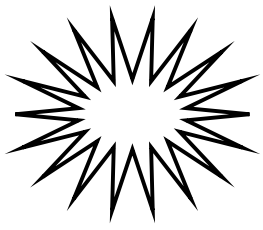
The magazine for members of

Eureka

The ARM Club

Publishing Pack graphics package



Winning games with logic

CD collection from Cherisha

Print your own appointments calendar

Issue 44 — Winter 2002

Exciting Times Are Still Ahead

The excitement of looking forward to a new RISC OS computer has become less keen for most of us in a succession of disappointments after being told that Omega is about to appear.

The situation at present, just before we go to the printers, is the same as at our last issue: MicroDigital have set the release date but haven't announced it. From what I have heard since then, though, they are hoping to give some positive news in time for the two shows being held this month.

There could also be further exciting news to come from reports of other secret plans, including a developers' meeting to discuss a 32-bit version of RISC OS which has not been announced and, we are told, will *not* be coming with Omega.

On thing we can be sure of in life, though, is that prices inevitably rise. It is a happier fact that The ARM Club has kept its membership fee remarkably low for so many years, despite the steadily rising costs the Club has been facing. Now it has been a very reluctant decision by the Committee to make the small increase of £3 a year which has been forced on it to enable the Club to stay active, as you can read on page 52.

So, is the Club still good value for money? Undoubtably it is! The main benefit of membership that everyone receives is, of course, Eureka and if you look at the price of other magazines you will, I hope, consider that this alone is fair value for your membership fee.

But ***you get more than a magazine*** with your Club membership. The free and prompt help and advice provided by our Technical Help Service is alone worth the annual cost of membership on those, hopefully rare but usually unforeseen, occasions when a problem strikes.

So stay with us. Exciting times are still ahead.

Peter Jennings

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Print your own diary calendar (see page 18)

Publishing Pack 2

When I was asked if I would like to do a review for a graphics package my immediate reaction was to say no. My graphical prowess is non-existing, I can just about draw a 'stick man'.

Ralph Sillett discovers that you don't have to be much of an artist to make use of this new graphical package and has fun finding out.

The package is Cerilica's Publishing Pack 2 which includes five separate programs to assist with such items as barcodes, frame maker (for the published page) and flashes, the type that are used by backstreet car traders and the corner shop to promote special offers.

The five programs are:

• !Barcoder: Generates professional barcodes based on the ISBN, ISSN & EAN protocols.

• !Bleacher: Creates grey and monochrome images of a coloured Drawfile.

• !Flashes: Creates a single form of shape in a Drawfile.

• !Framer: Creates a frame/border for use in any design & publishing software.

• !Scaler: A calculator to determine optimum resolutions to scan at.

The best thing about all these programs is that they are very easy to use and do exactly what is requested.

Barcoder

For those requiring a bar coder for their products, life has just got easier.

On loading an icon sits on the right hand side of the icon bar. Clicking with the menu button gives you only three choices of *Info*, *Choices* and *Quit*. Choices gives you the chance to alter the height of the barcode and the thickness of the lines.

It is suggested that the default values are used and that they are not magnified.

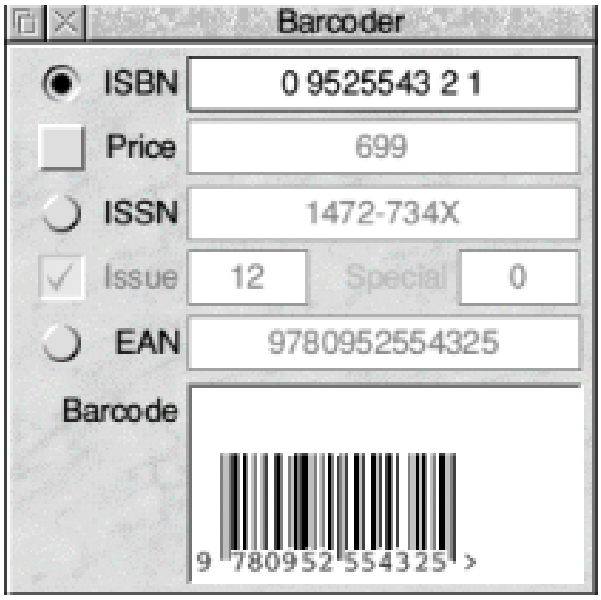
1SBN barcode

ISSN barcode

EAN barcode

The barcodes shown have been enlarged for clarity on the printed page.

Barcodes are generated from the main window.



The main window where the barcode is built

The required information has to be entered then *Return* pressed to generate the barcode.

Clicking the menu button anywhere in the window will bring up the standard RISC OS Save as window.

Drag the Drawfile icon out as normal. Or drag the preview barcode graphic from the main window to a filer window or another application that can accept Drawfiles.

Bleacher

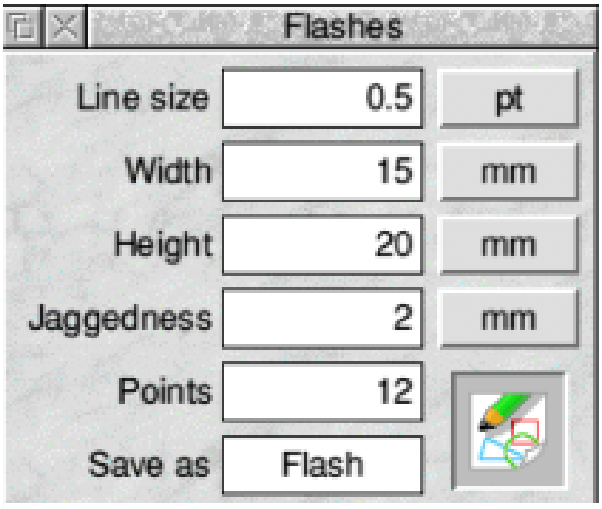
!Bleacher has one job in life and that is to bleach a Drawfile with all its contents to produce a greyscale or monochrome version.

To use, simply drag the coloured Drawfile to the !Bleacher icon on the icon bar then click on the arrows either side of the Drawfile icon to get to either mono or grey then drag the drawfile to a filer window or back into !Draw. As the advert says: 'it does exactly what it says on the tin'.

Mickey in monochrome (above)... or greyscale

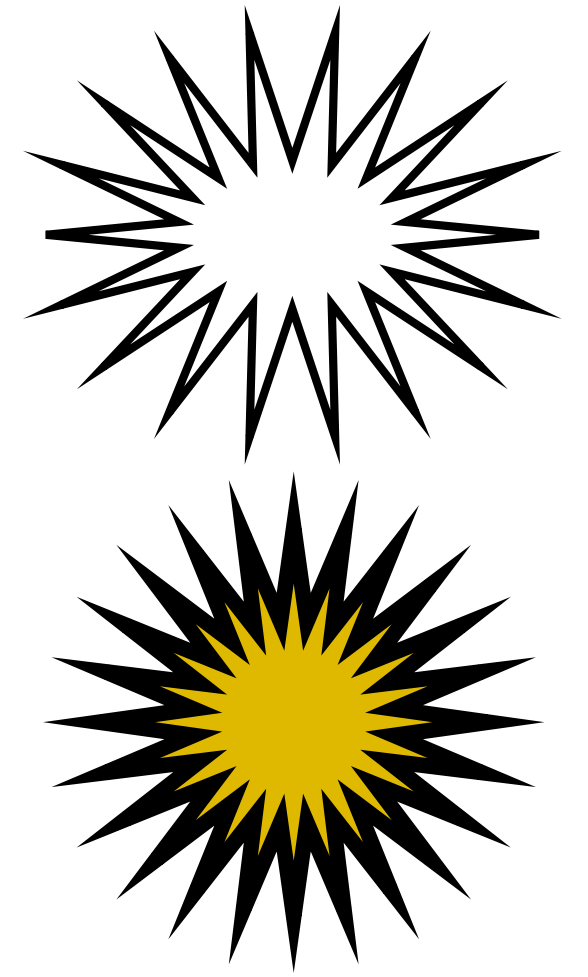
Flashes

!Flashes creates a single shape in a Drawfile, these objects are commonly used for sales promotion and other highlighting requirements.



The Flashes main window

Once loaded on to the icon bar a Select-Click on the icon brings up the main window.

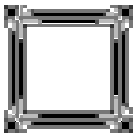


Flashes — the family favourite

Each flash can be altered by changing the setting in the writable boxes and the sizes can be varied between Picas, Points, Millimetres, Centimetres and Inches.

The Save As box follows the usual RISC OS procedure and the resulting file can be further enhanced within !Draw to alter the colour of the line and fill colour or line width to get exactly what you require. See some examples, left (in greyscale only). I could have played with this one all night. It is now in regular use by myself and the family.

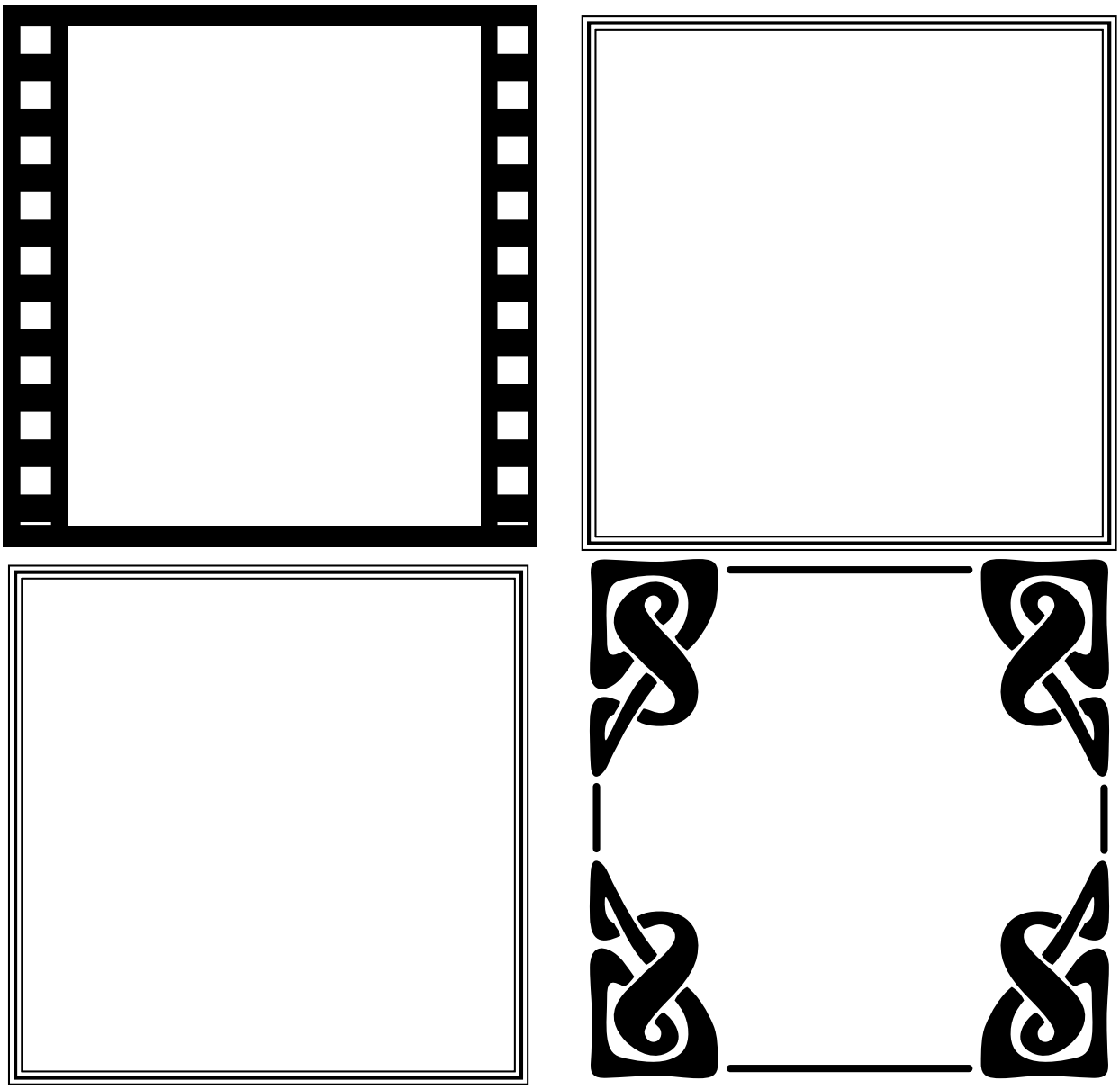
Framer



!Framer is another very useful program and I wonder why someone has not developed it before now.

It produces a variety of frame and border styles of your specified size and ratio. These may be dropped straight into your preferred design or publishing program including !Draw.

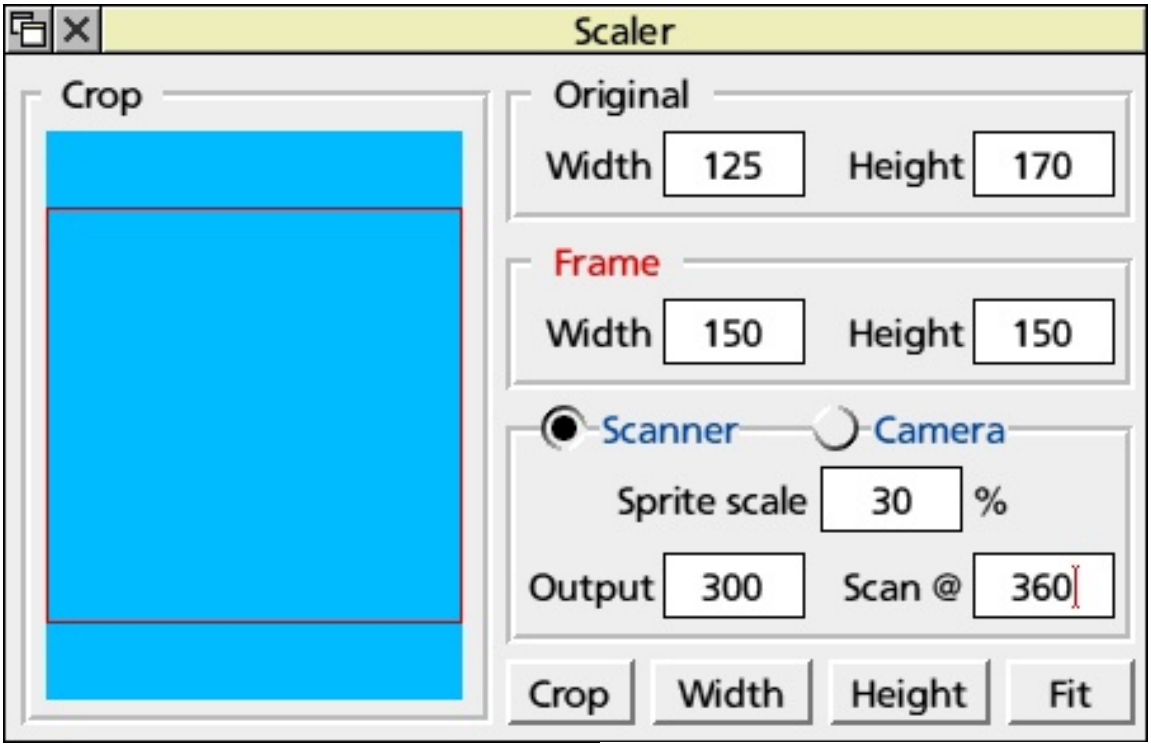
!Framer produces monochromatic frames in the vast majority of the designs. This allows you to colour in the frame to your taste by using



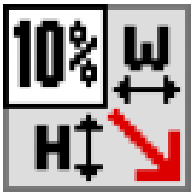
Modern and traditional styles of frames to be coloured to taste

design packages such as !Draw, !Vantage or !Artworks.

According to the online manual the Tapes section of frame styles have been produced in traditional border styles commonly used in publishing prior to full computer design and publishing. The vertical and horizontal components are repeated to suit the frames size and scale. As with some of the frames supplied with Impression it is possible that slight misalignment may be noticed at the corner joints. This is a consequence of this frame style.



Scaler



!Scaler is a calculator designed to determine optimum resolutions to scan at (or to optically magnify if dealing in traditional methods of image reproduction). It can base calculations on original artwork, frame size and desired print resolution.

This was one program I was unable to fully try out due to having problems with my scanner.

Needless to say that this program is a bit more complicated in its use but still has a simple interface to get the results.

Enter the values and Scaler calculates the optimum resolution for a scan

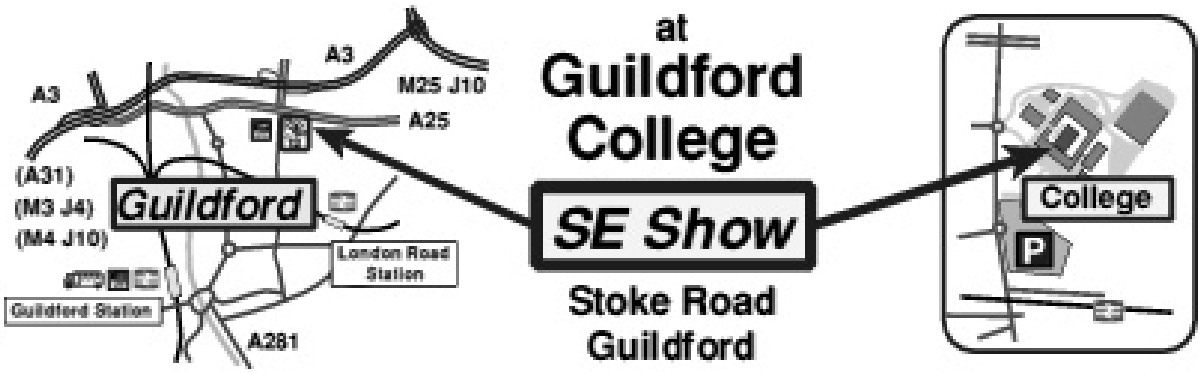
The Publishing Pack 2 is a very capable and worthwhile suite of programs that will enhance any publishing or design package available.

Publishing Pack 2
Price: £29 inclusive
Supplier: Cerilica Limited
PO Box 40
Ross-on-Wye HR9 7WH
Tel: 0870 2411731
Email: cerilica@cerilica.com
Web: www.cerilica.com

The South East
RISC OS Show

Saturday 2nd November 2002

10am - 4pm



http://www.fillin.co.uk/seshow

Easy to get there

by road...

...or rail

Guildford Station	London Road Station

Site Seeing

Sue Clamp looks at some of the websites aimed at helping with literacy lessons in schools but which will also interest anyone who enjoys reading.

In this article I shall be focussing on web sites that support the teaching of literacy. In the old days, of course, this was known as English but in a drive to improve standards the government invented the National Literacy Strategy. Web sites were duly created to help the teachers desperate for help in teaching in this 'new' way.

Some are designed to give support in planning lessons according to the suggested lesson structure. One such site is *Literacy Lessons* (www.literacylessons.co.uk), which contains lesson plans for Key Stage 2 and 3. *Literacy Time* takes things one step further.

As well as a bank of lesson ideas, there is a list of suggested texts for Key Stage 1 and 2 (not all are books!); articles focussing on a specific aspect of ICT and literacy; a featured school which changes each time the site is updated and a section of the site devoted to identifying useful resources, including software and publications. Literacy Time can be explored at www.vtc.ngfl.gov.uk/docserver.php?docid=1523 (Nice and easy to remember, eh?).

A useful resource that many teachers use to help children to develop their writing skills are writing frames. These are simple frameworks that help children to structure and organise their thoughts for particular styles of writing, for example, argument, persuasion and recount.

David Wray, professor of literacy education at the University of Warwick, has a number of these freely available in text format from his website at www.warwick.ac.uk/staff/D.J.Wray/index.html.

J.K.Rowling's Harry Potter books have had a notable influence on children's reading in recent years, so much so that there is now a site dedicated to providing lesson ideas based on each of the books *(see left)*.

If you have a class full of Harry Potter fans you could do worse than to visit the site for inspiration at www.harrypotterlessons.co.uk/.

As I'm not a huge fan of the Literacy Hour, I prefer sites that offer me resources, activities and ideas that are not necessarily tied to the rigid structure of the 'Hour'.

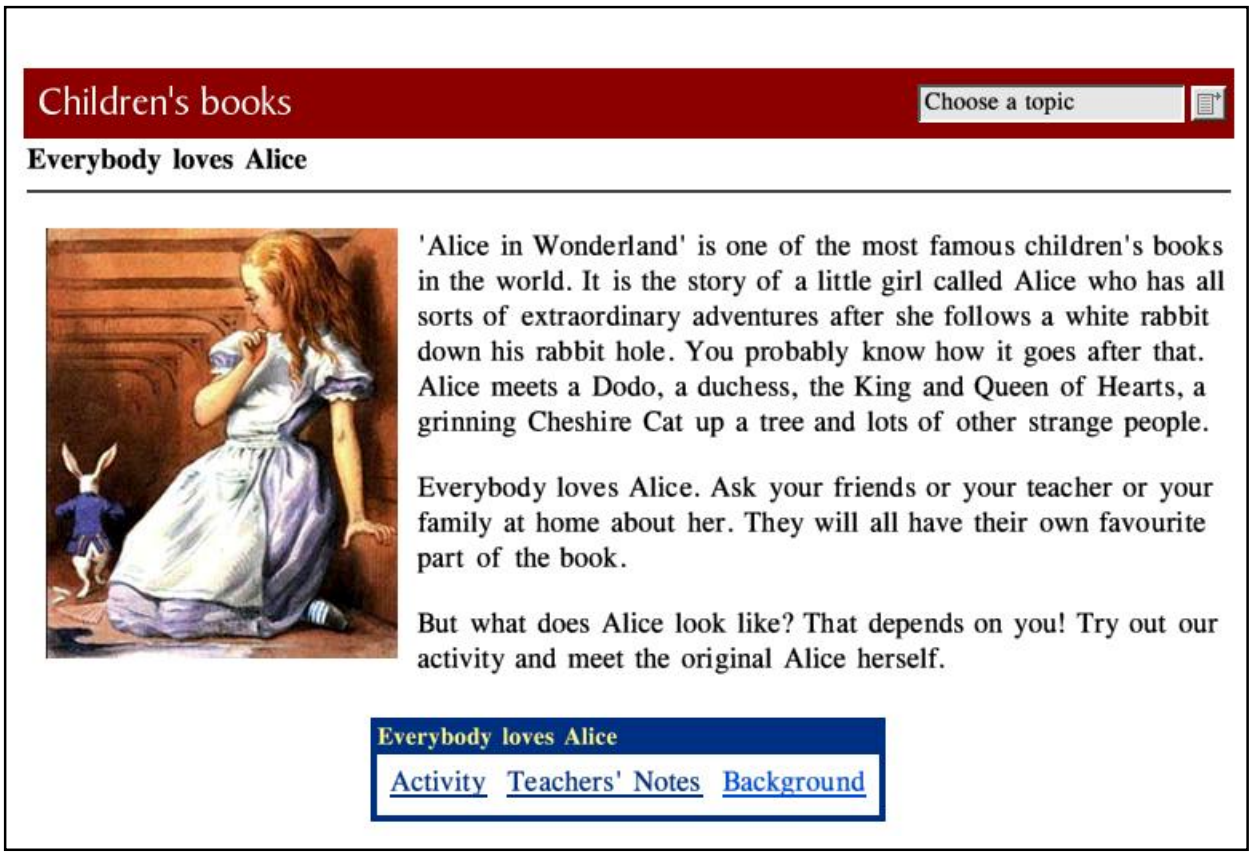
Thankfully there are many of these. One of the most exciting is the Gutenberg Project site where copyright-free books can be downloaded as text files. Quoting from the History and Philosophy page of the project:

"The Project Gutenberg Philosophy is to make information, books and other materials available to the general public in forms a vast majority of computers, programs and people can easily read, use, quote and search."

Some of the resources on the British Library website

I can imagine the many nods of approval from RISC OS users! Many of the classics can be found there, including works by Dickens, Lear, Aesop, Poe, Dante, Conan Doyle and Lewis Carroll and the complete works of Shakespeare! The search facility allows you to search by author or title and you can also download complete lists of authors, titles and books. The official home of Project Gutenberg is promo.net/pg/index.html.

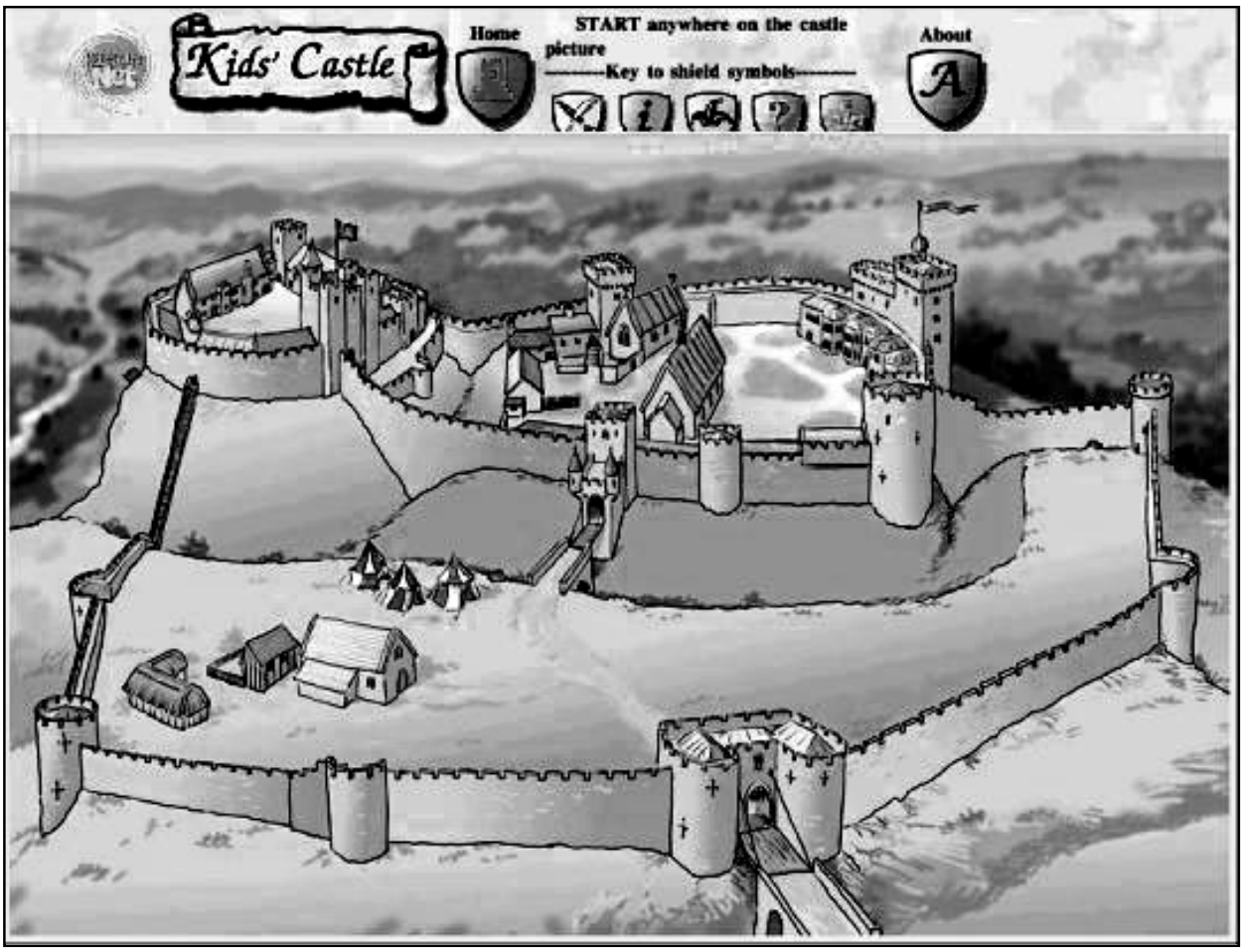
The British Library website has a number of lovely projects relating to various curriculum areas. There are currently seven projects based on children's books, including two on Alice in Wonderland. The children's book section is just one of six under the heading of 'English'. The projects are all based on the British Library's collections of original source material and each include activities for the children, teachers' notes and background information. The projects page can be accessed from www.education.bl.uk/welcome/index.html. Another category of literacy web sites is the kind that provide an opportunity for chilren to publish their writing on the Web. This can be useful either if the school hasn't got a well-developed web site of their own on which to publish, or if the teacher wants to get the children working collaboratively with other schools. *Kids on the Net* kotn.ntu.ac.uk/index.htm features



One of the popular projects on the British Library's website

writing by children all over the world and is part of the trAce Online Writing Centre based at Nottingham Trent University. There aren't just stories here but also poems, book reviews, children's opinions and observations. There are two bigger projects on the site to help inspire children's work: Monster Motel and Kids' Castle. The Monster Motel Welcome page encourages children to describe any monsters that might like to stay there. Each 'room' of the Motel (including the annexes!) contains the writing that has been submitted. The Kids' Castle doesn't just restrict itself to writing activities. By clicking on the different parts of the castle children can find out about the people that lived there and what they did. Sometimes more information is given about aspects of castle life. There are games, puzzles and even the opportunity to send in a design for a coat of arms.

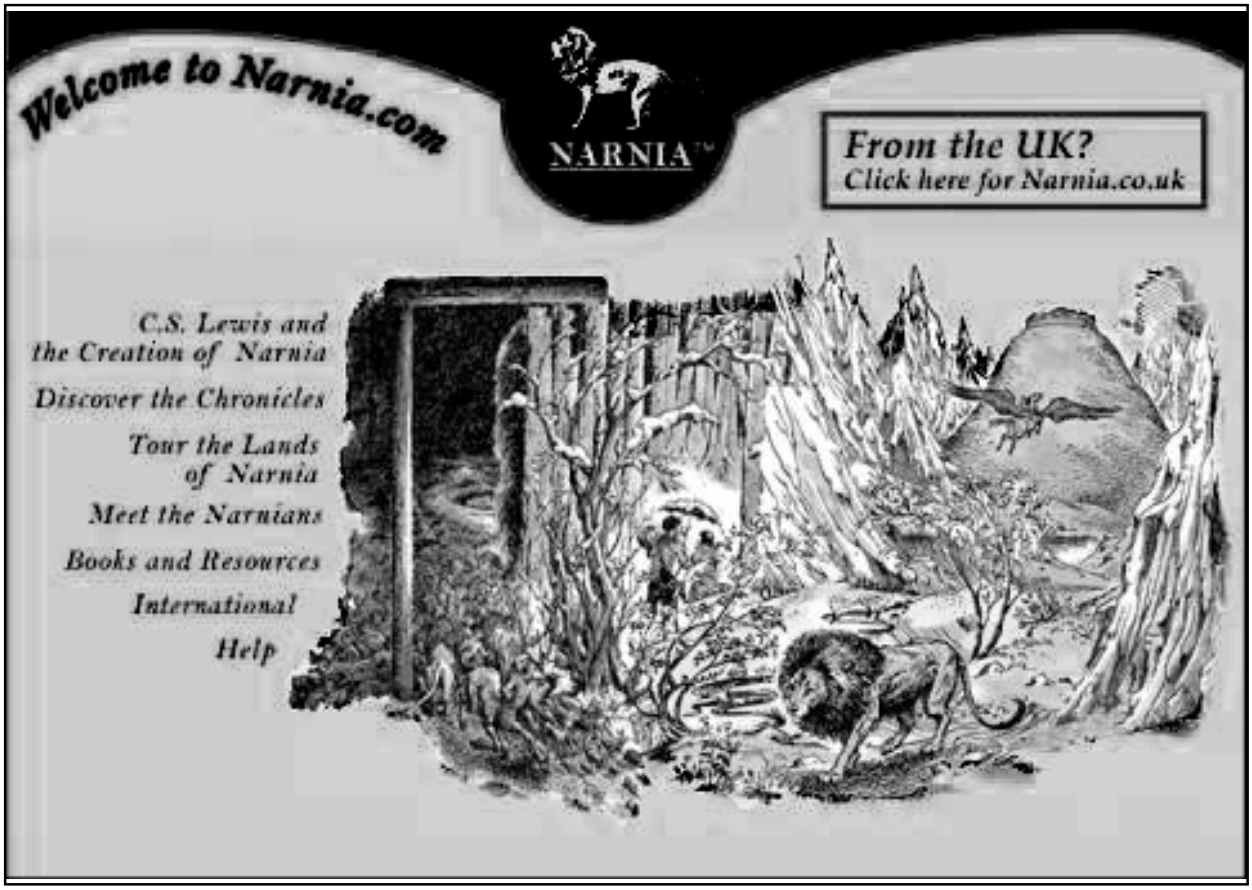
Daisy and the Intergalactic Travelling Salesman is a collaborative branching story hosted by the site and children are invited to write the ending.



Find out who lived in the Kids' Castle from Kids on the Net

An important safety feature of the site is that they do not publish surnames or email addresses of the children. *CW4K* (Creativewriting4kids.com) is another such site.

This site is the work of children's author, Antony Lishak. Unlike Kids on the Net, the work in the Authors' Workshop is listed by school, having first been checked and then submitted by teachers on behalf of the children in their classes. CW4K also has a useful page of writing tips for children which I found helpful in the classroom. A unique feature of this site is that Antony will respond to children's queries and advise them on their writing as well as sending serialised stories that they can work on. He also does school visits (he is a former teacher himself) and can be contacted via the web site. Some of the javascript on this site doesn't seem to work on RISC OS browsers but the site can still be navigated.



Tour the land of Narnia on its own website

Finding out about well-known authors can provide inspiration for young writers, and a site that can help with this is *Word Pool* (www.wordpool.co.uk/index.htm).

One of the most interesting parts of Word Pool is the Author Profiles section, where many children's authors have been interviewed about their books and the way that they write. If you can't find the author you want to find out about at Word Pool, they have a more extensive list of author web sites at their UK Children's Books site at ukchildrensbooks.co.uk.

Finally, all fans of C.S. Lewis's Narnia Chronicles should not miss www.narnia.com or the UK version at www.narnia.co.uk, The Official Narnia Page. This is a beautiful site for anything to do with the Narnia Chronicles, including the first chapter of each book (these can be downloaded as pdf files from the UK site) and online quizzes.

A Diary For Your Dates

Like to make your own personal appointments calendar for 2003 and the subsequent years? Peter Jennings provides the pages and shows you how to do it yourself.

About this time last year my wife and I were looking round the shops for a new appointment calendar to hang up and record our social engagements during the coming year — shows and other events, family birthdays, invitations to tea at Buckingham Palace (which still haven't arrived) and so on.

We always look for a calendar with pictures which interest us, such as scenes of places we know. These usually amount to just a few in each calendar and, as we couldn't find anything which really attracted us, I decided to make my own, using Ovation Pro and some of my own photographs.

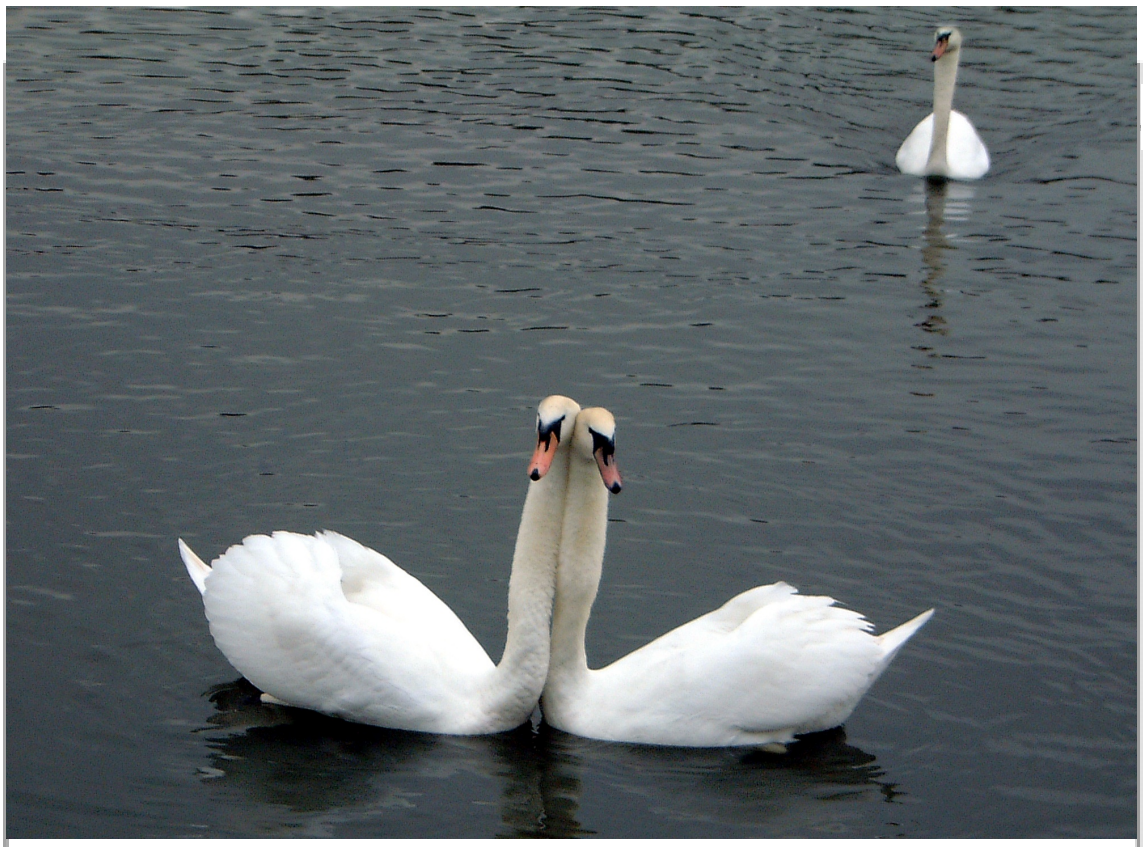
As well as the pictures, the printed contents could be personalised to include, along with the usual public holidays, pre-printed notes of the dates of family birthdays and anniversaries.

It took a while to work out all the sizes and settings but, once done, the calendar *(see part of a page opposite)* can be very easily updated every year.

If you would like to use it for your own personalised calendar diary there is a set of pages for 2003, in Ovation Pro format, and a template for updating them for future years, on the Club's website at www.armclub.org.uk.

If you haven't got Internet access, use a different DTP program or just want the fun of making your own, you can use the following information with all the sizing provided. This, too, will allow you to personalise it more by choosing a different font or even amending the layout if you have some better ideas.

If you are using the supplied files you can skip the next two pages and just read the final two on how to use them.



May

1	Thu
2	Fri
3	Sat
4	Sun
5	Mon
6	Tue
7	Wed
8	Thu
9	Fri
10	Sat

D-I-Y

Open an A4 page in Ovation Pro.
Set View-Zoom to 70% and tick *print margins* in View-Options.
Load printer to show margins.

Draw a frame 94.5mm wide by 205mm high positioned at X=3 Y=82.
This will probably extend slightly beyond the printable area on the left but need not be repositioned unless the date figures, to be added next, are outside it.
At top left of frame type two spaces and figure '1' in 15pt Trinity Bold, then type two spaces and '2' immediately below it.

Draw a horizontal line 0.25mm width, to the right of the figures, down mid-way between them and extending across to the right hand side of the frame.
Select the line then Object-Duplicate 30 times with a vertical offset of 6.35mm and horizontal offset 0.
Group the lines.

Complete adding the figures down the left to '31', typing two spaces before the single digits so that they are all aligned at the right.
You can then check that the figures appear within the printable area and, if not, position everything to the right until they do so.

Draw another frame immediately above the first, the same width (94.5mm) and 13mm high. This is where the name of the month will appear.
Use Object-Border to add a line 0.25mm width at the bottom only of this frame.

Above that draw another frame of the same width, 64mm high, for the picture.

We then need a vertical column where the days of the weeks will be added.
Draw this 15mm wide immediately to the right of the figures.
Place this 1mm below the line at the bottom border of the month frame.
That is positioned at: X=11.5, Y=82.25, W=15mm and H=202mm.That completes the template for each month.
Group everything, save as 'Month' and copy to the clipboard.

Paste a copy to the right of the original then position it to X=109.
Save this as 'Page'.

Make a copy renamed as *Jul+Aug* (as both these months have the full 31 days).
Type in the 'July' and 'August' respectively, in 18pt Trinity Bold, in the month panels.
Make two more copies of 'Page', named *Mar+Apr* and *May+Jun*, add the month names then delete '31' from April and June.
Make two copies named *Sep+Oct* and *Nov+Dec*, add the months and delete '31' from September and November.
Make one copy for *Jan+Feb*, add the names and delete '29' to '31' from February.

You then need a template for adding the days of the week, in a new A4 page.
Draw a frame 202mm high and about 15mm wide positioned at Y=48.
Type the figures '1' to '31' in a column down it using 15pt Trinity Bold.
To the right of this frame draw another, also about 15mm wide, from the top of the page (Y=10) down to the level of the bottom of the figures column.
Type the days of the week, in order, down this frame, also in 15pt Trinity Bold. The last day of the week ('Saturday' if you have started with 'Sunday') should be aligned with the figure "1".
Repeat typing the days of the week until all 31 figures have a day aligned with them.
See the next section on how to use the template.

Whether you are doing it yourself or just downloading the ready-made pages from the Club's website you will, of course, have to print them and, if you want to use the calendar for more than one year, you will need to update it for reuse.

If you are printing in colour it is a good idea to print 'Saturday' and 'Sunday' in a contrasting colour to help mark out the weeks. If you are using black ink only they could be distinguished with something such as a *bullet:* • made by typing ALT+143 on the keypad.

If you are a photographer using a digital camera or have a scanner you can easily add your own photos in the rectangular frames at the top of the months. Otherwise, with a bit more trouble, you can get small prints made and cut out a suitable area to fit. Artists can go one better and draw or paint their own pictures and sketches will look particularly effective if you have only a monochrome printer.

As you will see, the pages are designed to be printed with two months at a time and, if the positioning is correct, you should be able to cut them down the centre to leave even margins on each side of the months. Print them on A4 thin card, obtainable in reasonably priced packets at stationers' or camera shops, using both sides.

Back them up as follows:
Jan+Feb with Nov+Dec
Mar+April with Sep+Oct
May+June with Jul+Aug.

The best way to mount them for hanging up is to use an old appointment calendar. Cut off the pages leaving the blank margin with the hanger at the top. Then stick your new months on. Using a strip of 'invisible' sticky tape on each side is very effective and avoids the additional bulk caused by sticking them on with adhesive.

Otherwise, punch a couple of holes in the top of each page and insert split rings or circles of wire. Get another piece of wire, bend into a hook at each end and then bend in the middle to fit into the rings.

The appointment calendar is designed to be easily updated for reuse in following years. All that has to be

done on three years out of four is to delete the column of days and replace it with a new one. You don't even have to retype anything although, in the fourth year there is the additional chore of adding an extra '29' to February!

The update is done with the amazing *DaysTemplate*, devised by a highly skilled mathematician. The secret has been revealed on the D-I-Y pages and a copy is enclosed with the completed 2003 months on the website. A smaller version shown opposite demonstrates how it works.

All you have to do is look for the first day of the month in the column on the right then drag the column down so that the first day aligns with number '1' in the left hand column. Select the column of days down as far as the day which is aligned with the number of the last day of the month: 31, 30 or 28 for February. Copy to the clipboard then paste into the days of the week column in the appropriate month file.

Do that a dozen times then find some new pictures and replace the old ones and you have your new appointment calendar for the following year.

Setting for April 2003

		Sun
		Mon
Month	**1**	**Tue**
starts on	**2**	**Wed**
Tuesday	**3**	**Thu**
	4	**Fri**
	5	**Sat**
	6	**Sun**
	7	**Mon**
	8	**Tue**
	9	**Wed**
	10	**Thu**
	11	**Fri**
	12	**Sat**
	13	**Sun**
	14	**Mon**
	15	**Tue**
	16	**Wed**
	17	**Thu**
	18	**Fri**
	19	**Sat**
	20	**Sun**
	21	**Mon**
	22	**Tue**
	23	**Wed**
	24	**Thu**
	25	**Fri**
	26	**Sat**
Days	**27**	**Sun**
selected	**28**	**Mon**
to end of	**29**	**Tue**
month on	**30**	**Wed**
the 30th	**31**	**Thu**

Cherisha Software RISC OS CD-ROM

Mark Smith previews a new CD-ROM from Cherisha, now available in a pre-release version, and takes his pick from the varied collections of RISC-OS programs.

Rebecca Shalfield's enterprise, Cherisha Software, has been supporting the Acorn/RISC OS market for many years. She has now put together a CD-ROM containing a number of software titles, a partially completed *RISC OS User's Reference Manual*, a copy of the Cherisha Software website and a products database site that she put together for RISCOS Ltd.

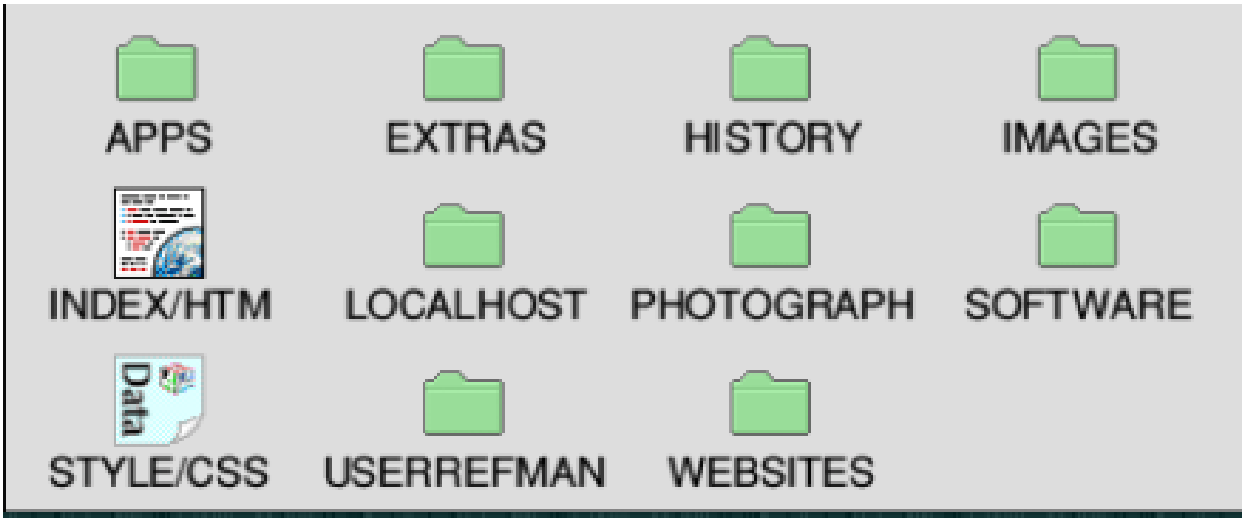
The CD that I had for review purposes was a 'pre-release copy', which is being offered with a free upgrade to the official release version in January.

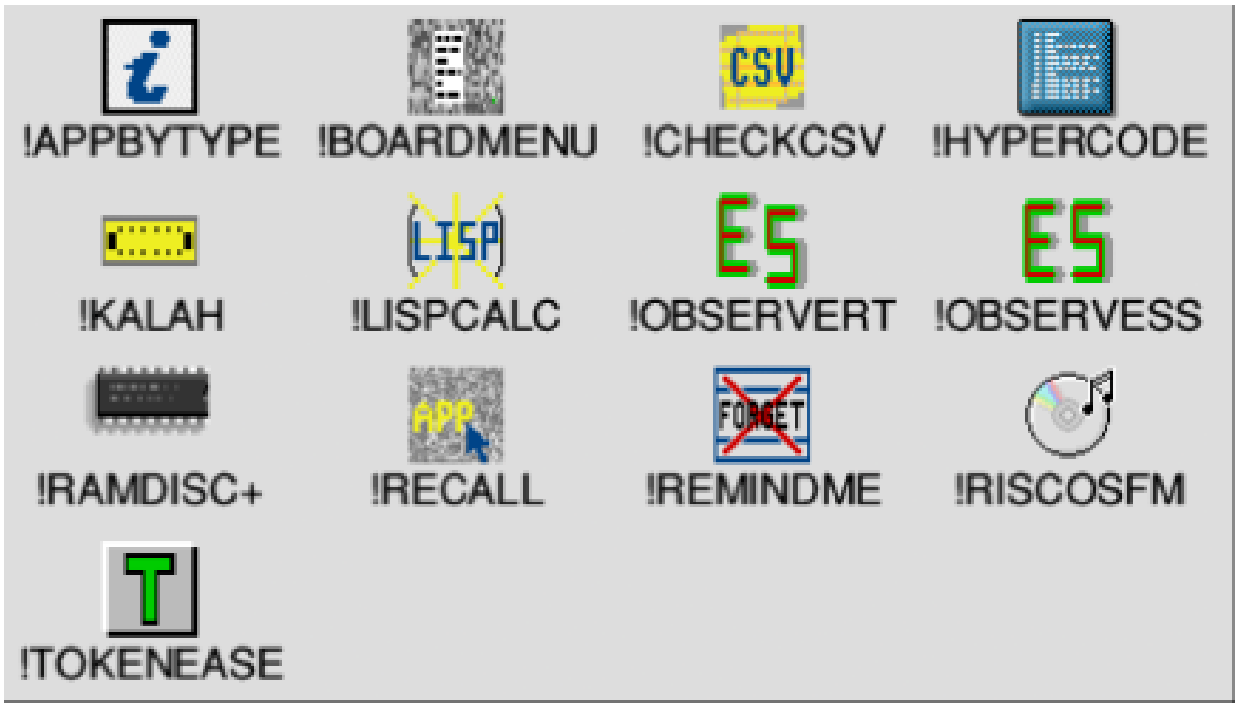
The Reference Manual

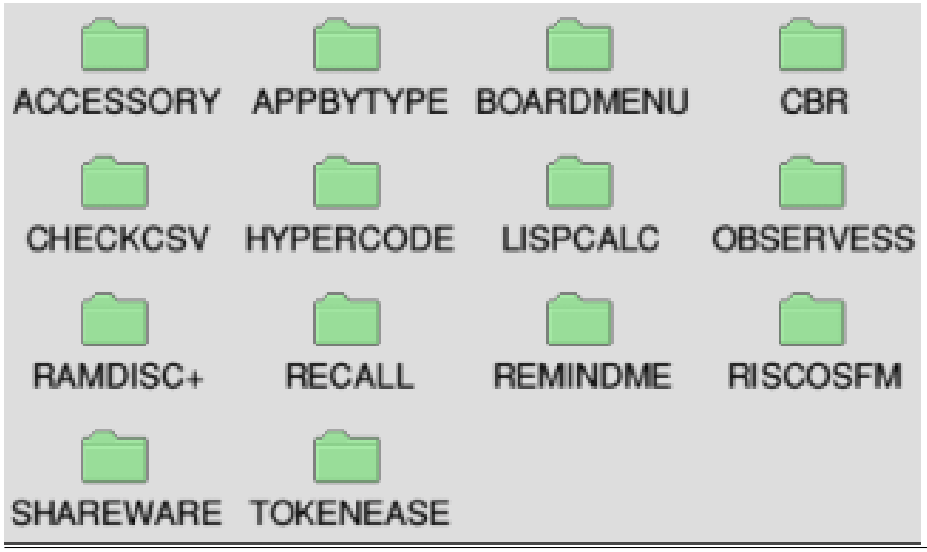
On inserting the CD into the drive and clicking on the drive icon, a standard RISC OS filer window appears as normal. This includes an index/htm file which you can load into your favourite browser. From there, you can follow the link to the Reference Manual.

The manual itself is held as an Adobe PDF file and a viewer application is supplied on the CD. This is a reasonably up-to-date version of Leo Smiers's Public Domain PDF viewer, which works quite adequately, if a little slowly. On following the Reference Manual link, the browser should automatically start the PDF viewer and load the document, presenting you with a contents page. If your machine has no web browser installed, you can load the PDF file directly from the RISC OS filer.

The document currently runs to over 160 pages but — on this pre-release disc — is clearly very much still work in progress. A number of section titles exist with no text and some sections are clearly in the wrong place (such as detailed reference to ResourceFS within the section that introduces RISC OS).







Top: The CD contents.

Centre: The Apps directory.

Bottom: The Software directory.

On the positive side, this document has obviously been written very recently and covers RISC OS Select (v4.29) as well as older versions of the OS. At 160 pages, with a great deal more still to be added, it has the potential to become a very comprehensive document covering RISC OS in its current state.

Unfortunately, I found it very difficult to see quite who the document was aimed at. It delves into the technical detail a little too much to really be a User Manual, yet it tries to cover the basics and certainly isn't presented in a form that would provide useful reference to programmers. In addition some of the information contained within the document is suspect or factually incorrect (including the assertion that an A7000 contains an ARM2500 processor).

As a result, I cannot see it being a great deal of use to many people in its current form. With more consideration to the document's intended audience, completion of the missing sections and some proof reading it could become a valuable guide for that intended audience, but it requires a great deal more work to get there.

Software Titles

Most of the software titles provided on the CD are updates of previously released Cherisha titles. However, there is one new title: RiscOSFM.

RiscOSFM

RiscOSFM is intended to allow the playback of audio tracks copied from a CD to a hard disc. As far as I'm aware, it is unique in that it will allow you to set up a number of tracks and specify during which times, days of the week and dates that you wish to allow that track to be played. Tracks are then played in a random sequence from the set allowable at any time, the intention being that you can create your own 'music radio station', albeit with a limited selection of tracks that will be played according to the current day and/or time.

The first thing I tried to do was to run the application straight from the CD. This presented me with a rather unfriendly looking task window containing several options followed by an error to say that there were no tracks to play.

On subsequently reading through the help text that is hidden away inside

the application, I realised that I needed to take a copy of the application and then set up all of the tracks to be played inside it. This entails creating a directory for each track, copying the track in a specific format and then creating a text file to specify when that track may be played.

The help file suggests that tracks need to be copied from CD using AudioFS2. This may be downloaded from www.xlcus.co.uk/software/acorn/index.shtml. However, WAV format files (as extracted by CDBurn, for example) will also work as long as you get the contents of the track directories correct. Failure to set it up correctly tends to result in cryptic errors such as *Subscript out of range* appearing in the task window.

Once you have set it up correctly, you can use the application by selecting the options presented in the task window. There is no graphical interface of any kind on this application and some sort of control panel window, as well as a GUI setup facility would make a big difference, especially for novice users.

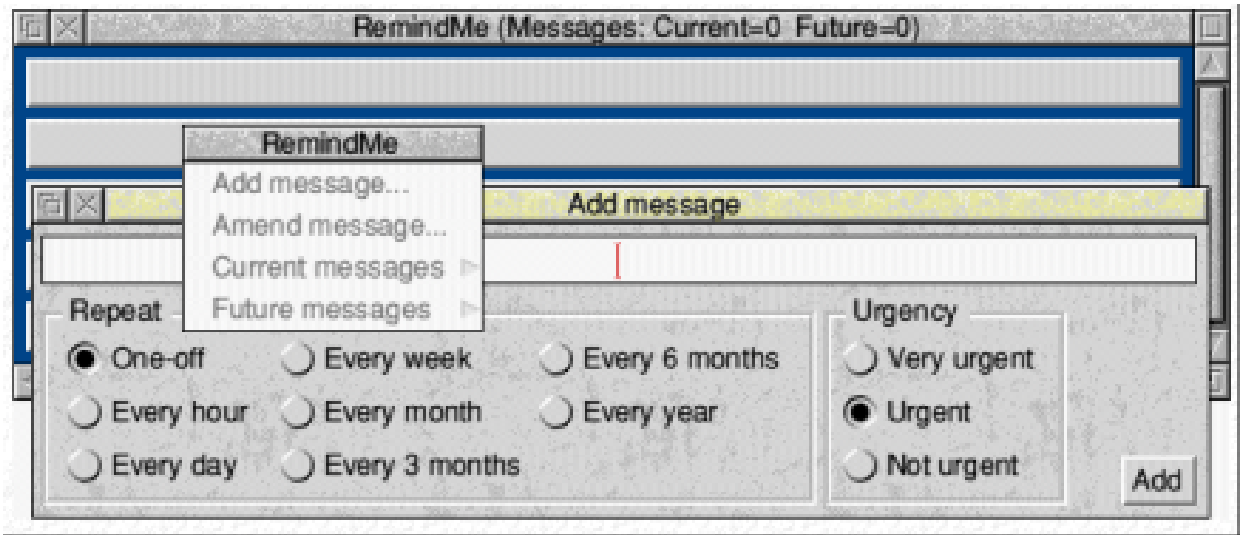
I set up a couple of tracks and, although I could get it to play the most recently added track by pressing 'B', I was unsuccessful in getting the random play feature to work. No doubt I'd set something up incorrectly, but it does underline the point that this is not the easiest application to make work.

Other Titles

A total of 12 other commercial applications (plus some shareware) are also supplied on the CD.

RamDisc+ is a potentially useful application that replaces the normal RAM Disc icon. It has the functionality to display the amount of free space under its icon, as well as set the size of the RAM disc to a number of predefined options, if it is currently empty. Assuming that you want a RAM disc of one of those sizes, it saves messing around in the Tasks window, but the selection of sizes is fixed, not user definable.

RemindMe allows you to maintain a 'To Do' task list on screen —again potentially useful if you have a need for such an application.

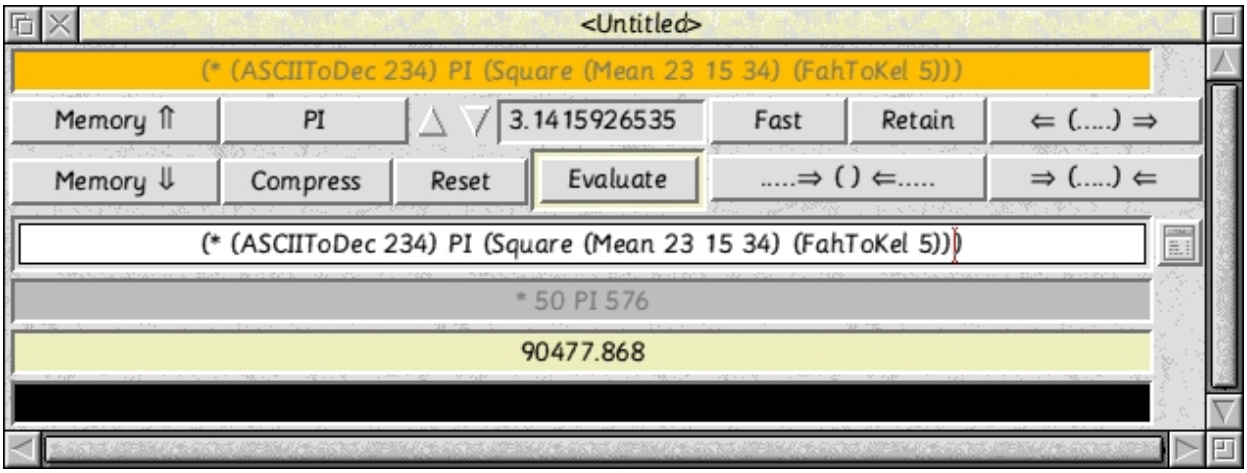


RemindMe — your on screen memory jogger

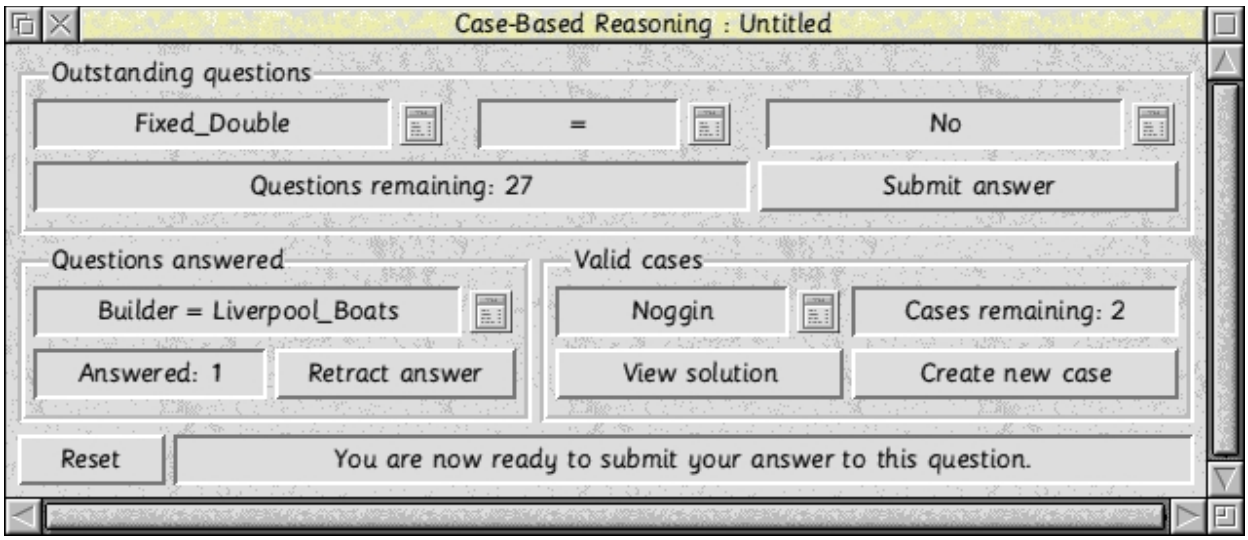
Recall allows you to rerun previously quit applications from a menu, which might be useful if you have limited memory.

Hypercode generates a hotlinked HTML listing from a BASIC program. The application produces HTML which tends to be much easier to follow than it would be in some editors, because it is easy to display a function or procedure by clicking on a line which calls it. So it's great for reading programs but unfortunately not very useful if you want to make edits to the program you are looking at.

A number of the other applications seem to be aimed at a very specialist audiences.



LispCalc does your calculations in a Lisp style format



Questions and answers with Case-Based Reasoning

LispCalc is a calculator that takes calculation entries in a Lisp style format (such as, + 1 2 would yield the result 3). There is also a ***Case-Based Reasoning*** tool and ***Observess***, an application which uses rules from a knowledge database to derive a conclusion from questions on a specific subject.

Conclusions

This CD contains a number of potentially good ideas but unfortunately fails to deliver much of real quality and usefulness. The User Reference Manual is far from being finished in the pre-release version and many of the applications are difficult to set up and may be of interest to a very small set of people.

If you have a particular interest in any of the applications, it may be worth buying just for that but you may be well advised to try the applications you're interested in before you buy.

Cherisha Software
RISC OS CD-ROM
Price: £50 (pre-release version with free upgrade to official release in January 2003 after which upgrades will be £10)
Supplier: Cherisha Software
16 Woodside Drive, Wilmington
Dartford, Kent DA2 7NG
Tel: 01322 553953
Fax: 01322 400883
Email: rebecca@cherisha.co.uk
Web: www.cherisha.co.uk

Winning Games With Logic

Keen on computer games? Barry Aulton offers a useful technique to improve your game playing skills with the help of some logical thinking.

And now for something completely different! I thought if Gill could write about, well, that! I could write about this. This is a useful technique that can be used in a wide variety of computer games and many other applications and is used to duplicate human reasoning processes.

As always the problem is where to start. I will try to explain things as I go along, presenting the reasoning behind this technique. I will later give some examples and plug some numbers into it so you can see how it works. (On the subject of RISC OS computer games if anyone is developing a game I can help out on the design tactical and coding side.) Anyway, here goes!

Why do we decide to do things? Why would you put your foot on the brake while driving?

Possible Reasons:
A) To conserve fuel.
B) Policeman ahead.
C) Pothole in road.
D) You felt like it.

You may decide not to brake for one reason alone but several reasons together could make up a good argument for braking.

Often reasons for performing an action conflict (such as, you are late!). Decisions thus become more difficult *and* humans must deal with conflicting information.

How can we apply common sense in such situations? Common sense while driving requires that safety should be given the highest priority but there are other factors, such as cost of repairs. We have built up skills (as for driving) to enable us to make such decisions. But what do we mean by skills?

We would need to know:
A) What relevant things are likely to be encountered (such as a stop sign or sleeping policeman).
B) How to behave in particular situations (such as an encounter with a traffic officer).
C) How to make a decision given a finite number of choices (to brake or not).
D) In order to make such a decision we need some criterion to estimate the performance of our possible actions. For example our aim when driving would be safe and timely arrival at our intended destination (Ram Raiders need not apply). Unfortunately one can rarely attribute one action or even sequence of actions to the final outcome (unless you hit something).
E) You need some way of learning through experience, (driving fast over sleeping policeman is not recommended).
F) You need to be able to generalise, as for when you buy a new car.

What types of Knowledge do we need to make decisions?
A) Problem solving knowledge. We need good reasons for making decisions in a variety of related tasks. When driving we know reasons involving safety are good reasons for actions.
B) Start up Knowledge. A driver must be able to recognize other vehicles, and has to be able to prioritise reasons. Safety reasons are given a higher priority over time of arrival unless joyriding!

For a computer game we must have:
1) a means of displaying the game on the screen.
2) a means of displaying any moving pieces.
3) a means of making the movement.
4) a legal move generator.
5) a test for end of game.
6) a means of calculating the winner(s) *and* loser(s).
C) discovery knowledge.

We need to be able to know what to learn to improve our skills. In order to do this we need to be able to ask the right questions. We need a set of *features* that we consider to be relevant to the situation.

A feature is a description. For example, in the game Tic Tac Toe we may decide that occupation of the middle square is an important feature,

or 'the black king is in check' for chess, or if we can directly go to our destination (for a navigation problem).

We need to be able to focus our attention on these important features and ignore irrelevant ones. For example, a car's colour is irrelevant to driving skills. We need to learn a general skill, about driving or game playing in general, and more specific learning applicable to particular situations.

So much for how humans may make decisions, but how might we automate such a process? Suppose we start with some prior knowledge and some not very specific skill knowledge. We know for most games that if we can make a winning move immediately then we should make it. Alternatively if we cannot make a winning move we should avoid making one that will immediately result in a lose situation. This, weak general knowledge, can be applied to all games.

If we can start with such non-specific knowledge can we somehow automate the acquisition of more specific —that is game specific — knowledge)?

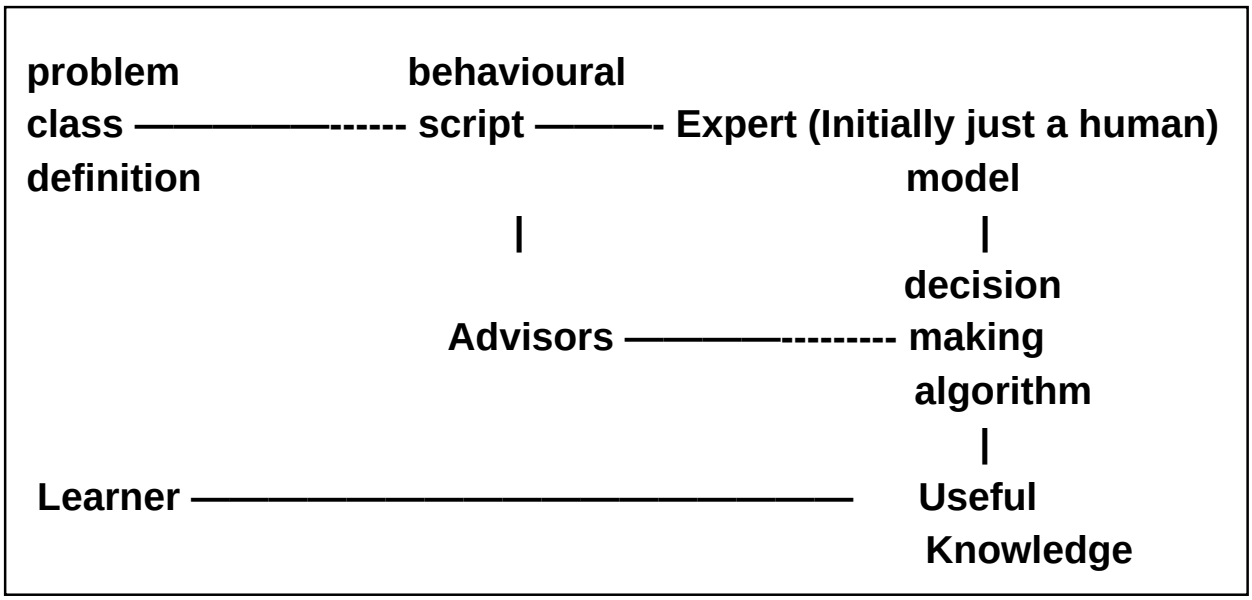
Susan Epstein proposed the architecture shown opposite.

Problem class definition

The problem class definition attempts to state the specific type of problem. For a game, we need specific initial information about it. We need to state the object of the game, the material pieces in it *and* a means of obtaining a list of legal moves. We may not know how to win the game but we must know how to play it.

Behavioural script

We need some way of mimicking the human expert's problem solving knowledge. The behavioural script must produce appropriate but not necessarily intelligent behaviour (at least a valid move). We also need to be able to mimic the human's ability to discover knowledge about appropriate behaviour. It comprises the right set of questions to ask about a type of problem. Answers to these relevant questions should be applicable and probably correct. This knowledge must be gained through further learning. We will discuss this later.



Susan Epstein's idea

Advisors

Finally we need a set of reasons that Epstein calls *Advisors*, for making appropriate actions. Each advisor, is a generalisation for a set of answers to a relevant question. It is a good reason for taking an appropriate action. (See the following examples). One human's assume is a good choice, (but not necessarily optimal) in the circumstances. Advisors may give conflicting advice. For example the advisor to travel towards one's destination may conflict with that of one warning of one way systems. The following gives some examples of advisors applicable to many games:-

Blinders: Select a move to further a simple plan without considering what opponents will do.

Defence: Select a move to defend against simple opponent plans.

Don't lose: Don't make a losing move.

Enough rope: Do not block any opponents moves that would result in them losing.

Panic: Block opponents winning move(s).

Winner: Make a winning move if you can.

Win: If you can remember a certain winning move, make it.

Leery: Avoid moves that in the past have lead to a loss.

Wiser: If this is a significant win state, make the correct move.

Sadder: if this is a significant lose state resign.

Advisors are thus common sense principles which we can apply to the game to direct the search for a good move to make. When it is the computer's turn to move, the legal move generator computes all legal moves from the current state of the game and offers them up to the advisors. The advisors comment on these alternatives, recommending them or advising against them. We can order some of the obvious advisors. The order adopted being Wiser, Sadder, Victory, Panic, since these advisors are predicting certain wins or losses. An advisor produces any number of *Comments* about what the next move should be according to its limited perspective.

Each comment is an ordered triple consisting of:
A) the advisors name (or index).
B) a possible type of move under consideration.
C) and a *Strength* of that move (-10 indicating strong opposition to the move, such as to one that would result in a certain loss of game) and 10 indicating a certain win).

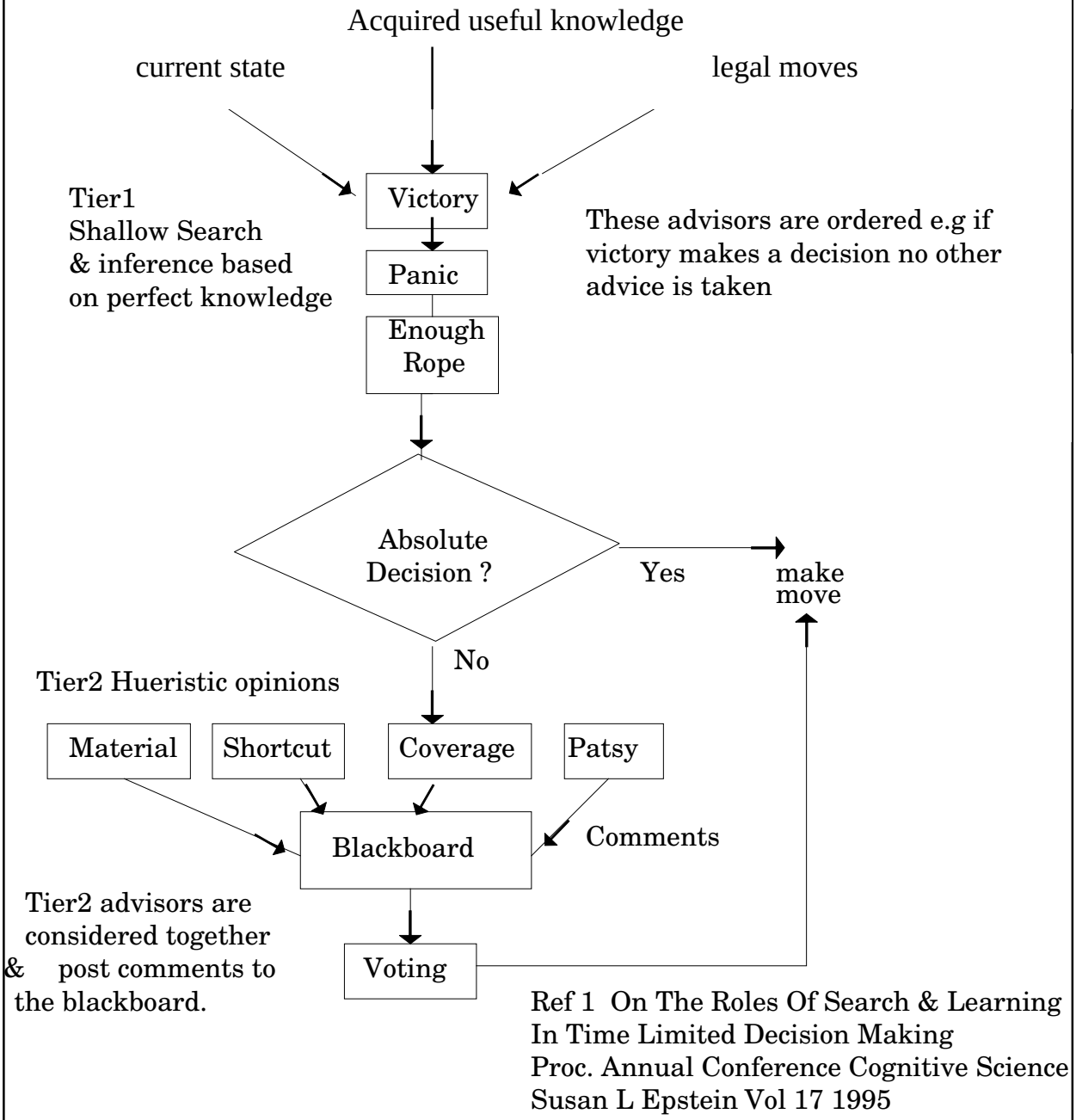
Through learning, advisors may make different comments about the same game state. The algorithm (here called a behavioural script) used to play a simple board game is shown opposite.

The decision making process that Epstein adopted is shown on page 36. At its input we have the current state of the game. For a simple game like Tic Tac Toe this would describe the position of every 0 or X on the board. For other games we may make approximations to represent the state of the game. In a battle game we may only consider the total strength of nearby enemy forces and not their make up. We thus focus our attention on what we think is relevant and ignore everything else, i.e. we extract the most relevant *features*. We need to generate legal moves and hope to accumulate some useful knowledge about the game as play progresses. The decision making algorithm instructs all the advisors to read the game state and the legal moves and post comments to be evaluated. The final components needed are some way of assessing performance here called a *validation* model and some way to learn the *learner*. This can initially be the human player changing the strengths of the comments by hand.

```
Initialize the game frame
For some number of contestants
{
 Determine the identities of players and opponents
 Initialize the board
 Do while the contest is not over
  {
    If it is the human player's turn
     {
       then do until a legal move is input
        {
          request a move
        }
     }
      else
      {
            generate all legal moves
            CASE:
              {
                    There are no legal moves -> resign
                     There is only 1 legal move -> make it
                   There is > 1 legal move -> consult the advisors to select 1
               }
             Record the most recent move in the contest's history
      }
      (contest over)
    Announce the winner(s) and loser(s) of the contest
    Conduct a post mortem on the contest.
  }
}
```

A behavioural script for a simple board game

The decision making process



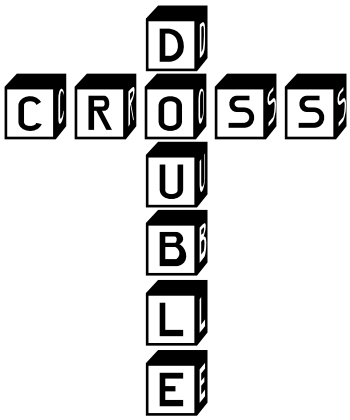
Ref 1 On The Roles Of Search & Learning In Time Limited Decision Making
Proc. Annual Conference Cognitive Science
Susan L Epstein Vol 17 1995

A blackboard architecture is just a globally accessible data source (such as RAM) that gathers information from several knowledge sources.

This includes data and information on what to do with it.

The sources here are the advisors, the decision making algorithm and the useful knowledge that is acquired during game play. The blackboard receives the comments from the relevant advisors and the voting system chooses the action with the most votes (highest strength).

The Word Puzzle

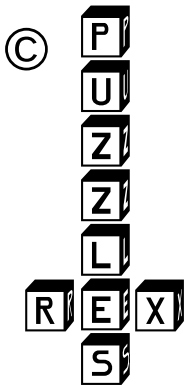


By Roger King

			O		E							
	A			H		I						
			R		I							
	O			N		I						
			A		U							
				Y								
	E		I					I		E		
E		L		I		U		E		R		A
	R		P						I		N	
T		Z		L		A		E		M		D
	N		R						O		E	
				O								
			H		U							
U				T		I						
	A			A								
I			O		D							
	A			N								

Place the 42 letters shown below into the grid to make valid words.

A A D E M N P R S T Y
A B D I M N P S T T Y
A B D K N O R S T V
A C E M N O R S T V



The solution is on page 61.

The Midlands 2002 RISC OS Show

Saturday 30th November

The National Motorcycle Museum

Solihull, Nr Birmingham

Time: 10am to 4.30pm

Entrance Fee: Adults £3, ARM Club members £2

Children Under 14 (accompanied by an adult) Free

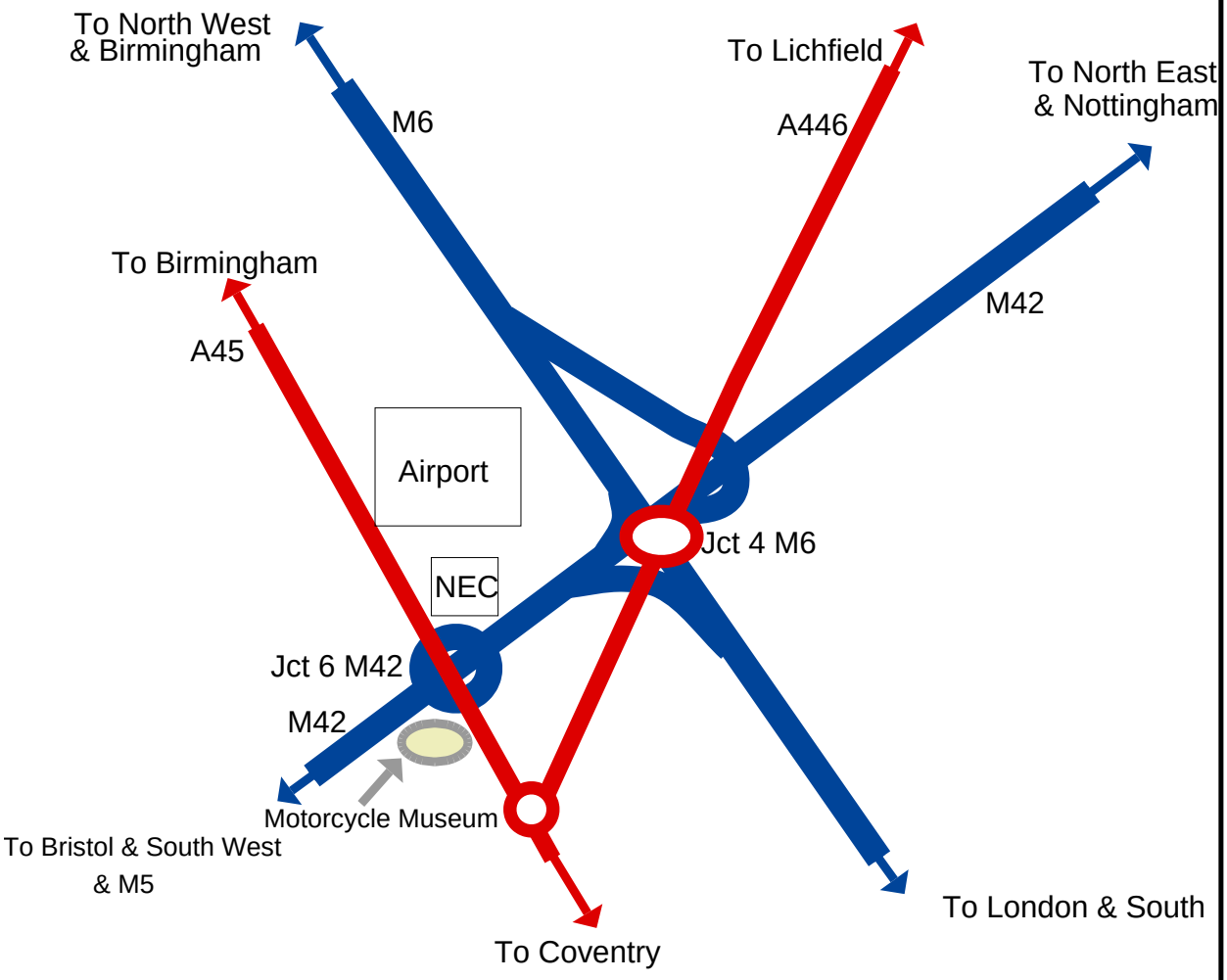
The Midlands RISC OS Show is making its sixth appearance at Birmingham's prestigious National Motorcycle Museum, which has easy access by road or public transport.

The Birmingham International rail station is less than ten minutes away, with a free coach service to and from the National Motorcycle Museum laid on. Birmingham International Airport is also less than ten minutes away and you can catch the monorail to the train station to use the free bus service from there.

There are easy routes by motorway from most parts of the country. (See opposite for full details)

For more information contact Ralph Sillett Tel: 01785 714535
Email: ralph@armclub.org.uk. midlandshow@armclub.org.uk

The Show is organised by The ARM Club



From the North & Scotland travel South on the M6 to Junction 4A and follow signs for M42, South West, Birmingham Airport & NEC (National Exhibition Centre). On Joining M42 you will require the next available exit which is the A45. Sign posted for Birmingham, Airport & Coventry. Use the middle lane up the slip road and the entrance to the Museum is off the island at the "10 too" position or the second available exit of the island. This is just before the slip road to go back onto the M42.

From the South & London take the M1 to Jct 19 That is the M6 and stay on M6 to Jct 4 and follow signs for South West and Birmingham Airport. Use the middle lane up the slip road and the entrance to the Museum is off the island at the "10 too" position or the second available exit of the island. This is just before the slip road to go back onto the M42.

From the South West and M5 take the M42 for Nottingham to Jct 6. Move into the left hand lane on the slip road and take the 5th available exit into the Motorcycle Museums car park.

Happy motoring & drive carefully.

Gill's Ski Slope Journal

Gill Smith goes skiing and ponders on the mystic powers of spods who may be tongue-tied with non-spods but recognise each other across crowded rooms.

Well, I think this quarter's journal has to start off with the good news that several spods have taken my advice, eaten their tomatoes, found themselves dancing shoes and are about to head off for a wild weekend of avoiding treading on women's toes. I hope they succeed in the latter. I'm also hoping there's a sort of après salsa where they can also chat to any ladies who happen to be there –- like après ski but without the necessity for getting cold, falling over and ending up in a plaster cast.

On the subject of skiing, we took a trip out on a delightful, sunny August day. This then involved having to have all limbs fully covered and wearing large gloves.

It turned out to be a surprisingly successful way of tempting screen-glow-tanned spods to venture into the great outdoors. Dry ski-slope skiing is clearly the way to trick spods into getting fresh air and even sun light.

Stop laughing! The sight of spods on skis wasn't actually a lot sillier than the sight of anyone else on skis, carefully covered up so as not to need skin grafts if they fall over, in spite of the blazing August sunshine. No. What was worrying about the whole occasion is that, for the first lesson at least, you don't get those nice little ski poles to support yourself on.

Now I'm sure that any of you that ski will know some complicated explanation. However when you're sliding forward worryingly fast, while being told to look up, lean your weight forward, bend your knees and lift alternate feet (including heavy ski-boot and ski) off the downhill surface of upturned broom-ends, the lack of stabilisers seems unfair. That's how I learned to ride a bike –- I had

extra support. How come they only give poles to the good skiers?

I know what you all really want to know, though. You can imagine begloved spods flailing around as they try to play catch on the world's shortest slope that, believe me, feels very long and steep. You can probably even imagine the set of rather warm Committee members turning their knees and skis out to master the task of getting back up the slope –- which, incidentally, is far harder work than the actual skiing. What you really want to know is who fell over most, isn't it?

Well, one group member had skied before, so the rest of us were waiting to hear a distant scream as he took a tumble due to paying a great deal more attention to laughing at us than to where his skis –- and poles –- were. Somehow, he avoided this and even tactfully kept a fairly straight face in the bar afterward. Lack of balance and wobbling around like scarlet faced (it was warm, OK?) jellies was pretty even all round. The prize for

losing skis most frequently had to go to a certain author of DiskKnight. But the trophy for best mid-air cartwheel, complete with loss of skis and longer term loss of balance for about the next twenty minutes, I claim myself.

I have just one request. Since it is absolutely necessary to wear thick trousers (or I wouldn't have a left knee) and long sleeves (or a right elbow) next time we go, how about not going on one of the sunniest days of summer? Just a thought… this year, Bracknell, next year… no, not Aspen –- how does High Wycombe sound?

Anyway, enough drama. Spods aren't used to all this talk of physical activity and I'm sure I ought to manage to mention something to do with computers, in order not to disappoint my aspiring-spod readership.

So, what I'd like to know is, how is it that a spod can find any other spods in a room quickly, easily and without appearing to have to manage the trauma of talking to anyone not-

spoddy? I've noticed an amazing ability in all The ARM Club spods I know and also in various other technical people to instinctively find the only other person in any room who can either understand, or more importantly care about why they chose which linux distribution.

This ability is all the more spooky for the fact that this skill is, in some spods, so finely honed, that I believe if there is a choice of other spods around, they will find the one who's first choice OS is most similar to their own. Why is it, the rest of us have to ask, that we cannot tell from first sight that someone is a spod and therefore avoid accidentally asking "So, what do you do?"

Well, it's very simple. This skill shall henceforth be known as 'geek-dar.' And like the equivalent that I borrow the name from, women are hopelessly bad at telling on sight whether a man is gay or straight. Somehow, other gay men just know. This is gay-dar at work. Geek-dar is much the same.

Spods are able to tell a RISC OS user at twenty paces, while the rest of us were casually assuming that the person in question probably worked on a PC during the week. We were even, in some instances, considering asking them what the day job was. That's when it really helps to have a second spod at hand to get their geek-dar up and running and ask this near victim of our small talk, "So, what's your linux configuration then?"

To those of us who can't count in either binary, or hex, without a major amount of thought, it seems odd that we failed so dismally to realise that this person was a spod. But we mustn't blame ourselves. Like gay men don't always dress camply, spods wear a variety of different outfits, suits, jeans, even chinos. Some occasionally avoid the unhealthy monitor glow. Yet nothing stops the other spod seeking them out from across a crowded room and starting up a deep and meaningful conversation about the size of the other's hard drive.

You shouldn't worry that you didn't realise someone was a spod. Other spods are simply more attuned to noticing those all-important little tell-tale signs.

I should point out that I'm sure it's possible to get better at spotting a spod on sight. It is a skill and I'm sure many do display outward signs such as an unhealthy dose of 'mouse-finger' (like tennis elbow but due to the mouse and guess where you get it!)

Unfortunately, though, to the untrained, the lonely looking man in the corner staring into his pint as he considers whether he needs a new motherboard can frequently and easily be mistaken, especially by inexperienced young women, for a sensitive, shy soul quietly composing verses about your fabulous new haircut. Trust me, if he's writing poetry, then that's only because some UNIX commands do just happen to rhyme, helped by the fact that good coders break their work into lines. (National Poetry Day is 10th October, by the way if you'd like to submit your perl scripts for this celebration, do let me know and I'll see if I can find somewhere suitable! Real verses, send to the Editor, Eureka, the Acorn market's most literary magazine.)

I've probably deeply offended a few people out there by comparing spods to gay men. Firstly, I'd like to say "Get over it" –- nothing wrong with being gay, so what could be wrong with being compared to being gay. Secondly and more gently, take it as a compliment. Gay men, along with possessing gay-dar, are considered to be better dressers and dancers. While I can't honestly claim either skill for the spod, I'm sure there are some other special skills that we can find… now if only I could work out what they are…

What they seem to be good at, is spotting odd but unique landmarks. A certain spod I see more of than most managed to navigate his way round our recent trip to Edinburgh by remembering emergency-backup electricity generators and computer shops. Along the same route, I was too busy gazing at the antiques shops, day-dreaming of my own one-woman show at the Fringe and wondering in passing why there was a double bed, complete with mattress, lying on the pavement. I never worked out that last one.

You can't fault Toby's ability to remember the route from A to B, having only done it once before. In fact, due to his ability to remember

strange things along the roads that I wouldn't, when I'm lost he's usually fine. Just occasionally he doesn't have any landmarks to work with but then I can often find a particularly pretty run of Georgian houses, or simply spot a discount shoe shop.

In other areas of life, too, the spod works a little different from the rest of humanity. Many of us learnt left and right at school. Others learnt it when they had to, in order to drive. A few still need prompting. However the spod needs no such help. The spod knows his (or her) left from right easily. How? Because all they have to do is picture the little 'left' and 'right' justification buttons and all becomes clear.

For the spod, the world is a little different. The sky does not look as if it has fluffy clouds today –- it has a Microsoft image across it. Colours are all merely a mix of red, green and blue —sorry 'rgb.' Where other people find computers do something wrong, the spod finds a 'challenge.'

One of Toby's colleagues has even developed a new hobby. It works like

this. You search on the internet for the non-word *retiblue*. You then laugh hysterically at anyone whose site includes this word. This is not because you're a mad computer scientist who spends too long starring at a screen. Oh no. Everything the spod does has logic (of a kind). So why the ROTFL? (Rolling On The Floor Laughing –- we've covered that some time ago!)

The reason for such scenes of amusements is that these are examples of people who decided to change a colour name throughout their website. They did a *Search and Replace* on 'red' and changed the word 'retired' to 'retiblue.' Try it on other –red words sometime You'd be amazed how often it happens. But I have to ask –- amusing as it is –- who else but a spod could have created such a game?

Now, given this special mindset that draws together all spods within any room, why haven't more male spods met more female spods and lived happily ever after, collaborating on child-processes and slowly taking over the world? Partly, the numbers of female spods are more limited than male ones. This is nature's method of natural selection and ensuring that the spod population doesn't get completely out of hand.

However, there are female spods. I have met some. I have been introduced to several at shows. It has even happened that some of them are attractive, showing all the signs of a life beyond the computer (such as a skin that doesn't glow green). Why aren't male spods becoming drawn to these women and chatting them up with their witty repartee about the evils of a certain large software company in the US, or by offering the lovely ladies a discount on a CD writer?

Pheremones. Now, in case you haven't heard of pheremones, these are, scientists believe, what attracts men and women to one another. These are a scent, given off subtly, that draws in the opposite sex. Everyone has them, according to scientists, although I'm not convinced that their study actually included lawyers.

I've concluded that the strange scent given off by constant finger-keyboard

contact and especially picked up from taking the case off your computer, causes a special spod pheremone. When this mixes with male pheremones, spods are pulled into deep conversations comparing recent pieces of coding. This is a similar effect to two rugby players knowing from each other's pheremones that they must instantly do battle to drink more and much faster than each other. Spods instead compete to debug with the most style, panache and speed.

When the delightful whiff of monitor cleaner and dandruff stuck between the keys instead mixes with female pheremones, sadly, it only causes confusion in the male spods. Their senses become confused and instead of mentioning their enormous processor speed, they just become shy.

Female spods are able to chat among themselves "Love your new motherboard, sweetie, where did you get it?" "That new DVD ROM is just so you!" but when faced with silent male spods, aren't clear what to do. In case there are any female spods reading this, my advice is simple. Run away! This confusion is nature's way of saying "Go off, find someone non-spoddy. Distribute the technical abilities wider in the gene pool." Just think, by taking my advice you could help lead to a society where no one mistakes a mouse for a foot pedal and everyone knows how to reply to emails without top posting —and, better yet, without assuming anyone who doesn't top-post hasn't written anything! And wouldn't that be an upgraded world?

Hence male spods drift to the outskirts of any party, geek-dar scanning the other lost and confused souls, to work out who to show off about their bytes to over the hostess's carefully prepared nibbles. Female spods drift to different corners and compliment each other on their set-up, ensuring the next generation's varied genetic make-up. And just occasionally, Mother Nature finds a partner for a spod, allowing us all to dream of a better world where technical support never needs to ask "Have you plugged it in?" What with all this skiing —exercise, sunlight and fresh air —as well as dancing classes, you might have to keep your eye on The ARM Club committee!

Cartoons by Howard Read

Ask A Member Who Knows

David Ruck and the team solve some more problems, emailed or phoned to the Club's free Technical Help Service and all of them promptly answered direct.

Hard drive noises

Question:

Intermittently the hard drive seems to stop or spin down and then restart again after a second or so. At first I thought it was the fan, but there seem to be two whirring noises and once, when I was copying to the hard disc or reading from it, an error message appeared to the effect that a file couldn't be read or written at just the time one of the whirring noises seemed to stop.

After a second or so when the whirring noises increased to the usual level, I repeated the filing operation with no problems.

So far, this lessening in the noise level (often/always preceded by a slight click or clunk) only occurs after using the computer for some time (half an hour perhaps or more).

Any ideas what this might be or what I should look out for?

Dave Lane

Answer:

They're the classic symptoms of a failing bearing. There's no guarantee how long the drive will last but my old one was giving those kind of warning signs a few weeks before it finally gave up completely, steadily getting worse all the time.

Make a backup ASAP and replace it before it fails completely — it's only a matter of time.

Monitor display

Question:

I have just purchased an Iiyama Vision Master Pro 413 17" Monitor. The Acorn MDF file supplied with this monitor is 'Pro410'. I have set up the screen geometry according to the

supplied manual using my preferred screen mode of 1024 x 768 (75 Hz).

I am not too happy with the display. The whole screen display is slightly 'dished', which cannot be adjusted using the screen geometry options.

'Dishing' is apparent with all of the provided screen modes.

Do you know of an MDF for this monitor instead of the supplied 'Pro410' version?

Roger King

***Answer*:**
Not sure what 'dishing' is. If it's apparent in all modes, it may well be that the monitor is at fault. Try standard resolutions such as 640x480, 800x600, 1024x758 and 1280x124, and use the reset option to get back the standard settings. Then make sure you adjust only one geometry control at a time as, with monitors with lots of settings, it's very easy to get it into a position where each affects the others and it's impossible to work out what to change to fix it.

First adjust the size and offsets, so the picture sits in the centre with 0.5cm borders —you can always make it fill more of the screen later, but it's best to start off like this so it's easier to see the effects of other settings without parts of it going off screen. You should also note that with some monitors the picture will either grow or shrink as it warms up, so it's best not to set the size immediately after switching on.

Next, adjust the pin/barrel to get the vertical edges of the picture straight, and then the trapezoid to get the vertical edges parallel. Make sure that your eyeline is directly in the centre of the monitor (that is, it's not tilted up or down) when doing this. Next adjust the rotation if necessary. If it has any more controls, use with care.

Lastly, after it has been on some time, adjust the size back up.

Regarding a different MDF, that question is best directed to Iiyama but by all means try the standard AKF85 and check to see if the geometry is any different.

If you still have problems, see if you can check the monitor with another

type of computer or a laptop, as the monitor may be at fault. Occasionally duff ones can slip through quality control.

Optical mouse

Question

I am using a cordless version of an optical mouse and would like to do the same with a second computer on my desk.

How far apart do the receivers have to be to avoid interference? Or do they all have their own particular frequency?

Danny Fagandini

Answer:

I believe there are a couple of frequencies that can be selected (depending on model) as they can have a considerable range. You may have to opt for a slightly more expensive professional version aimed at offices (where there are likely to be many) rather than a cheaper home unit.

Changing CD-ROM drive

Question:

I've had to replace the ADAPI IDE CD-ROM drive in my Risc PC with a new one, however any attempt to access it comes up with the error *This compact disc is faulty*. I assume this is due to a driver problem. I don't currently have any additional modules loaded.

I need to get it working with RISC OS 3.7 first, so that I can install the RO4 software before changing over the ROMs.

Does RISC OS 4 have improved CD-ROM support? What are the implications of changing to the RO4 ROMs without having upgraded the software on my hard disc?

Answer:

It has better support for newer fast CD-ROMs and worse support for older slower ones. Unfortunately it's a pig getting these things working.

First so we know what sort of drive you have, do a:

```
*CDFS:CDDevices
```

Then Unplug all CDFSSoftxxxx drivers except CDFSSoftATAPI and reboot.

If this doesn't work and one of the drivers matches the manufacturer of the drive, unplug CDFSSoftATAPI and
*RMReint CDFSSoft<whatever>, reboot and try that. Failing that try putting the !EX_ATAPI in the attached archive in !Boot.Choices.Boot.PreDesk.

If you have no luck with any of that, it would probably be easiest to put the RO4 ROMS in, shift boot (to avoid problems with the old !Boot), and see if the CD Works with that. You can then install the boot sequence.

An alternative would be to network the RPC to your PC and copy over the contents of the CD, the important bits of which should all be in archives.

I wouldn't recommend changing to the RO4 ROMs without having upgraded the software on your hard disc, unless it's the last resort. A moment of stupidity led me to end up having to do it once before.

The problem is that you will then be unable to run the boot sequence properly as the one you have will most likely refuse to run under RISC OS 4. This, in turn, makes it that much more difficult to run the installer. It's possible to get it working but it's not designed to work that way.

Also, if you find you still can't get the CD-ROM drive to work, you'll end up having to swap the old ROMs back again, or use the machine without a properly working !Boot.

Notice of AGM

The Club's Annual General Meeting will be held as usual after the Midlands Show, on 30th November. Come and air your views, hear the reports on how the Club is doing effectively and financially, or see what you could do to help the running of the Club. No constitutional changes are prepared for this year to date, and so far there are no extra candidates for the Club Committee.

Details of the new membership fees, with the Chairman's comments, and the Club's Constitution in full follow on the next pages.

Club Membership Fee

A recent meeting of the Club Committee has decided to raise the annual membership and renewal fee for the Club to a rate of £15 (£19 Europe, £21 Rest of World). This decision is based on the increasing costs of printing the Club magazine, a cost that unfortunately rises with external printing costs.

This marks only the third ever increase in membership fees in the Club's 12-year history. (Starting at £6, followed by a long stint at £10 and £12 for those wishing to reminisce). We would seem to have beaten inflation comfortably over the same period!

This raise will formally be applied on 1st November 2002, allowing anyone due to renew on this issue of the magazine to continue to do so at £12.

The membership fee mainly funds the printing and postage of the magazine, with all the other administration, show, equipment and hosting costs of the Club being met from the sales of the Club's software. This model has been working quite well for us for many years now, mainly due to being able to market some very popular packages like StrongGuard and DiscKnight, while still providing the software at a price to suit all pockets.

Nothing, however, stands still. We're busily developing and changing the Club on a continual basis to adapt to the changing needs of *you* the members. More and more of the Club's facilities are becoming available online or via email —a time saving and convenience for both members and the volunteers backing the services. If you have any ideas how things can be improved — extra services we could investigate, articles you'd like to see in Eureka and so on —do contact me.

Toby Smith
Chairman

CONSTITUTION OF THE THE ARM CLUB

Article 1 Name

The name of the Association shall be The ARM Club.

Article 2 Objects

The objects of The ARM Club shall be:

1. To advance the use and knowledge of all RISC based Acorn Computers among its members and to provide or assist in the provision of facilities for those purposes.

2. To provide every means to foster good relationships between members of The ARM Club and others using these computers which will be for the ultimate benefit of the User base.

3. To organise activities and events for the purpose of supporting The ARM Club's aims and raising funds.

Article 3 Establishment of Sub-Committees

1. The main committee of The ARM Club shall establish sub-committees as necessary to further its aforesaid aims.

2. The main committee of The ARM Club may also establish such further sub- committees as it may deem necessary from time to time.

3. The main committee of The ARM Club shall provide standing orders for the conduct of all associated committees.

Article 4 Membership

1. Any person shall be entitled to be a member of The ARM Club upon payment of the appropriate membership fee and acceptance of the constitution of The ARM Club.

2. All members of the main committee shall be members of The ARM Club.

3. Honorary life membership may be extended to those who have rendered outstanding service to The ARM Club.

4. In exceptional circumstances, the committee may vote to disbar a person from membership. Such votes must be supported by at least two thirds of the committee. Examples of exceptional circumstances may include wilfully bringing the Club into disrepute or consistent failure to observe the constitution or by-laws.

Article 5 Meetings

1. Annual General Meetings of The ARM Club shall be held at least once in every calendar year.

2. Extraordinary General Meetings shall be held for such purposes and convened in such manner as shall be required by this Constitution at any time by:-

(a) The Chairman of the Committee

(b) Three Officers of the Committee

(c) Or at the written request of a minimum of 10 members of The ARM Club addressed to the Honorary Secretary.

3. Two weeks notice in writing must be given to all members to convene a General Meeting together with an agenda which shall clearly state the reasons for such a meeting.

4. Minutes of any of the above Meetings shall be kept by the Honorary Secretary and be available upon request to all members of The ARM Club.

Article 6 Officers and Committee of The ARM Club

1. The governing body of The ARM Club shall be the elected Committee.

2. The Officers of The ARM Club shall be: a Chairman, one or more Vice Chairmen, an Honorary Treasurer, an Honorary Secretary, an Honorary Membership Secretary, and an Honorary Editor.

3. The Committee of The ARM Club shall consist of:

(a) The Officers as specified in paragraph 2 above.

(b) A minimum of four further members of The ARM Club.

Article 7 Amendments

1. The ARM Club shall have the power to make amendments to this Constitution but such amendments shall be made only by the votes of not less than two - thirds of those who, being entitled to do so, vote in person at a General Meeting of The ARM Club, a quorum being present.

2. Notice of the terms of any proposed alteration shall be given in writing to the Honorary Secretary at least 21 days before such General Meeting and the Honorary Secretary will make the amended constitution available to any member on request in advance of the meeting.

Article 8 By-Laws

1. The By-Laws have been provided for the carrying out of this Constitution.

2. The ARM Club shall have the power to make alterations in the By-Laws to suit its requirements.

BY-LAWS OF THE ARM CLUB

1. Officers and Committee

(a) The Officers and Committee of The ARM Club shall be as specified in Article 6 of the constitution.

(b)The following are ex officio and entitled to attend Committee Meetings but not entitled to vote:

i) any other person at the invitation of the Committee.

2. Election of Officers and Committee Members

(a) Any member of The ARM Club shall be eligible for election as a Committee member of The ARM Club.

(b) i) The Committee members shall be elected at the A.G.M.

ii) All nominations shall be submitted in writing to the Honorary Secretary not less than 14 days before the A.G.M. Later nominations may be accepted by a majority decision of those present.

iii) The Committee shall serve for the period to the following A.G.M.

iv) Nominations for the Committee shall be submitted by members of The ARM Club. Each nominee should be proposed and seconded by two members of The ARM Club and should also indicate a willingness to fulfil the requirements that holding that position involves.

(c) The Committee shall have the power to fill any vacancies arising during the year until the next A.G.M.

(d) The name of any candidate for Honorary Life Membership (see Constitution Article 4, paragraph 3) shall first be put before the A.G.M. for adoption or otherwise.

(e) All contested elections shall be by secret ballot. Two scrutineers shall be selected, by the Chairman, at the meeting. Ballot papers shall bear only a mark of identification identifying it as from The ARM Club for purposes of a ballot. Postal votes are admissible.

3. Quorum and Amendments

(a) At any General Meeting of The ARM Club eight (8) of its members shall constitute a quorum.

(b) i) These By-Laws may only be amended at a General Meeting by a majority of not less than two thirds of the members present.

ii) Notice of any proposed amendments shall be given in writing to the Honorary Secretary at least 21 days before the meeting. The Honorary Secretary shall make the details of any amendments available to any member on request in advance of the meeting.

4. Meetings of the Committee

(a) The Committee will meet at least four times per year and the Committee can also be convened at such other times as may be decided by the Chairman or at the request of not less than 3 members of the Committee.

(b) The Committee shall elect its Officers at its first meeting.

(c) Two thirds of the Committee constitute a quorum and must include 2 Officers of The ARM Club.

(d) If any elected representative shall be unable to attend he or she may send another member as a non-voting observer in his or her place.

5. Finance

(a) All assets and funds of The ARM Club shall be managed and controlled by the Committee. The membership fee shall be set by the committee from time to time as is deemed necessary.

(b) i) The Honorary Treasurer shall be responsible for the banking of all net funds which shall be banked to the credit of The ARM Club.

ii) The Honorary Treasurer shall be responsible for the payment of expenditure from The ARM Club funds. All cheques shall be signed by one or more authorised signatories to all bank mandates. The signatories shall be the Chairman, The Honorary Treasurer and other Committee Members as deemed appropriate by the Committee.

(c) All payments from The ARM Club funds in excess of such amounts as may from time to time be determined by the Committee shall require the prior approval of the Committee.

6. Accounts

(a) The Honorary Treasurer shall prepare and submit to the Committee an annual statement of the Accounts of The ARM Club, together with an Auditors report. All accounts and the auditors report shall be prepared for The ARM Club Financial Year ended on 31st March.

(b) These accounts shall be audited by a person or persons appointed by The ARM Club at their preceding A.G.M. and need not necessarily be a member of The ARM Club, but shall be unassociated with the Treasurer.

(c) A copy of the audited Accounts and the Auditors report shall be available for inspection at or before the A.G.M. at which the Accounts and Auditor's report are to be approved.

7. Dissolution

If The ARM Club should be dissolved then all net funds or assets standing to the credit of The ARM Club following dissolution shall be distributed to charities chosen by the final Committee. Before dissolution all bills and invoices shall be settled and assets sold at fair market value.

Something's Up!

Cartoon by Jan Pearce

ARM Arena

Welcome to this month's column which is aimed to let those of you attending the South-East show know first of any games-related developments that have emerged since the last magazine.

Jan Klose has just announced that a new patch will soon be available to deal with stability problems experienced with TEK and also a demo. for those people who are still undecided about buying this game.

As RISC OS users wait for the new games which will come when Omega appears, Andrew Weston looks at recent developments and revivals of some old favourites.

The South-East show takes place at a time formerly associated with Acorn World when some of the long-term users amongst us may have splashed out on the 32-bit games available at the show from publishers such as the 4th Dimension or TBA Software and going back even further from Clares and Minerva perhaps.

Of course today there is less activity in the games area although with the attendance of both CJE Micros (owners of the 4th Dimension) and RComp a significantly wide range of RISC OS games should be available including TEK 1608, the real-time strategy game reviewed last time and RComp's previous major PC conversions.

Until the patch arrives though the recommendations of last time would seem to stand.

First, the problems may relate more to RISC OS 4 machines; also to download the patch from Artex's website and to save regularly. TEK is highly enjoyable and rewarding though and a review is now available on line at Gareth Moore's long-running Acorn Gaming pages.

Another negative piece of news is that I have no further information on a release date for *FlaYmz's* (formed from VOTI — Sunburst, Super Foul Egg) latest project which is tied to the availability date of MicroDigital's

New games from FlaYmz are waiting for Omega

Omega. However, MicroDigital hope to be able to demonstrate the Omega at the show.

Aside from the show there have been several developments in the emulation and retro-gaming department of RISC OS computing.

Theo Boogaert has been working hard on making a large glut of games compatible with the latest versions of the operating system (RO4 and Select). These titles are from a range of publishers, many long-gone, and extend as far back as the aforementioned Minerva Software. So Theo's efforts should revive some enjoyable moments for a lot of people. Games supported include Arcturus, Rick Dangerous, Talisman, Empire Soccer, Cycloids and many more. Theo's website is given at the end.

On the subject of patches, Alex Macfarlane Smith, who in the past has produced numerous StrongARM patches for games of old, has updated his patches website (see at end). Included on Alex's site is a patch for the well-loved point-and-click adventure *Simon the Sorceror* and he says it will now work on RISC OS 4/Select and StrongARM machines together with the great, fitting music that was a hallmark of this game.

I have mentioned Superior Software several times in this column in relation to emulation issues and now the former BBC (and for a short-time RISC OS) games producer has relaunched, but for the PC. Thus this development may be of more interest to those people who have a PC as a secondary machine.

Richard Hanson, the founder of Superior Software Ltd, is behind the new venture, Superior Interactive, which has a website and has been working on converting Repton for the PC. (Acorn Arcade readers may recall that a version is being worked upon for mobile phones as well). There will be a version for the hand-held console, Gameboy Advance as well, says Richard. Other former BBC titles in progress are *Codename Droid* (the sequel to Stryker's Run; Stryker's Run III an ill-fated RISC OS game) and *Ravenskull* (the Repton-style game but with a much larger area and more realistic story).

This is quite exciting, and novel games are planned as well but, as I say, mainly relevant to long-term Acorn games fans who have a PC. Given the popularity of these games when they were originally released though and their unique atmospheres and enjoyability I would strongly recommend them to anybody.

Finally this month, Andreas Dehmel (Dr) has converted the latest version of *VICE* for RISC OS, the versatile Commodore emulator which emulates the range of early Commodore machines — most notably the Commodore 64. VICE requires a StrongARM Risc PC and more than 16MB of RAM.

Until next time, I hope the SE show is fruitful and maybe there will be some news on games developments to be found there, not least on Flaymz's project. I'm sure there will be plenty to report next time.

Artex: www.artexsoft.com

FlaYmz: www.flaymz.co.uk

Theo Boogaert: http://www.vd-boogaert.myweb.nl

Superior Software: www.superiorinteractive.com

Commodore Emulator: http://home.t-online.de/~zarquon/Software.html

Alex Macfarlane Smith: http://aardvark.mine.nu/patches/riscos/

32-bit Acorn Gaming: www.acorn-gaming.org.uk

VICE: http://home.t-online.de/~zarquon/Software.html

The Word Puzzle Solution

The puzzle is on page 37.

				T	O	T	E	M		
				A	■	H	■	I		
				B	R	A	I	N		
				O	■	N	■	I		
				O	A	K	U	M		
				■	■	Y	■	■		
S	E	P	I	A	■	O	■	S	I	T	E	D
E	■	L	■	I	N	U	R	E	■	R	■	A
T	R	A	P	S	■	■	■	V	I	A	N	D
T	■	Z	■	L	E	A	V	E	■	M	■	D
S	N	A	R	E	■	B	■	R	O	P	E	Y
				■	■	O	■	■		
				T	H	R	U	M		
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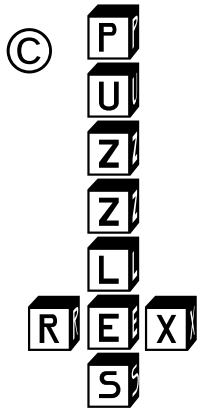
				I	■	O	■	D		
				C	A	N	N	Y		



Writing For Eureka

Are you are interested in taking advantage of the Club's new policy of rewarding members who write for Eureka with a free extension of membership plus a discount from the price of Club software? This article answers some of the questions we are sometimes asked. If you haven't written for Eureka before, we suggest you read at least this first page, which explains what it's all about, and the first three points of the Eureka styles.

Eureka is written and produced for Club members by Club members. Any member who has something they can contribute is very welcome to send it in.

You do not have to be a skilled journalist, an expert writer or even an accurate speller to write for Eureka, as long as you can make yourself understood. It is part of the Editor's job to make any necessary adjustments or corrections and to give you any help or advice you may need. If you have got something interesting to say about computing the RISC OS way, could review some item of hardware or software or if you have some particular knowledge or expertise that you could share with other members of the Club you can be a contributor and the Editor of Eureka would like to hear from you.

The rest of this article deals with the 'small print' of the contributors' guidlines and some of the finer points of style.

All magazines have guidelines and styles and a printed copy has always been available to any contributor who wants one. It is always sent with the assurance that, although it helps if you can follow some of the rules, you are not expected to be able to remember them all!

But do remember that any help or advice you may need from the Editor if you're writing for Eureka is always free and friendly.

Guidelines for contributors

(The small print!)

These guidelines apply to all articles and reviews written for Eureka. By submitting an article to Eureka or accepting a product for review you agree to abide by the terms contained in these guidelines. If you have any problems or queries, please contact the Editor.

1. All review products must be requested through the Editor. Contributors must not approach authors or distributors direct unless this has been agreed by the Editor. The Editor must be notified immediately of any unsolicited products which may be sent or given to you for review, whether or not you wish to review them yourself.

2. Articles can be emailed or submitted on disc, preferably with accompanying hard copy. Ovation Pro, which is used for the magazine, is the preferred format but any other DTP program or word processor is acceptable — but please always include a plain text file as well.

3. With software reviews a selection of screenshots or other illustrations *must* be supplied in a separate file. Draw or other vector-based formats are preferable to bitmap (Sprites), where possible. Turn off any background textures before making screenshots and leave a small border around the edges of any windows included.

4. Include captions for screenshots and other illustrations in a separate text file. Do not assume in your article that illustrations will be located in particular parts of the page.

5. Please try to follow the Eureka styles, listed below.

6. It is ***essential*** to add the following information at the end of the article: Product name, price and whether VAT is included/extra/not payable, the costs of site licences, the supplier's name, address, phone and fax numbers and email address. Contact the supplier for this information, if necessary.

7. If you have any problems using the software or hardware, or in understanding the manual, contact the

author or supplier. They will be glad to explain or, if there is a bug, they will send you the necessary upgrade.

8. Before submitting the article, re-read it carefully, check all the facts and use a spelling checker. If possible, get someone else to read it as well as it is very easy to miss errors in your own work.

9. Get the article to the Editor as soon as possible. Do not leave it until the deadline and advise the Editor in good time if you have any problems which may cause a delay.

10. Any connection which you have with the author of software being reviewed, or the company publishing it, should be declared in advance.

11. Copyright of published articles will be owned jointly by the author and The ARM Club. They must not be offered for publication elsewhere. The Editor has authority to act on the Club's behalf in respect of copyright.

12. Once a review has been submitted and accepted, the reviewer is usually allowed to keep the product for his/her own use. It may not be sold, nor may copies be distributed to any third parties.

13. The Editor reserves the right to modify articles as he sees fit, and articles are accepted or commissioned on the understanding that publication is entirely at the Editor's discretion. If a review is not received before the deadline, without explanation, the Editor may ask for the product to be returned at the reviewer's expense.

Eureka styles

Please note the first three points in particular as correcting these causes several hours of work on each issue of the magazine.

***** Type only one space after punctuation marks, including full stops.

***** Do not use carriage returns at the end of lines, except for a single one when starting a new paragraph.

***** Do not use the keyboard hyphen (-) for a dash (—). The dash can be produced by holding down ALT and typing 152 on the numeric keypad. Otherwise, type two hyphens as these are easier to convert when editing.

• Use smart quotes (“ ” and ‘ ’ rather than " " and ' ') if possible.

• Normally write numbers up to nine in words and 10 upwards in figures. This does not apply to dates or to numbers preceded or followed by an abbreviation, which customarily always use figures. (Examples: three pence, 10 pence but 3p £3 and 3K).

• Abbreviate megabyte as MB without a space after the figure. (Example: 5MB).

• Note the correct use of capital letters and spaces in: RISC OS and Risc PC.

Tip: You can type bullets (•) as used above, if required, by using ALT 143.

That's it. Give it a try!

If you have any queries, problems or comments concerning Eureka you are welcome to contact the Editor, preferably by email to: eureka@armclub.org.uk.

Or you can write to the address given in Club Contacts at the end of the magazine.

Free Membership

Remember that all contributors to Eureka get a free three months' extension to their membership for every contribution.

Also, there's a £5 discount from any item of the Club's software.

Regular contributions win you free membership for life!

For Sale

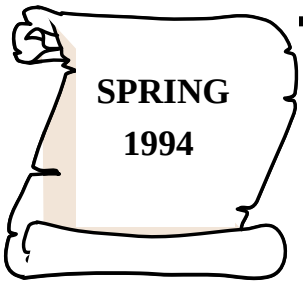
A420 computer base unit,
OS3,
850MB H/Drive,
Genlock card fitted,

Star LC24-200 Colour Printer,

£60.

Purchaser to collect (Warwickshire).

Tel: 01788 544077



Remember When... The Risc PC Was New?

From Eureka 11 (Spring 1994) by Simon Burrows:

It has long been rumoured that Acorn has had a new generation of desktop computer under development, and over the months a huge amount of speculation has taken place over the specifications, price and release date of these new machines.

As we wait fo read the first reports of the released version of Omega can you remember when we had the first exciting account of Acorn's new Risc PC computer?

The Risc PC, as it is now called, has been under development for roughly two-and-a half years in conditions of great secrecy at Acorn. From the time the A5000 was launched it became clear that Acorn would need a new architecture of computer in order to maintain its position and survive.

The Risc PC runs RISC OS version 3.50, and at face value it might appear that not all that much has changed, but once you start using the machine or take its lid off, you realise that the changes are significant. From a hardware point of view, almost no component has survived the change from Archimedes to Risc PC unchanged, and yet the degree of compatibility with Archimedes hardware and software is very great.

Striking casing

The most obvious change on seeing a Risc PC for the first time is the casing; Acorn has done away with the old Archimedes casing, and indeed the PC style casing of the A5000, and opted for an original design from the company Cambridge Product Design, who styled the original BBC micro.

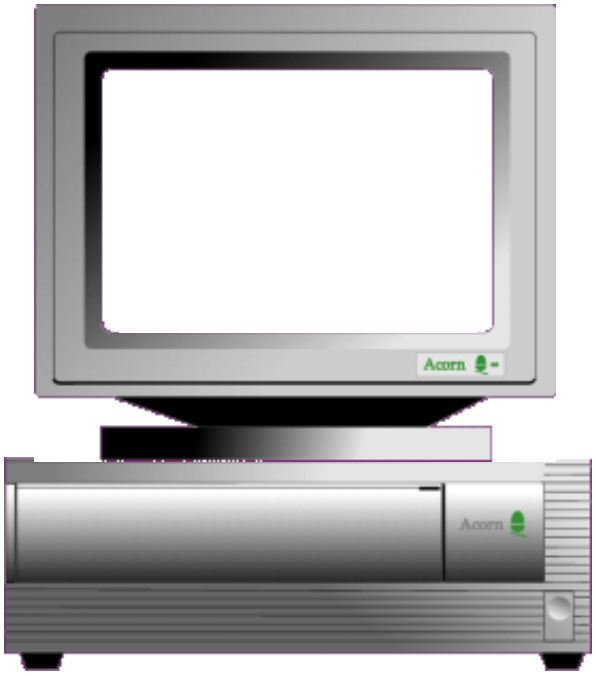
The new modular casing is extremely expandable —if you need a larger

case, it is simply a matter of taking the lid off, fitting an additional expansion slice and re-fitting the lid. The basic machine comes with a single slice, but up to five extra can be fitted. Obviously this makes the computer rather big, but the case can be used in traditional desktop mode, or a new tower mode, and special clip-on feet are provided to enable this. Each slice of casing enables the machine to be fitted with one or two additional expansion cards (podules), along with a 3.5" device such as a hard disc and a 5.25" device such as a CD-ROM drive.

Along the front of each slice is a spring loaded flap which conceals the drive bays mentioned above. All models of the Risc PC supplied by Acorn come with a standard 1.6Mb floppy disc drive. At first glance these flaps look like an area of weakness, but Acorn assures me that people have even been known to lift a Risc PC solely by its flap (such action is not recommended)! The case itself is moulded from Bayer Bayblend, a mix of tough ABS and polycarbonate normally used to make visors and riot shields! To cut down on electrical emissions, the inside of the case is metal-sprayed, and the walls themselves are 4mm thick with 2mm ribs. In desktop mode, the case can support a monitor weighing up to 16 kg.

The basic one-slice case consists of three parts: the slice, the lid and the base which contains the computer's motherboard. The lid is held in place by two glass-filled nylon twist-lock pins, and the whole computer is very quick and easy to open and access.

A major surprise is that there are only two screws in the whole computer, one to hold the power supply unit in place, and one for provide earth bonding. Everything else is held in place by specially designed clips. For reasons of security, padlock holes are



provided so that unauthorised persons can be prevented from opening up the computer, important when the computers are exposed to public use, for example in schools.

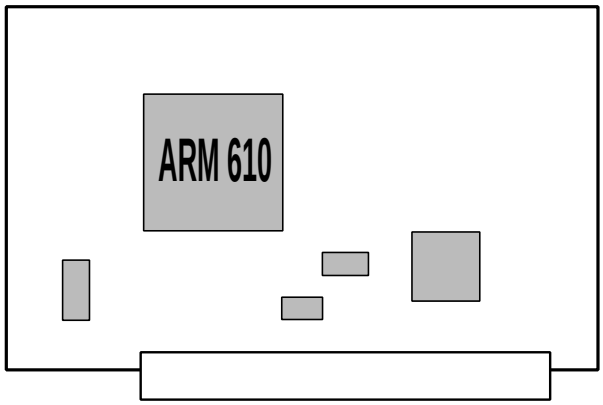
The dimensions of the Risc PC casing are as follows: 117mm high by 355mm wide by 383.4mm deep. Each additional casing slice adds 65mm to the height of the case. Upgrades such as expansion cards and processor cards are very easy to fit thanks to guide lines moulded into the case.

Processor

The old Archimedes A540 computer had its ARM3 processor on a removable card, unlike the A5000 for which the ARM3 was surface mounted onto the motherboard, making it very difficult to replace.

The Risc PC uses a similar style of removable processor card to the A540, however there is one major difference, every Risc PC comes with TWO processor card slots side-by-side! These are 96 way DIN sockets.

Initially all Risc PC machines will be supplied with an ARM610 processor, as used in the Apple Newton MessagePad computer. This processor is clocked at 30MHz; the clock crystal is mounted on the processor card.



A processor card containing ARM610 & clock

At the end of this year an ARM700 processor card will be produced, and upgrades will be available for existing owners. Next year, another upgrade to ARM800 will also be produced, offering a substantial increase in performance without needing to buy a replacement computer. Computers fitted with these processors are expected to be known as the Risc PC 700 and 800 respectively.

Video Sub-System

All of the Archimedes range use a video controller called VIDC1a (apart from the A500 development machine which used the VIDC1). The Risc PC

uses the updated version of this called VIDC20, which offers substantially improved graphics performance over the existing capabilities. The VIDC20 offers a choice of up to 16 million colours (rather than the 256 colours of VIDC1a), each pixel being represented at a depth of 32 bits (24 for colour plus 8 control bits). The table below gives some examples of the graphics capabilities of the Risc PC.

An important feature of the new architecture is the ability to fit Video RAM (VRAM) to the computer. This is special RAM for storing screen images; it is rather more expensive than ordinary RAM, but improves the graphics performance of a Risc PC significantly. VRAM is not essential —indeed the base version of the Risc PC 600 does not come fitted with any. Either 1 or 2Mb of VRAM can be fitted, upgrades are available from Acorn, and simply plug into the socket provided. The upgrade from 1Mb to 2Mb VRAM requires a replacement VRAM card containing 2Mb, however it is expected that dealers will be able to offer a trade-in service.

Video modes are configurable by the user, allowing tradeoffs to be made between resolution and the number of colours. With 2Mb VRAM fitted, the memory bandwidth into VIDC20 is at least 152Mb per second! The benefit of this "dual port" VRAM (as it is

	Resolution	Colours	Refresh Rate (Hz)	Pixel Rate (MHz)
DRAM only	1280 x 1024	4 greys	60	110
	1024 x 768	16	75	75
	800 x 600	256	56	36
1MB VRAM	1280 x 1024	16	60	110
	1024 x 768	256	70	75
	800 x 600	32000	56	36
2MB VRAM	1280 x 1024	256	60	110
	1024 x 768	32000	70	75
	800 x 600	16m	56	36

Samples of the video performance offered by VIDC20 in the Risc PC

properly known) is that screen modes with high resolution or lots of colours no longer slow down the ARM processor, having a dramatic effect on the overall performance of the machine.

For use in multimedia applications using Acorn Replay (displaying animated films in the desktop), a special 70MHz Replay mode is available offering 32,000 colours at 480x352 pixels, rising to 16 million colours with 1Mb of VRAM fitted. The graphics facilities of the Risc PC are very good indeed.

Memory Upgrades

When the Archimedes was first launched, its 4Mb maximum RAM capability seemed massive compared with the BBC Model B and Master 128.

However over seven years memory requirements have changed, and 4Mb is no longer enough for many people. The A540 had the capability to take up to 16Mb RAM, but the rest of Acorn's machines struggle to take more than 4Mb. Even 4−8Mb RAM upgrades for the latest A5000 machine cost around £400.

The Risc PC uses industry standard dynamic RAM (DRAM) upgrades in the form of SIMM packages (SIMM stands for Single Inline Memory Module). The type of SIMM required is 32 bit wide, and has 72 bits. The Risc PC motherboard has two sockets for SIMMs, theoretically allowing up to 256Mb of system RAM. At present the limit is 128Mb due to larger capacity SIMMs not being commercially available, but this is likely to change before long. Each SIMM socket can contain a different capacity SIMM, or indeed no SIMM at all.

These SIMMs are widely available for PC computers, and are substantially cheaper than the RAM upgrades for existing Archimedes computers. The initial Risc PC range is fitted with 2, 4 or 8Mb of RAM, but upgrades will not be available from Acorn. This is because the chips are widely available at knock-down prices, and Acorn could not compete on price.

As an added bonus, any video RAM (VRAM) not needed for display purposes is available to the system for general use. For example, if your

machine has 2Mb VRAM and only 1Mb is needed for the current display mode, the other 1Mb is automatically made available for general system or application use.

What about the Archimedes?

Acorn has committed itself to continue selling the Archimedes range —after all, the most basic Risc PC costs £1249 + VAT, and so there is still a large market for the cheaper machines. Acorn is continuing to supply the A5000, although it is expected that the number sold will decline drastically, since the Risc PC 600 is a far superior computer for roughly the same price.

Acorn's installed base of Archimedes machines numbers in excess of 300,000, so we can be sure that it will continue to be supported for a long time to come, and since software can be written to run on both the Risc PC and the Archimedes, there's no reason whatsoever to throw your Archimedes in the bin!

A statement has been made by Acorn that portable and further (cheaper) desktop computers will be introduced using the new technology during 1995.

Conclusions

Naturally it is far too soon to draw any real conclusions about the new Risc PC, apart from the fact that Acorn has put a huge amount of resources and investment into this technology, and appears to have come up with a very exciting product,

At first glance the prices of the various Risc PC models and upgrades may seem a lot of money, but Acorn has produced several pages of comparisons with rival computers, including the PowerPC and Pentium equipped computers, and the Risc PC appears to be well-priced in comparison with these, recognising that Acorn is not a charity and needs to make profit in order to survive and grow. The Risc PC has many features to commend itself to both existing and potential Acorn users, and shows that Acorn is on the leading edge of technology, what's more designed and assembled in the UK. It will bring a new lease of life to the whole Acorn community, and we wish Acorn well.

That is how the RISC OS scene looked eight years ago. We now look forward to seeing if Omega can recapture the same enthusiasm.

After Acorn: The Worry Of Windows

Caveat Lector: The opinions expressed below are entirely my own. Chris Price.

Does a future really exist for RISC OS?

Well we *all* know the answer to that one! Of course there's a future for RISC OS! It's in my home, it's in your home and the homes — and businesses —of lots of other people besides!

Chris Price gives his personal views, as a teacher, on how the take-over by 'Wintel' computers is now increasing costs in British schools.

So what am I babbling on about? (Readers of longstanding to this magazine will know that I babble long and often —just ask one of the other Committee members. New readers are just going to have to indulge me!)

However, nobody could realistically admit that we RISC OS users are in the majority. We all know where that title belongs —to *Win* and *Tel*, the ubiquitous Microsoft Windows™ operating system and the Intel processing chip and, much as we may rail against them, we must accept that they are here to stay.

(The next bit is going to get a bit political, OK? So, if you don't like politics, then get yourself a nice mug of coffee or tea, half a dozen digestive biscuits, skip this bit, and go and read one of Dave Ruck's or Mark Smith's excellent technical articles instead).

One of my other favourite reads is the satirical magazine *Private Eye* and, in the last issue (a couple of weeks back) there was an interesting spot in their *Educashun Newz* (No, that isn't a spelling mistake —I did say it was a satirical magazine!) which pointed out that the ubiquitous Microsoft —I would use one of their many soubriquets but they are known for having a very nasty legal department

who sue at the drop of a hat so I shan't! —could be finding the going a bit tough financially. As a result of which they are now introducing annually renewable licences and, having found the health service falling for the trick, they are now trying to pull the same stunt on schools.

Before you say "Bull****!" and put this article down, consider the fact that Private Eye have a long and enviable reputation of picking up these stories long before they hit the general media and, though they do get sued regularly, the reason they generally don't get sued as often as people think they should is that they research their stories and tip-offs extremely prudently. So, if they say something is happening/is going to happen, they've usually got it right. After all, being sued successfully is *very* painful in the wallet region and too many of those can cause a business to fold!

End of digression... Now, where was I?

Oh, yes! Annually renewable site licences. As far as schools are concerned (and I can speak for primary schools only) there has been a long and, dare I say it, honourable, tradition with site licences. Once you've bought it, it's yours —for keeps! For life! For ever! Whichever happens to last the longer! Or until you or the software falls off your/its perch.

Until now...

Actually that isn't totally true. There are a few companies that insist on annual licences. The last one I had the misfortune to encounter was peddling some software for dislexyic diagnostics about half a dozen years ago.

When they informed me that the licence was annually renewable (and they reserved the right to 'vary' (that is increase) the price of the licence without consultation on an annual basis) I got quite cross. I don't remember my exact reply but I think the words 'sex' and 'travel'—or their synonyms —may have featured somewhere in it! Probably fairly prominently!

But back to Microsoft...

Dictate terms

The problem here is that, as my good friend Angie would put it, "Microsoft have got the market by the bullitas" and so they can, pretty well, dictate terms and get away with it. Our good friends George (Bush) and Tony (Blair) have let them buy (their way into) the departments of education so what they say goes.

And, in case anyone is in any doubt about this situation, it means that they run what is generally referred to as a monopoly —and, no, I ain't referring to the nice board game we played as children!

In any other walk of life (gas, electricity, water, railways) this would mean that the government would be down on them like a ton of bricks with a regulator —OFWAT, OFGAS, OFGEN etc, etc —but that is where another of this government's (and astute readers will now have picked up on the fact that I am no fan of Mr Blair) neat little tricks comes in. It's known as PFI —the Private Finance Initiative.

Unless you're in education you won't have picked up an item in the education news a few months back to the effect that that *nice* Mr Gates was going to build the government some *nice* drop-in centres, furnished with the latest state-of-the-art computers and related kit, where people could learn how to use computers and, thereby, get a better chance at the job market.

Lovely places

Now, I'm not very bright but even I can pick up from this that the aforementione Mr Gates is *not* very likely to furnish these lovely places with RISC OS, UNIX LINUX etc He's going to use Windows™ isn't he? Well, he'd be daft not to. After all, it's his company.

And we're back to my friend, Angie's remark about having the market "by the bullitas".

The idea of PFI, as I understand it, is that the government allows Company Y to build a facility and then pays it back over (usually) 25 years while Company Y runs the thing. At the end of that period, the facility belongs to the governnent. The advantages to the government are twofold. Company Y takes on the financial risk and the debt

doesn't go onto the government's books.

I'm putting a date stamp in here — it's 11th October — because a *most interesting* letter has just dropped through my letter box from the Office of Fair Trading. In doing some research on this article I thought it would be interesting, given Microsoft's dominance and the recent Senate v Microsoft case in the USA, to find out if there were a regulator for the operating systems market.

Benefit from 9/11

(Interesting fact: Microsoft was one of the few companies actually to benefit from 9/11. In the light of the Twin Towers disaster George W Bush instructed the Senate to drop the case against them).

The relevant section of the letter is quoted below:

'There is currently no regulator specifically for the computer operating systems market in the UK. As such, application of the Act to IT hardware and software generally falls to the OFT. Regardless of whether an industry is regulated, the Act will generally apply to undertakings' activities that infringe the Act.

Further, should anti-competitive activities or undertakings affect trade between Member States of the European Union, such activity will generally fall under Articles 81 and 82 of the Treaty of Rome, Articles 81 and 82 are generally enforced by the European Commission.

Since your letter refers to Microsoft, you may be interested to learn that the European Commission is currently investigating Microsoft for anti-competitive activity, details of which can be found at:

http://europa.eu.int/comm/competition.

Where the European Commission investigates an undertaking's activities, a national competition authority (such as the OFT) would not instigate its own investigation into the undertaking's activities which might raise the same issues.'

And the final paragraph is a real cracker:

'While there may not currently be a specific regulator for the computer operating systems market (or software in general), any anti-competitive agreement or conduct within the UK market can be considered by the OFT under the Act.'

From this, I think it is safe to deduce that this government either
1) doesn't think it's its job to investigate this matter,
2) doesn't much care or
3) realises that, on current form, and given all of the above, it's so thoroughly compromised that it had better just shut up and hope the issue goes away.

Come back Sir Humphrey

And, frankly, given the (lack of) intelligence displayed by the current incumbent of the top job at the Department for Envy and Stupidity, any or all of the above could apply! Come back Sir Humphrey —all is forgiven!

Oh! And I've just looked up that website. I did a search in the competition section for the word *Microsoft* and found there was an eyewatering 5,836 documents! Yes, you did read that right: five thousand, eight hundred and thirty six different items!

I am trying here not to turn this into one of those tedious anti-Microsoft rants that appear on some newsgroups. How am I doing so far?

OK. Let's get back to the Private Eye article:

'With the technology economy on the slide, and the PC market saturated, Microsoft has been trying to screw as much money as possible out of existing customers. One lucrative innovation has been the introduction of annually renewable licences for software instead of one-off payments.'

Well, that's OK, innit? After all, it's their software, their company, so where's the beef?

Well, as far as I can see, this action borders on the illegal (it's certainly immoral —but I would say that as I'm a big, old fashioned softie!).

Consider the following:

Company A buys a licence for product X (I've got a site licence for *Impression* on which this is being typed). That's a legal agreement. I pay company X (in this case Computer Concepts) several times the cost of a single user licence and I have the *legal* right to use Impression on as many computers as possible. Within that licence is also, usually, the right to use the software for as long as is needed (My copy of Impression is vintage 1996.)

And, so it was, for many moons. For many companies it still is the norm. Indeed, for most companies it isn't just the norm, it's a legally accepted fact.

Then along comes Microsoft and decides to change the accepted norm with the express purpose of screwing more money out of the market.

In most areas of life this would, quite properly, encounter a legal challenge as Company X has, without consultation, varied its terms of licence from widely accepted, legal, norms. Company X's standard defence is generally known as *Caveat Emptor* (buyer beware) which, in brief, is the old argument "Well, you should have read the small print, chum."

Now I have no problem with that defence (I've used it myself on occasions) except for one fact. In ordinary circumstances one would simply walk away, telling Company X to stick their product and one would find an alternative.

The problem here we face is the very simple one that there really isn't a practical alternative. Given the present government effectively allowing Microsoft free rein within the DfEE, effective opposition has been run out of town. Further on in the same Private Eye article the author states that Acorn and RM are extinct. From a practical point of view he is incorrect but both companies are now so low on the public radar that it might as well be the truth. To Joe Public 'Microsoft' and 'computer' are synonymous.

There's an obvious remedy here which is for this government to reverse the decline of past years and take a sensible interest in the native IT industry but, for the sake of argument,

I'm going to assume that that just won't happen. Call me a cynic but I just can't see it.

Further on in the article the author writes:

'As well as losing the one off licence fee, schools may be doubly penalised because, for reasons known only to Microsoft, schools do not qualify for the discounted campus licences offered for colleges and universities.'

There is an MP taking an interest in this, Bob Blizzard and he's the MP for Waveney. I'd write to him if I were you as he clearly needs all the support he can get.

It goes on to quote some interesting figures:

'A college in his constitutency has raised the matter of campus licences after finding that a college in his constituency, with 550 computers, pays £6,900 a year while a school with only 152 pays £6,300 and another school with 273 computers pays £11,000. By comparison, last year a school with 396 computers made a one-off payment of £31,700 to buy the licence outright.'

So 550 computers equals £6,900 per annum, 152 computers equals £6,300 per annum, 273 computers equals £11,000 per annum. Buying the licence outright for ever costs £31,700.

Spot a connection there? Nope? Well, that makes two of us 'cos I can't either. The pricing seems to be utterly arbitrary.

Finally the Privare Eye article states that, so far, Mr.Blizzard has ***'been unable to extract a promise of a better deal from Microsoft.'***

Don't hold your breath, Bob, but, if you need a hand with this, you've got my address and I think a few of my friends might be interested in the outcome too.

Your views

If you have any views on this or any other computing subject we'd like to hear them. Email or write to the Editor at the addresses on page 80.

Coming Shortly...

In our next issue we *hope* to have full details of the released version of Omega! Also there could be the inside story of another significant development on the RISC OS scene.

• We also expect a comprehensive look at Martin Wuerthner's Artworks modules.

• There will be a second instalment of Winning Games with Logic, with some examples.

• Reports on the South East and Midlands Shows.

• Our popular regular features will include the latest notes from Gill's Journal, chronicling more of the weird and wonderful happenings she witnesses among the spods. Jan will give her view of the scene in a new cartoon. Andrew Weston will report on the latest games in the ARM Arena. Sue Clamp will be site seeing on the Web and Roger King will be setting one of his challenging word puzzles.

Looking further ahead...

We have plans for some 'specials' with articles covering different aspects of popular topics. The first one is likely to be digital photography.

If you could contribute an article to this, or any other subject you think interesting, please contact the Editor. For digital photography it could, for example, deal with choosing a camera, scanner and suitable printer or choosing and using software. We would be very glad to hear your ideas.

Club contacts

Email:

General queries	info@armclub.org.uk
Membership queries	membership@armclub.org.uk
Members' technical help	support@armclub.org.uk
Product sales	sales@armclub.org.uk
Magazine	eureka@armclub.org.uk
Software	products@amclub.org.uk

The ARM Club, Merton Court, 38 Knoll Road
Sidcup, Kent DA14 4QU

Telephone (higher rates):
General queries 07010 709849
Technical help line 07010 708098
Fax: 07020 954018

Web site: http://www.armclub.org.uk/

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• Chairman: Toby Smith
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The ARM Club, Merton Court, 38 Knoll Road, Sidcup, Kent DA14 4QU
Email: info@armclub.org.uk Tel: 07010 709849 (Flextel)