EUREKA

The magazine for members of

The ARM Club

SW Show

More from Ron

Product Reviews

Issue 53 - 2005 No. 2

Come on - tell us about it

First of all my many thanks to those of you who have contributed to this magazine now and in the past. However for the magazine to continue we need more than just the articles written by our regular contributors.

If you buy a new piece of hardware or software that works on RISC OS machines it would be good to hear about it. The RISC OS community is not very large but getting information out to users is difficult. You may have just bought that nice new digital camera and plugged it into your Iyonix and file transport works direct to the computer via USB. Why not send us a few lines on how easy (or not) to get it it working, how fast it is etc. Other members of the club I'm sure would be glad of your findings.

Unlike large PC magazines who can afford to test large quantities of hard ware, a magazine like *Eureka* cannot afford to do this. It relies on the members of the club to spread the information amongst themselves. I'm sure some of you have bought some hardware or software recently, share your experiences with the rest of the club. To start the ball rolling I've done a short review of the Buffalo Wireless Airstation on page 55 of the magazine.

So please let us know about your experiences; just a few lines and a photo is always welcome, otherwise you might find this magazine morphing into Chartham Hatch Gardening News.

After all we are a club not a magazine publisher.

PS We are desperately in need of members who would be willing to do a series or mini series of articles.

CONTENTS

Shock news! Average age of RISC OS users drops by 50%

RISC Bytes

ACORN CYBERVILLAGE TAKEOVER

David Bradford well known for his activities as a media publisher for RISC OS, has taken over the day to day running of the Acorn Cybervillage web-site from Stuart Hallidy. David is aiming to provide quick links to current RISC OS items of interest, whether they be located on web sites, news sites, newsgroups or in the printed press.

He will be expanding the software database to provide a central source of virtually anything useful, and welcome input from any current or prior readers of The Acorn Cybervillage as to how we can make it better.

To coin a common phrase, The Acorn Cybervillage will be run by enthusiasts, for enthusiasts.

THE FIRST RISC OS DVD

RISCOS Ltd have announced the immediate availability of the very first native DVD-ROM for the RISC OS platform, the Foundation RISC User DVD Edition.

Launched to coincide with issue 16 of the regular CD edition of Foundation RISC User, the new DVD-ROM contains absolutely everything that Foundation RISC User has ever published, right back to issue 1, that's five full years' worth of magazines in total. What's more, all of this material is comprehensively combined and cross-referenced within a single attractive and very easy-to-use HTML-based 'Web site format' magazine. The combined edition is more than just sixteen separate magazines on one disc; it's a carefully integrated and indexed compilation of all the material in a single highly organised entity with multiple ways of accessing the articles.

Of course, the DVD edition continues to support Foundation RISC User's unique and pioneering interactive presentation, in which a click on a special link within an article can cause software to launch from the disc (so that, for example, clicking on an illustration of a Draw file causes the original vector graphic to be loaded immediately by Draw).

The Foundation RISC User DVD is packaged very attractively in a black plastic DVD library case with a full-colour disc label and sleeve insert; its front cover features a collage of the cover artwork from the sixteen constituent issues, and it will grace any RISC OS user's software shelf.

As for the magazine content, Foundation RISC User has a tradition of publishing particularly lengthy, detailed and authoritative articles of lasting interest and usefulness on a very wide range of topics. Subjects have included programming articles (for all levels of expertise), graphics tutorials, behind-the-scenes guides to RISC OS software and hardware, plus fascinating special features on unusual subjects, and the magazine has even published enhanced editions of entire books.

All in all, there's a vast amount of material on the DVD: in storage terms, there's well over a Gigabyte of data (and all of the software is stored in compressed archives); in article terms, there are several hundred lengthy feature articles comprising well over a million words.

Existing subscribers already know the value of the magazine, and can

now get all of its previous content combined on one convenient disc with enhanced indexing; non-members can now find out what they've been missing, even if it means that they have several months of reading ahead of them!

Aside from all the articles, the Foundation RISC User DVD also contains lots of other useful information, including a large archive of the best and most useful RISC OS free software, a database section with many details about user groups, developers and products, and a comprehensive news section that contains a very complete record of announcements, shows and user group events since the year 2000.

The news section and other time-based aspects of the DVD go up to the end of the year 2004; as with all CD editions of the magazine, the date on the disc indicates the latest date of the material contained on it, which is why the disc is labelled "Christmas 2004" (rather than the launch date of February 2005). The FRU DVD is a five-year slice of history which runs up to the end of the year 2004; but, of course, the bulk of the material on the disc will be of interest and value for a very long time to come.

For the first time, as a special spin-off product from the regular magazine, the Foundation RISC User DVD is being made available to everyone, not just to members of the Foundation. However, to be as fair as possible and to reduce the price to Foundation members who have some or all of the material on the DVD already, a scale of charges is being implemented, so that the longer you have been a Foundation member, the more cheaply you can buy the DVD. No matter how much you have to pay for it, though, the DVD represents the equivalent of five years' worth of Foundation subscriptions, and is therefore tremendous value!

The Foundation RISC User DVD is a genuine milestone for the RISC OS platform, being the first native DVD-ROM. (The magazine's interactive features will only operate under RISC OS, though you can read the articles on any DVD-equipped PC or Mac.)

An unfortunate side-effect of ploughing a new furrow such as this is that not all current hardware is capable of reading the DVD. In basic terms, you will need one of the following systems in order to make direct use of the Foundation RISC User DVD:

- A Risc PC with a DVD drive, running RISC OS Select or Adjust;
- Virtual Risc PC running on a PC with a DVD drive, running RISC OS Select or Adjust.

Other RISC OS computers fitted with DVD drives (and running a

suitable version of RISC OS) may be able to use this DVD, but the above two systems have been tested successfully by RISCOS Ltd.

At present, the elements required to use a DVD-ROM disc under RISC OS are as follows:

1. A DVD drive to physically read the disc;

2. A version of RISC OS capable of supporting DVD drives. At present this means either RISC OS Select or RISC OS Adjust. RISC OS 4.0x and RISC OS 5.0x do not support DVDs.

Some Risc PCs supplied by Castle Technology included DVD drives for use as CD drives; if any such machine is upgraded with Select or Adjust, it should be able to use this DVD.

Any machine that already runs Select or Adjust, but has only a CD drive, should be able to use this DVD if it is upgraded with a DVD drive.

For any users who wish to upgrade their computers with RISC OS Select or Adjust and/or a DVD drive, RISCOS Ltd is offering various handy upgrade bundles; see above.

Ironically (given that the DVD was actually created on an Iyonix, and is compatible with it in software terms), it is not currently possible to use this DVD on an Iyonix PC because RISC OS 5 cannot read DVDs. In the future, however, this is likely to change: once DVD-handling capabilities have been added (either by a future RISC OS upgrade or via the forthcoming third-party Cino product), the FRU DVD will work very nicely on the Iyonix.

If you wish to use the Foundation RISC User DVD but do not want to upgrade your computer, or you have an Iyonix, there are still other alternatives: if your computer is on a network with a PC or Mac, and you are prepared to devote 1GB of hard drive space to the magazine, you can simply copy the entire contents of the DVD across your network and then run it locally from your RISC OS computer. This will provide the most efficient performance in any case. The magazine itself can also, of course, be read on a Mac or PC; you will simply lose the ability to use the RISC OS-only interactive features which involve launching software from the DVD.

The prices have been set as follows (including VAT and UK postage):

Prices to Foundation members
The price decreases depending on the length of your membership:

1 year: £36.25
2 years: £29.20
3 years: £22.15
4 years: £15.10
5 years: £8.05

Price to Select members
£25.00

Price to non-members of Foundation/Select
£43.30

Bundle options
Also available are several hardware and software bundles which
include the Foundation RISC User DVD:

DVD + 1 year's new Foundation membership: £70.50
DVD + 1 year's new Select subscription: £175.00
DVD + Adjust ROM set: £131.00
DVD + 16x DVD-ROM drive: £73.00
DVD + 16x DVD-ROM drive + Adjust ROM set: £200.00

Basic V

Basic V: A Dabhand guide is to be reprinted by Alligata Media. Mike
Williams' book, was originally printed by Dabs Press in 1989, is a
friendly guide to programming on RISC OS in the BASIC language.

"If you're looking for a first introduction to BASIC programming,
avoiding many of the complexities of the WIMP, you need look no
further," says Alligata's Dave Bradforth. Dave wants to charge around £8
plus postage per copy, so if you're interested, let him know.

The reprint will be A5 sized, with 100 pages of black and white and a
colour cover, and either bound or in a binder depending on demand.
Alligata have also republished First steps in programming and First
steps in RISC OS 4.

Martin Wuerthner takes over development of EasiWriter/TechWriter

Thanks to the efforts of Martin Wuerthner (of ArtWorks fame) who has taken over the development of EasiWriter and TechWriter, version 8.31 is available.

The new version is 26/32 bit compatible (i.e. one version for both RISC OS 3.5+ & 5).

Among the new features which have been added since the release of version 7.11 are:

+ Comprehensive support for ArtWorks file import, rendering and printing.

+ Easi/TechWriter now have 16M colour export capabilities. This enables ArtWorks files to be exported in full colour. In addition, the output of deep sprites as HTML GIFs has been greatly enhanced.

+ Auto-save added. This is non-interruptive, i.e. the implementation waits for a short period without any user input to avoid opening the confirmation 'Save' window while the user is typing.

+ New (much easier to use) choices user interface using !ConfiX (supplied). Choices include:
- Option for Ctrl-Arrow to move the caret to start/end of line instead of start/end of paragraph.
- PC Keys option "Off", "On" or "Auto". This option controls the interpretation of "Delete" and "Copy/End".
- Easy configuration of the output resolutions of vector graphics/equations when saving as MS Word.

+ New facility to insert the Document (leaf) name into a Header or Footer, as opposed to File name which inserts the full path name.

+ WMF files embedded in RTF files can be read even without ImageFS2.
    + 32-bit compatible EuclidX module included so animations can be

viewed on the Iyonix.

+ Status of "View Animation" is saved with document.

+ Support added for EFF's magic handwriting font manager.

* The Easi/TechWriter CD now includes a FULL copy of Citation, which costs £30 if purchased separately. Citation is the premier bibliographic reference manager for users of RISC OS computers. It has been designed to facilitate the storage, searching, sorting, and formatting of references for direct output into technical and academic works or for publication on the internet.
More details at: http://www.dawsontp.doctors.org.uk/

There have been a number of important bug fixes. Users will be pleased to learn that:

+ Selecting a paragraph and typing in to it no longer merges it with the paragraph above.

+ Picture dialogue aspect ratio now stays synchronised.

+ URLs are no longer truncated to 80 characters when exporting to HTML.

+ Euro symbols in Word documents are no longer imported as "_" but as character 128, suitable for standard RISC OS fonts, e.g., the ROM fonts Trinity, Homerton, etc. (not EFF fonts, which have the Euro at a different position).

+ The border styles of auto-width tables are now exported to HTML.

+ "Enter user-defined label in change list format box" bug fixed.

+ Word documents have "Background printing" off by default.

Full details can be found at:
http://www.iconsupport.demon.co.uk/Latest/Latest_news.html

The update CD contains full documentation, examples, hints and tips, a selection of complementary utilities, etc. For users of version 7, it costs just 25.00, inclusive of postage anywhere in the World (there is no VAT). EasiWriter users can upgrade to TechWriter for an additional 25.00 **http://www.iconsupport.demon.co.uk/Prices/Upgrades.html**For support Visit:
http://www.iconsupport.demon.co.uk/Support/Support.html

Coming soon simple macro support allowing you to expand phrases from a few letters - e.g. convert BBC to British Broadcasting Corporation simply by pressing the full stop.

ROX-Filer 2.2.0 is out now!

ROX–Filer is a small, fast, powerful filer for Unix, Linux and compatible systems. Its user interface is based on the RISC OS filer, and it supports similar concepts, such as application directories, drag–and–drop saving and popup menus. It implements a RISC OS like pinboard, and a panel which can be used in a similar way to the RISC OS iconbar. It also supports many features not found in RISC OS, including thumbnails of images, keyboard short–cuts, custom menus, many more options, powerful search facilities, etc.

ROX–Filer can be used on its own, with another desktop (such as GNOME, KDE or XFCE), or as the core component of the ROX desktop. The ROX desktop aims to bring all the good features of RISC OS to modern systems.
ROX–Filer is also available via Zero Install, which allows traditional RISC OS style application directories to automatically handle dependencies without needing an installer. This is a new, easier and safer method of installing software:

Get ROX–Filer here:
http://rox.sourceforge.net/phpwiki/index.php/HelpInstalling

The Really Small Software Company software updates

Sourcery (0.61)
Sourcery is a development tool that manages all of the source code and resources that make up a project. Use whatever tools you want to build the project, Sourcery tries to make life easier without restricting what you want to use to build your software. This version has a number of changes from the last announced version:

- Fixed a problem copying include paths and libraries
- Allowed export of source as well as runtime files
- Improved makefile generation
- Added ability to build multiple targets for a project
- Added ability to handle GCC dependency files
- Fixed a problem deleting Code types
- Changing include paths caused projects to lose reference to them
- Added some new compiler flags
- Reorganised Code types to allow for GCC C type
- Updated manual with new example

To get the best from this release of Sourcery it is important to follow the upgrade instructions supplied.

ODBC drivers and tools
ODBC is an industry standard API for connecting to local and remote databases without the client application needing to be aware of the type of database it is connecting to.

This allows you to develop against one database and (in theory) move to another as your requirements change. Use of database specific features will limit how easy this is! All of the previous ODBC related downloads have been replaced with new versions:

- iODBC driver manager now at 3.52.1
- New version ODBCMan which integrates with Configure

- New version of SQLTool
 - Updated PostgreSQL, FreeTDS and SQLite drivers

Note that the mySQL driver supplied is the same version as before but the new distribution is required to work with this release of iODBC.

This release seems a lot more stable than before, but because this is now an ODBC 3 compliant release rather than ODBC 2.5 there have been some API changes. These tools require a 32 bit Shared C Library due to the use of 64 bit integers. Note that client applications can be linked against any variant of the Shared C Library.

SQLite
The SQLite library is a small embedded SQL database engine that has been ported to run natively on RISC OS. This release delivers ports of versions 2.8.15 and 3.0.8. Note that SQLite3 can not read databases created with SQLite2. These libraries require a 32 bit Shared C Library due to the use of 64 bit integers.

SampleEd (0.30)
A disk based sound sample editor. Provides effects such as fade, reverse, echo and amplify. Additionally supports the LADSPA plugin API to extend the effects available. Many sound formats supported using libsndfile and PlayIt used for playback.

Changes this release include:

 - Added ability to import a sample directly into an existing sample
 - Fixed problem generating large equations
 - Added ability to rescan drivers and plugins
 - Added driver management window
 - Added paste options to Choices window
 - Improved Harmonics window
 - Restructured plugin menu
 - Added ability to play highlighted area only
 - Enhanced methods of highlighting areas of a sample

LADSPAMan

A configuration tool for LADSPA plugins. Can be integrated into Configure or run as a stand alone application.

Games

As part of the testing for Sourcery with GCC some SDL games were compiled. They have been tested on an Omega and RISC PC both running Select and seem playable.

LBreakout2

A good looking breakout style game.

Jump 'n' Bump

A simple multiplayer game where bunnies squish each other.

http://www.reallysmall.co.uk

VICE 1.16 Released

VICE (Versatile Commodore Emulator) is a portable emulator suite for the 8bit CBM machines C128, C64, CBM2, PET, Plus4 and VIC20. For more information visit the official VICE homepage at **http://www.viceteam.org/**

The RISC OS release of version 1.16 is 32bit compatible and will therefore run on RiscPCs as well as Iyonix computers, but requires the 32bit Shared C Library. This release no longer contains the DigitalRenderer module, since other programs started using it recently, so an application–specific installation is no longer sensible. You can download the latest module from the homepage at **http://home.t–online.de/˜zarquon/Software.html#drender** and install the module in System:Modules. For more information and the download link see either the VICE homepage above or the VICE section on my software page at **http://home.t–online.de/˜zarquon/Software.html#vice**
If you want to download the archive directly, here's the link to the RISC OS binary release:
ftp://ftp.funet.fi/pub/cbm/crossplatform/emulators/VICE/vice–riscos1_16.zip

FREE FOR ALL

*I*n which *Andy Burgess describes his change of circumstances and then adds a little about free software*

All Change!

Well, hello again! It seems to have been a while in the wilderness, but I've managed to get back in touch with the ARM club! The reason? Well it's a long story, so if you don't like fairy tales with a happy ending (for me), then skip to the stuff about the software.....

Once upon a time in June, June 11th 2004, my section leader called me into his office - my heart was pounding. I hadn't spoken to him in a while, and asked him about his children - one is the same age as my son. He curtly told me how his daughter was, which seemed unlike him. I had really been getting to dislike my company. I was employed as a programmer - supposedly to analyze and fix PC Visual FoxPro and Visual BASIC

programs, but for the last two, maybe three years, I had become an SQL script coder and checker (yawn). Now, when you've written one script to fix a data item from 0 to 1, you've done them all, and I must have done many 100s without any opportunity of anything else, and consequently I'd lost complete interest in the work! This coupled with the fact I was using horrible PCs instead of 'real' Acorns, was not interested in the financial products the company produced, and had had a couple of run-ins with my previous, disliked immediate boss, I'd given up any interest in the company.

Anyway, my section leader had told me I had been selected for redundancy. I was relieved - I'd wanted out for four years! but a bit disgusted that I was told to leave that day - with no real chance for a leaving do. My new boss, a Welshman, who had been beginning to line up slightly more interesting work was very annoyed. I liked him, he liked

me, and my going left a massive hole in his schedules. He met me after I heard the news and said, "Do you want to go to the pub?" I said I did, still feeling a bit funny, and we adjourned there. "We'll get the section leader to pay for these!" As it was a lovely summer's day - as two chaps who liked their beer - we arrived at 11am, and didn't leave till gone 4:30pm!

PC vs A7000!

Anyway, I had been toying with starting my own business for years, and I now decided to take the plunge (look at **www.jet–net.co.uk** - graphics are **!Draw** files converted to GIFs through **!InterGIF**). I'm supporting PC (yuk) users in the aviation business - flying's a passion of mine. Incidentally if any Acorn users could benefit from my on-site support in Hampshire, contact me! I have had to build and install a new PC. For the first time, I have a 'state-of-the-art' (ahem) PC computer. I built a Pentium 4 3.2 GHz, and installed Windoze XP on it. Now, after a bit of argy bargy with the new motherboard not liking my hard disc cables, I'm impressed with the speed XP starts. I'm sad

to say it's a mite quicker than starting my A7000 (Risc OS 4), but the Acorn's probably doing more work in the boot, and it's substantially older! However my being pleased with the PC stopped when I attempted to access the Internet (on dial up) - what a tortoise! I didn't disable my firewall and XP took about 15 minutes to download 3% of a 1.5MB file or so. I gave up on it, and did the same (PC) file on Warm Silence Software's **!LoadMaster** (commercial) software. It did about 85% in the same time! I always knew the Acorn was better, it also feels more 'honest', and isn't checking up on you, or trying to 'catch you out' - "Ah, you're out of disc space on drive G:" - so what? I never use it anyway!! I'm seriously considering broadband - I have customers who use XP on broadband and it seems really fast, so I wonder what **!Fresco** would be like on a fast internet connection? I'll probably prepare an article on it for *Eureka* if I do go with it! Watch this space!

I run my business from the Acorn, rather than the PC (I leave that to my customers)! I use **!Voyager**, **!Pluto** and **!Fresco**, plus freeware and other stalwart RISC OS applications. I

built my website through simple HTML pages and uploaded it to my free pages on Argonet (where I have four separate websites installed). Currently, the only issues I have with running my business on RISC OS are with spreadsheets - I'd like to use 'merged cells', and my elderly **!Eureka** doesn't allow this. Also I need to buy the full-featured **Oregano 2**, rather than my 10-minute time limited **Oregano 1** (demo) - which I feel is the most capable Acorn web browser, though I still prefer trusty **!Fresco!**

Graphic folders in RISC OS

Whilst still on the subject of my business, I have used RISC OS facilities in my business folders to instead of merely having the folder's name, having my customer's logo on the folder. This is done really simply by renaming the folder to have a pling (BBC Micro speak), a '!' in front of the folder - i.e !customername. You have to remember to shift-click to open it, as it's really an Application folder - without an application! I create a !Boot file within this folder with the following text within it (to load up the logo for the folder picture):

```
IconSprites <obey$Dir>.!logo
```

I have a sprite file called !logo in which there is the converted website graphic (thru **!ChangeFSI**) from my customer's website saved as a **!Paint** sprite. In **!Paint**, I've often adjusted the sprite - Edit-Mask, then flood fill the background globally to transparent, and then Edit-Scale x and Edit-Scale y to an acceptable size - though not all logos are the same size in my directory list, they now have the same width, so things look better.

Finally I have a !Run file to open a relevant shortcut web page (created in basic HTML) to give me links to appropriate places and links locally - e.g. Voyager dial log, basically using internet file path (with /) to traverse the RISC OS file structure - <AHREF="/$/apps/!voyager/diallog"> Voyager Dial Log</A>

The !Run file is like :

```
Filer_Run <obey$dir>.Acorn/html -
```
to open my 'relevant' web page

```
Filer_OpenDir <obey$dir> - to open
```
the directory as if I have shift-clicked on it.

Enough of this spiel, on to the

FREE SOFTWARE!

I have all but forgotten about **!AntiSpam** for the moment, with the change in my working circumstances. I will try to get back to more on it for some future issue.

Ghostscript

Using Ghostscript to produce a PC Adobe Acrobat Reader compatible document.

Ages ago I stumbled upon a webpage detailing how a PDF document could be produced from a RISC OS Postscript output file. I rediscovered this recently, and it still exists at **http://members.ozemail.com. au/˜bmcelroy/riscos/freepdf. html**. It tells you in a simplistic way how to achieve this, and this instructions are good enough to allow you to do this, bar the issues I discovered decompressing - see below.

The linking page **http://members.ozemail.com. au/˜bmcelroy/riscos/pdfapps .html** tells you where you can get the software.

I downloaded the requisite

software: **!Ghostscript**, **!PS2PDF** (Acorn PostScript to PDF file) and **!PDF**.

!Ghostscr

www.acornusers.org/ ghostscript

I previously had version five of **GhostScript** and had loads of hassle trying to get it to work. I desperation I looked on the internet (address above) and located version seven, that was far, far more reliable. You need to download all the five files! This should give you a **!GhostScr** application with a 'Ghostbusters' style icon. You should have a directory structure like the following: **!Ghostscr** + 7_03 + bin + fonts

After downloading successfully, I experienced issues with my **!Sparkplug**. For some reason it insisted on decoding Windows file names as shortened filename and extension merged - annoyingly translating files like '8012224.pfb' to '8012224_p' (doesn't work in **Ghostscript**) and revealing itself by **Spark** asking if I wanted to replace a file (8012224.pfb by a 8012224.pfm which both translated to the same name of

8012224_a from **!Spark)**. All of this was despite **!Spark** displaying them fine in its filer window prior to saving to disc. If anyone knows what I'm doing wrong, please let me know - it doesn't appear to be **Win95FS** or **!LongFiles** screwing it up, but **!Spark** itself! Maybe I need to update !Spark - mine is version 2.23? I got around this by decompressing the files on a PC on my local network, and copying them across via **LanMan98** (which incidentally works on Windows XP too), though without a network or indeed a RISC PC it would be a bit unwieldy with floppy discs - so far as I'm aware PCEm's hard discs can't be read in RISC OS. Anyway, once saved correctly I could use it, though it's far too complicated for simple use without the following program:

!PS2PDF

I also experienced issues with this program, but this was merely my own ignorance of the file type. The file was downloaded as PS2PDF/sea. I didn't know how to decompress it. I think I had to change the file type to "Absolute" if it didn't come down this way. Doing this, I was still perplexed as to how to

decompress it. I consulted the internet, and found out all I had to do was to run it! Sure enough, like a PC "self-extracting EXE", the file automatically decompressed itsself, and I had a PS2PDF application to save. **!PS2PDF** needs the filer to have already seen **!GhostScr**, and the system variable GhostScript$Dir to have been setup.
www.runton.ndo.co.uk/bin/ ps2pdf.sea

!PDF

www.pdf.iconbar.com Again I had an old version of **!PDF** and downloaded a new copy. For some reason, on my A7000, **!PDF** was stored in $.!Boot.Resources, and so I replaced it there. I must find out more about the !Boot.Resources folder, but I presume it's a place to store programs that will automatically link to their respective file types. Incidentally, the help file was also badly translated by !Spark, but was easily fixed by changing the name in "!PDF.Documents" to "help/html".

Producing the PDF.

I added a PostScript Level 2 printer definition file into my running **!Printers**, and changed

the Configure-Connections dialogue for this printer to output to a file at ADFS::HardDisc4.$.!Jetnet.Print out, and saved the settings. I used **!Impression** to produce a nice looking document, and 'printed, it to the new 'generic' postscript 'printer'. I dragged and dropped the saved Postscript 2 file into **!PS2PDF** (running on my task bar), and the machine seemed to go quiet for a while (there was my company logo in this file). After a short time, a save dialogue appeared, and I saved my PDF file (having to add to the default filename of /PDF). Using my newly downloaded **!PDF**, I was very disappointed in the rendering of the file on the Acorn in **!PDF.**

After the disappointment on the Acorn platform, I copied my completed PDF to a PC and loaded it up in Acrobat Reader (version 4). It looked as good as the original RISC OS document, and was great to see something so 'pretty' on a PC! This is what I wanted to be able to achieve, create attractive documents on a decent platform which are readable on the PC (all my clients use PCs). Indeed I've used this facility in my business, sending a network design

document (from **!Draw**) as a PDF to an associate using a PC. It gives one the chance to have greater PC connectivity, without actually having to use one of those awful beasts!

!Organizer (continued)

I've drafted Chris Morison's excellent **!Organizer** in to helping me organise my time - I don't think only that can sort me out though! I told you I needed time to use it! I now have two Organiser data files - one I use for my business - and use the diary part, and the other, I principally use for my personal names and addresses. I'm still using **!Alarm** for repeating alarms I have set up, and now I've learnt I can do these in **!Organizer**, I'll remove **!Alarm** from my boot sequence shortly! See below for how to set up. For this issue, I'll only concentrate on the 'Diary' and 'General and Diary' configuration options. More next issue.

Diary

The diary is a very useful (and commonly used) feature of **!Organizer**. One thing I really like about this over American Diaries on other machines, is

that British dates to remember are quoted - e.g. St David's Day on 1st March (no more Welsh cakes for me now I'm not working for my 'decent' Welsh boss!) It would appear that you cannot search for an alarm string (or memorable date, like St David's Day), but you select a specific date, by choosing Find Date from Menu clicking, or by pressing F4. By default today's date is selected in the little calendar window, but this can be changed by clicking in the date box at the top to change the month, or by using the scroll arrows to change the year. Click OK to go to that date.

Diary entries can be entered by merely clicking on the relevant date. Set a time if appropriate (must be 24 hour clock) and enter text in the large white box. Note if you enter a lot of text, it will be sized down in the diary entry to fit on the line. In some cases long text then becomes unreadably small. If you want to run a program, enter the RISC OS command line in the box, and tick 'Task' on. You can change the time of any entry with the colour drop-down, or set default in choices, see below. Tick Beep on if you want a noisy reminder (by default this is a constant

beeping, but it can be changed in the choices). I had to change that as while out in site one time, my wife was so annoyed by it, she shut down the computer - at the mains plug! 'Show Time' will show the time in the diary entry. 'Display only' is self explanatory, as is 'Repeating Alarm' - which I'll have to use in preference to **!Alarm**. Click OK to save it, and it'll appear in your diary.

I use a two week view, which is easy to change by just clicking Menu over the diary pages, or by setting to default (see below). This is really useful, as I can see what's planned for the next two weeks.

Setting defaults

I found this option absolutely invaluable for the way I use **!Organizer**. You can press F2, or menu click the icon and select 'Choices'. If you want to find what the various options do, start interactive help from the Apps folder on the RISC OS icon bar for **!Organizer**. Then you have to select Help->Interactive from a Menu-click on the taskbar icon. Alternatively if you want to set Interactive help, you can click the Interactive Help tick box on the General tab (below).

General tab

Auto Save - Save data when you make changes - I've set this myself. Auto open: - Centre - the diary opens in the centre of your monitor on starting **Organizer**. 'Your Name' will appear on the start-up banner if you've entered it. 'Rings' is not terribly meaningful, but is a 'cosmetic', pretty change. It determines how many 'rings' you have in your on-screen ring-binder. Although not like an actual filofax where you have specific punchings in the paper, you can tell Organizer how many rings you want displayed. 1 indicates the presence of a ring, and 0, none. Having all zeros gives something like a normal diary, and having the maximum of 14 1's resembles more like a spiral-bound notebook, or a string of '11' gives a normal ring binder effect! Not really essential, but a nice touch giving Organizer a really user-friendly interface. I use "11111111" which gives 8 rings. You can even have it display in English, Français (French), Italiana (Italian), Nederlands (Dutch), Portugues (Portuguese), Dansk (Danish) or Deutsch (German)!

I have changed my iconbar clock to be 24 hour, digital (a personal preference), and with a day and date of "%w3 $dy%st %24:%mi" - 3 letters for day name, the date itself with 'st', 'nd' etc and a 24 hour clock. The help file details all these formats.

Finally the non-stop beep can be ticked to turn off after a duration. I've set this to the default of 10 seconds, so my wife won't be powering down my machine, if I'm out!.

Diary tab

Two Weeks/One Week/Two Days - choices for diary display - I have mine set to Two Weeks. Default entry settings are how your diary entries will normally appear. Click the Colour window to select your default colour. I use red.

24 hour format - times will display like 2:00pm without and 14:00 with. On the diary entry screen, you still need to enter times in 24 hour, even with it unset here.

The rest are fairly self-explanatory.

More on Organizer next month!

Roger King's Double-cross
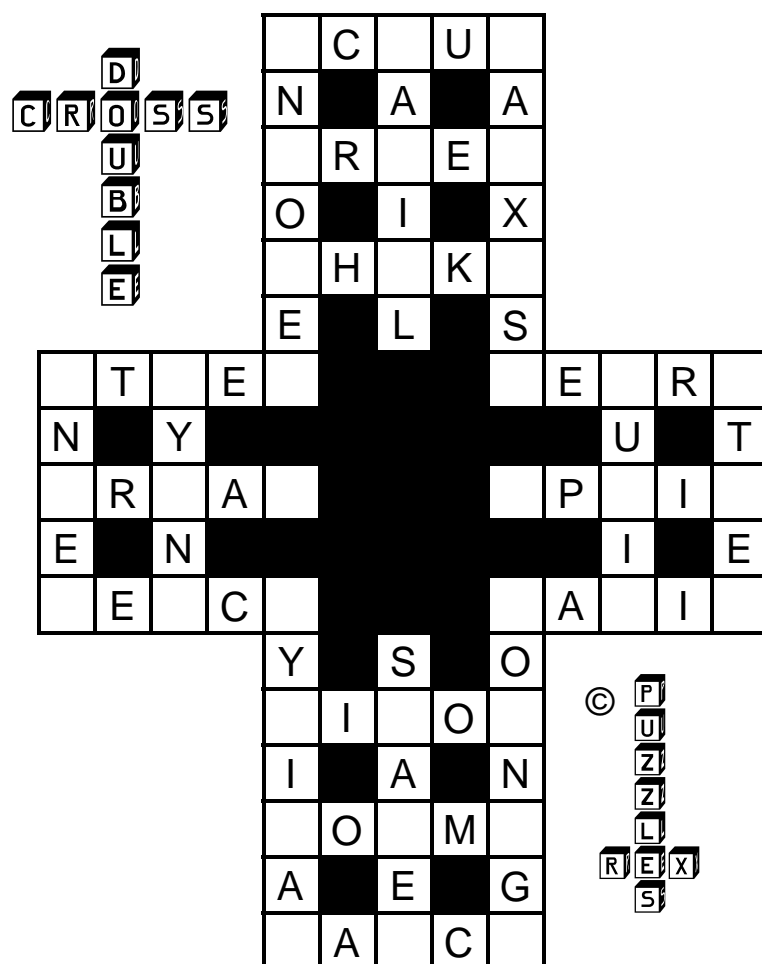
Place the 36 letters shown below
into the grid to make valid words

A	E	L	O	R	T
A	E	M	O	R	T
A	H	M	P	R	T
C	I	M	P	S	T
D	K	N	R	S	T
E	L	N	R	T	T

Solution page 59
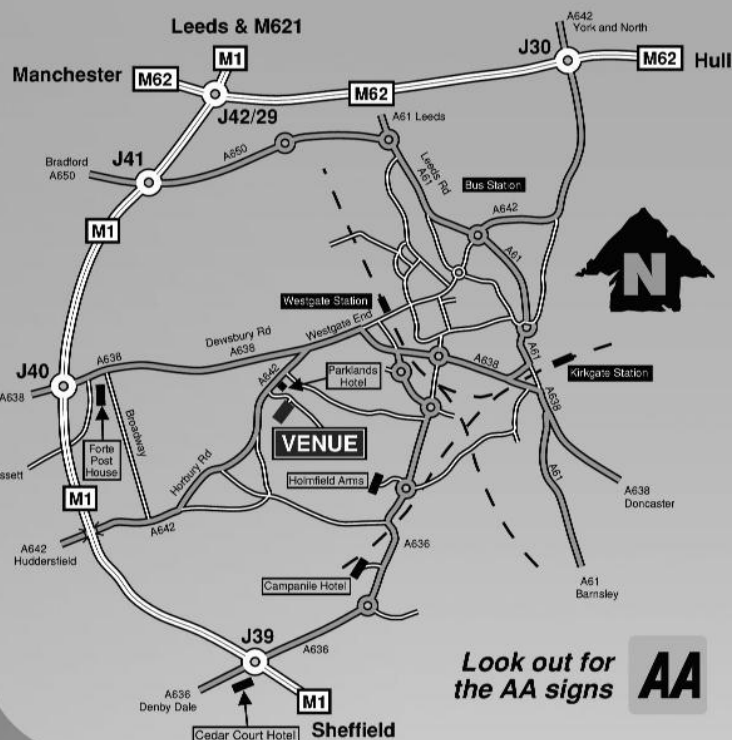
2005

SATURDAY & SUNDAY 21 & 22 MAY 2005

THORNES PARK ATHLETICS STADIUM, HORBURY ROAD, WAKEFIELD WF2 8TY

Ticket prices & show opening times

	Ticket price in advance	Ticket price at the door	Show opens from
Saturday 21st May	£5	£6	10:00am to 5:00pm
Sunday 22nd May	£5	£6	10:30am to 3:30pm

Entry for children aged 5 or under (accompanied by an adult) is FREE

Tickets are valid for use on ONE DAY ONLY
Members of WROCC may gain FREE entry on Sunday

Advance tickets

For advance tickets, send cheques or postal orders to:

Wakefield Show 2005,
3 Riverdale Avenue, Stanley, Wakefield,
West Yorkshire WF3 4LF

Cheques/postal orders should be made payable to:
WROCC Show

Further information

For advance ticket orders and further details, visit the Wakefield Show Web site:
http://www.wakefieldshow.org.uk/
Credit card ordering and advance tickets will be available via the Web site from mid-March 2005

... 1997 ... 1998 ... 1999 ... 2000 ... 2001 ... 2002 ... 2003 ... 2004 ... 2005

Look out for the AA signs AA

Sponsors: Spellings Computer Services

APDL STD MW Software VIRTUAL ACORN

Attractions include

- Show theatre
- Prize draw
- Free car parking
- On-site catering
- AA signs to event
- Disabled access
- Charity stall (raising money primarily for Wakefield Hospice)
- Small Developer Community Area
- Free minibus service between the venue and Wakefield Westgate railway station

The rights and responsibilities of users of PD and Freeware programs

R*on Briscoe writes about paying for software*

A short time ago I was in ether-type communication with someone who had written a nice little program and was most surprised to find out that I was the only person who had bothered to get in touch with him. This set me to thinking and I emailed a few application/useful module writers asking them if they kept download statistics and also how many people wrote to them concerning said programs.

The answers have now come back and the results are disturbing at the very least. It seems that a large number of us users cannot be bothered to;

a) Even download some very good software.

b) Even if they do, take the trouble to write to the authors thanking them and maybe making constructive suggestions on possible enhancements.

This is both wrong and short-sighted!

Why wrong and short-sighted? Simple, if people have been good enough to share the fruits of their labours then it is only right that we should thank them and if we do not encourage them then they may not bother to write any more or if they do, refuse to share it with us. No matter how good a GUI or hardware an OS has, without software, that OS will die and we really do not want our OS to die. Do we?

Ahh! I hear you mutter. "X looks interesting but I already have an application that does the same thing." So what? It would not hurt to download and try out 'X' and even if it does not meet your requirements dash off a small email of thanks with maybe a

polite request for improvements so that it will meet your exacting standards. Also remember that the author of your original software may not be, for one reason or another, available to make improvements to it whereas the author of 'X' with proper treatment may be encouraged to improve it so that it becomes even better than your original application.

From my own experiences software authors are always willing to try to sort out any problems that the user has with the software concerned, showing itself particularly when I purchased my Iyonix. Software writers who had not got an Iyonix themselves at the time (and some still haven't) laboured long and hard to 32bit their programs so that I could still enjoy them on my Iyonix. This as anyone of them could testify was particularly difficult, given that from my end the only information that I could feed back was a verbatim copy of the resulting error box on my Iyonix. Plus the soon discovered knowledge that they were dealing with an idiot.

Why are they so accommodating? It cannot be for fame, as from the results fed back to me show that

downloads of some very good software are quite low even allowing for the relatively small user base. No I think that they are another manifestation of the friendly RISC OS community. These people give and enhance their work because they think, and they are right, that we may find them useful. Thanks...not a lot. Complaints... usually on the newsgroups. Sometimes without even bothering to contact the author.

Now you may not agree with what I have written but here are one or two things to ponder. How many people have written potentially useful programs and having released one or two, received precious little thanks or feedback, decided not to bother releasing any more? How many applications or modules could be improved if we as users could be bothered to write to the author?

Of course by writing to the author I mean constructive emails not postings along the lines of "Your program is garbage so I won't bother trying out any more of your stuff." After all the old maxim of 'Do as you would be done by' still holds true even using modern forms of communication and the

recipients have feelings.

Now so far I have only written of our, the users responsibilities, but we have rights too. The main one is a 'Help' or as Druck would write, 'Halp' file. I do not personally care what form this takes; text, HTML, StrongHelp, PDF or one of the commercial DTP offerings (although the last is a bit of a problem if whoever is attempting to read the file has not got the relevant software), but I think that if an author cannot be bothered to write a 'Help' file then I can only think that it is not worth the risk of trying the program out. I need to know what the program does and where on my machine is the best place to install it.

Fortunately all of the software authors of the programs that I use write clear and informative 'Help' files and are often more than willing to explain parts that I do not understand. It's a good job that there is no postage charge on emails otherwise I would be a lot poorer.

Err...That's it! The user has no right to expect more than what the program does, only hope that if it does not do all he expects of it that the author will spend some more of his time in enhancing it.

So to recap:

At least try out software, you never know it might be just what you need.

Write a thank you email to the author. Everyone likes a little appreciation now and again.

If you have any problems with the software, remember that the person that you are dealing with is not some faceless corporate nonentity but a fellow **RISC OS** user who has been good enough to share the products of his labours.

Do as you would be done by.

Read the help file and or manual, if there is something that you do not understand then I am sure that the author will explain it in greater detail. Also remember that the author may not be writing in his native language, although I have to say that in particular, our Continental friends have a better grasp of the English language than me.

Last but by no means least, those of you who are writing software out there, keep up the good work please.

SW Show in colour

For more pictures and the show report see page 54

The venue

On to the Show

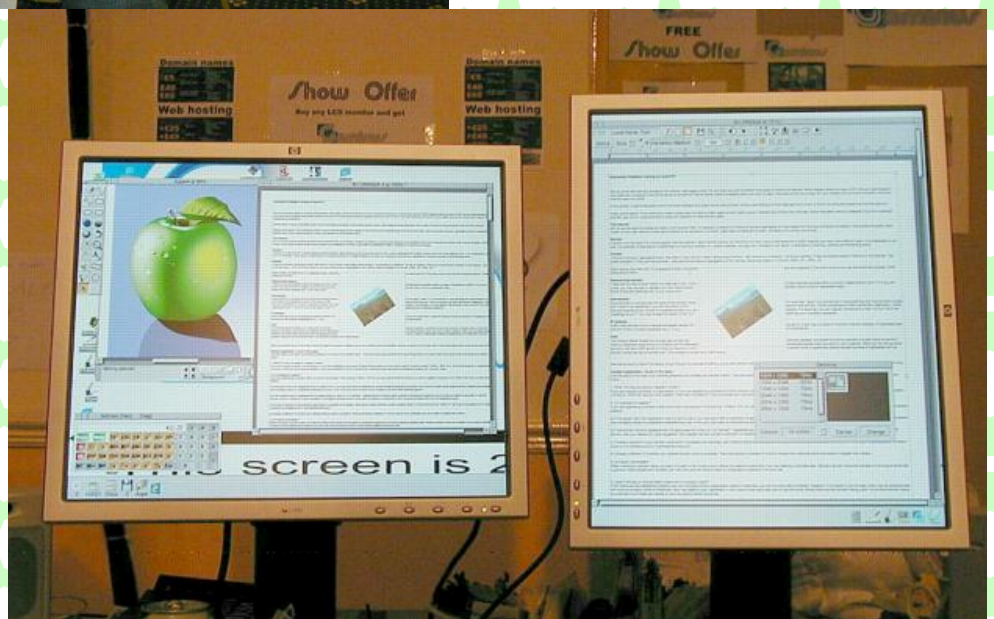*Inside with a good view of*

At last the Mathematical

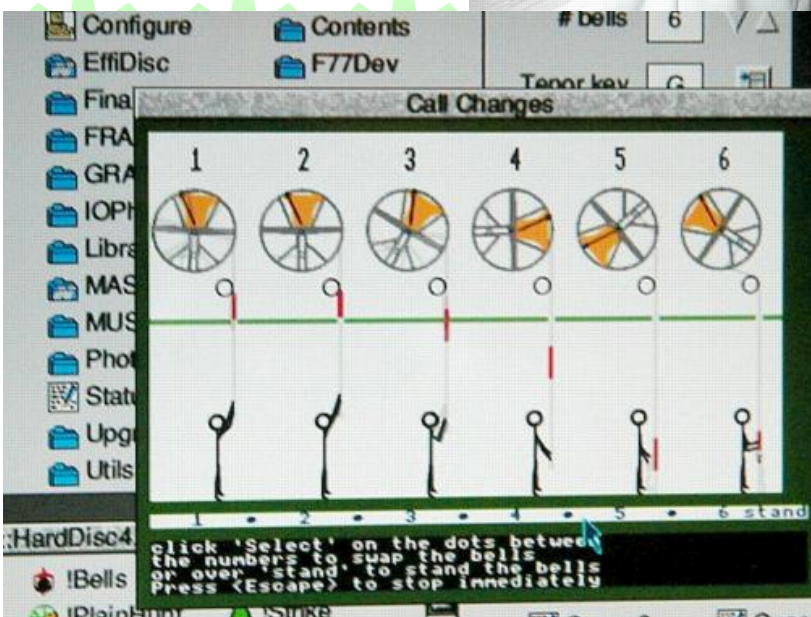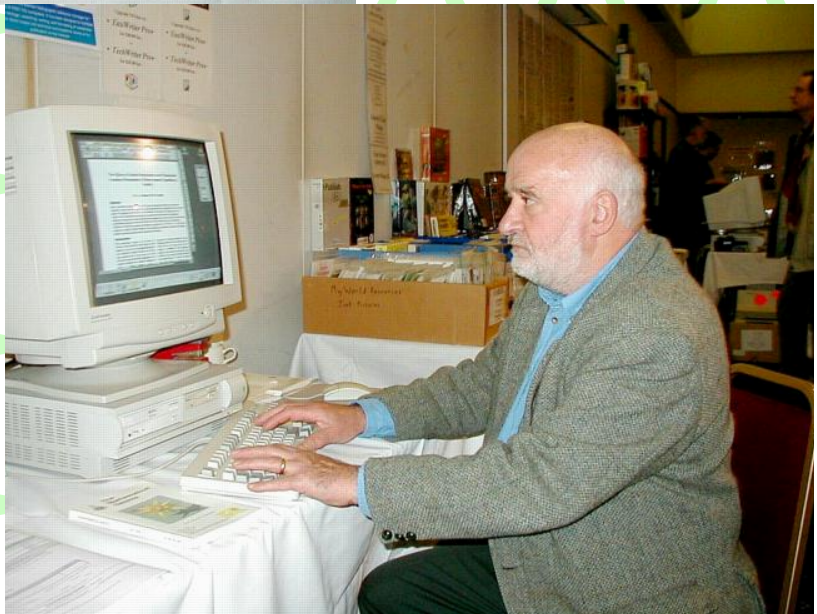*Neil Spellings*

Geminus screens

Shapes from Fortran Friends

Mike Glover playing with his macros

Once you start you can't stop

Castle's stand

Qercus

Machines from the past

Pictures by Andrew Wyver

Winning Games With Logic Part 9

Barry Aulton *continues the series.*

Since I am now writing a simple game, I will include some of the techniques I am using. Many games have been released with a long list of 'promises' that do not materialize, usually because the extensible AI aspects of games fall to the pressures of shipping and design complications. This is the lament of Eric Dybsand who maintains a WEB site on games that make interesting use of AI techniques. "AI will almost always be shirked by the software developers/producers, at least in the initial release. This I feel is because most AI cannot be written to be effective until late in the development cycle as it needs a functional game environment to see its' effects. Then the developer is faced with a choice of spending several more months to get the AI right, or release a fully functioning game with limited AI capability. Most choose the latter".

Also, there does not seem to be any magic technique guaranteed to work. They all have limitations; you have to adapt them to fit game particulars and perhaps even sling them to try something else. By then of course it's probably too late to include them!

When you have several CCC's interacting you can get absolute chaos! Your CCC's must cooperate with each other to reach a common goal. This is particularly true for sports games but also Real Time Strategy Games. In the book (*ref. 1*) the editor Steve Rabin lists some of the observed play during early development of the game Microsoft Baseball 3D :-

1) Three fielders were all standing where a fly ball was going to land waiting to catch it, and they all did! (Nice one!)

2) Outfielders banged in to the outfield wall while trying to follow a home run that went over the fence.

3) Two fielders pursuing a ball and both giving up thinking the other would get it.

4) A fielder waiting to catch a fly ball runs away at the last second, no one else goes after it, it just lies on the field.

5) A fielder throws the ball to 2nd base and the baseman doesn't know he should catch it. After flying through the baseman (ooh nasty!), the ball rolls towards the catcher who simply ignores it.

6) A fielder catches the ball but another fielder, not knowing it was caught, keeps chasing him trying to steal it away.

Fig. 1 shows a flow diagram showing the various components of a game, each of which can be developed separately. But what about the tactics? You have to start somewhere, hence the Finite State Machine (FSM). This provides a way of reducing the long mess of IF-THEN-ELSE code that gets very difficult to maintain and debug. (Just adding another (damn it) factor may result in having to completely rewrite the code.)

To recap, a computer controlled character (CCC) is often controlled by a finite state machine (FSM), whose output is a set of probabilities of it performing actions, given its state (note that this requires the CCC to be in just one state). Individual, relatively minor, CCC's can change their behaviour via changes to these (state transition) probabilities. For example suppose a CCC is in the state - ATTACK, we could have a set of numbers indicating how much of a good idea it is (i.e. its' motivation) to move to another state DEFEND, say:-

for Current state = ATTACK
Transition Numbers
(proportional to transition probabilities)

ATTACK	DEFEND	RETREAT	EAT	REGROUP
250	50	50	0	50

sum = 400

Here, the probability of changing from the state ATTACK to state RETREAT is 50/400, whilst the probability of continuing with the attack 250/400

Where did these figures come from? These are all from ad hoc formulae estimating the 'MOTIVATION' to continue attacking as discussed before.
The FSM approach is the good old black box approach used in
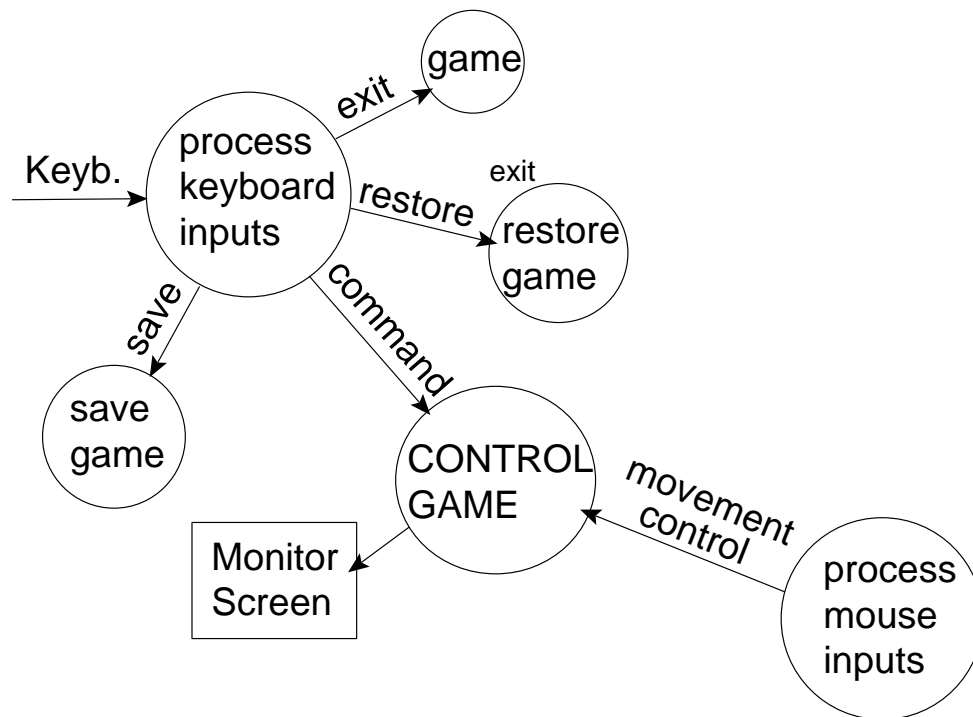
This is a possible level 1 data flow diagram for a computer game . The mouse is here expected to control ship or hero movement . Other commands to control the game are assumed to be input from the keyboard

Context Diagram
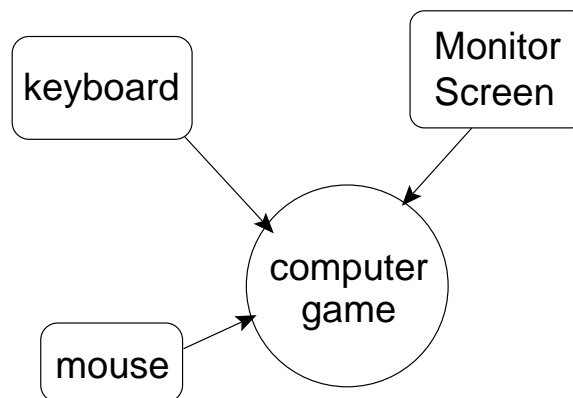
The context diagram simply shows the interaction Between the sofware for the computer game and the outside world . It shows the things with which the software interacts

Fig. 1

electronics or encapsulation in programming i.e. isolate everything to do with a game object in one piece if code. This method was used in the text adventure compiler Infocom. (In Infocom everything is an object. Objects can be buildings or rooms, creatures, the player and things such as doors and switch type things.)

This works well for simple objects for example for a door we may store a structure such as:-
class door

```
{
    private:  // (you may have
noticed I am one of the dreaded C++
coders)
    int is_locked;     // is the door
locked, say 0 not locked , 1 locked
        // we only need one bit
    int is_shut;  // is the door shut
    int is_openable;  // is it
openable
    int is_lockable;   // is the door
lockable
  // we assume you are not supposed
to blow the bloody door off!
    int  key_index; // index of key
that will unlock the door
    int exits[];    // a list of indexes to
the rooms the door connects to
  public:
  void  when_open();   // action to
be taken when door is open
    void unlock_door();
```

```
    void open_door();
    void when_locked();  // action to
be taken when the door is locked
  // etc.
}
```

You can see (even if C isn't your bag!) that the door can be thought off as being in one of several states, locked, closed and open. In order to progress from one state to another, actions unlock_door or open_door are needed. This leads us to the idea of a state diagram (see *fig. 2*)
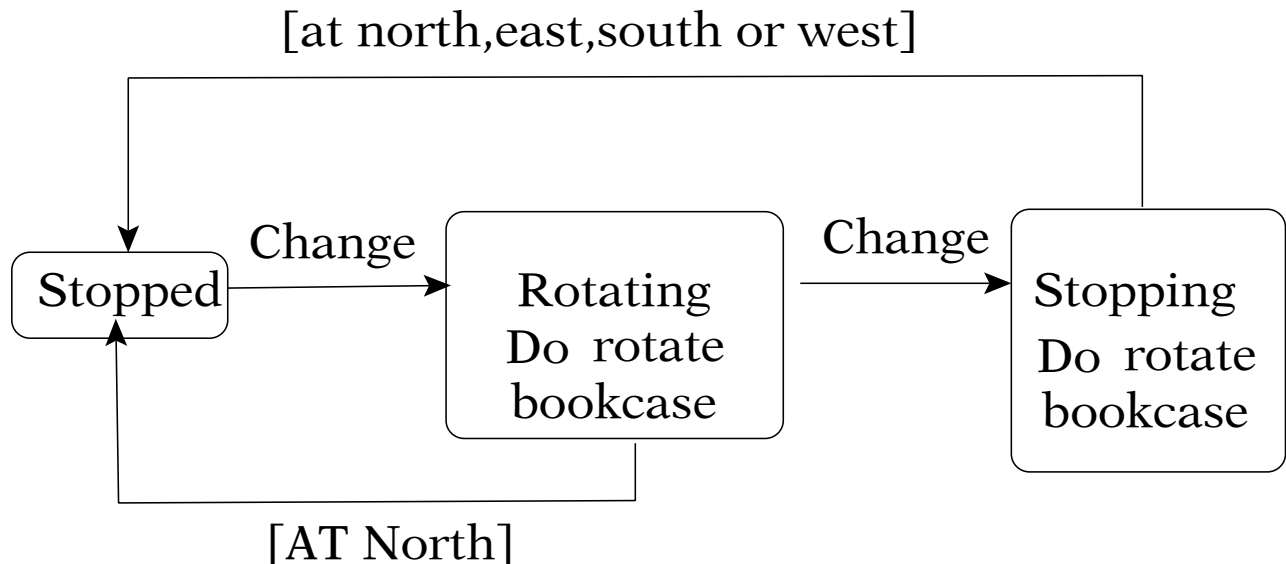
For a more complex CCC it is harder to separate the states out. Should your CCC have a state :-
    If (it is a long time since it last ate)   ->   STATE(HUNGRY).
But suppose the " bigbossbaddie - Balrog" approaches, whilst your CCC is in STATE(HUNGRY) ? -> STATE(DEADASADODO) ??
  We can get round this problem by :-
1) Use simple FSM's for simple objects.
2) Input   the information for FSM's from a script file so you can change how they behave.
3) For more complex objects, combine the FSM with a motivational (behavioural or drives) model :-

THE STATE DIAGRAM

[at north,east,south or west]

Stopped | Change → | Rotating Do rotate bookcase | Change → | Stopping Do rotate bookcase

[AT North]

 Here we are representing the state that the bookcase is in. This is shown using boxes. Connecting the boxes are lines together with a few words of text to show what must happen to cause a change in state. Here the change means moving the candlestick. (Forcing the door is not shown.) In square brackets are the conditions that must apply to cause a change in the state of the bookcase.

Here we have a bookcase which has a secret door that can only be opened by moving the candle stick whilst facing North.

State diagrams are often used to depict timed events. All other detail is suppressed.

You may have noticed that bookcases have it easy, they don't rush arround in a blind panic shouting, " this won't get the pigs in", they do? what kind of game are you writing?

Simple, inanimate objects e.g. bookcases can be easily represented by FSM's that can then be input from a script file as in the text adventure compiler Infocom.

For more complex objects we need plan B.

Fig. 2

A Behavioural Model

To recap, in a behavioural model, each CCC in the game is only considered with the here and now. Each makes an individual decision based on several ad hoc formulae, each estimating the 'motivation' (or how much of a good idea) it is do perform an action. Often the action taken, is the one that has the highest motivational energy (winner take all).

Inhibition

Because we don't want our CCC to keep changing its mind, competing activities (e.g. eating and drinking for an animal, attacking and retreating, for a CCC) are considered to be mutually inhibiting, i.e. they reduce the motivation of each other.

If the inhibition factors are symmetric, all > 1, except self inhibition (try 2, and 0 for self inhibition), when the system has settled, only one motivation should be positive. The action corresponding to this motivation is the one that the CCC will 'decide' to carry out. Inhibition provides a measure of the 'persistence' of an action.

Ludlow models the amount that one activity inhibits another as proportional to its motivation. This seems sensible. Suppose you like both fish and chips and mushy peas, and chicken Tikka Masalla (if you're vegan —— tough!), and the restaurants that serve them are equally far away; you may be left undecided. If however you don't particularly like chips, or the chippy is too far away, there is no contest. Your motivation to decide to head for the curry has hardly been influenced by the alternative one to head for the chippy.

To explain the effect of inhibition, suppose :-

$\text{motivation}[eat]$ - is an animal's motivation to eat
$\text{motivation}[drink]$ - is the animal's motivation to drink
and that $\text{inhibit}[eat,drink] = 2$

If the animal is eating, this can inhibit drinking since it may have to move away from water to find food. The animal's motivation to eat ($\text{motivation}[eat]$, must fall to half its' initial motivation (due to its hunger being reduced,) before the animal decides to stop eating and seek water. (Alternatively the animal's motivation to drink may rise by that amount if the animal passes a water source on the way to the food). Since all activities

compete at the same level, all activities inhibit each other.

In pseudo code the total inhibition for activity m is thus :-

```
total_inhibition[m] = 0
for j = 1 to no. of activities
if (j != m ) total_inhibition[m] +=
inhibition[j,m] * motivation[m]
end for
```

Fatigue

We also have the notion of level of interest. How interested is the CCC in performing the chosen action now? This is usually modelled as fatigue i.e. that it's level of interest will drop with time due to boredom, frustration or satiation. Without fatigue it may never perform a low priority action, (such as self cleaning for an animal), or may be obsessed with trying to reach an unobtainable goal (e.g. because the players characters are preventing it). It controls how long a CCC should continue with an activity before giving up. Ludlow modelled fatigue as proportional to the motivation to perform it's current action.

For the fatigue value in performing action m we thus have:-

fatigue[m] = motivation[m] * fatigue_increase_rate[m] ,

where the latter is just a select on test constant. Fatigue is then normalised to be < 1, and is zero if the animal is not doing that action. (This notion of fatigue is a bit arbitrary, but so is every other attempt at quantifying such things.)

External Factors

Some external factors will be relevant to the activity the CCC is 'thinking' about carrying out. Information from sight, sound and 'smell' etc. have to be considered separately, (i.e. each has its own "releasing" mechanism). We must combine the effects of these to decide what to do, hence COMMON CURRENCY.

To decide whether to carry out action m we can then sum the outputs of the mechanisms (sense mechanisms for an animal) relevant to it.

```
total_external_motivation[m] = 0
for j = 1 to no. releasing
mechanisms
if( releasing mechanism[j] is
relevant to activity m)
total_external_motivation[m]
+= output_releasing[j,m]
end_for
```

Internal Factors

We now add up the contributions from the internal factors (how hungry, thirsty for an animal, how heavily armed, how strong, etc. for a CCC).

These factors too can be included in 'releasing' mechanisms, but are often ad hoc formulae:-

total_internal[ATTACK] = C1 * strength of CCC + C2 * armour of CCC + uncletomcobbly

e.g. (as done in Dungeons and dragons type games) (where C1 and C2) are constants).

Combining Internal and External Factors

To estimate how much of a good idea it is to carry out action m, we need to consider how the CCC's external factors (e.g. distance to and firepower of nearest enemy), combine with internal factors such as health, hunger, own_firepower etc. This bit is disputed, but Blumberg suggests add them if the internal factors are favourable.

This does make sense e.g. if you have the trots would your favourite food still seem appetising?.

We would thus have :-
    total_motivational_factors[m] = total_internal[m]

if(total_internal[m] > 0) total_motivational_factors[m] += total_external_motivation[m]

However this is a technique, not an algorithm, try anything that works.

Finally we must include fatigue and inhibition.

We can now state a formula for motivation for performing action m as :-

final_motivation[m] = (1 - fatigue[m])* total_motivation_factors[m] - total_inhibition[m]

if (final_motivation[m] < 0) final_motivation[m] = 0

Iterating round this a few times only one motivation should be > 0 Its corresponding action is the one the CCC should carry out.

ref. 1: AI Game Programming Wisdom 2 ed. Steve Rabin, Charles River Media

Ron's Rubbish Corner

In which Ron Briscoe cons his daughter into giving him money for his nasty computer habits.

Well here I am again with my quarterly load of drivel carefully designed to make eyes water and shorten teeth, that is unless some of you have realised that the only way to stop the torture is to write sufficient articles so that our esteemed editor can say... "Sorry Ron there is just no room for your article this time." Enough of the frivolity back to the plot or another update of the happenings at the Briscoe domicile.

As anyone who bothered to read that far, outwitted by Christine I was awaiting delivery and fitting of a new front door. Well it is fitted and I must admit that it looks a lot smarter than the old, once bright but at its demise very faded yellow door, however I am positive that I could have spent the money on much more interesting things.

Yours truly went to the Birmingham Show and spent money and because the rest of you had read that I was going and stayed away I had lots of time to talk to the various developers and the ARM Club boys. I actually appear in one of the show pictures, well a rear view as I think the editor was frightened of doing severe damage to his camera if he took a front view. Notice the bag, empty on entry and filled with goodies by the time of leaving the show.

Now amongst my many cunning plans are the ones for going to shows. Like I always upgrade (Insert name of RISC OS magazine) at Wakefield and I want to buy (Insert name of software) at Weston but I want to see it working first. Birmingham is different because it is local and Christine knows that I will be too busy playing with my latest acquisitions to sneak around trying to find out what surprise presents I will find in my Christmas sack. Notice that I say a sack as I need lots of presents to while away the holiday period before Christine drags me off to be her parcel carrier at the sales.

My daughter comes down from Edinburgh for a pre Christmas visit and makes the mistake of telling her mother within my hearing range that she and her husband will pay off their mortgage early. I quickly dun her for my Qercus and Acorn User combined subscription renewal, neglecting to say that the Qercus owner and editor is so determined to continue the Acorn User experience that I have not received anything for months. Before anyone leaps to his defence I know full well that John Cartmell has various difficulties but this is my article so there. I put the resulting forty five pounds in my computer fund for Weston and only since receiving this month's (year's?) issue have I noticed that the subs are forty nine pounds and ninety five pennies. I wonder aloud if it is worth writing to her for another fiver but only till I am made aware of Christine's disapproval in a most violent and uncalled for way.

Now my daughter is a vegetarian but not only that, preferably organic, so I am despatched to buy much organic food. Talk about the fatted calf more like fatted parsnip in her case, anyway everywhere I visit seems to have very little left of the organic variety so I buy normal vegetables and rolls instead. When I get home Christine is out so I unpack the shopping and put it in various places marked 'organic'. I later sit munching a large slice of Christopher Kirk's award winning pork pie whilst listening to my daughter saying how much better organic food tastes and why her mum should become a vegetarian.

I have a surprise in January, an invite to an ARM Club dinner, which I regretfully have to decline owing to prior commitments. I show the invite to Christine who is momentarily impressed but soon recovers and says "Dress smart-casual hmm, well that lets you out anyway." I retire hurt to the brown pop shop and enquire of the barman, "Do you think that I look smart but casual?" to which he replies "Not that I've ever noticed." Oh what it is to be a leader of the 'comfortable look', history will recognise my talent one day.

Happily fate has intervened in the cunning plan campaign to get broadband. Previous arguments have fallen on deaf ears and I was resigning myself to staying on dial up until Microsoft went bust when Christine received a letter from our daughter saying that she had tried to phone us but the line seemed to be engaged all of the

time. I explain to Christine that yes it is necessary to stay online whilst I read my emails as I might see a URL for something that I wish to download in one of them. "Course if I was on broadband then the phone would be free for you to use," say I determining to go online whenever Christine wants to phone someone. My plan seems to be working as Christine has asked how much will it cost to set up and run.

Another happenance has thrown up a chance to enlarge my RISC OS software collection. I have long had an hankering for the EFF collection of fonts but Christine is aware that there are a considerable number of fonts on my hard drive. This is due to my persuading her that I really needed **EasyFont Pro** as there were too many to store in my !Fonts directory. (When I bought my Iyonix I then had to have **Font_Dir Pro** as that was 32bit, sneakily upgrading **EasyFont pro** when that also became 32bit.)

Upgrading to the 20th of February version of **Netsurf** gave me an idea because when I tried it the first thing that happened was that when I clicked on a URL a **Netsurf** window opened, closed and **Netsurf** died gracefully. The

Netsurf mailing list provided the information that this behaviour was caused by incorrect fonts in my !Fonts directory. I have informed Christine that I will only get **Netsurf** to work properly when I get some proper professional fonts, neglecting to mention at all, True Type Fonts and TTF2f. Watching **Netsurf** fall over is slowly persuading Christine that I should maybe invest in an EEF CD.

To bring this latest instalment of drivel up to date is the fact that I went to the South West show and upgraded one or two software titles not least my copy of **1stL** from Serious Statistical Software which has been 32bitted and Martin Hansons excellent **TurtleChalk** and **Artgraph**. I then spend some cash with RComp on the necessary bits for me to get Cable broadband. See with the right cunning plan anything can be yours. I was also gifted an 'Arm Club' mug a product that I had been assured was all sold out and therefore safe from having to purchase it. All I can say guys is that I live in a mixed crockery household and regular use should soon reduce it to china jigsaw pieces.

ARM Arena 19

A*ndrew Weston's roundup of games for RISC OS.*

This being the first column after Christmas there's a good number of releases old and new that our generous user-base of programmers made available in time for the festive season. These include conversions made possible directly or indirectly by the efforts of the Unix Porting Project and other original games.

UPP Xmas Games

As a present to the RISC OS community the Unix Porting Project promised several games releases were to be made available on Christmas day. One novel idea was that one of the games was to be voted for by users themselves. In their wisdom the voters chose a fantasy, turn-based strategy game called **Wesnoth** which was duly delivered on time. This is now available to download from the UPP website. **www.chocky.org/unix**

At present **Wesnoth** is only compatible with the Iyonix but a version for the earlier machines is anticipated. The other titles to be released were an enhanced version of the graphical adventure ('point-and-click') game interpreter **ScummVM** (an earlier version released by David McEwen); **Lin City** (a Linux-based Sim City clone) and **SuperTux** (a Super Mario Bros. type game also only playable on the Iyonix). Also Alex Macfarlane Smith ported a version of the dungeons and dragons style dungeon exploration game **Nethack**. Unlike a previous ASCII version by Jeffrey Lee **www.phlamethrower.co.uk** that readers may remember the latest port has a graphical interface and so might appeal to those who find becoming familiar with a huge range of symbols too daunting.

On the RiscPC I found that **Lin City** was unstable and would crash in critical areas such as loading or saving a game so it is hoped that this can be dealt with as part of the UPP scheme whereby subscribers work with the programmers to fix bugs and

develop the software.

The release of this batch of games reflects the work of a number of people who have effectively contributed a range of development resources to make future games and serious software titles possible on RISC OS. In other words the repertoire of programming resources has been advanced in addition to the range of software available which bodes well generally for the platform. Essentially, it has taken the UPP to begin to open up the open source movement in the interests of RISC OS.

One other significant development which readers of the last issue of Eureka! might have noticed is that a Soundtracker program has been ported by the UPP. Whether this is utilised by budding games programmers for future games remains to be seen but it is an interesting development as applications for music development outside of MIDI (which is not always practical for games and is often more complex to develop) tended to stand still after the initial Tracker programs of the early 1990s. Games benefitted immensely in the 1990s from this format so it would be welcome to

see this development encouraged and more widely recognised. More news on this if and when it emerges.

LBreakout and LBreakout2

Another game released before the festive period by the UPP was a port of a bat and ball derivative for Linux called **LBreakout**. This is a very smooth implementation of this kind of game with numerous in-game features, gameplay options and 25 levels. Another bonus is a decent and concise HTML manual including information on creating your own levels. All in all a very neat, simple, addictive and compact game. A welcome change in these days of complex, involving games and in particularly after a day's work!

LBreakout2 is a larger download and ported by the Really Small Software Company **www.reallysmall.co.uk** which takes the game to a new level. As well as a dedicated level editor there is the option to play over a local network or the internet (although this hasn't been tested). There are more in-game features and improved graphics although the game can temporarily freeze which is an annoying hitch. However, like

LBreakout it's extremely high quality for a free game.

Dogin' Diamond 2

The availability of the SDL programming library for RISC OS on which the above games are based has also inspired Neil White of Cloudsprinter Software **www.cloudsprinter.com/softw are/SDLGames** to port titles. One such title is **Dogin' Diamond 2** a retro-style shoot-'em-up. Retrogamers will recognise the format: spacecraft flying above landscape scrolling below whilst facing waves of oncoming enemies. A range of other games is available from Neil's website.

Super Methane Brothers

Mark Page has released an update to his conversion of the Amiga game **Super Methane Brothers**. This is a platform/shoot-'em-up hybrid with cartoon graphics and plenty of music and sound. To spice things up there isare a variety of special features and bonuses amongst the various levels and this update includes a new 2-player mode. The game is available to download from **http://methane.sourceforge.net**

Tanks

Long-time users of 32-bit Acorn machines may remember Werewolf Software's games releases in the mid-90's. One title is **Tanks**, a feature-packed version of a classic 8-bit game where the player competes against other players or the computer to launch missiles at each other across a landscape. The trick comes with finding the correct trajectory to hit the other player's tank during your 'turn'. This version, by Rik Griffin who released the game at the 1996 Acorn show, attempts to cram in as many variations as the game format will allow. So in addition to a huge range of different ammunition and ways of launching it, there is support for up to 12 players (all computer controlled if necessary), various means of defence, offering rewards to destroy other players (useful if one player is pulling too far ahead) and also options to change the environment amongst many other features.

Formerly a commercial game, it can now be downloaded from Rik's website (**http://homepage.ntlworld.co m/rik.griffin/**. **Tanks** is highly addictive with very polished graphics for an Acorn game and has been made compatible for all

RiscPC machines and the Iyonix. The game is fairly self-explanatory but an Impression manual is available from the site or as a PDF from Alex Macfarlane Smith's website: **http://cerberus.archifishal.co.uk/~aardvark/tanksman.pdf**. Hugely popular at the time of release (thousands were sold), I'm sure there will be a large number of latter day RISC OS converts who will thank Rik for extending the availability of this great game.

Desktop Repton update and correction

The desktop conversion of the best-selling BBC Micro Repton series was re-released as Desktop Repton Plus shortly before Christmas 2004 to include the new Repton (1) graphics from Superior Interactive's **www.superiorinteractive.com** PC-compatible version of the game.

The original Desktop Repton was a desktop re-write of the Archimedes 1988 version of Repton 3 together with a multi-tasking (using the RISC OS environment) game editor. Included with this CD however are **Repton 1** (original Archimedes conversion graphics

and PC graphics), **Repton 2** and again **Repton 3** (again including all variants). The **Repton 1** and **Repton 2** releases are conversions of the 1988 Archimedes versions (although not actually released until 1997 by ProAction!) and run in the desktop.

The CD can be obtained as an upgrade for Desktop Repton owners for £7 and £20.50 when bought new, from David Bradforth of Alligata Media **david.bradforth@alligatagroup.co.uk**

Another Berty game

The latest Tom 'Berty' Cooper game to be updated for use on later versions of RISC OS prior to the Iyonix (excepting using Aemulor Pro) is **Styx**, the Crazy Painter-inspired piece of arcade action. For those unfamiliar, this type of game involved drawing lines with a kind of cursor to create enclosed areas which are then filled in. Each level is complete on filling most or all of the screen but various obstacles are placed to hinder your progress. It sounds facile but can be strangely rewarding. As usual with Berty games there is accompanying this PD game a

range of great Tracker music. **Styx** is available to download from the free games section of Acorn Arcade **www.acornarcade.com**.

Retrogamer anthology

In the last column I mentioned back issues of Retrogamer featuring the old Acorn-games company Level 9 (specifically issues 6 and 7). However, since that time the magazine sold out of these issues and the best advice for those wanting to obtain them is probably to look for issues being sold on Ebay **www.ebay.co.uk**. It's possible that the high collect ability value of this magazine in these days of online auctions is a significant factor in Retrogamer magazine's publishers (Live Publishing) quickly running out of spare back copies.

Therefore it is hoped that the latest issue to have Acorn coverage remains available for some time in the near future. The issue in question is Retrogamer Anthology, a compendium of many of the topics and games that the magazine has so far covered but revised or expanded for the purposes of the compiling the information into this large reference publication. Of

particular interest to long-time RISC OS users is the feature on **Elite**. Although the game was featured in issue 3 there is a fresh description of the story of the original BBC Micro game spanning two pages with screenshots. There are brief mentions of other Acorn games elsewhere but the main relevance otherwise is the nostalgic and historical value of contemporary games released during the early Acorn period.

Retro: tape–file creation

As a footnote to the acquiring of 6502em by APDL as reported last time here is information for any emulation users who wish to create UEFs (tape images) for distribution or even for conversion into original tape file sound data. The good news is that this is possible on RISC OS but the bad news is that it is a convoluted and fiddly process. Nevertheless it has been made possible thanks to a conversion of two Linux utilities to RISC OS by Jeffrey Lee.

The first thing you'll need is to organise your BBC Micro files into a single directory — these should have load and execution addresses rather than filetypes which is the norm when viewing

emulator files under RISC OS ADFS. Next, make an index file listing the files in the order in which they will be 'saved' to the tape image. Add a '/txt' Windows extension to the file which is necessary for recognition later. The necessary tools to convert the files into a UEF require the interpreter for the Python programming language so the RISC OS version of the interpreter should be downloaded from **www.schwertberger.de** or **www.python.org**. Then the Python scripts should be obtained from **www.david.boddie.net /Software/Tape2Disc/** .

Then you will have a range of tools to process the BBC files with including a script called **file2UEF.py**. After allocating several MB to the 'next' slot in the Task Manager and displayed the **!Python** application to the desktop, the script should be double clicked on.

Now press <ctrl><f12> then type (at the * prompt):
file2uef/py <directory> <name of file to create> where <directory> is the directory within the currently selected directory (CSD) containing the individual files and <name of file to create> is the name of the resulting UEF file.

If you plan to do nothing else with the resulting UEF then add a '/uef' Windows extension which other platforms generally need. You should now have a UEF file which you can distribute as many other people have across the internet in establishing the huge archives of BBC Micro software over the past 10 years or so.

It is possible of course to go further and output the UEF to audio cassette if desired. Here the afore-mentioned software converted by Jeffrey Lee comes in handy. Download the utility FreeUEF from **www.phlamethrower.co.uk/m isc2/freeuef.zip** and un-zip. Also acquire the PD audio-file converter **!Soundcon.** Then with the UEF and the FreeUEF program in the CSD type *freeuef <filename> <soundfile> at the command line prompt.

This converts the UEF (filename) into a waveform-format (WAV) file (soundfile) that is a 'standard' audio format amongst PC and Mac users. This will need to be converted into a mono 8-bit signed linear WAV file which can then via a double-ended 3.5mm jack cable or other output hardware to a tape recorder and voila!

you should have a BBC Micro-compatible tape.

Another utility, MakeUEF **www.phlamethrower.co.uk/misc2/makeuef.zip** does the opposite job and takes a sampled soundfile and converts it into UEF. I'll leave those interested to experiment with this for themselves. It should effectively replicate the function of Warm Silence Software's **!Tapes** application which sampled BBC tapes via the parallel port and created Tapefile-format files suitable for 6502em (a RISC OS standard). However, this is a free alternative and should work on the Iyonix which is without a parallel port or on tape file data sampled onto your RISC OS hard-drive by other means.

It seems that at last there is the range of facilities to create and manipulate the emulation formats that other platforms have enjoyed for years yet which the very platform and OS spawned by the BBC Micro has been denied.

Card and logic games

One area of leisure software which has traditionally attracted original software development on Acorn/RISC OS machines is in computer implementations of games played by hand such as card and board games. This tradition continues with the release of three new such games.

The first, **Wari**, a sample version of an apparently ancient game of logic involving filling hollows with seeds and was written by Ian Macfarlane of Brain Games. As with Ian's previous games, **Solitaire** and **Vingt-et-un** (also available from his website **www.maceng.karoo.net/BG/wari.html**), a full range of features including various high-quality graphical veneers, interactive help and levels of play is planned in the upcoming full version.

The second game by 7th Software is a card game called **Moan** for up to 4 players and played with two packs of cards. **Moan** is commercial and priced at £14.99 excluding PandP but can be sent by email. A demo. however is available at **www.7thsoftware.com/moan/**.

Finally, Neil White has released another game which this time is shareware and complements this batch of games. **Ezkzo** is a desktop puzzle game and a demo. can be found at **www.cloudsprinter.com/software/ezkzo.zip** .

The Unix Porting Project

is a way for you to actively contribute to RISC OS by having a say in what software you want to see, while enjoying support, active development and automated upgrades.

The basic idea is this: you pay an all inclusive subscription fee, and with that you get support for all the programs available from this project. You also get to make suggestions and comments on what programs you would like to see converted (or ported) to RISC OS. This project is not specifically aimed at programmers, nor advanced RISC OS users, but rather anyone who would like to see new software.

CD–ROM of current UPP software   UKP/1 5.50 EUR
Regular subscription for 6 months   25 UKP/39 EUR
Regular subscription for 12 months   50 UKP/78 EUR
Regular subscription plus browser,
support for 6 months (includes CD)   50 UKP/78 EUR

Include mailing address if ordering a CD–ROM.

All software is 32–bit compatible, and supports RISC OS 3.5 to 5.

Credit card payments can be made through PayPal.
See website for more details.www.chocky.org/unix/

Make cheques payable to "Peter Naulls" and send to:
Unix Ports,
45 Water Street,
Cambridge,
CB4 INZ.

SW Show Report

*Andrew Wyver reports from a sunny SW Show.*

Setting off from darkest Kent at 7.30 am and driving through a couple of snow showers we finally arrived in sunny Somerset at 11 am. A steady stream of visitors appeared to be arriving at the venue and when we entered the hall things were in full swing.

RISC OS World

I decided not to hear any of the talks put on as very little had changed from the SE and Midlands Shows so I contented myself with visiting and chatting with the exhibitors and taking photos. Unfortunately this made it more likely that I would be tempted to buy a few goodies.

The first stop was Neil Spellings stand. He was showing off **Geminus** with multiple LCD screens. The software was almost ready for public consumption and would be released shortly, he said.

Meanwhile, **Cino** the DVD playing software is still being improved.

My next port of call was Virtual Acorn but Aaron had no more news than he had last time I spoke with him.
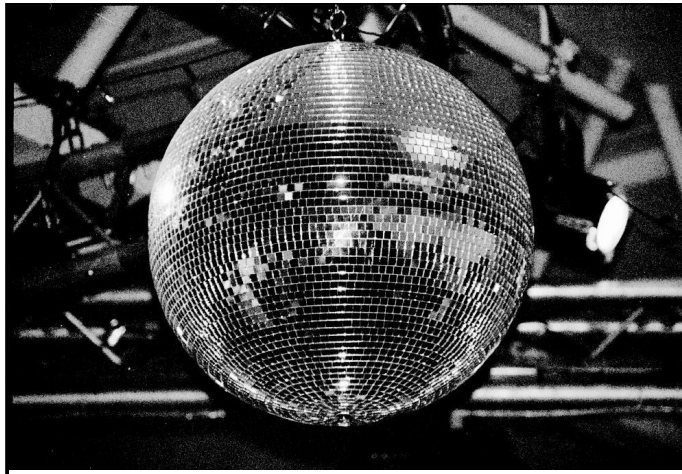
On to Web Wonder. Ah this was better, new software that works. I was interested in this as **Web Wonder** is designed to make constructing your own web-site easy without having to remember all those HTML tags. I was interested in learning if it could cope with existing web-sites as I have to edit the raw HTML on my music site at the moment and was looking for an easier way to do it. Yes it can - as long as you don't use frames, nested tables and cascading style sheets! Luckily mine is a simple site and doesn't use any of these.

Lunch time - the catering

arrangements here were much better than some of the shows I have attended as you could order food at one of the several bars in the hotel and then sit and eat it in comfort.

After a good lunch I went and had

*Web Wonder's working wonders*

a chat with Graham Shaw of the RISC OS Packaging Project. This is a packet manager for RISC OS.

It's three main functions

- to download and install new software packages on request;
- to update installed software packages when new versions are released; and
- to remove software packages when they are no longer needed.

It can also handle dependencies: if one package requires another in order to run, then a request to install the first will automatically install the second. Software must

be distributed using a specific package format for this to be possible. Packaging Project is an attempt to assemble a collection of non-commercial software packages for use with RiscPkg.
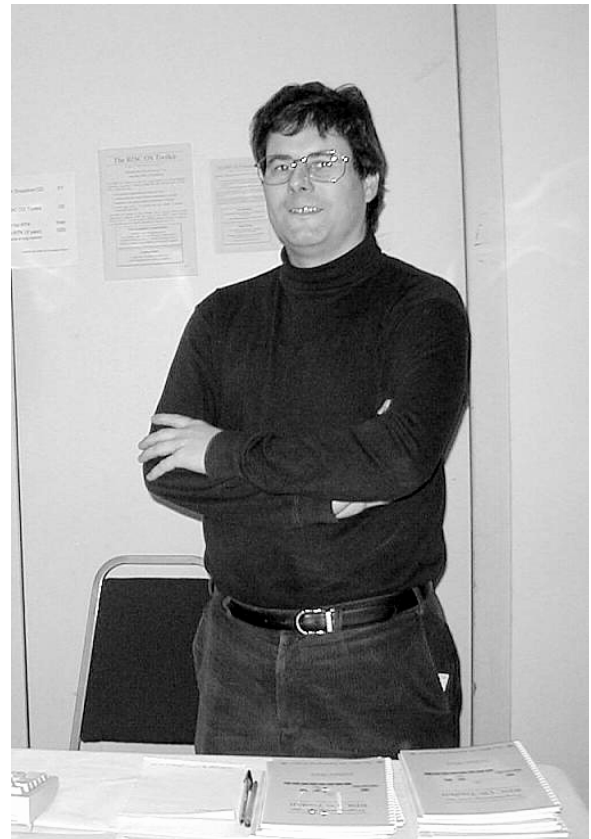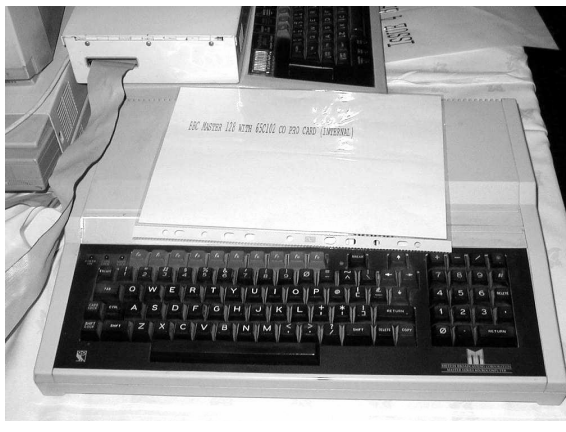

Graham Shaw of the
RISC OS Packaging Project

At the moment the package manager, **RiscPkg**, is in a primitive but working state and a small number of packages have been created.

Graham is working at the moment on improving the user interface enhancements for managing large numbers of packages, managing

conflicts between command names, filetype bindings and other settings, and building a large package collection.

Next I signed up with Peter Naul'ls Unix Porting Project and bought the CD. Various ports of Unix programs have already been done and more are in the pipeline. Please support this project *(see advert on page 51)* as Peter is currently porting the **Firefox** web browser which would certainly make surfing on the web a much more pleasant

Well there was a pile of network cards here 10 seconds ago!

Luckily Sheilia dragged me away before I could buy the stack of Risc PCs...

Nostalgia time.

experience for RISC OS users. The more people who sign up the more likely it is to get done.

The usual trade stands seemed to be doing good business all day and there a good few bargains to be had on the second hand stall.

Pictures by Sheilia and Andrew Wyver

Product Reviews

The Buffalo Air Station Access Point WLA–G54–1

The Editor starts on his first step to get rid of spaghetti junction under the desk

My set-up at home consists of two Risc PCs, one running 3.7 and the other 4.02. I also have a Shuttle type PC using Windows XP Home and a laptop using the same. The XP box and the 4.02 RiscPC live in our music room which is some 15 metres away from our house at the bottom of the garden. To move data from one side to the other I had used floppy discs and Zip discs. But I really was feeling lazy and wanted to control every thing from the music room. So to save me the trouble of trudging back and forth I invested in two wireless access points, one in the music room and one in the house. The Acorns are connected to these using ethernet cables, the laptop uses a Belkin wireless card and the PC a Buffalo USB wireless access point.

The Buffalo Air Station

The first problem I found was setting up the access points so that the Risc PCs could communicate.

You first had to configure the access points. This had to be done first of all from the PC using the

supplied software and ethernet cable. You also have to ignore most of the instruction booklet and make sure you set the access points to the range of IP addresses you are using on your network and the PCs to have fixed IP addresses. Once that was done I had no problems with all the computers seeing each other. The access points can then also be reconfigured using a web browser.

The second problem was then getting a good line of sight from the music room to the house. This took some experimenting with as the range of these wireless devices is very much attenuated by brick walls. The thicker they are the more the range and signal strength reduces. The Buffalo access points are very prone to this and the outside wall of the house reduces signal strength and range dramatically. Luckily I was just able to place them by windows in either building so I could get a good line of sight with no interruptions. You also need a wall socket near each one for it to be plugged into via an AC adaptor.

There are still some problems connecting with the laptop in some rooms of the house. Buffalo can supply an aerial for the Air

Stations that boost their range by about 15%. If you have an old house with good thick internal walls you may find you need several access points to give you good coverage. I personally would halve the range given in the adverts. Due to my link being outside, the weather can also affect signal strength, with the signal sometimes dropping in wet weather.

The Access Points are compatible with both 802.11b and 802.11g transmission standards. Once set up the Air Stations are very little trouble. The Stations use an internal aerial so there are no bits that can inadvertently be broken off and they seem to be robust and well constructed. Each has four ethernet ports in the back so routers, other PCs etc can be connected if necessary. The supplied software using the browser interface is very easy to use and configuration including setting up encryption (WEP) is no problem.

Once set up you can forget about them which is ideally what all computer hardware should aspire to.

Articles required for Eureka

Remember that everyone who contributes an article to the magazine will have their membership extended, free of charge, for every issue in which their work appears.

If you feel like writing an article or even a series then get in touch with the editor at:

music@wyvers.freeserve.co.uk

Or eureka@armclub.org.uk

Copy date for next issue of Eureka is the 1st of June.

Send your queries, whether technical or elementary, to our Technical Help Service, by email to support@armclub.org.uk or write to the club's Merton Court address (which you can find on the last page) or fax 07020 954018.

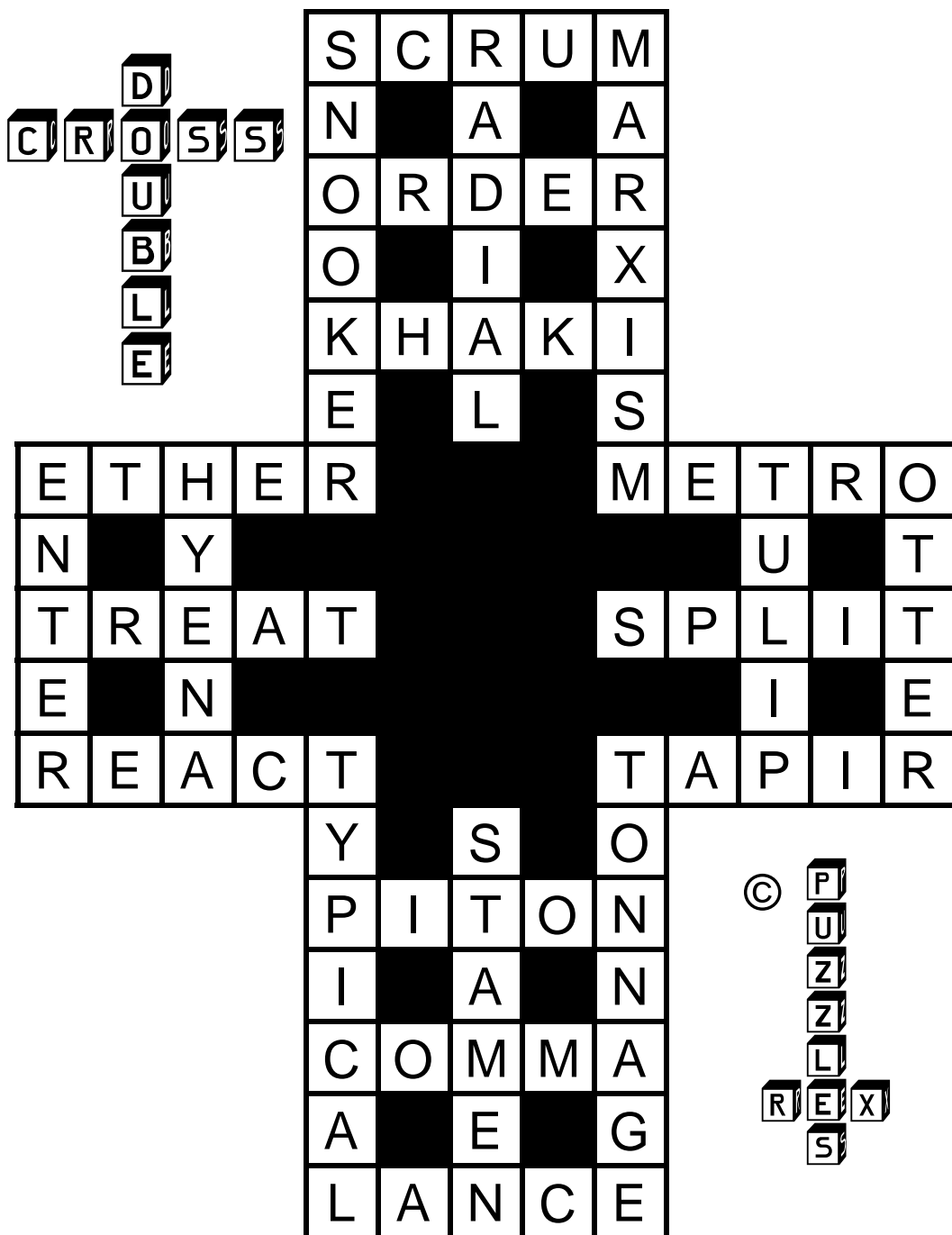**If it's urgent you can phone 07010 708098. (Phone and fax are at higher rates.)**

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Benefits of membership

The national club for all users of 32 bit Acorn computers and Pocket Books

- The Club's magazine, 'Eureka', written by members, is published and sent free of charge four times a year.

- Free software to accompany articles in Eureka is available on the Club's FTP site or can be sent to members on disc.

- Free Technical Help Service. We will do our best to solve any problems which you may have, by email, letter, telephone or fax.

- Special discounts for Club members from well-known companies.

- Regional open days and shows are regularly organised by the Club. Other events can be arranged on request.

- Special offers at shows and open days.

- Regional contact lists of other members, available on request.

- Opportunities to get involved in the running of the Club itself.

- School and Affiliate Membership available on request.

- Joining pack includes an extra copy of a recent issue of the magazine and software.