

# nicen



#### **ACTION NEWS**

More high profile PC ports are heading the Amiga's way, read about it in the news

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It's probably the last pointy-clicky adventure you're going to see for a while, so make the most of it while you can

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Amiga Action talks to the antipodean developers (that means their Australian little Jimmy)

#### EVIEWS

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PAGE MONSTER

Those lovley people at Softwood have done it again with the latest update to the long, long running wordprocessor come DTP package

Neil Mohr got up early to review this HTML authoring package but wished he had stayed in bed a little longer





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Only one new CD this month, no Aminet can you believe it, but the one we have has kept our lovley dim whitted Huggie gurgling contently for hours

If you never felt at home using a PC, now you can - the UAE is an Amiga emulator that is available for virtually every computer around





#### World of Amiga 24

Neil Mohr went to the World of Amiga Show and the Gateway 2000 press conference



#### HE COVERDISK

#### **GET ANIMATED**

Try this months Amiga Computing top rated shareware program, Animate, a MovieSetter for the '90s



#### Includes:

BarNone – The ultimate Workbench extension DiskSafe – Protect your drives from corruption DiskSpeed – Benchmark your hard drive

DRemind – Never miss another meeting NewSerial – Low CPU overhead serial device Powerlcons – New style icon dragging

### REGULARS

#### **NEWS**

No Hugh you cannot copy the news out of the other magazines, I said no. Don't make me come over there. For the big news read my show report

ESP

After the hail of abuse last month things have calmed down to the

#### ACAS

usual rants and raves

Generally thick black smoke pouring out the back of your Amiga is taken as a bad sign



#### PUBLIC SECTOR

Dave Cusick is dead clever, like. Even though he does come from Cheshire and is a bloke, said Justine who's standing just there, eh?

#### A MIGA GUIDE



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Want to order something on-line but are scared?
Dave Cusick has it covered



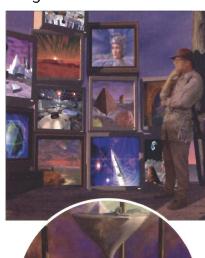
Event handling can be tricky, Paul Overaa explains everything

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#### OVER STORY

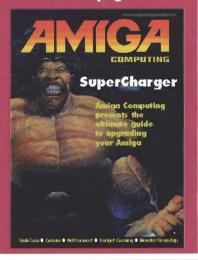
DIGITAL ARTIST\_

Learn about the company and man behind this month's **Amiga Computing** cover and how the Amiga created it!



#### **BACK ISSUES**

Missed out on an issue of Amiga Computing?
Turn to page 30



# what

he big Amiga event this month is obviously the World of Amiga Show and accompanying Gateway press conference, and I'm sure you would love to know all about it. For a detailed report read the full Show Report on page 24, where you can find out all the details of what was said at the press conference and how the show and developers con-

Overall, the feeling after the press conference is that Gateway and Petro said all they could. It was made clear that Gateway had, at the time of the conference, only really owned the Amiga for a day the actual sale had been legally confirmed 24 hours before.

ference went on.

Due to the situation at that time, nothing really could be said about what may happen or about any new developments either current, planned or future. Generally, however, it was good to hear some of the positive directions that Petro Tyschtschenko wants the Amiga to move in.

He wants co-operation with other companies, such as PIOS, Phase5 and Macrosystems. They want to license the OS (which in essence is the only viable mass market product they have) to as many people as possible. He also stated. very strongly, that any new machine will be based around industry standard components.

# happens now?

Reflecting on the recent World of Amiga Show, Neil Mohr wonders what now?

> Over the year this has been something that has caused quite a bit of contention, with there being a 'we have got to have custom designed hardware' camp and the 'standard components will do us' camp. I fall into the latter category, so am obviously biased. Others may not be so happy but, whatever you think, the fact of the matter is that this will mean we will see cheaper Amigas released much sooner than would be possible if custom hardware was utilised, so there.

> If there was anything a little disconcerting it was that anyone who went to the Toulouse VIScorp press conference would be going through a bout of deja vu, as pretty much the same things were said. Luckily, the difference here is that Gateway does own the Amiga and has a rising share price.

> At least it has already taken the first few steps to get Amiga International back up and running with warehousing and offices already being located and staffed,

albeit sparsely. Alongside this, a new product development manager is to be appointed.

Gateway is prepared to be patient with Petro and allow the company to develop something that is very important as nothing is going to change overnight. Just because Gateway has bought the Amiga does not mean we will be seeing amazing new developments in the next month. To properly develop the machine and, more importantly the operating system, will take many months, even a couple of years.

I think we could all do with taking a leaf out of Gateway's book. Just a few days after the show had finished I had someone on the phone saying they had heard Petro say that a new machine could be out by the end of the year! AST

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For eight years Amiga Computing has been the leading magazine for Amiga nthusiasts. Amiga Computing promises to nform, educate and entertain its readers each month with the most dedicated coverage of the Amiga available

#### Amiga Mice MegaMouse Plus (3 Button) ......£10.95 Optical Mouse ......Sold Out New Golden Image TrackBall ......£19.95 Pen Mouse .....£12.95 (ideal for CAD) New Black Mouse Ram Boards RAM CARDS A1200 A1200 with clock and 4Mb.....£49.00 A1200 with clock and 8Mb......£65.00 A1200 with clock, 8Mb & 33Mhz FPU....... \$80.00 33Mhz FPU inc. crystal .......£15.00 RAM CARDS A500/500+ & A600

#### Controllers

Catweasel for A1200 - allows you to
connect High Density Disk Drives
Catweasel for A1500/2000/4000
Buddha IDE Controller for A1500/2000/4000.£55.00
Catweasel plus Buddha for A1500/2000/4000.£79.00
Oktagon 2008 SCSI controller
Multiface III
PCMCIA Controller for CDRom for A1200£69.00

#### New GI-Quatro Buffered Interface for A1200

(Successfully launched at World of Amiga Show '97) Buffered Interface for A1200 with IDEfix'97 software allows to connect 

#### (New AlfaQuatro Interface)

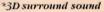
Specially made hardware and software. Allows 4 ATAPI devices, ie, 2 IDE hard disk & 2 IDE CD Rom to Amiga 4000 internal IDE controller, through Alfapower on Amiga 500/500+, comes with full IDE Fix software .....

#### (Joysticks & Joypads)

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- c) Use Internal IDE port with GI-Quatro buffered interface if you have 3.5" Hard Drive (will be with full IDEFIX software).

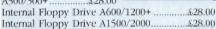
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16 speed CD ROM for	£189.00	£159.00	N/A	£149.00

\*(for A500/A500+ Alfapower hard drive controller and Hard Drive is required). A1500/A2000 supplied with IDE controller & software. A4000 supplied with AlfaQuatro interface & Full IDEFIX software.

#### Floppy Drives

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for all Amigas\$39.95	3
Internal Floppy Drive	
A500/500+£28.00	
. 1 201 0 1 1/00	mana



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#### (IDE 3.5" Hard Drives

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SMb	Simms\$35.00	32Mb Simms £140.00

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#### (Miscellaneous Products)

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DD floppy disks (100)
(including multicoloured disk labels)
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2 in 1 Scanner/Mouse Pad Can be used as a memo pad 53.00
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1230 50Mhz +	8Mb	2189.00
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#### Accelerator for A600

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# GATEWAY PRESIDENT ATTACKS MICROSOFT

ateway President attacks Microsoft Speaking at the PC Tech Forum in Burlingame, California, Gateway CEO, Ted Waittes presented his vision for the future of personal computers. His vision was surprisingly critical of the Microsoft/Intel monopoly, stating that the two companies stranglehold on the market was bad news for customers.

When asked by CNET's NEWS.COM what

he thought of Bill Gates goal to 'put Windows every desktop', Waittes replied that the OS gets too much attention. He criticised Windows, saying that should be hidden away, and that a front-

end should

be a 'navigational tool' that allowed the user to 'simply do their work'. It should be a sort of browser centric world. Waittes also criticised the complexity of the Windows OS, pointing out that users spend, on average, 27 per cent of their time fiddling with Windows.

Ted Waittes also attacked the Intel/Microsoft duopoly over the PC industry

stating that, "We can't let the creators of this technology lead and the world follow blindly... We should not allow ourselves to be intimidated by some technology companies." When asked later as to whether he thought Microsoft and Intel are intimidators, he said, "You can read between the lines".

Coming from Waittes, the comments are momentous as he was, for years, one of the greatest proponents of the Microsoft/Intel duopoly, having reaped great financial rewards from the their stranglehold on the PC market

The main theme of Ted Wait-

tes' address was that personal computers need to be cheaper, easier to use and more accessible. When asked whether or not Gateway was planning to build a non-Intel chip PC, he simply replied that Gateway is "always evaluating new technologies".

Quite what Gateway plan to do in the near future is anybody's guess, but chances are, it's going to rock the boat.



#### IMAGINE 6.0

Impulse has released further details about its upcoming release, Imagine 6.0. Imagine 6.0 should boast new GUI which is up to date with the current O/S, Inverse Kinematics, a new preference editor, new effects such as 'jitter' and 'jiggle', new textures, Linear Fog Fall off and staging functions to make character animation easier. It will be optimised for 040 and 060 processors and will support PowerPC.

Imagine 6.0 will be part of the Impulse CUP or Constant Update Program. For \$100 US dollars, members of the CUP will be able to

obtain all the latest improvements and features – this amounts to about four upgrades a year.

For more information contact Impulse at:

Impulse Inc.

8416 Xerxes Ave N Brooklyn Park MN. 55444

or

sales@coolfun.com

Amiga Computing AUGUST 1997

# ATEWAY 2000 BEGINS TRADING ON NEW YORK STOCK EXCHANGE

Gateway 2000 began trading on the New York Stock Exchange on 22 May. Wearing a cow spotted tie, Gateway President Ted Waittes accompanied NYSE President Richard Grasso in ringing the Stock Exchange bell to begin the trading day.

Waittes was enthusiastic about the move: "Gateway and our shareholders will reap multiple benefits from trading on the NYSE. We'll experience improved trading efficiencies, tighter quotation spreads and greater liquidity in this larger, more stable trading environment. This is an important step towards maximising long-term value for our individual and institutional investors."

Grasso was equally positive about the Fortune 500 company's decision to begin trading on the NYSE, saying, "We are thrilled to welcome Gateway 2000 to the New York Stock Exchange.



Gateway is an exciting, dynamic company whose phenomenal rise to the top has been remarkable. Gateway's values-based approach echoes our own beliefs and we are confident they will thrive in the NYSE environment."

A two for one stock split and stock repurchase programme, the decision to trade on the NYSE and Ted Waitte's bullish comments about the outlook for the country helped the company's shares soar from \$7.50 to \$68.875.

#### NEW AMIGA ORGANISATION

Nine months of discussions, debates and negotiation between Amiga developers, Amiga and Commodore veterans and Amiga users has culminated in the formation of a new Amiga organisation.

Working under the title of ICOA (the Amiga Industrial Council and the Open Amiga Workgroup), the organisation will function as a co-operative forum to discuss and co-ordinate plans for the future of the platform. The body should enable the Amiga community to 'create a single set of focused concerns rather than competing against each other and wasting time and resources re-inventing the wheel'.

In the words of the ICOA's press release, the council will, "work towards the establishment of a common set of open API's, protocols and specifications and lobby for the creation of a shrink-wrapped Amiga operating system that could run potentially on any platform, platform specific HALs (Hardware Abstraction Layers) providing the translations that would allow Open AmigaOS to run on disparate systems."

The ICOA has contacted Gateway to gauge the reaction of Amiga International's new owner. Apparently Gateway has responded positively to the ICOA's proposals. For further information contact Fleecy Moss, the ICOA's Project Manager at:

fleecy@netreach.net

or Skal Loret

Director of Communications

The Jay Miner Society for The Advancement of Personal Computing skal@nac.net

# PHASE 5 EXPANDS POWERUP PRODUCT LINE

Phase 5 Digital Products has announced the latest addition to its PowerUp product family for the Amiga. Besides the two existing PowerUp boards, the Cyberstorm PPC and Blizzard 603e, two new boards will be available.

The Blizzard 603e+ Power Board will be made specifically for the Amiga 1200 model. It will feature a high performance PowerPC603e RISC processor with a 200MHz clockspeed and a socket for a 68040 or 68060 companion processor, a memory expansion option for up to 64Mb of high speed memory and a Fast-SCSI-II controller on board. Available at the end of July, the Blizzard 603e+ will be priced at £399.

The board will be introduced for the Amiga 2000. Utilising a high performance PowerPC604e RISC processor, the board will have a 150/200MHz clock speed. Like the 603e+, the 2604e will include a socket for a 68040 or 68060 companion processor, a memory expansion option for up to 128Mb of high speed, 64 bit memory and an expansion slot for high performance expansions such as the CyberVisionPPC. The Blizzard 2604e will be priced between £529 and £729.



WHERE DO YOU WANT TO BE TOMORROW?™

#### QUEEN ON-LINE

Demon Internet, the European Internet Service Provider, will be transmitting footage of Her Majesty The Queen's visit to a Siemen's plant on Tyneside over the Internet next month. The 'Netcast', one of the first of it's kind, will be transmitted over Demon's Progressive Network's RealVideo Server. Anybody wishing to watch the visit should contact: http://www.siemens.demon.net/

#### S A D E N E S S G A M E S

Sadeness Software, the CD-Rom multimedia developer, has entered the games market with its signing of Paul Burkey's 'Foundation' game. The game, a Settlers type strategy 'god' affair, will be released around September or October of this year. For more info, take a look at Sadeness' Web site at: http:// www.sadeness.demon.co.uk/

#### SVIEWNG POWER UP

SuperView and SuperView NG, the image processing libraries, can now take advantage of PowerUp(TM). Registered users of SuperView/SViewNG can currently obtain 26 new PPC plug in modules for SuperView Library, with more becoming available in the coming weeks and months. The PPC plug in modules are available for registered users for the same fee as the SViewNG registration fee.

For more information contact Andreas Klinert at:

Andreas\_Kleinert@t-online.de or http:// h o m e . t - o n l i n e . d e / h o m e / Andreas\_Kleinert/

#### CLOANTO LAUNCH PERSONAL PAINT 7.1

The World of Amiga Show in London saw the launch of the new Personal Paint 7.1 CD. The new art package has the privilege of being the first piece of software (excluding developer tools) to include PowerPC code.

Designed to run on 68000, 68020, 68030 and 68040 processors, Personal Paint 7.1 boasts new Rexx scripts, including text animation and animation paths, improved blitter emulation and support of third-party graphics and library enhancements to store bitmaps in Fast ram instead of Chip ram. Personal Paint also supports environments such as Siamese RTG and UAE and can load TIM graphics directly from Sony PlayStation CDs.

Personal Paint 7.1 is now available in a total of 16 languages, and is accompanied by extended and more comprehensive manuals. If you've already got Personal Paint 7.0, you'll be able to upgrade for free by downloading the new features from Aminet.

For more information write to info@cloanto.com, or visit the Cloanto "Web Workbench" at http://www.cloanto.com/amiga/.



#### A MIGA PLANS REVEALED

After months of waiting, Amiga International and Gateway 2000 have finally revealed their plans for the future of the platform.

Speaking at the 1997 World of Amiga Show in London, James Taylor, Senior Vice President of Global Marketing of Gateway 2000, announced that the way forward for Amiga International would be via broad licensing and support for the Amiga community.

"There is still an extremely loyal following of AMIGA users and we look forward to supporting the needs of this group through licensing and support of new product development", he commented.

Taylor was joined at the news conference by Petro Tyschtschenko, MD of Amiga International, who outlined the company's plans to reinvigorate the Amiga market by: Supporting the existing Amiga community, leveraging the existing Amiga technology through broad licensing, and assisting in developing new products based on open standards to the home computer and video/graphics market. For more information read our four page feature on the World of Amiga Show.



More details have been released about the PowerCon '97 show. The show, dedicated to PowerPC based computer systems, will be held in Montreal on 19 and 20 July.

CUBE, the first Be User Group in Montreal, will be present in the user section to show several aspect of the BeBox/BeOS and GfxBase, a reseller of Amiga products, will demonstrate the PowerUP boards from Phase 5. A company called BeatWare will be demonstrating some of the applications it has developed for the BeOS and will present its BeSuite package.

# KILLER GAMES FOR POWER AMIGA

PXL Computers, ClickBOOM and Phase 5 have announced that they will cooperate to make products for the Power Amiga.

"We strongly believe that the future for the Amiga computer lies in PowerPC processor. Furthermore, we believe Phase 5 is, and will continue to be, the Amiga hardware leader. Therefore, we have selected Power Amiga as our future platform of choice", said Alexander Petrovic, PXL and ClickBOOM producer.

ClickBOOM has said that its next few 'killer games' projects will be optimised to support 680x0 processors as well as Power Amigas, before gradually concentrating on the Power Amiga alone. For more details check out our Click-BOOM feature in Amiga Action.

#### BLITZ BASIC2

Jon Lenart, the creator of the Amiga Foundation Network, mailed Amiga Computing a few days ago to tell us that the AFN had expired. However, busy bee(!) that he is, he's set up a BlitzBasic2 support site from which you can download libraries that will allow you to create Internet applications. Check out the site at: http://home.sol.no/jonlb/index.htm

#### AIR MAIL Pro release

Toysoft Development Inc, the manufacturers of the only commercial e-mail software for the Amiga, has released Air Mail Pro for Magic User Interface and Class Act environments.

The latest version of the popular e-mail program includes a number of new features including; more preferences so the user can tailor the program for their needs, a log file to keep track of all incoming and outgoing messages, a new interface for composing messages and a feature that notifies the sender when the recipient gets your mail (although this will only work if the recipient also uses Air Mail Pro).

In addition, Air Mail Pro includes additional forms for composing messages, an import and export address book and support for multiple e-mail accounts. Air Mail can now display any types of pictures including PNG, Jpeg or IFF, sounds such as AU or WAVE and animation such as Mpeg, CDXL, AVI or Quicktime.

For more information contact: Toysoft Development Inc. 131 - 64 Ave N. W. Calgary Alberta T2K OL9 Canada



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1.2GIG EXT SCSI	£219.00	£257.33
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#### EXTRACTING COVER DISK FILES

Before putting the cover disks anywhere near your computer, write protect them by moving the black tab in the top corner of the disk, so you can see through the hole. Doing this makes sure you cannot damage your disks in any way. There is also no reason why the cover disks need to be written to, so even if the computer asks you to write enable the disks, don't do it.

To extract any single archive, simply double click its icon, and follow the on screen instructions. If you want to extract the program to Ram, select the NOVICE level on the welcome screen, and press proceed once on the current screen, and then again on the next. The program can then be found in your Ram disk. Normally most programs need further installing, so read the documents on how to do this.

#### HARD DRIVE USERS

Hard drive users do not have to boot with the first disk, but you must make sure you have the Amiga's Installer program in your C drawer. To make sure your hard drive has the correct files in place double click on the SetupHD icon. This will check if you have the Installer program and if not will copy it across. Do not worry as it will not write over any existing files.

All you hard drive owners will find MultiExtract very useful. It is a separate method of extracting the cover disk files. It allows you to extract a number of files in one go, to your hard disk or Ram.

When you run MultiExtract, you will be presented with a number of check boxes, each representing one of the programs on that cover disk. Just de-select all the programs you do not want extracting, and then press proceed. All the selected programs can now miraculously be found in the selected destination.

#### FAULTY DISKS

If you should find your Amiga Computing CoverDisk damaged or faulty, please return it to:

MB Plc, TIB House, 11 Edward Street, Bradford, W. Yorks

Please allow 28 days for delivery



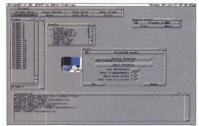
Here you are the usual collection of Amiga utilities and tools, nothing is quite so up-to-date

#### ANIMATED

Author: Marco Vigelius Requires Workbench 2.04

Recently, 2-D animation seems to have taken somewhat of a back seat while massively expensive FMV systems appeared and the big buzz about 3-D animation using LightWave and the rest did the rounds. So there never seemed to be much development for plain old 2-D animation.

This small program lets you add that little bit more to your plain animation. Primarily you can add sounds and play modules along side your animation. At specific frames in the animation you can play a sample, add a pause or change the speed of the animation. The program comes with



Make your animation that little bit better with animatED

a standard front end that will run on any Amiga screen making it easy to use.

#### DISKSAFE

**Author: Thomas Richter** Requires Workbench 2.04

owner at some point or another - the straightforward crash before the OS has dreaded drive SYS is invalid. Here at finished writing to the drive. So when the Amiga computing our external SCSI drive went through a terrible spate of drive crashed drive is incomplete and before crashes and read errors and it seemed that everyday the drive would become invalidated at some point. This of course led to us having to do a full drive recovery, and on a 2Gb drive that takes quite a while - and then you have the problem of lost files.

One cause of this is the Amiga resetting

It must have happened to every hard drive either due to your own foolishness or a OS does restart, the file system for the you can write to the drive again the OS has to rebuild the file system, and on a large drive this can take a long time.

DiskSafe simply stops your machine resetting before the operating system has finished writing to the drive so preventing the drive becoming invalid. Put it in your WBStartup and forget all about it.

#### NEWSERIAL

Author: Iain Barclay • Requires Workbench 2.04

It is well known that the Amiga's serial ports leave a lot to be desired by modern standards. Years back when a 2400 modem could set you out of pocket £1000 pounds (I kid you not), who would have thought you would ever need the serial interface would have been redesigned by then.

up and you start getting transfer errors. To help things out, a good few years back a number of replacement serial devices appeared that re-implemented the original serial device with a much less CPU intensive affair. The trouble is many do not work too well with modern Amiga hardware and software.

This is a updated version of one such replacement device called 8n1 (after the type of serial transfer used) and is a cut down and optimised version. Better still there are specific versions for the 040 and 060 processors.

To use the device, rename the version for your processor to 8n1.device and

copy it to your DEVS drawer. If you have an 030 or better you need to which is a system patch that speeds device. The program archive is included, but you will have to extract similar program these already have a copy memory patch built in so you are no traffic cops to stop you do not need the included program.



To correctly use the device, do not rename it serial device. From within any program that uses the serial device you have to use its preferences to tell it to

#### DREMIND

Author: Deniil ● Requires Workbench 2.04 Remember remember the 5th of November. Right so you are pretty much guaranteed not to forget that date, but what about the other 364 days of the year, and if it's a leap year then sheesh, that's another day to worry about?

DRemind is a great little program that will make sure you never forget a loved one's birthday, engagement, wedding day or funeral. There is a preference program into which you enter all the important dates and times and there are two main programs, depending on how big your Workbench is.



Magazine, magazine... there is something about a magazine I can't quite remember. Doh, that was it, write the magazine

#### OOB OF THE MONTH

Nothing to do with Melinda Messenger, although... no I can't do that, I would get my wrists severely slapped. Anyway you know how each month Amiga Computing likes to put a few deliberate mistakes in just to keep you on your toes? Well, this month's stinker is with BarNone. Due to a mistake archiving the program, on our behalf, BarNone will not install, but it is dead easy to fix the problem.

Once you have extracted BarNone from the cover disk, open the BarNone directory and press the right Amiga key and N, in the requester that appears type catalogs and press return. Again, press right Amiga and N and this time type contrib then press return. You can now go ahead and install BarNone as normal. Sorry.

#### BARNONE

#### **Author: ShadowWorks**

Requires Magic User Interface Workbench 3.0



Imagine ToolManager on steroids - that's BarNone. Essentially it is a front-end system for Workbench. Using MUI as the basis, BarNone adds a whole bunch of new object classes. Any of these objects can be used within the BarNone interface that you configure from the main program. From basic program buttons to screen buttons, clocks and CPU load graphs, it can all be added to this interface.

Generally the whole thing is stupidly complex but offers so much you have to have a go. The provided configuration file will start you off and, along with the HTML documentation, there is a comprehensive tutorial explaining everything.



This program requires the Magic User Interface to work. MUI can be purchased from any good PD house for a nominal amount, and without it you will be unable to run any MUI program

#### **PowerIcons**

Author: Georg Steger ● Requires Workbench 2.04

Powerlcons is probably going a little over the top on the naming side of things - something more like Nicerlcons would be appropriate. It removes the border from around icons when you drag them, also if the icon happens to have a transparent background you will be able to see through it. Right that's about it, you can go home now.

#### DISKSPEED

Author: Michael Sinz ● Requires Workbench 2.04

People can be very competitive, I'm not exactly sure why, too many hormones maybe. If there is any reason I would go for, its the old, 'it's a way of testing your limits or a way of tempering oneself'. This may go some way to explain the semi-obsessive behaviour that computer users exhibit towards benchmark programs. I doubt there is any long term Amiga owner that does not have a copy of SysInfo hanging around their hard drive.

To be fair, one thing that benchmarks do allow you to do is check that your system is working correctly or whether a change you have made has had any effect on performance. Talking of SysInfo, it does allow you to check most parts of your Amiga, including hard and floppy drive, but is notoriously unreliable. Run the test a few times in a row and I bet each time you get a different result.

DiskSpeed is quite an advanced drive performance program and at the end of its test you will have a pretty good idea what sort of performance you are getting out of your Amiga drives. Not only does it do straightforward read tests, but also writes of different block sizes and from different parts of the Amiga's memory. For each test it also reports how much of the CPU power is left over.

#### NEW AMIGA GAMES MAG

GNeo-Media Publications, a game console and computer magazine publisher from New Hampshire, has announced plans for a new North American Amiga magazine, Totally Amiga. The magazine will focus on general-interest Amiga information, with tutorials, reviews and other features.

Issues will be released quarterly, with the first issue scheduled for 1 August. The cost of a one-year subscription to Totally Amiga is projected to be \$29.95.

Advertising space can be purchased in full page, half page and smaller-than-half page sizes in black and white or colour (for an additional charge). Inside and outside cover space is also available. There is a discount for additional full pages beyond the first.

Contact Michael Pittaro at 603-886-7180 or Blackang@ix.netcom.com for more advertising and subscription details. A media kit is expected to be available 1 September.

#### ARTICLE ACCELERATORS

RBProductions of Gilbert, Arizona, has acquired the rights to re-publish material from Scientific Amigan, a magazine geared towards the more technical and scientific aspects of using the Amiga computer.

RBProductions also announced the presence of the new Scientific Amigan Web site, located at http://www.goodnet.com/~cyrano/. The full disk library of Scientific Amigan, along with some new additions, is available on its Web site, as well as information on technical uses of the Amiga and information about hardware and software which is particularly useful to the technical user.

Each back issue of Scientific Amigan is ready for downloading in PostScript format or viewing in HTML format. Orders may be placed for hard copy versions as well.

#### FOR RIVAL PUBLICATIONS

The Amiga Informer print publication has announced it has redesigned its Web site. The new location can be found at http://www.amigainformer.com. Present on the Web site is a Public Service Database, containing a mailing list information for The Amiga Informer has recently updated its Web site Amiga users and groups who sign up. This



will provide a convenient method to access Amiga users.

There is also a search engine for viewing past articles. The Amiga Informer articles are present in their entirety, with a two to three week time delay over the distribution of the printed version. Subscribing to the Informer is still the quickest way to read the information.

In other Informer news, the number of complimentary copies of the news magazine delivered to dealers has been drastically reduced. Fans of the magazine are encouraged to subscribe, if they have not already done so. The cost of a one year subscription of six issues costs \$14 US for US subscriptions, \$16 US for Canadian subscriptions and \$21 US for subscriptions anywhere else. Credit cards are accepted, as are US cheques made out to Eldritch Enterprises. Call 914-566-4665 for more subscription information

#### EATH VIDEO

Intangible Assets Manufacturing has restarted production of Dave Haynie's Deathbed Vigil videotape for a limited run. The tape chronicles the Commodore-Amiga engineering staff during the end of Commodore. Orders will be processed through 30 June, 1997. All copies of the tape will be signed by Dave Haynie.

The cost is \$35 US plus \$6 US shipping and handling. The tapes will be produced on a per order basis, 50 orders take up to six weeks to ship. For more information on the Deathbed videotape, http://www.iam.com/amiga/ deathbed.html

#### HINY BBS

ZenMetal Software, the owners of the CNet Amiga BBS software. has announced that many improvements to the software have been made, and the new CNet Amiga



Here is the global configuration editor for CNet

Professional Version 4-will begin shipping on 30 May, 1997.

Some improvements in the new version are built-in Internet utilities such as telnet, irc and news reading capability. FTP is planned for a future version. The Sysop GUIs have also been updated, and according to ZenMetal, give the application a "more professional feel".

The cost of CNet is \$150 US to first-time buyers, \$120 US for registered users of CNet/2, \$90 US for registered users of CNet/3, and \$50 US for Perspective 4.x customers. There are also discounts for purchases of quantities greater than one. Order information is available on the ZenMetal Web site, http://www.tggh.net/~rakey.



#### CONTACT POINT

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ver the years, Amiga Computing has covered many stories about single and groups of Amiga users who have taken the Amiga, its software and hardware and struck out into the world and made some money with it. It seems these people have done more to promote and sell the Amiga than any company that has owned it.

One such individual is Tom Miller, CEO of Adventure Unlimited Media. Tom and his company are responsible for all the art work you see on these pages, and the Amiga was the computer at the heart of each piece. Thomas Miller is a long-time Amiga user, having been introduced to the machine when it first appeared. He was one of the first A1000 owners and has been a devoted user ever since, making sure he keeps up with the latest models.

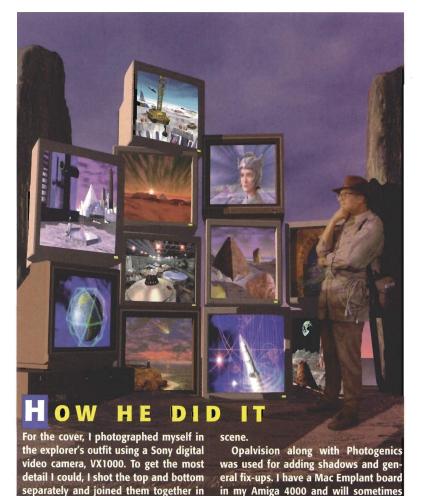
A graduate of the University of South California, Tom wrote, produced and directed one of the first student films made at the university. From here he went on to work for Saul Bass, a film designer and artist. A special position was made for

ImageFX (a reverse on the magician's

trick of sawing a person in half). Then I

used Photogenics' 'rub thru' to put myself into a Lightwave generated Amiga Computing talks to **Tom Miller**, the man behind Adventure Unlimited Media – a company that produces outstanding animation and art work on the Amiga

# Digita



use PhotoShop's good airbrushes for

some final touch ups. The foreground of the moon picture is a Mac Bryce effect –

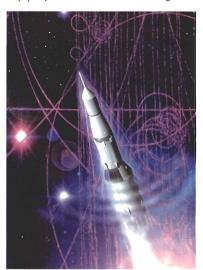
but it's all running on an Amiga!

# artist

Tom as design cameraman and during his time there he worked on films such as Walk on the Wild Side, Something Wild and Nine Hours to Rama.

Tom went on to be involved in many media projects and was among one of the first people to make use of computer animation. On top of this, he has also scored and recorded full orchestral and choral works.

He now works as head of Adventure Unlimited Media, alongside three other key people who have all had long term



AMIGA COMPUTING AUGUST 1997



Adventure Unlimited specialises in producing the highest quality 2-D and 3-D animation at low cost. Time after time projects undertaken by Adventure Unlimited have been completed at a fraction of Amiga the cost quoted by other companies - in 1 0 0 0 one case an advertising campaign for a restaurant in Montana was completed for a fifth of the price quoted by competitors. The finished advertisement went on to win an Addy award.

To help them in their efforts, two fairly beefy Amigas are employed. The first being the solid workhorse that is the A2000, equipped with a Blizzard 060, Video Toaster and, to back that up, a PAR card. As you may guess, this is primarily used for video and animation work. For graphics Tom has an A4000 equipped with an 040 Warp engine on which he uses Lightwave 5, Opalvision, ImageFX, Photogenics, Image master and AdPro. To add to this arsenal of top quality Amiga software there is Emplant, giving access to extra software such as Photoshop and KPT Bryce.

Q: How did you first come in contact with the Amiga and what first grabbed you about it?

Q: As far as artwork is concerned, most peowould advised to go for a Mac, what were your main reasons for using the Amiga over any other plat-A: It is the graphic capabilities of the

the first

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chase

when it

first came

Amiga. When the Amiga 1000 first arrived on the scene, nothing else in desktop computers could touch it.

First of all, I went for the Amiga because of the superior graphics and animation capabilities when they first arrived on the scene. I was one of the first to purchase an Amiga 1000, a 2000 and a 4000.

Secondly, I have an Emplant board in my Amiga 4000 which enables me to use such Mac software as Photoshop, KPT

> AMIGA COMPUTING AUGUST 1997

Bryce and Live Picture so that balances that equation very nicely. And finally, I still recall a comment made by one of my first teachers in high school that "a poor workman often curses his tools", so even though I have always sought the best tools, I've also tried to transcend them if the situation required it.

Q: Which programs do you use to create your work and what does each offer you that makes them so suitable to use?

A: Lightwave 3D is a great friend of mine and can help with such things as perspective and lighting, and in such areas as drawing details such as many rungs on a ladder which have to be seen in the correct perspective. Artwork, like life in general, is problem-solving. No two pictures present exactly the same problem.

Q: Before you discovered the Amiga to create your work, what did you use?

A: All different media: Oil, acrylic, pen and ink, pastel, airbrush, woodblocks, litho-

graphics, stone, etc. I did not like not being able to preserve an idea that might be going in several different directions. I would say I was born to be a computer artist, when you can make many adjustments or changes as needed – you can definitely explore more possibilities with a computer.

Q: What sources do you draw on when starting out on a work?

A: In the 'Atlantis in Antarctica' pictures, the editor of Atlantis Rising magazine, Douglas Kenyon, wanted the cover to show both the Antarctica ice-field and artefacts deep in a hole on the same cover picture. He suggested a 'fish lens' approach which is what I attempted.

Fortunately, Lightwave allows you to use different 'camera lenses' so that was a huge help. I tried drawing

the crane's metal boom and rigging with no success, so I ended up modelling it in Lightwave. The golden head of the lady with the helmet at the bottom of the hole started out as the Lightwave library's Beethoven bust which I eventually

painted into the final shape using Opalvision. I tried to make it look 3-D and photographic so it would match the rest of the picture.

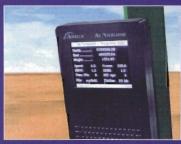
I've always been amazed and fascinated by artwork by film matte artists which is painted so it looks photographic. That is not the same as 'realistic'. It is a challenge, but much more fun if and when you succeed.

I love working on the subjects that I am involved with in connection with Atlantis Rising magazine. It is wonderful and sometimes solutions are simply the result of trying many different ideas until you find something that 'works'. I'm

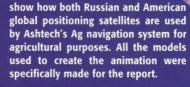
also a film and video director and recently had the opportunity to interview the inventor of roller blades or "in-line" skates, Scott Olsen. He said in the interview we taped that he was turned down by 110 investors before he finally found a backer.

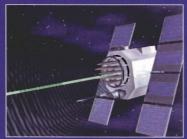
This selection of pictures are taken from a 3-D animation produced by Adventure Unlimited for the Ashtech Corporation. Part of the animation was used in a CNN News report about Ashtech. The animation was used to

















AMIGA COMPUTING
AUGUST 1997

#### Q: A trait of your work is that it is almost impossible to tell it is computer generated. How do you manage to get this end result?

A: I think it is because I 'paint' with the mouse. I will cut out irregular shapes using Opalvision's paint program and use different amounts of transparency. I will smudge, smooth and rotate the brush. I try not to repeat an effect and try out different approaches sometimes using the airbrush and line tools until I find something that works. I do a lot of experimenting and trial and error. That is why we have 'undo' buttons. I might make five or 10 versions of a certain solution to an artistic problem before selecting one and moving on.

Q: Along the same lines, the detailed landscaped you draw – how do you set off drawing those?

A: Necessity is the mother of invention. It depends on whether a partial photo is used or, as in the case of 'Atlantis in Antarctica', I create a landscape from scratch using a 3-D program such as Lightwave. I am content-driven and I will do whatever it takes to create the desired mood or effect and I have many ways of going about that, thanks to the versatility of the

computer.

Q: What are your feelings on the Gateway buy-out and what are you looking for from the newly rejuvenated (hopefully) Amiga International?

A: This is terrific!! Commodore had a fantastic computer in the Amiga but never understood marketing, while Gateway is a marketing genius. Its cowhide boxes are fun and a good example of how it gets people's attention. I understand it has money to spend on the Amiga which is always exciting and many possibilities are there. It is apparently going to keep the Amiga separate and maintain the integrity of the computer, which I applaud. Three cheers and I wish them the very best.

#### Q: What would you most like to see added to a new Amiga?

A: The basic multi-tasking architecture of the Amiga and its amazingly low overhead operating system still make it the best for housing the Flyer. The best for DRACO Vision's turnkey multimedia intensive operations. It just needs extra

acceleration options and some work on its interface

It's still the best in these major categories that count the most. Why else would it be so popular among the European computer types who seem to have a better sense of value about these things than those in the USA? Over here, we have been succumbed to IBM and Bill Gates' Windows hype'.

#### Q: Does the amount of power that digital manipulation now offers worry you at all, and if so can anything be done about it?

A: Digital is the future of video and computers and will eventually affect almost all communication industries. It's a better

way of storing and transferring information. Jets and rockets were invented but we still have propeller aircraft, but what do you do when you're in a hurry and want to cover vast distances?

Digital allows us to go many generations without loss – the bane of analogue, go with the flow. I'm a happy digital artist. I'm actually more interested in what subjects and ideas I am conveying than how, except for what is the most efficient and cost effective way of producing art.

You can contact Tom Miller at

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Lanon BJC420d £199.99 Epson GT-5000 scanner

10n BIC4550 anon BJC620

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Canon BC-09 Fluorescent (24,99
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Canon Bubble Jet Paper (14,99

HP DJ690 Photo Cartridge £29.99

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Canon BJ 27 000 colour (3 pack)
Citizen Printiva mono/col.
Citizen Printiva Metallics
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F. Writer Lte

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Final Writer 97

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Joe Wicks was right – you're one of THEM aren't you?

# Laser Guidance

# EPIC INTERACTIVE ENCYCLOPEDIA OF THE PARANORMAL

The disk appeared on Thursday morning. I don't know where it came from – a discontented hacker, anarchist, some poor soul racked with guilt over his part in the worlds biggest cover-up maybe. One thing was clear though, the KGB, CIA, Mossad and any other shadowy organisation you car to mention would be out to get it back...

I had, in my hand, the answers to the questions that that had troubled generations. Feverishly I scrambled to the office window and opened the blinds just enough to see the big, nondescript van parked across the road. It said UPS on it but that didn't fool me. They knew, they had tracked me down, time was running out. Sweat beaded my forehead as I placed the disc into the CD-Rom drive of the Amiga and prepared to discover the forbidden truth...

OK maybe that's a trifle dramatic. Truth is, I was actually quite chuffed I had a CD to brighten up my Thursday morning. I was slightly bored and had spent most of the morning poking my tum and trying to work out if I was getting a beer belly or not and whether I should try taking more exercise.

Epic's Interactive Encyclopaedia of the Paranormal turned out to be a fascinating, funny and pretty comprehensive



Look no hands...

directory of the unexplained.

The presentation of the CD is first rate; the front end is well laid out, easy to understand and enables you to effortlessly navigate the

various categories and options available. One thing struck me while looking at the UFOs and Aliens presentation screen was one of the aliens wearing what appeared to be Elvis' rhinestone jump-suit from 1977 – conclusive proof that he was abducted by aliens, wouldn't you

say?
The main encyclopaedia follows a pretty similar format to Epic's other, more conventional encyclopaedias. A clear, easy to understand index allows you to access not only text and pictures but also animation, video footage and sounds relating to the chosen topic.

Although searching for information is simple, this arrangement is particularly good if you just want to browse through looking at anything you think looks interesting. We had an excellent time in the office just scrolling through the UFO information, checking out fascinating looking categories such as 'How to know if you have an implant' and 'Greys: Friend or foe?'

One excellent touch that'll amuse you for hours is the slide shows. Each category is divided between into Information and Experience. If you click the Experience button you will find yourself witnessing an excellent and very 'in yer face' slide show presentation. The UFO show is brilliant. Thundering, bombastic and slightly intimidating music is accompanied by a slide show of fantastic photos and footage. Some of the footage looks quite realistic, some is pricelessly funny. One appears to show a pan lid attached to a pole by twine and dangled in front of the camera — it wobbles so

much that if it actually was a real UFO, its driver must be off his head (or heads?) on duty free Alpha Centuri space vodka. The presentation, resolution and pace of the slide show was so good it even prompted Neil the Ed to say, "Its better than anything I've seen on my PC!"

All in all, Epic's encyclopaedia is excellently put together. The information is fascinating and not strictly limited to the paranormal (I found an interesting piece on the Cerne Abbas, it claims the giant figure with a large 'frontis piece' was actually daubed onto the Devonshire hillside by mischievous monks rather than being an ancient pagan fertility symbol).

There's a hell of a lot covered here so you get a good blend of the out and out stupid (but fun) huge sculptures of heads on the surface of Mars type stuff and more serious and informative material on actual scientific phenomena such as mirages and optical illusions.

If you've got an interest in the paranormal, or even if you've just got 20 quid to spare, give Encyclopaedia of the Paranormal a go, you won't be disappointed.

### Bottom

0500 131 486

#### PRODUCT DETAILS

Product Epic Interactive Encyclopedia of the Paranormal Supplier Epic Interactive Price €19.99

#### SCORES

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

always like surprises, they are guaranteed to put a smile on my face. Like when Michael Jackson got married to Priscilla Presley, or got that nurse pregnant, or pulled the Ghost video for being too scary. Apparently he didn't want to be accused of putting the willies up little children.

So when two disks fell out of the brown padded envelope onto my desk with the latest update of Final Writer it was almost as pleasant as a warm bed bath by an accommodating nurse. But then, like a Vietnam veteran having a flash back with the sound of hughies buzzing in his ears, I started recalling the Wordworth 6 non-update

At the time I was looking forward to seeing some new functions – nothing special, I'm only a simple person having gone through the GCSE system – but I started looking around for the new features list and managed to find it in the end, on the back of a postage stamp. So I was sitting there asking why had this thing gone up a whole new version? Because they had gone and put it on a CD, I should have guessed.

So it was with some suspicion that I eyed the two red disks sitting on my desk, I was not going to be so easily fooled this time. The first thing is the new title of Final Windows (oh sorry) Writer 97. Now I'm assuming here that this is because the year is 1997 and I have not actually missed 92 updates since version 5, and I think I'm on pretty safe ground here.

If you have ever upgraded a version of Final Writer then you know that you only get the replacement install and program disks, as the installer allows you to either just update your current version of Final Writer or create a complete new installation. You also get the normal manual addendum that outlines all the new additions.

Looking in the changes part of the addendum it would appear, at first, that this update suffers the same problem as the Wordworth 6 upgrade in that there seems to be very little changed, in fact only four additions. However, take a closer look and you will see that something quite radical has been altered.

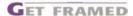
One thing that Wordworth has been able to do that Final Writer has never is create standalone text boxes. All that Final Writer has been able to do is have a box with a single line of text that could then be moved and scaled. With Wordworth it was possible to have any amount of text positioned anywhere on a document. Even though these boxes could not be linked, it still gave you much more flexibility over the layout of a document — to the extent that complex magazine and newspaper layouts could be copied from the comfort of your home computer.

# Happy

Amiga Computing gets a chance to take a look at the latest release of this long running Amiga wordprocessor/DTP hybrid

Earlier versions of Final Writer allowed you to use columns but these had to all be the same width and even though you could pull off a few tricks to get the text to flow how you wanted it, at the end of the day the program was working more against you than with you.

So SoftWood has gone and implemented a text box tool for use with Final Writer, right? Well yes, but in some ways more so. The best way to describe Final Writer's text frames is to say they are 'built into' the way you enter you document. If you want to enter text and treat it as you normally would in earlier version of Final Writer then just type away and the text will flow, as before, over the entire document.



To tell Final Writer that you want to use a text frame, just click on a blank area of the page with the normal text tool and start typing away. At first, everything seems the same as normal with the text flowing onto

the page as normal. If, however, you use the select tool and 'drag' the text, the text frame appears and the box full of text can be moved and sized however you wish.

Just as with any other object used in Final Writer, you can add any size border you like as well as a background colour. Text flow can also be performed around the text frames. One thing that text frames can do that their equivalent in Wordworth cannot is be spread over multiple parts.

If text run past the bottom or top of a text frame, a little tab at the bottom or top of the frame will change colour. Clicking on this once will allow you to get Final Writer to create a linked text frame to the original. Any editing you now do will take place over both the frames or as many linked frames as you like. These frames can then, of course, be placed anywhere in your document regardless of the other's position.

This is not to say the new text frames are perfect. Firstly, even though in all the documentation it says it is possible, you cannot seem to size text frames below the level of



#### LIKE GIRL GUIDES

I'm going to get arrested if I carry on like this, but anyway I have to make a box out from something and why not Final Writers new guides? This again shows how much Final Writer is moving towards being a DTP package. The notion of guides comes from the DTP world and is really only relevant in a DTP role. Using the guides you can mark out the margins of a page along with where columns should be placed.

So when you come to lay out a page that uses columns, the whole process is made much more precise and quick as you don't have to worry about exactly lining up pictures and text boxes as the guides can take care of it for you.

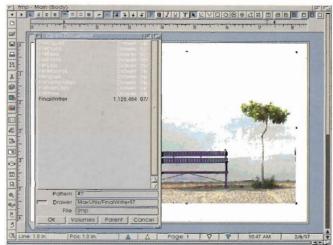
Of course, snap to guides are not always desired and they can be turned off at any time or hidden so you can see what the page looks like without all the extra clutter.



Using the snap to guides you never have to worry about column positioning

AMIGA COMPUTING AUGUST 1997

# New Writer



It's good to see that Final Writer supports ASL file requesters, if you want, and Datatypes give you access to a much wider choice of picture formats

text in it. Consider a DTP program normally – you will size out a text box to cover the area of the page you want filling with text, and then either paste in or type out the text you want. Final Writer's text frames cannot be vertically sized past the last bit of text. In the long run this would not hinder you from laying out a page, but at the planning stage it will make it that much harder to work out where text boxes and pictures will go.

Frame splitting is also a problem. In a DTP package you normally create a linked group of text boxes and any text is automatically flowed into the these boxes. The way Final Writer handles things you have to have the text first before any 'linked' boxes can be created.

They also act a little oddly as well, when

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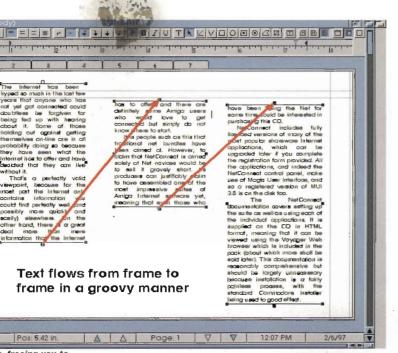
compared to other objects. For starters, they cannot be grouped as other objects can and the text within them will not flow around other text frames or objects.

A final point is about actual page layout. The way Final Writer works pages are handled like a single continuous strip of paper, which is fine as long as you want to work on a page per page basis. No with the extra power of text frames some people may want to start laying out documents that include spreads across two pages.

It would be possible if you do all the cropping yourself but you cannot even see the pages side by side, something that can be done in Wordworth, and though it does not support spreads at least you can see pages next to one another.

Spart from my few minor quibbles with

this latest release of Final Writer, the addition of text frames really does make a big difference to the style of documents you can now create within the program. Not everyone is going to benefit. If all you ever need to do is send "I would like to order that motorised spice rack" type of letter then text frames are hardly going to be a revelation. If, on the other hand, you are frustrated by the lack of flexibility in Final Writer's layout, then text frames will be a little bit of a revelation.



New text frames, freeing you to splatter text where ever you want



# **Guildhall Leisure** Services

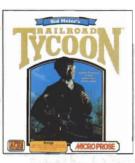
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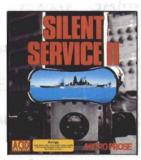
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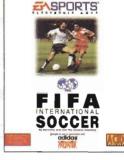
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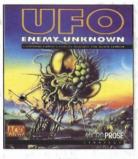
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F15 Strike Eagle II

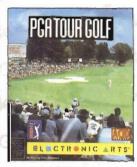
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while ago I took a look at what HTML authoring packages were available to the Amiga and the answer was not a lot. The main two were HTML Heaven and Web maker, and all these really did was provide a system where style tags were inserted around selected areas of text.

HTML Heaven worked around a set of Rexx commands that linked to an external text editor and a number of short cut interfaces. Web maker did the same, but provided a single MUI based text editor. In essence, both systems gave an extension to a standard text editor - pretty much the system I use to update the Amiga Computing pages on the Mac.

The problem with these systems is that they only think about Web sites on a pageper-page basis and not the Web site as a whole. So you have to manage and verify all the links yourself and if a page is deleted, update all the other pages with links to the deleted page.

When I first heard that PageMonster requires at least 6Mb of ram, I thought it must be something pretty special. Visions of drag and drop interfaces, full graphic previews, automated table and frame design and database style page management sprang to mind. You get the gist of things.

The actual program comes on eight disks with no documentation - not a great start but the program could be so easy to use that you do not need documentation. A normal Amiga install script made installing straight forward, and to show off it plays a tracker module in the background, nice.

Once installed, my suspicions were first aroused when I tried to run Pag Monster and it instantly complained that inneeded the AmigaVision player to run. This begs the question, why wasn't it installed with the program, or included with the packa e? No, I have to trundle off on the info nation super motor way in the little ford fice that is Amiga Computing's A4000, and Go load a separate archive and install it myse, worse. Very user friendly.

As for the program itself, what you get is an AmigaVision driven front end that allows you to cobble together fairly basic Web pages. You do this through a number of preset screens that are devoted to a specific set

Neil Mohr was looking forward to reviewing a quality Web page creator, instead here is a review of PageMonster

# Manal

of HTML commands. If you need to add a heading, click the heading type what you want and select the size heading you want and PageMonster surrounds your text with the correct HTML code, and that's about it.

Previewing is done via one of the existing Amiga Web browsers, which you have to have a copy of already. There are a number of ARexx scripts that do automate uploadour Web pages via FTP but really, that par of maintaining a Web site is the least of your worries.

A Web page design program should make esigning and maintaining a Web site easier, but all PageMonster does is make the process long winded. It also does nothin more than any of the current design t ols out there, in fact it does less, and

I have heard of people making tasks needlessly complex but PageMonster takes the biscuit. What you have to remember is that HTML is plain text, so any program that is going to make creating Web pages easier is intrinsically going to be fairly transparent.

A click of a button here, or a menu selection there, and changes should take place straight away.

PageMonster gives you a gargantuan 6Mb program to do little more than what amounts to text editing and, in reality, you would actually be better off just using a text editor. CygnusEd is a lot smaller, quicker and easier to use.

# Bottom

#### REQUIREMENTS

RED essential BLACK recommended





#### PRODUCT DETAIL

Product	PageMonster
Supplier	CultureShock Multimedia
Price	\$75.95
E-Mail	cshock@serv.net
www	www.serv.net/~cshock/

SCORE	S
Ease of use	40%
Implementation	40%
Value For Money	40%
Overall	40%

	вяская	JUND GENERATOR	PLUGIN			
ORD IMAGE BASOUND	ran:html/pics/t	background3.gi	VIEW PENY			
	BACKGROUND COLORS					
	BURCK	UCHOE	CADETBLUE	DEEP PINK		
-	HHITE	Yes	LINON CHIFFON	PURPLE		
RECEPT	CROEYBLUL	URONN	HOCCASIN	HEO PURPL		
	MOUREMARINE	URANGE	SEASHELL	PEUH		
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1	MURAUDISE	RED	HINI CREAM	RG BUFFER		
CANCEL	CHARTREUSE	DARK RED	RZURE	THREE 1		
	GOLD	NARGON	TVORY	THREE 5		
	GOLDENROD	DAKK HARGON	YELLON	THAGE 3		
	INDIAN RED	HAGENTA	LIGHT YELLON	THAGE 4		
	SADDLE BROWN	RED VIOLET	PINK	THREE IS		
	STENNA	ROYAL BLUE	HOT PINK	CHANGI		
BACKGROUNG	DIEXT	(FEIR	KI JEVE	Your		

Here is the easy to use back ground screen. Much easier than just using a text editor and typing bgcolor



The main PageMonster screen, I bet you think you can type in that HTML display window don't you? Well you can't

# Unlucky for some

It was the 13th show, on the 13th day of the 13th month. Well it wasn't but I'm trying for some atmosphere here. Not as busy as last year but at least there was some genuine good news to hear at this years World of Amiga show.

ast year's World of Amiga turned out to be somewhat of a shock, not for any bad reason the exact opposite to be precise. With the Amiga looking at its second parent company going into liquidation and no real Amiga sales for a good number of years, the genbe a flop. Everyone was wrong. The show

When this year's show was first announced with the Amiga still orphaned, the old scare mongers crawled out of the woodwork and started spinning their nega-

tive little rumours, about how this show is going to be a big disaster.

Then a couple of little things happened that made the up and coming show very important, like the small matter of the Amiga being bought by Gateway. This in itself would not have changed much about eral opinion was that the show was going to the show but the first good bit of news as the show approached was that Amiga Interwas packed, wall to wall, for the entire national was given the go ahead to get a stand at the show and then a press conference the day before the show was announced by Gateway 2000.

> Suddenly the show took on a completely new importance as it would be our first

ee what they had to say for themselves.

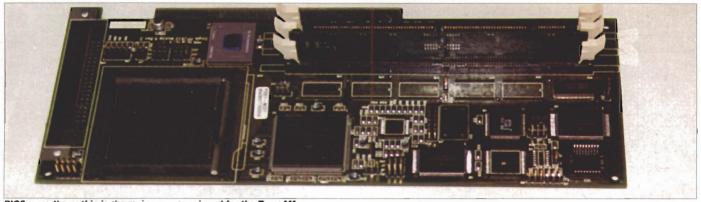
The press conference was scheduled for n and, apart from a little impron of Hammersmith thanks to some terrible directions from a hotel worker. I managed to find my way to the Novotel without a hitch.

Finding the conference room was easy, it was the one with a stinking great big queue. The initial welcome was upbeat and positive and even though it was the unlucky 13th show there were more pre-booked tickets and exhibitors than last year. Not bad for a dead computer.

The main event started with Dr James ylor, senior vice president for global mar-Technologies had been compl approved and finalised, so no worries a a VIScorp type debacle. Under Gateway, th company will be known as Amiga International and will act as an entirely autonomous unit.

After giving a run down on the background of Gateway 2000, how it was built up, the driving principle behind the product line and company policy, he went on to talk about its new acquisition. He thanked the Amiga community (that's you that is) for supporting and keeping an almost orphaned product alive for the last two years, and how our belief in the product and operating system actually allowed Gateway to have anything left to buy at all.

Petro, who we all know and love, stepped up next and went about explaining the past,



PIOS were there; this is the main processor board for the TransAM

current and future positions of the Amiga. The newly named Amiga International, as well as being given funds for a large stand at the World of Amiga show, now also has a brand new office in London and is operational again. Already three new staff are handling marketing, sales and general administration.

Since April, in Germany, there have been four employees taking care of logistics, warehousing and customer support. Importantly it is currently looking to take on some-

one to manage new product development, a very important position.

Petro then outlined the most important next few steps for Amiga International. To start, it will add proper support for the existing Amiga user base. Secondly 'leveraging' the existing Amiga technology

through broad licensing. Thirdly developing new products based on open standards for the home computer and video graphic markets. He also promised to keep the Amiga community well informed on all Amiga Internationals activities through regular press releases, conferences and meetings.

A.I also wants to seek co-operation with developers through such initiatives as the recently established Open Amiga Initiative that already has many prominent members. Working together, Petro wants to form a common development path that the whole Amiga community can follow as so keep the

whole industry going. It will have a very broad policy on licensing, allowing third parties to use the operating system, chipset and even Amiga trademarks. There are hopes that

Amiga technology could make its way into a whole spectrum of equipment, from military to medical applications.

It was stressed that Petro sees it as very

important that an open Amiga platform needs to be developed using industry standard components allowing Amiga's to be developed as quickly and cheaply as possible. These developments would need to happen as quickly as possible, but in a managed manner. Petro ended his presentation by saying that he is convinced that with the support of Amiga International, the Amiga community and Gateway 2000 the Amiga has a bright future.

The question and answer section that followed did not really reveal anymore than had already been said by Petro and James. Generally most of the responses from James were very positive with him saying things such as "We believe the Amiga can become one of the most important computer companies in the world" and "this is an important investment for us (Gateway)". James also hinted that Gateway wants to put a computer in every household and the Amiga could be the way to do that.

#### ROUNDING UP

There were a few other interesting tit bits, such as any future marketing will be done by Gateway's own very competent marketing division. When asked which system would Petro choose (Phase 5, PIOS or Draco) he responded all of them. They seem very keen to support all future systems through licensing the operating system to anyone who wishes to use it.

At the end of the day, the most concrete thing said was that there is a possibility of an operating system upgrade coming out by the end of the year, possibly November. Before you get all excited, I would imagine this will be version 3.3, or something along those lines, but hey it will be the first official upgrade for a long time, so it is good news.

The show itself took place on the Saturday and Sunday. The general consensus was that it was not quite so packed as last year, but even so the place was packed even five hours after the doors had opened.

All the usual Amiga retailers had displays this year. Most of them were, of course, trying to flog as much as possible, but you could pick up the odd bargain such as 16Mb Simms going for £60.



"A wonderful opportunity

for Gateway 2000"

- Dr. James Taylor,

**Global Marketing** 

All the fun of the fair, this was taken around 3pm when the crowds had eased off a little

Amiga International's stand was well turned out with a couple of 060 Amigas, fitted in Microvitech towers. Young Paul Nolan was also positioned at one corner of the standing showing off both the Siamese system and the latest development in OpenGL.

HiQ deserves a mention of its own as its stand was about the only one that tried to do something a little different – many others just looked like bring and buy stands. Throughout the show the hoarse sounding Steve at HiQ could be seen demonstrating its Siamese RTG system to an attentive group huddled around the stand.

On the main Amiga International, stand Paul Nolan was showing off its latest development of OpenGL that seemed to be running over the RTG very well, with an Amiga screen on Window 95 and the OpenGL demo running smoothly away. Also an impressive combined genlock, picture in picture system and real time audio/video digitising was at another corner of the stand.

Phase 5, tucked away in a corner, were demonstrating the latest version of its PowerUP system. Apparently the Cybervision software has been converted and the boards are finished, but there is still more software to be finished before the boards can be released.

I was a little disappointed that PIOS could not demonstrate its latest machines. Apparently it is working but was damaged in transit. There was a fully working Mac machine but, due to a hardware conflict, they could not boot the machine.

Eyetech, Blittersoft, Gastiner, Power Computing, Wizard, Digita, Siren Software, Sadness, GPSoftware were all there selling their stuff. Wizard's good three button mice seemed to crop up all over the show.

Overall I think with both the show and press conference, the weekend proved to be a very positive one.

#### DEVELOPERS

The World of Amiga show in London is more than just a safe haven for Amiga fanatics searching for elusive software or clues to Gateway's hidden strategy; a large number of the visitors are key developers of Amiga products. With so much talent in one place, the opportunity of a gathering could not be missed and that is exactly what the AmigaSoc boys did.

A meeting room at the hotel was booked at considerable expense and a developer conference was scheduled for the Saturday evening after the show. The AmigaSoc team is made



up of Andrew Elia, Julian Sadotti, Chris Livermore and Ash Thomas alias DrAsh on IRC. "Only AmigaSoc made it possible".

Kermit Woodall of Nova Designs (the team behind ImageFX and Aladdin4D) chaired the conference. Armed with an agenda on the overhead projector and DrAsh on an Amiga 4000 hooked up to IRC, Kermit outlined the purpose of the conference as well as giving the history behind the Arise mailing list. Arise is a mailing list on the Internet made up of Amiga veterans, major developers and industry experts.

This private community has spent the last year discussing the possible resurrection strategies that the Amiga can take to make it a dominant platform again. The Industry Council/ Open Amiga (IC/OA) strategy has been born out of Arise to put the findings into action. Ben Hutchings was the IC/OA representative and, as he was due to speak at the end of the conference, Kermit focused on the areas where developers could help themselves.

The Internet represents an ideal tool for the Amiga developers and there was a large emphasis on how it could be used to speed up communications. A developer Web site (http://www.amiga.org/developer/) has been started to try and centralise all Amiga information. Archiving everything Amiga is the goal; all documentation, source code examples and programming help will be there.

The developer community will also be brought closer using passworded areas of the site, forums and resource pooling. It is clear that a large amount of development on

#### GATEWAY BACKGROUND

Gateway 2000 was established back in 1985 by Ted Waitt, Mike Hammond and his brother at Sioux City Iowa, which at the time was the last vestige of the American cattle industry (which explains the odd bovine fetish).

Ted's grandmother stumped up \$15,000 so he could borrow \$10,000 from a bank allowing him to get started distributing Texas Instrument's PCs in the mid-West. Shortly after, Texas Instruments pulled out of the PC market and Ted was offered the chance to convert a lot of warranties to cash.

Using this money, Ted had the chance to buy a lot of chips from a certain, at the time, small manufacture called Intel who had a new product just out called the 386.

Hand assembled computers were sold locally and through magazine

advertisements. By offering an alternative to the existing supply of high cost PCs, Ted and Mike made \$100,000 in the first four months. The real growth in Gateway came when they realised that technical customers would buy PCs mail order, if the price was right. Gateway's continuing drive to produce products specifically for the customer has led to its almost exponential growth in sales and profit since 1987.

Its recent expansion to Japan has seen a 389 per cent growth in the first year alone, and has been described as the fastest corporate start-up in the history of Japan, grossing 250 million dollars in the first year. Gateway is also the number one company in America for brand loyalty, proving the quality of its customer care.

**Pictured** 

right are

Steve Jobs.

James Taylor

Petro Tyschtschenko.

and Keith Braddock

left to

here from

new Amiga programs goes into writing code that could easily be shared to save time.

At the moment, companies find themselves having to write drivers for new bits of hardware just to add features to their applications. TWAIN is something that the Amiga could definitely do with and is a prime candidate for co-operative development. This common goal approach can only happen with communication via the Internet or developers conferences such as this one.

Ben Vost, of Amiga Format, pointed out that he had started a regular section in the magazine designed to make people aware of new hardware products on the market needing Amiga drivers and software. For example, the new Hewlett Packard all in one printer and scanner. Ben could print with it, but not use the scanner. I have since noticed a new site on the Internet which is doing something similar, check out http://thunderstorms.org/NATW/.

The IFF standard was discussed and the importance of Datatypes were cited as an example of one way in which the Amiga has managed to keep up with emerging file types and formats. Some of the developers were worried that the Amiga IFF was being left out of the latest Adobe Photoshop, apparently it is now in the goodies section! The Amiga needs to use open standards if it wants to have a role in the current market-place, making people aware of IFF is surely a secondary goal.

A suggestion to change Amiga Guide into some sort of HTML format was not met with open arms, but distributing documentation as HTML means that it can be read on any platform. This was actually a great idea and it was a shame to see some developers so out of touch with the market and the opportunities of the Internet.

Sadly, some of the developers lost the plot halfway and started harping on about



Just one corner of the very large Amiga International stand. All the Amigas had 060 and 128Mb of RAM

wanting more information from Petro Tyschtschenko and the Gateway folk, who just happened to be at the back of the room. Now we would all like to know Gateway's intentions but it was clear it had nothing concrete to say, especially as it had bought the Amiga only 48 hours before.

The whole point of this conference was for developers to co-operate with each other and discuss ways to work towards common goals, not to blitz Amiga International with demands. The floor became rather heated and both Amiga International and Gateway left the room as an old can of worms was opened.

AmigaSoc managed to regain control of the conference; you couldn't help but feel sorry for both them and Kermit who were asked questions well outside the scope of the meeting. Kermit looked relieved as he handed over to Ben Hutchings of the IC/OA.

It is understandable that people

may be frustrated by the lack of any development on Amiga hardware over the last few years, but you cannot expect Gateway to buy the Amiga one day and announce a whole string of brand new hardware developments the next. Dr Kittel's statement of "Would you rather they tell you lies just to keep you happy?" received a resounding round of applause and reflected the major-

ity view that Gateway and Amiga International are telling us all they can at this point.

The IC/OA is an indepose of the control of the cont

dent

pool of developers that will use the Internet to try and focus Amiga development towards a common goal. Ben talked about trying to produce standards such as for plugins for Web browsers and define new open protocols. The first phase has been completed, made up from the Arise mailing list findings, and sent to Gateway to keep them up to date. The next phase has been started and will involve the building of the Web site (http://www.amiga.org/developer/).

I think the developers meeting was a success, despite the disruptions, because it served as a starting point for co-operation and gave everyone lots of ideas to go home with. Remember, it wouldn't have been possible without Kermit and the guys from AmigaSoc.



Steve from HiQ was demonstrating the Siamese RTG system



suppose it had to happen sooner or later, but it is time that Amiga owners got a taste of their own medicine. For years Amiga owners have had the luxury of being able to run emulators for almost every type of computer under the sun.

From the BBC and Spectrum to modern day Macs and Pentium PCs, if you need to use software from another platform, forget porting the software, don't bother throwing money at expensive hardware, just grab yourself a piece of software and have the machine right there on your Workbench.

The sheer nostalgia factor makes emulators fun to try out. The first time I ran a Spectrum emulator, the sight of the off-white screen with 1982 copyright message at the bottom of the screen in the traditional spectrum typeface was enough to bring a salty tear to my eye.

With all those ex-Amiga users and Unix/PC owning Amiga users you knew it had to happen, and a year or so ago a program called the UAE (Unusable Amiga emulator) made an appearance for Unix based machines. At the time it could not even boot, but now that it has come a few versions on you can have a fully emulated Amiga running on Unix, MS-Dos, Windows 95, Mac, NextStep, BeBox, OS2 and apparently there is even an Amiga version. An Amiga running an Amiga emulator, very sensible.



I have a dream — an Amiga running on every computer, whatever the operating system, processor or user. Too late mate, it has already happened!



As the custom chips are fully emulated, pull down screens still work

The latest release of UAE is now known as the Unix Amiga Emulator, as you get is a completely emulated 68000/020 ECS Amiga. Both the Motorola processor and the Amiga's custom chipset are fully emulated by the software. This means that even the most low level, hardware hitting game or demo is completely fooled into thinking that it is running on a real Amiga.

Having tried both the Dos and Windows 95 versions of UAE, I can say it does its job very well. All operating system software worked virtually flawlessly – the only problem was running Sysinfo's disk speed test which resulted in a Guru meditation, but then I suppose that is a fault of either the AmigaOS or Sysinfo. The emulator comes in both plane 68000 and 68020/881 versions. Currently the Mac version only runs 68000 code. This caused a few problems as A1200 and A4000 Roms use 020 only code and so would not run on the Mac version.

Having run Sysinfo a 200MHz Pentium PC

#### ON-LINE SUPPORT

As with so many public domain and shareware programs these days, UAE is fully supported over the Internet. You first stop should be the main Unix UAE home page, but don't expect anything too fancy.

As with Unix, the page is more functional than frilly, unlike the Mac home page which is frilly and functional. http://www.schokola.de/~stepan/uae/
DOS UAE - http://tinos.pucrs.br/
~ggoedert/dosuae.html
Win95 - http://www.informatik.
tu-muenchen.de/~ortmann/uae/
Mac - http://www.emulation.net/
amiga/ index.html



If you want to try out UAE, point your Web browser at one of these Web pages

# Sal

can push UAE along at about twice the speed of an A1200. There are plenty of options that allow you to increase different points about the emulation speed such as reducing the frame rate, aspect correction and resolution that it is running at.

Sound seems to make quite a big difference to the speed, but changing the replay sample rate and sound chip emulation quality you can counter the slow down.

SpaceBall's State of the Art demo shows you can see how different parts of the Amiga's chipset being emulated, as when the Amiga's copper is being intensively used to generate



Even on the PC you are not safe from the Guru Meditation



Not one but two Amigas running away on my PC. DOpus 5, MUI and State of the Art running side by side

the colourful background, the demo slows down somewhat.

Once you have the boot disk up and running you can either set up a hard drive via a single hard drive disk file or, more conveniently, later versions allow you to specify a

directory path that is then treated as a single hard drive by the emulator. This means if you have something like the Gemini you can easily copy across your Amiga files from your Amiga to the PC and set them up in the emulator.

#### UP AND RUNNING

All you need to get the UAE up and running is an Amiga, a computer that has a version of the UAE for it and a little patience. The emulator can be up and running in a few simple steps – all you need is a PC formatted floppy to transfer a couple of files from your Amiga.

With the UAE archive there is a directory called Amiga, in here are two Amiga programs, called transdisk and transrom, that allow you to transfer the Amiga Rom and Amiga floppy disks over to your computer running UAE. So before you start you need to get these over on your Amiga.

Once you have these on your Amiga, you need to get a copy of the Amiga's Rom. Open an AmigaShell and change to the directory where you copied the two programs. To gab a copy of the Rom ,type transrom >ram:kick.rom then copy this over to the other computer in the same directory as the UAE program. You can actually run UAE at this point but as you do not have any disk images or a fake Amiga hard drive set up, you will just get the old Amiga insert disk screen.

You have to remember that as the Amiga uses a custom disk controller it makes it impossible for any other computer to read Amiga formatted disks. You cannot even connect an external Amiga disk drive as you would still be missing the all important controller hardware.

To get round this the emulator 'emulates' the Amiga disk drives by allowing you to copy Amiga disks to a single file then transferring this to your PC or Mac the emulator makes the Amiga think that this file is a floppy drive. So the most sensible idea is to run the transdisk program with the Workbench disk in DFO.

So in a shell type **transdisk** >ram:df0.adf and, as before, copy this over to your UAE running computer. Once you have copied this to the same directory as UAE you should now be able to run and have Workbench up and running.

Essentially any Amiga disk that does not use disk protection can be read and copied this way.

To make accessing Workbench a little easier you can set up a hard drive file, this is a single massive file that can act as an Amiga hard drive. Better still, if you create a directory where the UAE program is and copy Amiga files to this, you can instruct UAE to make the Amiga treat this as an normal Amiga hard drive and makes for the most convenient way of transferring files to UAE Amiga.



The front end allows you to configure all manner of things that allow you to speed up or slow down the emulation



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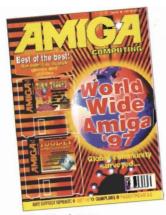
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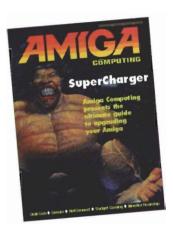
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We'll listen to your rants and raves - whatever it is you want to get off your chest, Uncle Neil will help



#### HOCK HORROR

I would like to answer Martin Prentice from Glasgow on his letter in your February edition on his comments on putting Internet into public places like pubs, cafes etc. Sorry Martin, but I disagree. That is the worst thing you could do. Let's put it in perspective...

I see the younger generation going to 'the Arcade' and pumping hundreds of dollars into a machine to give them one minute of fun. When was the last time you went to 'the arcade' to watch, socially that is, somebody else have fun and lose their money. Do you have a pinball machine of some kind at home?

I see the older generation going to the 'club' most days and nights, pumping thousands of dollars into a machine hoping it will give them a pay out of some kind.

When was the last time you went to a club to watch, socially that is, somebody win some or lose a lot of money? Do you have a pokie at home?

I have seen an Internet connected machine at a picture theatre in Adelaide, South Australia, and it cost two dollars for five minutes. Can you get gratification out of your computer at home for just five minutes?

No doubt that it would catch on I am sure, but at what cost? The point I am trying to make is that we as a people need to do a lot more about our 'Communications Revolution' without the aid of the Internet.

I go to have a quiet beer at my local, to meet friends, to talk to them, to have them talk to me. I am afraid that the art of conversation is something being lost the further we go down the technological road.

#### WRITE

If you have something you need to get off your chest then put pen to paper and write to ESP, Amiga Computing, Media House, Adlington Park, Macclesfield, SK10 4NP. You can also Email us at ESP@acomp. demon.co.uk We have various software bundles to give away for the best

letters. We do try to reply to all Emails and letters, but at busy periods this is sometimes not possible so please bear with us

> It's to easy to switch on a machine that will do it all for you. I don't find any fun in that

> Well, that's it from me, I am a moderate user of the Internet myself. But I do it from the comfort of my own home, in my own time. Whenever I have a guest in my house the computer gets turned off, even when I hold a party. For those that feel the need to use the Internet but don't own a computer, do what I did, I went to the public library to use it. Not the pub or local cafe.

> Robert Holmes, ddrph@hunterlink.net.au The idea of an Internet cafe has always seemed odd to me. A place to go and browse the Internet, well the comfort of my own home sounds nice. If I want to go meet my friends I do not particularly want the encumbrance of a computer and, if I remember correctly, computers do not react too well to spilled drinks.

> Personally the way I see thing developing is through television. I think you could say that TV is our cultural hub, and what better way to infiltrate a new technology than by integrating into a thing that is the

very centre of western culture? With an Internet-ready TV you could pretty much replace Teletext services with the new 'media rich' format that the Web provides. Along with the two-way interaction that is possible, the home shopping channel will never seem the same, you won't even have the trouble of talking to another person, just type your credit card details into your Web browser (your credit will of course be checked on-line).

Why have I gone and made that sound so sinister all of a sudden? Some how I do not think you are going to be getting droves of people abandoning conversation down the pub for sludging the Internet. It seems whenever a new technology or fad comes along, people immediately think that people are going to change their behaviour. To some extent it is true - without television I don't think you would be stuck indoors all Saturday. But at the end of the day I don't think you have to worry about there being a row of Internet consoles on the bar, rather than pumps.

#### CAD 2000? EAD

After receiving my April issue of Amiga Computing yesterday I noticed in Gareth Lofthouse's 'The Great Giveaway' article that Almathera was making XCAD2000 available on its site. Much to my chagrin today, I find its Web site no longer accessible, but on reading the news on the Amiga Web, I learn that it has gone out of business. Have you learned what is going to happen to Photogenics and is XCAD2000 available at any other site? Robert Meintzer, bmeintzer@ogb.gsa.tuscaloosa.al.us

It was very unfortunate that Almathera went into liquidation particu-

larly if it was because of unpaid debts by VIScorp. As for where this leaves XCAD2000 I have no idea, I doubt very much it will appear free

There is some good news with regards to Photogenics. The author of the original program has announced that he will be working on a new version at some point called PhotogenicsX and will have a completely overhauled front-end and internal workings. So at least you can look forward to that.



#### HAT NEXT?

Firstly, let me congratulate you on your excellent magazine. Seeing that the Amiga seems to be near the brink of non-existence, I suppose I should be selling my Amiga like the rest of the people who apparently are leaving the scene.

But that is exactly what I don't want to do. The Amiga is the best computing system I have ever used. It does everything I want, doesn't make me have to pay for Bill Gate's bills and does it better that the PCs and the Macs of the world. However, if the Amiga is to survive, the following has to be done:

- 1) The ownership of Amiga Technologies has to be resolved by a company that will be willing to produce Amigas.
- 2) New models must be developed involv-

ing a large amount of memory, high density disk drives, 68030 to PowerPC range processors with FPUs (if required) and MMUs, new Workbench capable of networking (Internet and LAN) as well as internally multitasking (e.g copy while doing other things at the same time), virtual memory support, be capable of doing most (if not all) commonly used applications out of the box as standard, as well as security features built-in (like UNIX).

- 3) The business that takes the Amiga on should hold itself accountable for the future of the Amiga. It should not be treated as ESCOM did, ever again.
- 4) This business should push the Amiga with wide spread heavy advertising internationally.

If these things are done, the Amiga will flourish. If not, it will die. Let's hope the former happens.

Matthew Briggs, mattb@ca.com.au

I don't think you will find too many Amiga owners that will disagree with you. At least we can finally say the first part of your plan has been fulfilled, and from what I heard at the World of Amiga press conference I think we can say that part three is also going to be true of Gateway 2000.

As for a new machine, well I wouldn't hold your breath on this one. I think any new machine is going to be quite different from a traditional Amiga, but when it does appear I would expect something a bit special.

#### LOSED

I would like to purchase LightWave 5.0. However, as the following attached file indicates, the Amiga needs more 'horsepower'.

One of the most significant improvements of C's openGL architecture. This allows for colour previews in both Modeler and Layout. While not fully textured, these stand-ins are in the model's basic colour, and let Layout's lights play off the models in real-time not on the illumination of the model.

Unfortunately, this highly useful feature won't be making it to the Amiga, due to the lack of horsepower. However all nonopenGL features will be present in both Amiga and PC and features several NURB (Non-Uniform Rational B-spline) based modelling techniques. The demo 1 received was using a tool called meta NURB.

When will this horsepower be available to run OpenGL function? Little Wolf, csanty@gj.net

OpenGL was developed by Silicon Graphics and is based on its IrisGL which is designed to run on its very expensive hardware. As such, any system that runs OpenGL also has to have a lot of horsepower just to run the basic OpenGL functions.

From what I have heard, even a 40MHz 040 runs Phase5's OpenGL implementation very slowly, and so I would imagine that we will have wait for a PowerPC based machine (perhaps with a 3D accelerator) before an Amiga can summon enough Mips to power OpenGL.

If an OpenGL versions does make it to the Amiga then all sorts of 2-D and 3-D graphical operations will be available such as modelling, smooth shading, texture mapping and motion blur.

#### STANDARD

May I just say how much I enjoy reading your mag it month? has a nice balance for beginners and seasoned readers too. That's the grovelling out of the way.

Now for some complaining. I have noticed some inconsistencies lately. For instance, and perhaps these are minor niggles, but last month (February) I decided I would like to subscribe as sometimes your mag does not always seem to come out at a regular time each month and WH Smith don't always seem to have a large stock, and some local newsagents seem to have given up on Amiga mags altogether. So if I don't get to WH Smiths at the right time I miss out. I couldn't get the January issue anywhere. So where was the subscriptions page?

Also there were two pages on the extreme racing cover disk but nothing on the utilities disk. There were some other things I noticed that spoil an otherwise good read and it was not just last month this has been going on since before Christmas. Articles referred to and not appearing, I think in one issue a page was missing pictures and some had the wrong captions. Max BBS was referred to in the March issue but I have checked my copy of February and can't find the aforementioned piece. Perhaps these are just minor niggles but they are annoying nonetheless.

Now I greatly enjoy your cover disks especially the utility disks which I think most of us with hard drives and extra ram cards would find most useful which brings me to my next point.

Now for the begging I would like to see a lot of these useful programs rounded up and put on a CD especially those that have been on previous cover disks that we may have missed. New versions of familiar programs like Magic Menu for instance, and those programs that are often mentioned in your mag. I don't mean the ones that get reviewed, though certainly some of these should be considered. No, I am referring to the ones that you use all the time to make life easier, the sort of thing that you have on your hard disks and take for granted. We often see reviewers mention that they couldn't live without a loyal readers as you do with your knowledge each laborious to configure in the first place.

Configuration files would be a godsend no more fiddling about for hours trying to find the right settings. Take TERM for instance, a widely used PD communications program which many of us will have used as the first program in logging on to a BBS. It is very user friendly but can take ages for the beginner to work out. How useful to have a config file on a cover disk or CD.

Also, things like Opus config files that would save a lot of time having say DMS buttons, LHA buttons, CygnusED button and the like already set up. All the user would need is to have said programs somewhere on his hard disk, she or he would simply need to alter the Paths.

You can say you love us as much as you like, we just adore sycophants around here. The thing with subscription and back issue pages is they are treated as fillers - if we need to drop a page or go up a page, they are first choice. So there is always the chance will not appear.

As for the other problems they are, erm, all Tina's fault. Yes that's right, Tina. They are more to do with the way the magazine works. Final proofs are only checked on computer, and if the art editor does not spot them, they go through to the printers, normally this accounts for strange captions such as "Caption requires, come on Huggy pull your finger out". Our excuse is that it just adds to the friendly, homely feel of Amiga Computing, though I'm sure some people could think of other names for it. The Max BBS thing was simply to do with it being pulled so we could put another article in at the last minute.

You idea about the CD is a very good one, really the nearest thing currently available are the Aminet disks. If you bought one of the Aminet set boxes this would cover most programs, or the CD called AGA experience would be another close match. The problem with creating config files is that people has such diverse system set-ups and requirements that it would be nearly impossible to provided a single config file that would satisfy even a small number certain piece of software so why not share it with your of people. I suppose this is why programs can be so

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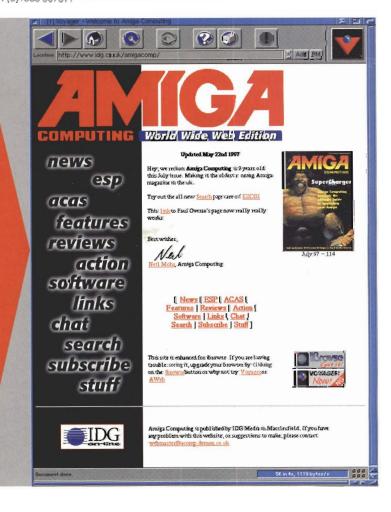
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### D ISABLED DESKJETS

I have an HP Deskjet 682C printer and would like very much to be able to print at 600x600 DPI as the printer says it can. I've checked many places, trying to find the right driver for my A1200 to print with, but the most I've been able to produce is 300x300, and that's from Studio Printer.

Is there a driver that will print 600x600 in colour, or am I S.O.L. (what does that mean - ED) and have to deal with 300x300? Or, do you know if it's being developed or going to be developed? Jim Maciorowski, jimmymac@citicom.com

This is a real problem for the Amiga as currently it is falling further and further behind with printer drivers. With Gateway now behind the Amiga, hopefully we will see something done about this soon.

As for current solutions, the only system I know about is for TurboPrint that supports the HP 600 at 600x600 DPI but only as greyscale.



It's like using a thermonuclear device to remove an annoying spot of paint, but at least it gets the jobs done

#### DEAD DRIVES, SOMETIMES

I have an A1200 40Mb HD with a Blizzard1230IV, Squirrel SCSI and CD-Rom. These work fine, except my internal and external floppy drives are on the blink. They sometimes work and sometimes don't (they don't recognise disks at all).

I have two ideas about what the problem could be, firstly the CIA chip or secondly, the lack of trackdisk.device file on my Workbench. Could you please advise me. Am I correct in thinking there should be a trackdisk.device file, or could it be the CIA chip? Any insight would be greatly appreciated...

Joe & Tammy Bedard, aamesrme@ix.netcom.com

Firstly we can discount the trackdisk. This is actually stored on the Amiga's Rom as part of the operating system that is available when you first turn on your computer. You are right in thinking that without it your disk drives would not work, but this will always be available.

I think you may be closer to the mark suggesting the CIAs, but as far as I know they have nothing to do with the disk drive controller, which is a separate control chip. From what I remember the CIAs house the Amiga's timers and are used for serial and parallel transfer along with the mouse and joystick ports. Which is why, if you plug a cable into the serial port while the machine is on, you have a chance of blowing the CIA chips.

So this means the problem could be the floppy drive controller. Do these problems only occur after the machine is on for a while? This can indicate a problem with the silicon being damaged, as it heats up problems start to occur.

An outside possibility is power, an A1200 power supply is not known for its power output but even so it should handle the accelerator, hard drive and two floppies with no problem. Try disconnecting the external drive or accelerator and see if the problem persists.

A final possibility (I bet you never guessed so many things can go wrong) is that your drives need cleaning. Muck can build up on the drive heads and if it gets to a certain level the drive simply cannot read anything. You can pick up disk cleaners very cheaply, they are just disks of gauze in a normal plastic disk case.

A word of warning on disk cleaners – one I used said you should clean your drive every day, this is utter garbage and would be likely to end up damaging the drive heads. More like once a year will do. A final, final possibility is that simply the disks you are using are knackered, it does happen.

One last little thing while I am talking about disks. Every now and again

you may be clumsy enough to spill a drink over a floppy disk. Now usually this is not a plain thing like water, but something horrendous and sticky such as Ribena or, in one case, a Tequila slammer that was slammed to hard. Never fear it is possible to save the data on the disk. You need to rip open the plastic disk case, first pull off the metal cover and then pry open the casing. Pull out the all important brown magnetic disk and wash it, yes that's right, wash it under a tap and wipe off all the gunk with a soft tissue.

Finally, make sure the disk is thoroughly dry and replace the disk in its case. Tape up the casing, make sure the disk spins OK and place the disk back in your Amiga (you do not have to replace the metal 'shutter') and you should be able to read the data on the disk. You should now make a complete new copy of the disk and throw the old one away. As you have washed it with water the whole disk will simply start to rust. For any doubters out there, this works, I've done it a couple of times.



Look, floppy drives were a good idea at the time, but now they are just bobbins

#### S ERIOUS NETWORKING

I have an Amiga 4000T and an A500 (which has a GVP SCSI Hard-drive) and have been experimenting with networking them. I have used Sernet & Dnet but Parnet seems the best so far, working well with Dir Opus.

However, a SCSI network should be faster and probably better all round. The question is – if I connect the spare SCSI socket on my Zip Drive (last unit in the A4000T chain) to the socket on my GVP drive (the only SCSI unit on the A500) and change the unit number of one of the controllers, which are both numbered 7 at present, do I then have a network similar to the one used by the Siamese System?

Of course, the GVP Drive would have to be mounted on the A4000T. I suppose someone out there must have tried this already? It sounds so simple but there must be a snag somewhere!

I would also like to use the A500 as a printer server with the printer on the A500's parallel port. What is the easiest way to do that?

Ronald Fairfield, ronfairfield@homeport.demon.co.uk, www.homeport.demon.co.uk



The answer is yes and no. Essentially the way you would be using the Zip drive is as a straightforward shared drive that is accessible from either machine. There is no real networking, you can just drag files quickly between machines. This in itself is very handy and off a GVP interface you can expect 1Mb/sec transfer rate.

Your first step is to set the controllers and shared drive up with unique SCSI ID numbers. This however does not guarantee the to SCSI controllers will behave properly as not all have been designed with this use in mind. If it works, it works.

#### WEB PROXY

have been trying to connect to the Internet via my service provider, but here in Australia, ALL service providers are now using proxy services.

I am using AMITCP v4.0, and AWeb v1.1. I appear to have successfully installed the AmiTCP and PPP stacks as I am able to ping my host server and mail server and proxy server. My name server seems to be working. I have used the proxy settings given to me by my server in AWeb, under proxy. When I send a request, the system looks up the name, sends a request and sits waiting for a response forever. This also happens when I try my server's home page.

I have an Amiga 1200 with a DKB 68030 Cobra accelerator and 10Mb RAM. I

Is there something I am missing out on? My current proxy settings are; proxy.tac.com.au:8080 (These work for the PC I am e-mailing you from in Netscape and MS Internet Explorer) but this setting doesn't work on the Amiga. My service provider is unable to supply any help.

Is there something you could suggest, or somewhere I can get some information about this problem?

Robert Boyle, boyler@tac.com.au



You still using AWeb 1.1? To be honest, I cannot remember if it could handle proxy servers. What I would suggest is get yourself a demo of either iBrowse or Voyager and see how they work with your ISP. From what you have said everything is set up correctly.

You have not mentioned any other Internet services. Can you FTP or Telnet. As far as I know you do not normally have to go through a proxy server, in fact we use Demon here in the UK and many times it can be quicker not to use the proxy server, but that's Demon for you.



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

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

# WHAT, WHEN, HOW WHERE?

I am buying a second hand A4000, although I am familiar with the workings of the A1200 I know very little about A4000s. I know they are both AGA machines but I am not too clued up on the expansion capabilities namely Zorro slots.

What accelerator card to get, which graphics card to get? Mine comes with an Opal vision board, how does this compare to the new boards? Can I use my Seagate HD in my 1200 without modification or 8Mb Simms. How easy is it to add a CD-Rom drive, can I use my Dataflyer and Aiwa SCSI CD-Rom, can I use my Goliath power supply? I recently read an article on a serial board, as I have a modem already would I get greater speeds, as I do a lot or serious work this is clearly the way forward for me.

So many questions, and so little time. To start with regards to transferring hardware from your A1200. If you have a hard drive in your A1200 you will be able to use this in the A4000. If it is a 3.5" drive you will have no problems at all, but if it is 2.5" then you need to get the correct cable converter as the A4000 is designed to work with 3.5" drives. Simms is another problem, the Simm sockets on the A4000 are designed to only take 4Mb Simms. There is a rumour that if you fully populate the four sockets with 8Mb Simms they will be recognised, but I have no idea if it is true.

If you are going to get an accelerator then I would hang onto the 8Mb Simm as you will more than likely be able to use it with this.

I doubt the DataFlyer will work as it is again designed with the A1200 2.5" IDE interface in mind, and there was a specific A4000 version made. Your best bet if you want a SCSI interface is to go for an accelerator with a SCSI interface built in or available as an option. Both the G-Force 060 and DBK WildFire have SCSI-2 controllers built in, while the Cyberstorm has is as an additional option. Once installed you should be able to use the software you originally used to install your CD-Rom, just tell it to use the correct SCSI device.

On the subject of Zorro slots there is not much to say, they are just the expansion slots used by big box Amigas. The ones in the A4000 are called Zorro 3 and can take both Zorro 2 and 3 cards. Zorro 2 slots were used in the A2000.

As for your final point, yes, a serial board will help with modem use. As mentioned a good number of times in the magazine the current Amiga serial port was not designed to be used beyond 28800 BPS and if you try can lead to transfer errors creeping in as the buffers overflow. A serial card gets around this problem and usually gives you a number of extra ports to.



If you are upgrading from an A1200 to a big box Amiga, do not expect to keep hold of too much hardware





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efore we leap headlong into another lovely hotchpotch of the top notch, I ought to say a word. Often (though, for the first time in a long time, not this month) Public Sector features programs which are described as being available from Aminet. If you see such a program in these pages but you don't have the luxury of an Internet connection, fret ye not. Several PD libraries offer a downloading service - try OnLine PD, for instance.

If you do have an Internet connection, don't forget that the Public Sector Web site contains details of all the programs reviewed in these pages since issue 79, and is, in the words of our esteemed editor, "Absolutely lovely". To take a look, point your browser at http://www.dcus.demon.co.uk/ sector/sector.html, or follow the Software link from the Amiga Computing homepage.

Dave Cusick knows the way to San Jose. Do you?

## QUANAUT

Programmed by: Phil Ruston Available from: F1 Licenceware/Saddletramps PD Disk No: F1-068

Cast your mind back, if you will, to circa 1991, when the Bitmap Brothers ruled the Amiga roost and tasty scrolly shoot 'em-ups were very much in vogue. Parallax scrolling, always an Amiga strong point, was a feature in practically every major release, and there wasn't a selfrespecting gamer in the land who didn't own an A500.

Aguanaut wasn't developed then, but it might as well have been, because it could pass for a commercial offering from that era. The graphics are superbly drawn in a bitmap-esque style and palette, the sound effects and music are slick and unintrusive, and the scrolling blasting action is as polished as you could hope for.

As one would expect, there is a suitably convoluted storyline: Atlantic HQ have lost contact with their top secret

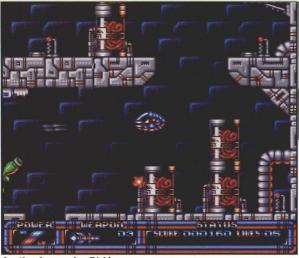


underwater base, Aquasphere 1, and a terrorist attack is suspected. As pilot of The Shark, a state-of-the-art submersible, you must blast your way through several levels populated with evil marine beasties and deadly gun emplacements, with the objective of reaching Aquasphere 1 to find out exactly what ghastly fate befell its band of brave inhabitants.

The primary weapon you have at your disposal is a pulse laser, but the obligatory power-ups include missiles, lethal blasters, rebounding bombs and depth charges. Other bonuses enable you to

view scanner readings of the current level, or to recharge your energy levels.

With such noteworthy visuals and addictive gameplay offer, there can be few blasting fans who won't instantly fall in love with Aquanaut. At £3.99 plus 50p P&P, it's also a lot cheaper than the commercial offerings it so resembles.



MIGA COMPUTING AUGUST 1997

## BASE V1.3

Programmed by: Frederic Laboureur Available from: Classic Amiga Software Disk No: BU106

F-Base is described by its author as "a simple, easy to use" program, a description it certainly fits. It's a fully multitasking database capable of handling up to 9999 individual records, each with up to 30 fields, although the full program is shareware and the freely distributable demonstration version only allows you to use 20 records.

The custom-created F-Base interface is extremely usable if a tad inelegant. You can load in BBase III databases converting using a separate supplied utility, or you can build your own database up from scratch. Creating new records is incredibly straightforward: It's a case of clicking on the Add button and entering the relevant details. One particularly welcome feature is the option of adding images and sound effects to records. Records can be listed alphabetically by a specified field or flicked through one by one. There are fastlink buttons enabling you to jump instantly to any records under a particular letter of the alphabet.

Unfortunately there doesn't appear to be a keyword search as such, which seems a fairly major omission. In fact, F-Base really isn't suitable for more demanding database work, because it's not exactly brimming over with the sort of features that will appeal to power users. That said, F-Base is more than capable of keeping track of, for instance, CD or video collections. Indeed, the example file lists a few compact discs the author owns and a rather sorry bunch they are too, in the opinion of this humble reviewer...



FBase offers enough power & most home users

## MIGGYBYTE XI

Programmed by: Ben Gaunt
Available from: Classic Amiga Software
Disk No: M96

The quotation from Green Day's Basket Case on one of the introductory screens might not bode well, but the eleventh Miggybyte disk magazine contains a wide variety of articles accessi-

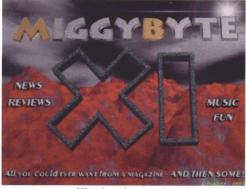


...but it contains plenty of information and opinions too

ble via a simple if not especially pretty interface.

Amongst the 67 articles included are press releases from the major players in the Amiga market, announcements about forthcoming versions of popular software from the programmers and distributors themselves, hardware and software reviews, some general interest features such as a brief history of the Bitmap Brothers and a discussion of the capabilities of the Nintendo 64, and a selection of humorous material. There is also a Dune special, including a review of the book and both the computer games, as well as tips for Dune II.

As with all disk magazines, Miggybyte is not a particularly good source of up-to-date news. It talks about Quikpak's final bid for Amiga Technologies, amongst other things, and a great many of the press releases will certainly be familiar to Internet users if not to



Miggybyte is not only well presented...

Amiga Computing readers in general. Nevertheless, Miggybyte XI is worth a look if only for the reviews and the humour, both of which will be as relevant in a few months as they were in February 1997 when Miggybyte XI was compiled.

## KICK-IT

Programmed by: Los Laibans Available from: SaddleTramps PD Disk No: G757

This is a thoroughly bizarre game which might just help you while away a spare five minutes of your life – though I wouldn't bet on it.

The story so far is that a laiban (your guess as to what a laiban is will not doubt be every bit as good as mine...) wakes up one morning and realises he has not returned a rented cassette on time. He races out of the house in his altogether, but evil zombies from the shop are already swarming all over town and he must kick his way through them if he is to reach the shop successfully.

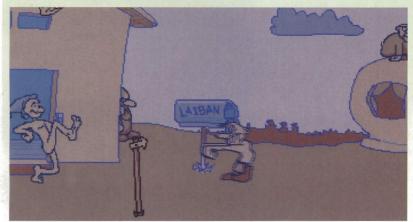
All this translates into an incredibly simplistic but quite well presented leftto-right walky-scrolly romp in which the



Kickit: Bags of depth. Not

challenge is not so much in ensuring that our hero doesn't get his nether regions zombified, but in maintaining interest for long enough to get past more than a couple of screenfuls of zombies to see if the gameplay action actually changes (it doesn't, as far as I can see).

Still, it looks quite nice...



Just look at those stunning graphics

## RAINDROPS KEEP FALLING ON MY HEAD

Each month Public Sector tries to bring you the very best of the latest PD and shareware releases. Consequently I want to hear from you if you have any program, whatever its purpose, which you consider worthy of review. Whether it will be freely distributable Public Domain, Shareware or Licenceware, if you feel it is of sufficient quality to merit coverage then cram it onto a 3.5", slap it into a padded envelope with a covering letter and wang it with all haste in my general direction. Some days later when said envelope tumbles gently through my letterbox, I'll tear open the envelope, shove it in my drive and don my evaluating cap, with the creme de la submissions earning reviews in these pages. The magic address is:

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

Since I've had a fair few people sending me submissions via the Internet, I suppose it's time I officially made allowances for this. You can e-mail me at sector@dcus.demon.co.uk with your submission attached, but please don't send anything larger than about 500k, because I have a phone bill to think of...

## CLASS HD UTILITIES 20

Programmed by: Various

Available from: Classic Amiga Software

Disk No: UT240

This collection of four useful utilities is aimed at owners of A1200 systems with hard drives, and comprises of BootPic 2.2, MagicPointer, SysInspector and DiskMaster II.

Unsurprisingly, BootPic is a program which displays a picture and some system information whilst your Amiga is booting up. Installation is a matter of making a couple of changes to your startup-sequence and user-startup files, but this should not take more than a few minutes at most and the brief documentation outlines exactly what is required in order for BootPic to function properly.

MagicPointer is a shareware utility which patches the mouse pointer so that it displays a high resolution image. The standard low res pointer does not look too impressive on a high res Workbench screen, so multisync monitor owners who do not already have a similar program would do well to investigate this. It is also possible to replace the busy pointer and to use animated pointers consisting of up to 999 frames (memory permitting, of course).

The normal and busy pointers can use separate palettes, and you can even choose to have a random busy pointer selected each time you boot up. All of these features are accessible via a preferences program. As mouse pointer patches go, this is incredibly comprehensive... but £10 seems a rather steep registration fee for a system hack.

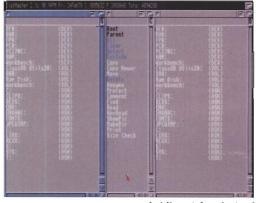
SysInspector is a marvellously detailed system information provider, which uses a rather ugly but mercifully speedy ClassAct GUI. It will display lists of current assigns, interrupts, libraries, commodities, devices, fonts, resident programs, tasks and much more. As well as simply letting you snoop around your computer, SysInspector allows you to make various changes such as changing the priorities of tasks, removing crashed windows from screens, and so on. It also seems to be stable - although obviously performing certain dodgy functions such as removing tasks can often lead to crashes.

Finally, DiskMaster II is a directory utility. In this day and age I find it hard to believe that there is a single 'serious' Amiga user in the entire world who doesn't have at least one version of Directory Opus on his or her hard drive,

or at least one of the multitasking, multi-windowed Workbench alternatives which proliferate in the Public Domain.

DiskMaster isn't that bad, but it doesn't stand out (at least for any of the right reasons) and it certainly doesn't compare too well with programs like Browser II.

Overall though, Class HD Utilities 20 is worth looking at for SysInspector and MagicPointer, and BootPic may appeal to those who just cannot live without something to look at during boot up.



...but it contains plenty of information and opinions too

## IRST STEPS WITH HTML

Programmed by: Steve Bye Available from: F1 Licenceware

With the ever-growing interest in the World Wide Web, and an increasing number of Amiga owners using the Internet regularly, it's not surprising that someone has decided the time has come for an Amiga-specific guide to getting started in Hyper-Text Markup Language, the style-tag system that is used to produce Web pages.

A quick trip into any good book shop might be off-putting because there are some colossal (and expensive) PC and Macintosh orientated guides to HTML, but essentially it's a very straightforward language – a message which this 54-page spiral-bound booklet and accompanying disk manages to convey quite well.

First Steps With HTML has been written with a basic Amiga set-up in mind: The basic software you'll need to make use of the booklet consists of a text editor, a decent art package such as Personal Paint and a demonstration version of either IBrowse, Voyager or AWeb (free demos of all three are available over the Internet or from PD libraries). You do not actually even need an Internet connection to use

the booklet, so if you've got a friend with free Web server space there is no reason whatsoever why you shouldn't use this package to help you produce some impressive pages which could then become part of your chum's Web site.

The booklet covers basic HTML tags such as <body> and <title> before moving onto lists, graphics tags, forms, tables and frames. Several sections of the guide contain handy recaps of the approaches you will need to employ to use certain style tags, and at the end of the book there is a comprehensive index of commands. There is also a section listing online sources of advanced HTML information.

Written in a friendly and readable style, and explaining clearly everything most people will ever need to know about the language, First Steps with HTML is a thoroughly worthwhile investment for anyone who is interested in producing their own homepage and doesn't know where to start. The example HTML files, the demonstration version of Edword 5.6 and the 120 useful Web graphics included on the disk are most welcome too. The package is available for £6.99 plus 75p P&P.



## THE SUN

Programmed by: Matt West
Available from: Matt West

The Sun (wittily subtitled You Cannot Be Sirius) is an innovative and hugely addictive game from the chap who gave the world Burton Bird a few months ago. Indeed, this disk was accompanied by an amusing letter discussing the Burton Bird review in these very pages, in which I said playing the game was as frustrating as watching Andy Cole miss chance after chance at Old Trafford. I was, however, quite impressed by Matt's attempt at adding an element of innova-



...and apparently it was on CU Amiga's coverdisk. But you wouldn't know that, because you're loyal and you don't read CU. Maybe they should start writing a Windows NT magazine

tion to a rather tired genre.

This time, Matt has gone a lot further – he has produced a totally original game which, while every bit as hard as Burton Bird, manages to be immensely challenging without ever getting frustrating. There is a cracking introductory sequence, which begins with a black and white movie-style thingy and some cheesy music before the screen explodes into colour and a banging dance tune kicks in.

From the main menu there are three solo gaming styles on offer, as well as a two player mode. Instructions are also available and there's even a consolestyle sound test. A nice touch here is that when you turn the music on, the screen starts maniacally vibrating, whereas when sound effects are selected or you decide to mute the game everything settles down. The effects have a lovely, soothing quality about them which I must confess I'm extremely fond of.

Although the gameplay is really incredibly simple, trying to describe it without making it sound horrifically complicated is rather difficult. You play a sun which is being orbited by eight planets and, using the joystick, you must rotate these planets around you and fire stars at them. Hitting a planet causes it



The Sun is a rather offbeat game from the chap who wrote Burton Bird...

to cycle one step further through a series of glyphs. You must make the orbiting glyphs match the displayed target glyph. All the while, the sun is slowly setting, but hitting the target glyph will cause it to rise a little. Confused? Told you so.

The Sun is a wholly new gaming concept and it's wonderfully entertaining as well. It is one of those games which is beautifully simple to grasp and yet astoundingly tricky to master. What's more, it's available for only £2 directly from the author. Give the man a biscuit...

## X ENOMORPHS 2

Programmed by: Aidan Boustred
Available from: Aidan Boustred

Around 18 months ago, while I was fiving in a converted church with a bunch of other ungodly reprobates, I happened to mention my involvement with Amiga Computing to a flatmate's boyfriend. "Really?" he exclaimed, a look of glee in his eyes. "I've got an A1200 and I'm writing a game at the moment. Would you take a look at it when it's finished?" Well, it being my job to look at as much new PD, shareware and licenceware software as I can lay my hands on, who was I to say no..?

Potentially, Xenomorphs 2 might have been a disappointment, being written in the powerful yet strangely constricting AMOS, and featuring some music which



The demo contains five missions but the full registered version has many more

I rather foolishly agreed to produce myself and ended up cobbling together in a matter of minutes (and it shows). In reality though, despite my input, it's an absorbing strategy shoot 'em-up with some gorgeous graphics and incredible depth.

Principally inspired by Space Hulk, Games Workshop's popular tabletop space battle game, Xenomorphs 2 pits the player against hordes of nasty Genestealer-esque aliens (or should that be Giger-esque aliens, since GW themselves drew heavily on Ridley Scott's seminal Sci-Fi thriller Alien?). The moody visuals perfectly capture the atmosphere of decaying research complexes on mysterious, faraway worlds.

Prior to undertaking a mission you must put together a squad of marines from the force of 45 troopers at your disposal and then equip them with suitable armour and weaponry. During the game itself your squad can be controlled using the joystick, the mouse, or a combination of the two. The scrolling playing window displays a small section of the level, and around this are a variety of clear icons which can be used to perform actions such as setting waypoints for your marines, operating machinery and picking up or dropping equipment.



If it's tactical blasting action you're after, then Xenomorphs is for you

There are a variety of missions included with Xenomorphs 2, with additional mission disks being promised in the future. There is also a two player mode, offering addictive split-screen action, which adds considerably to the longevity of an already engrossing adventure game.

Xenomorphs 2 combines playability and user-friendliness with an astonishing amount of detail. There is a freely distributable demo disk floating around in the Public Domain which doubles as a series of training missions, but the full version of the game is available complete with a printed instruction manual for just £7, making this is a must-have game for strategy fans.

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	1469 THE ROAD TO HELL	☐ 1753 A1200 GLOOM	475 BAIT MASKING	☐ 413 N. COMMS V3
	1417 MANG FENDERS V2		☐ 347 NEWTEK V3 2 DISK	☐ 079 OPTICOMMS V2
	1417 MANG FENDERS VZ	☐ 1894 TIME RUNNER V2	☐ 187 ANIMATION STUDIO	☐ 1032 MAX BBS PROG
	1466 A12 KNOCK OUT	☐ 1925 DUNGEONS	AMIGA VIDEO	PROGRAMMERS
	1642 A1200 EX RACING	STRATEGY GAMES	☐ 329 VIDEO INSCRIPT	
	1705 A12 AER RACERS	■ 876 GLOBAL NUKE WAR	790 VIDEOTRACKER 5 DISK	288 A-BASIC TUTOR
	1893 BOSSCAR	☐ 826 IND-ESPIONAGE	148 S - MOOVIE	306 UNDERSTAND AMO
	074 F1 EDITOR 96/7	☐ 1182 A12 NIGHTMARE	MUSIC MAKERS	☐ 722 TONS OF AMOS
SI	IMULATORS	☐ 1170 A12 LORDS 2 DSK	T 220 ELINY VEVEO ABOVE	☐ 1067 AGA DATATYPES
	332 SEALANCE-SUB	1431 UFO UNCLOTHED	220 FUNK KEYBOARDS	☐ 1691 NORTH C
	333 BATTLE CARS V2	1547 SOLO STAR-TREK	431 RAVE KEYBOARDS	☐ 1754 AMIGA DOS FRAU
	926 HELICOPTER	PUZZLER GAMES	202 MED V3.2	DO IT YOURSELF
	1273 A12 TRAIN DRIVER	PUZZLER GAMES		
5		DES CHANEOUE S DIEN	729 DRUM MACHINE	
ř	PORTS GAMES	953 CHANEQUE 2 DISK	☐ 787 SONIC DRUM KIT	239 SLIDESHOW MAKER
	PORTS GAMES 1014 CRAZY GOLF	☐ 859 10 PUZZLERS	787 SONIC DRUM KIT 738 OCTAMED V2	239 SLIDESHOW MAKER 808 MAKE A DISK
	1014 CRAZY GOLF	859 10 PUZZLERS 1550 PUZZLE PITS	☐ 787 SONIC DRUM KIT☐ 738 OCTAMED V2☐ 136 THE ART OF MED	☐ 239 SLIDESHOW MAKER ☐ 808 MAKE A DISK ☐ 242 MENU MAKER
	1014 CRAZY GOLF 630 TEN PIN BOWLING	☐ 859 10 PUZZLERS ☐ 1550 PUZZLE PITS ☐ 1546 EXPERT BALLS	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A13
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER	859 10 PUZZLERS 1550 PUZZLE PITS	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A12 1903 MAKE A DISK V2
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY	☐ 859 10 PUZZLERS ☐ 1550 PUZZLE PITS ☐ 1546 EXPERT BALLS ☐ 1633 THE WOOGLIES	☐ 787 SONIC DRUM KIT☐ 738 OCTAMED V2☐ 136 THE ART OF MED☐ 192 THE COMPOSER☐ 618 MUSIC DATABASE☐ 981 AUDIO ENGINEER	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A12 1903 MAKE A DISK V2 VIRUS CONTROL
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N	☐ 859 10 PUZZLERS ☐ 1550 PUZZLE PITS ☐ 1546 EXPERT BALLS ☐ 1633 THE WOOGLIES ☐ 1765 BRAIN BALLS	☐ 787 SONIC DRUM KIT☐ 738 OCTAMED V2☐ 136 THE ART OF MED	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MAKE A DISK 1154 HEDLEY GUIDE A1: 1903 MAKE A DISK V2 VIRUS CONTROL 506 A1200 VIRUS
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS	■ 859 10 PUZZLERS ■ 1550 PUZZLE PITS ■ 1546 EXPERT BALLS ■ 1633 THE WOOGLIES ■ 1765 BRAIN BALLS  MANAGER GAMES	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A12 1903 MAKE A DISK V2 VIRUS CONTROL
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS	■ 859 10 PUZZLERS ■ 1550 PUZZLE PITS ■ 1546 EXPERT BALLS ■ 1633 THE WOOGLIES ■ 1765 BRAIN BALLS  MANAGER GAMES ■ 876 SCOTTISH LEAGUE	☐ 787 SONIC DRUM KIT☐ 738 OCTAMED V2☐ 136 THE ART OF MED☐ 192 THE COMPOSER☐ 618 MUSIC DATABASE☐ 981 AUDIO ENGINEER	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A1. 1903 MAKE A DISK V2 VIRUS CONTROL 506 A1200 VIRUS 160 M.V.K. PLUS
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A 12 GON FISH'N 1465 A 12 2 DISK TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET	■ 859 10 PUZZLERS ■ 1550 PUZZLE PITS ■ 1546 EXPERT BALLS ■ 1633 THE WOOGLIES ■ 1765 BRAIN BALLS  MANAGER GAMES ■ 876 SCOTTISH LEAGUE	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5	239 SLIDESHOW MAKER  808 MAKE A DISK  242 MENU MAKER  1154 HEDLEY GUIDE A1:  1903 MAKE A DISK V2  VIRUS CONTROL  506 A1200 VIRUS  160 M.V.K. PLUS  AMIGA UTILITIES
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES	859 10 PUZZLERS   1550 PUZZLE PITS   1546 EXPERT BALLS   1633 THE WOOGLES   1765 BRAIN BALLS   MANAGER GAMES   876 SCOTTISH LEAGUE   321 AIRPORT   443 SLAM BALL	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   192 THE COMPOSER   618 MUSIC DATABASE   981 AUDIO ENGINEER   1268 HIPPO PLAYER   1681 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   19	299 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A1: 1903 MAKE A DISK V2 VIRUS CONTROL 506 A1200 VIRUS 160 M.V.K. PLUS AMIGA UTILITIES 1030 A12 DIONIC TOOLS
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS	■ 859 10 PUZZLERS 1550 PUZZLE PITS 1546 EXPERT BALLS 1653 THE WOOGLIES 1765 BRAIN BALLS MANAGER GAMES 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 817 BLOOD BALL	785 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1971 SAMPLE MAKER CLASSIC - POP	239 SLIDESHOW MAKER 808 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE A1. 1903 MAKE A DISK V2 VIRUS CONTROL 506 A1200 VIRUS 160 M.V. PLUS AMIGA UTILITIES 1030 A12 DIONIC TOOLS 612 A DSK YOOL KIT 612 A DSK YOOL KIT
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GOM FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 418 1000 CHEATS	859 10 PUZZLERS 1550 PUZZLE PITS 1546 EXPERT BALLS 1633 THE WOOGUES 1755 BRAIN BALLS 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULIT MANAGER	785 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1971 SAMPLE MAKER CLASSIC - POP	239 SLIDESHOW MAKER   888 MAKE A DISK   242 MENU MAKER   1154 HEDLEY GUIDE A1:   1930 MAKE A DISK VIRUS CONTROL   506 A120 VIRUS   160 M.V.K. PLUS   1030 A12 DIONIC TOOLS   612 4 DSK TOOL KIT   1629 UN-ACHIVER   1629 UN-ACHIVE
H	1014 CRAZY GOLF 630 TEM PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 418 1000 CHEATS 931 BACKDOOR V3	BS9 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGUIS 1755 BRAIN BALLS 875 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 1429 ULTI MANAGER 1699 PREMIER PICS	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   197 THE COMPOSER   618 MUSIC DATABASE   981 AUDIO ENGINEER   1268 HIPPO PLAYER   1681 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   CLASSIC - POP   1029 COTTONEYE SONG   201 PIANO CLASSICS   201 PIANO CLASSICS	239 SLIDESHOW MAKER   808 MAKE A DISK   242 MENU MAKER   1154 HEDLEY GUIDE A1.   1903 MAKE A DISK V VIRUS CONTROL   506 A1200 VIRUS   160 M.Y.K. PLUS   160 M.Y.K. PLUS   1612 4 DSK TOOL KIT.   1030 A12 DIONIC TOOLS   612 4 DSK TOOL KIT.   1983 CRUNCHERS 60   1983
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 418 1000 CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA	859 10 PUZZLERS 1550 PUZZLER PITS 1546 EXPERT BALLS 1633 THE WOOGUIES 1755 BRAIN BALLS 876 SCOTTISH LEAGUE 321 AURPORT 443 SLAM BALL 1429 ULTI MANAGER 1639 PREMIER PICS 1763 AUR TRAFFIC	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTAUTOR V5 1991 SAMPLE MAKER CLASSIC — POP 1029 COTTONEYE SONG 201 PIANO CLASSICS 234 VIVALUL 2 DISK	239 SLIDESHOW MAKER   888 MAKE A DISK   242 MENU MAKER   1154 HEDLEY GUIDE A1.   1933 MAKE A DISK VIRUS CONTROL   506 A1200 VIRUS   160 M.V.N. PLUS   1610 M.V.N. PLUS   1610 M.V.N. PLUS   1610 M.V.N. PLUS   1612 4 DSK TOOL KIT   1629 UN-ARCHIVER   1983 CRUNCHERS 60 DISK & SYSTEM   1612 MAKEN   1612 MA
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1377 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTES & CHEATS 418 1000 CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5	889 10 PUZZLERS 1550 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIS 1765 BRAIN BALLS 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULTI MANAGER 1639 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   197 THE COMPOSER   618 MUSIC DATABASE   981 AUDIO ENGINEER   1268 HIPPO PLAYER   1681 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   CLASSIC — POP   1029 COTTONEYE SONG   201 PIANO CLASSICS   234 VIVALDI 2 DISK   342 AMIGA. PUSIS	239 SLIDESHOW MAKER  808 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1: 1903 MAKE A DISK V VIRUS CONTROL 506 A1200 VIRUS 160 M.V.K. PLUS 161 M.V.K. PLUS 162 4 DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM 166 SYSTEM 166 SYSTEM
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK. CRS-ANGLER 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 418 1000 CHEATS 931 BACKDOOR V3 821 PASSWOORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS	889 10 PUZZLERS 1550 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIS 1765 BRAIN BALLS 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULTI MANAGER 1639 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1991 SAMPLE MAKER CLASSIC POP 1029 COTTONEYE SONG 201 PIANO CLASSICS 224 VIVALDI 2 DISK 342 AMIGA-DEUS 213 DIGI CONCERT V2	239 SLIDESHOW MAKER   888 MAKE A DISK   242 MENU MAKER   1154 HEDLEY GUIDE A1.   1933 MAKE A DISK VIRUS CONTROL   506 A1200 VIRUS   160 M.V.N. PLUS   1610 M.V.N. PLUS   1610 M.V.N. PLUS   1610 M.V.N. PLUS   1612 4 DSK TOOL KIT   1629 UN-ARCHIVER   1983 CRUNCHERS 60 DISK & SYSTEM   1612 MAKEN   1612 MA
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK. CRS-ANGLER 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 418 1000 CHEATS 931 BACKDOOR V3 821 PASSWOORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS	BS9 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS MANAGER GAMES 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 1817 BLOOD BALL 1429 ULTI MANAGER 1699 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 QUIZ GAMES	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1258 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1971 SAMPLE MAKER CLASSIC - POP 1029 COTTONEYE SONG 201 PIANO CLASSICS 224 VIVALUI 2 DISK 342 AMIGA-DEUS 213 DIGI CONCERT V2 620 BAGPPE MUSIC	239 SLIDESHOW MAKER  808 MAKE A DISK  242 MENU MAKER  1154 HEDLEY GUIDE A1.  1903 MAKE A DISK V2  VIRUS CONTROL  506 A1200 VIRUS  160 M.VK. PLUS  AMIGA UTILITIES  1030 A12 DIONIC TOOLS  612 4 DSK TOOL KIT  1629 UN-ARCHIVER  1983 CRUNCHERS 60  DISK & SYSTEM  166 SYSTEM TESTER  467 FILE UNDELETE
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1377 ALIZ GON FISH'N 1465 ALIZ 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 821 PASSWORD MANIA 821 ASSWORD MANIA 823 GAME TAMER V4.5 820 MEGA CHEATS 820 MEGA CHEATS	BS9 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS MANAGER GAMES 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 1817 BLOOD BALL 1429 ULTI MANAGER 1699 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 QUIZ GAMES	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1971 SAMPLE MAKER CLASSIC POP 1029 COTTONEYE SONG 201 PLANO CLASSICS 234 VIVALDI 2 DISK 342 AMIGA-DEUS 213 DIGI CONCERT V2 620 BAGPIPE MUSIC 248 EXPRESSION V2 248 EXPRESSION V2 248 EXPRESSION V2 248 EXPRESSION V3	239 SLIDESHOW MAKER   888 MAKE A DISK   242 MENU MAKER   1154 HEDLEY GUIDE   1930 MAKE A DISK V2 VIRUS CONTROL   506 A1200 VIRUS   160 M.V.K. PLUS   1030 A12 DIONIC TOOLS   612 4 DSK TOOL KIT   1629 UN-ARCHIVER   1983 CRUNCHERS 60 DISK & SYSTEM   166 SYSTEM TESTER   467 FILE VINDELETE   194 DISK OPTIMISE
H	1014 CRAZY GOLF 630 TEM PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 418 1000 CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 812 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE V1	BS9 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGUIS 1755 BRAIN BALLS 875 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULTI MANAGER 1699 PERWIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 QUIZ GAMES 1011 TREK TRIV 5 DISK 716 POP MUSIC QUIZ	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 981 AUDIO ENGINEER 1258 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTAUTOR V5 1791 OCTAUTOR V5 1791 OCTAUTOR V5 1792 OCTOMEYE SONG 201 PIANO CLASSICS 224 VIVALUI 2 DISK 342 AMIGA-DEUS 213 DIGI CONCERT V2 528 BABCIPPE MUSIC 248 EXPRESSION V2 478 RHYTHMIS DANCER 478 RHYTHMIS DANCER	239 SLIDESHOW MAKER  808 MAKE A DISK  242 MENU MAKER  1154 HEDLEY GUIDE A1: 1903 MAKE A DISK V VIRUS CONTROL  506 A1200 VIRUS 160 M.Y.K. PLUS AMIGA UTILITIES 1030 A12 DIONIC TOOLS 612 4 DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM 155 FER 167 FILE UNDELETE 194 DISK OPTIMISE 195 GENGINEERS KIT
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1173 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1374 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES 1700 GOLF 9 HOLES 1700 GOLF 9 HOLES 1705 BCHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE V1 1358 GAME SOLUTIONS	859 10 PUZZLERS 1550 PUZZLER PITS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS MANAGER GAMES 376 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 1817 BLOOD BALL 1429 ULTI MANAGER 1699 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 QUIZ GAMES 1031 TREK TRIV 5 DISK 716 POP MUSIC QUIZ 309 THE QUIZ MASTER 309 THE QUIZ MASTER	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 981 AUDIO ENGINEER 1258 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTAUTOR V5 1791 OCTAUTOR V5 1791 OCTAUTOR V5 1792 OCTOMEYE SONG 201 PIANO CLASSICS 224 VIVALUI 2 DISK 342 AMIGA-DEUS 213 DIGI CONCERT V2 528 BABCIPPE MUSIC 248 EXPRESSION V2 478 RHYTHMIS DANCER 478 RHYTHMIS DANCER	239 SLIDESHOW MAKER  888 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1: 1930 MAKE A DISK V VIRUS CONTROL 506 A120 VIRUS 160 M.V.N. PLUS 1630 A12 DIONIC TOOLS 612 4 DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM TESTER 467 FILE UNDELETE 194 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK
H	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1317 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTES & CHEATS 418 1000 CHEATS 418 1000 CHEATS 821 PASSWORD MANIA 813 GAME TAMER VA.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE VI 1358 GAME SOLUTIONS 1653 SOLUTIONS 1653 SOLUTIONS	889 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS 475 SCRAIN BALLS 476 SCOTTISH LEAGUE 221 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULTI MANAGER 1699 PREWIKE PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 7171 MICRO MART 3 718 TOP MUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUME	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   197 THE COMPOSER   618 MUSIC DATABASE   981 AUDIO ENGINEER   1268 HIPPO FLAYER   1681 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   CLASSIC — POP   1029 COTTONEYE SONG   201 PIANO CLASSICS   224 VIVALDI 2 DISK   342 AMIGA-DEUS   215 DIGI CONCERT V2   620 BAGPIPE MUSIC   248 EXPRESSION V2   473 RHYTHM'S DANCER   1357 2 MEG DANCER   1	239 SLIDESHOW MAKER  808 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1. 1903 MAKE A DISK VIRUS 160 M.V.K. PLUS 160 M.V.K. PLUS 161 M.V.K. PLUS 162 A DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM TESTER 467 FILE UNDELETE 194 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1173 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1374 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS V3 1651 SOLUTIONS V3	BS9 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS MANAGER GAMES 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 1429 ULTI MANAGER 1699 PERMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 QUIZ GAMES 1031 TREK TRIV 5 DISK 715 PO PMUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUNE 1597 QUIZ 555	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   192 THE COMPOSE   136 THE ART OF MED   192 THE COMPOSE   136 MUSIC DATABASE   981 AUDIO ENGINEER   1258 HIPPO PLAYER   1581 PROTRACKER 3.5   1791 OCTAUTOR V5   1971 SAMPLE MAKER   CLASSIC   279 PI SAMPLE MAKER   CLASSIC   234 VIVALUI 2 DISK   342 AMIGA-DEUS   213 DIGI GONCERT V2   620 BAGPIPE MUSIC   248 EXPRESSION V2   473 RHYTHM'S DANCER   1357 2 MEG DACC V1   1759 GUITTAB BLUES	239 SLIDESHOW MAKER 888 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE 1 1933 MAKE A DISK V2 VIRUS CONTROL 506 A1200 VIRUS 160 M.V.K. PLUS 1030 A12 DIONIC TOOLS 612 4 DSK TOOL KIT 1629 UN-ARCHIVER 1933 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM TESTER 467 FILE UNDELETE 1940 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL 1881 HARDWARE MANUAL 1881 HARDWARE MANUAL 1881 HARDWARE MANUAL
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1173 ICE HOCKEY 1373 ICE HOCKEY 1371 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTES & CHEATS 418 1000 CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 831 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS V3 1651 SOLVES 6 DISK VER 18 GAMES	889 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS 475 SCRAIN BALLS 476 SCOTTISH LEAGUE 221 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULTI MANAGER 1699 PREWIKE PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 7171 MICRO MART 3 718 TOP MUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUME	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   197 THE COMPOSER   618 MUSIC DATABASE   981 AUDIO ENGINEER   1268 HIPPO FLAYER   1681 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   CLASSIC — POP   1029 COTTONEYE SONG   201 PIANO CLASSICS   224 VIVALDI 2 DISK   342 AMIGA. DEUS   213 DIGI CONCERT V2   620 BAGPIPE MUSIC   248 EXPRESSION V2   473 RHYTHMYS DANCER   1357 2 MEG DANCER   1757 HEAVY METAL   1757 H	239 SLIDESHOW MAKER  808 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1. 1903 MAKE A DISK VIRUS 160 M.V.K. PLUS 160 M.V.K. PLUS 161 M.V.K. PLUS 162 A DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM TESTER 467 FILE UNDELETE 194 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1374 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5 821 PASSWORD MANIA 813 GAME TAMER V4.5 681 SIEBRA SOLUTIONS 1118 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS 1653 SOLUTIONS 1651 SOLUSE 6 DISK VER 18 GAMES VER 18 GAMES 997 ZOSK ADVENT V1	889 10 PUZZLERS 1550 PUZZLERS 1550 PUZZLERS 1564 EXPERT BALLS 1633 THE WOOGLIES 1765 BRAIN BALLS 276 SCOTTISH LEAGUE 231 AIRPORT 443 SLAM BALL 1817 BLOOD BALL 1429 ULTI MANAGER 1639 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 QUIZ GAMES 1031 TREK TRIV 5 DISK 1716 POP MUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUNE 1537 QUIZ 555 1683 HOLLYWOOD TRIV	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   197 THE COMPOSER   618 MUSIC DATABASE   981 AUDIO ENGINEER   1268 HIPPO FLAYER   1681 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   CLASSIC — POP   1029 COTTONEYE SONG   201 PIANO CLASSICS   224 VIVALDI 2 DISK   342 AMIGA. DEUS   213 DIGI CONCERT V2   620 BAGPIPE MUSIC   248 EXPRESSION V2   473 RHYTHMYS DANCER   1357 2 MEG DANCER   1757 HEAVY METAL   1757 H	239 SLIDESHOW MAKER 888 MAKE A DISK 242 MENU MAKER 1154 HEDLEY GUIDE 1 1933 MAKE A DISK V2 VIRUS CONTROL 506 A1200 VIRUS 160 M.V.K. PLUS 1030 A12 DIONIC TOOLS 612 4 DSK TOOL KIT 1629 UN-ARCHIVER 1933 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM TESTER 467 FILE UNDELETE 1940 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL 1881 HARDWARE MANUAL 1881 HARDWARE MANUAL 1881 HARDWARE MANUAL
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK. CRS-ANGLER 1173 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1376 ALI 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS V3 1653 SOLUTIONS V3 1651 SOLVES 6 DISK VER 18 GAMES 997 2DSK ADVENT V2	889 10 PUZZLERS   1550 PUZZLERS   1550 PUZZLERS   1546 EXPERT BALLS   1633 THE WOOGUIS   1765 BRAIN BALLS   876 SCOTTISH LEAGUE   321 AIRPORT   443 SLAM BALL   817 BLOOD BALL   1429 ULTI MANAGER   1699 PERWIER PICS   1763 AIR TRAFFIC   1771 MICRO MART 3   70 PW MUSIC QUIZ GAMES   1031 TREK TRIV 5 DISK   1597 OP MUSIC QUIZ   309 THE QUIZ MASTER   462 WHEEL OF FORTUNE   1597 QUIZ 555   1638 HOLLYWOOD TRIV   1670 A12 DEATH ROW	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   192 THE COMPOSED   136 THE ART OF MED   192 THE COMPOSED   136 THE COMPOSED   136 THE COMPOSED   136 THE COMPOSED   137 SAMPLE MAKER CLASSIC - POP   137 SAMPLE MAKER CLASSIC - POP   132 OCTOMEYE SONG   201 PIANO CLASSICS   234 VIVALUI 2 DISK   342 AMIGA-DEUS   213 DIGI CONCERT V2   628 BABCIPPE MUSIC   248 EXPRESSION V2   473 RHYTHM'S DANCER   1357 2 MEG DACO V1   1759 GUITAB BLUES   1757 HEAVY METAL   1800 TEKNO MAGE 96   1968 BEATEL MANIA   1968 BEATEL MANIA	239 SLIDESHOW MAKER  808 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1: 1903 MAKE A DISK V VIRUS CONTROL 506 A1200 VIRUS 160 M.V.K. PLUS 612 A DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 165 YSTEM TESTEM 467 FILE UNDELETE 194 DISK OPTIMISE 1356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL 1881 HARDWARE MODS AMIGA EDUCATION 766 GEOGRAPHY
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1374 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES 181 BACKDOOR V3 181 BACKDOOR V3 181 BACKDOOR V3 181 GAME TAMER V4.5 821 PASSWOORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1181 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS V3 1653 SOLUTIONS V3 1651	859 10 PUZZLERS   1550 PUZZLERS   1550 PUZZLERS   1550 PUZZLE PITS   1546 EXPERT BALLS   1633 THE WOOGLIES   1765 BRAIN BALLS   376 SCOTTISH LEAGUE   321 AIRPORT   443 SLAM BALL   817 BLOOD BALL   1429 ULT MANAGER   1699 PREMIER PICS   1763 AIR TRAFFIC   1771 MICRO MART 3   7012 FOR MUSIC QUIZ   1031 TREK TRIV 5 DISK   1761 FOP MUSIC QUIZ   1031 TREK TRIV 5 DISK   1767 QUIZ 547 QUIZ 55   1638 HOLLYWOOD TRIV   1570 A12 DEATH ROW LOGIC GAMMES   1050 AT 1050	1787 SONIC DRUM KIT 1738 OCTAMED V2 134 STHE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1258 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1991 SAMPLE MAKER CLASSIC POP 1029 COTTONEYE SONG 201 PIANO CLASSICS 224 WVALDI 2 DISK 342 AMIGA-DEUS 1213 DIGI CONCERT V2 620 BAGPIPE MUSIC 248 EXPRESSION V2 472 RHYTHM'S DANCER 1357 2 MEG DANCE 1757 HEAVY METAL 1800 TERNO MAGE 96 1968 BEATLE MANIA SAMPLES — MODS	239 SLIDESHOW MAKER  888 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1: 1930 MAKE A DISK V VIRUS CONTROL 506 A120 VIRUS 160 M.V.K. PLUS 1030 A12 DIONIC TOOLS 612 4 DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 166 SYSTEM TESTER 467 FILE UNDELETE 194 DISK OPTIMISE 1356 ENGINEERS KIT 245 FIX DISK 1831 HARDWARE MANUAL 1831 HARDWARE MANUAL 1831 HARDWARE MANUAL 1831 HARDWARE MOSO AMIGA EDUCATION 766 GEOGRAPH 5 DISK 532 MATHS 5 DISKS
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK. CRS-ANGLER 1173 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1376 ALI 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS 931 BACKDOOR V3 813 GAME TAMER V4.5 820 MEGA CHEATS 1118 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS V3 1653 SOLUTIONS V3 1651 SOLVES E DISK VER 18 GAMES 997 2DSK ADVENT V2 101 TERROR LINER V1 1081 ADULT TERROR	889 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS 475 SCRITISH ELAGUE 221 AIRPORT 443 SLAM BALL 817 BLOOD BALL 1429 ULTI MANAGER 1699 PREMIER PICS 1771 MICRO MART 3 7012 GAMES 1031 TREK TRU 5 DISK 716 POP MUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUNE 1597 QUIZ 555 1683 HOLLYWOOD TRUV. 1670 A12 DEATH ROW LOGIC GAMES 1031 TABRILS GAME 1037 MARBLES GAME	1787 SONIC DRUM KIT 1738 OCTAMED V2 134 STHE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1258 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1991 SAMPLE MAKER CLASSIC POP 1029 COTTONEYE SONG 201 PIANO CLASSICS 224 WVALDI 2 DISK 342 AMIGA-DEUS 1213 DIGI CONCERT V2 620 BAGPIPE MUSIC 248 EXPRESSION V2 472 RHYTHM'S DANCER 1357 2 MEG DANCE 1757 HEAVY METAL 1800 TERNO MAGE 96 1968 BEATLE MANIA SAMPLES — MODS	239 SLIDESHOW MAKER  808 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1. 1903 MAKE A DISK V VIRUS CONTROL 506 A120 VIRUS 160 M.V.K. PLUS 160 M.V.K. PLUS 1612 A DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 165 SYSTEM TESTER 467 FILE UNDELETE 194 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL 1881 HARDWARE MODS AMIGA EDUCATION 766 GEOGRAPHY 532 MATHS 5 DISKS 644 ENGLISH 4 DISK
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK. CRS-ANGLER 1373 ICE HOCKEY 1373 A12 GON FISH'N 1465 A12 2 DISK. TENNIS 1251 TOUR TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES 1700 GOLF 9 HOLES 1700 GOLF 9 HOLES 1710 GOLF 9 HOLES 1711 GOLF 9 HOLES 1	BS9 10 PUZZLERS 1550 PUZZLERS 1546 EXPERT BALLS 1633 THE WOOGLIES 1755 BRAIN BALLS MANAGER GAMES 876 SCOTTISH LEAGUE 321 AIRPORT 443 SLAM BALL 1429 ULTI MANAGER 1699 PERMIER PICS 1763 AIR TRAFFIC 1771 MICRO MARTS 1781 TREK TRIV 5 DISK 1716 POP MUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUNE 1597 QUIZ 555 1683 HOLLYWOOD TRIV 1670 A12 DEATH ROW LOGIC GAMES 1033 TMARBLES GAME 1035 ATMING GAME	787 SONIC DRUM KIT 738 OCTAMED V2 136 THE ART OF MED 192 THE COMPOSER 618 MUSIC DATABASE 981 AUDIO ENGINEER 1268 HIPPO PLAYER 1681 PROTRACKER 3.5 1791 OCTATUTOR V5 1991 SAMPLE MAKER CLASSIC POP 1029 COTTONEYE SONG 201 PIANO CLASSICS 224 WVALDI 2 DISK 342 AMIGA-DEUS 1213 DIGI CONCERT V2 620 BAGPIPE MUSIC 248 EXPRESSION V2 473 RHYTHM'S DANCER 1357 2 MEG DANCE 1757 HEAVY METAL 1800 TEKNO MAGE 96 1968 BEATLE MANIA SAMPLES — MODS 660 KORG 01W 8 DISK 643 2501MD EV 3 DISK 643 501MD EV 3 DISK 643 501MD EV 3 DISK	239 SLIDESHOW MAKER  888 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1. 1933 MAKE A DISK VIRUS CONTROL 506 A120 VIRUS 160 M.V.K. PLUS 1610 M.V.K. PLUS 1610 M.V.K. PLUS 1613 A12 DIONIC TOOLS 612 4 DSK TOOL KIT 1629 UN-ARCHIVER 1983 CRUNCHERS 60 DISK & SYSTEM 1656 SYSTEM TESTER 467 FILE UNDELETE 194 DISK OPTIMISE 356 ENGINEERS KIT 245 FIX DISK 168 HARDWARE MANUAL 1881 HARDWARE MANUAL 1881 HARDWARE MANUAL 1881 HARDWARE MOSO AMIGA EDUCATION 766 GEOGRAPHY 532 MATHS 5 DISKS 644 ENGLISH 4 DISK
	1014 CRAZY GOLF 630 TEN PIN BOWLING 1171 2 DSK CRS-ANGLER 1173 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1373 ICE HOCKEY 1374 A12 GON FISH'N 1465 A12 2 DISK TENNIS 1630 INTER CRICKET 1700 GOLF 9 HOLES INTS & CHEATS 931 BACKDOOR V3 821 PASSWORD MANIA 813 GAME TAMER V4.5 820 MEGA CHEATS 681 SIERRA SOLUTIONS 1118 UP TO DATE V1 1358 GAME SOLUTIONS 1653 SOLUTIONS V3 1651 SOLVES FOLKS VER 18 GAMES 1997 ZDSK ADVENT V1 1001 2DSK ADVENT V2 101 TERROR LINER V1 1081 ADLIT TERROR 1248 STRIP POKER 1145 A12 UMBERS V1	BS9 10 PUZZLERS 1550 PUZZLERS 1550 PUZZLERS 1563 THE WOOGLIES 1765 BRAIN BALLS 276 SCOTTISH LEAGUE 231 AIRPORT 443 SLAM BALL 1817 BLOOD BALL 1429 ULTI MANAGER 1639 PREMIER PICS 1763 AIR TRAFFIC 1771 MICRO MART 3 201Z GAMES 1031 TREK TRIV 5 DISK 176 POP MUSIC QUIZ 309 THE QUIZ MASTER 462 WHEEL OF FORTUME 1597 QUIZ 555 1683 HOLLYWOOD TRIV 1670 A12 DEATH ROW 1670 A12 DEATH ROW 1037 MARBLES GAME 1037 MARBLES GAME 1037 MARBLES GAME 1035 ATOMIC GAME 119 DRAGON'S TITLES	787 SONIC DRUM KIT   738 OCTAMED V2   136 THE ART OF MED   192 THE COMPOSER   136 THE ART OF MED   192 THE COMPOSER   158 MIDIC DATABASE   151 AUDIO ENGINEER   1258 HIPPO PLAYER   1581 PROTRACKER 3.5   1791 OCTATUTOR V5   1971 SAMPLE MAKER   CLASSIC — POP   1029 COTTONEYE SONG   201 PIANO CLASSICS   234 VIVALUI 2 DISK   324 AMIGA-DEUS   213 DIGI GONCERT V2   620 BAGPIPE MUSIC   248 EXPRESSION V2   473 RHYTHMYS DANCER   1357 2 MEG DACO V1   1759 GUITAB BLUES   1757 HEAVY METAL   1800 TEKNO MAGE 96   1968 BEATLE MANIA SAMPLES — MODS   1660 KORG OI W 8 DISK   647 SOUND FX 3 DISK   619 DRUM SZ DIS	239 SLIDESHOW MAKER  888 MAKE A DISK 242 MENU MAKER  1154 HEDLEY GUIDE A1 1930 MAKE A DISK VIRUS 1900 A120 URIUS 1910 AN TOOLS 19
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DISKS COST £1.50 EACH, NO MINIMUM ORDER, ALL VIRUS FREE AND USER FRIENDLY All Games are on 1 disk and run on all Amigas unless otherwise stated. PICK AN EXTRA DISK FOR FREE WITH EVERY EIGHT DISKS YOU PURCHASE

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Phil South faces the final curtain with some AMOS hints and tips



# The End is Near...

kay it's the last AMOS column. What can I say to sum up 100 glorious years as the AMOS columnist for AC? Well here is a list of the top 10 things you should bear in mind when planning and executing an AMOS project.

### 10. Spack your screens

If you don't know what spacking is then you should find out. SPACK is a command that packs a graphic, compresses it and pushes it into a memory bank. The point in spacking screens is that they take up less room and load instantly with the UNPACK command. So try this:

FS=FselS("\*","","Load a picture") Load lff F\$,0 Spack 0 to 1 Print "The length of your new bank is ";Length(1);" bytes" Wait Key

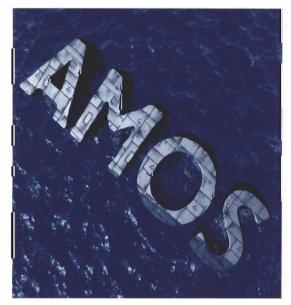
To unpack the screen you saved just use:

Umpack 1 To 0

And the screen snaps into view.

### 9. Use Subroutines instead of PROCs

Okay so the PROC structure is really nice in AMOS and it's hard to resist. But please do, as the PROC will slow down your programs, and if



you are doing a really long game using AMOS you will get better performance if you use GOSUB RETURN. There is a really long and boring technical explanation for this, but I nodded off when it was explained to me.

### 8. Like a Movie

Organise your credit screens to remain on screen for a few seconds rather than a few hours. Watch a movie and time how long the titles are on for, and match the speed of yours to it. Fade out your screens for a slick look, and make sure that the credits only appear the first time the program is run. Make a loop that takes them out of the sequence once the game is in play. People don't want to see your name every five minutes, it'll make you seem like an egomaniac. You may be an egomaniac, but don't let everyone see that you are.

### 7. Use Maths

I know it's a dirty word, but maths formulas can give you routines for your programs that you never thought possible. My particular favourites are vectors and flip-flops. A vector sends a sprite off in a certain direction and a flip-flop bounces it. Check out the back issues of the column to see these processes in use in games.

### 6. Learn Animation

Buy and use a book on animation. You'd be surprised what a tiny bit of animation training will do for your sprite animations. Use squash and stretch, anticipation, and follow through and your sprites will seem alive!

### 5. What makes a game Tick?

Start out by making exact replicas of traditional game formats, Pong, Galaxians, Pac-Man, Defender, Tetris, etc. If you know how these games work then you will be better equipped to design your own. Unless you know where we've been, how can you tell where we're going?

### 4. Use Extensions

There are many extensions to AMOS available both as shareware and freeware. Use them. Some enable you to use Intuition libraries to make real Amiga programs rather than plain AMOS ones. AMOS programs sit behind Intuition and don't use any of the gadgets and win-

dow options, and so make very non-standard programs.

### 3. Use Blocks for Backgrounds

It's tempting to use full size IFF screens for backgrounds in games. If you use Blocks you can not only bolt them together in different orders, but you can reuse elements to make more screens. Maze games and car-racing games benefit from this kind of recycling.

### 2. Use MODs for Music

MOD files are great for game music. There are so many tunes available in the public domain, and you can use them in your programs provided you contact the author and ask their permission. Who knows if you strike up a relationship with the author they might even be persuaded to write you a new tune for your game, for a share of the credit of course

### 1. Planning planning planning

Before you even type the first command of your program, plan exactly how you are going to proceed. Write down the program flow on a piece of paper, showing what you are going to do and when. Move the sprites, check for collisions, move the bullets, check for collisions, move the background, etc. When are the sounds going to happen? What flags do you need to set when a bullet has been fired to stop that awful stuttering?

Plan everything and then once you have an idea of what you will need, then start coding each routine individually. Once you have each routine running on its own, start bolting them together as subroutines of the main program loop.

That's it! Thanks for reading the column all these years, and good luck with your AMOS coding in future. If you want any more info about AMOS, check out the World Wide Web, as there are many places for AMOS info still around out there. Also you could invest in some back issues of AC, and look up some of the topics we've discussed here. Perhaps we might publish an index in the near future to make this easier. Also, if you can find it, there is always my book, Mastering Amiga AMOS, published by Bruce Smith Books, ISBN number 1-873308-19-1. It may not still be in print, but you will certainly be able to get it from your local library.

Either way, it has been fun, and thanks again for joining me in the wacky world of AMOS.

Paul Overaa checks out a couple of small utilities that you might find useful



# Striking A Chord

ne of the great things about most public domain software is that it is not (in the main) driven by what is, or is not, commercially viable. Most programmers who write it do so either for fun, academic interest or because they themselves want particular utilities but have been unable to find suitable offerings from other sources.

Chances are then that if a piece of software has a potential specialised use, despite the fact that commercial software houses may choose to steer well clear of such development, someone somewhere will have spent their spare time knocking up a freely distributable utility to suit. Granted the final software may not perhaps be as polished as a commercial offering might be, but it'll usually still do its intended job well enough.

For many years of course a lot of this software ended up in pd libraries, in collections like the Fish disks, but nowadays Aminet is the centre of attraction and it was whiles browsing through the Aminet archives the other day I came across a couple of utilities that I thought might be of some general use.

The first download was a little 'freeware' program called ChordMaster, written by Chris Carr as an aid to writing music. It allows you to enter a collection of notes and get a listing of relevant chords that contain those notes. In fact, three groups of chords are returned: Exact matches, matches for those chords that contain the specified notes along with one extra note and wider matches where the full chord contains both the notes specified and two extra notes.

The chords searched for will use every combination of the inputted notes (so any chosen note can be the root) and if, for example, you specify notes F# and C# then you'll be offered F#5 as an exact match, F# and F#m (because of the missing A# and A respectively), along with various C#-based chords as 'one note out matches'. Also shown will be a variety of C# and F# chords, such as F#7 and F#add9, where two notes are missing.

ChordMaster installation is easy enough. You just copy the program, and a data file called test-file-a.txt, to your desired location and you're ready to go. This program does, incidentally, use MUI and because of the way it has been compiled it doesn't seem to run from the Workbench - so you have to start it from a Shell window. From then on, however, it's just a matter of click-



Once you've figured out which chords are needed you could then use Andreas Fredriksson's Shell-based Chordian utility to create chord samples from a single note sampled sound

ing on the appropriate notes and then pressing start to see the resulting chords.

The chord data for ChordMaster is actually held in testfile-a.txt with details of each chord being held on a separate line. For the techies amongst you the encoding is a binary representation of the intervals required for each chord and full details of how extra chords can be added are provided with the program's documentation. What's more, if you're into C coding, you be pleased to hear that you do in fact get given the source code as well!

### CHORDS

The other program I came across, called Chordian, has been written by Andreas Fredriksson. It's a utility that allows you to take a raw sampled sound and create a chord from it. Again, nothing fancy as utilities go but it works well enough and does, by the way, remove some of the problems with various other chord makers in that it has an option which permits interpolation.

These chord-making utilities are useful since they make it easy to add things like string section tracks to an arrangement by creating an appropriate series of chords from a single note string synth sample. Chordian is another utility that comes with its C source code and the executable program itself is strictly Shell-based using this sort of command line...

Chordian <source> <output> [i] n1 n2 [n3..]where <source> is the sample you wish to make a chord from and <output> is the name of the chord sample you wish to create. The n values are tones relative to the base note values and while the first two (n1 and n2) values are always required, up to four intervals can be provided.

The optional i flag, incidentally, tells the program to use interpolation during the composite waveform calculations. If all this sounds a bit high-powered, don't panic - all you need to know is that although interpolation (calculation of intermediate waveform amplitude between two known points) slows down the sample mixing process a little in most cases, it produces improved overall quality in the resultant playback sound.

Of course if you are using the OctaMED Sound Studio, which provides its own built-in chord generation options (allowing you to generate samples of particular chord inversions from any specified sample) then you won't have any need for Chordian. But for everyone else it's just another of those utilities that, though not by any means earth-shattering, is still handy to have around

Oh yes, I nearly forgot - for those of you who don't have access to Aminet I've put both the ChordMaster and Chordian utilities on the coverdisk.



ChordMas ter . not awe inspiring by any means but the utility could prove useful for anyone who struggling to ligure out which notes are part of which chords!

In part two of his Amiga health guide, Doctor Hugh looks at posture and RSI



# Survival Guide Par

Part two

he upper body also suffers from the subtle rigours of working at a computer. All manner of minor and not so minor ailments arise from the unnatural actions and posture required for working at a computer.

### POSTURE

The typical position to sit in when working at a computer terminal is also probably the most unhealthy one. Most people will sit with head craned forwards to a degree and shoulders hunched up. In this position the spine will be

bent, causing pain in the back and shoulders and the internal organs of the body will be compressed together. The lungs won't be able to function as effectively and circulation will be decreased.

This position is encouraged by the layout of most computer terminals, with the worst offenders being laptops without detachable screens. Although this isn't a problem for Amiga owners, lower end machines such as the A1200 are just as bad because, as the monitor has no big box to sit on, it usually rests on the desk making it necessary to crane

forwards to look at the screen.

### WHAT CAN YOU DO?

Position the equipment to suit your needs. If you can, sit in a slightly reclined position with the monitor closer to you, rather than the other way round. Buy a computer stand and position the monitor higher and further forwards – ideally so that the front of the monitor is above the trailing edge of the keyboard. The perfect position is so that your line of vision is about three quarters of the way up the screen.

### RS

RSI has been a subject of much debate in the last few years, mainly due to the mistaken belief by some employers that the condition doesn't exist. This, of course, is far from true.

To understand why RSI occurs, it is first necessary to gain some understanding of the working of muscles. Under normal circumstances blood reaches the muscles via capillaries. When the muscles are tensed (even if only tensed to 50 per cent), it is impossible for the blood to reach them and the muscles will then use whatever stored energy they can. When the muscles have exhausted this source of energy they switch to anaerobic (without oxygen) metabolism. This creates harmful by-products such as lactic acid which in turn lead to pain.

The theory is that, when typing, there is such a rapid and continuous tensing of the muscle groups in the hand that oxygenated blood isn't given sufficient time to return. Because the muscles never retax properly, lactic acid starts to be produced. Once one muscle is affected, the others will tense more to relieve the load. Unfortunately this tactic is useless, and indeed more harmful with repetitive motions leading to real problems.

Other problems associated with excessive typing include:

Tenosynovitis. This caused by an inflammation of the protective sheath of the tendon. If a movement is repetitive and excessive the tendon sheath will not be able to lubricate itself sufficiently to avoid problems and the sheath will become inflamed and painful.

Tendonitis. This is a condition that affects the tendon itself rather than the sheath. If the tendon is strained too frequently the fibres can begin to separate and break. This creates detritus which, in turn, can cause friction. Tendonitis ranges from a dull ache to, in more severe cases, acute pain caused by the friction and swelling of a severely damaged tendon.

Carpal Tunnel Syndrome. This condition occurs when the inflamed muscles around the wrist trap nerves. A peculiar 'pins and needles' feeling and even loss of sensation can result.

### WHAT CAN YOU DO?

When it comes to RSI, prevention is definitely better than cure. Ensuring that you are using the correct equipment and posture will virtually assure that you avoid problems later on. Good typing technique is essential. For people (myself included) who can't touch type, the problem isn't quite so great because the hands pretty much hover above the keyboard.



However, for those who touch type, using the correct hand position is essential. Try not rest your wrist on the desk while you are typing, but if you absolutely have to, ensure you have a raised wrist pad in front of the keyboard. Instead, rather like the none touch type position, float your hands above the keyboard as if you were playing the piano. If you have to reach for a distant key, use the whole hand rather than just the finger.

Ensure the wrists do not face inwards towards each other too much. This distortion can be extremely stressful on the tendons and muscles of the wrist and hand.

There is hardware now available to cut down on RSI injuries. Ergonomically designed split keyboards eliminate the need to put the wrist and hand in such uncomfortable and unnatural positions. Although there are none specifically for the Amiga, adapters are available to enable ergonomically designed PC keyboards to be used on big box Amigas.

A keyboard should give tactile and audible feedback so that you are aware that you have hit the keys. Trivial though it sounds, if you aren't entirely sure you've hit the keys hard enough to activate them, you will exert more pressure into your keystrokes, creating harmful jarring vibrations through the fingers, hand and wrist.

So there you have it. The almost comprehensive guide to computer health hazards. Bear these little pointers in mind and you shouldn't be bothered by a fuddy head or an aching back again.

Dave Cusick investigates online ordering and the security issues it raises



# Digital Dollars

he Web browser Voyager NG seems to be one of those programs Amiga owners either love or loathe. Whichever group one falls into though, it is hard to deny that programmer Oliver Wagner has managed to keep his baby at the cutting edge of Amiga browser technology. Not only was VNG the first browser on our favourite platform to support frames (albeit slightly eccentrically), but since release 2.70, Voyager NG has supported a protocol called Secure Socket Layers.

SSL was originally developed privately by Netscape, although the current version 3.0 is the product of a great deal of consultation with users. It was designed to enable Web surfers to safely transmit credit card information over the Internet, so that they could purchase items and conduct business from their home.

The appearance of an SSL compliant browser means that Amiga owners can finally experience Electronic Commerce for themselves. Electronic Commerce is a subject about which much has been written, both in Internet magazines and in the technology supplements of some daily newspapers. Although there is a perception in the industry that digital transactions are still far from commonplace, a survey by the NOP Research Group suggested that a quarter of a million people in the UK alone already shop on-line each month, and that in the next year over £1 billion world-wide could change hands over the Internet.

Nevertheless, there remain few UK sites that offer visitors the opportunity to buy instantly. There are notable exceptions: For instance, the supermarket chain Tesco offers a home shopping service in several areas including Leeds and Hammersmith, and the computer games and hardware club Special Reserve has an impressive site around which you can wander with a virtual shopping trolley. Indeed, Danny Corder, Webmaster of



Special Reserve has an SSL ordering system which can be used to buy anything in its catalogue



Tesco now offers a home grocery shopping service in certain parts of the country, and wine and flowers can be ordered nation-wide

the Special Reserve site, says that the SSL ordering service is proving extremely popular amongst the fifty thousand or so different visitors the pages receive each month.

On the whole though, companies on this side of the Atlantic have been slow to embrace Web shopping. This is perhaps surprising, because I know from personal experience that when presented, while browsing, with the opportunity to purchase new software there and then, the temptation can be hard to resist.

Perhaps the current rarity of on-line ordering services stems from (what I believe is) a misconception amongst companies that potential customers are not ready to embrace Electronic Commerce just yet, or perhaps it is simply a byproduct of the curious technophobia that still seems to pervade the upper echelons of Britain's corporate hierarchy. If it is the latter then the situation will surely change only very gradually; if it is the former, then we may already be teetering on the brink of an exciting new era, ready to topple gleefully over as soon as the remaining barriers are overcome.

Of those barriers, surely the most evident remains the belief among many Net users that Electronic Commerce is still too insecure. It has been suggested by some that Information Superhighwaymen are everywhere, simply monitoring communications between Internet nodes and stealing credit card numbers as they pass, but even if this was ever the case then the reality today is very different.

Although it would admittedly be foolish to send credit card details in an unprotected e-mail message, information entered into secure transaction Web pages (those preceded with https://) is encoded prior to transmission using an incredibly complicated algorithm – 128-bit in Voyager NG (as

in the US version of Netscape Navigator; though only 40-bit regardless if the server you're connected to is a Netscape one because US laws forbid a higher level of encryption in exported software).

The average hacker isn't very likely to crack even 40-bit encoding. Admittedly a few individuals such as Damien Doligez, whose site is listed below, have managed to unscramble messages protected using the weakest algorithms available in SSL, but it has been worked out that it would take a network of around 40-50 high end Pentium PCs an average of around eight days to crack a similarly protected message. Electronic criminals are therefore far more likely to target corporate computer systems, which could theoretically be holding vast databases of clients' credit card details, than sit monitoring an on-line ordering page.

Corporate system administrators have accordingly been tightening security considerably over recent months, and various Internet technology companies have not been slow to seize on the business opportunities this presents. Some American security system programmers regularly attempt to hack into computer systems protected by their rivals in order to try and expose flaws.

To the average home user there really isn't the risk attached to Electronic Commerce that some would have you believe, so to try out armchair shopping for yourself, get hold of VNG and make sure you've got your credit card to hand. IBrowse looks set to follow suit with an SSL expansion module promised in the near future – by which time VNG should feature Javascript support, which we'll be taking a closer look at next month.

## SITES OF INTEREST

Voyager NG - http://www.vapor.com/voyager/ Special Reserve: - http://special.reserve.co.uk/ Tesco Online - http://www.tesco.co.uk/ Damien Doligez and the SSL Challenge http://pauillac.inria.fr/-doligez/ssl/

### CONTACT

If you wish to contact me, my e-mail address is dave@dcus.demon.co.uk. Questions, suggestions and feedback are all more than welcome. I also have a homepage, which can be found at http://www.dcus.demon.co.uk/.

This month
Paul Overaa
offers a few
general file
editing plans



# Handling your files

hen the Amiga first arrived users, nigh-on automatically, took interest in the Basic language because Amiga Basic was provided as part-and-parcel of the Amiga's system software. So, whenever anyone had to knock up a short program to do some file conversions or a bit of file editing, chances were it would be done using Basic. Firstly, because it was available, and secondly because Basic's high-level file and string handling facilities made such programs easy to create.

Nowadays of course it is ARexx, rather than Basic, that is the O/S supplied language but because of its use in the macro-scripts/inter-program-communications arena, it's often overlooked that ARexx is as capable as Basic (if not more so) when it comes to high-level file and string handling.

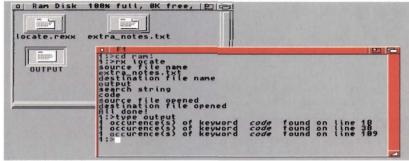
This month I thought I'd provide not just a typical example but a general overview of ARexx's file handling functions. Trouble is - it can't be done in a single page so, if you're in any way unsure about this area of ARexx, take a look at the extra\_info.txt file on this month's coverdisk which contains some notes about the file handling functions I'm about to discuss. (This extra material, by the way, comes from my corner of Amiga Computing's Web site).

### CHECK IT OUT!

As far as the example itself is concerned, try this scenario for size: You've got a disk full of text files which, for reference purposes, you wish to scan for particular keywords to identify in which lines of the original files those keywords appear. Seen it, done it? Probably, I'll certainly agree that this type of task is a bit of a perennial topic in programming circles so let's add some extra twists. Let's produce a script that creates a new file containing statements that provide the line references, the keyword in question and the number of times on each line the keyword occurs.

And, for a bit of fun, opt for adding the keywords in such a way that they will be displayed in italic form when the output files are listed at a Shell window using the AmigaDOS Type command

I'm not, incidentally, suggesting that the 'italics' option would be particularly useful - just trying to throw a few extra issues into the overall script creation problem in order to illustrate how



This is the sort of output the example script produces

facilities like these can easily be provided if necessary!

Getting started. Perhaps surprisingly, even with the extra bells & whistles mentioned, we've still got a relatively easy task to cope with. Codewise the starting point is, of course, ARexx's line-based file handling functions. We need a loop to read lines of data held in a file until the EOF() function indicates there is no more data to read and a typical script framework can be seen in the fragment shown in listing 1.

It is, of course, possible to do anything at all with each line read from the file but, as far as our search operations are concerned, we just need a few SAY and PULL statements to collect details of the file to be dealt with etc., coupled with an inner loop that performs the searching.

Listing 2 shows the inner loop from my completed script and you'll notice that surprisingly little work needs to be done. We use ARexx's Words() and Word() functions to check the keyword occurrences in each line of text and increment a hit\_count variable whenever a match is found. Having previously set up definitions for italic control sequences and some static text (see the start of the coverdisk script for these details), it's then possible to build up the out-

```
if Open(s, source_name, 'r') then
do
if Open(d, dest_name, 'w') then
do
do white "EOF(s)
/* do something */
end
(close(d)
and
end
(close(s)
```

Listing 1: Check out the coverdisk notes if you're not happy about ARexx file operations.

put line and write it to the destination file as easily as this...

```
output line=hit_count TEXT1,
ITALIC_ON search_string ITALIC_OFF,
TEXT2 i
Writein(d,output_line)
```

The script, by the way, is very easy to use. Just provide suitable source and destination file path/names and the search keyword, and then wait for the script's 'All Done' message (needless to say it needs to be run from a Shell window using the RX command).

You can use similar scripts to perform all manner of search &/or replace jobs and, since the basic framework works as well with binary files as it does with text files, the overall ideas are general and well worth understanding.

The additional notes on the coverdisk, coupled with this month's example should provide pretty much everything most people will need to know about ARexx's sequential file-handing functions. I ought to mention, however, that more sophisticated built-in functions are also provided that allow something called random access file handling and I'll be giving you a novel example of these facilities next month.

```
hit_count=0
do j=1 to Words(input_line)
if Words(input_line,j)=searck_string then do
hit_count=bit_count+1
end
end /* j loop */
if hit_count+0 then
do
coutput_line=bit_count TEXT1, IISLIC_ON
search_string ITALIC_OFF, TEXT2 j
Whiteelin(d,output_line)
end
i=i+1 /* increment line count */
```

Listing 2: The code section that does all the hard work

Imagine that, a very poor heading. I just hope the standfirst is better, oh dear



# Imagine that!

eb pages really would be a bit bland if you were limited only using text. So you can put a few lists in, wow wee. No, we want to be able to splash large colourful pictures all over our pages, so they take hours to download.

I think there is a message in there somewhere, so before I actually explain how to add graphics, I want to show you lot how to be a considerate Web designers. When you actually create graphics check how many k they take up. Remember that most people will be lucky to get a 3K/s connection to your site, and in reality this is more likely to be 1K/s so try to keep the total size of graphics bellow 60k.

Take the Amiga Computing site as an example; the total amount of graphics is around 30k, there are two 40k GIF animations but you can count these separately as the individual frame size is very small. The largest single image is the cover picture, coming in at around 12k and can be annoying with the amount of time it takes. And you thought the AC Web site was just something we threw together in a day at the end of each month, oh it is.

So the moral is to keep any graphics you use as small as possible, use as few colours as possible (remember dithering) and use the Jpeg and GIF interlaced modes. If you do have to use a large single image, think about splitting it into quarters, eighths or maybe strips.

Just before I go on to explain the image tag this month I will simply describe the tag and then go on to list the various attributes you can use in the tag, starting with the most important. Now onto the image tag itself, to add an image place the <IMG> style tag where you want the image inserted in your Web page.

SRC = to actually display an image you have to specify the source of the image. This will have to be either the path and file name of a picture stored on your Web site, or the Web address of another picture. If the image is in a previous directory use ../ before the file name to tell the browser to look in the previous directory, you can use this more than once in a row to go back any number of directories.

ALT = you should always have this attribute, if a person is browsing using a text only browser or with images off, this allows a text alternative to be displayed and allows them to still understand what your page is about.



Finally we get to add some graphics to what would be an otherwise very dull Web page. Next month, links

WIDTH/HEIGHT = Two separate attributes you should always try to use, these allow you to state the height and width of an image in a Web page. This allows the browser to format the Web page before any pictures are downloaded or if images are turned off. They have to be used separately.

ALIGN = left | right | top | bottom How other objects will be aligned with this image can be set using this attribute. Normally this is for flowing text around a picture, using align left or right to flow the text to the left or right of the picture. BORDER = When using this (if an image is used as a link) you can specify the thickness in pixels of the highlight drawn around the image. Usually zero is used to remove the ugly blue border you would normally get. Also allows you to add a border to a normal image.

HSPACE/VSPACE = If you need to add blank

space around a picture these two attributes let you specify how many pixels, either horizontally or vertically, should be left empty.

LOWSRC = This is a new image attribute I came across and is currently only used by Netscape 2 and above. Using this you can specify a second image that loads first then the normal image is loaded over the top. The idea being that if you have a large image you can use the LOWSRC attribute to specify a smaller file size version that should download faster. The best use is to have an interlaced grey scale version using about eight or 16 colours, over which the normal colour one can be drawn in, making quite a nice effect. How useful this is, is debatable, as usually you are lucky if the grey scale version is half the size of the original. So if you have an image that takes 30 seconds to download, using LOWSRC will increase total download time to 45 seconds.

### TELL ME YOUR BACKGROUND

While I am talking about adding images and pictures to your Web site suppose I should mention backgrounds. These are dead easy to add using an attribute of the tag. Using BACK-GROUND = you just add the path and file name of the background image.

For God's sake though, make sure you use a background that is light enough to read any text on your Web site and that it is not too garish.

Both of these are cardinal sins, and if you commit them you deserve to have your modem shoved up part of your anatomy.

You can just as simply add a plain colour as the background using BGCOLOUR = # to specify a RGB colour in hex format. Such as FFFFFF for white, FF0000 for red or FF8822 for an orange colour.

Paul Overaa helps demystify the issue of stacks, in this month assembler column



# Parameter Passing

aving outlined the use for a couple of the amiga.lib routines last month, I thought that it would now be worth looking, in a little more detail, at that mechanism being used for parameter passing. In general of course, there are really only two ways in which data can be passed to a routine: Parameters may be placed in the 680x0's registers or stored and retrieved from memory.

The first option is both simple and fast and since pointers to larger objects such as strings and other blocks of data can be used there is little you cannot do. Similarly, the subroutine may return either any results themselves or a pointer to a block of data containing those results, in a single register so again there's no limit on the amount of information that a routine may return. You do of course need look no further than the Amiga's run time libraries - Exec, Intuition etc., to see how effective (and fast) this register-based approach can be!

Memory-based parameter passing, while slower, is more flexible and probably the most powerful of these techniques is stack-based parameter passing. The idea, as we saw last month, is that before you make your subroutine call you push the parameters that the subroutine needs onto the stack. These values are collected and used by the subroutine itself and then when the subroutine returns, the parameters are effectively removed.

Stack-based parameter passing can be done in several ways: The 680x0's move instruction can, for example, be used in conjunction with indirect addressing and autodecrement to push a value onto the stack like this

```
move.l some_value,-(sp)
push a parameter
jsr MySub
```

The important thing to remember with this approach is that, after you have pushed the parameter, the jsr instruction will then push a return

address onto the stack - so the final arrangement in memory will look like that shown in figure 1. This means that in order to extract the parameter, the subroutine needs to look not at the 'top' of the stack but 'into it'. And since the return address is four bytes long, a displacement of 4 would be needed...

```
MySub move.l 4(sp),d0
subroutine now has parameter in d0
rts
```

The above fragment copies into d0 the four bytes of data immediately above the return address and the amiga.lib afp() and fpa() routines would use a similar method for collecting their parameters.

The snag with all these arrangements of course is that once the subroutine has returned, the stack pointer is left pointing to the parameter placed on the stack. This situation cannot be left as it is because the integrity of the stack, as far as other items already on the stack are concerned, would be destroyed. Because the parameter is no longer needed there is little point in removing it via a move. I (sp)+,d0 type instruction - instead it's faster to numerically adjust the stack pointer so that the item is effectively ignored.

The code fragment that pushed a long word (4 byte) parameter onto the stack would in reality then have to include this sort of stack adjustment:

```
move.l some_value,-(sp) push parameter
jsr MySub
addq.l #4,sp
clean-up stack
```

and this of course is exactly the type of thing we were doing whilst using those afp() and fpa() amiga.lib routines last month.

The reason this stack method is so useful is that it makes it possible to create subroutines that do not alter the contents of temporary workspace registers being used. Needless to say it's done by preserving the contents of those registers on the stack and restoring them just before the subrou-

tine returns like this...

```
MySub movem.l d0-d4/a0-a3,-(sp)
preserve registers
movem.l (sp)+,d0-d4/a0-a3
restore registers
rts
```

Now with routines expecting parameters on the stack you need to allow for the fact that more items have been pushed onto the stack after the return address. In the above example, nine 32 bit registers are preserved (d0, d1, d2, d3, d4, a0, a1, a2 and a3), so a further 36 bytes have been placed on the stack. If we go back to the stack-based parameter passing example mentioned earlier and add the above register preservation code, the offset now needed to extract the word parameter variable would be (9 x 4) + 4, i.e. 40, so the subroutine entry code would then be based on this type of framework...

```
MySub movem.t d0-d4/a0-a3,-(sp)
preserve registers
move.l 40(sp),d0
parameter now in d0
movem.t (sp)+,d0-d4/a0-a3
restore registers
rts
```

The good thing about these arrangements of course is their generality and, despite the fact that it might seem more complicated at first, once the principles are understood this stack-based parameter passing approach may actually make code development easier!

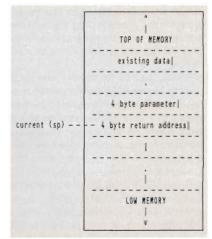


Figure 1: Relative position of the stack parameter after the subroutine call.

1:>cd ram:
1:>chordian digitalbass1 basschord i 0 3 7
Chordian v1.0 -- copyright (c)1996 by Andreas Fredriksson (dep@canit.se)
Interpolation enabled.
Mixing sample 'digitalbass1' to 'basschord'.
Notes in use (3) 8 3 7
Sample size: 6016
Chord size: 4015 (based on highest note)
Saving data.. done.

Modern assemblers like Devpac make it easy to read in and re-use existing routines

This month things are really hot as Paul Overaa gets you into event handling



# Talking to Intuition

ntuition, the Amiga's graphical user interface, is of course the cornerstone of most Amiga operations. Even when your Amiga is just sitting there doing nothing Intuition is active and continually listens for any information that may arrive from any of the input devices (mouse, keyboard, joystick etc.).

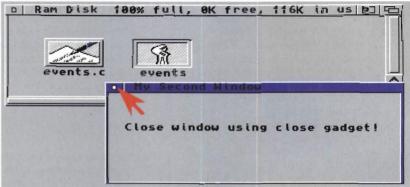
It will look at this data, use what it regards as useful, and then pass the rest on to any interested parties, i.e. any programs that are running. Programs can be selective about the type of events they wish to be told about. If, for instance, a program needs to know when a close gadget has been used it can ask Intuition to send a message if this event occurs. If the same program doesn't need to worry when a user resizes a window then it simply does not ask for any notification of these actions to be sent.

It's all done using something called the IDCMP (Intuition Direct Communications Message Port) system. Sounds clever and the Intuition related coding involved certainly does present such a challenge. But we've already opened windows and seen how loops work, and that means we are now in a position to deal with event collection head on.

The message system used on the Amiga is actually an Exec facility (that's the part of the Amiga's software which handles multitasking and so on). Information can be sent from one task to another by creating a data block known as an Exec Message structure and then transmitting it to its destination. These messages pass between tasks using another Exec defined structure called a 'message port' which, for the moment, may simply be regarded as a software entity that acts as a receiving station for messages.

Before a program can receive a message it needs to allocate and initialise a suitable message port. Luckily, however, providing we have asked it for notification of at least one type of event, Intuition will do all this port creation stuff automatically. This, of course, means that your only responsibility as a C coder is learning how to make use of the message system itself.

The scenario is simple. We tell Intuition about the type of events we are interested in at the time the window is opened. Various system header file defined constants are available that are used in conjunction with a WA\_IDCMP tag entry as part of the OpenWindow() function call.



That's better - now the window remains available until we decide to close it by hitting the close gadget!

This month, for instance, we are going to ask Intuition to send us a message if the user clicks on the window's close gadget and so the tag entry being used is...

### WA\_IDEMP, IDEMP\_CLOSEWINDOW,

How do we get a close gadget into a window in the first place? We ask Intuition to add one by setting another tag, WA\_CloseGadget, to true...

### ##\_CloseGadget, TRUE,

In fact just adding the above extra two lines to the example program originally provided on the June issue coverdisk will cause Intuition to give us a close gadget, set up the message port, and send us a message when the gadget

### SIGNALS

The big question now is - how do we know when Intuition has sent a message? Well, Exec has an inter-task signalling system available which programs may use. For each task Exec allocates 32 'signal bits' - half of which are used by Exec itself with the remainder available for use by the running program. Don't worry about how these bits are allocated and so on - Intuition handles the nitty gritty details automatically.

All you need to know is how to put your program to sleep and how to bring it back to life as messages arrive. There is one Exec function called Wait() available that is useful if programs have more than one window on display, but for our purposes we have only one window (and

therefore just one port) to look at so a simpler function, called WaitPort(), can be used.

As soon as WaitPort() returns we need to do three things: Collect the message using an Exec library function called GetMsg(), extract any information from the message that we require and then use a ReplyMsg() function to let Intuition know we've finished handling the message.

With this month's example we do not need to worry about extracting information. We've only asked to be notified about one type of event and so, if our program receives a message at all, then it has got to be an IDCMP\_CLOSEWINDOW type event - and the reception of this tells us all we need (namely that the user wants to quit the program).

As mentioned earlier, I've used code from the June issue as the basis for this month's program, modifying it by adding an event handling loop that performs the message collection and reply operations. There is a little more of the story to come of course, but for this month if you can come to grips with the general way that messages are collected and replied to within the while/do-while framework of this new example then you're doing just fine!

```
do (
    waitPort(window_p->UserPort);
while (message_p=GetHsg(window_p->UserPort))) {
    ReplyMsg(message_p);
    program_exit=TMUE;
}
}while(!program_exit);
```

Listing 1: Notice that the true/lalse logical sense of the program\_exit variable here is being inverted by using C's! operator. This causes the outer loop to terminate the moment program\_exit is set to TRUE.

# A/A/GA CTION



## INSIDE AMIGA ACTION THIS MONTH:

Big Red Adventure, Silent Service II plus interviews with Vulcan and GeoSync

news

**Hugh Poynton** peruses the latest useful snippets of news from AmigaLand

### **P**hantasmagoria

It looks as though Sierra's smash hit, Phantasmagoria could be finding its way onto the Amiga. This excellent game follows the age old boy meets girl, girl meets boy, boy and girl move into large spooky house (why do they never decide to set up in a cosy London flat or cute suburban bungalow?), boy gets possessed by evil dark spirit hell bent on death and destruction.

The storyline might not seep originality from every pore but who cares when it looks like this? The game specs are tremendous. Available on a mammoth seven CDs, the game includes full speech throughout, tonnes of movie quality animated images and a pretty decent soundtrack.

Direct Software, like ClickBOOM, is looking at developing games for the Power Amiga, and Phantasmagoria looks like being predominantly aimed at this type of machine. However, a lower spec. version is in the pipeline which should run on an 030 processor, 4x CD-Rom drive with around 8 Mb ram.





# STAR FIGHTER D'YAMMEN'S REIGN

Australian developer, GeoSync. Media, look as though it has a promising game in the pipeline. Star Fighter D'Yammen's Reign looks like being an excellent Wing Commander meets X-Wing style 3-D Polygon space shoot 'em-up.

The player is put at the controls of a space fighter in the midst of a vicious solar system wide civil war. The game is designed so that you can decide whether to fight for the militaristic Confederacy or the forces of good, striving to return peace and free trade to the solar system. If neither of these options grab you, why not join the intergalactic out-

laws out to make a fast buck amid the chaos?

For more info, take a look at our interview with GeoSync.



# THE FINAL ODYSSEY: THESEUS VERSES THE MINOTAUR



Another Vulcan title penned for an imminent release is The Final Odyssey, an adventure/puzzler based on the legend of the same name.

Our Mediterranean friends have never been noted for their enlightened attitudes towards women, and it seems a couple of millenniums ago things were no different. Legend has it that in the days of Greek mythology, the

King of Minos imposed an annual tribute for seven girls to be shipped to Crete and thrown as food to the hideous creature called the Minotaur who lived in a vast magical labyrinth in Athens.

A bloke called Theseus was responsible for delivering the girls to the beast but his conscience got the better of him and he rebelled. You take the part of Theseus in his task to defeat the Minotaur and save the girls. To do this you must use a variety of weapons and brave enemies, traps and puzzles. The game will be available in English, German, French, Italian, Spanish, Swedish, Danish, Dutch and Slovak and should be out around about July.



### BRAIN DAMAGE INBALL



Vulcan Software has just released the first screenshots of its August release, PinBall Brain Damage.

Although being one of the last floppy releases before the great switch to CD Rom, PinBall Brain Damage still looks rather impressive. The game includes two fully rendered tables with 400 tracks per second ball update, three ball multiplay and three directional tilt functions.

Although it includes complex animated option screens and high quality digitised effects and music, the game can still be played on any AGA machine and can be installed to the hard drive.



### GEOSYNC. **IORE**

GeoSync also has a few other games up its sleeves, including a totally unashamedly Command and Conquer clone called H.A.R.D. Corps, which hopefully should support split screen and Internet gaming.

Rally World promises to be another pretty decent looking game - the first rally game for the Amiga in years. Apparently the game includes realistic skid control, vehicle dynamics as well as a range of different rally cars and terrain types.

Matrix Assault is another ongoing development featuring fearsome cyber tanks and a scary sounding enemy called the Recognisers. To top it off, GeoSync is also working on a 3-D Doom clone called Fire Mission



3D. The screenshots look good and the game should include static pre-rendered backdrops, raytraced graphics and disk-stream fully rendered environments, together with randomly generated missions.

## Quasar Wars



## Bulls\*\*T ALERT!

As everyone now knows, Gateway has taken over the Amiga, and the Holstein cow is the famous mascot of the company. Some people have been taking things a little far however, even choosing to emulate the toilet habits of these lovely creatures. News items have appeared on a few Web sites that do appear a little full of Cow Doo Doo these include:

A story on the development of AmigaQuake stating that, "Contrary to what has been reported, the author of the port has not abandoned it and is still continuing with development of it with the current version being 0.49a. It is rumoured that a company may be picking it up to become a proper commercial release." Sorry everybody, the AmigaQuake Web page is no more and I'd have about as much interest in developing AmigaQuake as they do running for the US Presidency.

Another story gathered from the WWW concerns a shadowy 'Hanger 18' type scenario involving Electronic Arts: "Electronic Arts has converted around about 12 PC games to the Amiga, and will refuse to release them. These include Syndicate Wars and Magic Carpet. There are around about 30 copies of each game sitting in a warehouse somewhere waiting to be duplicated. Our 'reliable source' told us of how each think that releasing the software would be a financial risk to the company."



# Kiler Clickes

### WipeOut 2097 on the Amiga? Read on...

Could you imagine sitting down in front of your Amiga, booting up and loading MDK? Or TombRaider? Or Command and Conquer? Well if things go according to plan for PXL Computers and ClickBOOM, you mightn't have to imagine.

On May 5 1997, Alexander Petrovic, PXL and ClickBOOM producer, issued a statement saying, "We strongly believe that the future for the Amiga computer lies in PowerPC processor. Furthermore, we believe Phase 5 is, and will continue to be, the Amiga hardware leader. Therefore, we have selected Power Amiga as our future platform of choice".

The implications of Petrovic's statement for the Amiga games industry could be huge. Basically, if ClickBOOM is developing games with the PowerPC in mind, all manner of games can be ported over or made afresh for the machine. As we already know, Myst will be the first of ClickBOOM's 'Killer Games' followed by

whichever PC title proves to be the most popular on ClickBOOM's 'wish list'.

The wish list enables Amiga owners to vote for the game they would most like ported over to the Amiga, and is no sensational publicity stunt - voters are required to leave e-mail addresses to prevent people voting for their favourite game over and over again. Visitors to the ClickBOOM Web site are allowed to vote for the three PC games that they would most like ported to the Amiga. Proof of the popularity of the wishlist is evident in that, on the first day that the page was up, ClickBOOM received over 1500 submissions.

ClickBOOM's motivation to develop games for the PowerPC market is driven by both commercial and technological factors. Primarily ClickBOOM hopes that the prospect of being able to run such impressive looking software will persuade many Amiga users to buy a PowerPC board, something that, whilst earning

ClickBOOM and Phase 5 some hard earned dollars, will open up a whole new dimension of gaming on the Amiga.

The shift to Power Amiga will be gradual at the moment ClickBOOM is planning to produce Myst and another title for both the PowerPC and 680x0 processors. After that, production will concentrate on Power Amiga.

Not surprisingly Wolf Deitrich of Phase 5 is enthusiastic about ClickBOOM's new corporate strategy: "We are happy to see how Click-BOOM has realised all its ambitious projects in the past, and we are excited that its new projects will be targeted for the PowerUp accelerators. Beside all the demanding creativity software that we expect to come for the PowerUp boards, it's good to see powerful games coming soon. What would such a powerhouse Amiga be without some breathtaking amusement? Still fast, but less fun... It's really impressive and good to see that ClickBOOM is in the front line of visionary development for a new performance dimension."

Start saving and keep your fingers crossed...







Just some of the titles that could be ported over to the Amiga...Quake, Command and Conquer and Syndicate Wars.

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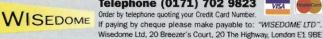
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# STRATEGY

Loved and loathed in equal parts, Sid Meiers legendary Railroad Tycoon is, like Elite, Tetris and Leisure Suit Larry, one of the most famous computer games ever.

Basically, Rail Road Tycoon is the great grandaddy of all God games. The aim of the game is to build the railroads that brought fortune to Europe and America in the 19th Century and make an obscene amount of money while your at it.

To be frank, the game looks as ropey as hell. The graphics look as though they were probably designed with EGA or CGA in mind, and the front of the box does say that the game needs 512K to play (512K! - you probably get that in a calculator these days). Graphically this was probably one of the crappest looking games you could get on an Amiga when it first came out. However, as your Mum and Dad used to say, don't judge a book by its cover - Rail Road Tycoon is one of those games that makes you realise gameplay extends much deeper than 16

million colours and MMX technology.

The real attraction of Tycoon is the sheer depth of the game. You have the opportunity to build railways and freight handling facilities in four regions of American and Europe. These aren't sketchy representations, they are meticulously researched historical maps that accurately represent the size and prosperity of various towns and cities in the area. Build on the East coast of the states and you will see not only New York, Richmond and Boston, but Peterson and Springfield (the Simpsons'll be

Anybody who has studied this period of history will know that it was capitalism gone mad. Free from modern restraints on monopolies and mergers, robber barons ruled. Your job is to take on the giants of industry and ensure that it is your railroads snaking from one side of the continent to the other. There are a wealth of strategies and tactics you must master to make the most of this game. A word of warning

> though; it will take a while. In the opening game you have to get established, earn a crust and start eating into the opposition's stake. Using the regional and area displays you can take a look at the population and resources of surrounding areas and decide which locations to build between. Passengers and mail will ensure you a steady income, after which you can start to diversify and buy into the opposition's stock. Develop independent lines in differ

ent parts of the country and then start linking them together. You'll also have to learn how to conduct take-overs and efficient rate wars.

As an ex-history graduate, I'm pretty impressed at the historical accuracy of the game. Building in Europe or the States you might come across builders like Isambard Kingdom Brunel or Robert Stephenson, Robber Barons like J. Pierpoint (one of the richest people in American history before old Bill Gates) or rulers like Czar Nicholas II, Otto Von Bismark

MicroProse and other developers launched a series of games after Railroad Tycoon. Some were tremendously successful such as Civilisa tion and SimCity, some not so successful such a Transport Tycoon and Detroit, However Sid Meier's business strategy game (which must have sounded like an absolutely suicidal idea for a games company at a time when punters only, wanted to fly a stealth fighter or battle invading alien hordes) is the one that kicked off an entire

The game still retains the same intelligent gameplay it enjoyed when first released. Like pretty much all of Guildhall's re-release range, Railroad Tycoon is well worth a look.

### THE LOW-DOWN

**PUBLISHER** Guildhall **DEVELOPER** Microprose **CONTACT** 01302 890000 **PRICE** £14.99 DISKS 3

GRAPHICS	90%
SOUND	80%
PLAYABILITY	90%
DIFFICULTY	Tricky

SCORE OVERALL



Railroad Tycoon lets you build up own railroads in Europe and USA

# SIMULATION

## Just when you think the re-releases have run out, along come another couple of quality games to tickle your fancy... 2/1/16:

tend to be memorable because there is something intrinsically cool about submarines. Sneaky, underhand and threatening, they lend an air of menace to any film, TV programme or book they appear in.

Strange then that you don't see that many sub sims - I can only think of a couple in recent years. The problem is that the genre isn't as fast moving or graphically exciting as say, racing or flight sims (have you ever seen windows on a submarine?). For a sub sim to do well it has to be bloody good - which is why I am glad to see Guildhall re-release Silent Service II.

Silent Service II gives you the con on an American submarine during the second world war. Your orders are simple - sink as many Japanese ships as possible. The game is very well executed. Written, as it was, in 1990 it relies on bitmapping and sprites rather than more complex polygon models. However, like Wing Commander (of the same vintage) the game definitely overcomes its primitive origins.

This is due mainly to presentation, partly because of the sheer originality of the game and partly because it's so damn playable. Admittedly, unlike a flight sim, the onus is not on instant thrills, rather it is a mix of strategy and tactics. The action is far slower, but enthralling nonetheless.

Basically the point of the game is to captain an old diesel submarine around the Western

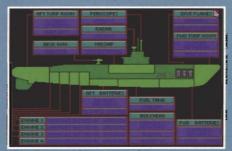


Capt'n Bear sneaks up on the Isle of Wight ferry

Pacific attempting to hinder the Japanese war effort as much as possible by intercepting as much of their shipping as you can. As with all the best Microprose releases, the game is chocka with options and you can chose the type of submarine you want (curiously you can chose duff subs over pretty good ones), the base you want to operate from, the type of torpedoes your sub carries (electric which have short range but good accuracy, or steam torpedoes with long range but very bad accuracy). You can even choose between historically accurate torpedoes, which are about as reliable as an A reg Lada, or perfect torpedoes which will do their job without any period malfunctions.

The beauty of the game is the fact it's so different from anything you've played before. There is a wealth of new tactics to learn. You have to work out which ships to take out with your bow tubes and which to nail with the stern tubes. You even get the chance to play dead and shoot debris out of the tubes to make out you've been sunk.

As I say, the action isn'f always as fast as a flight sim or a racing game, but it still manages to be more tense than the material in Pamela Anderson's bra. Once you've stirred up a hornets nest of Japanese destroyers, you will have to run the gauntlet of depth charges and gunfire. You can keep track of the damage to your sub via a schematic display - it really does



This diagram shows you where all the sandwiches are stored



Trying to play chicken with an oil tanker. Not a good idea

make for an exciting game when your hull is critically damaged, your nearing collapse depth and their are depth charges dropping on

Although possibly a more cerebral game than many might like, Silent Service II is definitely worth a look. From what I've seen of more recent games like Tom Clancy's SSN or Silent Hunter, the game definitely holds its own. If you've always had a secret desire to be a Marco Ramius this is definitely the game for VOU.

### THE LOW-DOWN

**PUBLISHER** Guildhall **DEVELOPER** Microprose **HD INSTALLABLE 01302 890000 PRICE** £14.99 **DISKS 2** 

GRAPHICS	92%
SOUND	88%
PLAYABILITY	90%
DIFFICULTY	Hard
THE RESIDENCE OF THE PARTY OF T	

OVERALL SCORE

# Dirty Rotten Scoundrel's Cheat Page

### MORTAL KOMBAT II

On the main options screen, between the 'Start' and 'Options' boxes, type 'Fiona'. The screen will flash green. This will turn off the blood so that you don't feel squeamish during play. If you want to you can reactivate the blood by typing it again and the screen will flash red.

Select options from that same screen and type "ZEDWEB". A new option (DIAGNOS-TICS) should appear at the bottom of the screen. Select this option and you will be given a list of cheat options.

### **NIGHTSHIFT**

By entering the name 'MPICKLE' onto the high score table, once you restart the game you will be able to access the next level, no matter how atrocious your play.

### NORTH AND SOUTH

Give those irksome rebels or pesky Yankees a damn good thrashing by using this simple little cheat. When in battle mode, move your infantry to the bottom of the screen, get them into retreat formation, then move forward to the enemy. You will see that the enemy cannot get quite as far down the screen as you and so they are stuck trying to move downwards. Now you can just advance and shoot them all down with minimal losses. However, remember that this will only work when playing the computer.

### OPERATION WOLF

A handy hint for the excellent old Operation Wolf is, when you reach the end of a level, wait until the time is about to appear and roll the mouse down the damage bar. This will cause your damage to decrease. When your trying to knock somebody off, pause the game with 'F1', position your crosshairs over the selected enemy, unpause the game, click the button and blast him to kingdom come.



Well hello again!! You know the drill - Dunhill in the holder, pour G+T and come peruse my collection of cheats old and new.

### **OUTRUN**

It always puzzled me that, when playing the old classic Outrun, the VW Beetles kept up with your Ferrari when you were hurtling along at 227 mph. However, back to the task in hand - when playing this classic old game, type "RED BARCHETTA" now press any of the following:

'S'	Skip levels
'T'	Add 10 seconds
'B'	Extended play

This mightn't work for some versions so try this

Type "STARION" while playing the game. Now use the following keys:

Extended play
Next screen
Extra 10 seconds
Quit
Save screen in Degas forma
Program info

### PACIFIC ISLANDS

Get the most out of your Pacific Island tank force by, when at the filling screen popping up a file, instead of your name type in "Let me cheat!" (you will need to make sure that you include the capital and exclamation mark). Don't press return, hit the Reset button. The number next to the losses column will now be 1, and this shows you are in the cheat mode. Now type your name in and you can get into

the game as normal.

You will find that now you have an amazing ability to shoot about anywhere on the map. When on the map screen, hold the right mouse button down and click on any square and you'll be transported there. You can also transport any other unit to the desired location by selecting the location with the mouse, pressing the left Amiga key and the number of the unit you want to move there. In this cheat mode you'll also be able to automatically win any battle simply by pressing the left Amiga key and 'W'.

### PREMIER MANAGER 3

Here are some simple little cheats for the excellent football management sim: Dial "400040" and your players will have a higher fitness rate and better moral. Dial "343343" for extra money.



### RAILROAD TYCOON

Is the pressure of being a 19th Century Rail Baron getting to you? If so try one of these little

Hold down the 'SHIFT' key and 'Y' key for lots of extra money. (stop at 32,000,000)

To increase your cash balance by half a million dollars, make sure you are on the main 'continent' screen, enter the 'F1' screen and hold down the 'SHIFT' key and the '4' key. You'll see a dollar sign and hey presto you'll inherit loads of cash.



### **RAINBOW ISLANDS**

Collect all the gems in the right order (RED, ORANGE, YELLOW, GREEN, LIGHT BLUE, DARK BLUE, and MAUVE). Doing this will give you a life and a bonus Gem and will open a special silver door so you can avoid fighting the end of level boss.



On the fifth island you'll find a box in the secret room which you should collect. There's also a gate with a '7' on it, leading to island 7.

The best tip will enable you to create a gem of any colour. The screen is split into different invisible zones. When a gem falls, its colour is determined by the colour zone into which it

falls. By trail and error try to work out where to kill an enemy so that the required coloured gem falls. Also, try these simple cheats to help you through the game:

Type one of the following on the title screen, while the rainbow is cycling through colours:

"BLRBJSBJ"	Permanent fast shoes
"RJSBJSBR"	Permanent double rainbows
"SSSLLRRS"	Permanent fast rainbows
"BJBJBJRS"	Hint a
"LJLSLBLS"	Hint b
"LBSJRLJL"	Continue after island five
"RRLLBBJS"	All hidden food becomes
	money bags
"RRRRSBSJ"	Does both of the previous two

## REVENGE OF THE

Gives you 100 million counter

Here are a few level codes for the tricky dromadarian epic:

01	"SIETCH TABR"
02	"OLLANTAYAMBO"
00	WE WITH THE LICE

**MUTANT CAMELS** 

03 "RAVEADELICA"

04 "NEWCASTLE EMLYN" 05 "DROMEDARIA ZOOPHILIA"

06 "THIS IS BASINGSTOKE"

07 "OCCAM II"

"SRBISLSB"

08 "SMOKE ME A KIPPER"

09 "RASPBERRY INFUNDIBULUM"

10 "GOATS GOATS AND MORE GOATS"

### RISE OF THE ROBOTS

Plat the military droid and deliberately lose. Then set the options to the following:

Difficulty Hard Timer Off Bouts

Cinematics Shadows On Screen Shake On

Now select two players, and on the handicap screen push left so that the red bar moves about quarter into the player one side and back again about six times until the screen flashes. After this has happened, cycle through the opponents and after the sentry droid, there she'll be. Player two can now play as her, with special moves being: Down, towards, up, for a mutation, or; down, back, and up, quickly, to melt and reform.

### **ROLLING THUNDER**

On the title screen, the one with the green dude talking, type "JIMBBBY" for infinite energy. Press 'I' to skip levels.

### SIMCITY 2000

Start a new game, any year on Hard level and type "FUND" until your cash is at \$60,000. Make sure that you reply 'yes' to any queries and then go to the budget menu and select bond repayments. Then click on repay bond and answer yes to repay bond at 3 per cent. You will now get \$50,000 every year.



### PINBALL FANTASIES

You can use these cheats on any table. When the table is scrolling up and down type any of the following:

"DIGITAL ILLUSIONS" Bail can't be lost "FAIR PLAY" default

Resets everything back to

"EXTRA BALLS" "VACUUM CLEANER" Disables the tilt Five balls instead of three Message from the silents

"THE SILENTS" "HIGHLANDER" "TECH STUFF"

Technical stuff Message about ulf Message about olof Message about markus Message about andreas

Message about barry





# ACTION FEATURE REGULAR

# Grandpa

The old duffer contemplates Carrier Command and Stunt Car Racer, among others, in part two of old Grandpa Jo's look at classic Amiga games

# CARRIER COMMAND

Back in 1988 the Amiga ruled. The machine had just trampled on the Atari and wowed the computer world with its slick, smart graphics. Games developers were suddenly given a whole new machine to play with and utilise to the best of their abilities. Not surprisingly a wealth of games appeared that can now be deemed classics.

Carrier Command isn't really a household name in the same way as Elite or Speedball, for example, but it still represents a revolution in computer games.

Developed by a bearded trio of beer loving developers calling themselves Realtime (supposedly when they were looking for new programmers they placed an advert in a local paper saying 'Realtime Games Software Ltd), Carrier Command is probably one of the first decent strategy/shoot 'em-up mixes.

The story is simple enough. You are the captain of one of two giant, high tech aircraft carriers that are sent to colonise a volcanic archipelago. Infiltrated by terrorists,





the other carrier suddenly turns against you and your mission brief turns from one of peaceful exploration to war.

You must conduct a campaign against the enemy carrier, utilising the resources of the islands that you have captured. Populate and exploit the islands you land on, deny the enemy territory and destroy his forces.

You have a large arsenal of futuristic weapons to achieve this goal. Manta aircraft can be used to bombard an enemy islands defences until they are weak enough to over-run using your Walrus amphibious tanks.

For a game of this vintage, Carrier Command has a vast amount of options, making it eminently playable. You can control four Mantas or Walrus' at a time and establish your own supply routes. The game is presented using a user friendly icon system and you can keep track of resources and damage via a cunning damage control system.

Using over 1.2 Mb of source code and utilising the creme de la creme of existing computer technology (386/20 Compaq then worth over £8,000), Carrier Command was undoubtedly a classic.

# BATTLE CRUISER 3000

BattleCruiser 3000 is basically the same recipe of resource management, strategy and shoot 'em-up, but takes full advantage of all the developments in computer technology in the last nine years.

Again you're commanding a huge carrier, this time it's a space cruiser and its full compliment of space fighters. You have to use the resources available to use this huge battle-cruiser to police the spaceways. Although you are not up against just one opponent (there is a huge galaxy full of hostile, neutral and friendly alien civilisations), the aim is the same - you need to use a mix of strategic planning and fast reactions to accomplish your goals.

Obviously things have changed with the times – the graphics are superb, taking full advantage of gourade shading and fine texturing, the incredibly complex AI routines mean that, rather than fight for dominance of territory, diplomacy plays a much greater part. Relationships between different cultures change all the time, making the game environment much more realistic.



## PART TWO

In the same way as Carrier Command Bat-le Cruiser 3000 captivates those who play it. Both games project such a believable virtual world that you can't help but live the game as well as play it.

Seven years ago, Amiga Computing took a look at an exciting new game coming out on the Amiga. Started at Firebird Software, the racing game didn't involve any pretty sprites or copper list skies, but it did boast mental, looping, gravity defying race tracks that would make Alton Towers' Thunder Looper look like a curtain ring.

We said: "In future years, when most arnes have been forgotten and aged joystick ockeys reminisce about the games of their outh, Stunt Car Racer will be one of the titles obe cited as a classic". We weren't wrong. Simplicity and thrills were definitely the sawords when Geoff Crammond set about esigning the game. Rather than go through II that dull qualifying and tweaking your airoils muggubins that appears in most driving arnes, Stunt Car Racer entailed chasing nother car (which could be controlled by a late, via a two computer data link) along isanely narrow elevated tracks at about 250 uph. ano mat mpl

ontrols are about as simple as they accelerate brake and steer (which is





self-centering). The only other thing you've got to master is checking the roll cage for cracks — a pretty minimalist method of dam-age assessment. In this game you don't just skid onto the grass if you take a corner badly you take to the air in a manner cars just aren't

arena is evident in a much more recent release...the infamous Carmeggadon.

Carmeggadon adds another appealing little feature to the basic 'drive a souped up car at ridiculous speeds around very dangerous looking arenas' formula – the ability to run over innocent pedestrians.

Although it has only just come out the game has already caused something of a stir. The quite graphic representations of farm animals and pedestrians being mashed up by the connecting cars has prompted the Labour MP.

competing cars has prompted the Labour MF (now the government for anybody who's

such 'nauseating games'. Like Stunt Car Racer, the aim of t and nerve and generally beating th

on. Like stunt car racer there are some very lary fooking tracks to race on, and the gam similarly configured for more than one layer. Carmeggadon, however, takes the enre just a little further, perhaps little too

driven by a nervous granny and are rendere in such detail that you'll need a pretty hefty Pentium to run it. Rather than have all the action car based, Gametek has decided to give you the freedom to get out of your car and shoot the other drivers face to face. You can also steal their car if you so desire.

The game looks great and you can't deny the fact that its more adrenaline stiphulating than a free fall off the Empire State Building

than a free fall off the Empire S Whether it'll become a classic



# ADVENTURE

# Big Red Adventur

### Na' Strovya! Hughsky Poyntonov takes a look at Power Computing's **Big Red Adventure**

I reckon that to be a successful point 'n' click adventure game player you have to be one of the most bizarre people on the planet. You have to be devoid of all logical thought. mean, "I'll pick up that half cabbage just in case I want to stand on it to reach the bag of sandwiches I can use to bribe the security guard later" isn't really the kind of thing that pops into most people's heads.

Well Big Red Adventure is one of the trickiest and most convoluted adventures I've played in ages. That's not to say its not fun, on the contrary, it's a big, sprawling, cartoonty, adventure, sprinkled with crap jokes and a big twist of originality.

As you might have guessed by the title, Big Red Adventure is set in the new Russia, the brand new playground of capitalism and organised crime where Izvestija and Pravda sit next to decedent western glamour mags in the news stands that are springing up in Red

Your task is to complete three loosely linked



Donna in a train

episodes, controlling one of these characters for each episode. The first sees you guiding Doug, the cunning techno-nerd (reminiscent of that Bond baddie from Goldeneye the one who constantly twiddles his pen and fancies Issabella Scorrupco), through the burger bars and news stands of Red Square and Gorky Park, a TV game show and a sophisticated heist to steal the jewels of the Czars from the Kremlin.

In the second segment you must play the dumb, but good natured, Dipo - an ex boxer and sailor who has been left behind on a deserted wharf after missing the departure of his beloved oil tanker, The Potempkin. The final segment of the game introduces. Donna Fatale, a star of the Russian ballet who's amazing gymnastic skills have probably been seen by more people on a dodgy VHS than on the stage of the Bolshoi.

This game will keep you occupied for absolutely ages. There are over a hundred locations, each of which you'll need to spend a while on to collect your full quota of useful items and clues.

Unlike a lot of adventure games, there are a variety of different ways you can solve the puzzles and it will take you a while to work out exactly what to do with the huge amount of people and possessions that you com across. As I said before, you will need to

suspend all normal, logical thought processes o play this game. I recommend playing drunk and only then will it appear logical to find out the weight of a burger by weighing yourself

before eating it and then after, using a broken to the aerial you snapped

a TV to cheat the elec-ronic scales into weighin you without paying

Using three characters to play adds immensely to the game and ensures that the story doesn't get boring or samey, Plus, if you get completely stuck trying to guide Doug through episode one, you can start afresh in episode two playing the part of poor Dino,

watching his ship sail off into the distance. Believe it or not you even get used to the 'unique' sense of humour that permeates the game.

Initially you'll cringe at the references to Leo Tallstory and Burger Czar but bear with it and you might even find it brings a wry smile to your lips. My favourite little one liner is one of Dino's. Drifting around a wharf side bar Dino



Donna in a train (fancy bloody train- ED). Again



Lots of pictures of Donna in a train coz I wasn't very good at the game. Sorry

talks to a former chess master who has fallen on hard times because of the wonders of modern high tech computerised chess boards. Dino comforts him by telling him that, "I'm quite safe, they'll never make a computer as stupid as me". My relationship with anything vaguely computer like summed up in one bite sized quote.

The game controls are about as easy as you can get on a Point'n'click, and anybody who's played Leisure Suit Larry or Monkey Island will feel right at home here. A big fat red arrow acts as your cursor and a click on the right mouse button will bring up the full selection of objects or actions you may want to utilise.

The downside? Well there are only really a couple of things that draw attention. It might sound a little over sensitive but the writes of the game seem to have a view of Japanese people that some could call a little unPC. The Japanese tourist you meet in Red Square is a none too pleasing representation, laden down with cameras and possessing a huge set of teeth and squinty eyes. It's such a fun, friendly game that

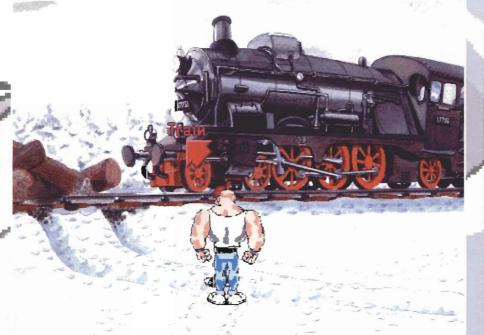
Welcome to the new Russia, home of Mac Romanov...

there's a different tune (tacky musac in you Moscow

really no need for this sort of thing (even though it's true -ED). The sound isn't really anything special and could have been utilised a little better. OK each scene has

a different tune (tacky musac in you Moscow hotel or big top music at the circus) but a few more sound effects or maybe a bit of speech would have made the same a little more enjoyable.

However, this said, Big Red Adventure is a corker. It's just the sort of game the Amiga needs right now; a big shiny adventure infused with loads of plot, fun cartoony graphics and the sort of gentle humour that admittedly won't have you rolling in the aisles but it'll bring a way smile to your face.



## THE LOW-DOWN

**PUBLISHER** Power Computing **DEVELOPER** Power Computing

**HD INSTALLABLE** 01234 851500

**PRICE** £19.95

**SUPPORTS** All 1 meg Amigas

GRAPHICS	90%
SOUND	80%
PLAYABILITY	90%
DIFFICULTY	Hard

OVERALL SCORE

87%

# ACTION FEATURE INTERVIEW

# Wizard of

Oz

Australian Software developer GeoSync Media is an ambitious bunch; 1997 should see the release of a whole host of quality games as well as a possible diversification into multimedia. Hugh Poynton investigates in part one of his interview with head honcho Andrew Hawkings

① 1) Firstly, can you tell us a little about Geo-Sync? How many people there are developing games and what machines do you programme on?

⚠ GeoSync Media is basically me with the help of others. I live in Australia and I figured the best way to get games out on the market was via the Internet. I had four actors to do the preliminary voices and cut-scene material, and two beta-testers on the first version. Now I'm almost through to the post-production of Star Fighter D'Yammen's Reign.

I have had a lot of help from people on the Net and this has been great. The Internet has become my 'office' and since I released the shareware version of Star Fighter I have been inundated (in a good way) with technical assistance and suggested improvements.

Technically I have a 'cyber' staff of about 15 members now, but I really need dedicated support for future projects.

I originally wrote "Star Fighter" on an A500 and this was a good starting point as I

had to optimise the code no-end to get a decent frame rate and to fit into the small memory. I also had to design the game to run with minimal disk-swapping. The A500 version required only two disks one

only two disks, one to boot with and one to play with, but allowed you to use more disks if you had another floppy drive.

Since I updated to an A1200, I have the scope to build Star Fighter into a 'big' game, and it's getting bigger every day!

I use the IBM for uploading & Web publishing and occasionally the for graphic/sound enhancements & archiving projects.



From here the game looks better than Wing Commander.

② 2) When did you decide to start producing games for the Amiga? What prompted you to support the Amiga platform when almost every software developer was abandoning the machine?

○ I have been programming since I was 13. In 1983 a friend bought an Amiga and I was amazed by the graphics and sound from such a low-cost computer, I had to have one. Two years later I bought one and I started working on a game called Fire Mission Alpha; a Robotron derivative with an adventure feel.

X-Wing came out on the IBM and I wanted to play the same thing on the Amiga. Elite, Epic, Wing Commander, Star Crusader & Star Lord just didn't cut it. They all tried either to mimic space-flight so realistically, you had to have a degree in physics to play or use techniques that only worked well on an IBM. When I started writing Star Fighter in 1992 I believed I could deliver to the Amiga community, a game that beat all those in sheer fun and playabilty. I wanted people to stay with



The option screen looks as good as any on the PC



Weave your way between the 3D Polygon space cruisers

the Amiga for games such as this, rather than having to convert to the IBM because the games were better. Since I've been on the Net, it has just encouraged me to stay with the Amiga.

(a) 3) Now something about the games... How do you plan to release the various projects you are working on? They look too good quality to be shareware, so are you looking for a commercial publisher? Have you had any offers yet? Do you plan to put demos of Star Fighter and the other games on Aminet to get the game publicised? When do you think the various projects will be ready for release?

I got to a point where I had programmed Star Fighter D'Yammen's Reign to death! I had no spring-board of opinions and didn't know whether it was worth finishing the game. So I put it on the Net as shareware (it is cut-down, there are heaps of other options that are locked out at the moment) to get it to a point where it would work on any computer, bug-free.

Thanks to the support I have, it has progressed in leaps and bounds and now I want to finish it, because people are starting to like it.



### Matrix Assault...

I have had several publishers offer to distribute the game, but I am still in discussion.

I like the idea of shareware because...

a) everyone wants to download it because it is free

b) I don't care whether people copy the shareware version because I want it to be distributed c) Everyone gets to criticise the game, and tell me about it. However, I do agree that too much shareware is destroying the Amiga.



So that's what Richard Branson will be up to in a hundred years time...

All the games I develop will appear on my homepage when I am ready for them to be beta-tested. There's such a wealth of information and talent out there, you can't go wrong.

H.A.R.D.Corps (a Command & Conquer clone, but for the Amiga) is coming up soon. In a week or so I will have released the basic combat model on the Net. I suspect this will be completed by Christmas 1997.

Star Fighter D'Yammen's Reign is in the final stage of development. I am working on the cut-scenes at the moment and it should be ready by July 1997.

Fire Mission 3D, an update of my aforementioned project, will appear about September 1997. It will feature 3D rendered graphics, diskstreamed animations and sound, a jumble-mode where, much like Diablo, the game is randomized for each new game, and only the game characters themselves know the true layouts of buildings, spaceships etc. But I don't want to spoil it. Think Diablo/Doom/Robotron/RebelAssault and you have Fire Mission 3D.



...and Rally World

# ACTION REVIEW INTERVIEW

# GD Switch

# Oyer

Vulcan Software has announced that it is switching to predominantly CD-Rom based games. Are the days of endless disk swapping numbered? Will Vulcan titles make their way into the high street retailers? Hugh Poynton talks to Paul Carrington BA, to find out more.

- What prompted the move from disk to CD-Rom?
- A Basically there are three reasons. Firstly, from a developers point of view, it is so frustrating catering for disks, i.e. always making cuts in designs. Catering for disk swapping limits the amount of graphics, speech, music etc. which all reflect the games design. Sure, we can make hard drive only games but then disks become storage devices and you need a lot of them, it makes far more sense to put all the info on one medium, namely CD after all it is the mass storage format for other platforms.

Secondly, Vulcan believes the Amiga needs a good boost with regards to games software, we intend to publish not only good big titles for Amiga CD, but incredibly high quality hardware extensive titles as well, like 030+ 8 - 16Mb ram AGA/GFX CD-Rom games.

This will ensure future Vulcan Amiga titles can compete with other formats, namely PC CD-Rom and bring the commercial Amiga market in line. This also means developers will once again be able to cater for the Amiga and push creativity to the full knowing there is a market being created, it even allows ports to other platforms from Amiga based software instead of the calls



Vulcan's CD releases will include games such as Genetic Species...

for the reverse.

Finally, the world-wide wholesale Amiga market is diverse, many retailers and wholesalers (especially in Europe) are not willing to stock Amiga floppy games any more due to the old hassles of corrupt disks and piracy, they make great preference over simple CD housed titles (simple in packaging and storage, not quality of game) that can be placed on their shelves next to PlayStation CDs and PC CDs. There is also an incredible demand from users who want new commercial games software on CD formats.

Apparently, only half of the current A1200 and A4000 users own a CD-Rom drive; are you concerned that this might lead to falling sales?

I'm not sure where your figures come from but, even if this is the case, when users realise the biggest Amiga publisher around is making incredibly high spec, 'must have' Amiga Games for CD only (Genetic Species, HellPigs, Uropa 2, Breed2001 and Wasted Dreams), they will have no choice but to upgrade. CD players are very cheap these days, with some double speeds being under £70.00. Lets face it, Amiga users have to either upgrade and enjoy the future or let the Amiga market die before their very eyes.

- How many games will still be available on disk?
- A We will still publish the odd title that is best suited for floppy such, as the forthcoming Final Oddessy, Pinball BrainDamage and Five A Side Football, but most future titles will be geared towards CD only.

- I read in CTW that Vulcan is negotiating to sell The Mini Series via retailers again (most likely the independent sector). Is there anything else you can tell us about this move?
- Indeed, if you check our Web pages you will see we have embarked on a world-

wide campaign to get as many retailers around the world stocking our Amiga titles. The

response so far has been good (outside the UK) and our Mini Series and Future Mega Series (CD) will be available not only direct from Vulcan Software's Mail order company, but also from all good retailers around the world.

At present we ship to

America, Australia, Germany, France, Spain, Italy, Sweden, Netherlands, Denmark, Yugoslavia, Finland, Norway and more. All European retailers or wholesalers can either buy our titles from Vulcan's distribution company or from our European traders, GTI Gmbh.

With regards to the UK, we have been systematically contacting all chains and independents to get them stocking Vulcan's Amiga titles ready for the big revival. Apathy apart, we are getting there but overall the UK attitude is negative to this once great commercial dominating machine compared to our European counterparts.



...and the new beat 'em-up, Strangers

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NetConnect has received rave reviews by Amiga Internet experts from paper and online magazines! Many of these reviewers recognise the ease-of use of the package, the comprehensive collection of software and the backup support we provided via our mailing list, web site and telephone hotline (during office hours).

CU Amiga (June 97) - 89%

Amiga Format (June 97) - 92% Gold Award ". if you're considering getting online,

NetConnect is the perfect choice for the Amiga user.

Amiga Computing (July 97) - 92%

theLair (issue 3) 5/5 " .best of its class." (online http://amigaworld.com/thelair)

PureAmiga 98% (online http://www.pureamiga.co.uk)



Internet! Just choose the provider, enter some user details (name, email address), select your modem and you are ready to start surfing! NetConnect also comes with a configurable icon bar to launch and manage your Internet modules - you can even add other software if desired. All the software within NetConnect is supported with regular upgrades. Amiga Format concluded (June only and the perfect package for the Amiga Internet user", "If you need to get online, this is the easiest way to do it" and "It's good value for money too - especially the bundle including the 33.6K modern.



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Brand new DOpus like archive management tool which integrates with the NetConnect package!

### STOP PRESS....STOP PRESS....STOP PRESS....

If you thought NetConnect was good check the specifications for v2 (due out around the middle of June):

- Wizard GUI makes configuring your ISP a doddle!
- · Re-written AmiTCP Dialler (MUI based, more control)
- · Programs are now keyfile based (can be used with any TCP stack!)
- Voyager v3 (see other box for information)
- Updated, latest versions of all the modules (Microdot-II, AmIRC v1.57 etc)
- · 64 page introductory guide to NetConnect/Internet · Plus many more changes and additions

## oyager v3 Announced

specifications of Voyager v3. New major features include:

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- · Security Socket Layers (https:) with CERT management (allows secure online ordering)
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HOT NEWS! Haage&Partner and Vaporware have agreed to include Merapi within future versions of Voyager-NG. Merapi is a JAVA virtual machine for the Amiga computer! This means you will be able to use JAVA within Voyager-NG. Merapi is expected to be completed by August.



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