and SCSI scanning - all in this month's Active Shareware...

For those of you that don't use Opus Magellan, you can now benefit from some similar functionality on your Workbench. Opus allows the creation of floating banks of buttons to launch programs, just what Christian Lepper's Launchpad does. With the ease of drag'n'drop support for the launch window, and the power of all the configuration options you could need, it is one rather nifty program.

Dropping icons into the launch window will build up a list of applications, which can be represented in the launch pad window either by their icon images, as a text name, or a combination of the image and text. If you are running the NewIcons patch, Launchpad will store the new images rather than the old ones, which can help dramatically, as Launchpad will scale these images so that they are all the same size. This applies even if you stretch the window out, an effect that is not always too pleasing on the eye. The configuration screen allows you to tune each application to launch it the way you want. You can set scripts, ARexx and even appicons as different criteria, as well as rearranging the order in which the buttons appear on the screen. The ability to be able to set stack sizes and priority is also especially handy for some of those programs that may need more than the default.

Running as a full-blown commodity, Launchpad has a built in tooltype editor, which makes editing a breeze, especially if you tend to bury applications deep inside hard drives. Launchpad also has pointer sensitive text that shows what application the pointer is currently over. Although in essence a good idea, the text is blitted direct to the screen, and doesn't check whether the window is active or not. This really should be sorted out, as the text tends to appear on top of any other windows that may be open. Apart from this, and the scaling issue, Launchpad really is a great companion to Workbench and makes finding all those often used applications so much easier.

Madhouse

As monitor technology gets better there are less and less reasons to use screen blankers, so they are now more commonly regarded as toys - and you don't get much more toys for your money than you do from Madhouse, which includes mad, psychedelic and therapeutic screenblanker modules.

Madhouse is a commodity which acts as a master controller for the 19 bundled blankers. Also supported are SwazBlanker, GarshneBlanker and BlitzBlanker modules, so you'll never be short of a screen blanker. You may have to do some configuring to get them all to work, and the Soccer one doesn't seem to like graphics cards, but you can control just about every aspect of each blanker, including passwords, screen dimmers, specific controls and setting the screen mode for each individual module. Madhouse is all wrapped up in a MUI interface with some nice graphics thrown in too, so if you are looking for that ultimate screen blanker program, you should certainly take a look here.

ArtPRO

One of the Amiga's strengths has always been in graphics, so it comes as no surprise to find a plethora of graphics orientated packages available in commercial and shareware sectors. ArtPRO is a manipulation program that allows you to fiddle and change any kind of bitmap image supported by its loaders. Anyone who has used Art Department Professional 2.5 will certainly feel at home with this package as the developers have clearly been heavily influenced by ADPro. Unfortunately, while it's a long way short of the price of Art Department Professional, it's also a long way short on features.

In ArtPRO's defence, what it does, it does quite well. The list of filetypes it can import covers most of the popular ones you are likely to come across, and can be expanded via datatypes. The same goes for the savers, so ArtPro is pretty handy for file conversion alone, but the true power lies in the graphic effect operators. Although missing many of ADPro's convolves and operators, ArtPRO can take an image and sharpen it, scale it, flip it, count its colours and even

make a button from it. Another feature which will be handy for programmers is the ability to turn any image into bitplane data for inclusion into source code, a particularly useful feature when backed up by ArtPRO's strong fileype loading capabilities.

Unfortunately the downsides to this package are quite plentiful at the moment, including a lack of operators, no ARexx port and a buggy palette editor. These failings are of course all due to be addressed in future releases. The program as it stands shows promise, and once more complete should be a worthy companion to other graphics programs you may already use.

WBBump

As the documentation proudly claims, "THIS IS NOT A HACK." Technically speaking, correct - WBBump is a commodity which can be switched on and off cleanly through Exchange, the Workbench Commodities handler. On the other hand it does follow in the great tradition of "Workbench Hacks," being slightly buggy, totally pointless and great fun.

"WBBump is one of those 'because you can' programs that make owning an Amiga fun."
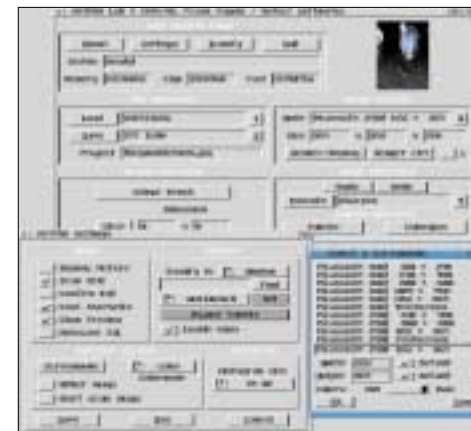
Above: The ArtPRO GUI is well laid out and easy to navigate.

Above: WBBump can render multiple images on your Workbench screen.

Thomas Jensen's WBBump takes a 256-colour greyscale image and renders it as a transparent bumpmap on your Workbench, using the position of the mouse pointer as a lightsource. It handles any filetype through the datatypes system and is configured by setting tooltypes in the icon.

Sometimes it ignored a file we tried with it until it was renamed as "amiga.ilbm," the same as the default image. It also messed up the backdrop on a few occasions (although this may have been due to WBBump conflicting with another program elsewhere on the system we used). Once coaxed into proper functionality,
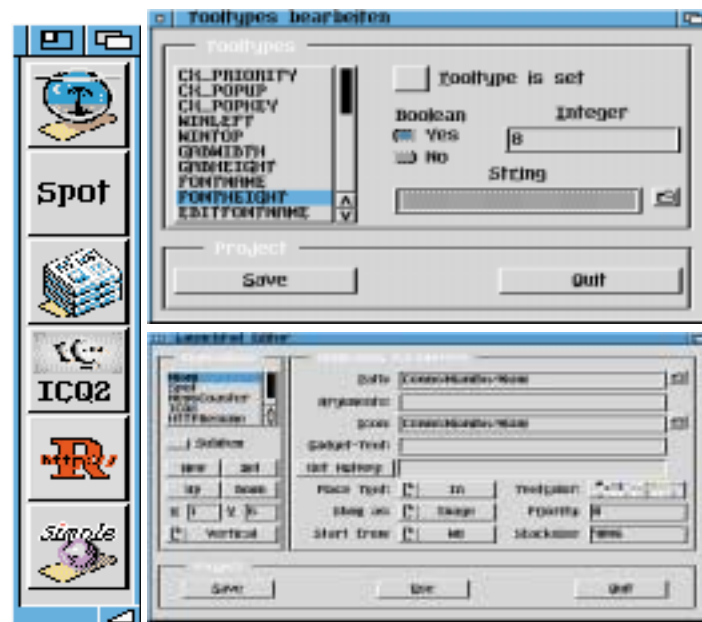
WBBump is one of those 'because you can' programs that make owning an Amiga fun. Configure it with a graphic of your choice, dump it in WBStartup and show it to people used to drab, barely configurable Windows or Mac desktops for best effect.
Simon Archer

Scanning with ScanTek

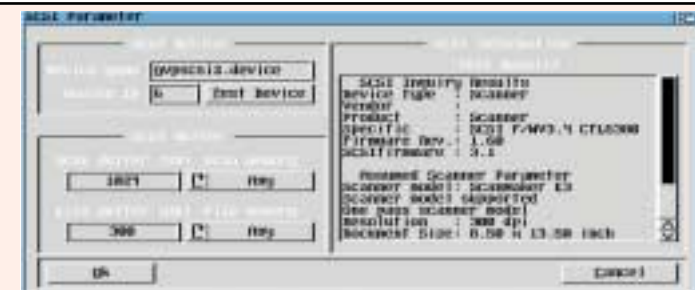**Above:** A scanner getting a thorough grilling in the SCSI configuration window.

If you've ever considered getting a flatbed scanner to transfer images into your Amiga, Scantek could be just the thing for you. There are quite a few things that need to be taken into account, as scanners generally won't plug in to your Amiga and work straight away.

Most cheaper scanners today are based on the parallel port (but a more advanced form of parallel port than the 15 year old design implemented on the Amiga). Enhanced parallel modes such as "EPP" are supported with various third party parallel port add-ons such as the IOBlix and Hypercom ranges, but it remains something of a minefield. For simplicity's sake this really only leaves a SCSI (Small Computer Standard Interface) connection, which means

slightly higher costs but significantly higher scanning speeds. Obviously your Amiga will need to be SCSI equipped to use these, but Amigas with SCSI are a lot more common than Amigas with an EPP parallel port.

Scantek supports a number of SCSI scanners, covering Highscreen, Mustek and Microtek ranges. Our Microtek E3 has worked faultlessly since a very early version of Scantek, and produces some great results. The software itself is very easy to set up, in that you need only select a screen mode to use, and then select the SCSI device controlling the scanner. If you run Scantek on a graphics card, you will get the benefit of a colour preview window, not available on the Amiga's native display modes.

Select 'SCSI' from the 'Settings' menu. This opens up the SCSI configuration window,

and allows you to interrogate the device to ready it for work. Once completed, it's time to scan, so place something in the scanner - a photo, magazine page or whatever - and click 'Preview'. After a short while you should get some scanner activity and the results will be displayed in the preview window. Here you have a chance to correct any alignment problems or cut down the area to scan. You can also correct colour balance, gamma or brightness at this stage in order to obtain the best final image. Clicking the 'Scan' button again allows you

to save the image to your hard drive for later use, and the scanner will go about its business for a few minutes scanning and generating the file. One word of warning though: you'll need a fair amount of free RAM to start playing around with scanners, as 24 bit images (16 million colours) can run into many Megabytes in size. You can get away with 16MB of RAM at a push, but if you are planning on scanning full colour A4 pages, you'd better start snapping up a few more SIMMS (Standard Inline Memory Modules).

Welcome to the world of

Broadband

The key to the future or just another I.T. buzzword?

If you're lucky enough to have broadband access to the Internet, you're almost certainly an overseas reader. We're jealous. It's not just a matter of having to suffer along with 56k modems, or if we are lucky ISDN lines. Of course it's a lot nicer to be able to stay connected to the Internet 24 hours a day and download 30 MB movie trailers in just a couple of minutes but it's the knock on effect that is really going to bite.

There is a general agreement that the Internet is going to fundamentally change the way the world works. The first signs of this are clear to see in the effect that the MP3 compressed audio standard is having on the music industry. The first thing that got the music industry's attention was the use of the MP3 format for making downloadable pirated versions of music. However, it did not take long for the music business to spot the potential the format offered. Some musicians questioned whether they needed the big record companies any more when they could distribute the music themselves over the Internet. Retailers and publishers realised the potential of direct sales over the Internet. Not only could the customer, for instance, download a song sampler to listen to before buying a CD, but also they could actually buy the music over the Internet. It can even offer unique services, such as pick your own compilation albums. When an album only takes a few minutes to download, this becomes a far more attractive retail outlet.

The music industry is a battleground of attempts to find a way of turning the mp3 revolution into a new revenue stream. It won't be long before other digital content moves this way, although there is a major hold-up with this - bandwidth. Broadband is going to make a better music shopping system when you can download an album in a couple of minutes instead of a couple of hours, but a couple of hours you can live with. A TV program transmitted over the web or a CD game, however, is digital media that would be totally impractical over a phone line. Broadband makes transmission of even these feasible. One on-line games company recently gauged interest in a downloadable version of an upcoming 600MB add-on pack, a 40 hour download over modem or an hour or two at worst with broadband. Sony have already announced that they hope to pursue a broadband-based direct sales model for the Playstation 2, which may cause problems for the current retail outlets.

Clearly broadband is the place to be. It is key to the development of e-commerce, and enables companies to offer thin client systems, video on demand, interactive programming, direct content delivery, and so on. It's clear that the first areas of business to be effected by the development are the ones with the clearest and simplest tie-in - the media and popular arts. It's also clear that it is important to companies working in that sector to embrace broadband as quickly as possible. This sector is massively important to the UK economy, second only to the finance sector in terms of bringing wealth to Britain. Surely, then, we have to be in the vanguard?

What is broadband networking?
Briefly, a broadband network connection is one that is capable of fast data transfer, usually permanently connected. This is nothing new; the Internet started out as a network of other academic and research networks and universities and other such organisations have permanent, fast connections. For years, this was the standard way of using the Internet, until dialup networking came along (note the lack of capitals, they are added when Microsoft take an existing technology and claim it as their own). With a dialup connection, you use your phone line to connect to your ISP's network, which is then connected to the rest of the Internet.

When used in the context of individual users, particularly home users, broadband networking is concerned with replacing that one slow part of the connection with something more suitable for high speed, permanent access. Telephone lines were never a good choice for Internet connection, but there's one big advantage - most people have one.

Any widespread Internet access system needs an infrastructure that is accessible to the majority of the population. While there are wireless systems on trial, these have their own limitations and we are stuck with using cables for now. This restricts provision of Internet connectivity to networks that have cables in the majority of homes. The obvious choice in the past was the telephone cable. While there are now ways to use this for broadband access, there are also other options. Even more pervasive than the telephone network is the electricity network. Norweb developed a system called PowerNet, to transfer data over the power lines. A box by the meter in each home would handle the transmission of data, and make sure that it didn't interfere with other appliances. However, the project was shelved, apparently for technical reasons but exactly what the reasons were remains a mystery.

Cable modems
Cable TV is spreading throughout the UK, and should be an ideal medium for broadband Internet data. The networks already handle the demands of video and audio content delivery. Cable modem Internet access is just starting to become available through NTL. Nynex, now part of Cable & Wireless, began a three month trial of cable modems in the spring of 1996. They were planning to launch a public service in the autumn of that year, which would have meant UK users being at or near the forefront of the technology. It never happened, the trial dragged on for a lot longer before quietly dying. Cable & Wireless are about to launch limited Internet connectivity, consisting of selected web sites and basic e-mail. However, they are now owned by NTL who are rolling out a full cable modem package.

NTL's package is the best of the currently available options, hardly surprising since it is the only option for now. For £40 pounds per month, you get a permanent connection with a download speed of up to 512Kbps (128Kbps upload). There are no ongoing charges apart from the flat rate subscription, but you do have to pay £149 for the cable modem itself. You also have to be in an NTL cable area and subscribe to at least their minimum TV service. At first glance, the price may sound good, and it's not that bad compared to the alternatives of telephone or ISDN. However, other countries provide faster connections for less. More importantly, most cable Internet providers overseas include rental for the modem in the subscription. Not only is the extra £149 a lot to pay out to be connected, but it may make upgrading harder. Telewest, the other major cable provider in the UK, are considering cable modem access but won't be doing anything until "well into next year".

ADSL
That brings us back to BT as the only company with the ability to provide broadband networking capability to the majority of UK addresses. Asymmetric Digital Subscriber Line (ADSL) is a method of dramatically increasing the amount of data that can be transmitted over a standard telephone line. The data is carried separately from any voice traffic, unlike current modem or ISDN technology where the data is sent instead of voice traffic. This means that the data link is a permanent connection, running at speeds between 512Kbps and 2Mbps. The asymmetric part is that these speeds only apply to downloads, upload speeds are in the ISDN range, 64Kbps or 128Kbps. This isn't a real limitation for most people since broadband connections will mainly be used for downloading data or digital content. The upstream side is mainly used for control information and data requests.

There is another alternative, satellite Internet. This is already available, but at a cost. It also needs custom hardware and the only service available for end users requires the use of a PC card for decoding. The real killer for the satellite alternative is that it still requires a standard modem connection for upstream data, the satellite connection itself being download only. The upstream side has a much lower bandwidth requirement, but while we have metered phone calls, this will never be a viable option.

Bits not bytes

All of the speeds mentioned in relation to network connections, whether modem or ADSL, are measures in bits per second (bps or b/s) not bytes per second (Bps or B/s). A 512Kbps connection won't transfer half a megabyte per second, but 64 kilobytes per second - less overhead for the network.

Broadband & ISPs

You'll still need an ISP to use a broadband Internet connection. They will still provide the connection from their network to the rest of the Internet. The difference is that you'll be using a fast, permanent connection to talk to your ISP. To handle this, the ISPs will need a connection from the other end of your ADSL connection, the telephone exchanges, to their network. Initially, this will mean buying ADSL service from BT, who will then provide the route from your machine to the ISP's network. In 2001 the "local loop" will be opened up to other companies. This will enable ISPs to locate equipment at the telephone exchanges and give far more flexibility in providing the right kind of service.

More importantly, most ISPs will need to significantly upgrade the capacity of their internal networks and their connections with the rest of the Internet. Most ISPs get a proportion (in some cases all) of their revenue from call charges - this will change with a far greater focus on subscriptions and advertising. There's also the possibility of bypassing the flat rate subscription and levying a charge according to the amount of data downloaded.

Much will depend on how much they have to pay BT for the ADSL service. Current figures of around £50 per month for a 512kbps service are way in excess of the equivalent charges in other countries. As long as BT have control over the local loop, ISPs will be forced to use them as the only available ADSL supplier.

"...isn't it about time they stopped listening to Bill Gates, talking in buzzwords and did something?"

So far we've got NTL's cable modem service at £40 per month (plus £150 for the hardware) and BT's ADSL for around £50 per month (ADSL does require a separate "modem"). How does this compare? In the USA and Canada the going rate for ADSL or cable modem access is around £20 to £25 per month, this usually runs at higher speeds than the 512kbps of the UK offerings, often 1.5Mbps. It generally includes the rental of any hardware required.

One part of the UK has an alternative to the higher UK prices, Hull. Hull is served by Kingston Telecommunications, the only local telecom company that wasn't absorbed into the Post Office in 1912. They are planing to offer ADSL access for £15 per month, although possibly at a speed of "only" 256kbps.

For current Internet use, speed isn't that important. Even 256kbps is four times as fast as ISDN. However, when live digital content becomes available, speeds of over 1Mbps may be required to make full use of it.

Falling behind?

Going back to the start of this article, you will remember the point we made about how essential to Britain's financial prosperity the media content market is. How are we going to compete if the world is moving to broadband and we don't? The simple answer is we couldn't. The government has ordered BT to open the local loop to competition in 2001, and Oftel (the official watchdog for the telecommunications industry) is finally putting some pressure on BT over their attitude towards the Internet. Nonetheless, it seems likely that we will have to wait until at least 2001 for any real progress.

The head of AOL Europe has spoken out several

Below: Tony Blair puts his mark on the move to e-commerce, but don't let it fool you - he's only just got his e-mail client working.

times on the damaging limitations of the UK's Internet access, and he isn't the only one. Intel are another big name dissenter, and it's not just the IT firms who recognise the importance of the Internet. The head of Ford Europe recently claimed that the advent of the Internet is going to trigger off a bigger shift in the way business is done than anything in the last 200 years. Strong words from the company that invented the mass manufactured cards. Why is the Government not getting involved?

In the government's favour, they have actually paid some attention to the Broadband revolution. The Government's document Broadband Britain (available from the Royal Stationary office in hard copy or for download at the web site of the Department of Trade and Industry, www.dti.org.uk) covers much of what has been discussed in this article. The recent government document on e-commerce, e-commerce@its.best.uk makes frustrating reading. If this country is going to be, as the government insists, "The world's best place to trade electronically by 2002," isn't it about time they stopped listening to Bill Gates, talking in buzzwords and did something about allowing Britain's businesses to compete rather than falling behind?

There is some evidence that they have not totally missed the plot with the appointment of a new minister for e-commerce, but makes it a secondary appointment for the minister for small business. Small business? Information technology, broadcasting and the media? Astonishingly, until the DTI gave "e-minister" Patricia Hewitt the address e.minister@dti.org.uk, she appears to have not even had an email address! Perhaps you should visit www.parliament.org.uk and look for a minister who has an e-mail address listed, or your local MP, and make your feelings clear. It might be worth calling your telephone provider and demand why they are failing to supply such as simple but important service to you.

Neil Bothwick and Andrew Korn Ⓐ

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Something Old, Something New

I f there's one word that describes the Amiga games scene, it's "irrepressible." It has been years since the Amiga was a major gaming platform, but the sheer range of developments puts any other non-mainstream games system in the shade.

Something Old...
(Below)

A couple of years ago Vulcan decided to move over to CD-ROM. Their decision was largely predicated on the 22-disk size of one of their upcoming titles, Hell Pigs. The Hell Pigs developers unfortunately dropped the project, and shortly afterwards Vulcan left the Amiga scene.

After a long break, Hell Pigs is back, this time as Hell Squad. Digital Dreams Entertainment, the team behind the excellent Wasted Dreams, have picked up the title. They have restarted development and will be publishing it shortly. The game should feel pretty familiar after Wasted Dreams, this is another "solve puzzles and kill things in an alien world" game. The structure is somewhat different - it most closely approximates a point and click adventure, although it's joystick controlled and involves horizontal shoot 'em up action in the Flashback mould. You'd have thought DDE would want to do something completely different, but we're certainly not complaining!

Something New...
(Below left)

Between The Lines is a 3D RPG being developed by Dreamworlds. What we have here are some shots of the game in the very early stages - at the moment, it's just a 3D engine and nothing more. Dreamworlds are planning on producing a very sophisticated game with a complex, living world for you to explore, lots of freedom of movement and plenty of character interaction. Internet gameplay is another feature planned to be implemented, which will open up the game to include such multiplayer options as guilds, quests, duels and the prerequisite of multiplayer experiences - trading. With all these things being planned by Dreamworlds, will Between The Lines turn out to be an Everquest beater for the Amiga? Let's hope so! The game is being developed for Amigas equipped with PowerPC accelerators and 3D graphics cards which use the Warp3D API from Haage & Partner, but the final target is likely to be the Amiga NG, whatever that turns out to be.

Something Bobbled...
(Above right)

In the beginning there was Bubble Bobble. Bub and Bob made their way into video game
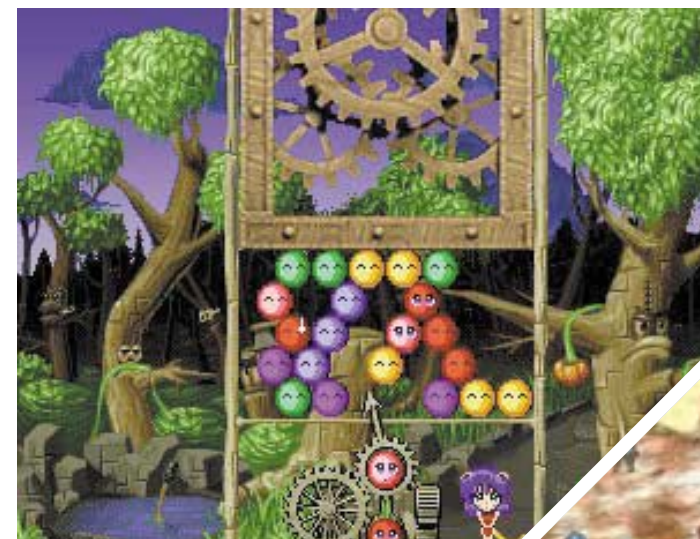
legend and pretty much invented the overlap between manga art and computer games. Namco followed up the success of Bubble Bobble with a number of sequels - most famously Puzzle Bobble, the Japanese answer to Tetris. Super-deformed dinosaurs shooting balloons at other balloons to make them pop - so much more Japanese than the social realism of Alexey Pajitnov's seminal classic.

Italian developers Arcadia along with UK publisher Crystal Interactive Software will shortly be bringing us Bubble Heroes, which is basically a nice new version of the classic Puzzle Bobble theme.

How far away is it? Well, Arcadia have already got the anime characters, the balloons, the strange noises and the obligatory bizarre back story. They've also got some superlative artwork, including copper effects, transparencies multiple playfield scrolling, along with cut scenes and a CD soundtrack for full late nineties street cred. They're also promising a story mode with cut

scenes as well as several challenge modes. Fans keep your eyes open; this has the potential to be the best Puzzle Bobble clone ever.

...and out of the blue...
(Far right)

Proving that not all surprises are nasty, this Polish real-time strategy game caught us totally on the hop. The low-profile appearance of a 6MB demo of Exodus on Aminet did not reflect the game revealed, a very complete appearing and gorgeous looking game that is set to give ClickBoom's Napalm a real run for its money. There's no graphics card support at the moment, and there are inevitably going to be a few gameplay tweaks to make, but the graphics are gorgeous and the demo plays very well and reasonably quickly even in AGA hi-res interlace. Expect one of the main Amiga games publishers to snap this title up very quickly.

Andrew Korn **A**
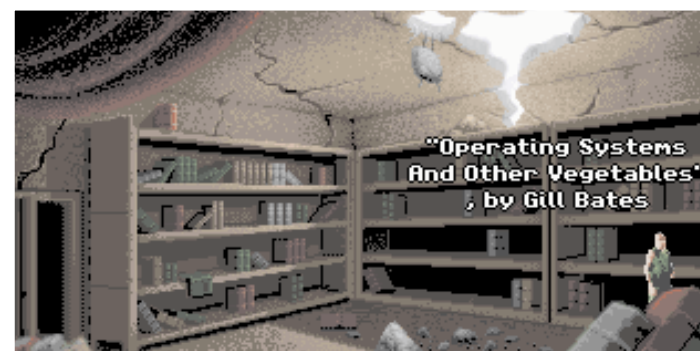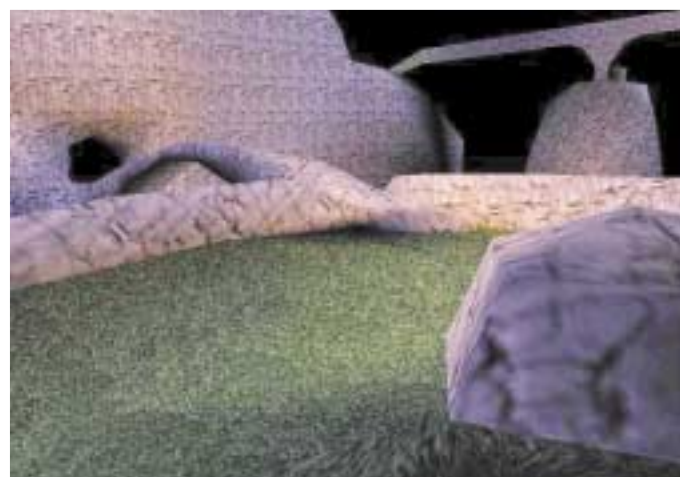
"Operating Systems And Other Vegetables", by Gill Bates

wipEout 2097

Dreaming of a
WipEout
Christmas

Possibly the greatest racing game of all time in its best ever incarnation. Can it be true? Read the review, play the exclusive demo on our Cover CD and judge for yourself!

Missile! After the best part of a year's frenzied programming, WipEout 2097 finally hits the Amiga. Set in the future (what isn't these days?), WipEout lets you take control of a craft to guide it, ducking and weaving over courses never before seen on the Amiga (nor in real life, come to that, although there is some resemblence to the steep San Francisco streets seen in many a car chase).

Let's get this out of the way now: You'll need a top-spec machine (CD-ROM, a PPC card and 3D graphics card) to be able to run WipEout 2097 on your Amiga. The latest versions of WarpUP (v4) and Warp3D (v2) from Haage & Partner are provided on the CD, and the on-CD documentation recommends you have the latest versions of your graphics driver software (CybergraphX or Picasso96) installed, along with at least 32 MB of RAM and OS 3.1.

If, on the other hand, you don't have a PowerPC accelerator and 3D graphics card, acquiring either may prove tricky. Phase 5 haven't manufactured any of these boards for months (the CV64/3D card is now available again, but is noticeably inferior to the CVPPC), and it's unclear when another batch will come off the production line. You may have to wait for the next generation of G3/G4 accelerators and future graphics cards to become available, but it should be worth the wait - WipEout 2097 on a G4 with a graphics card of similarly up-to-date spec should be a glorious sight. Twelve months ago there was decent hardware available with no software around to take advantage of it - now the software is finally surfacing, the availability of hardware is found to be severely lacking. Cruelly ironic isn't it? But that's not what we're here to judge...

Challenging
So, WipEout 2097 is now on the Amiga. What is it all about, and how does it shape up? Well, for those new to this game, a brief outline wouldn't go amiss. There are, initially, three classes of ship and track to race on. Team Feisar for the novice, AG Systems for the intermediate and Auricom for the experienced WipEout racer. The six tracks are grouped into similarly-rated pairs: Vector, Venom and Rapier, each proving to be a tougher challenge than the first.

Complimenting the three classes of ship and track are two gameplay modes: Arcade and Time Trial, which involve piloting craft around each course either against 11 opponents or the clock. In Time Trial mode you race on your own in an attempt to master every bend and nuance of the track and set faster and faster times. You receive one turbo per lap to help you in your quest for top-of-the table glory. In Arcade mode, the challenge is to race each of the six tracks and finish in the top three to obtain a gold, silver or bronze medal. This is harder than it sounds, thanks to your opponents' uncanny ability to overtake you when you make the slightest mistake, and pilot their craft through successions of tight corners at breakneck speed without breaking sweat. Unless you hit them with enough weaponry and send them flying into the walls, depleting their energy until it runs out and they are eliminated from

Below, and throughout: A selection of screenshots from the game. Note the addition of "fogging," one of the many Amiga-specific features added to WipEout 2097 by Digital Images.

ACTIVE GOLD • ACTIVE GOLD • ACTIVE GOLD
AA

Let's Race!

Diving straight in with the default race mode, ship and track options...

•Accelerate away from the grid (warm up your engines at "two" in the countdown for a good getaway) and over the start/finish line to start the clock.

•Yep, your time's limited, so zoom off up the hill (overtaking a couple of craft on the way).

•Pick up a powerup on the other side of the hill by flying over a coloured square. This one (indicated by the green logo at the top of the screen) is Autopilot - handy on trickier sections, or if you just need to blink! Flying over the blue arrows gives you a momentary speed boost.

•If things start to get a bit hairy, press the spacebar to engage autopilot. I was well in control, but thought I'd better show you how it worked (yeah, right! - Ed).

•Autopilot disengages after a few seconds, by which time I've picked up a nice little missile which locks on to the ship in front when he's in range.

•Into a tunnel section and the guy in front gets an early Christmas present. Engage smug mode. After taking another succession of bends, we pass through the start / finish straight to get some extra time for the second and final lap.

•Blazing around the track once more, definitely not running into any mines (ahem), we approach the final bend, but instead of going right we take a left into the eerily lit pit lane to replenish lost energy.

•Out of the red light zone and left into the final straight sees us past the finish line in... um, second place. That'll teach me to fly into the pits on the last lap...

Frame rate?

As the Permedia 2 graphics chip is the minimum recommended spec. for WipEout 2097 on the Amiga, we tried it on a 240MHz BlizzardPPC with BVision graphics card, starting the game with the default options (maximum texture memory, unlimited FPS, Half Volume and CD Audio) on a double buffered 15 bit 640*480 screen. Entering the first track and applying both airbrakes to remain motionless on the grid, FPS values were noted as the different options were changed.

OPTION	FPS
Default	15
Min. view distance	25
Sky off	27
Filtering off	29
Trails off	29
Linear textures	29
Dithering off	29

The 233 MHz PPC604 board for A3/4000s runs about six FPS faster with everything off, but suffers far less than the BlizzardPPC on long view distances, allowing for plenty more polygons on screen without slowdown.

▶ the race. Don't cackle too eagerly though, there's more of them than there are of you and you're only a succession of bumps and missiles away from elimination yourself.

It all makes for an addictive challenge and gives WipEout 2097 that priceless "I'll come first next time, just you watch" quality. At four o'clock in the morning, however, it may be a good idea to get some sleep. Don't say you haven't been warned. To allow you to sleep, you can save your games (along with all the new track records you're bound to set) and come back to them another day. One time-saving option in the preferences menu allows you to set a default three-letter name which will be used when you break any records. This lets you get on with the important business of racing.

New features

Think you've seen it all on the PC and Playstation? Think again. WipEout 2097 on the Amiga has many additional features. You can take advantage of an increased view distance (clipping) during races, fly through the early morning mists courtesy of fogging, brighten or darken the picture with gamma correction depending on your mood or the time of night, limit the frame rate and enable triple buffering screen modes for a smoother ride. Not only that, you can run it all in a resizable Workbench window, perhaps so that you can keep an eye on your e-mail whilst zooming around the six tracks, but more likely to show off to your Playstation and PC owning friends.

But having said that, the changes in the Amiga version aren't just cosmetic - playing this game for the best part of a week, it's noticeable that the handling of the different craft has been evened out slightly. Perhaps it was just my chosen method of control, but the larger ships don't feel so cumbersome when

No Fluke!

The biggest disappointment of the Amiga WipEout CD has to be the audio tracks. The Prodigy, Underworld, Fluke, The Chemical Brothers.... not there.

We misunderstood. The Amiga version is based on the PC, not the Playstation version, so it comes with nine audio tracks all of which have been produced by Psygnosis' in-house band, "Cold Storage."

No disrespect to Cold Storage intended - it's just that when you're hoping to hear a number one hit from The Prodigy, anything else just pales in comparison. Still, you're bound to have some heavy metal, punk rock or thumping techno choons lying around on CD, right?

Shocking!

At the moment, control options are somewhat limited. You can choose to steer your craft with joystick (or joypad) and keyboard, mouse and keyboard, or solely with the keys. Digital Images are working on implementing support for Playstation controllers via the PSX Port adapter (hopefully to include dual shock functionality) and a patch which will be made available on their web site (and our cover CD) when it's ready. Playstation controllers and the PSX Port Adaptor are both available from Blittersoft, priced £24.95 and £14.95 respectively.

Know your weaponry...

A whole variety of weapons and power-ups are available to you, including (but not limited to) the following:

•**Missile:** As you'd expect, a single heat-seeking burst fired from the front of the craft.

•**Rockets:** Three unguided rockets fired at the same time covering a wider area.

•**Electrobolt:** A blue bolt of electro-static energy that destabilises the craft it hits and temporarily drains its energy.

•**Thunder Bomb:** A single charge which, when dropped, takes a chunk of energy from all visible craft.

•**Quake:** A wave travels down the track like a freshly-shaken rug, throwing any craft in front of you into the air, slowing them down and sapping their energy.

•**Plasma Bolt:** The two-second delayed reaction of this baby is worth waiting for. The powerful bolt of plasma which shoots from the front of your craft is tricky to line up because of the delay, but rewarded with an instant knock-out at short range.

•**Mines:** Five mines are deployed from the rear of your craft onto the track, which explode after a few seconds (or when another craft flies into them).

•**Turbo:** Standard racing fare this one - it boosts your speed for a few seconds and is particularly handy on long straights (should you be able to find one!)

•**Autopilot:** A godsend if you need to blink - let autopilot take control on those tricky sections. It lasts just a few seconds, but will only disengage after a bend rather than in the middle of one - extremely thoughtful and intelligent. Just remember to keep your finger on the throttle!

•**Emergency E-Pak:** Does little more than restoring some of your ship's lost energy. Handy if you're a long way from the pits and in dire need of an energy-level top up.

•**Shield:** A giant blue bubble envelops your craft, protecting it from knocks and scratches, not to mention enemy missiles. Lasts around five seconds, during which time you can pick up another weapon to use after the shield runs out.

compared to the smaller craft - this may make it easier for beginners to get used to all the ships, but it can take the edge off the challenge. However, the difference is slight - it shouldn't worry anyone, not least the WipEout novice, and there's still plenty of challenge in completing all of the tracks in first place.

So here we have it: the first 3D accelerated commercial release for the Amiga, and one of the true classic games of the nineties. WipEout 2097 was the game that made the Playstation, let's hope this definitive version can do something to kickstart high-end Amiga gaming. If you've got the hardware to run it

and even remotely like this kind of game, do yourself a favour and get out your cheque book. It may be a little dated now the follow-up, Wip3Out, is available on other platforms, but it's still a magnificent, adrenaline pumping game that has never looked so good as it does on the Amiga.

David Stroud Ⓐ

WipEout 2097 — 9/10

SYSTEM:	PPC, 3D graphics card, 24 MB FAST RAM, CD-ROM, OS 3.0, CybergraphX or Picasso96, WarpUP v4 (included), Warp3D v2 (included).
SUMMARY:	If you only buy one game this Christmas, it should be this one. Only let down by the soundtrack which comes from the PC version, rather than the Playstation original.

Inter**a**ctive

Your chance to pester the Editor! Write to: Amiga Active Magazine, 3-11 Spring Road, Bournemouth BH1 4PZ. Or, if you enjoy the pleasures of being online, send your e-mails to us at interactive@amigactive.com

Active Down Under

Congratulations. I enjoyed the first issue (kindly sent to me by a friend). You can see the CU influence of course - nice tidy layout, easy to read. I look forward to the next issue.

I look forward to subscribing, but I have only just resubbed to AF, so the moneybox is empty. However by the time you have online ordering I should be in a better financial position.

Chris Faircloth, New Zealand.

We're working on it! In the meanwhile, you'll be glad to know that our overseas distribution is beginning to work. Although we don't know the details yet, there should be some coming to Oceania.

Couldn't Get Rid Of Us...

Congratulations on releasing a top notch magazine. The Amiga magazine front went a bit shaky with the closure of CU Amiga, but the advent of your fine publication shines a reassuring light on the Amiga community and stands as testimony that Amigans will not sit around and just watch the world go by.

The CD-ROM is excellent (nice one, Neil). I'm especially glad to see a demo section again. Lots of nice swirly eye candy and atmospheric music gives us the chance to relax while smiling, rather smugly, at the talents of the programmers and their choice of machine (don't see too much of that on the PC!).

Rest assured, I will be spending more of my hard-earned on your mag in the future.

Luis Ogando, via e-mail.

P.S. Nice to see Andrew, David and Neil making good use of themselves again. For a moment, I thought you'd all disappeared!

Disappeared, us? We can't, we're addicted to the whole thing. Terribly sad. Thanks for the comments about the magazine and CD, and I have to say I definitely agree with you on the swirly eye candy front.

Hard to Find?

Just a quick mail to say how impressed I and my friends are with issue one. The interest and discussion that it generated was phenomenal. I can't wait for number two.

One point - had a bit of trouble getting hold of a copy. Maybe the newsagents will order more copies next time. Keep up the good work.

David Price, via e-mail.

Glad you enjoy it! If you have trouble getting hold of *Amiga Active*, the best thing to do is talk to your newsagent. You can order a copy (give them the coupon on page 64) or suggest that you stock a few. *Amiga Active* is distributed on a 'sale or return' basis, so there's no reason for an independent newsagent not to stock it if they think they can sell a few copies.

Graphical Reader Interface

Great new mag. It's the first time in years that I have felt that there is a wave of enthusiasm breezing through the community again.

The writing and news reporting is great, keep up the good work. The reader interface reminds me of the old CU Amiga (RIP), the best mag of its time. Very clear, precise and very positive. I will definitely reserve a copy at my local newsagent in Edinburgh.

Well done, Pinprint and *Amiga Active*. Best wishes for the future and I'm sure now that it will be a rosy one.

Drew Phillips, via e-mail.

Reader interface eh? I like that. I must be too heavily involved in this month's Back for the Future feature, all I can think of now is parallels between the Reader Interface of a magazine and the User Interface of a computer. Now I wonder how you could implement a pull-down menu on the printed page?

Oh Dear Me...

Can't believe I'm writing to you guys with a complaint, but here goes...

The comments by Tony Horgan (issue 2, pages 18 & 48/49) have really got under my skin. In the past, Alive Mediasoft have taken the stand against companies who have given bad press to the Amiga, and we're not about to stop now. Make no mistake, these articles are pure bad publicity and undermining to this industry. Let me give you a couple of quotes to refresh your memory:

"Amiga graphics and sound hardware is so far behind even that of the Playstation, let alone the latest PC cards or Dreamcast"

"...it [Wipeout] looks rather better than the PSX game, with additional tricks courtesy of the Amiga's 3D hardware"

"I don't need to remind anyone how the average Amiga system shapes up to a PSX in the 3D department"

The first two quotes are obvious contradictions of each other, and serve no purpose other than to confuse people. The other quote is just irrelevant.

Playing devil's advocate, could we not also say, "we all know how the 286 compares to an A1200." That's right - what the hell does that mean? Absolutely nothing - so why bother saying it at all?

What does an "average Amiga", whatever one of those is, have to do with WipEout? Hopefully I don't have to explain to you how far advanced the Amiga is over the Playstation. Even though mentioning the PC has bothered us, comparing the Amiga and PC is an ongoing argument which I won't get into - but saying the Amiga is shoddy in comparison to a console?

But who cares what I think? It's

the Amiga owner's opinions that matter in this game. Remember that a lot of Amiga owners can't tell a 3D chip from a potato chip, so they rely on YOU to tell them the facts. Telling these people that their machine doesn't even match up to a console is dangerous business and a main cause of people deserting the market.

I've had my whinge, and I hope you take it the right way. Come on guys - pull it together, *Amiga Active* is supposed to be a positive read so don't let this drivel slip through.

Steven Flowers, Alive Mediasoft.

If anyone wasn't aware of just what an enthusiastic Amiga company Alive Mediasoft is, they certainly are now!

Steven, I appreciate the points you make, but the point Tony makes about Amiga hardware is a totally valid one. Of course the decade old 2D graphics in an Amiga isn't better than the

five year old 3D hardware in a Playstation, let alone the modern 3D hardware in a Dreamcast. You only have to glance at a screenshot of either to see that this is true. The Amiga can certainly do far more than a Playstation given a PPC card and a CyberVision or BlizzardVision card (although we'll have to wait for the G3/G4 cards and the CyberVision NG to overtake high-end PC or Dreamcast hardware). However, the simple fact is that most people do not currently have this hardware. That's what Tony was talking about when he referred to the "average Amiga."

Amiga users are mostly pretty smart people. As you say, not everyone knows all about 3D hardware, which is why we had an article on the very subject in that issue. However most Amiga users are very computer literate, and when it comes to a conversion like WipEout, they've probably seen versions on other machines and want to know how the Amiga version will compare. Tony was only asking the questions that many of our readers will be asking.

As Tony said in the article, it's good to see that companies are releasing products for the kind of high-end accelerated Amigas that are up to the task of thrashing the Playstation at its own game. Is this undermining the market? Far from it - if we want to see more quality titles, people need to know that they'll have to upgrade their Amigas to more modern hardware. To convince Amiga users differently would be to spell the end of Amiga gaming. ▶

"Do we have any other celebrity readers out there, cartoon or otherwise?"

Below: Feedback's great but watch what you write it on. This vehicle report from Robin Pavey had us wondering whether he should still be on the road.

▶ I won't defend Tony's 'On Trial...' so firmly for the simple reason that I don't agree with it. That is basically an opinion piece, and after all, it's not unknown for judges to perpetrate a miscarriage of justice! However, he does make an important point. Almost all demos are being written for relatively low end AGA and 68k processors.

All the programming talent in the world will not coax better results from this than can be got from state of the art hardware. Perhaps it's time that more demo coders took a lead from Digital Images and made demos that required PPC and modern graphics cards? Amiga demo coders regularly beat their PC counterparts in open competitions despite using older hardware - just imagine what they could do with a level playing field.

What, from South Park?

Just a quick note to say I love the new magazine. It's what the Amiga market needs - a new, dynamic shelf presence. Although I've only seen issue 1 so far, this looks as if it will be everything that Amiga Format isn't at present; exciting interesting page layout, friendly review technique and a huge amount of content packed into less pages than AF. Whether the magazine is a financially good idea is yet to be seen, but hopefully AF will pull their finger out now there is some competition in the market and we the readers will end up with two well-written publications that are a joy to read.

*Big Gay Al,
South East Anglia.*

I hope we read your signature right. Are you really Big Gay Al from South Park? The one with the Big Gay Animal Sanctuary and the Big Gay Boat Ride? Cool! New strapline I think - "Amiga Active - read by South Park characters." Do we have any other celebrity readers out there, cartoon or otherwise?

Yep. Right now

Thanks very much for a remarkable and much needed publication. I found issue #1 to be a truly wonderful piece of journalism and I've read every article thoroughly and several times over as well. I prefer the top-down approach occurring right through the pages to the more detailed and ever-so-slightly laborious approach of Amiga Format. There is of course plenty of room for both styles in the market place.

We've been overtaken by events though. Please note that MAC, Sega and even Neo-Geo are all 'back for the future'. We in the Amiga community have so far been back only for another disappointment from the parent company. My understanding of Amiga Inc.'s next Amiga is that it will be a CD-ROM.

So, I look forward to seeing new BoXeRs out there. I'm even looking forward to the new CD-ROM Amiga if that's what it will be. (I'll take a couple of those as well). When should these products be launched? Any time right now will do. Any time right now.

*Phil Warren,
via e-mail.*

Amiga's plans are being kept very quiet at the moment, although we are expecting to learn a few snippets at the Cologne and Comdex fairs in the middle of November. Keep an eye on our web site and expect full reports next issue, but we may have rather longer to wait for a product from Amiga than we were hoping. As for BoXeR, well, it *should* be coming very soon indeed - keep an eye on our news pages (both in the mag and on the web site).

CD Covers

Following last month's discussion on the container for the coverdisc I have no real objection to the wallet if the cost saving helps the profitability of the mag. However as I re-house them in jewel cases it would be nice to have front and back covers. Any chance of enclosing a separate sheet with covers printed on it, (I hate having to cut up a magazine and leaving a gaping hole in a page, even if it is 'only' an advert on the unused side).

It's nice to see HiSoft advertising in a magazine again, I have purchased both hardware and software from them on a number of occasions and have always found them to be very helpful. (CD Rewriter and MakeCD next I think).

It's also good to see you responding so quickly to reader requests - coverdisc glue, next publication date etc. I subscribed at the World of Amiga show and so far don't regret doing so. Keep up the good work, you are all doing very well! (a la "Are You Being Served").

P.S. How do I get onto the Amigactive mailing list? I can't get onto your web site, my machine locks up each time the site is loading. Can I just send a subscribe e-mail to a particular address? My apologies if the details are in the magazine but I can't find it in them.

*Phil Sell,
via e-mail.*

You're not the only person to have brought up the issue of covers for the CD. We're looking at the options and will figure out something on this front as soon as possible.

The easiest way of joining the Amiga Active mailing list is to send a blank e-mail to the following address: amigactive-subscribe@onelist.com, or you can subscribe over the web at www.onelist.com/community/amigactive. The details weren't in the magazine but they will be from now on.

ASK THE GURU

"...when making a transparent GIF, how does one make a colour other than black transparent?"

This month: Upgrading to an '060, transparent GIFs, Zorro slots, misbehaving e-mailers, sweet sounding soundcards and flicker fixing.

Chip upgrade
DIY

Greetings, oh wise Guru,

I wish to know if there is anywhere I can obtain a 68060 chip from in the UK, and how much it will cost, as I intend to replace the 040 on my Blizzard PPC card with said 060 (It is possible! Someone has already done this! The PPC card has holes for the extra pins on the 060). I also want to know if there is a socket for the 060 to plug into, so I do not have to solder the 060 to the board.

Thank you!

Mike Every, via e-mail.

Whilst there is pin compatibility between the 68040 and 68060 chips, they do run at different voltages. You'd need some way of switching the supply rail down to 3.3VDC if you don't want to blow your expensive '060. I certainly wouldn't undertake an upgrade such as this without fully researching first, and make sure that any warranty acting on your card is out of date. CPU sockets are available, but probably quite hard to find now, you could try Maplins or RS Electronics in the UK.

Sourcing 68060s in single units is even more problematic. They're rarely held by retailers, and those that do take the line almost never seem to have any in stock. Your best bet is to check the dealer's directory on the Motorola web site and go through the list of suppliers that have one. Even then, expect to pay a fair bit over the odds for a single part. In short, you'd be strongly advised to talk to your original dealer and find out whether they would be able to help you out or do the modification for you.

GIF woes
Creative

Hello Chaps,

Sorry if this is a dumb question, but when making a transparent GIF, how does one make a colour other than black transparent? I know black is colour "0" (well it is in ImageStudio anyway) so what number is white, or yellow, or whatever else. Help!

Dave Naylor, via e-mail.

The transparent colour is selected by its location within the GIF's palette. The colours will be listed from zero up to the maximum colour, which will depend on how deep your image is, generally 256 (8 bit). If you bring up the palette tool in PPaint or similar, you can physically see the location of the colour inside the palette. Set whatever RGB value you like to colour 0 - it will appear transparent when displayed in a Browser or other application which supports transparent GIFs.

Zorro choices
Hardware

Hi All-Knowing,

I'm very tempted to purchase the new ZorroIV board for my A1200 Power Tower, but I'd like a few questions answered first:

Can I use any of my Zorro cards from my A2000 in it, like my PicassoII+ card for instance?

I have an Apollo 040 card with SCSI, will the Zorro kit work with it? How easy is it to install? Good mag by the way, can't wait for issue three.

Richard Sherwood, London.

The ZorroIV board gives an amazing amount of expandability to a standard A1200, and is compatible with ZorroII. The use of graphics cards is supported in the top slot, (for PicassoIV and the like), and other Zorro cards in any of the other four slots. You also get the chance to double the speed of some ZorroII cards in the first two slots. Along with that you get (eventually) 4 clock port headers and a pass-through which has been tested (although not by us) with almost every modern accelerator. Check out the full review on *page 28* for more details.

Order, order!
Software

Dear Guru,

I've been having a few problems since upgrading my e-mailer program. I use Miami as my TCP/IP program, and am quite happy with Voyager V3 - but since upgrading Yam to version 2, it crashes constantly when starting up. I've now since gone back to V1.3.3 and it works perfectly, like it always did. Any ideas?

Bob Ross, via e-mail.

There is a reported problem with Yam Version 2 in that it checks for the presence of a TCP stack before continuing. You can start these programs up in the right order, which is the stack, then Yam, then lastly Voyager, or you can edit the tooltypes to include the following: 'ISONLINECHECK=N'. This is a workaround that has been implemented into later versions of YAM V2 and the setting of this tooltype will stop YAM from checking for the presence of an online TCP stack.

Sounds sweet
Hardware

Hi Amiga Active,

I'm wondering about upgrading my A1200 with a soundcard, and wondering if some of you might have any recommendations. Guess the choice is not big for me thought, but I was considering the Melody1200 Pro. Does this card fit in my clockport? Are there better cards available, and is it really worth the money upgrading the A1200 with a soundcard?

I actually think my Amiga plays MP3s at quite good quality, so will I notice any major difference, except in CPU usage? I don't need the soundcard for editing/making music, just listening, so would it be wasted money?

Helge Brede, via e-mail.

The question is, what do you want to gain by buying this new hardware? You state you just wish to heighten your listening pleasure by upgrading the Amiga sound system, and as such the soundcard will go a long way to help. I'm assuming you have already got the 14 bit AHI drivers installed, so the benefit of pure listening from moving to 16 bit sound may not be hugely apparent, unless you're an audiophile. You will notice the difference in the CPU load, as you stated, and this helps. MP3s are greatly enhanced by sound hardware if you have an '040 or lower processor.

If you are to invest in the upgraded hardware though, you should think about putting it to other uses. Fitting a card with a built in DSP chip can provide hours of endless enjoyment of real-time sound effects, but 16bit sampling, playback and mixing is a whole new world waiting to be explored. We'll be covering A1200 sound cards in more depth in the very near future.

Flicker-fixer won't fix
Hardware

Oh great and omniscient Guru,

I have a problem getting a PAL WorkBench screen to work with my EZVGA-Mk2 flicker-fixer / scandoubler. The offending monitor in question is a Samsung SyncMaster3. The problem seems to be that while the monitor will sync to 31.47Khz vertical at a 60hz horizontal refresh, it will only sync to 35.6Khz vertical at a 56hz horizontal refresh - meaning that PAL screens roll upwards annoyingly when I try to display them. NTSC, Multiscan Productivity and some other displays work fine though.

This is OK normally, but - even though I've installed RTGmaster - my copies of Gloom and Super Skidmarks insist on opening PAL screens to run in - making the games unplayable. Also, I am thinking of connecting the Amiga to the Internet (only the PC is so connected at present) but I'm concerned that the browser software will require PAL screenmodes or a graphics card. So:

1) How can I get PAL screens to work?
2) Are there any extra monitor drivers available for OS3.0 that may help?
3) Is OS3.5 the solution?
4) Can I use a web browser in a 64 colour Multiscan screenmode?

David A Cox, via e-mail.

Hmmm, plenty here to answer...

1) Some PC monitors simply won't scan down low enough to allow the use of PAL screens, even via flicker fixers. Ideally, you'd need to measure the frequency of the signals coming from the scandoubler in order to narrow this problem down further, but it's most likely the scan rate of the monitor.

2) Not for PAL modes. If these games multitask, using mode promotion software to retarget them to screens that you can view will help.

3) I'm afraid not, no.

4) Yes, but the display will be a little slow.

The Guru **A**

Monthly Meditation
To Pup or to Wup?

One of the most confusing and annoying issues for PowerPC card owners is the incompatibility between WarpUP and PowerUp. This need not be a problem, as it is possible to dual boot the system with the help of some handy scripts. On this month's AACD, you will find two such scripts that will boot your system into PowerUp or WarpUp depending on a key press. The "KeyPressed" program referenced in the scripts can be found in the root of the CD.

- Install PowerUp and WarpUp as normal.
- Copy the PowerUp ppc.library to LIBS:ppc.library.PowerUp.
- Copy the ppc.library emulation to LIBS:ppc.library.WarpUp.
- Copy KeyPressed to C:.
- Copy either ChoosePPC1 or ChoosePPC2 to S: and rename as ChoosePPC.
- Remove any PPC initialisation commands from user-startup.
- Add the following line to S:startup-sequence, right after SetPatch: "Execute S:ChoosePPC".

ChoosePPC1 will now boot into PowerUp if you hold down the F8 key while booting, otherwise it will use WarpUp. Use this if you mainly use WarpUp and only occasionally want to boot into PowerUp. ChoosePPC2 will boot into PowerUp if you hold down the F8 key while booting, and use WarpUp if you hold down F9. If you don't press either, it will use whatever you last selected.

Feeling blue? Ask the Guru

It's not necessary to climb the Himalayas to bring your problems to the *Amiga Active* Guru. If you have any technical problems, tips you'd like to pass on, or requests for in-depth coverage of a particular problem, please send them to: Ask The Guru, *Amiga Active* Magazine, Systems House, 3-11 Spring Road, Bournemouth BH1 4PZ - or e-mail them to the Guru's personal mailbox: guru@amigactive.com

Please don't send us an SAE with your letters, as we cannot enter into personal correspondance due to time constraints. Also note that techincal queries cannot be answered over the 'phone, as the *Amiga Active* Guru spends most of the month meditating.

What do they mean?

Our lovely Guru will sort out your silicon.

Sloppy software? Bug the Guru!

Networking and the art of Zen explained.

Get the most out of your Workbench.

Confused about your creative potential?

Save money - get the job done yourself.

Say WHAT? You must be bonkers!

Getting the Most from your Modem

British Telecom may not be too keen to help you reduce your online costs, so here's a little help from us...

"For the ultimate in fast dialup connections, the solution is ISDN"

Permanent, high-speed connections to the Internet remain something of a Holy Grail for the majority of Internet users. While a few users within the UK are privileged to have the chance of using a leased line or trial cable modems and ADSL, the majority of the population is left to connect via the old-fashioned phone line.

This, unfortunately, has two main disadvantages; a phone line is slow and is usually charged according to time spent online. The two are, of course, linked - the slower your connection, the longer you have to spend online to transfer the same amount of data. There are many ways to improve this - some come with a price tag while others can provide a remarkable reduction in costs for no outlay.

For the ultimate in fast dialup connections, the solution is ISDN, as explained in the October issue. Less extreme, and less expensive, is a faster modem. A 56K modem conforming to the V90 standard has a theoretical speed of 56000 bits per second (bps). In reality, you will be able to connect at between 40000 and 50000bps. Connect speed isn't everything, a modem will "retrain" during its connection, switching to a different speed as line conditions change. This makes connect speed nothing more than a vague indicator of the actual speed. For a real world assessment of your connection, download an archive from a local server (or your nearest Aminet site). A good V90 connection should give a download speed of around 5.5KB/s. Another way of checking a connection is to load up a terminal program (like Term or AmTerm) after disconnecting from the Internet. Type AT&V1 in the terminal window and you should get a status report that starts something like:

```
TERMINATION REASON.........
              LOCAL REQUEST
LAST TX data rate..........
                  31200 BPS
HIGHEST TX data rate.......
                  31200 BPS
LAST RX data rate..........
                  49333 BPS
HIGHEST RX data rate.......
                  49333 BPS
```

In this example the initial connection speeds of 49333 download and 31200 upload were maintained for the duration

of the call. If you regularly find that the modem retrains to a lower speed, or you feel the initial connect speed is too low, there are several things you can try.

First, disconnect everything else from the phone system. Telephones on the same line that appear to work normally can reduce online speeds. Extension leads and connectors are also causes of reduced connection quality. Changing your modem initialisation string can make a difference to the speed and stability of your connections too. It's best to ask your ISP for the best setting, as it can vary according to the type of server they use, but AT&F&C1&D2+MS=,,,,1%E1S202=32%C3 usually works well for V90 modems.

Throughput is dependent on the capabilities of your serial port. The standard Amiga serial port is too limited to handle modern modems effectively. A serial card will enable your Amiga to receive data as fast as the modem can send it. Serial cards also reduce the load on the Amiga's CPU, making multitasking smoother.

There are steps you can take to improve matters with the standard serial port. Don't use a native screenmode with more than 64 colours - a 256 colour screen will leave the custom chips struggling to handle the demands of AGA and the serial port, with the serial port losing out. This isn't a problem if you use a graphics card, of course. It is also worth trying some of the alternative serial drivers available.

Above: FTP is often a faster way to download, especially using a Batch facility.

Caches and proxies

Increasing the speed at which your Amiga can receive data is the first step to reducing online costs. How can we make use of this extra speed to reduce the amount of time spent online?

All browsers have a cache, a store of the most recently accessed files kept on your hard drive. This means that you can go back to the site you visited yesterday without going back online. Make sure you have sufficient space set aside for the cache in your browser settings, a 2MB cache won't last very long once you've visited a few graphics-intensive sites. Equally, there's no point in allocating hundreds of megabytes to the cache, a six month old copy of a site isn't very useful. When you are online and visit a previously cached page, the browser will check the server and only download it if it has a newer version than your cache. Most browsers allow you to configure how often this verification is done. Once per session is the best compromise between too many

connections to the server and viewing out of date information.

A proxy server is similar to a cache, but maintained by your ISP. Because the server is at your ISP, you should get access as fast as your modem can handle. When you visit a site that someone else has already downloaded, the proxy server will have a copy of it and send you that. It doesn't matter if the original site is on a slow server in deepest Russia; you are downloading from a local server. The disadvantage of proxies is that you may get an outdated version of the page, the reason some browsers give the option of not using the proxy server for certain sites where up-to-date information is more important than ultimate speed.

If you want to read through a whole web site, or a sizeable chunk of one, you will save time by using a web site grabber which will download the whole site in one go, ready for offline reading. Programs such as tcpdl, wget, HTTPJ and GrabURL can be used for this, building up a library of information for offline reading.

Multiple connections

It is possible, even normal, to have more than one stream of data flowing over a single connection. Most data transfers suffer from periodic breaks in the flow of bits, shown by the receive LED on the modem flickering. If you want to download mail and fetch a file from Aminet, it is more efficient to both at the same time.

Aminet provides other opportunities for reducing online time. Try the various mirror sites to see which is the fastest. There is a list of them on each server and on our cover CD each month. Rather than using an online search page to find the file you want, use the Aminet Online option of on the "SearchCDs" utility on the most up to date AACD to check an offline copy of the Aminet index, and only go online once you've found the file you want. Want to see what's new on Aminet? Instead of browsing the recent files online, subscribe to the daily or weekly update mailing lists to receive listings of new uploads sent to you automatically. Downloads can

Above: Search for your files offline.

also be made faster by using an FTP (File Transfer Protocol) program instead of a web browser, as the HTTP method of file transfer is often slower than an FTP connection.

It may be stating the obvious, but you should use an offline reader for your e-mail and news. Any good e-mail or usenet program will download a batch of messages at high speed, ready for offline reading. Replies can then be uploaded next time you connect.

Neil Bothwick A

Time to switch?

It may also be possible to reduce the amount you pay for each minute online. It's worth checking out the various options for telephone services in your area and what each charges. Many cable telephone companies charge more for an 0845 call than a standard local call. If you don't use BT, ask your ISP if they have a local number covering your area. It is also possible to make calls over your BT service, but be billed by another company. Cable & Wireless offer this; calls are routed through them if you

add a prefix to the number. One of their offers is a maximum charge of 50p for Saturday calls. Once again, this only applies to normal 01xxx telephone numbers, not 08xx numbers, but it applies to national calls so your ISP only needs one such number.

Other companies offer free local calls, subject to certain restrictions. Euphony charges nothing for the first ten minutes of a call on evenings and weekends. By careful juggling of providers, using whichever is cheapest for the particular time of the week, you can make significant savings.

Cool Sites

...and News Bytes

obtained exclusive interviews with Petro Tyschtschenko and Fleecy Moss. They also produce a quarterly magazine.

The majority of Amiga sites are in English, but there are many in other languages. Amimaniacs is a Turkish site and france.amiga.tm is, unsurprisingly, in French. Not speaking either of these languages, I won't comment on the content (I can kind of read French and france.amiga.tm is now one of only three foreign language web sites I have bookmarked -ed.), but they are well constructed, attractive sites.

(CUT) is lobbying the government to provide unmetered local calls. Their web site contains a great deal of information on the objectives of the campaign, its progress, arguments as well as background information.

Music online
http://www.listen.com

MPEG audio is one of the fastest growing areas of Internet use. While the use of MP3 to spread pirated music grabs the headlines, there is a lot more going on in terms of positive use of the Internet as a means of delivering music (this is one of the areas where the ill-fated MCC was targeted). Listen.com provides music for download, legally. You can browse the various music categories or search for specific artists or titles. Some of the files are free to download, but others require payment.

Moo Bunny
http://flyingmice.com/ squid/moobunny/amiga/

The web isn't all one way traffic; it's not just about reading web pages and downloading files. Message boards provide a useful alternative to mailing lists and newsgroups for discussion. Moo Bunny is one of the best known Amiga message boards, with a number of high profile Amiga personalities posting regularly.

Online Magazines
http://www.williams. demon.co.uk/seal/
http://france.amiga.tm
http://members/xoom.com/ amimaniacs

There are many Amiga news and magazine sites. SEAL (South Essex Amiga Link) is one such site. While the appearance of green text on a black background may not be to everyone's taste, they do have some excellent content. Recently, they have

Internet without the bills
http://www.elite.dircon.co.uk/ ADSL/intro.htm
http://www.unmetered.org.uk

What is this ADSL that people keep talking about? If you have asked that question, "Adams ADSL Reference Pages" have the answer. Mainly concerned with the current BT trial of ADSL, it also provides background information and links to other references. The Campaign for Unmetered Telecommunications

ADSL up in price
British Telecom are running a trial of ADSL Internet access in London. Unconfirmed reports claim they have increased the cost of participating in this from £30 per month to almost £50. At the same time, bandwidth has been reduced from 2Mb/s to 0.5Mb/s. If this is indicative of the service that BT mean to supply to the public next year, UK users will once again be

paying twice as much as those on the other side of the Atlantic, for an inferior service. Time will tell whether the cable companies see this as an opportunity to increase sales, or a chance to charge more themselves.

News too much
Usenet, originally intended for the transport of text messages, is now groaning under the strain of huge amounts of binary data - more

than 50 gigabytes of messages per day for all available newsgroups. Sending binary data encoded as text is highly inefficient, but the transient, decentralised nature of Usenet makes it ideal for those spreading the sort of material that would result in the closure of any web or FTP site carrying it. The largest single usage of bandwidth is on MP3 groups, now carrying far more than the warez groups.

Britannica Online
One of the most traditional publications, Encyclopaedia Britannica, has succumbed to the new order. Previously available as a high priced collection of books, and latterly on CDROM, Britannica has responded to the competition from the likes of Encarta by making its encyclopaedia freely available on the web:
http://www.britannica.co.uk

AMIGACTIVE MAGAZINE
Issue 4 - JANUARY 2000

Next month in *Amiga Active* magazine...

Show Special

Find out what's happening in the world of Amigas and the future of computing (prepare yourself for some major surprises) with reports from Cologne - **Home Entertainment World** and San Francisco - **COMDEX Fall**

Also, subject to the usual unpreictable nature of life and delivery dates...

Update PPC	What's happening with Escene, Met@box, Phase 5 and POP?
Masterclass	Samba networking made simple(r).
Making the most of OS 3.5	It's more than just icons.
On Trial	Gateway stands accused.
Tales From Heaven	We think.
Goal! 2000	You never know!
Ami-Atlas	Find your route.
Digital Almanac	Small-screen stargazing.

Plus: Surprise game previews and in-depth analysis of the latest news and everything we manage to blag from Cologne.

...and plenty more. Don't miss it!

That's issue 4, on sale Thursday December 30th 1999!

HAVE A HAPPY CHRISTMAS, AND WE'LL SEE YOU IN THE NEW MILLENNIUM!

AMIGACTIVE MAGAZINE

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

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Retroactive

We all know about the A3000, but the A3000UX? Perhaps that's because it was never to be...

You think it's spiffy to run Linux on your A1200? You think it's keen putting NetBSD on an A4000? You're right, it is - but you're really not breaking new ground running a Unix-like OS on your Amiga. In fact, the real UNIX, the granddaddy AT&T UNIX that's been around longer than many of our readers have (well maybe not, but we haven't got the readership demographics to be sure yet), was running on Amigas a good decade ago.

The Amiga 3000 was Commodore's great hope for resounding success. It was going to right the wrongs of the 2000 (excessive girth and a slow base CPU) with a sleek, speedy performance machine (030 at 16 or 25 MHz!). More importantly, it was going to be a workstation not just for the Amiga enthusiast and professional, but for the mainstream as well. Commodore was one of the first companies to obtain a full AT&T UNIX source license, and they put it to good use, creating a 68000-compatible UNIX that was the envy of the IS world. Commodore shipped both Amiga 2500s and 3000s with Amiga UNIX pre-installed.

Unfortunately, Amiga UNIX's end was not as happy as its beginning. Towards the project's completion, Commodore began to lay off the design team. Frustrated, the remaining members completed the port, then immediately resigned in what many consider the finest departure ever by Commodore employees. They had managed to obtain the private fax number of Commodore's much-hated CEO Medhi Ali, and all sent their notice directly to him.

Adding to the woes of Amiga UNIX was perhaps one of the greatest failures in Commodore history. Sun Microsystems (who, despite the Java hype, have always been and continue to be all about UNIX) was in some very serious negotiations with Commodore. They liked the design of the 3000UX, inside and out, and wanted to OEM the computer as a new low-end UNIX workstation, to add to their 68000-based line. It was not to be, and the 3000UX never had a chance to live up to its potential.

Uneasy Networking
Here's one more reason to pine for the never-completed AAA chipset-based computers Commodore was working on before their demise. Like AGA, the AAA feature set has been superseded several-fold by developments in the PC industry, but that doesn't mean Commodore wasn't working on some clever features for their Amiga computers.

Aside from seeing just what HAM10 would look like (HAM and HAM8 are still neat to this day, I don't care if 24-bit looks better), one of the most interesting features was foreshadowed on the AAA developer boards, of which three are known to have been built. The board had built-in networking hardware that operated over standard RCA patch cables in a bus (serial) chain, much like 10Base2 Ethernet networking but without the messy cabling and nasty terminators. There's no guarantee that such a feature would have made it onto a production machine, but we can dream of such easy networking, can't we?

"The PC gaming industry likes to make a quick, cheap buck based on prior art."

"Amiga Greatest Hits"?
The PC gaming industry likes to make a quick, cheap buck based on prior art. That's why there have been so many commercial emulator game bundles over the past few years. Activision in particular have been very active, releasing game packs with emulators of the Atari 2600, Intellivision, and Commodore 64. There are even several arcade emulator bundles available for the Playstation.

These things start to become possible when emulation technology is mature enough to sell as a commercial product. Amiga emulation is certainly at that point - witness the success of Cloanto's commercial bundle Amiga Forever. It occurs to me that all we're missing is an enterprising games publisher to step up and get their own emulation license, put a nice front end on things and re-release a nice, fun, legitimate bundle for the emulation world. Epic have recently released the Gremlin collection and perhaps, with a little help from Gremlin, this could get distribution alongside PC games in high street stores.

A word of advice: if you hear of such a project getting started, encourage the publisher in question to actually include some decent games in the compilation, even if they have to go out and spend a little to re-license some of their older titles back from the original authors. Activision's Commodore 64 emulator pack was a failure because the 15 titles were mostly from the absolute dregs of their titles.

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