

ATARI

COMPUTING

ISSN 1461-9539



Issue 9 • May 1998

£3.50

Showtime
ACC 1998

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TOS 2.06 is the enhanced operating system from ATARI for the entire ST range. Improved desktop including full keyboard control of windows, place programs on the desktop for easy launching, or edge function keys to launch the required program. Switches give access to old TOS system for complete compatibility. All kits supplied with full fitting instructions and ion manual.
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We will do our best to help you through the pages
of the magazine but cannot enter into personal
correspondence.

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We're part of



ACC '98 Show

8



ABOUT THE COVER

Legendary Stories

For the left legs were created from their
cylinders, the ends were rounded then bent into
shape and randomised added to give them a
real appearance.

The ground was created from a patch primitive
and modified until it formed a suitable billy
shape. At this point I dropped some preliminary
textures so I could get a feel for how the image
would look then rendered a few stones, bushes
and grass around.

Next I added the trees and ferns to cover the
edges and add interest to the scene and finally I
added a few finishing touches, adjusted the
textures and moved the objects slightly until the
image looked appeared nearly balanced.

I used 3D Studio Max on a PC, but could have
created the same image on my ST - it would
just have taken longer.

Mark Bacott



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"Smile" they said...

For this issue we had pencilled in reviews of well over a dozen major new products but the review copies didn't materialise in time. Up beat reviews of stunning new music applications Digital Home Studio and Quincy are still in the pipeline and graphic designers will just have to sit on their hands until we finally get hold of Photo 4 and Airbrusher 2. We were looking forward to working you with reviews of DA's Layout, MMD 3, Magic 6, Excel 3, Papyrus 6 and Freedom 3.2. These are not vapourware - far from most of them in action which is doubly frustrating. However we do have a product launch - CENTrade is a brand new German/English translation package. We also have a review of a CD Writer hardware/software solution and some excellent feature articles. Following the loss of the Calamus editorial page we were offered a series of DTP tutorials based on DA's Layout which plugged the gap nicely.

Unfortunately, as we go to press, the Studio 4 CD-ROMs had still not arrived from France. With a bit of luck they'll be ready by the time we send the magazines out. In an attempt to avoid further confusion in the future we have separated the magazine and CD subscriptions so they can be handled and dispatched separately as and when available. Depending exactly how you paid for your CD-ROMs you may well have different expiry dates for your magazine and CD-ROM subscription but there's no reason to panic! When either subscription is due for renewal we highlight the envelope label with "RENEW" and enclose a form for renewal form.

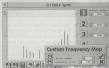
Joe Connor

News...

Electronic Cow

Electronic Cow are pleased to announce the release of two new software packages:

Scritbble Synth



Scritbble Synth is another software-based sound synthesizer, in the same vein as Electronic Cow's previous release *Scipipe Synth*. However, the synth's model used in Scritbble Synth is completely different -

it's a true additive synthesizer, but with a difference! You actually draw in frequency envelopes with the mouse. It works by transforming mouse "scribbles" (of which there can be up to five per sound) into 20 frequency spectrum plots by the software.

Frequency spectrum plots by the software automatically. Both low and high frequency bandwidths can be defined, and up to twenty bands can be comprised in one 'scribble'. These plots are then placed in the time domain, and Scritbble Synth interpolates individual envelope shapes for each frequency band. The results can be quite amazing! Strange sci-fi warbles, time-based pitch and filtering effects, plus frequency-modulated sounds are all possible with Scritbble Synth, as well as some really deep bass sounds! Sounds can then be exported to tracker programs, direct-to-disk sequencers/recorders, and sample editors in either AIFF, WAV or SFL formats. Bank right and left-bit formats are supported, and any frequency between 0 and 500Hz! Scritbble Synth also allows you to dump the sounds via MIDI to an MIDI-compatible sampler, or the Atari 5200/1050. The main features include:

- **AIFF/AIFFC/IFF** 8-bit sample export at any frequency (up to 500Hz)
- Digital audio playback of sounds on the

Falcon and STe/TT

- MIDI sample dump for Atari 5200/1050 and all sample dump standard samplers
 - On-line help utilizing ST-Guide, plus an eight-page CD-booklet manual
- Scritbble Synth requires at least 1MB memory and a 640x400 display to run. Due to hardware limitations, audio playback is not possible on STe/TT/1050 models - but you can still generate samples! Scritbble Synth costs £16 plus P&P (£2 UK, £3 Europe, £4 ROW).

EC-909

Ever fancied *Be-Bop* on the Atari platform? EC-909 is an analogue drum machine emulator for the Atari STe/TT or Falcon. EC-909 features sixteen original



TR-909 sounds (including bass, snare, toms, rim, clog, and symbols), with various controls (pitch tuning, volume attenuation, and attack shape), and an interface everyone will have seen somewhere before.

EC-909 can create single bar patterns (in real-time on the Falcon), then export them to your drumless disk recorder or sample editor in AIFF or WAV format samples. Both 8-bit and 16-bit formats are supported, as well as mono or stereo options. The program will also allow you to export the patterns as a standard MIDI file for loading into your MIDI sequencer! EC-909's main features include:

- **AIFF/AIFFC/IFF** 16-bit sample export, either mono or stereo
- 16 unique TR909 style drum sounds
- Tempo and bar length controls
- MIDI triggering for drums and pattern playing
- Exports patterns as type 1 MIDI files

- **Undo**
- On-line help utilizing ST-Guide, plus an eight-page CD-booklet manual

There are two versions of EC-909, one for the STe/TT, the other for the Falcon. EC-909 requires at least 1MB memory (4MB on the Falcon) and a 640x400 display or higher. EC-909 does not run on STe/TT/1050 models due to the lack of digital audio hardware.

EC-909 costs £25 plus P&P (£2 UK, £3 Europe, £4 ROW)
 Pippyshop, PO Box 211, Aberdeen, AB10 6J Tel/Fax: +44 (0)1224 312198
 Email: happyshop@pippysshop.org
<http://www.pippysshop.pippysshop.org/>
 Electronic Cow, 150 Broadwater Crescent, Stevenage, Herts, SG2 8ET
 Telephone the technical support line for more details: +44 (0)411 541133
 Email: electronic_cow@initial.pipes.com
<http://repute.dial.pipes.com/learn/>
 Website: <http://www.initial.pipes.com>



Play content with scoring a respectable 88% in ACPS, MC tests and simply had been updated and improved Power Up. Power Up Plus is the result.

Power Up Plus is confined to a smaller 'test space' on the screen as you have a better range of view ahead. There's some gameplay options including shooting, oil drills and farms, a new sound system, some revamped graphics and extra circuits for those too excited about racing to spend time labouring over the track editor. This update is free to existing owners which is great news. All you have to do is return your master disk with an stamped, self-addressed envelope to your local distributor.

- IRE: Floppyshop
 - Australia, NZ etc: Anthony Green
 - France: TR Bar
 - USA: Systems for Tomorrow
 - Czech Republic: Karel Rouz
- Email: stefan@stefan-ire.com
<http://www.stefan-ire.com>
<http://www.godzilla.com/SiliconItaly/>
 Italy: 071

some photo manipulation style options including Gamma correct, Brightness, Contrast and Greyscale. External plug-in modules offer batch conversion and CD/DVD printing facilities.

The user interface can be adjusted from Standard to Therapy and there's an online Bubble-GEM help along with a clickable ST-Quick Hyperlink inviting the user to refer to the printed manual. UK support will be via CyberTrider although currently no registration details have been announced.

- Users: Download and read the Atari Authors profiles posted on the web pages and encourage programmers with feedback and suggestions for new projects.
- Users with web pages: Download one of the Atari Authors buttons and include a link from your pages to the Atari Author pages.



Matthew Bacon, Cadexia Software
 Email: cadexia@cybertrider.org
<http://www.cadexia.cybertrider.org>

Computer Dungeons

Computer Dungeons now carry Atari Computing magazine and the ST Plus feature. ST Plus feature is even included FREE with every order.

Registered copies of shareware titles including Running, the Doom clone for the Falcon, and other titles can now be purchased from Computer Dungeons.

They also maintain a provision for of used software titles. Computer Dungeons, 1440 Spencer Avenue, Berkeley, IL 60521, USA
 Tel: +1-815-943-7885
 Fax: +1-815-943-7885
 Email: ComDungeons@aol.com
<http://www.mcs.net/~1440/dungeons/dungeons.htm>

STem



This is the first (and only) Atari ST emulator for Acorn RISC OS platforms.

David Mearns started the project in February 1997 and development is ongoing in his spare time. It's still very much a work in progress but is now capable of running some games albeit slowly. The core emulator is written in C++ using the GNU compiler with small amounts of hand optimised assembly language for added speed, where required, and to interface with RISC OS. STem v1.02 was released on 8th March 1998 and now includes full Blitter chip emulation which speeds up many graphics operations.

Email: sd194@stetn.ac.uk
<http://www.stetn.ac.uk/~sd194/stem/>

SMURF v1.0



SMURF is a stylish image viewer and editor, programmed by Christian Eyrich and Olaf Pfeiffer of Therapy Software. They're currently working on the English release, in the meantime here's a few more features:

The current German release includes over 40 import modules including: BMP, IFC, TIF, GIF, JPEG, Targa, GEMPaint, RAW, ICA, IFF, Neochrome, PCX, PICT, Pixmap, QIF, TruePaint, XBM and XGA.

There are also features (selectable) export modules: Dega (Dra), BMP CMF (behaviour), Simplex, 16-bit Falcon raw GEM (XBM), GEMPaint, Image Image, PCL, PCL, PCLAR, PPM, QIF, TGA and 'Truepaint' Image. There's still no sign of extension of mainstream formats such as TIFF, JPEG and GIF but there's still time.

There are five different filter modules, 3d editor interfaces, modules which offer some exciting options for manipulating images. There's an excellent built filter which opens 71 pre-defined filters.

Other fun selections include Solaris, Twist, Wind, Spherical Image and Bump It Up. On a more serious note there's some routine functional options including Rotate, Crop/Pin and Rotate and finally



Email: christian.eyrich@mas.de
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<http://www.cybertrider.org/>

Atari Authors

Matthew Bacon of Cadexia Software has started a campaign to bring programmers and users closer together to ensure the survival of the Atari platform and production of future software. Everyone can help.

- Programmers, Distributors and Suppliers: Please consider writing a brief profile about your products and plans for the future and send a copy to Matthew for inclusion on the web page.

ACC '98 announced

First of all thanks to everyone who returned the survey forms in Atari Computing Issue 8. The majority of respondents wanted an Accusave show in Birmingham and with that in mind we're delighted to announce the Atari Computing Convention 'ACC '98' will take place on Saturday November 14th 1998 at Bingley Hall, Staffordshire Showground, Stafford, from 10am to 4pm.

The Showground is easily accessible by car from junctions 13 and 14 on the M6, just north of Birmingham with ample free parking and there will be a shuttle bus service running from Stafford railway station.



Between now and November we may be able to organise a coach trip to make it easier for Localities to attend if there's enough interest.

Tickets will cost less than ever before - just £1 on the door with discounts for Atari Computing exhibitors with further reductions for children, OAPs, UBAs, students and orange card holders.

Here's just some of the attractions you've heard up already:

- The traditional annual forum where Accusave can get together, discuss the latest developments, get excited to focus and enjoy the company of other like-minded computer enthusiasts.
- Atari Computing. Our stand will carry all available back issues, Reader Disk and Reader Offers and for the first time ever we will be running demonstrations and advice clinics covering all the major aspects of computing including MIDI/music, DTP/web processing, Comshare/Internet access and emulation.
- Most of the specialist Atari hardware and software dealers who collectively offer all the hardware and software required to ensure the Atari platform remains a viable alternative to mainstream machines have already signed up including:
 - Tisc Designers. Their stand will be primarily demonstrating and selling DMS layout and Publisher, along with their other supported products such as Widsley, APEX, Pledge and so on. They will also be selling the usual range of products: Scanners, Hard drives, SuperDisk drives, CD-ROM drives, Falcon 14MB memory upgrades,



scanners, etc. Larger items, monitors etc. can be ordered on the day for despatch the following week.

- Atongton Systems Projects will be building CD-ROMs, hard disks and other SCSI devices into standard PC cases and connected to Atari machines.
- Electronic Cow Electronics. Cow will be demonstrating all of their audio and MIDI software for the Atari, including new versions of MIDI Arranger, Sound Chay Synth, and Snapper Synth. They'll also be showing (and selling of course!) their new programs: EC-MOS, Terrible Typh, and Squash it! Finally, Electronic Cow will also be offering on-the-spot upgrades for registered users!
- InPrint Solutions. Calamus 5i, 98 will be up and running on a Hades and under PlugC Plus with 11" monitor. Calamus Digital Publisher for the PC platform will also be demonstrated.
- Interactive. For the first time ever Interactive will be accepting registrations "live" at the show.
- CyberSister Cyberlander will be accepting registrations at the show - is there an echo in here somewhere?
- 1612
- PoT Club
- System Solutions
- Flappettop
- More details and other exhibitors to follow in next issue

We're still looking for other exhibitors and we can offer workstation sized stands at special rates to encourage shareware programmers to bring their systems along and demonstrate their wares and meet their users. Please get in touch and we'll be delighted to send you the details.

If you're wondering how can we bring you a bigger and better Atari show than ever before and keep the prices so low the reason is simple. Atari Computing have decided to work together with Garwood Pressmen who have organised computer shows since 1968. ACC '98 has been combined with their twice-annual general computer and electronics show which means you effectively get two shows for less than the price of one!

We've watched Accusave drift away from recent shows because there's nothing left to do or see after several

hours. We feel, after having made the effort to travel to the show, you'll enjoy the extra dimension offered by the other stand.

So in addition to checking out the latest hardware and software releases and spending some time chatting with familiar faces there will still be plenty to see with stands offering general computer hardware, accessories, cables, CDs, books, manuals, telephones, radio and general electronics.

If you have any friends who have moved onto other platforms why not bring them along? We're really looking forward to seeing you at ACC '98 and we'll keep you up to date in forthcoming issues. For more details contact: Atari Computing, Box 101010, Burton-on-Trent, Staffordshire, ST10 8UB, SCOTLAND. Email: showinfo@atari.computing.com <http://www.atari.computing.com> Tel: +44 (0)1829 820600 (Leave message on answeringphone)

STARTRACK

StarTrack is a complete hardware and software audio mastering solution for TOS based computers using the 68000 bus of Atari TT, Plus4s and Haibs machines.

The StarTrack hardware card offers clean digital 24-bit mastering at a sample rate of 96KHz - a first on any platform! This means you could convert two Soundpool Analog8 for 16-separate analogue cards! The soundcard and software can then output 16 channels at full 16-bit.

There's an optional DSP 14802 card running at 64MHz - double the speed of the Falcon DSP56001. This card elegantly outperforms an Intel Pentium Pro(R) running at 300MHz. TT owners should definitely consider adding this card to free up their main processor to enable problems from eight track playback/output at 48KHz, SBC - Stephan Winkler Development of Hard- and Software, Wobler Str. 111, 58759 Krefeld, Germany. Tel: +49 (0)203 7537388 Fax: +49 (0)211 683184 Email: stepw@sat.com <http://members.at.com/~winkler/>

ATARI

COMPUTING

Offers...

Essential accessories for you and your machine - subject to availability. Stocks for some offers are LOW, breathe and you could miss out!

READER DISKS

Individual Reader Disks are available separately from the magazine. Each disk includes software exclusive to Atari Computing which is not available anywhere else.

We also have a Specialist 1600k BASIC Reader Disk compiled by Paul Jones, to accompany the booklet.

All items are available and cost £3.50 each including UK delivery.



BACK ISSUES

Atari Computing issues 1, 2 and 3 are now sold out but we do have a small stock of other back issues. So get them while we've still got them! Each magazine costs £3.00 including UK delivery.



CULT ATARI T-SHIRTS



Thanks to the scramble around the Atari logo is popular once again. We now have stock of new sexy and trendy Atari T-Shirts featuring the famous Atari logo logo in three colors. They're black, 100% cotton, unisex and one size fits all. Atari Computing readers can obtain these essential fashion statements for just £5.99 including UK delivery.

EDITH PRO



Following the inclusion of Edith Pro, the semi-commercial and fully featured text editor, on our Reader Disk we can now supply the official 76 page combi bound AA manual and labelled Master disk for just £12.50 including UK delivery. Read all about this excellent program in the Client text editor review in AC44 where it received a glowing review.

STRATOS CD-ROM

These are only available to Atari Computing subscribers and cost £3.00 including UK delivery. Only 1 copy per issue per subscriber may be purchased! Each Stratos CD-ROM issue includes Atari Computing articles and Reader Disk contents along with the Stratos French magazine in HTML format and a collection of international software compiled by Stratos.

Order form overleaf!



Trackman

Trackman is a complete, fully featured, semi-commercial program. We've already given you the software on Reader Disk now we're offering you a chance to get your hands on the original printed manual in a luxury binder. For just £13.99, including UK delivery, you get:

- 64 page glossy A3 ring top by top
 - Tutorial manual
 - 68 page A5 ring bound detailed Reference manual
 - Instant Qualification User Card
 - Trackman Master Disk
- add another £8.50 (making a total of £22.49) we'll bundle a copy of Midiman in the same binder...



Midiman

Midiman is a flexible universal MIDI Reader which runs as a desktop accessory and is designed to integrate with Trackman. For just £15 including UK delivery you get:

- 32 page glossy A3 ring bound detailed Reference manual
 - Midiman Master Disk
- add another £9 (making a total of £23.99) we'll bundle a copy of Trackman in the same binder...



MOUSE MATS

Atari Power User and proud of it! Better get one of these top quality mousemats now! These glorified mouse mats are 3mm thick and feature a smooth hard surface and non-slip base. They cost just £4.99 including UK delivery.

Letters



Programming matters!

Thank goodness you're still around! I spent most of this month worrying about the demise of what is probably the main thing will keep the platform alive. Like Matthew Baron, I feel programming is the way to contribute to TOS survival. But as time rolls on and talented TOS programmers leave the platform, TOS advance will grind to a halt.

I think fully commented listings printed in the magazine instead of tutorials and essays on programming technique would be more useful. That's how I learn to program my Spectrum and it's the method which worked so well in ST world (RIP).

Specifically I want to learn how to program a desktop accessory: how to display text and pictures in a window and how to interact with the user. I managed to achieve this by working through the excellent commented Coderbase source code you recently included on Reader Disk but I'd prefer to do it with a copy of Atari Computing, a pencil and a bit of paper. I wonder how many others feel the same way! Millions of useful routines would be really useful too!

Yeh Ahmed, Tisbury, Wilt, via email

So long as people like yourself continue to subscribe and send in contributions to Atari Computing we'll stick around! Our HiSoft BASIC specialist Reader Disk already includes loads of useful routines so do check out our Reader Offers on page nine!

We do agree it is important to encourage programmers. Although we currently have no plans to extend our programming coverage beyond our regular HiSoft BASIC series and the specialist Reader Disk there's always room for feature articles - check out page 12 of this issue. You're actually the first person to ask for more - are you sure your name's not Oliver?

Including printed listings in magazines seems a waste of resources, we include the listings on disk so save typing them. If you want to do it the old fashioned way can't you print out the listings and type them in manually - or maybe I'm missing the point?

Statewide service

I have just had a depressing conversation

with Teal Computers here in the US. They are no longer supporting the Atari platform. Does using the last Atari output in the US mean we have to abandon our platform when it breaks? Carl, Allentown, Pennsylvania, USA

Sent at Systems For Tomorrow (SFT) replies

I am happy to report that Teal was not the last Atari Dealer in the United States. We feature a growing product line, including products from companies like System Software, HiSoft, Electronic Arts, PBS Systems, and many more you read about here in Atari Computing. Systems For Tomorrow
Email: info@SystemsForTomorrow.com
<http://www.SystemsForTomorrow.com>
Tel: (814)833-4788
(800)875-6940 (Orders Only Please)
Fax: (814)833-3611
Mail: Systems For Tomorrow, PO Box 3034, Independence MO, 64650, USA
Retail: 7100 East Winner Road, Independence MO 64051, USA.

We are not the last Atari dealer either - check out these other fine US dealers:
ATY Computer: (810)836-7999 B&C
Computer/Vision: (520)286-8979
Best Electronics: (800)333-6998
chr4MAGE: (811)633-7993 or
(888)660-8841
Computer Concepts: (800)547-7665
Steve: (800)441-3333

Jimmy Dodger!

My brother recently bought a 10Mhz LORotation Counter module from the local rubbish dump for the princely sum of one pound. Amazingly it worked but didn't always register a full turn. After an email exchange with LORotation they informed him it was still under guarantee and they repaired the module free of charge! Jimmy links
"JP" 9/2/88, 47

B Gardner, LynOp, Moon Valley 085
+44 (0)1338 432189

Great story, it just goes to show how wasteful our society is. You might like to get your revenge by checking out the Little Brother's Handbook web pages at:
<http://www.users.atnet.co.uk/~and1/bh/>

Platform problems!

My Atari 1320 upgraded to 4Mb has been unplugged for the last five months since I bought a PC - which I bought to help me with my City & Guilds DTP course. Because I was not making any headway with my Atari, like others I love my Atari and would like to continue to use it but only have space for one computer. I'm wondering if the Reader Disk and CDE you offer can be used on a PC then I could have the best of both worlds! I'm sure there are other beginners moving to other platforms who would like to retain the Atari magic.

Phil C Davis, Ashmore, Lyons

The good news is you can have the best of both worlds and make use of Atari Computing Reader Disk and the 51stCDS CD-ROMs. There are an ever increasing choice of Atari emulators available from FreeWare (PaCEST) through ShareWare (TOSBASIC, WinTos) to commercial (Emulator and Magic PC) available.

Which one is likely to suit your needs best depends upon what you want to do. PaCEST is the wild one out because it concentrates on running Atari games which traditionally break programming rules. The other emulators concentrate on running cleanly programmed GEM applications and although each offers particular advantages/disadvantages any of these can be persuaded to work with DTP applications such as Timeworks, Calamus and PagePlus.

GET IT OFF YOUR CHEST!

Got something to say, or have a mean about?

Atari Computing welcomes your comments, gossip, news, advice and useful tidbits!

Send your contributions on paper, or preferably ASCII text on disk, to:
Atari Computing, 45 Mill Road,
OSLCHESIER, COX SL, UK.
Or email us at:
letters@atari.computing.com

We reserve the right to edit letters for reasons of space or accuracy without altering the content.

Icon Power!



Recreational programmers don't have to worry about deadlines which leaves us free to do the unthinkable without worrying about petty annoyances like the project specification, the boss, or job security.

This icon in menu idea falls into the unthinkable category but since text entry in drop down menus are "objects" it seems reasonable to be able to substitute an alternative "object" such as an icon - right?

Happily it is possible using a copy of ResourceMaster, included on the ACiW Reader Disk, and an in-process menu.

Step by step

Because resource file development is a highly visual process we'll use illustrations and start with a completed test menu. If you're not sure how to create the test menu refer to the boxout.

Installing an icon



already established the File menu. Since Print will be changed we'll stop menu development temporarily.

We're used to icons on the desktop so why not in menus? Because it's tricky, that's why! George Crissman has put together this ResourceMaster tutorial which makes it easy - allegedly!

close the editing window to return to the ResourceMaster desktop and save the work already completed.



Single click the (MENU) icon, then select File > Information for statistics.



Change the menu object into a dialog object by selecting the Dialog bubble, then OK. The icon representing your menu has changed to FOMBI. Double-click to re-open the menu for more editing!



This nightmare of overlapping menus, caused by changing the menu into a form, is exactly what we need. This is why it's easier to install the icons during menu construction rather than later!



Drag the Print entry to the Macintosh, leaving a hole in the menu.



Position the mouse in the menu opening and (Shift) left-click to edit the size of the menu. Be careful! Accidentally clicking on an entry will edit the size of the entry, not the menu!



For an icon, increase Height by 16 (or other multiple of 8) followed by OK then drag the Quit and separator objects down to make room for the icon.



and drag it into place dropping it in the empty space. Double-click the icon to call the editor.





Name the icon, edit the entry, then edit the icon to look like a printer. Be sure to leave 16 blank pixels to the left of the icon (OK so I forgot) for alignment purposes then select OK.

The easy part

Close the window containing the edited menu, select the FORM icon and use the File>Information dialog to change Dialog back to a Menu then select OK to save your work. Congratulations! You've added your

TEXT MENU CREATION

Generating the text style menu structure is quick and straightforward using ResourceMaster. Unless otherwise instructed use the left mouse button. After launching ResourceMaster:

- Use File>New to create a resource file.
- Use Create>Menu to create the menu skeleton.
- Name the menu skeleton (MAINMENU) works well.
- Double-click Program then name the title (MM_DSGN) and edit the text (Flowchart replaces Program).
- Click Flowchart to get drop-down menu.
- Double-click Your Message then name the entry (MD_ABSUT) and edit the text (About Flowchart...).
- Double-click File then name the title (MM_FILE).
- Click File to get the drop-down menu.
- Right-click to get the menu toolbox.
- Drag an Entry to the drop-down menu, position it completely inside the menu on top of the existing Quit, and release.
- Repeat as necessary, adding Entry and — to create the complete File menu.
- Double-click each Entry then name each entry (MF_printer) and edit the text.
- Repeat until all entries are complete.

File	~
New	⌘N
Open	⌘O
Export	⌘E
Close	⌘W
Quit	⌘Q
Text	~
Font	⌘T
Size	⌘S
Style	⌘B
Color	⌘C
Align	⌘A
Just	⌘J
Indent	⌘I
Page Setup	⌘P
Print	⌘P
Quit	⌘Q

this procedure until the menu bar is complete.

Limitations

From a programming standpoint, icons in menu bars can be treated just like a text item. It can be checked if you remembered to leave 16 blank pixels to the left of the icon, crossed out and all the other options available using the menu_check() and edit_change() calls. However, not all standard dialog techniques work in menus. Installing radio buttons on top of an invisible icon in the menu is not supported. Although they may be added during the editing process, the Menu choice will be De-selected (greyed out) when attempting to change back from Dialog.

Remember to save your work frequently, especially when attempting risky changes such as attempting to "cut later" the resource (construction set with some exotic object).

Wanna Play?

There's no need to stop with icons! It may be possible to add colored, formatted text objects to spruce up the appearance of your program. Editable text fields in menus anyone? Anyway, have fun, and be sure to let us know if you make any cool discoveries... ☺

ON THE READER DISK

FLOWCHART.PRG

A dummy program created by George Crisman to illustrate icons in menus. Tested on TOS/GEOS, Mint/MultiTOS, and MacPC.

About The Author

George Crisman has been a "recreational programmer" since obtaining a 5200M study 51 model with no internal floppy using Mark Williams C. He currently uses a Falcon and Lattice C.

Get icon to a drop-down menu! Continue with the next drop-down menu (Edit) along with its entries and add any desired icons as you go. Repeat this procedure until the menu bar is complete.

THINKING OUT ALOUD

Some new GEM commands related to the menu bar should offer greater flexibility in screen usage, for example:

- menu_point(edge) would put the menu bar along the TOP, LEFT, RIGHT, or BOTTOM edge of the screen. Naturally, the MIN_DEFAULT_EDGE would be the TOP. A value of INQUIRE(-1) would return the current edge.
- menu_height(pixels) would allow for larger menu bars than the MIN_DEFAULT_HEIGHT, currently 1 character plus two pixels when the menu bar is along the TOP or BOTTOM edge. INQUIRE would return the current height in pixels.
- menu_width(pixels) would allow for larger menu bars than the MIN_DEFAULT_WIDTH (equivalent to 12 characters, maybe) when the menu bar is along the LEFT or RIGHT edge. INQUIRE would return the current width in pixels.
- menu_depth(count) would allow for nested objects like radio buttons if set to MAX_DEPTH(8) instead of MIN_DEFAULT_DEPTH. INQUIRE would return the current depth count.
- menu_just(direction) would allow menu bar entries to be LEFT, RIGHT, or CENTER justified. Although this call is primarily intended for menus along the LEFT or RIGHT screen edge, it might be handy for TOP and BOTTOM orientations as well. INQUIRE would return the existing setting.
- menu_font_style(selection) would allow additional customization so the user wouldn't be stuck with the MIN_DEFAULT_FONT_STYLE. INQUIRE would return the existing setting.
- menu_font_size(selection) would be an ideal companion call to menu_font_style.

Although these commands may affect other GEM commands (wind_get(MAX,...) springs to mind), they might just inspire programmers to try out some interesting alternatives to plain text menus.

Trackman

88 TRACKMAN
ATARI 800/1000/1300/1300X

Andrew Harvey gets re-acquainted with an old friend...

Trackman is a friendly sequencer which appeals to both experienced and first-time musicians and it's an excellent introduction to sequencing and the enjoyment of making your own music.

Trackman manages to combine functionality with ease of use (hands up those who really know how to use Cabbage's Interactive Music Sequencer!) and was originally a commercial package costing £179. Recently the entire package has been re-released as 'freeware' which prompted this review and our Reader Offer on page 9.



All features are accessed from the main screen. The sliders along the bottom can be operated like a virtual mixing desk.

Sequence dancing

Once everything is connected up it's not difficult to figure out all the features on your own (see the manuals in a real test). There's a 44-page glossy coffee-ground A4 Natural manual which takes you through features step by step and, with the help of some simple example files on disk, shows you how to make use of all the features of the 'now press this button, now press that' level, which beginners need yet rarely get. There's a separate 68-page A5 ring-bound Reference manual which explains every program function in detail

and both books are well written, with no obvious errors.

Unlike most current sequencers which operate on the tape recorder emulation metaphor, Trackman organises itself into sequences, of which there can be up to 100. Each sequence can have a maximum of 32 tracks, each of which can be named and each with its own MIDI channel 1-16 (or 14 through the usual Atari MIDI Out socket. MIDI channels 17-32 are also accessible using a hardware add-on, plugged into the serial port - refer to the Further Information booklet for more details. Each sequence can be up to 999

bars long. Sequences can also be chained together in 'Main long' mode. Up to 100 sequences can be chained like this and saved as a new sequence, which can in turn be chained together with other sequences into

The sliders along the bottom

a new sequence and so on until all available memory has been exhausted. To anyone familiar with the way many drum machines operate, this will be familiar territory.

To record, the sequence can be looped over any number of bars, and while it keeps a note list can be recorded on each pass round - again like many drum machines. Alternatively, the loop facility can be disabled, in which case Trackman works like a tape recorder for MIDI information. Fortunately the Undo facilities are comprehensive - notes can be undone.

Quantise can be used while recording or afterwards if preferred. The options are 16th-note, and also include various percentages ('twings') - which if applied after recording can turn a straight four into something much sicker (like all such functions, if the result isn't satisfactory, press Undo).

Each of the 100 sequences (0-99) can be named, the name being displayed on screen. Having recorded a number of sequences there's a great way to audition

the order of sequences before committing the order to be fixed in the 'Main long' mode. Set Trackman running, enter the number of the next sequence from the computer keyboard, and that sequence will play when the current one has finished. Each sequence has its own tempo, which can be active in the 'Main long' mode, or all the sequences can be set to the tempo of the first sequence in the chain. Another nice touch is the clock in the top right hand corner of the screen, which shows how long ago the current play or record session began.

Automated mixing anyone?

Finally, in the case of the main screen, there are the track displays along the bottom. Each track shows its number 1-16 (or 17-32 if the additional MIDI socket is fitted), its MIDI channel, Solo or Mute buttons (to switch off either all the other tracks or just the track), and 'Index'.

GHOSTS IN THE MACHINE?

Trackman includes features which encourage creativity instead of merely recording what you play. For example, with Trackman running, click on Transpose then press a note on the MIDI keyboard, and the sequence transposes by however many semitones the note played is from Middle C.

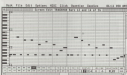
The arpeggio function is almost as creative. When set to record, click on Freeze then hold down the note or notes to be arpeggiated and it creates what's being held down.

The Repeat function is like a 16-note mini step note sequencer. It's possible to choose which of the 16 notes are used, the speed at which they play (set by the quantise rate) and whether the pattern starts when a key is pressed or synchronises to the start of a bar. Once the pattern is set, start Trackman in record in the normal way, but click on the Repeat button. If a note is now held down, it will repeat in the rhythm. This is a great way to create polyrhythms, or drum machine type programming, and a really useful way to quickly build up pieces for anyone without keyboard skills.



Any of the 16 notes can be selected to repeat when a note is held down.

These can be moved up and down with the mouse to balance the volumes between the different tracks. This is particularly useful with a multi-channel expander, as it could save quite a bit of button pushing on the module. What is particularly wonderful is that all those fader movements, including track moves and notes, can be recorded as part of a sequence - it's just like having an automated mixing desk. On playback, all the faders go up and down in exactly the same way as when they were recorded. This is very similar to the Cubase Plotting page - except Trackman got there years earlier and it's a lot more user friendly.



Imagine lying on your side looking at the piano keyboard and a roll of paper feeding into it with all the notes on and you get the idea.

The piano rolls on

Screen Edit is Trackman's other main screen. This features a grid where the pitch is displayed vertically and time horizontally with notes shown as blocks.

The notes are more or less heavily shaded depending on their velocity - how fast you hit the keys. If your spirit wants out that information. The screen can display one, two or four bars at once, but you can select which four bars are displayed using the arrow keys on the bottom of the screen. With some sloppy mouse work, notes can be deleted, added, transposed, expanded or simply moved around - and all while Trackman is playing.



The sequences may be put in any order to create the final piece.



Almost any kind of MIDI event can be taken from one track and copied to another.

All the other good sequencers are present - track copy, copy bars, MIDI Merge, MIDI

sync, System changes and a few less common ones such as a Track Store. Although Trackman features its own file format it can save standard MIDI files. There's also a small stand alone program to convert MIDI files to Trackman format.



MIDI controllers are used to set the fader or note or velocity operate the main screen faders.

FURTHER INFORMATION

MIDIman, also from Hollis Research, is a very useful Universal MIDI Merger which works as a desktop accessory and integrates with Trackman. MIDIman has also been released as Freeware. The original printed 36 page A3 ring bound manual plus disk is also available to Atari Computing readers - refer to page 9 for details. The software is also available for download from:

<http://www.hollis.co.uk/gbnet/>

The serial port expander to add an extra 16 MIDI channels (which can also be used with Cubase, Mixator and Dr.Ty) is available from:

Phobic, 30 Fish Street, Southwark, London, EC3A 3AT

Tel: + (020) 521 788-88

Cord: 424 86 + 75p P&P

"Hans Ge" Midi Software Ltd, 11

Warfield Avenue, Waterbury,

Barnstaple, PL21 7JN

Tel: + (03) 755 783 188

Cord: 424 86 + 42.75 P&P



A sequence can be retitled by naming amounts with anything that fills all one and being put back in the other end.

Conclusion

Unlike most sequencers Trackman actively encourages your musical efforts. It

includes all the features most musicians are likely to need and is clean, easy, and friendly to use. You're more likely to be pleasantly surprised than irritated or frustrated - and the price is right.

TRACKMAN

Publisher

Hollis Research

Status

Freeware

System

All Atari

Price

Good balance between straightforward operation and features. Excellent Repeat function, real time transposing and real time recordable mixing. Trackman guesses sensible default values in edit fields - and more often than not, gets it right!

Comments

No longer under development, no support.

90%

Well Connected!

Users' Guide to the Internet for Atari



As Roy Gidding, the author says in his foreword, the aim of this guide is to make it as simple as possible for Atari users to get up and running with an internet connection. So has he succeeded?

Getting an Atari machine connected to the internet for the first time is a black art. Internet Service Providers (ISPs) invariably provide software for Windows users but Atarians intent on joining the comms revolution are left to find their own way through a minefield.

It was navigating this minefield when the author went online a couple of years ago that provided him to go it down and write this guide. Initially the guide was for use with the Zenet OS but has subsequently been expanded to cover most of the UK based Atari friendly ISPs and it also takes a sideways look at UK Atari BBS's and the CLX conferencing system.

The 44 size comic bound 100 page guide starts with a brief description of what the internet is all about and its history. It looks at Atari systems and establishes a recommended minimum then goes on to look at ISPs. The guide points out that not all ISPs are accessible to Atari users so reading this section along with the list of ISPs is required reading!

Once an ISP has been selected the next order of business is to check out the available Atari software and the guide thoughtfully includes sources to obtain the software if you are not yet online.

The next, and perhaps most important section, takes a look at setting up most of

Mike Kerslake finds a book that doesn't assume you have a degree in comms technospeak!

the current Atari software. This includes: The STIR and STING TOS/MP stacks, Amnet, AmNetC, Telnet, CAR web browser, NEWSite, MG-FTP and Gate 1. The information provided in this section is very detailed and should be enough to get most users up and

running. Novices may prefer to obtain the Internet Access Pack. This is a collection of software known to work together and which comes with an installer which takes some of the hard work out of setting up. Once up and running it's easy to add extras, fix bugs and update the installed programs later.

Lately there's no coverage of POPWin32 or NEWSite and recently released client software such as the latter smaller are not covered but the continuation of the guide does allow for extra or amended sections to be inserted.

Following the program section there's a general guide to the internet which covers newsgroups, the World Wide Web, Netiquette (code of conduct), Frequently Asked Questions (FAQs) and more. There's lots of interesting information and pointers to locate specific details on topics such as mailing lists and so on.

The final section provides lots of useful addresses and phone numbers along with a short list of acronyms and emoticons - funny little clusters of characters which looked at sideways indicate the writer's mood (parentheses called emoting). This section also includes an extensive guide to the File Transfer Protocol (FTP) which handles binary file transfer from FTP sites around the the world. Finally, there is a full glossary which explains most of the word terms comms enthusiasts throw around to confuse 'not newbies'!

The appendices include examples STIR, Gate1C1 and STING did and configuration files which can be used as guides when editing your own installations.

In conclusion the guide should enable most Atarians to get connected to the internet using readily available non-commercial software. I found the



And some of the many internet programs featured in the book

guide a little dry in places, with coverage of some sections both technical and non-technical - albeit for good reasons. Where appropriate, screenshots have been used to illustrate points.

My main disappointment was the price quality of the manual. Because of the specialist nature of the publication the author prints, and binds the publication himself using an inkjet printer and combi binder. Although the output is perfectly readable, one gets the impression of a home-distributed manual. On the plus side the combi binding is ideal for any references work because it can lay flat or hold back on itself.

Overall this is a clearly written and helpful guide. If you're thinking of going through the gate barrier to get online, buy this book first, it will save you both time and aggravation! ☺

USERS' GUIDE TO THE INTERNET FOR ATARI

Publisher/Author
Roy Gidding
Post: 95 Whitford Farm Road,
Ardara, Kent, TN13 5YN
Tel/fax: 01223 623177
Email: rogidd@netnet.co.uk
Cost
£5.50 including UK postage

Pros
Atari specific, clear and concise writing, will get you going on the net!

Cons
Some program omissions, print quality not robust enough for frequent use purposes

GEMTrade v1.00

REVIEW

GEMTRADE

Joe Connor unveils the first shareware project sponsored by Atari Computing...



Wearing my ineffectual *Translation* hat I've been translating software from German to English for years. I've always used *Ruftrade* to generate the first English draft which, thanks to its highly targeted dictionaries, produces better translations of Atari packages costing hundreds of pounds.

I once described *Ruftrade*'s interface as "a necessary evil" so when *Ruftrade* author, Charles Edwards, decided to stop development I asked permission to use the dictionaries and started to look for a programmer to continue development.

Mark Wherry's articles on *BuilditGEM*, *OLGA* and other system enhancements convinced me he was the man for the job - all I had to do was persuade him to get involved.

Ruftrade dictionaries, the translation routines, have been rewritten. *GEMTrade* was developed to intelligently handle case sensitivity (HTML tags, email addresses and so on which *Ruftrade* translated), of heavily formatted documents easier to understand.

The enhanced *GEM* interface supports all the latest interface developments including dialogs in windows, *OLGA*, document history and *AT* protocol support along with *BuilditGEM* and *AT-Tools* help which means *GEMTrade* integrates well with the desktop and other programs.

or English word into the editable field, select the language - or *Auto*, which works 90% of the time, then click on the lookup icon. The translated word appears in the line below ready for insertion into your text editor at the cursor position by dragging it onto an open editor window.

GEMTrade as GEM Module

Imagine you're browsing the web and you stumble across a fairly looking site full of Atari goodies and the page is in German, what are you going to do? With *GEMTrade* installed in your GEM modules folder all you have to do is select *GEMTrade* from the Modules menu or pop-up and the page is automatically translated and re-displayed in English. It's not perfect but it works and is a brilliant concept.



GEMTrade v1.00

Author

Mark Wherry

Status

Shareware

Contact

4 Fernpark Close, Tapscott Road,
Exeter, EX3 6AH, England
Email: mark_wherry@pcn.co.uk
URL: http://www.pcsc.co.uk/~mark_wherry/

Cost

£9.99 for key and master disk presented in CD case including PMP or £8.99 for key only by email

Requires

All Atari, 1MB memory minimum

Pros

Modern stylish interface, ongoing development, intelligible document format handling

Cons

File (English to German translation, odd HTML file handling, few minor bugs to be ironed out

88%

Translation

Files can be translated by calling the file selector to load the target file into the *Source* line. Alternatively a file can be dragged from the desktop onto the *GEMTrade* icon in which case *GEMTrade* auto-starts, translates the file, then auto-closes (unless the *[Alternate]* key is held down) - *manuscript*!

No translation software will recognise every word but to make it easier for subsequent editing *GEMTrade* can optionally surround untranslatable words with a user-defined marker character.

Electronic dictionary

Apart from the translation *GEMTrade* can be used as an on-line dictionary to translate individual words. Enter a German

The unregistered version translates the first 1000 words and the look-up dictionary works twice each session which means you can thoroughly test *GEMTrade* before parting with your money.

There's still plenty of room for development. For example, *GEMTrade* could be adapted to handle loadable dictionaries which would make it easy to support other languages and one-way translation.

Options to edit and browse the dictionary could be added but future development really does depend on you.

If you use *GEMTrade* and find it useful please do register your copy and encourage both Mark and Atari Computing to continue developing Atari software. ☺

ATARI COMPUTING Q ISSUE 9

17

Burn Baby Burn!

Dreams do come true! It's now possible to produce your own CDs on an Atari machine using a CD writer. Mark Wherry sets his Falcon on fire...



The process of creating the CDs is called "burning" because that's exactly what happens. A CD writer is essentially the same as a normal CD drive, except the laser is capable of burning the media.

Unlike the silver CDs your music or magazine software comes on, which cannot be written to, you have to buy special CD-Rewritable (CDRW) media which are commonly gold coloured. CDRW media already cost less than £1 each, and this price is falling all the time.

Before writing to a CDRW, the data must first be prepared on another storage device then written to the CDRW as a single "session" which fits up the computer. Although CDRW media is "write once, read many times" data can be added gradually by writing further sessions.

Unfortunately most audio CD players only recognise the first session on a multi-session CD because they include single-session drives so bear this in mind if you're creating audio CDs. However you can create a mixed mode CD using a format known as CD-extra or CD-plus. These enable data to be added as extra sessions to audio CDs and vice versa.

There's also another type of CDRW media called CDRW IC30 (write-once) which requires a CDRW compatible drive which is capable of erasing blocks of the CD and starting again. Most audio CDs cannot read CDRW media and each disk costs over £12 so these are currently not an attractive option.

crypto numbers, for example 246. This means the drive writes at double speed and reads at six speed. If there are three numbers, such as 2463, this means the drive can write at four speed, re-write at 2 speed, and read at six speed. Faster drives can always write at the slowest speed as well.

Audio CDs can always be written at the fastest speed because they only contain one file per track. However, it's worth considering burning data CDs at slower speeds when writing lots of smaller files.

Software

CDRecorder Pro2 is currently the only software package available on the Atari platform to burn CDRWs and it's expensive. The good news is it's really very good and includes all the features I need but before we go any further I'm going to get up on my soapbox...

I fully appreciate the need for copy protection, but CDRecorder Pro2 insists on having the master floppy disk in the drive every time the program is run. I

Speed trials

Like conventional CD-ROM drives, CD writers operate at specific speeds. For example, a double speed writer can write one hour's worth of information to a CD in 30 minutes, whereas a quad speed writer would write the same information in 15 minutes. Drive specifications are often quoted as:

find this a totally unacceptable form of software protection - whenever I run the program I'm a nervous wreck and what happens when the disk eventually corrupts or if the program is no longer supported? I expect to be able to make a backup copy for my own peace of mind, that's not unreasonable is it?

CDRecorder Pro2

The software consists of 2 collection of tools and two main programs, CDRecorder Pro (CDRP) and CDRecorder Audio (CDRA). Both are brilliantly designed CDist applications, which perform flawlessly under IntegC - I'd like to see OmegaDrive support from the desktop though!

The author has also implemented his own bubble help variation although I'd rather he supported standardISA and spent the time improving CDRecorder itself.



CDRP allows the creation of (yellow-book) CD-ROMs as well as mixed mode audio+data CDs. CDRAP can work with multiple sessions, and read the archive flag set on files which makes keeping track of back-up easier. A SCSI copy feature non-Atari compatible file systems to be copied - for example Mac HFS.

Although it's possible to add audio tracks using CDRAP, there is no live control over pauses, and other details. However there is a better solution...



CDRs can create red-book compatible audio CDs which can be played in standard audio CD players. Best of all it can also write the PQ subcode, which contains specific timing information including pauses, the copy protection and pre-emphasis flags, and the ISRC code - a unique number given to each CD for identification purposes. These are professional level digital audio features.

CDRA includes other neat extras including the ability to preview how the CD will sound with all the pauses, and so on. It's also possible to get cover and master list print-outs.

A cover list describes each track with track number, name and length - perfect for covers. A master list is built on the cover list and in addition details times, pauses, Remances, codes and more.

HARDWARE

Until recently, only TIs and Falcons could be hooked up to CD writers but now ST computers can join the party using a Link 16/2 SCSI adapter. A CD-R can contain up to 650MB of data (which equates to 74 minutes of audio) and this needs to be prepared on another drive first so you'll need to be using a large fast hard disk.

During the burning process the CD writer expects a constant stream of data which means the faster the CD writer writes, the faster the data must arrive in the memory buffer from the hard disk so in addition to a large and fast hard drive you'd better make sure it's defragmented. If the data stream is interrupted during burning everything goes to a halt and the CD is scrap.

CD writers are getting cheaper, a 4x24s can now be bought for less than £400, but unless you have a free format tape slot to slide in an internal mechanism you'll need to add £50 to buy an external model or alternatively spend the money on a PC, insert card and add a SCSI busster.

own material. Neither repair nor fix! Computing involves the use of the CDRecorder package for any other purpose.

There's also a device driver which enables the CD writer to behave like a normal CD-ROM drive. This is a special version of IntraDOS, but it also works on any SCSI CD-ROM drive and is one of the most reliable I've seen. Finally there's CD-Reader, programmed by Klaus Heyne, which is really only of interest to Falcon users. It's essentially another CD player. However, instead of sending commands to the CD drive, it reads the audio data directly and plays it via the Falcon sound system. Audio can also be output via a DSDIF interface if you have one - which could be really useful.

Conclusions

Minor upgrades to the CDRecorder package are currently released on a regular basis via the SoundPool web pages which is an excellent service.

Although the software is expensive, which will undoubtedly deter some prospective purchasers, it does offer professional level features and there's no alternative. It's great to see the Atari platform has something to offer.

Although SoundPool currently enjoy a monopoly it could be under the appeal of the software by releasing the two main CDRecorder applications separately. This way anyone who needs to write data and basic audio CDs could buy CDREP program and musicians who need the specific audio features could buy CDRA - how about it, SoundPool?

It would also be useful to see integration with other SoundPool products like Audio Master, and Digitalize Pro/Back/Master/Int on the Mac. For example, ProTools on the Mac, and Audio Master on the Falcon, can handle a non-destructive mix-list. Using Pro Tools, this mix list can be imported to the CD burning software master list and it would be useful if CDREP also offered this. Since Audio Master is a



There's a program called CD-Copy which makes copying CDs really easy so it's ideal for maintaining back-ups of your

material. program anyway, CDREP could be made available as a "plug-in".

So how does a Falcon based setup compare to other systems on other platforms? Having previously used a Mac to burn CDs I'm pleased to report the Falcon is just as capable, and performed perfectly.

I note I scored the Falcon's SCSI bus was not up to writing at four times speed because it requires constant use for about 20 minutes but so far I haven't had a single failure!

The convenience of producing my own CDs is well worth the cost. For musicians it's the ideal back-up medium and you can use it to present the final result of your efforts. For non musicians, using a CD writer actually costs a lot much cheaper than running an Amega (at drive in the longer term, and you get access to a CD-ROM drive as well - so why not get yourself some?)

Finally I would like to thank Titan Design for the excellent service I received when purchasing my system; their Atari Times award was well deserved. ☺

CDRecorder Pro 2.24

Author

Joan Fuller (CD-ROM Solutions)

Publisher

SoundPool
http://www.soundpool.de
Available in the UK from Systems Solutions and Titan Design, who can also supply the hardware.

Cost

£199

Requires

Falcon/TT or ST with Link 16/2. A large, fast hard drive preferably an AW-rated SCSI and 4MB memory minimum.

Pros

Great user interface. Everything you need, and more besides.

Cons

Expensive, unacceptable copy protection method, only works with certain drive models, does not support rewritable media.

80%

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This version of CAB comes with a PPP-enabled and SLIP driver designed for use with Magic, Mac and Magic PC. Easy to install and set up, you will be surfing within minutes (You do need an Internet account, of course).

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- CALinkback** - Checks Website pages for updates. Finds what is new quickly.
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CAB also works on TOS with STX or STX2 but needs Magic to use plug-ins.

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No page, window or file - just high quality tools. The SuperTrack MIDI Audio card for HADCS (and TT) now comes with a DSP Module to enable supporting 16 bit channels unlike the HADCS which supports only 8 bit. SoundPool audio I/O and software are HADCS compatible. SuperCD audio HADCS add-on, is an 84 card for the connection of up to 3 cartridges (optional).

HADCS is a joy to use, a time saver and a real alternative to PC and Mac for HADCS Studio and professional MIDI users wanting to replace their aging ST. Interested? Then call for an individual quote and to discuss your project.

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Texel is a new, easy to use spreadsheet program for Magic and TOS. Because it is a true GEM application it will run on just about any hardware. Texel allows a maximum of 16,000 x 100 cells per worksheet. You can choose from over 90 functions. Import/Export of most common formats, powerful sorting routines, preview in windows. Texel comes on a single floppy disk, runs on systems with 256k free memory and a display of at least 640 x 400.

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Printing Magic!

Derryck Croker finds a way to save an Atari Laser printer from redundancy...



MagicSLM is a Hewlett Packard PC2 (Page Control Language) to Diablo graphics converter wrapped up in a desktop accessory shell.

MagicSLM enables anyone owning an Atari SL8884085 laser printer to continue using a real Atari ST machine as the middle man to produce printed output from a Falcon, PC, Mac or other platform.

A real Atari ST machine is required because only these models include the DMA interface used to drive Atari laser printers. MagicSLM is a compromise and cannot match the speed of accessing the printers via the original DMA interface, but if you have one gathering dust in a corner it's a lot better than putting it on the scrapheap!

The Atari ST must have at least 2Mb of memory and a monitor. More memory to use as a RAM disk or a hard drive are useful extras. Apart from the MAGICSLM.AC2 desktop accessory itself you'll need to install a copy of Atari's Diablo emulator which runs from the AUTO folder of your hard disk.

Getting into print

With the ST up and running as your printer server, and both the Diablo emulator and MagicSLM installed, you can begin experimenting to find the best way to print files from applications on your other machine. There are two alternatives:

- Via a null modem link (modified serial cable). MagicSLM, running on the ST, can intercept printer data on the serial port and produce printed pages.
- From a file printed to disk on your other machine.

Falcon owners, and probably Atari emulator users on other platforms, running applications which can output via NVIO get an easy ride. In the NVIO

- A click on the Hester button sends MagicSLM to the background where it awaits data arriving on the serial port.

CONTROL.CPI select one of the Hewlett Packard 200dpi Dotplot or Laserjet drivers and redirect printed output to the serial port or a disk file. For serial transfer to work the serial ports on both machines must be configured. Use any serial port setting utility such as Atari's COMBIO.AC2 or Peter Rotenburger's SERIAL.CPI set the following parameters on the ST:

- 8 data bits
- No parity
- One stop bit
- Baud rate to highest setting both computers will support. For an unmodified ST this is 19200
- No handshaking

On this real machine (the computer you want to print from) use the same settings apart from handshaking which should be set to NONE/NONE.

Applications which have built-in printer drivers may only offer a print-to-disk facility, the resulting file contains the printer control codes and page description which MagicSLM can use to produce a printed page.

You can take the simple approach and copy the file to floppy disk and walk between your machines or, more elegantly, if you have a working network between your machines, send files via the serial, parallel or token ports.

Using a RAM disk or local hard disk on the ST offers the advantage of leaving

your other machine free for work while MagicSLM goes about its business - but you'll need to be on hand to select each file in turn for printing.

A printer spooler is another option to consider to catch output from application programs so it can be redirected to a disk file. Calamus 34 allows this if the Other box is selected. For QDWinPro's queue to "stop" before printing.

With the help of this article you should be able to breathe new life into old kit and obtain printed output from almost any machine - keeping your trusty ST and Atari laser printer away from the classified scrapheap! ☺



- ▲ The PC2 option produces a graphics file that can be imported into other applications after suitable conversion.

MAGICSLM

Availability

MagicSLM was written by Harold Schoenfeld and originally published in a German print magazine. With Harold's kind permission it is also available from the CDX Atari Software topic, any BBS connected to the HAMlib network and from: <http://www.cdx.at/~/atempk/index.htm>. The Diablo emulator was included with all Atari laser printers but is available for download from various FTP sites including atari.at and atari.com. Pkg. 19114

Requirements

Atari SL888 laser printer and a Falcon, PC or Mac. Software solution requires an ST with a minimum of 2Mb memory, the Diablo emulator, a null modem cable and a monitor/TX.

Price

There's no other way of using an Atari laser printer with any other computer, easy to use.

Cons

No built-in way of printing multiple copies, direct printing of plain text files isn't possible.

85%



- ▲ The running display as MagicSLM performs, with number, commands read and status - which can be writing, reading, receiving, printing or writing.

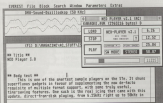
NETWORKING OPTIONS

Mike Wherry's Networking feature in AC87 includes some useful ideas or you could try the parallel port copy program PACP120 between a Falcon or PC and the ST server.

NED Player

3.0/3.1

Shluming Lai reckons this is one of the smartest sample players available for STe machines...



▲ Play 250kHz samples of 500Hz. Four beats as much-made in the same time!

NED Player (short for *Ned Design's* share superflexible gadgets in favour of supplementing the now de-facto repertoire of multiple format support, with some truly useful, time-saving features.

The real icing on the cake implemented in this exclusive release is direct-from-disk playing - from 0.0000Hz all the way up to 500kHz is done. As you can see from the screenshot, I'm actually listening to some music streaming off my hard disk as I write (please note the oscilloscope is only for look factor and isn't part of the package...)

It's a joy not seeing those irritating 'Out of memory' messages when loading large samples made prior to the installation of NEDs and countless other system enhancements - but there's more! The so-called SW Mode lets you

adjust the playback frequency in real time over 14 steps between 0.750kHz and 23.050kHz (emulated in software, hence 'SW'). Although this offers hours of amusement making samples wobble up and down like a faulty cassette deck, its practical application is to eliminate the proportionally long wait normally associated with resampling a sample not recorded at any of the 16 hardware replay rates - it's done on the fly to the nearest SW Mode frequency. Transitions in playback frequency are completely glitch-free, whether in software or hardware direct mode.

While it's far from perfect (for example, certain system events stall the DIO mode playback buffer and you get gaps in the sound) it works very well and is altogether cleaner than PH Player. It's also more relevant, and stable, with some problematic samples. PH Player scores

over NED with its support for industry standard 52, 44.1 and 48kHz sampling rates and recent accurate off-line resampling. PH Player is freeware but NED's menu club comes with an invitation to pay (the £10, \$15, £24.95 elsewhere for either direct to the author or

TECH CORNER

How does NED play a file larger than the available RAM? Even though the designers of the STe probably never envisaged this, it's fairly simple due to the way the STe is designed. The trick is to fool the DMA fetch mechanism into thinking two separate memory files are in fact one. By alternating the sample start address between these two blocks you can load one while the other plays. An implementation in C would consist of two linked lists as the buffers, with each list's tail pointing to the other's head, making a continuous loop. Standard CBI-DIOs functions can then be used for IO and the sample file need not be split into smaller chunks (though custom routines would still be needed to get around clashes with other tasks).

via CyberSticks. The Czech author, Petr Svoboda, has kindly made an exclusive v3.1 release for Atari Computing readers and it's included on the Reader Disk. This version includes AUI and IFF input plus a few other internal improvements, tweaks compared with the current release. ☺

NED PLAYER v3.0/3.1

Publisher: New Design Ltd, 24 Dubna 26th, Zelenka, 664 43, Czech Republic

Availability: PD library, on-line version and the New Design web page at: <http://www.stel.be/cute/st/~newdesign/>
NED Player v3.1 is available exclusively to Atari Computing subscribers on the Reader Disk/CD-ROM.

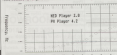
Requires: SHarTT (Halcon enhanced version coming soon), any memory hard disk recommended.

Pros: Multitasking friendly, good attention to detail, small program size

Cons: Limited control over playing (only start/stop)

84%

▲ NED's resampling is real time but doesn't include common industry rules (because its range is almost linear) and has a ceiling of only 250kHz



Reviewed: 1998/06/07

Merci pour la musique...



...and for finding time to chat with us. Shuming Lai takes care of the introductions...

Last December, at the Forum des Applications Atari exhibition, Joe Corbin and Al Good enjoyed showing off Atari Computing and Electronic Core's music software to an integrated French public and met up with one of the famous names in the Falcon music scene. Some of you are no doubt aware of the acclaimed Digital Tracker and now it's time to meet its creator, Jérémy Lemaire of SOFTJEE.

SOFTJEE is in fact now 17½ years old and I have a diploma in Informatics. I started programming when I was 13 on an Amstrad, then Atari XL, then Atari ST and now on Atari Falcon. I program mainly in 68000/68010 (and even 68010's assembler) and a bit of C, but also some other high-level languages such as Pascal and FORTRAN.

I first started writing programs on the Falcon before that I programmed games for platform and that was all. When the Falcon was released in 1993 I was a student in Toulouse, a town in the south of France.

With four of my best friends I formed the Kamikaze group, three was BIGYER (the musician, GABRIEL; Thierry the graphic artist, CHANE-ENNE Olivier and myself, the programmer. We all bought Falcons when they finally became available and we started to make some stuff together but Eric wasn't very satisfied with the Falcon because there wasn't anything to make music like Audio Sculpture.

This started us thinking about a Falcon soundcard and the result was Digital Tracker. This only had 4 voices to

start with, then someone helped me (I don't remember who) to extend these first to 8, then 24 and finally 32 voices. Digital Tracker was a strange experience for me because I had never finished software before and I don't know how I finished it. I guess it was the help of my friends and other people but I remember making a determined effort to make time to program it and correct the bugs - a big step in my programming life.

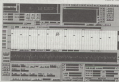
The first Digital Tracker release was a shareware version and with the success I had in France and other countries, I continued to add new features to this software. After contacting Frontier Software they asked my software to version 1.2 and I took another step to a commercial release.

program and decided to sell my products myself. Digital Tracker 1.3 was released in mid-1996 and I took it to the French Atari show that year. There was a lot of interest so I decided to start my own company last May in France while I began work on my second package, Digital Home Studio. DHTS was ready in June 1997 and I presented it at the Atari show 1997. Some people have made some music with DHTS which sounds like a remix of DA HOCES, or Twenty Fingers.

SOFTJEE was born in December 1997. I'm the only programmer and I've had a lot of friends including ANDRÉU Cedric, HEBERT Franck and Magnus Kallberg from Sweden have helped me a lot. As I have a lot of taxes in France I have to make a lot of software to look out for MICROPLAY, Inquard and Line Machine too.

I will certainly continue with other projects. The next is probably a sampler but I'm also working on a DSP assembler for the future project. I'm also searching for new software ideas for the Falcon, so if you have an idea please let me know - time marches on! For more information on SOFTJEE products look out for reviews in future issues of Atari Computing and contact:

Mail: SOFTJEE, P-4706
LONGUEVILLE, France
Email: softjee@at.fr
<http://wwwpage.tel.fr/~softjee>



▲ Digital Home Studio is an integrated audio MIDI sequencer with DSD and sampling editor

Frontier sold Digital Tracker for about a year before I took direct control over my

DIGITAL TRACKER



For sheer convenience, sametrackers are unbeatable - no MIDI cables to mess around with, no synths to set up, they literally turn your computer into an integrated music tool. Of course there are limitations, but the latest release of DT is blurring the distinction of a tracker. It now incorporates direct-to-disk (DD)

capability so that any part of the sequence may be either internally generated or read off the hard disk in real time, with the ability to synchronise to the sequence!



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Audio Tracker.....£169.00

CB Recorder Pro.....£199.00

Cubase Audio.....£399.00

MUSIC - Hardware

ADAT.....£119.00

Analog 8/4.....£299.00

SPDIF (external).....£179.00

SPDIF (internal).....£179.00

Digital

John Smith continues our round up of the latest Atari compatible peripherals...



A full page about the Canon's digital

cameras

camera range with built-in LCD screens - the QV-100A, through to the QV-100 with telephoto lens first sparked my interest in digital cameras.

Although aimed at PC/Mac users the Cine DMM format files can be viewed in Par's Piccolo on a Falcon using the Par's MLE ROM module (also to AGF's pit) for more details.

I haven't got a Falcon so this wasn't an option, however the SONY Mavica provides an ideal alternative for Atarians. Instead of storing the images internally in memory the Mavica saves them as JPEG images straight onto standard high density HD floppy disks.



I didn't have an HD floppy drive but in Atari World issue 1 (BPS) there's an article about a HD drive kit sold by The Upgrade Shop (TUS) and the good news is the kit is still available. I bought the kit from the Birmingham AT Atari show and, to my amazement, successfully managed to modify my 1040ST.

Having crossed that hurdle I needed to check the TUS HD formatting software would be PC compatible and was wondering whether 4Mb memory would be enough to display images.

To find out I borrowed a couple of picture files on a QV-HD disk from a friend at work and to my delight I was able to load images (one at a time) into Imagoscopy and print them out in grayscale on my black and white Canon 8700s printer - although I had to free up much memory to do so.

Eventually I acquired a Sony Mavica MVC-HD7 and excitedly took a few snapshots before removing the disk and shoving it into my modified HD floppy drive. Full of anticipation, I took up with fingers crossed, hardly daring to breath, as a window opens to drive A containing these files, MVC-0011, MVC-0025 and MVC-0026. It

denotes standard quality and F is used for fine quality. Also, what seemed like an eternity loading the first file into Imagoscopy the image finally appeared, yippies, it really worked.

There it was - a picture of our dog Sam's head which I had managed to fill the entire frame with his head and shoulders relying on available room lighting - three table lamps. On my



mono monitor the image looked quite poor and very dark but I decided to print it and was pleasantly surprised to see a recognisable grayscale of Sam.

The Sony Mavica MVC-HD7 lens focal length is 4.2 - 4.2mm (Wide angle to 10x telephoto zoom) equivalent to 40mm to 400mm for a 35mm camera. Aperture range F1.6 to 2.9 auto-exposure and focus with the option of switched wheel manual focus when required.

Now I'm waiting for a colour printer and a colour monitor would be useful as well. I hopefully my experiences will encourage other Atarians to push the limits of these machines. May where did I put that copy of Positive Image? ☺

MAVICA MVC

Sony Mavica MVC range

<http://www.sony.com/UK/computer/mavica/>

Typical street prices

Models:

MVC-HDS between £400 and £100

MVC-HD7 between £800 and £100

The HDs is a fixed focus camera with a switched macro facility only. It doesn't have the added zoom, additional exposure programs, and so on of the more complex HD7 model.

Pros

Universal storage media and good in-camera processor with excellent zooms, ADOBE Photo Studio software bundled for PC/Mac users.

Cons

HDs has fixed focus lens, both models quite bulky with no viewfinder.



The exact number of images which can be stored on a floppy depends on the complexity of subject matter - the actual file sizes vary. On Standard setting expect somewhere between 30 to 40 images compared with Fine setting which stores between 15 to 20.

The resolution is 640x480x3-bit and the files can be read directly on any PC/Mac or Atari machine equipped with an HD floppy disk drive.

STiNG 1.15



To access Internet images, download files using the File Transfer Protocol (FTP), chat to fellow Atariists on-line using Internet Relay Chat (IRC) and to browse the World Wide Web you need an Internet account, available from any Internet Service Provider (ISP), suitable client software and a TCP/IP stack.

TCP/IP stands for Transmission Control Protocol/Internet Protocol and is a set of rules which keeps a network running by controlling how information is sent and received. The TCP/IP stack acts as the negotiator between the SP and your client software.

The first and best-known TCP/IP software is the STiNG desktop accessory. STiNG uses the SLIP protocol, which is slowly being phased out in favour of the more modern Point-to-Point Protocol

If you're stuck with STiK, why not get stuck into STiNG with Dan Dreibielbis...

(PPP). Some ISPs no longer support SLIP connections so the need for a TCP/IP which uses the PPP protocol became important. There are currently several available options:

- **PPP Connect:** This is bundled with CAB v2.3

and later but unfortunately is incompatible with all the Internet client applications programmed to work with STiK and, adding insult to injury, it also requires the Magic CS.

- **MINI Net PPP socket solution:** Compatible with STiK clients but requires more than casual knowledge of MINI and Minix to configure properly.
- **STiNG:** Programmed by Peter Rostergater, this package is rapidly establishing itself as the TCP/IP stack of choice for PPP connections. STiNG appears to 100% STiK compatible so it works with existing clients including CAB, MPWise, JTR, AtariIRC and the web.

STiNG (STiK - the Next Generation) can also be used with just about every type of Atari setup including single IOX, Magic CS and Genesis. STiNG can also handle SLIP and CS/LP connections with Van Jacobson compression, so there's really nothing to stop any STiK user switching programs. STiNG is also designed to network machines together using the various serial and IEEE ports of such machine but in this review we're covering its Internet capabilities.

STiNG installation

Proceed as follows:

- Install STiNG.PRG and STiNG.INF in your AUTO folder. STiNG.INF is a configuration file which tells STiNG where its modules and set-ups are stored.
- Ensure STiNG.PRG is towards the end of the running order in your configuration file, especially after the PSACED41 in serial patch routines (recommended by Peter to obtain the best possible performance with STiNG, PWDI, MINI and any

multitasking kernel programs. Use AUTOSHED or other utility to change the actual running order.

- Create a folder called STiNG and into it copy all the modules (files with the .STI file extension), DIALOGUE, ROUTE, INB and CACHE.DNS. The STiNG folder can be located anywhere but STiNG.INF expects to find it in the root of drive C: so if you locate it anywhere with STiNG.INF using an ASCII text editor so STiNG finds it on booting.
- Install the three Central Panel extensions (STiNG.CPL, STiNGPORT.CPL and STiNGPROM.CPL) into your CPL folder where your Central Panel (Control or equivalent) can find them.
- Locate DIALOGUE.APP and its DIALOG, DIALOG, LOCALIZE and LOCALIZE in the same directory if you're running single IOS you can place these files in the root directory of your boot partition and rename DIALOGUE to DIALOGUE so it runs as a desktop accessory.
- Reboot to install STiNG and activate the CPLs.

Getting on-line

Choose your ISP carefully. Compare their rates, payment plans, terms of use, including any long-term contracts and referral policies. Consider selecting an ISP where Atariists are already on-line or, where this isn't practical, ask for a trial period or short-term contract to see if it will work with your computer - watch out for one-time setup fees and find out if this can be waived if you subsequently take out a longer payment plan. Your chosen ISP should provide you with the necessary details to access your account along with details such as the name server and proxy server addresses (designed to speed up connection and download for various services provided by your ISP).

Ask your ISP for an example PPP login script - this should help you figure out the necessary prompts and suitable replies for STiNG's DIALOGUE and DIALOG configuration files. The

STiNG v1.15

Availability

Peter Rostergater's web page:
<http://www.sti.at/~rasterer/sti/~perl/index.html>
Email: perl@polix.atp.at/~rasterer/sti

Atari's Atari's Channel Area Page:
<http://atari.paragon.se/sti/>

Additional help

<http://www.geocities.com/Networld/Armsy/388/>
(this is a repository of tips, tricks, and scripts contributed by users to help other users).

Status

Freeware, but donations accepted

Requires

All Atari, 1Mb memory minimum

STiNG v1.15

alternative way to obtain a login script is to log onto your ISP using a terminal program, such as Connect or Telnet, with an active capture buffer. By following the server prompts you should be able to figure out what each prompt requires. Thankfully, you won't need an ASCII text editor to configure JDDM11.CFG and DM1.SCR because most changes can be made directly from the Dialer program.

You can also configure the Dialer to track how long you've been online to monitor the cost of each online session - remember to save your configuration if you make changes and once you have a working setup make a backup!

You do need to load the DEFAULT.CFG file into an

ASCII text editor to make any modification. There are a number of lines at the end which set how CAB handles proxy servers. If your ISP offers a proxy server add it here or alternatively disable these entries by adding preceding hash '#' characters so they are ignored by STING. Next open the STING Internet.CFG and make two modifications:

- 1) Click on the box marked Active
- 2) Drag the slider down to 10 - this sets the speed STING increases your provider.

After saving and reloading it's time to click on the dialer, activate it, and select the Connect button.



the various internet client software to see what happens and find programs you're happy with.

Personal observations

For those using STING since last October and, compared to STIC, I find it much faster downloading to the various clients, particularly NEWSie and CAB. However, mail uploads via NEWSie or POPWatch take around 15 seconds or so to connect to my mail server, whereas I remember MSX connecting near instantaneously.

I have also found big clients including MCHP and dTP which I could never get working under STIC, work fine with STING. Under STIC these would either not connect to the server or freeze up on my Falcon laptop impairing the problems with earlier releases should try the current release because some problems have been addressed in this release. Another (my preferred IRC client), however, a program which fetches weather information from US airports works and, better, a recently released mail client also works well.

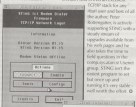
Overall I find STING an excellent

POP3 stack for any Atari user and best of all the author, Peter Rodriguez, is actively supporting STING with a steady stream of upgrades available from his web page and he also takes the time to field questions in the comp.os.atari.us Usenet group. STING isn't the easiest program to set but once up and running it's very stable - well worth the effort.



With the Dialer disabled, you can access various sub-menus and set up the mechanics of your connection, including your login prompts and responses, commands to your modem on starting the dialer, nameservers, and which protocol you'll be using to log onto your ISP. Hopefully my setup examples will set you on the right track...

With a bit of luck the Dialer will connect to your ISP, process your login to prompts, and ascertain your IP number - assuming you have a dynamic IP address. Once you get a successful internet connection you can check out



MIDPLAY



Matthew Bacon and Shuming Lai explore Falcon music territory...



There are no prices for correctly guessing the purpose of this program, but before you turn the page here's the clever bit: not only does MIDPLAY play a MIDI file, it can also generate the final output internally, with up to 16 voices and 24 note polyphony.

The idea isn't new, it was done a while ago on the Sanyo with DPM, from the makers of ZeroX, but a Falcon-enhanced implementation which takes advantage of the DSP-assisted audio system has been a long time coming.

We almost witnessed a commercial realisation of this seemingly elusive Falcon application in 1995, with The Digital Sound Module from System Solutions, but it was a pleasant surprise to come across MIDPLAY.



As a stable mate of Digital Tracker (refer to the Software feature on page 13) it was certainly something to get excited about - over to Matthew.

MIDPLAY is supplied over four High density disks complete with a custom installation program which installs all the

relevant files to your selected hard drive partition resulting in over 170kb of data in total.

Similar to most modern sound modules and expensive synth keyboards, MIDPLAY conforms to a most of the General MIDI specifications including note-wrap, dynamic voice allocation, pitch bend and after touch instructions. This makes it highly compatible with the vast majority of MIDI files available commercially or in the public domain. With great anticipation, I delved into the interesting selection of MIDI files provided. Although most files performed perfectly a few weren't, which was a surprise, and prompted me to experiment with some of my own Custom Score MIDI creations.

I found the interface initially difficult to master but with the help of the label manual and perseverance I was able to find my way around MIDPLAY's features - however my initial impressions contain, for example, the OPTION button is hard to spot among all the information parameters and is not the only one. At least the majority of features are available directly from the main window including the general track transport controls.

MIDPLAY offers good control over individual channels. You can select a different voice/sample to the one selected by MIDPLAY (when the track is loaded), the sample base note - from which other notes are defined relative to and the ability to solo or mute channels in real time - which kept me amused for

some time. However, I would also have liked global and per channel control over the velocity and volume levels.

I found the detailed track information of beats per minute (BPM), bar and time position very helpful indeed. Although MIDPLAY does not currently offer controls such as pan or chorus, typically found on external sound modules, it does provide relatively good control over the track's ambience. For example, it is possible to set the speed at which a velocity message is handled when a note ends (quickly, moderately or slowly).

How does it sound?

The sample bank is currently limited to 8-bit resolution so I won't be selling my truly 16-bit module yet, but if you

stickler with electronic music and cannot justify the expense of a full synth take a closer look.



MIDPLAY

Publisher

SOFTBI

Contact

Email: SOFTBI@I, F-472040
1000000000, France
Tel/Fax: + 33 005 55 63 64 67
Email: softbi@i
<http://www.pera.fr/~softbi/>

Cost

280 FF (around £24) + 28 FF CD
R&P Payment by cash, cheque or bank account transfer

Requires

Falcon, 16bit/200 resolution CD
medium or higher, 4mb memory,
hard drive

Pros

Made well for a first release, unique,
works as a clock accessory, value for
money

Cons

Slightly awkward interface

75%

More System Extensions

Mark Wherry looks at another two utilities to ease your Atari computing.

There's a small, but dedicated, band of Mac programmers who, instead of giving up and switching platforms, continue to deliver new system enhancements. They've often imagined by utilities on other platforms, but they do help keep us all closer to the cutting edge.

THE NEW YORK TIMES

Windows operating systems on which platforms are increasingly dependent on multi-tasking features to enable programs to interact with each other and it's no different on the Atari platform. A multi-tasking OS is becoming increasingly essential. My preference for Mupac! should be obvious from my previous contributions but it clearly doesn't inspire more support than any of its competitors.

11. *Journal of the American Medical Association*, 277:1003-1004, 1997

Wouldn't it be nice if your computer maintained a easily accessible list of all the documents you had recently used? That's the aim of Thomas Hainke's latest protocol called the Document History (DHT) protocol. It doesn't actually create a list itself but makes it possible for programmers to add this capability to their applications.

One practical place to maintain a document history list (DHLL) would be by a program such as Thomas' own Staff file (<http://Staff.it>) - and surprise, surprise! from v7.01 Staff.it indeed is a DHLL server. On loading Staff.it places a DHLL cookie into the cookie jar which contains the ID number of the server to inform other programs where they should send DHLL messages.

the source the name and absolute path of the document and the program in which it is being used.

The server takes this information and adds an entry to the DRI, which, when selected by the user, reloads the file into the appropriate program - almost stuff!

Even better, some popular applications already support the DNET protocol including Call, Inc., and my own (Cidra, Inc.). Although undocumented, the current English SAA/VT *Do* already acts as a DNET server. To activate this hidden ability simply add the line:

```
!dnetserver
```



Source: *Author's calculations*.

GDScript is another new protocol. If you're familiar with Apple Mac machines, you may be aware of AppleScript which enables programs which support the protocol to control the operation of other programs. The GDScript protocol offers similar abilities on our favourite platform.

Again the CMA32api protocol does nothing on its own - it simply defines the way communication between programs should take place.

When an application has established the receiving program supports GEMScript, it can send a GS_COMMAND message via the AIS. This will contain a command along with any required parameters, such as a filename.

The commercial could conceivably be anything the programmer could dream up which throws up a potential problem. If individual programmers dream up their own commercial, it is a total success, as

communication would be impossible. To counter this potential problem, the creators of the GEMScript protocol have created a standard set of commands for programmers to use whenever possible.

Table 1

Imagine one of the programs was an interpreted programming language: if it would then be possible to write a list of instructions, much like a shopping list, and the instructed programs could carry out their instructions autonomously.

Here's an example, using appropriate commands, a script could be written to carry out the following task:

- Log onto the Internet.
- Load C&I, and download a page.
- Print this web page.
- Close and finish.

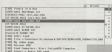
The user would simply move the the

script, entering the URL address at run-time then leave the application to get on with it via C#(http). The potential uses are mind boggling.

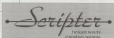
So do we have an interpreted programming language which makes this all possible? Yes, it's called Scripter, programmed by Holger Weiss (ol@H-Online.Gmx) and Christian Weipert. Scripter is published by Applications Systems Heidelberg (ASH) and available now in German. As usual there's no English release available but I expect the System Software will be on the case.

Can a brighter reader a stronger argument of

Scripture is available for download from A&P's web pages and just in case you're wondering, my cover story will clearly also offer similar revelations. — in *Profile* 



Any program that supports the CH32 protocol should send a CH31_AID3 message to the server whenever a user loads or saves a file. This message tells



ST STE FALCON JAGUAR LYNX GAMES

[illegible]

Railways Development Ltd	24.12
The Very Best of Adult Books	25.12
Telcel	25.12



DATE RECEIVED: 01/20/2008
TIME: 10:00AM

[illegible]

0001-0001-0001-0001

100

- Support graphics program for all most common file formats
- Basic functions complete manipulation of picture clipping and projection of freely defined objects onto framework structures
- 16 different color patterns - continuous pattern in low colour resolution
- Three model strategies in window mode available

REMARKS:

- Colour printing to 300/300 dpi/cm, 24bit, RGB, CMYK print
- Frame print up to size DIN A3/maximum conventional A3 printer up to DIN A3 with 600 dpi/cm

[illegible]

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

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00000000000000000000000000000000

Direct replacement for C2000, supports 3 types of Flares, Bluetooth, Spread, Two Type and Class. You can use any one of all three types at any time.

Want to view any of the three then use Spider which will also install the three for you. Issue on using C2000 for version synchronization like Spider is NOT and they it seems you will not take advantage of the current features. Spider is also compatible with many C2000 and other monitoring environments. Spider comes with Spider Control

QUALITY

Lipogenesis from gaseous substrates

TAKES WHITE 2003.100

Superb round Provençal tile all hand fired, complete with spall chips and various built in patterns. Perfect for most major projects. Contact for more details on these tiles.

[illegible]

Journal of Management Education 35(10):1107-1120

STUDIO PHOTO

For all those machines, this is a complete retouching program allowing you to paint with virtually any colour, has specific tools to affect an entire image or even manual zooms and decisions and provides a zooming program. Manipulate all types of images from masters (1-bit) to 24-bit colour images, zooms of 1000x available.

[illegible]

4044117

Find us with having to test 2-different programs to access the Internet? There's Microsoft, Netscape, Web, Mail, News and FTP all in one package. More available online.

[illegible]

12572 • J. Neurosci., September 24, 2008 • 28(39):12566–12572

173 High Street, Second
East ME2 4TW
Tel: 0755 566646

TABLE 1. *Salmonella* serotypes and their percentages in the isolates

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

[illegible]

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Age Group	Percentage
18-24	~15%
25-34	~25%
35-44	~15%
45-54	~10%
55-64	~10%
65-74	~10%
75-84	~10%
85+	~10%

[illegible]

1994-1995 2000-2001 2006-2007 2012-2013 2018-2019

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

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Year	1990	1991	1992	1993	1994
1990	1.0	1.0	1.0	1.0	1.0
1991	1.0	1.0	1.0	1.0	1.0
1992	1.0	1.0	1.0	1.0	1.0
1993	1.0	1.0	1.0	1.0	1.0
1994	1.0	1.0	1.0	1.0	1.0

[illegible]

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	



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1992: 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132, 134-135, 137-138, 140-141, 143-144, 146-147, 149-150, 152-153, 155-156, 158-159, 161-162, 164-165, 167-168, 170-171, 173-174, 176-177, 179-180, 182-183, 185-186, 188-189, 191-192, 194-195, 197-198, 200-201, 203-204, 206-207, 209-210, 212-213, 215-216, 218-219, 221-222, 224-225, 227-228, 230-231, 233-234, 236-237, 239-240, 242-243, 245-246, 248-249, 251-252, 254-255, 257-258, 260-261, 263-264, 266-267, 269-270, 272-273, 275-276, 278-279, 281-282, 284-285, 287-288, 290-291, 293-294, 296-297, 299-300, 302-303, 305-306, 308-309, 311-312, 314-315, 317-318, 320-321, 323-324, 326-327, 329-330, 332-333, 335-336, 338-339, 341-342, 344-345, 347-348, 350-351, 353-354, 356-357, 359-360, 362-363, 365-366, 368-369, 371-372, 374-375, 377-378, 380-381, 383-384, 386-387, 389-390, 392-393, 395-396, 398-399, 401-402, 404-405, 407-408, 410-411, 413-414, 416-417, 419-420, 422-423, 425-426, 428-429, 431-432, 434-435, 437-438, 440-441, 443-444, 446-447, 449-450, 452-453, 455-456, 458-459, 461-462, 464-465, 467-468, 470-471, 473-474, 476-477, 479-480, 482-483, 485-486, 488-489, 491-492, 494-495, 497-498, 500-501, 503-504, 506-507, 509-510, 512-513, 515-516, 518-519, 521-522, 524-525, 527-528, 530-531, 533-534, 536-537, 539-540, 542-543, 545-546, 548-549, 551-552, 554-555, 557-558, 560-561, 563-564, 566-567, 569-570, 572-573, 575-576, 578-579, 581-582, 584-585, 587-588, 590-591, 593-594, 596-597, 599-600, 602-603, 605-606, 608-609, 611-612, 614-615, 617-618, 620-621, 623-624, 626-627, 629-630, 632-633, 635-636, 638-639, 641-642, 644-645, 647-648, 650-651, 653-654, 656-657, 659-660, 662-663, 665-666, 668-669, 671-672, 674-675, 677-678, 680-681, 683-684, 686-687, 689-690, 692-693, 695-696, 698-699, 701-702, 704-705, 707-708, 710-711, 713-714, 716-717, 719-720, 722-723, 725-726, 728-729, 731-732, 734-735, 737-738, 740-741, 743-744, 746-747, 749-750, 752-753, 755-756, 758-759, 761-762, 764-765, 767-768, 770-771, 773-774, 776-777, 779-780, 782-783, 785-786, 788-789, 791-792, 794-795, 797-798, 800-801, 803-804, 806-807, 809-810, 812-813, 815-816, 818-819, 821-822, 824-825, 827-828, 830-831, 833-834, 836-837, 839-840, 842-843, 845-846, 848-849, 851-852, 854-855, 857-858, 860-861, 863-864, 866-867, 869-870, 872-873, 875-876, 878-879, 881-882, 884-885, 887-888, 890-891, 893-894, 896-897, 899-900, 902-903, 905-906, 908-909, 911-912, 914-915, 917-918, 920-921, 923-924, 926-927, 929-930, 932-933, 935-936, 938-939, 941-942, 944-945, 947-948, 950-951, 953-954, 956-957, 959-960, 962-963, 965-966, 968-969, 971-972, 974-975, 977-978, 980-981, 983-984, 986-987, 989-990, 992-993, 995-996, 998-999, 1001-1002, 1004-1005, 1007-1008, 1010-1011, 1013-1014, 1016-1017, 1019-1020, 1022-1023, 1025-1026, 1028-1029, 1031-1032, 1034-1035, 1037-1038, 1040-1041, 1043-1044, 1046-1047, 1049-1050, 1052-1053, 1055-1056, 1058-1059, 1061-1062, 1064-1065, 1067-1068, 1070-1071, 1073-1074, 1076-1077, 1079-1080, 1082-1083, 1085-1086, 1088-1089, 1091-1092, 1094-1095, 1097-1098, 1100-1101, 1103-1104, 1106-1107, 1109-1110, 1112-1113, 1115-1116, 1118-1119, 1121-1122, 1124-1125, 1127-1128, 1130-1131, 1133-1134, 1136-1137, 1139-1140, 1142-1143, 1145-1146, 1148-1149, 1151-1152, 1154-1155, 1157-1158, 1160-1161, 1163-1164, 1166-1167, 1169-1170, 1172-1173, 1175-1176, 1178-1179, 1181-1182, 1184-1185, 1187-1188, 1190-1191, 1193-1194, 1196-1197, 1199-1200, 1202-1203, 1205-1206, 1208-1209, 1211-1212, 1214-1215, 1217-1218, 1220-1221, 1223-1224, 1226-1227, 1229-1230, 1232-1233, 1235-1236, 1238-1239, 1241-1242, 1244-1245, 1247-1248, 1250-1251, 1253-1254, 1256-1257, 1259-1260, 1262-1263, 1265-1266, 1268-1269, 1271-1272, 1274-1275, 1277-1278, 1280-1281, 1283-1284, 1286-1287, 1289-1290, 1292-1293, 1295-1296, 1298-1299, 1301-1302, 1304-1305, 1307-1308, 1310-1311, 1313-1314, 1316-1317, 1319-1320, 1322-1323, 1325-1326, 1328-1329, 1331-1332, 1334-1335, 1337-1338, 1340-1341, 1343-1344, 1346-1347, 1349-1350, 1352-1353, 1355-1356, 1358-1359, 1361-1362, 1364-1365, 1367-1368, 1370-1371, 1373-1374, 1376-1377, 13

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Digital audio

Music by numbers with Shiuming Lai...



"Digital" has become something of an essential tag in the world of consumer electronics during the past decade. Although much of the thunder of its entry into the domestic market was stolen by Compact Disc, this was done so by revolutionizing a firmly established application - that of audio reproduction.

The fact is, home computers, which existed as something relatively new for some years before CD, and virtually all computers that have ever been conceived, are also digital. It's only since the early 1970s that some aspects of home computing technology have caught up with, or surpassed, the specifications set out for their equivalents in more specialized hardware. PC expansion cards began by offering CD-stimulated audio, followed by Atari's effort, which not only imposed on this technically but integrated it into the FalconCD computer architecture.

More recently, the leaps and bounds made in microprocessor performance have helped bring reasonable digital video to the masses. Check out the home movie making section of your local electronics department and you'll see a revival of digital lines taking shape, while Digital Versatile Disc (DVD) has been running around like a headless chicken ever regional coding and audio standards. Digital television broadcasting is set to make its debut this year too, so with the future surrounding this new era, you could be forgiven for thinking digitally-upgraded technology is not exactly a mature concept. If you did, you might also be surprised to learn audio recording and playback equipment of this nature was first demonstrated to the general public, as far back as 1967.

In this article of a serial series, we'll be looking at the principles of digital audio.

Digital recording

Analogue recording of any type is a physical representation of some quantity which is hence analogous to its real world counterpart. In audio, this is the straight translation of air pressure waves to a storage medium, be it magnetic tape, or vinyl disc. The waves directly influence the writing mechanism rotating a diamond or sapphire tip while it cuts a groove, in the case of vinyl recording) so it is desirable, for the highest possible sound quality, to ensure the signal path throughout the system is as clear as possible.

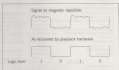
Upon playback, many problems can arise from the dependency on the physical condition of the recording medium and accuracy of the transport mechanism. Tape is prone to stretching and drop-outs, vinyl is useless once scratched and fluctuations in the running speed of either manifest themselves in the form of inconsistent tuning. On top-end equipment these problems have been almost engineered around but at no insignificant cost.

Digital audio was developed to bypass these restrictions of analogue systems, achieving this by first converting the sound into a discrete structure, so it may be stored logically as opposed to physically. The idea is staggeringly simple and removes a lot of previous worry in the area of storage and transmission. The critical factors governing the fidelity of sound signal reproduced are now more firmly concentrated at two points: the quality of analogue-to-digital (A/D) acquisition and digital-to-analogue (D/A) reconstruction conversion processes. This is what computer manufacturers, Atari included, usually don't tell you when claiming "better than" or "CD-quality" sound. It may hold true while the sound is in the digital domain but what you get to hear depends most fundamentally on the individual device performing that conversion. No amount of techno-wizardry can compensate the

ill effect of inferior A/D-D/A, so for professional use, this is why engineers and musicians spend extra money on quality offboard converters.

Information integrity

Literally anything which can store a sequence of numbers can be used to store digital audio (or video, for that matter) and that includes the human brain, marks on a sheet of paper, even bags of peanuts, though more commonly a magnetic or optical disc. Once in the digital domain, it's feasible to use lower grade conductors for transmission, yet without affecting the presence of digital data. That's the great advantage of digital storage - at the lowest level, bare two binary numbers a piece of information is there as it isn't. Likewise in a digital tape recorder, even if the signal is obscured by noise on the tape, within a threshold, the digital levels of logical one and zero can be easily fully recovered and the tape noise doesn't enter the system (figure 1). It is this quality which gives digital technology its robustness.



▲ Figure 1: Digital system's tolerance to noise on recording medium

This brings us neatly to duplication without degradation, another digital exclusive. If you trace a picture by hand, then trace another copy from that, and another from that, by the time you reach, say, the thousandth generation copy, no matter how carefully you traced, it would be noticeably different from the original image. On the other hand, if you traced it on graph paper, you could theoretically make infinite generations of copies, all identical to the first. You could also transmit it to the other side of the globe by whatever means, such as dictating the coordinates

of filled squares over the telephone, and still end up with the identical picture at the other end (provided the same scale of graph paper is used).

Analogue-to-digital conversion

Delicious acts of electronically "installing" portions of other people's work in the record industry have familiarised the term "sampling" to many a music lover. This generically refers to the process of converting a sound into digital form, but technically is more specific than that. Several waves have transpired in time and magnitude, both of which are continuous variables. Sampling is the conversion of continuous time to discrete time, while at each sampling interval the level of the sound wave (amplitude) must be measured and converted to a discrete value which can then be stored in a digital memory device such as found in your computer. This is known as quantisation, though not to be confused with the sequencing term which does refer to time divisions.

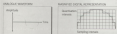
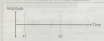


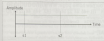
Figure 2: Analogue and digital domains

Figure 2 shows how a digital representation is merely an approximation, exaggerated here for clarity. For this series we will only consider linear quantisation, where the quantisation interval (Δ) is equal for the entire range. Most-linear quantisation systems based on logarithmic companding curves (1A-law" or "mu-law"), there are two main types are used for data bandwidth reduction, or increasing dynamic range depending how you look at it, and are beyond the scope of this article.

SAMPLING INTERVAL EQUAL TO WAVE FREQUENCY



RESULTING OUTPUT AFTER D/A CONVERSION



To achieve high quality with digital recordings let's go back to our graph paper analogy. Like a graphics display, we talk of resolution when discussing the extent of information depth recorded by some digital system. The smaller the discrete components (squares on paper or pixels on screen) the more accurately you can represent a continuous quantity. The audio sampling interval should be small so it must be done many times very quickly, the frequency being measured in Hertz (Hz, events per unit time, a second). It's also necessary for the quantisation interval to be small.

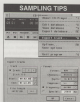
Compact disc uses a sampling frequency of 44.1KHz (44,100 samples per second) with 16-bit quantisation resolution, giving 65,536 possible discrete amplitudes. (Ed McGloin's explanation in AC#1 p27 "How do they do that?" explains this well. Dynamic range, mentioned earlier, is determined by the quantisation resolution, and is simply the range between the smallest and largest signal strengths generated by audio equipment, measured in decibels (dB), the unit of sound pressure change. In digital systems such extra bit of resolution increases dynamic range by a theoretical unit.

Evening with the quality of the DAC, so the linear 8-bit sound of the S1e has a dynamic range of 48dB while the Falcon's 16-bit CODEC chip has a range in excess of 70dB, enabling it to handle more subtle signal nuances and produce a far more realistic sound.

Another aspect of sound reproduction we must consider is signal-to-noise ratio (also dB). All recorded sound has some background noise present originating from the recording and playback process. The higher the resolution of a digital system, the better its S/N ratio, as the signal masks out the noise.

Nyquist's theorem

An important rule for digital recording, this stipulates the minimum sampling frequency to be used, should be at least twice that of the highest frequency component in the sound you're recording. The reasoning is quite simple - a single cycle of any kind of wave, by definition, consists of two complementary phases, so it must be sampled



All digital recording systems need to filter the sound before A/D to remove frequencies above the Nyquist limit. This job is delegated to what are known as low-pass anti-aliasing filters; inexpensive 8-bit sampling hardware for the S1e incorporates such filters but they usually cut off quite low (just 50KHz in some cases). When sampling sounds for S1e/TT computers in particular, it's advisable to use a 16-bit sampler if you have access to one, and convert the sounds down to 8-bit. The enhanced sound chips of these machines are capable of a frequency bandwidth well beyond that offered by many 8-bit samplers.

MSD Systems' Baylay II is still available now, though you can just as easily use the facilities of a Falcon or even an multimedia PC.

If you make intensive use of sample CDs, invest in a CD-ROM drive and Extended Pro, which allows 80% dump of the data on a CD. Equally applicable to Falcon owners, this method provides the best possible quality because it bypasses the inevitable degradation which occurs from transposing the analog/digital boundary, even if 16-bit is used throughout. Before making off to buy the cheapest CD-ROM drive you can get, because that not all drives support the command set for this feature, as check first. Ask for CD-ROM or Digital Audio Support... There is still no official standard for this command set as far as SCSI-2 but InterData supports most current implementations from major manufacturers like NEC, Pioneer, Sony and Toshiba.

at least being in order to capture some information about both phases. In figure 3, you can see a sampling frequency equal to the sound being recorded only

Figure 3: Principle of Nyquist's theorem (also known as Shannon's Theorem)

In practice, when recording real music, which typically contains a huge range of frequency components, failure to comply with Nyquist's theorem induces a phenomenon called aliasing. This is a difference-frequency noise relating the sampling and sound source frequencies (heard) as an unpleasant whining or whistles in the resulting signal. Look for the sampling tips listed on the previous page.

Watch this space

Next time will be a more in-depth look at sampled sound and the SBC. ☺

TERMINOLOGY

"Sample" at the lowest level means a single word (number of bits) representing an amplitude measurement of a sound - although a collection of these samples describing a sound over time is also called a sample.



The latter is generally what people mean when talking of samples.

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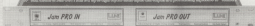
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FILES

Denesh Bhabuta gets on his soapbox...



The Internet is becoming more useful by the day with on-line stores popping up all over the place. Companies like Apple have all but abandoned high street marketing in favour of their "virtual" Internet Apple Stores where you can browse the latest models, select the exact spec of the machine you'd like and pay for it there and then. Here's a few examples:

- Apple: <http://www.apple.com/>
- Dell: www.dell.com
- Download Shop: www.download.shop.co.uk
- Egg Registration Service: www.egg.com

All the examples above allow instant payment methods and fast turnaround of your order.

So what's in it for Atarians?

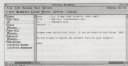
Silly nothing at the moment which is why I'm throwing down the gauntlet to Atari dealers. It's easy enough to come up with excuses - there's no software to do this, how much will it cost, not enough Atarians are on-line, it isn't secure, blah, blah...

The software is certainly available right now, in the form of CASH, Light of Adames and WinUpdate. OK, they'll need updating to offer secure transactions but these facilities are already offered by Internet Explorer and Netscape and it's a chicken and egg situation. I AGH updated CASH to

support secure on-line transactions then updated a virtual store I'm sure a lot of us would use it, or are I dreaming? No one can doubt better and cheaper Internet access methods will continue to see growth in on-line usage and they'll be other companies taking advantage of the marketing opportunities. I'll certainly be creating an on-line store for

CyberStrider services in the near future and I'm constantly on the lookout for ways to make my web site more user friendly - so keep an eye on <http://www.cyberstrider.org/>

To infinity and beyond!



Back in CyberStrider country and the first really exciting project I have come across in a long time is an email client program called Indira by Cyberman in The Netherlands.

Indira will eventually be released as a commercial program but you can download usable beta versions right now and give it a try for yourself: <http://www.worldwidesoft.com/~teemsoft/>

The proposed final feature list is mouth watering and would offer a professional quality email client to rival Eudora and Outlook on the Mac/PC platforms.

Indira works with STRIDERS and includes a relational feature for email

contacts which are a bit like address files can be attached to emails using the built-in HTML and MIME options. Configuring Indira is fairly straightforward and user friendly. The closer feature has to be the man with which you can easily store, organise and access your email in folders within the program. Indira is coded in pure assembler and the new speed is demonstrated by the speed processes within the program itself.

That's MIMIE to me



MIMIE is an easy to use GEM based package to read Usenet news, send and receive email, browse web pages in text only, and transfer files using the FTP protocol and has just been updated to 4.0.0.

There's been a serious bug hunt which makes this release the most stable release

yet. Amongst the new features there's the ability to highlight URLs within emails and news articles, and by selecting these links, open the link in the text browser module. The HTML parsing of the browser has been improved and

offers better support for URL handling. MIMIE is a most fun-to-download for anyone using previous releases, grab your copy from:

<http://www.primenet.com/~rejsrd/>



▲ MIMIE stores you in the files in and from daily website sites.

Basic BASIC!

Heard the one about the man and his keyboard? Paul Jones reveals all...

Fields of glory

Last issue I mentioned the default edit field with our Register FDC dialog. This was passed in the function:

```
dummy=Fil(dialog  
(reglist, regcode))
```

Where regcode is the name of the edit field we're interested in - it's the place for editing the registration code.

When this line is executed, the dialog is displayed with an editable text field following. Code which you can enter text - give it a try. The [Esc] key can be used to clear the field.

This section of the program displays the dialog box, allowing the user to enter a key then press REGISTER. We then check what the user typed and compare it with the real key in our program code. The moment the user presses the REGISTER button, we can display a confirmation alert box informing the user whether the key they entered is correct or incorrect.

```
case reg:  
  data=FDialog (reglist, regcode)  
  if button=button THEN  
    select case reglist  
      case=Register: press= (regcode)  
      if text=FDialog (regcode)  
        if text=press THEN  
          (key=FDialog (alert  
            ["Y","N"] ["Key correct"] )) OK  
        else  
          (key=FDialog (alert  
            ["Y","N"] ["Incorrect key"] )) OK  
        end if  
      end if
```

Here's an explanation. The FDialog function displays the dialog and waits for user input. The button pressed is

returned in button. If the button pressed is the register button (named reglist) then we need to find out what the user typed as the registration code. We do this using a function called press, which takes the object as the parameter. First, we have to say which dialog we were looking at and this is where the Select case call comes in. It includes a more detailed explanation of Select case in a future article.

Remember to add extra STATs to declare any variables HiSoft BASIC doesn't recognise.

We'll take a closer look at text input checking next issue - the "Look me harder" lawsuit offers a few clues to the topics we'll be covering.

Stop the press!

The following routine can output an entire file to the printer. First it opens a file called MYTEXT.TXT to read and gives it a handle (name).

```
case pr: i  
  open "MYTEXT.TXT" for input as #1  
  repeat  
    line input #1, as  
    print as  
  loop until eof (#1)  
  close #1
```

There's an example MYTEXT.TXT file on the Reader Disk but any ASCII format file will work so long as it's placed in the same directory as the program executable. We then repeat the following steps:

- 1) Take text from MYTEXT.TXT
- 2) Send line of data to the printer port until there's no more data to output on the "Send Of File" (EOF).

marker is reached. After all the data has been sent to the printer, the file is closed.

More Basic BASIC in the next issue, but please get in touch with us if there is anything you want to see covered in the tutorial section. ☺

ON THE READER DISK

Shoreware delays

Last issue we talked about the theory of shoreware delays/program bars and you'll find some commented examples on the Reader Disk.

SPECIALIST DISK

HiSoft BASIC Usual Routines & Documentation Guide

A specialist Reader Disk, compiled by Paul Jones, to accompany these tutorials is available. The disk includes:

- ▶ All the previous HiSoft BASIC materials, images and source code
- ▶ Libraries: GEMVCL, Tchart, HiWorld, MODPLAN, WaveProc, GOFUS and how to write your own library.
- ▶ Mostly BubbleGEM, WA protocol, Drag&Drop, multistacking screens, latest GEMVCL.BM file, P80 Flaps.
- ▶ Other useful routines including: sprite handling, blind class and loads of source!

Refer to page 9 for ordering information

LOOKOUT HACKERS!



▲ Here's a section of compiled code loaded into a disk editor, notice the characters "Register" are clearly visible in the right hand section surrounded by anonymous code - easy prey for hackers!

When you select the compile option, your source code is converted into machine code which your TOS computer can execute directly from the diskette. This means the source code no longer has to be loaded and run from within HiSoft BASIC.

However, strings remain visible in the source code, for example:
IF text="REGISTER" THEN...
can be read using any disk editor which is an open invitation to any hackers traveling through your source code. The solution is to encrypt passwords or other sensitive data and next issue we'll take a closer look at string manipulation.

Suggestive Remarks

Mike Kerlake's back with ideas for printer drivers and how to get help and advice from fellow Atari users...

Atari computers have until recently, usually been able to work with standard peripherals by simply plugging them in. The arrival of cheap "Windows only" printers with few, if any, user-operable buttons and switchless lenses, Atarians out in the cold - or are they?

Windows only printers are controlled by software which sets font styles, sizes, print quality and so on. Reader Pete Smith in Sheffield and Colin Ballance in Scotland reckon Atari programmers could create a desktop accessory to feed suitable Windows commands to printers from Atari machines. Imagine each supported printer has its own configuration file to send the appropriate control codes. For example, a Desktop driver could offer: *Reset, Load/Save paper, Landscape/Portrait, Compressed On/Off, Fast to use, Clean print head, Draft mode On/Off*.

Colin Ballance is prepared to assist anyone undertaking the project with suitable graphics. If you fancy having a go at the project let us know and we'll put you in touch.

Atari Computing Floodhows?

In the good old days there were plenty of shops, magazines, shows and fellow enthusiasts around to assist beginners or anyone needing specialist help and advice. Nowadays it's much harder to find help but it is out there - all you have to do is ask.

- Get online. Day-to-day help is available from Atari friendly bulletin boards (BBS), CIX conferencing and Internet Service Providers (ISPs) which offer Usenet access to comp.sys.atari.
- Join a local user group. There's one near most of you - and if there isn't you could consider starting one yourself.
- We're working on a plan to offer a directory of people prepared to offer help and advice to other readers by phone or email. (see box out)
- We're also looking into the idea of putting together an Atari Computing floodhow to visit local user groups or organise separate events in pubs or village hall around the country. The idea we'd turn up with a selection of

hardware and experts to demonstrate how to make the most of your machines and offer everyone a chance to get hands-on experience with the latest software.

We'd really like to hear your opinions and ideas. If you're prepared to help out at a suitable machine or if you'd like a floodhow near you write in and tell us why you deserve one...

Mike Kerlake

CAN YOU HELP?

As part of our plan to offer a directory of people prepared to help other Atari users with advice and guidance we would like to start the ball rolling now.

Therefore, if you are knowledgeable in any particular aspect of the Atari such as DTP, disk, graphics, games, the internet or something else and are prepared to freely help other users by post, phone or email then please contact us now. You won't be paid but it is expected that anyone wanting help will call you direct or will cover any costs you incur helping them.

Please send your offers of help to the usual editorial address or email Mike Kerlake at: mike@atari.computing.com

STOS Corner

ON READER DISK

GEMMA goes PG

Ped Jones has recently informed me that due to the other members of the programming team being able to spend less and less time on GEMMA, he has now released the latest version of GEMMA (1.72) as PG, including the source files and they're both on the Reader Disk. If you would like to get involved with ongoing GEMMA development, get in touch with Ped by email at: ped@jones@erel.net

ON READER DISK

Network for STXQ/STWQ

Network is a new STOS extension which enables STOS and HSBQ BASIC programs

to interface with STXQ/STWQ and access the Internet! This means you can use STOS programs to send or collect email, transfer files using FTP and so on. Theoretically you could program a multi-player game using the internet to connect between players! The HSBQ BASIC version is on the Reader Disk.

Falcon Extensions Update

Anthony Hardin has recently restructured his Falcon extensions to not only add more commands, but to group them more logically and make them much more compatible with ST and STE machines. The following extra facilities are now available:

- The start extension now has a "start clock" command which lists all of its commands and a new version of the "go start" command.
- All of the generic commands have been put into one dedicated extension. New commands for loading GEM/GOH fonts now make the old FONTGOH accessory redundant. A new utility FONT/JOH, allows more than one GEM font to be stored in a single memory bank. This extension

also has a command for command.

- The Tracker extension now allows the displaying of an oscilloscope of the currently playing tracker read.

There is a new Sprite Engine under development. It is primarily for the Falcon, (especially it's 440x280/240 by 16 colour video mode), but is also going to be compatible with the STS too. Anthony is also hoping it will eventually be able to work in 344 colour modes as well. The new engine is compatible with standard STOS sprite banks and may eventually use the linker where available.

Hopefully we'll be able to include the interpreter versions of some of the updated extensions on next issue's Reader Disk. In the meantime if you'd like more information you can contact Anthony at: 45 Wytham Road, Newbold, Cheshire, Derbyshire, S41 5BP

Mark Miller

STOS

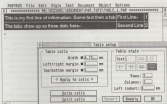
Tables are Fun!

papyrus

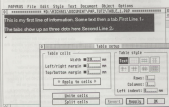
Tables in Papyrus are like a kitchen table, seemingly simple and functional but useful for a wide variety of purposes. Michael High explains...

My old dictionary provides the computer version. It defines a table as a document as "a compact scheme of statistical information". On a typewriter, they are created by setting up a suitable tab line and entering the information separated by pressing the tab key. If your text information is short enough that it never needs to take up more than one line within a column, you can do things this way in Papyrus. Just review the last tutorial on the use of paragraph styles, and away you go. However, there is a better way.

Tables are made up of rows and columns of information which can be either text, numbers or even pictures. The intersection of a row and column is called a cell. It is possible to create an



▲ Figure 1, automatic column widths



▲ Figure 2, the word is in the table

empty table and then fill it with data. However, experience dictates the best way to create an effective table is to follow this step by step approach.

GOOD NEWS!

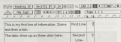
The powerful features of this program which are being explained in this series of tutorials have been there since Papyrus V3 but it's still worth upgrading to the latest version to make the most of forthcoming materials.

Step 1 - Enter the data. I have typed in the information I want to form into a table by separating each column with a "tab" and each row with a "return", just as I would have done on a typewriter. I have then selected all the data I have entered and opened the Table setup dialog. The Table style looks at the selection and sees that it is currently text with two rows (from the two returns) and three columns (separated by the two tabs).

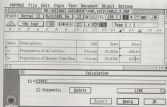
Step 2 - Convert the text to a table. Clicking on one of the seven table style choices other than "text" converts the selected text to a table, with the chosen default lines separating the information. Figure 2 shows the "Times small everything" option being applied. Papyrus automatically works out the best column widths.

Step 3 - Make any final edits to the data. Data editing is best done at this stage. Pages 179 to 181 of the Papyrus manual explain in detail how to move around a table. The best way to master this is to create a few tables and play with them. One thing that deserves a little more clarification is the deleting of rows. The (Control)+(Delete) function only applies to the row of text within a cell, not the row within the table. You can select the entire row and delete it, though it seems that once you add formatting to the table, this facility is lost.

There is no button to recalculate the column widths, should you modify the text. However, to do this, all you have to



▲ Figure 3, we have the text wrap



▲ Figure 1. Calculations made easy

do is select the entire table, bring up the table setup dialog, select Table style

'test' to convert it back to table separated data, select Apply, select the table style you want and then click on OK.

Step 4 - First turn the column widths, Figure 2 shows the effect of altering the column widths. See how the table automatically wraps the text to suit the new column widths and adjusts the row heights accordingly. This is the heart of the power of Tables, the ability to reformat information in multiple columns whilst keeping the rows aligned. Notice that in converting the test to a table, Papyrus removed the Paragraph style, whilst leaving the Text style intact. That is because in tables, the paragraph margins are replaced by the cell margins, which are set in the Table setup dialog. It is possible to continue to use Text style tags within tables.

Commercial benefit Before moving on to the fun and games of cell manipulation and formatting, a brief word about calculations. Tables look like

spreadsheets, and Papyrus has always had built in a powerful set of calculation tools. These get a brief mention on page 186 of the manual and do not even get listed among the features on the cover of the box. This is surprising, as I have found them to be simple and effective to use. The Reader Disk contains a file that gives an explanation of the different functions, as well as an example template that uses them.

If you set up your screen as Figure 4, it is easier to see how these calculations work as you move round the table. In the way, this example uses the very powerful cell formatting function which is only detailed on the Reader Disk file, and despite what this example might imply, AC contributors are not paid for their efforts!

Step 5 - Apply any cell manipulation.

Cell manipulation consists of either splitting or joining cells, having two principal uses. Firstly cells across the top or bottom of the table can be joined to create titles or footers. Secondly cells up the side can be joined to create group headings. This is particularly handy when

the orientation of the text within the joined cell is changed.

Cell splitting is for the rejoining cells that have previously been joined. The information as to how to split the selected cells comes from the adjoining cells, so you can not split previously unjoined cells.

Step 6 - Add any special formatting of the cells. Here the only limitation is your imagination and the resolution of your printer. Colour users

can mix text of one colour with a background of another with a third colour for the boundary lines. If you have one of the recent generations of VGA digital monochrome laser printers, you can get some effective 3D effects by combining grey backgrounds with light and dark grey boundary lines. Some examples are included on the Reader Disk.

The method of selecting the cells is different to that for selecting other boundaries. To select a cell, set the text cursor in the cell and drag it to another cell. To select the original cell only, drag the cursor back inside before releasing the mouse button. Selected cells invert their colours.

To select boundary lines you use the arrow cursor, a click selects an entire boundary line, while a (Control)+click selects the line segment for a single cell only. Holding down the (Shift) key enables you to toggle the selection status of any line.

Next time...

We will have some fun with graphical objects to create DTP layouts. My thanks to those who emailed me after the last tutorial. Perhaps we will have enough material for a readers' tips column in AC185. ☺

Michael High

michhigh_high@bt.com

ON THE READER DISK

And there's more...

The Reader Disk includes some example files to accompany this tutorial so turn to page 18 to order a copy! If there are any topics you would like covered drop me a line, on disk in ASCII or Papyrus format, to the editorial address.

TIDY TIP

From the Production Team...

Papyrus is able to import many graphic files using the GEM module system. However, only IMG and GEM files are saved within a document, all other format files are located by their path info being held in the document. If you move these graphic files at any stage then Papyrus will prompt you for a new path when reloading a document, however this not only takes extra time but can lead to completely missing files. Therefore it's a good idea to group all graphic files for a particular job together in a folder together with the actual PAF document file and load them in from this location. If you ever have to move the folder, at least everything will be kept together.

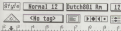


Table Heading in joined cells		
Group A	Team 1	Passed
	Team 2	Failed
	Team A	Approved
	Team B	Rejected
Notes	Some footnotes in joined cells	

▲ Joining cells and relating text

User Group News

Federated Trial Atari User's Group (FTAUIG)

The Federated Trial Atari Users' Group have been meeting on the last Wednesday of every month (except July and December) for over two years.

The next in Greensboro, North Carolina, USA, at the Talk South Center. We really enjoy our Atari. Anyone is welcome attend our meetings free.
 Doremy Barinas, president
 Mail: C/O Keith Pulp, 5850 Bean Mountain Road, Winston Salem, NC 27105, USA.
 Tel: 1-336-733-0883
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 rbarnell52@paganix.net

Toronto Atari Federation



Sam Bratolova, TAF Vice President

Our December meeting saw a demonstration of E-Magic Logic 2.5 by our membership desk, Martin Herwald. With such a full-featured program as Logic it is could well take literally days to demonstrate its many capabilities. However, Martin happens to be a music teacher in the Ontario school system, and gave a very comprehensive and easy-to-follow demo concentrating on its scoring abilities, as well as playing back a number of contemporary and classical MIDI files.

Our January meeting, too, in the new year with a very important topic - getting on the internet. Not every very lucky to have Quebec native and Atari enthusiast, Martin-Éric Racine, come all the way from Montreal to put on what many of our members said was the best presentation TAF has hosted in a long time.

Martin-Éric is a beta-tester for Alexander Clausen's C48 as well as a number of other SMD/SMD related

internet clients, and put on a very well-presented talk tonight on his inability to get a phone line in the Rose-Rosars.

Compared to that triumph, February's meeting turned out to be a real comedy of errors. Material as a demonstration of the hottest Falcon and ST games, it got off to a late start when we couldn't find the cable for the graphics tablet it had helped out another club, the Personal Computer Club of Toronto, the previous night when the cable to their graphics projector turned out to be incompatible with their guest speaker's laptop - it turned out to have been placed in a not-so-apparent zippered part of the case. And then the featured program of the night, the demo of BLUENHOC, refused to run on the club's Falcon.

However, the big hit (turned out) to be Starball, the incredible pinball game - our club library reported a run on that particular game during the break.

We have many events planned for the next few months including a look at building SCSI-based hard drives, a demonstration of Cubase Audio 76 (April 1 still running on a Falcon performing integrated hard disk recording and sequencing, presented by Club Cubase) and a presentation by Michael Barkley of Sony's Software (May 20th) - the US' most popular Atari PC/Shareware house, who's sure to have some entertaining tales to tell.

Toronto Atari Federation meetings are held on the Third Wednesday of the Month in the North York International Community Hall on the Lower (or Concourse) Level of the North York City Centre Library at 1518 Yonge Street at Parkhome Avenue.

Via public transport take the TTC's larger University-Spadina line to North York Centre Station.

Meetings start at 7.30 pm, \$2.00 to non-members. Membership costs \$35 CDN a year which includes a subscription to the club newsletter Phoenix and full use of the TAF on-line BBS. TAF membership is Atari support! Contact:

Email: drat@telnet.com
 Tel: 416-740-6116
 TAF Online BBS:
 416-421-4099
 TAF Home page:
 http://www.intellog.com/~schlot/taf/
 TAF PHOENIX page:
 http://www.solar-net.com/~netlog/
 phoenix.htm

Cleveland Computer Club



This was a meeting of two halves - and we're not talking football. Much meeting saw the successful connection of a Falcon to the World Wide Web and the AGA Web browsing via a modem-enabled cell

phone isn't the most cost-effective or speeded way to browse the net but it did remove the furrows from the forehead of doubt!

Peter Weir's Falcon and Steve's Amiga, sporting a MegaVision180 graphics card to accompany his already extremely well specified machine, took us up to half time displaying hints and tips and demonstrating various utilities. Following the scheduled interval the meeting was called to order and the AGM commenced, there were no major surprises, and the constitution was re-elected as it stood. I announced the Cleveland Computer Club WWW site is now on-line and contains meeting details for the rest of the year along with some useful software.

Bernard Drake
 BBS Netmail: 90-102/118@net.be
 Email: bernard@ccs.ca.ca
 URL: http://www.ccs.ca/~bernard/
 Tel: +416 (416) 673/018 (jazzphone)

South Yorkshire Atari Group

We got it slightly wrong in the last issue. It's actually Nigel Tutton in Rotherham, and not Paul Tutton who's taken on the task of forming a user group for all Atari users in the S. Yorks area. Nigel would like to hear from anyone interested in joining the group. You can contact him via the following ways:

Email: npt@btinternet.com or
 nigel.tutton@compuserve.com or
 Tel: 01709 825114 after 5pm.

PROMOTIONS 'R' US

If you would like to promote your user group on these pages totally free of charge then all you have to do is send us some copy!

Atari Computing (User Groups),
 "Box Britain", Overton Crescent,
 Ashdown, PO4 8BB, Scotland, or
 Email: usergroups@ataricomputing.com
 Netmail: 90-100/375.0@net.be



linker we drive deep into the guts of the Team Tap. I thought it might be useful to look at it in block form.

The most important block of the team tap, and the bit which does much of the hard work, is the chip we covered last time so dig out the last issue and read it again.



Fig 1: Block Diagram of a Team Tap

To summarise, one output is taken low for each combination of inputs. This gives sixteen possible output states, which are arranged such that four DIPs can be independently driven. 8 things seem arranged in the most obvious way (Q0, Q1, Q2 ... Q15) then the Tap would have to be removed in order to play older games, by using an "old" arrangement, however, it is possible to use the same mask for a single joystick plugged directly into the DIP as for a joystick plugged into the first socket on the Tap. In other words, the Tap becomes transparent to the software.

However, none of this would work correctly without the "diode decoding network". For our purposes, the diode can be considered to be a one-way valve for electricity. Quite simply, by sticking a couple of pieces of chemically altered silicon together, the current can be made to flow one way but not the other.

It's not always clear to beginners in electronics why you would want to stick elements of diodes into circuits, in very precise positions and orientations, but a brief look at the way the current flows will soon make things clearer.

Fig 2: A Simple Switch Matrix

Blockbuster

Xav de-mystifies a block diagram for the Team Tap...

In figure 2 we have a simple switch matrix - not dissimilar to that used in the joystick. The idea is that voltages are applied to the input lines, and when the switches are pressed, these voltages are transferred to the outputs. Therefore, if 5V is applied to B, and switch A is pressed, 5V will appear at Q0. Similarly, if switch B is pressed, 5V will appear at Q1. By applying a voltage to only one input at a time, it is possible to work out which particular button in the whole

matrix is being pressed. Now imagine that our elementary switch matrix represents the joystick direction and fire buttons. What happens when you want to perform some ultra-quick move in a lightning game, which requires you to hold down A, B and C simultaneously? The obvious answer would be that Q0 and Q1 are at 5V when B is at 5V, but when B is at 5V only Q1 will be taken to that level.

Unfortunately this ignores one vital point: what are the input voltages when they're not being held at 5V? In other words, when B is at 0V, what is the voltage of B? (Depending on the drive electronics, it could be at any level, of course - but the most likely case is they will be at 0V.)

Now let's trace the path of the current. It comes sauntering along B, and finds a nice exit route through switch A, pulling Q0 towards 5V as well. But not all it takes that route - some carries on along B, where it finds an equally nice path through switch B. Before it reaches the end of Q1, however, it gets distracted by an even nicer route through switch C, which will

allow it to get straight to ground without having to insinuate through the electronics attached to Q1. This is the infamous "short circuit" - basically a way for the current to reach ground more easily. So now, instead of being pulled up towards 5V, Q1 is actually pulled down towards 0V, and it becomes impossible to tell precisely which buttons are being pressed.



Fig 3: A Switch Matrix with Diode Decoding

Now let's add some diodes to the circuit (figure 3). This time our current travels happily along B, and some of it branches down to Q0 through switch A as before.

The diode lets it though, because it happens to be travelling in the right direction. Had it been coming the other way, the diode would have blocked it. This is exactly what happens when the current passes through switch C and then tries to double back via switch B. This time the diode stops it, so the master route is the one through the electronics on Q1. Consequently the current continues on its merry way, pulling Q1 towards 5V as it does so.

Basically the actual Team Tap slightly complicates this scenario, as all the voltages are reversed (remember that negative logic stuff), but the general principle remains the same. Also, the number of diodes in a Team Tap for joystick puts our simple circuit to shame, but essentially they perform the exact same task.

Next time we'll look at the full circuit diagram for the Team Tap. In the meantime if you have any questions or comments about this series, get in touch and I'll do my best to help. ☺

Email: xav@compuserve.com

SITE SEEING

Floppyshop

70%

<http://www.floppyshop.cyberstrider.org/>



After a long and quiet period, Floppyshop's site has started to pick up again with Steve Delaney now creating the pages himself on a regular basis. The address recently changed and should never change again regardless of the physical location of the site.

There's no fancy graphics - which works to its advantage and makes it ideal for Askitans to browse. The graphics used are functional and are only placed where advantageous. The site seems to be designed as an on-line version of their Atari Computing advertisements. The

main difference being more detailed information about Floppyshop's services are available and you can download the including demo versions of their commercial software and the latest PC catalogues. Floppyshop also offers a mailing list to keep customers up to date with the latest Floppyshop news. The site is easy to navigate but far from complete. The structure is in place with some more work required on the extra detail pages for some of the programs. Worth re-visiting regularly.

Desmeth Shabuta

Homepage of Thomas Much

83%

<http://www.stud.rz.uni-karlsruhe.de/~tm48>



Thomas's web page covers a wide variety of interests in a mixture of German and English. The site is easy to navigate with each sub page clearly signposted from the main page.

Of particular interest to Askitans are the home pages for OLGA, GopherGEM and the ATOS disk magazine but my favourite page is the Natural Born Programmers page which features links and downloads for over a dozen of these nifty utilities which make Atari computing more enjoyable.

The latest versions of OLGA, BubbleGEM, Start Me Up!, CPM and Weblog are all available for download. A must for programmers is a copy of the NICH programming documentation in English.

Jon Corcoran



Cadenza Software

80%

<http://www.cadenza.cyberstrider.org/>



Cadenza Software is run by Matthew Bacon, a shareware programmer dedicated to writing TOS compatible software.

The pages have been created using Matthew's own Web Wizard program which is an HTML editor under development for release and support via CyberStrider later this year. Instead of using frames, Matthew has made clever use of tables to give a similar effect - with outstanding results - although the colour is a little garish for my taste!

The front page gives you information about Cadenza and points you to the five different sections of the site, each pointer is accompanied by a description of that particular section.

All of Cadenza's past and present programs are available for download from one of the sections. As a dedicated HiSoft BASIC programmer Matthew has set up a HiSoft Basic area which tells you about the HiSoft BASIC user group and a new section which Matthew and Paul Jones have created.

The Atari Authors section looks interesting. Matthew's keen to encourage Atari programmers to remain active and is in the process of creating a list of current programmers by inviting them to send in their profiles. This list is displayed on the site and gives the programmers some well deserved exposure. Askitans can peruse the list, find out latest versions of programs and then give feedback to the authors. Everyone concerned with - users know about programs, authors know their programs are being used and continue to program for the Atari platform.

Finally visit the site, download the Atari Author button and wear it on your web site web profile!

Desmeth Shabuta



Already over half our subscribers take the Reader Disk. The combination of tutorial files, listings, PC/Macware and exclusive software is unbeatable and not available anywhere else. Individual hard disk copies of the Reader Disk are still available. Please refer to page 9 for ordering details.

Trackman, EXCLUSIVE Freeware, Holis Research



This commercial sequencing software, originally costing \$179, has now been released as freeware. We've obtained permission from Holis Research to include the original tutorial files and put together a Reader Offer which includes the original printed manual. Please refer to page 9 for ordering details.



NEO Player 2.1, EXCLUSIVE Shareware, New Design

NEO Player is one of the smartest sample players available for 516 machines offering stream-lineable playback from 6.25kHz all the way up to 50kHz in stereo. This exclusive release includes AUP and UP sound file import compared with the current release.

PAUPYUS.HYP Freeware, Nick Popley

This ST-Quide format hypertext is

designed to encourage Papyrus users to make the most of keyboard shortcuts without repeated reference to the manual.

**Document History Protocol (DHP)
Freeware, Thomas Much/Walt Wherry**
The DHP protocol makes it possible for applications to access a list of recently accessed files. Applications which already support the protocol include CAD, Total, GEMTrade and Team Player!

**MacWorld v1.02, EXCLUSIVE
MacWorld enables Hibern BASIC programs to develop internet clients for use with STOS/STING. Example Tines client and source code included. A STOS version is available but not included on this disk.**

**GEMMA v1.72
PB: GEMMA programming team**
GEMMA is a STOS extension which allows you to use GEM in STOS.

**Manoeuvre
Freeware, Mario Becroft**
Strategy game for two players which can be played locally or over a network or via the internet.

**Papyrus tutorial, EXCLUSIVE
© Michael High/Atari Computing 1998**
Example documents to accompany the Papyrus tutorial in ACIF.

**Icons in menu tutorial EXCLUSIVE
© G Chiseman/Atari Computing 1998**
A dummy program, FLOWCHART.PRG, illustrates icons in menu to accompany the Icon Power! feature in ACIF.

**HSsoft BASIC tutorial, EXCLUSIVE
© Paul Jones/Atari Computing 1998**
Test example programs and source code to accompany the HSsoft BASIC tutorial in ACIF: FOO.PRG (Print Documents - Out) and SH-ADDY.PRG.

**GEMTrade, EXCLUSIVE
Shareware Mark Wherry**



GEMTrade is a document translator which includes a German <-> English look-up dictionary, document statistics, ST-Quide and BubbleGEM help. This exclusive version translates the free ISO and allows 2 look-ups per session.



The STOS CD-ROM is made available as a Reader Offer to Atari Computing subscribers. Refer to page 9 for ordering details. The STOS #5 CD-ROM should include:

- Complete ACIF Reader Disk contents
- PlaySLIM - Falcon/PC/Mac output via SLIM/ST
- Helgate - Doom style game, STOS coded!
- Nightfall - RDX style strategy game
- Menulink 2.49 - Menu bar utility
- ST/STOS HTML format magazine
- Collection of international software

Please note the STOS CD-ROMs are dispatched separately to the magazine subject to availability which is beyond our control. Please also note the contents of the STOS CD-ROM is beyond our editorial control so we cannot guarantee any of the items featured will be included.

**Nightfall, EXCLUSIVE
Thomson Outsource**

Nightfall is a strategy game for one to eight players. One player can play against the computer. Nightfall is reminiscent of the RDX board game. The objective of the game is to kill a monster by placing, moving and attacking units.

**PlaySLIM, EXCLUSIVE
Harald Schaeffert**

PlaySLIM is desktop accessory (based) Hewlett Packard PCL to Delta graphics converter which enables Atari ST/1004/605 laser printer owners to produce printed output from a Falcon, PC, Mac using a real Atari ST machine in the go-between.



David Wilkes/SMARTSOFT, Shareware

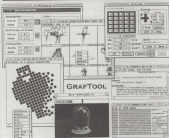
Helgate is the first Doom-Doom style clone for the Atari platform to be coded in STOS and has been under development for two years.

**Menulink 2.49
Freeware Dirk Hagedorn**

Menulink is a menu bar corner clock with a difference - it can also display the date, free memory and other system details. Menulink can be installed as a desktop accessory or standalone application under PlayIC, and occupies just 500b memory.

PD and Shareware

NEWS



GraTool

GraTool is a German image viewer, editor and manager. GraTool is compact, fast, supports long filenames and can output images via any GDCR, HVD or Special2DOS device driver. GraTool can play RLE, CL and GL animations - more than one simultaneously if your system is up to it and can display the following image formats: ART (BMP, GEM, GIF, GIL, (GraTool Catalogue format) ICO, (P)JPG, PNG, NICO (NewChroma), PAC (STAD), PBM (Lzw), PPM, PCO (Photo-CD, laser image only), PCX, PF (Papez), GL, RGM, PBM, PNG (Portable Networks Graphics), PPM, SCR, SPC (Spectrum 512 Images), TGA (Targa) TIF, TNY and PNT (GEMDOS-form). Currently images can be saved in IMG, TIF, PNG, GIF and PCX formats.

Catalogue files with comments can be created, searched and converted via an external utility to HTML format for display in CGI etc. ASCII image files can be loaded from a drop down menu option or via WinStarc or Drag/Drop to display subwindows and catalogue or perform batch image conversion.

Images can be edited using a range of impressive functions including: Rotate, Reduct, Crop and Filter - which includes a preview option.

GraTool is resolution independent and runs on all Atari and most TOS compatible systems. German 32k mode hypertext help is available in a separate archive. There's

currently no English version but it appears English and French releases are planned. Amazingly GraTool is Register-Free - or to put it another way it's free! All you have to do is email or write (enclosing SAC and International Reply coupon) to the author and he'll send you a key by return. For more details contact:

Jeanpierre van Bergen Rosenberg 11a, D-85444 Bamberg, Germany
Email: jeanpierre_van_bergen@btu-muench.de
<http://www.world.compuserve.com/~homepages/11a/>

StarCall Pro v0.5



StarCall Pro is a suite of GEM based, multitasking tools, comes programs which are distributed as shareware. The software runs on any Atari system and most TOS compatible systems with 1PB memory minimum.

The modules are available separately or as a complete package.

StarCall offers terminal, fax, BBS/email and voice modules. The English release includes full English documentation and program modules.

StarCall includes software to access the BBS networks or using StarBox/StarFax, you can set up your own BBS. All the features you'd expect are included: VTSS, ISO, ISO, ISO and ANSI emulation, batch/script programming, buffer management, password protection, chat mode, logins, telephone book, modules for protocols and many other tools.



StarFax, the fax module, can be installed as a desktop accessory, called from StarCall or run as a stand alone program. StarFax works with any Class 1 compatible FAX modem which includes the TRS, ACCEX, ELSA, ZYXEL and USB modems. A separate utility, Viewfax, is used to display and print faxes. There's also a driver to convert Coleman documents into fax files.

If your modem offers voice support

StarCall can be used as a virtual answering machine to answer calls and it's capable of recognising the difference between modem, fax and voice calls and acting appropriately. Pricing, including delivery, is as follows:

- StarCall Terminal: DM 40 (around £14)
- StarFax module only: DM 50 (around £17)
- Printed manual: DM 15 (around £5)
- StarCall Pro - all modules: DM 99 (around £34)

Ingo Linsellier, Marthaler 48, D-81711 Berlin, Germany Tel: +49 (0)30-2526 Fax/Mailbox: +49 (0)30-2526
Email: ingo_linsellier@btu-muench.de
<http://www.ab.rhein-tele.de/~infinity/>

Word Processing
 Firmware, all Atari
 Author: Nick Ripley
 Email: nrd4@compuserve.com

The *ST-Guide* help file has been written by Nick Ripley to help Papyrus users explore its full potential. Papyrus has many features, most of which are accessible from keyboard shortcuts, however, without repeated reference to the manual the features tend to be forgotten. And as this HYP demonstrates, without using keyboard shortcuts, keen users will not be able to access some of the program's more interesting features.

Another reason for this HYP is that there have been many changes in keyboard shortcuts between Papyrus versions 3 and 4. This means on-line help is available for these shortcuts, which saves thumbing through the manual, two addenda's and on disk text files.

Additionally the help file corrects a number of mistakes that appear in the manual.

Some of the areas covered include block commands, navigating around documents, microspacing, moving around tables and mouse actions. There's also a hint, and tips section offering advice on speeding things up and exporting RTF format files to MS Word 6.1.

As Nick points out this HYP file is not designed to replace the proper manual, and it concentrates heavily on using keyboard shortcuts, so printers will get no joy from it. However, keen Papyrus enthusiasts should appreciate the extra assistance when composing their literary masterpieces!

All in all the Papyrus HYP is an excellent help file/memory jogger for anyone using Papyrus versions 4 and 5 with *ST-Guide* installed. Installation is simple, copy the PAP.HYP file to your



default GUIDES folder. The only minor niggle, which isn't Nick's fault, is because Papyrus has no Help system, the HYP file has to be navigated manually from inside *ST-Guide* - a small price to pay.

Nick Korstake

Manoeuvre

" ON READER DISK "

78%

Entertainment
 Program, all Atari
 1MB memory minimum
 Network version requires STX,
 STXG or recent copy of GleeSTX
 Author: Mario Beorch
 Email: mbe@tin.pln.net
 URL: www: http://www.pln.net/~mario/

moves ahead before each turn commences. A move can consist of moving a piece or firing at the opponent's pieces. The spades is the most important piece, lose it and you're lost. Each piece has its own armour strength, missile range and missile strength which focus some pieces towards attack and others towards defence.

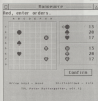
Setting up the game across a network is fairly straightforward but requires planning and co-operation. For a connection to be established, one player has to make a connection while the other player needs to see their machine to listen for the incoming connection. The player making the connection has to specify the IP address or hostname of the other player's machine which is tricky because most IP providers dynamically allocate IP different IP addresses each time you log on! One way round this is to chat first via IRC first to find someone to play against then check their address.

Once a network game is underway the game proceeds exactly the same as a local version with one exception - there's a messaging system running across the bottom of the window which you can use to hint the other player - even if they're on the other side of the globe.

The author, Mario Beorch, says the main purpose of this game was to test the feasibility of networking machines to play games which partly explains why there's no option to play against the computer.

Mario is currently considering ideas for other network games and although a networked version of *Quake* isn't on the cards I'm awaiting future developments with interest.

Neil Jones-Rodway



Good moves all of a sudden do not seem so good when you realise the turn order!



Manoeuvre breaks new ground for the Atari platform - it's the first game which can be played over a network - which includes the Internet. *Manoeuvre* is a GleeSTX game, which works on almost any Atari system, including emulators.

The gameplay is pure strategy and involves two players battling it out on an eight by eight grid. Each player has three pieces, a heart, a circle and a spade, and each piece is programmed up to five

After each piece has been programmed the moves are played out on the board, piece by piece. The two circles are moved first (first first if the red player started the programming round, green first otherwise), followed by the two spades, and finally the two hearts. Knowing the order the moves are played, and more importantly knowing which order you'll be playing in the next round, is a crucial factor when planning strategy.

H.E.R.O. 2



Laughing in the face of danger Shimmering Lil dons his red cape...



Thank goodness there's no elevator music...

I apologise for the misinformation in AC 8th regarding H.E.R.O. 2 - it's not a sequel but the original H.E.R.O. patched and improved for STe and Falcon computers. Due to technical difficulties the first game did not work on these machines, so it's still new to many people. For the benefit of this group here's a quick recap of the game's objective: save the world!

All right, at least in this case the story line bears some relevance to the game, which is set in a sprawling bio-machine complex on the brink of going "bang" in a mushroom of radioactive particles.

The task of preventing this terrible catastrophe is accomplished by guiding your character, first, around the Rick Dangerous style platform levels within a time limit, and the gameplay is very



WHAT MIGHT HAVE BEEN

New graphics were drawn for H.E.R.O. 2, but on a standard 640x350 these slowed down the gameplay (the extra detail making for a slower screen update) so they were discarded. It's a real pity these weren't kept and made available for machines with faster processors, as ST/OS games tend to be happy with this. With better graphics and more detail control this game could have been a blockbuster.

and slow locks, you have to remember to shoot off any remaining rounds of ammunition in your gun otherwise they'll blow up in the teleporter when you jump to the next stage!

At first sight I was disappointed with H.E.R.O. 2. Having heard it would require a minimum of 4MB memory, I expected far better graphics, especially as ST/OSSEIL has a new pixel via, Dean Chadwick, whose excellent work is a trademark of its recent titles. Apart from a few textures and extra animation frames, it looks more or less identical to the old game, which is a definite step back from the likes of Billy Boy. Considering it's for the STe and Falcon, I'm also surprised by the lack of decent scrolling - it's quite coarse and uncomfortable to look at.

Most of the memory went on sound - oodles of it, all sampled and mostly all appropriate for the game. Gunshots announce themselves with a satisfying punch and the atmosphere imparted by the clanging and whirling bit machinery is marvellous. However, in my opinion, it goes too far by subjecting you to a sample of M-People's "Search for the Hero" at every available opportunity including death, most irritating. Isn't this the sort of thing CD-ROMs are for?

Control is an important facet of any game's appeal and here to it hasn't really been improved from the original. The computer always forces an action to complete once started, which can be particularly nasty given the scale of the graphics in relation to the viewport. You can be running somewhere, see a robot heading for you, kneel down to shoot them in a split second realise you are actually too close. Meanwhile, halfway

similar - not a bad thing. H.E.R.O. adds to the shooting, jumping, and sliding action with a certain amount of puzzle element, with a sprinkling of device-as-twists to trip you just when you thought it was a wallower. For example, once you've worked out how to pass some levels with several strategically placed security casts



through the shooting action, the robot has reached and killed you (see M-People song...)

Despite these niggles I still found the urge to play on - the puzzles are well thought-out and the levels are not so large that they make remembering the maps get in the way of gameplay (there is a save game feature to help you along, too). If you view this as a goodwill gesture for those who missed out on the game when it was first released it's fine, plus there's the bonus of decent sound. Last but certainly not least it's free. ☺



H.E.R.O. 2

Publisher

ST/OSSEIL Software

Availability

PD libraries, on-line services and the ST/OSSEIL web pages:
<http://www.users.cornell.ac.uk/pastor/>

Requires

STe and Falcon only, 520x380 resolution (GF box), 4mb memory. Hard disk recommended

Pros

Sound, music, usability

Cons

Age! but not gracefully

Graphics	70%
Sound	95%
Gameplay	75%

82%

SMU-Setup

80%

Utility

Unsupported postcardware, all

Ataris

Author: Heiko Schuster

Email: Heiko_Schuster@GMail.de

URL: <http://www.stos.de/~stempel/>

StartMeUp! (SMU), programmed by Thomas Plach, is a popular utility which adds a handy Windows '95 look-alike front to your MegaC desktop. It's one of those utilities which requires an ASCII configuration file to be edited to select options and setup its menus and this is more than enough to put many people off. SMU-Setup makes creating your own encoding menu structure child's play. Simply drag components from the list on the right to the window on the left.

You can move the components about and check your work using the 'Test' function and when you're happy select 'Done' which terminates StartMeUp! and reloads it using your newly

created STARTSET configuration file.

Double clicking on a menu object allows it to be named and a double-click links it to a specific file - using the file selector as your navigator. Most SMU-options can also be set up, for example the



Use custom resource file option is just a click away.

Saddy SMU-Setup

development has ceased so any future options added to SMU will have to be added manually but it's a small inconvenience compared to the huge advantage of setting up the SMU menus.

The English SMU Setup release includes a public key and is available from any BBS connected to the HAMNET network, from the CDX starlink/hamnet topic and the World Wide Web.

Deeyeah-Crecker



Look 'n See Modules

80%

Utility

Postcardware, all Ataris

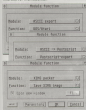
Author: Dirk Haux

Email: Dirk_haux@ed.mos.de

URL: <http://nada.dortch.tu-berlin/pub/atar/interactive/looknsee/looknsee.html>

Interactive/looknsee/looknsee.html

export modules programmed by various authors. This distribution includes all the modules programmed by Dirk Haux along with a revised and updated English IT-Guide format documentation to take account of the modules in this distribution.



- AG2P: Converts ASCII text to Postscript files
- AM2P2: Imports AmigaPro format text, graphics, text attributes etc. into Look'n See
- ASC2P2: Exports text to ASCII file with LHC options
- CPG2P2: Converts list Word/Plus CPG files back to commented HEX source files
- CTL: Exports ASCII list of telephone numbers from Colson CTL files
- HD2P2: Converts Look'n See hex dump displays into C or Assembly source text (requires Look'n See 0.97b2a)
- HTML: Exports ASCII from HTML documents, formatting a text
- JPC2: Supports via JPC2, can load progressive PBOs, menu options
- M2P2: Simple background characters (ASCII 8) from M2P2 options
- P2P2: Plays sound samples via P2P2 sample player if installed
- S2P2: Imports uncompressed 8 bit/16 bit/32 bit raster files
- W2P2: Imports Word 5 format text, graphics, text attributes and so on into Look'n See
- X2P2: Exports images, or marked blocks, in the X2P2 (colour) or IMG (mono) formats

Jon Cammer

Thanks to Peter West of the Translation crew English translations of various new and updated modules for Look'n See are now available. Look'n See is a Shareware file viewer programmed by Reinier Roers, which offers over 100 import, edit and

There are ten updated modules: BRIGHTEN, INGBORDER, P2TEXT, REFTEXT, SHOWWORD, SOUNDCOR, STG2ASC, TARGET2P2, X2P2 and X2P2. These new modules which offer the following features:

Floppyshop

PO Box 273, Aberdeen, AB15 8GJ
Tel: 01224 312786

Email: Floppyshop@btinternet.org
Web: www.floppyshop.co.uk/retailer/index.cfm

Other Software

The items below represent only a small selection of the Atari software available from Floppyshop. We currently stock around 20 top quality commercial releases and are adding more titles on a regular basis. In addition, our Floppystore collection numbers around 1,000 ST disks and over 800 for the Falcon, all at only £1.19 each (plus a fixed P&P charge per order). Everything is detailed in our ST and Falcon catalogues. These are available for only £1 each (please state ST or Falcon) or you can grab a copy from our Web site. If you make a purchase from this advert for our catalogue, you will automatically be sent a copy of our next catalogue update, keeping you up to date with the very latest releases for your computer.

Please note that Atari Software Treasuries, DTP+Graphics and Select

CD are all CD-ROMs and will require a CD-ROM drive along with appropriate drive software such as MetaDOS or ExtendedDOS. Similarly, MIDI Arpeggiator, Sound Chip Synth, Snippet Synth, Scribble Synth and EC-Arpeggiator disks of RAM and ST High res or better.

Limited Stock Items

Finally, we have a very limited number of copies of Steinberg Pro 14 £1 to MIDI sequencer by the creators of Cubase and Masterplan; is OEM based spreadsheet from the creators of Calculus; both are ST or £16 ONLY and more than a price tag of around £80. These last few copies are available for only £3 each + P&P (UK £1, Europe £3, ROW £4). Also in VERY limited supply are the Textile Games Pack (that's 100 top commercial games for the STE/ST) for only £3 + P&P (UK £1, Europe £3, ROW £4). Please call to confirm availability of these.



Floppyshop have teamed up with Atari Software Treasury, North America's premier supplier of new, never released Atari software in bring you a treasure of this popular CD which includes the complete contents of the original 2 disk set available to fit onto a single CD or the much lower price of £15 plus P&P (UK £1, Europe £3, ROW £4).

Categories include Games, Utilities, Children's Programs, Falcon software, Databases, Comics, Screen Savers, Graphics Tools, Financial Software, MMT Utilities, MIDI File Editors.



Atari Software Treasury Volume 2 contains almost 100 (when decompressed) of the very latest Atari software. It contains everything which could not be squeezed onto the first compilation as well as all the best software releases from the past three years. As with their first CD, much of the software is of American origin and has not received widespread distribution outside of the States. An absolute gold mine of top-quality Atari software, available now from Floppyshop for just £25 plus P&P (UK £2, Europe £3, ROW £4).



DTP+Graphics comprises of fonts (in Calamus, True Type, Postscript, DTP), Spelling and other formats, clip art (8000 clips in IMAG, GEM, C-VID, GIF and other formats, DTP support programs, printer drivers, printer utilities, word processors, drawing, painting and image processing packages, font editors and CAD packages.

This unique compilation has more fonts and Clip Art than the competition and that's without all the program DTP+Graphics costs just £25 + P&P (UK £1, Europe £3, ROW £4).



SELECT CD is a new release exclusively dedicated to the Atari for CLASS Falcon 030. It includes top demo from Europe's favourite demo scenes, audio programs, games, graphic packages, file viewers, source code, multimedia packages, file translators, direct to disk recording software, disk magazines, masses of small utilities, DTP projects and an easy to install Linux environment.

A unique collection at a unique price of just £15 + P&P (UK £1, Europe £3, ROW £4).

Easy Text Professional

Easy Text Pro: Writer is a highly capable DTP package at a very attractive price. It utilizes SpeedDOS to give output on a par with what you'll get from much more expensive packages. Comes with a 123 page easy to follow manual, needs 768k and a hard drive. Only £19.95 + P&P (UK £1, Europe £3, ROW £5).

Also available is Easy Text Professional for those without a hard drive and only 1M5 RAM. Similarly specified to Pro: Writer but without vector font support. Also £19.95 + P&P.

Competitive prices from other Atari DTP packages are available as is a low cost handling deal with SpeedDOS. Call for pricing on these.



MIDI Arpeggiator

Create arpeggiated style multi-sequences for use in your compositions by saving the part as an standard MIDI file (note type 3 and 0).

Can also be used as a live responding tool with its many real-time functions and play modes. MIDI Arpeggiator costs only £5 + P&P (UK £1, Europe £3, ROW £4).



Sound Chip Synth

Unlock the bubbling sonic potential inside the built-in FM sound chip, and create some snappy analog-style notes. SCS is great as a monophonic sound source in a MIDI set-up, but not equally be used as a sample generator for other software to play your burlies with. Sound Chip Synth costs only £18 + P&P (UK £2, Europe £3, ROW £4).



Snippet Synth

Granular synthesis is a method of sound generation that uses small audio events to create a composite sample. Use Snippet Synth to create a vast library of sounds for use with sample sequencers, professional audio applications or as a source for your MIDI samples. Snippet Synth costs £18 + P&P (UK £2, Europe £3, ROW £4).



Scribble Synth

Another software based synthesizer is the same role as Snippet Synth when change with warbles, time based pitch and filtering effects, plus Frequency modulated sounds are all possible. Sounds can be exported to constructors, MIDI sequencers/modules & sample editors. Available now for £16.00 + P&P (UK £1, Europe £3, ROW £4).



EC-909

Analogue drum machine emulator for the TR/Falcon featuring 16 sounds from the TR-909. Can create single hit patterns & export to your MIDI sequencer or sample editor. Patterns may be exported as MIDI files. Other features include MIDI triggering, tempo and bar length control and Undo. EC-909 costs £15 P&P (UK £1, Europe £3, ROW £4).

Utility

Shareware, all Atari

running MagicC

Author: Michael Palmer

Email: mp4light@compa.com URL:

http://www.compa.com/~michael/

Sea Bear maintains a log file of your computing activity and was originally programmed to demonstrate uses for the MagicC START and STOP folders. Installation is straightforward but a fair bit of setup you're used to dealing with MagicC.

- Copy SEESTARTING to your MagicC START folder
- Copy SEESTOP to your MagicC STOP folder
- Add an environmental variable to MAGELINE

Once that's out of the way you can run Sea Bear and display tables of charts and statistics about your computer usage.

SEESTARTING remains in memory and wakes up every 1 minute via the AEX to update the figures. The figure keeps track of:

- End time: E entry
- Start time: S entry
- Revolution changes: R entry
- Crashes: A entry

Although the practical benefits are limited it's great fun to see where all that time went. Sea Bear is one of a collection of programs by Michael Palmer supported in the UK by CyberTron.

Jon Cunniff

MenuInfo v2.49

Utility

Freeware, all Atari

Author: Dirk Hagelhorn

Email: CHagelhorn@t-online.de

http://members.aol.com/DirkHagel

indexing.htm

FILE File Edit Options Help

3502748 Free | Sat 31 Jan 14:48PM '02

The IT Guide English hypertext explains "pixelcider" gives us total control over components of the display, allowing a free mix of text to be used to add clarity. Seven

(Alternate) keys and the rightalt mouse button offers a range of features which makes a whole host of desktop accessories and utilities that clutter our hard drives redundant. MenuInfo offers screen redraws, call the selector, AEXC table with special characters handling, auto-topping of the window under the mouse, force or prevent a screen blanker, run MenuInfo display to the clipboard, call an external file extension and the ability to launch a pre-defined application via the AEX Protocol.

MenuInfo isn't perfect though. There's no drive access display, it won't run with memory protection under MultiTOS and the configuration dialog requires 640 horizontal pixels (ST medium resolution or higher) to open - although placing a mouse over the LEDs and pressing a number switches from one setting to another. The screen blanker isn't very sophisticated - it checks for mouse movement but ignores the keyboard, serial and MIDI ports but at least it doesn't clash with the other popular alternatives.

In summary MenuInfo offers answers to many questions and comes recommended.

Harry Sidman

Have you come across a good piece of new PG or Shareware software recently?

If so, then why not tell us about it or send us a review?



Common clock utilities have always been popular but as new hardware and software enhancements are released more of these suffer compatibility problems and fall by the wayside.

MenuInfo was first released in English several years ago and has almost the test of time. MenuInfo can run as a program, a desktop accessory or an automatic application under MagicC, consuming a mere 50KB of memory.

MenuInfo's strength lies in its configurability, displaying all conceivable variations of day, date, time, year, free memory (ST and TT) along with other system details.

configurations can be set as default with more being loadable from a small .INF file.

Virtual screens (VSCR) support ensures the clock is displayed in the screen corner irrespective of the resolution or hardware used and text can be offset from the right or placed in a window to avoid conflict with other utilities using the menu bar.

The incidental extra in MenuInfo apart from its competitors, two LEDs displayed at the left of the screen display a caps lock indicator and an open file indicator - used in conjunction with Kabol's CHW_OPLS utility.

Clicking on the LEDs using combinations of the [Shift], [Control] and

Layout in Style

Stuck on DTP design? David Encill and Chris Krowchuk present a new series dealing with all aspects of DA's Layout...

Welcome to a new regular feature about DA's Layout, the DTP and Master Vector Editing programs for the Atari. Over the coming months we will be exploring various topics, such as type and printer terminology, so none of our DTP programs need not feel excluded.

The main feature in this issue is a tutorial on how these very pages were created, starting with the basics of DTP: laying out a page, inserting guidelines, creating banner headlines and text columns. Although DA's Layout is the program used throughout, the principles involved will apply to virtually any other DTP software.

Presentation

The most important part of any publication is the presentation: the type of document being created, size of paper used, single or multiple column document, font style and size. All these factors can govern whether a document looks and feels 'right'. On first running DA's Layout, there are five main icons across the top of the toolbar, which control all the major features within the program. The first icon deals with Page Setting and how here the first decision to take is the page size to be used. In this instance:



At Format (Format > Width) is the medium used by most Computers.

One other consideration which would affect the page size, is if the document were being professionally printed, is the size selecting a 'trim' page size (that is, oversized A4) would permit a bleed to be used here (Printer Terminology). Using a real size page would mean using 'top marks', otherwise the printing could be misaligned, but effects such as the background covering the entire page is possible. This is termed full bleed.

The use of Guidelines

Typically, all printers commonly used nowadays cannot print to the edges of the paper. It is therefore advisable to set guidelines to avoid placing any objects outside the physical printer boundaries, unless a bleed is being used.



Basic Page Size dialog.

Left: Page Setting toolbar.

Documents produced in this publication have limits of lines on all sides.

DA's Layout permits horizontal and vertical to even diagonal and circular guidelines to be placed, or setting these at 12mm from each edge of the page ensures all objects will be printed correctly. To accurately position the guidelines open to on the negative area and hold the (Control) key to drag guidelines to a new position. Remember these are only to set the limits for the printer - the actual page design can alter margins if necessary.

Effective effects

Atari Computing use a standardised format for their pages and we shall now duplicate these effects. The side banners (outside edge of the page) were created using the Master Vector Editing feature, which is the last of the main icons. By switching on the Grid to 'on', spacing, and using (Snap) to Grid, creating the rounded banner becomes a doddle!

DA's Layout also has an extremely handy feature called 'Automatic Target Calculation'.

Right: Auto Target and Snap to Grid produces...

When using the Master Curve tool the Auto Targeting feature can create perfect curves, or circles, with ease. In this example a standard (dashed) grid was created with a single straight line and the curve tool was then selected. After placing the first control point no other alteration was necessary thanks to Auto Target Calculation.



HOW TO... CREATE A 'DROP CAP'

How was this first letter created? The answer is 'very easily' as DA's Layout allows Master Vector Objects to be created directly from any selected text. To do this, highlight the text you wish to derive as the Drop Cap. In this stage you can choose a different font for more emphasis (see second example, below). Next, click on the (Format) selected text to text outline icon. The selected text is now automatically duplicated as a vector object, and the selected letter from the text frame can be deleted.

The vector object can now be rotated, stretched, etc. to suit your requirements using the various manipulation tools within Layout. Normally a Drop Cap would be used to cover no more than three lines of text, but this is only a general rule and depends purely on the application.

Finally the text needs to be wrapped around the vector object. Place the vector object in the desired position and while holding down the (Shift) key, select the text frame (creating a temporary group). Click on the (Wrap text around a rectangular object) icon in the text setting toolbar and the text will automatically flow around the vector object.

A vector object can be edited further using different colours and effects. Here the text was changed in Windows Dope with a Shadow having a 10% red and 70% effect. Generally it is not advisable to over-complicate the effect with crude characters or by using the effect every paragraph, normally once for every new text column is sufficient. When using an angular character such as the 'A' in this example the text flow can be easily altered.

Text can now be added along the side banners. Create a text column in the usual way but enter '50' into the (Column Angle) field to rotate the column through 90 degrees. It is worth noting that text columns can be incremented to an accuracy of 0.01 degrees! Finally draw a line with a 0.5mm thickness down the edge, against the guidelines at the top and bottom of the page.

Unfold the Banner

The banner headline is another important aspect of DTP design. This can convey a great deal of impact and the size and font style should be chosen with care. For this page, a Gill Sans Extra Bold font was used for maximum effect. Although a text frame could be used in the normal way, we will quickly explore Graphic Text options. This topic will be covered in greater detail in later issues to cover the many ways standard text can be manipulated to create great impact.



Move Graphic Text dialog

Using Graphic Text does mean that a variety of effects can be used, but for this example we will just concentrate on the simple banner creation. Placing a guideline (shown from the left-hand edge) will provide a suitable margin by which to place the banner.

On opening the Graphic text dialog box, choose (Line Text) and select an appropriate font. The string doesn't really matter at this stage as, unlike a text column, Graphic text is a vector object and can be moved easily using the editing tools. When entering text for a banner headline it is advisable to keep the message short and snappy; too many words either make individual words too small or take up too much room. Click the [Close] icon and the graphic object can now be placed on the page and rotated (or stretched, copied, moved, pasted).

In this instance the vector object was rotated to stretch between the previously set guidelines. If the text needs altering, select the graphic object and click once more on the Graphic Text icon. The sub-header directly below the Banner Headline further explains the content of the article and should, ideally, be a standard text frame. A Gill Sans Bold font was used to complement the banner headline.

Text Columns

To conclude this first tutorial the main body text columns will be created. DTP layout has the facility to create multiple text columns on a single page and the does remove any doubts about the size and spacing of the columns.

Right Text Toolbars

Generally speaking a single text column using body text across the width of an A4 page is not advisable - the only real exception is when composing a letter.

For these pages each column was set to 12.5mm wide and 300mm high with a 1mm Gutter (the space between each text column) and with (Justified) set to 'on'. Paragraph permits the text to flow around graphic objects and can operate around a regular or irregular shape. The text used for the body text is *Times*, *Digital Roman* with Vertical justification 'on'.

The use of multiple columns containing a high density of text can lead to misalignment of text lines at the bottom of each text frame, thereby creating spurious spaces at the bottom of the columns. Vertical justification combats this by ensuring equalising the leading of lines (the space between lines of text).

When placing the text columns onto the page, the second and third frames in the example will overlap the bottom dealing with the creation of Drop Caps, but individual columns can be moved or resized independently.



Name: Text column creation

With the text columns in position the software automatically fills each frame with a random series of characters - very handy to judge the overall document appearance. Don't worry, as soon as you start entering text into the frame, or open the Text Editor, all these characters disappear.

And for my next trick?

Next issue we deal with an explanation of the Text Editor, showing suitable fonts for the document, introducing images, Cross headings and foot-note.



PRINTER TERMINOLOGY

Information: A method used during the creation of four colour separations, for controlling ink saturation. Automatic separation replaces grey components with black (K) and hence the term GCR, or Grey Component Replacement.

Additive Colour: A colour produced by combining equal amounts of red, green, and blue light, as utilised by scanners and monitors for example.

Ascender: The lower case character segment, i.e. h, k, d, and l, that extends above the characters main body.

Banding: In a gradient, the visible steps of shade.

Baseline: An invisible line that characters rest upon.

Bezier curve: A curve defined by points set along its arc.

Bitmapped: A graphic image or font stored by a grid of pixels.

Block: A page element that extends past the edge of a page.

Bullet: A character used to highlight a list, or to emphasise text.

Caption: The text used to identify an object or illustration.

Circle: A method used for trapping spot colours. A circle is a slight reduction in size of the background elements knockout area. When printed, the shaded element prints at normal size and the background colour comprises the shaded element.

Character: A method used during the creation of four colour separations for controlling ink saturation. Automatic separation removes underlying colour with black (K) and hence the term LSC, or Under Colour Removal.

Closest: A unit that measures approximately 4.1mm.

CMYK: A four-colour printing system sometimes referred to as Process. This uses various concentrations of Cyan, Magenta, Yellow, and black (K) inks to produce ranges of colour.

Colour bars: A strip of CMYK values usually placed in the trim area of the page. Used to verify quality of colour during printing.

Colour separation: A process to create individual plates represented by the CMYK components. Four colours require one plate per colour, while process colour separations require four plates, one each for CMY & K per page.

Crop: The trimming of an object to fit a specific area or to remove a portion of the object entirely.

Crop marks: Vertical and horizontal lines used to determine the final dimensions of the printed page.

DA'S LAYOUT V6.1

If you have any queries feel free to contact me - David Ford,
TITANWEB@compuserve.com
A complete demo (including the Page module) is freely downloadable from our web site - see back cover for URL - with a link to the Digital Arts site.

HELLGATE

71%
**Entertainment
 Shareware**
ST/STE only
1mb memory minimum



This is also the first STOS-based approach to the genre, yet again proving



If you enjoyed *Millies Adventures* check out our report of a French Falcon platform game called *Blum* which looks promising. There's not many games which run under Magic, and of those that do we certainly haven't featured any in previous Maggie columns! That's all changed with the release of *Blum* courtesy of the *Revenant* Cade. Finally we're delighted to feature some home grown talent - the first STOS based Doom clone (organised by David Maltres, and it'll be on the next ST/OS-CD-ROM for you to try. Next time our plan is to bring you a report from the *United Alternative Party* in Finland which is almost as strange and obsolete computers with a strong *Next Issue!* Richard Spencer and Chris Holland, *The Maggie Team*, Inc.
<http://www.users.comcast.co.uk/maggie/index.htm>

that anything Assembly language can do, STOS will have a pretty fair shot at as well. We have the efforts of SmartCOST to thank for this game, which has been in production for two years. The gameplay and presentation indicate a meticulously Doom style surround with reasonably nice presentation, with solid 3D geometry used to form the maze walls and the polygonal bad guys.



The presentation is kept simple to keep the speed up, and there is a minimum of texture mapping. This might lead to the Sub-Station syndrome of getting lost in identical looking levels, as games of this type often rely on changing



graphical ambience to find your way around the level. There is a full range of enhanced weapons to pick up, and energy/ammunition boost pick-ups scattered through the level.

The game is mostly mouse controlled, which works well, but with a little bit of chopiness in play. The game does not, thankfully suffer from excessive slowdown. It runs on ST type machines, and even Pacific emulation happily, the current beta/unregistered version does not like Falcons though. It would also be nice to see how it runs on any accelerated computer as well. This is a nice version of the game with some good detail, and just a few rough edges to be smoothed out.

Chris Holland

BLUM



BLUM's own caption describes the game's origins admirably. This is a fancy platform game in a style which owes

**Entertainment, Shareware
 Falcon only**

some elements to Rayman and *William Adventures* with a little bit of *Super Mario Bros* thrown in.

The plot is in French but, as with most computer games, the plot could be written on the back of a postage stamp. There's not much about our hero Blum in our name magical quest to complete the game and do away with some big bad guy right at the end. On loading the game the rough edges of this doom surface immediately - the game falls over nicely. Experience

of this doom surface immediately - the game falls over nicely. Experience

suggests my Falcom FDS was not to its bling, so I tried again floating with a later FDS version loaded from disk and no problems this time.

There's a lovely soundtrack, featuring lots of flute sounds - vaguely reminiscent of the Shadow of the Beast soundtrack and a screen full of graphical splendour, featuring a foreground, where all the action takes place, and a distant background.

The sprite you're controlling (Hilbert) isn't much to look at, a blob, with huge comical moustils and feet, all the better to see amusing enemies, and avoid them I suppose. The game is very colourful and certainly gives the Falcom's TrueColor (256 x 256) mode a good headstart. It's here the closest comparison to "Willen Adventures" can be made. On close inspection the graphics aren't quite as polished as the Swedish game and the platform levels have a certain blockiness about them. Similarly the game engine isn't quite as



smooth as it could be in places.

Boasting its title this isn't the release version let's just say there's still time for some optimisation and tweaking and reserve judgement and comparisons until another time.

The controls offer a choice of keyboard (although these weren't working in my demo version) and joystick. There's a range of move/jump controls on offer and currently no weapons are available so you have to dodge the enemies. The two enemies I've encountered look like Mandy Aole of ancient 8-bit game fame, and a bunch

of deadly snakes, no doubt these are others and surprise, surprise the documentation mentions something about an end of level big boss to deal with.

The final finished product should include several levels with distinctly separate graphical styles and will be released as shareware costing 100 french francs (around £10).

Overall this is a promising looking demo which needs the links and rough edges smoothed off before it is catapulted into the spotlight.

Trigon Software, Roland TOMCIAR,
11 rue des départs rétrograde,
94110 CHATELAIN, France
Tel + 33 (0)1 40 28 36 21

Chris Holland

STATIC

90%

Entertainment
Shareware
Falcom
RGB/VGA
4Mb memory minimum

Chris Holland takes a look at Static, the latest immaculately presented spin from the Reservoir Cards...

The Cards have a proven track record producing Falcom games including Technology and Double Bubble and this time they've based their simple Solitaire concept, which wastes millions of office hours on Windows machines, and transformed it into something much more interesting.

There's multiple players whose up to four players with any combination of computer intelligence and human player, play against the clock and each other,

blatantly sabotage the other players deck of cards with one of several cunningly designed jokers, including several standard

There's immaculately presented graphics, as good as anything available commercially, with several choices of card sets going way beyond the basic graphics seen elsewhere, the luxuriously appointed menu system, and the innovative "Draw your own high score" table backed up with a choice of killer soundtracks from among the best the Cards have to offer.

If you don't like games that screw up your elegantly featured Magic set-up, then you'll be amazed to learn Static is



even Magic friendly and relishes the chance to run on a VGA monitor as well.

Static plays quite a mean game as a computer opponent, unless you take the ultimate step of dumbing down the computer intelligence to the level of PC Quordle.

In short, Reservoir Cards have given us another heavenly game!

Chris Holland



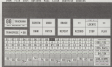
Now why not check out the
Maggie home pages at...

<http://www.users.zetnet.co.uk/maggie/index.htm>

Q & A

"We always have more answers than questions"

Ask: Atari, Atari, Apple, IBM, Commodore, Emulators



Making Tracks

Q I'm currently using Tracker as sequencer software on an STx. I've been giving some thought to the possibility of running it under emulation on another machine, ideally a Mac.

One of the obvious problems is that Tracker requires a cartridge to run and I'm wondering if there is a way around this?

I've tried to contact the Tracker authors, Halls Research, to ask for a copy of the program which does not require a cartridge but have been unable to find any trace of them. Assuming the cartridge problem can be solved will an Atari OS emulator running on another platform support MIDI based software?

Jim Alford, Plymouth

A Your question prompted us to track down Halls Research - we didn't have to look for because John Halls is still on CIO by an amazing co-incidence John had already stripped out the cartridge copy protection and released Tracker and MIDIman as freeware! We wasted no time buying up his remaining stock of manuals and we're delighted to offer them to readers - refer to page 9 for details.

Jon Casner

The German PC TOSMini's Atari emulator supports the MIDI ports provided on some PC sound cards. I had it working here with an AWT64G sound card and Sound in A Box but I only had a demo version so it might be worth following up. I downloaded the demo version from One Desktop independent Custom Users web page at: <http://www.oneusers.com/~oneusers/>

Brian Robinson, CIX, ataricomputing conference

AN Magic

! In my experience Thing is the best desktop implementation of the AN protocol and I've just discovered this neat trick.

If you are using CMI under Magic and have TTRTOS programs, such as the Apple file viewers, installed as external viewers you may have noticed your console screen is not set to close automatically after viewing - which I find really annoying.

With Thing installed as your AN Server, you can install Thing in CMI as an external viewer for certain file types, such as PEG pictures and so on. CMI then sends the ANView command to Thing, which in turn calls AFEX/PG.TTP because I have installed this as my default viewer for *.jpg files in Thing's applications menu.

Valid! The Apple viewers now start in a VTSL window and don't mess up the screen.

Lars Kraemer, via MailIT

Epson 400 Colour Printer

! I was wondering if these printers would work with Atari machines - in particular with Fine Word. I telephoned Epson's Technical Department (at premium rate of course) and the technician laughed when I said Atari and proceeded to state the obvious "the 400 is made for use with Windows".

Anyway I'll stop phoning them back and telling them they were wrong! Imagecopy, Positive Image and Fine Word (using EPSON_HTC.PG), all run fine - and I'd expect other programs to work as well.

Peter Wood via CIX

Virtual Memory

Q Am I under a misapprehension about virtual memory operation? The machine in question is a 1040 equipped with running the Outside virtual memory software which gives me 120% memory - 4% ST-RAM and 116% virtual memory.

Recently when working on some PEG images in Positive Image, which includes its own virtual memory routines, some images which only take up 8% of this space result in Out of memory messages! Does Positive Image only unpack images into ST memory?

What would happen if I upgraded to a Plusmode expansion memory board - effectively adding TT memory?

Would I then be able to manipulate images larger than available ST RAM? John Ash, Kent



A A 10% PEG image could easily take up 40% or more when it's unpacked - compression ratios of 20:1 are common with PEG compression. Jeremy Hughes, CIX, ataricomputing conference

Positive Image includes a useful info screen before loading PEGs which shows the uncompressed size of the image along with the available RAM - both ST or TT-RAM.



There's also a Preferences option which allows you to declare whether the image should be loaded into ST-RAM, TT-RAM, or TT-RAM preferred - this is independent of the flag settings of P itself. Finally there's a swap file feature that's described in the manual.

I don't think adding a Plusmode board would make any difference because, as I understand it, Outside treats its virtual RAM as TT-RAM. Viewing PEG images larger than TT-RAM isn't necessarily a problem if viewing is the only consideration. For example I include in hi-res mono mode can display large PEGs using a small amount of RAM by diverting to the current screen resolution to fit it - so you don't need to have the full memory required to display the image!

Harry Sidner, CIX, ataricomputing conference

Old Chestnut

Q I've had my 520STxm for a year now, and consider myself fairly experienced! but I have recently come across a problem with my machine. When changing disks and updating the

show in the file selector on HyperPaint 2, the machine (or the program) just corrupted folders from the HyperPaint disk onto my data disk. I don't know why - and it's happened more than once. I'm worried because a word to tell the machine back and upgrade to a Mega STx. Is this a virus or not?

James Barrett, Woking, Surrey

A This is happening because your machine is not recognising a disk change - some drives do this. There are a couple of practical solutions. Install FHC, FPG, available from most PC Resellers, in your AUTO folder - this forces a media change. It's also worth arranging to save your data to drive B instead of A - even if you only have one drive because your machine will prompt you to place a disk in drive A, and will re-read the directory. From the desktop the simplest solution is to press the [Tab] key which re-reads the directory.

Peter West, CIX start/computing conference

And ensure you're using a disk formatter which allocates disks with unique serial numbers. If this is a recent problem this is more likely to be the problem than the drive itself. Please if I feel it for each time I've said this...

Paul Glancey, CIX start/computing conference

HTML, Tables

Q I've just started dabbling in web page design but I can't get my head around tables, there just seems to be many tags and extra code, so I get confused. Is there an easier way?

C. Hinchhouse, Sheffield

A Yes, TEdit, programmed by Hinchhouse, converts ASCII tables into HTML format tables offering a

desired. The background colour, text colour, font attributes, size and text alignment for each cell can be set individually and links can be added to individual cells.

The final table can be saved from the browser for inclusion in other HTML pages as desired.

We used TEdit to create the basic subscription table used on our web page, which is also reproduced in printed form on page 10. TEdit gets the job done with the minimum of hassle and comes recommended.

Jon Connor

Canon Bubblejet support

I'm an Imagescape 4.1 user and have recently bought a new Canon BJC-200 colour bubble jet printer and was looking forward to printing in colour with my FutureLIS, but no matter how many different drivers or colour settings I have tried the font I have managed to print. I realise the BJC-200 is a new printer and was wondering whether Imagescape should work with this model - hopefully it's just how a problem with my set up? If this model is unsupported are there any plans to support it?

Ian Auld, Leigh-on-Sea, Essex

The BJC-200 supports a wide range of B) and Epson emulations which can be programmed by a series of patches on one of the buttons at the front so it might be an idea to try some of these.

John Snow, CIX start/computing conference

I have used a BJC-2000 and am now using a BJC-4000 and have had no problems at all printing anything with Imagescape in B&W or colour - or any other program for that matter!

Platini Milner, CIX start/computing conference



I'm planning to support it directly as soon as I can get some information about the printer codes it uses.

Jeremy Hughes, CIX start/computing conference

AC#8 BUG REPORT

Alexander Glass reports:

• The explanation of an operative and pre-operative multitasking in the Magic TIME (SHARD) forum on page 24 is not correct. In an operative multitasking the OS is passive, so the currently active application will run until it allows a task switch. No other applications or the OS can stop or interrupt the active program because rather the application run the OS gets any processor time. For example, if a program to calculate the first million digits of pi without allowing task switches was launched the system would be blocked for hours. Also the currently active program is not necessarily the application with the top window.

In pre-emptive multitasking the OS is active all the time. It switches to the next program once its time slice has elapsed. The applications themselves do not have to allow task switching regularly because they can be interrupted by the OS at any time. In this case the pi-calculator mentioned above would not block the entire system.

• In the same article, you mention WDialog is written by Thomas Much. It's not, it's written by Jiri & Miloslav Belova (people with some co-operation from Andrew Krenke - I don't know).

• The BubbleGEM Release 04 runs on p40. The feature to set the font for BubbleGEM should be only used by Desktops or a desktop accessory and not by "normal" applications because the setting will affect the help bubbles globally for all applications irrespective of the application which set the font.

The CIX mail switching Q&A included the wrong email address for Derryck O'neil which should have read: derryck@ccs.co.uk

Derryck also has available a G4-OUT script for STING is addition to the TTRC one.

range of display options in the process. TEdit can work with any ASCII file which uses tabs, semi-colon or comma to separate the individual cells. A few applications can output ASCII tables which semi-automates the process but it's easy enough to create simple tables using any ASCII text editor.

Once an ASCII table has been loaded TEdit can set the global table border colours and width along with a caption if

GOT A PROBLEM?

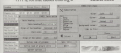
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SUPER SOFTWARE

Falcon AudioRecorder Direct by Data recording software which is currently retailing at £195. My copy is unused due to severe lack of time, but is a really excellent piece of kit! IT accept offers in the region of £75 plus insured postage.

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