

The magazine for members of

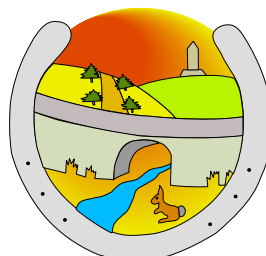
The **ARM** *Club*

**Kinetic power comes
to the Risc PC**

**Oregano browser offers
speedier surfing**

**Looking forward to the
RISC OS 2000 Show**

**The Interactive Tutorial
which shows how to do
more with Draw**



Issue 35 — Autumn 2000

Let's Show Them The Alternative

What would you think about a major piece of software which, according to a report in *The Times*, has had a 50MB upgrade issued to correct 65,000 individual bugs reported by users? It probably doesn't take you too long to work out what the software is likely to be. It could only be Windows! The upgrade is the first service pack just released for Windows 2000.

Its issue followed that of the latest 5.5 version of Internet Explorer. This was not, however, included with the service pack as Microsoft themselves considered that it was "not reliable enough"!

RISC OS does not need any advocacy when the so called 'industry standard' operating system produces facts like those. What it does desperately need is some publicity to draw it to the attention of the big majority of computer users who have never heard of it or who still think that Acorn machines are still just the Model Bs they enjoyed using at school.

Advertising is expensive but if some of the bigger companies in the RISC OS community could get together and organise some demonstrations at computer shows, in public areas or even in enterprising supermarkets there should be no lack of enthusiasts from local user groups willing to show off their computer's qualities.

This is something that RISCOS Ltd might like to consider when they have sorted out their more pressing current problems. There has already been too much uninformed speculation about the company so suffice it to say that an internal reorganisation is going on and an announcement should be made soon — even if it has not appeared by the time you read this.

RISCOS Ltd is now a key figure in the former Acorn community but there are other companies, who have heavily invested both time and money, who also have a strong interest in the survival of our computer system.

Peter Jennings

All opinions expressed in Eureka are those of the authors and not necessarily those of the Club or its Committee members and officers.

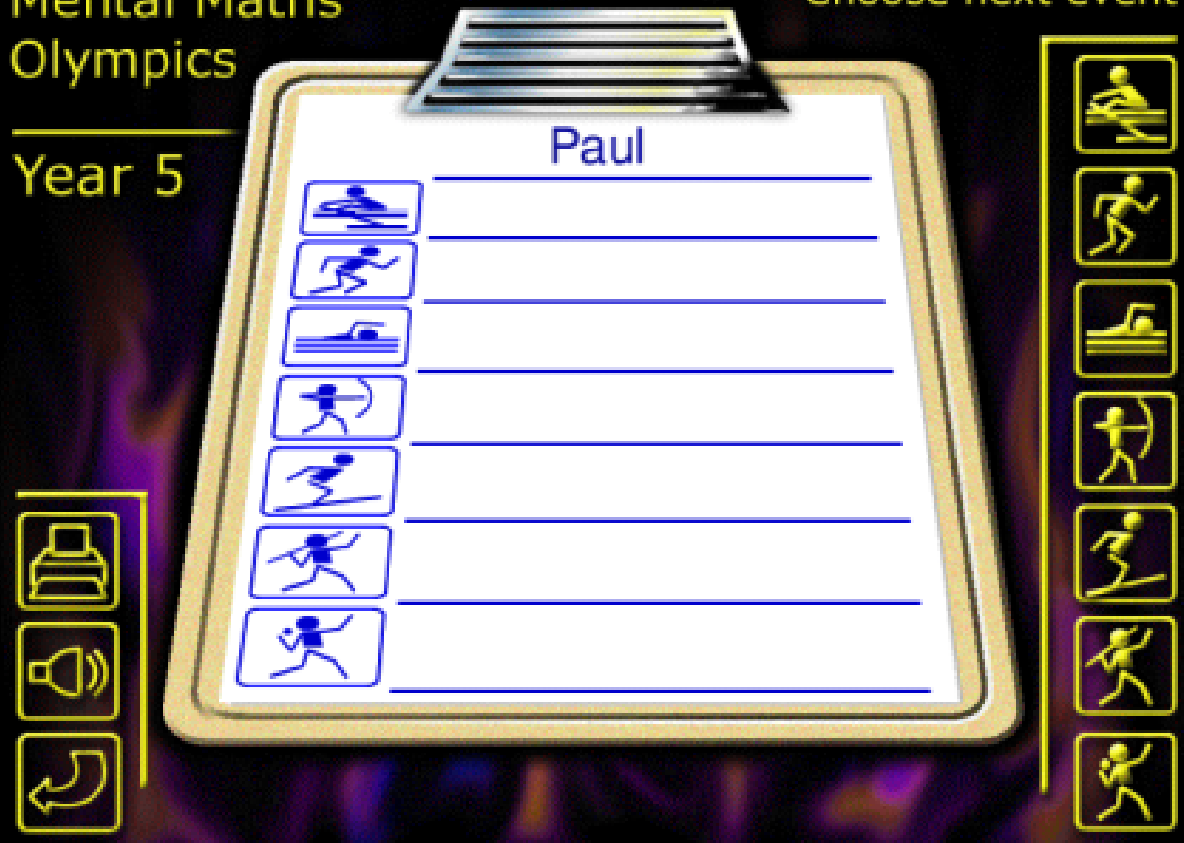
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Year 5

Choose next event



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Kinetic Comes To The Risc PC

Since the StrongARM was introduced three years ago, the Risc PC has remained unchanged, and has not had any performance upgrades. At the time we enjoyed a massive boost of up to 7x over previous ARM processors but it was

version of RISC OS, 4.03, will use the fast memory first and when that is exhausted can still make use of all the motherboard RAM, giving you the potential to have a huge 514MB in total. (Note it is always displayed as 4MB less, as the OS is loaded from

David Ruck looks at the biggest boost for the Risc PC since StrongARM, measures its increase in speed and suggests who can benefit most from it.

always said that the StrongARM could deliver more if it wasn't held back by the slow memory bus on the Risc PC motherboard. The Kinetic is Castle's attempt to remove this barrier and breathe a bit of new life into the venerable Risc PC design to add a new flagship to their range.

It contains the latest 233MHz revision T StrongARM and a 64MB or 128MB SDRAM DIMM memory module, which can be accessed much faster than the memory on the motherboard. This memory isn't used as a secondary cache, such as on other systems, but is in addition to the memory you already have. The new

the slow ROMs into the SDRAM for extra speed).

The Kinetic is being sold both as a complete system called the Kinetic Risc PC, and as an upgrade, the Kinetic processor card for existing Risc PC owners, which can be used in place of an ARM610, ARM710 or existing StrongARM.

If you already have a StrongARM card, a trade-in of £50+VAT is given. As it also requires a new version of RISC OS 4 to work, again a trade-in of £50+VAT is given against the full price of £399+VAT for existing RISC OS 4 owners. However as these two

items are still in demand, it may be worth considering if you could get more through a private sale.

Problems

Before getting to the results it is important to note a few problems that may be experienced with the Kinetic.

Due to the Kinetic's design it is not possible to use the motherboard's DMA controller on the faster memory and as a consequence all DMA on a machine fitted with Kinetic is currently disabled. While this isn't a problem for the complete Kinetic Risc PC system, which uses only the standard internal IDE disc interface, many people who might consider upgrading to Kinetic will have bought faster IDE or SCSI cards which use DMA.

Without DMA these cards will not be able to access the disc as fast, so some operations will actually slow down with the Kinetic. (*See table below.*) The degree will depend on how well

the card is designed. It should be noted that these figures are only for accessing large files, some transfers of small amounts of data are actually faster without DMA.

The first two cards are reduced to around 60% of their peak performance but the PowerTec card, which was not designed to work without DMA, performs extremely badly. Very few cards rely completely on DMA, but cards such as Videodisk won't work at all in a machine fitted with Kinetic. Solutions have been discussed with Castle and the card manufacturers but as yet there has been no progress.

The second problem concerns PC cards. A module (MemFix) must be placed in the boot sequence to allow the !PC software to claim motherboard memory for use with the PC card. The latest version of this is available on Castle's website and should be shipped with new upgrades. However, some people with early

Card / Typical large file reading	With DMA	Without DMA
APDL Blitz IDE	6.8MB/s	4.5MB/s
APDL ACIN DMA IDE	3.8MB/s	2.2MB/s
PowerTec SCSI II version 1.01	4.0MB/s	220KB/s

Risc PC 600 motherboards, myself included, found that the PC card would not work correctly with any combination of hardware and software settings, including fitting the jumper that makes the Kinetic behave as a normal StrongARM. With the help of Castle's John Balance (who designed Kinetic) and Aleph One's Wookey, we traced the fault to the capacitor C32. (Which was added by Acorn so they could use two home-made 128MB SIMMs to demonstrate the Risc PC with the full amount of memory at its launch, before large SIMMs were commercially available). This capacitor degrades the signals in the bus and, as its removal is the common modification made by Reflex Electronics to cure timing problems, this may have already been done for a lot of PC Card users. With C32 gone, the PC card booted without problems.

Another issue related to the PC Card is the RC5 code cracker. The RISC OS port of this can use both the ARM

and PC processors. However when I started up the software after installing the Kinetic, before the MemFix module was available, I had a serious crash which resulted in my hard disc map becoming corrupt. This may well have been a coincidence but it is wise to ensure that the MemFix module is installed and the PC card works with !PC, before using the RC5 PC card client.

Performance

Castle has claimed substantial increases in speed when using the Kinetic; up to four times in some advertising. Before the Wakefield show, where the card was launched, Mark Smith and myself wrote some memory benchmarking programs to test how much faster the SDRAM on the Kinetic actually was. (*See table below.*)

The Kinetic's memory does show itself to be substantially faster at reading and faster but not quite as much as expected at writing — it

Card / Peak memory performance	Reading	Writing
Standard Risc PC StrongARM 233	40.01MB/s	40.39MB/s
Kinetic Risc PC 233	101.0MB/s	63.8MB/s
StrongARM theoretical maximum	223MB/s	223MB/s



The Kinetic card

should be very slightly faster than the read speed — although not as fast as it is possible to squeeze out of the StrongARM, and certainly not the 4x claimed (see the technical section for details). It should be noted that the Kinetic accesses only the 64MB or 128MB of main memory at the improved speed. Any normal memory used, including that of the screen VRAM, will be no faster than before.

The big question is how much faster does this new memory make your system? Most benchmarks, such as Dhrystone, test the processor speed, as they are small and fit in the processor cache are not greatly affected by the memory speed.

Benchmarks specifically on the memory system don't give a realistic view of overall system performance, so the best way is to run a series of real world tests, using popular applications to do common jobs and comparing the results.

The following tests (*shown on the next page*) were carried out on a Standard Risc PC SA 233 revision S running RISC OS 4.02 with 98MB RAM and 2MB VRAM in 1152x896x32K screen mode and the same machine upgraded with a 64MB Kinetic (SA 233MHz revision T). Some tests give a range of results, which are representative of what was achieved with different data.

Application	Test	Improvement
Pinboard	Redrawing speed in 256, 32K and 16M colours	136% to 202%
Filer	Redrawing speed in 256, 32K and 16M colours	179% to 205%
TopModel 2.13	Loading various models	113% to 115%
	Rendering various models	132% to 162%
SparkFS 1.37	Zippping 233 files 2MB on RAM disc	174% to 182%
	Unzipping 233 files 2MB on RAM disc	197% to 211%
	Zip 8MB file on RAM disc (scrap file on HD)*	94%
	Unzip 8MB file on RAM disc (scrap file on HD)*	88%
ArtWorks 1.70	Load application	211%
	Render complex blends	136%
Impression Publisher 4.17	Load large file with 30MB of images*	83%
	Scroll down large file	137%
	Redrawing speed in 256, 32K and 16M colours	123% to 136%
MoveDB 1.37	Find film	132%
	Display film	108%
	Display cast member	208%
DDE Tools Diff	Fast difference of identical directory contents	218%
DDE Tools Find	Find string in directory of files	181%
Zap 1.44	Jump to end of 32MB binary in text mode	113%
	Find string with throwback in very large file	150%
Thump	Generate Thumbnails pages	121% to 128%
	Redrawing speed in 256, 32K and 16M colours	120% to 155%
PhotoDesk 3.03	Various image processing ops on 36MB sprite with different DA sizes	48MB* 68% to 224%
		80MB 103% to 110%
	Saving as optimised JPEG	121% to 125%
	Redrawing speed in 256, 32K and 16M colours	116% to 123%
ChangeFSI 1.17	Load 512K JPEG	118%
FireWorkz 1.30	Scroll up large spread sheet	199%
ImageOut 1.00	Convert small 256 colour spite to drawfile	201%
MakeMPEG	4% MPEG movie from 24 frame ARMovie	120%
SPRtools	Crop 10 sprites from 768x576 to 762x570	120%
	De-interlace 762x570 sprite	135%
Browse 1.07	Render Window manager chapter from PRM CD	141%
Fresco 2.13		151%
Oregano 1.03		181%
	Redrawing speed in 256, 32K and 16M colours	120% to 173%
GraphTask 3.53	Graphical apps running in Graphic TaskWindow (Graphical programs running full screen)	183% to 263% (111% to 119%)
Norcoft C 5.09	Compile and link 26 source files of 242K	182%

Continued on opposite page

Marcel 1.53	Open large mail folder	179%
	Show old newsgroup messages	167%
Sleuth 2.01	OCR A4 page of 12pt text	131%
Printers 1.63 (Print to file using ESC600 driver)	PhotoDesk of sprite at 720dpi	172%
	Impression mixed text & graphics at 360dpi	143%
	ArtWorks complex blends at 1440dpi	119%
	Average	148%

*The APDL IDE card was used for all disc access, resulting in a speed decrease on the Kinetic for large file operations without DMA.

Conclusions

The average speed increase of 148% looks quite low on paper. I was certainly disappointed it wasn't more. However, after using Kinetic for a month, I really do notice the difference. It feels a lot faster; even more so than the upgrade to RISC OS 4. Screen redrawing is wonderfully smooth, and things I do all the time such as opening large mail folders are much quicker, which is a real benefit.

Anyone looking to upgrade from an older Acorn machine and who feel they need better performance than that of the ARM7500 based systems should definitely go for a Kinetic Risc PC.

As for the Kinetic upgrade, if you haven't got a StrongARM card this is an excellent way to vastly improve the performance of your

machine, and get a discounted price on RISC OS 4. For existing StrongARM 200 or 233 users, it makes sense if you haven't already got RISC OS 4, or need extra memory. For people that already have a Strong ARM and RISC OS 4, it is quite an expensive option to provide the extra performance, so you'll have to decide exactly how much the extra speed is worth to you. I make so much use of my Risc PC, that any significant improvement, such as the Kinetic provides, is worthwhile and, after the initial teething problems, I am quite pleased with the card.

Very Technical Section

Contrary to popular belief, the Risc PC's motherboard memory is not accessed at 16MHz but 32MHz. However the fast paged mode memory takes five clock ticks to

deliver the first word and two ticks for the next three, so you could consider this to be 2.5 and one tick of a 16MHz clock. The Strong ARM always reads cached memory in 32 byte/8 word chunks, so it takes 5-2-2-2-5-2-2-2 i.e. 22 x 32MHz cycles, giving a theoretic maximum of 44.38MB/s (There are various reasons why our benchmark doesn't quite achieve this, but too technical to discuss here).

The Kinetic uses a different type of RAM called SDRAM, which can be clocked up to 133MHz, although in the Kinetic it is clocked at 66MHz as that is as fast as the memory bus on a StrongARM110 will go. It has different characteristics, in that it takes more ticks to get the first word but delivers subsequent words on each tick. John Ballance, the designer of the card, has published details on the Castle website that explains the StrongARM will be able to read eight words in 7-1-1-1-1-1-1-1, i.e. 14 cycles 66MHz cycles, giving a maximum of 144MB/s. However we see significantly less than this in our benchmark and theorise that the timing is either 7-1-1-1-5-1-1-1, or 6-1-1-1-6-1-1-1 i.e. 18 cycles giving 111MB/s which compares well with

the 101MB/s we achieved.

Writing speeds with SDRAM should be even quicker, using 5-1-1-1 accesses. However as the StrongARM is still being run in non-enhanced mode to enable it to access the motherboard via IOMD, the StrongARM's write buffer cannot work at its most efficient. (Writing of each of the 8 1-16 byte slots cannot be merged into sequential cycles). Our calculations suggest that 125MB/s should be possible, but tests show that it's only achieving half this at 63.3MB/s. We are trying to discover the cause of this shortfall with John Ballance. The Kinetic contains flash programmable components which can be reprogrammed (by returning the card) should any improvements be possible.

Kinetic Risc PC

Price: (from) £999 +VAT

Upgrade card: £399 +VAT, less £50+VAT each to trade-in StrongARM and/or RISC OS 4.

Supplier: Castle Technology

Tel: 01728 723200

Fax: (free) 0800 783 9638

Email: sales@castle.org.uk

Web: www.castle.org.uk

Oregano

If there is one area that people have seen as being lacking on the RISC OS platform and made them consider using PC alternatives, it is access to the Internet, and specifically web-browsing. An increasing number of sites and facilities such as Internet

browser, and the result is an extremely good, up-to-date, fast and reliable product — just what people have been crying out for.

Oregano comes on CD and has options to install Oregano on its own,

David Ruck goes surfing with the new RISC OS Web browser and finds it a blisteringly fast way to travel to areas of the Internet never visited before.

banking have been denied to us due to lack of progress within the web-browsers we have available.

This is now changing with the release by Castle of Oregano.

Oregan, formerly known for producing RISC OS titles such as Pro-sound and Cineworks, left the main RISC OS market a few years ago and became involved in network appliances. This led to them developing the Oregano browser for use on Acorn designed Network Computers and Set Top Boxes. Castle have bought the rights to produce a RISC OS desktop version of the

if you have an existing Internet set-up such as ANT's InetSuite or Acorn net, or it can install a minimal set of freeware tools which will allow you to dial up an ISP. It's not pre-configured for any particular ISP, so you will still have to choose one and register before you can get online properly.

Surprisingly the CD contains only the demo version of the browser (which can also be downloaded from Castle's website) but the page it displays on loading is a registration form. Filling this out with your details and the serial number from the back of the CD case will automatically download

and upgrade you to the very latest version.

Oregano has support for the main sticking points which have prevented us from fully exploiting the Web, namely 128bit SSL for secure

later) is the speed — it's blisteringly fast with pages rendering and images downloading faster than you thought your modem was capable of. This is a welcome side effect of it being developed for ARM7500 systems rather than StrongARMs.

Machine / Browser	Fresco 2.13	Browse 1.07	Oregano 1.03
Risc PC SA 233	104.3	56.8	28.8
Risc PC Kinetic	69.1	40.3	15.9

Test of rendering very large Window Manager chapter from the PRM CD

connections and a good implementation of JavaScript. It also handles the rest of the HTML 3.2 specifications with support for frames and tables etc.

Faking support is built-in, so it can pretend to be a different browser for badly written sites that lock you out if you are not using the latest version of Netscape or Internet Explorer. It has the standard plug-in interface, so if you use Java, Flash, Sound or MP3radio plug-ins with your existing browser they will also work with Oregano.

The first thing you notice when using Oregano (apart from the user interface, on which I'll say more

Its apparent speed is also helped by the fact that it will start rendering complex tables immediately, instead of waiting for a large amount of data to download first. It does have a small drawback in not using a local cache, so pages and images you have already visited have to be fetched again when they are redisplayed. However if you have *Browse*, you can use its companion application, *WebCache* with Oregano too.

Its handling of JavaScript is very good, which is essential as more and more sites use it, albeit often for producing unnecessary features (such as buttons which change when the mouse move over them) and are badly coded. But without it some sites are

completely inaccessible. This has been a problem for both the existing browsers that had some JavaScript support; Webster XL understood only a limited set and Fresco seemed to crash more often than not.

Oregano has handled all the sites I've tried it with, many of which defeated the others. People have found some sites which don't work or have minor display problems but it's a mere handful. Oregano has proved to be remarkably stable; in three weeks of extensive testing I've had only two crashes and both those were with the very earliest version. With Fresco, I'd consider myself lucky to get away with two crashes a night.

There are only two major niggles with Oregano: its interface and the fonts. The NC version of Oregano has quite a simple interface suitable for a product which may be running on a TV and it is this that Castle have had to do most work on to bring it up to the standard expected of a desktop browser. The main window is a bit different from other browsers. The area in the tool bar is shared between the URL bar and the status line, so you have to click to see what URL

you have entered. The current URL is shown in the window title instead of the document title of the page, and a *throbber* activity indicator also appears over the bottom right corner of the page which is unexpected but by editing a configuration file it can be moved to the status bar.

These really aren't a problem, as you get used to them quite quickly, but the bookmarks window is quite crude and definitely needs redesigning to give a hierarchical view with more than half a dozen items displayed. There are a few features which I feel are important missing from the interface: *find on page* — essential when trying to find information on very large pages such as the HTML PRM chapters — *save as draw file*, handy for storing complete pages with picture for off-line viewing, and *zooming in* to see fine detail or small text.

The other problem is the font system. One of the main strong points of RISC OS is the excellent anti-aliased font system, which is legible and accurate at all sizes regardless of the font. Oregano, being primarily designed for the Far East market,

required the use of Unicode fonts to be able to represent the larger number of symbols in the oriental character set. Acorn's version of the Font Manager shipped with the Network Computer does not allow this, so Oregano has had to come up with their own. (Ironically PACE who bought the Acorn NC and technology have extended the Font Manager to handle Unicode fonts as well but for whatever reason this wasn't used). Oregano's font system is not as good as RISC OS's. On the majority of pages you won't notice much difference but with small text or coloured text against a coloured background (especially with the fixed pitch font) the quality is very much inferior, lacking the hinting and sub-pixel anti-aliasing of the RISC OS font manager.

Although not implemented yet, its font system has one advantage in that it will recognise the HTML font face tag, to use fancy fonts to display pages as they appear on other systems. This is because it uses TrueType fonts, which are the standard on other platforms and many free versions can be downloaded from the Internet. Currently you can

replace the main and typewriter fonts with alternatives, although the process to do this is a little complicated.

One thing you can use the TrueType fonts for now is changing the base and fixed pitch fonts used to display pages so, for example, you could have Arial in place of Old Times (equivalent to Homerton instead of Trinity). Oregano looks can be changed extensively by the use of skins. These allow the appearance of most aspects to be altered, from background tiles to button icons. The fonts, icon size and ordering, are all configured by a text file and the icons, including the throbber animation, contained in standard sprite files. Two skins are provided with the browser, and several more are now available to download.

In the rapidly changing world of the Internet, just as important as what Oregano can do today is what it will be able to do tomorrow. Good and continued support is essential. Acorn's Browse was a good product but is no longer being developed after the demise of Acorn. ANT Fresco was quite good before a very unstable version of JavaScript was added and sullied its reputation. Its future on

RISC OS now remains uncertain. New versions have recently been produced for PACE for their combined TV and Set Top Box systems. It is rumoured that the stability problems have been addressed but we are waiting to see if Argonet can have any influence with ANT to get a RISC OS build released.

The other alternative is Webster XL, which is still under development and has just had a major release fixing many problems. However it is essentially a one man effort which is an uphill battle against constant evolution of the standards. Oregano on the other hand is maintained by a team of programmers: Oregan, with the backing of major Far Eastern manufacturers plus a full time programmer employed by Castle to look after RISC OS specific matters. So it looks like our best bet at keeping up developments on other platforms. I wouldn't hesitate to recommend Oregano to anyone one who spends a significant time on the Internet.

A free trial version is available from: www.castle.org.uk/oregano/ and a mailing list has been set up for users to report their experiences and

suggest improvements. See: www.smartgroups.com/oregano/. There are also a number of skins and links to help pages, created by users, to download from the document vault.

An example of the continued development by Castle came about when I was chatting to the author on an Acorn talk room. I just happened to mention it would be good if Oregano saved the image under the mouse on pressing F3, instead of going through three menus. Everything went quiet for five minutes and then he replied "Done!". Two days later, when version 1.05 was released, the F3 saving feature was included. Now that's what I call support!

David Ruck

Oregano

Price: £49 +VAT

Supplier: Castle Technology Ltd

One Trading Estate,

Woodbridge Road, Framlingham,
Suffolk IP13 9LL

Tel: 01728 723200

Fax: (free) 0800 783 9638

Email: sales@castle.org.uk

Web: www.castle.org.uk

Draw Interactive Tutorial

When I was asked if I would like to review a Draw tutorial I thought: great, this will not take me long. How wrong could I be? The depth to which this product goes has got to have been a labour of love. The detail and devotion that has gone into this makes it by far the best tutorial I have ever used. Most of the time with

your hard drive it will take up just over 10.5MB. Alternatively, just leave the files on the floppies as it runs fine from them. It would actually be cheaper to produce on a CD (and this is under negotiation).

In addition to the main files there are an index (in Impression and textfile

Ralph Sillett enjoys working through the best tutorial he has ever used, without skipping about, and learns things about Draw he never knew it could do.

other tutorials I get bored after the first couple of pages and just skip about.

Do you use Draw as well as you would like to? No? Then read on.

I, for one, purchased Artworks for quite a lot of money so that I could get better at drawing on the computer. It never happened, I still use Draw.

Draw Interactive Tutorial has been developed by a teacher, Tom Beeley, and arrives on eight 1.6MB floppy discs. If you load everything onto

formats), half a dozen worksheets, Drawfile clip art produced by the author, and a four-page introductory pamphlet which includes a student progress check list.

Each tutorial page has been completed in Draw, not in a DTP package. The sheer quantity and quality of the material is a testament to the versatility of the *free* software that comes with every RISC OS computer from the humble A3000 up to the current offerings from Castle/Acorn, RiscStation and Mico.

The files are not archived, so as not to confuse complete beginners and for ease of use.

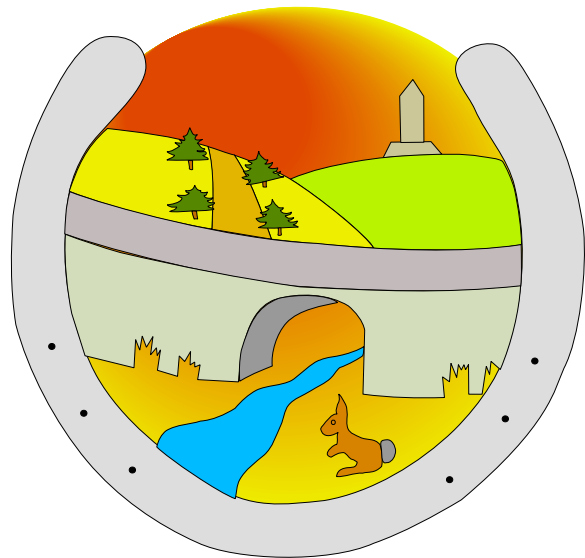
The tutorial has two stages: for the complete beginner and for the more advanced. If you are a beginner then I would suggest that you follow the sequence of pages.

The files are organised into directories relating to the various chapters of the tutorial. As the files are all in Draw it is fully interactive.

The worksheets are provided in Drawfile format as well as a colour printed copy of each. The clip art has been produced by the author and is of very good quality, I particularly liked the horseshoe. The original is in full colour.

I must say that on taking my time to work through each page of the tutorial it has given me some helpful hints and tips as well as things that I didn't think Draw could do, such as printing a four page poster. Read the tutorial to find out how.

As I have said before, the detail and work that has gone into this tutorial is



The horseshoe

outstanding and gets 10 out of 10 from me. I thought I could use Draw quite effectively but how wrong I was! A lot of the features are not explained in the Draw manual effectively.

Because you will be using Draw automatically it is very easy to interact with the tutorial either by having a blank Draw window to the side or by using the drawings on the pages. If you use the pages, either make sure that the floppies are write protected or that you use the discard button only when closing the page (if you have installed to the hard drive).

The style for the pages is consistent throughout the tutorial (See example

Use the following pages to practise using !Draw.

To delete any object or part of a drawing you must first click on the "Select arrow" at the bottom of the real Toolbox.

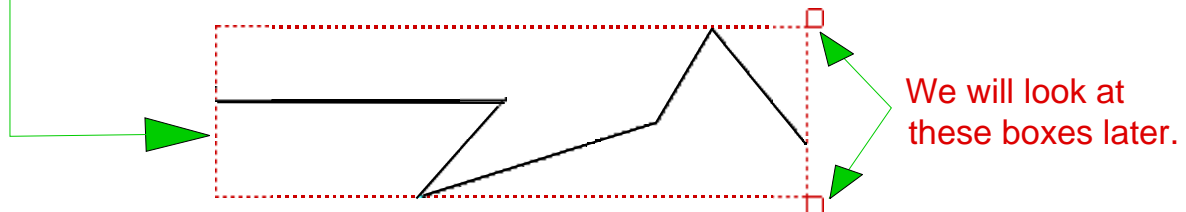
← This is the real Toolbox.

The "Select Arrow" is at the bottom of the Toolbox and looks like this when you click on it.

To Select the object to be deleted, place the mouse pointer anywhere over the object and click select.

This will then happen:

The object will be surrounded by a dotted red line with two small boxes attached, one at the top right corner and the other at the bottom right corner. The object has now been **selected**.



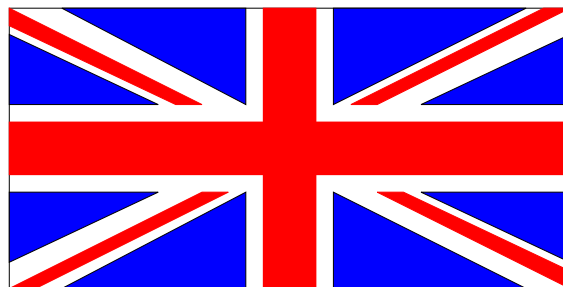
Pressing the delete key on the keyboard will delete all that is selected

To **de-select** an object, place the mouse pointer anywhere away from selected object and click select once. This will remove the red dotted box and its two small attached boxes, so the object is no longer selected.

This is called de-selecting.

If you delete anything on this page by accident, just close the window and double-click on the "IntroPage" drawfile icon to load it again.

Now, practice selecting and de-selecting the flag below. Then delete the flag completely.



When you are ready, discard this page and load Page1.

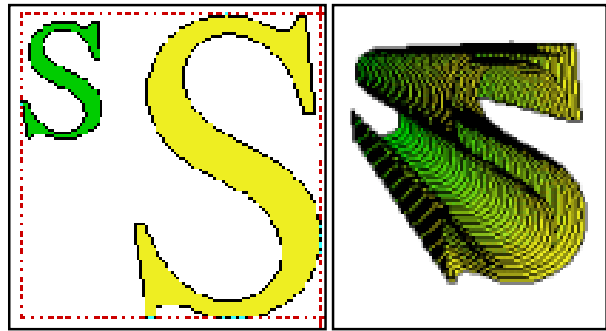


opposite). As you can see the use of Draw in DTP is feasible as well.

How far does it go? All the way, near enough, including use of all the tools, the menus, keyboard shortcuts, selecting objects, printing and saving, text, frame layers, text and object alignment and justification, interpolation (grading), undo/redo, start and end caps, winding rule, poster/tiling, zoom, using Edit for input of commands within a text file for importing to text areas including columns, sprites and producing Drawfiles from sprites.

The whole emphasis of this product is interactivity which it does well. I would thoroughly recommend this to beginners especially, whether adult or child.

The tutorial is very comprehensive and very good value for money. Have you ever wondered how you could draw such things as a flame? If you are as good an artist as me then you will realise how difficult that could be but after reading through this tutorial it will not be a problem. I was impressed with the whole package and, as the saying goes: 'it does what



Interpolation made easy

it says on the tin'. The author has put a lot of time and effort into this product and it shows by keeping the presentation consistent throughout.

This tutorial is a must for anyone wanting to learn about Draw but it will not happen in a day. Take your time and you will reap the benefits.

The package is a snip at its price.

Draw Interactive Tutorial

Price: £12.50 inclusive
(£17.50 overseas)

Supplier: Tom Beeley

1A Den Hill Drive

Springhead

Saddleworth

OL4 4NR

Tel: 0161 652 0930

Email:

Tom@alfonso.demon.co.uk

Site Seeing

This issue I am going to suggest that readers take a look at one of the Government's Web sites, at www.open.gov.uk

The Internet has changed rapidly over the last few years; now people log on

too. See under the *Younger readers* heading on the next page.

Log on to the address given and you will be presented with a well laid out page offering visitors a number of ways to find whatever they are

Geoff Lane looks at one his favourite Web sites and explains some of the fascination of the subjects you can find connected with government.

for an entertaining surf whereas a few years back it was the domain of the academics who went online to get or share information.

www.open.gov.uk is basically a government run site that links visitors to virtually anything that has a connection with national or local Government.

It is an absolute mine of information that can be of use to people of all ages in relation to research, law, complaints, education, statistics, claims etc. Younger readers are probably losing interest already but read on, there is something for you

looking for. There is an alphabetical list which is quite huge but easy to navigate, click on a letter and you get a manageable alphabetical list of links. Then there is the topic index, which is an alternativeway to find a link. If you select this option you get an alphabetical group listing such as 'Defence, Health, Transport', from there you can navigate to the web page of your choice.

What is there on a boring old Government site? Well, I'm not going to list too many things but to give you an idea there are links to the Duke of Edinburgh Award Scheme, English Heritage, Air Accident Investigation



Everything with a connection to national or local government

Branch, Atomic Energy Authority, Science Museum and all the Tourist Boards. There are also links to every Local Authority, Parliament, Police Sites, Health Authorities, DHSS sites and further links that show local solicitors if you enter a postcode.

Aircraft safety

The Air Accident Investigation Branch actually lists dates and details of incidents involving aircraft safety giving dates, aircraft involved, airport and crew — quite fascinating really but probably not a good read prior to leaving on holiday.

There is a list of the Schools and College Performance Tables as well as a page on OFSTED (Office for Standards in Education) and links to all local government and councils. You can also find your local councillor and MP showing email contacts if available.

I could go on but the site is a mass of info and links and I could not do it justice. View the site and see what it has to offer; you may be pleasantly surprised.

Younger readers

What on Earth could interest younger readers in a Government site? Well, there are links to all the defence departments, The Army, Navy and Air Force.

Go into these sites and you can find out about the equipment used by the



Government never sleeps



Check up on a military career

Army, loads of piccies and information on tanks, lorries, rockets, guns, radar etc. The Royal Navy site shows images of the various ships in use including aircraft carriers and subs and well, the Air Force — images of aircraft both up to date and historical. You can also find details of forthcoming air shows.

Cadets

If you are a teenager find out about the Army Cadets, Sea Cadets or Air Cadets or, if you fancy a career in the forces, each of the services has a section on job opportunities outlining what you could train for. The Army is Britain's largest employer and annually has over 15000 vacancies covering a whole host of trades. Who

knows, by reading this article you may end up with a career..

There is also the Duke of Edinburgh Award page which gives loads of info if you are involved in this scheme or want to find out more.

Perhaps Royal history is your fascination, if so then link in to the Royal Site and find out about the history of the monarchy in Great Britain, read about early monarchy, the Stuarts, Tudors and the present day Royal Family — not to be confused with the Royle Family.

James Bond

Overall, this is a site I have only recently explored and as I have done so I return regularly to see what else I can find. Within the A-Z index there must be other obscure and fascinating Government departments with interesting sites. Come to think of it, didn't James Bond work for the Government?

Hmmm, must go as I want to search on 007.

Have fun.

Oxford Literacy Web

Learning to read is a complicated business. The first stage requires the learner to identify the sounds associated with the shapes of the letters in the alphabet — the phonemes associated with the graphemes, if you wish to be technical. Once this is mastered the

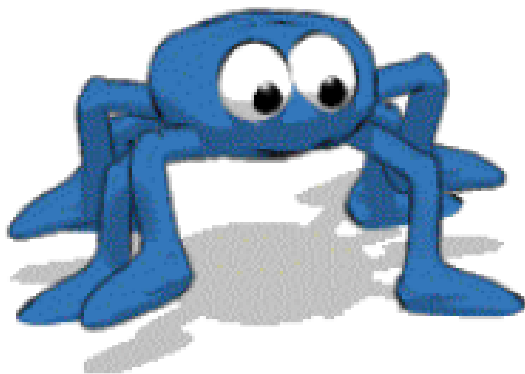
youngest classes in schools. Three CDs from Sherston: *Big ABC*, *Sound Activities* and *SoundStories*, will be a most welcome addition to the armoury of the teachers concerned.

They cover the 26 letters of the alphabet plus the *ch*, *sh*, *th* and *wh*

Di Hillage takes an approving look at three CD-ROMs which help children to associate the shapes and sounds of letters, as they learn to read while they play.

next stage involves realising how these sounds are fitted together to make words.

Many ingenious activities have been devised to help young children cover this stage in their learning in the



Webster

digraphs and the activities are based on the Sound Activity Cards in the Letters, Sounds and Rhymes strand of the Oxford Literacy Web.

Each CD has a similar interface with a teacher's page on which various choices can be made. The children are guided through the activities by a delightful cartoon spider called Webster.

Big ABC provides four activities for each sound. Firstly object starting with the sound must be chosen from a picture, then the three correct items from a choice of four highlighted ones



Recognise the word in the T-shirt game (Sound Activities)

must be found. The two spelling pattern games involve choosing the correct word to match an object chosen in the picture and the choosing the first letter to complete a word.

Rhyme

There is a rhyme for each sound which can be played at the beginning of each section, or not.

These rhymes are printed in the Big ABC book and can thus be discussed

with the class. They are also in the Little ABC individual books.

The Sound Activities CD covers two listening and two spelling games for each sound. The games involve choosing pictures with the required initial sound and then choosing the starting letter for the object.

The instructions and narration, as in each CD, are very clear and easy to follow.

The Sound Stories CD is my favourite. There is a short *Talking Story* for each sound in the customary Sherston format in which the words are highlighted as they are read and the chosen letter or digraph is displayed in a different colour. The stories are followed by a listening and spelling activity with the latter asking the child to choose the correct word to complete a sentence from the story.

Each CD also contains a text file with an extensive list of suggested activities for the classroom.

Work independently

The children would need some introduction to using the programs but once this has taken place most children would probably be able to work independently. If the program has been installed to a hard disc rather than just being run from the CD, individual records can be kept enabling the teacher to track the pupils' progress.

Reception classrooms are very busy places. Computer activities that the children can use without adult support are a real boon. They also provide an opportunity for extra reinforcement

for those needing a bit more time to pick up the essential basics.

Providing headphones for each computer would enable the programs to be used to best effect. It is a pity that those who design computer cases do not take this into account when they position the headphone connection on the back of the case.

These programs will have a useful role in any early learning classroom and are thoroughly recommended.

Each CD is in triple format for RISCOS, Windows and Apple Mac.

Oxford Literacy Web
Big ABC, Sound Activities and
SoundStories
Price: £35 +VAT each
Packs (same CD): 3 CDs £52.70,
5 CDs £70 both +VAT
Supplier: Sherston Software Ltd
Angel House, Sherston
Malmesbury, Wilts SN16 0LH
Tel: 01666 843200
Fax: 01666 843216
Email: sales@sherston.co.uk
Web: www.sherston.com

RISC User ...In A Nutshell

One of the big changes which really illustrated the effects of Acorn's withdrawal from the computer scene was the drastic down-sizing of BEEBUG, a major player since the days of the BBC-B, which gave it its name ('Beeb' User

and pictures have been collected together onto one commemorative CD-ROM: *RISC User ...In a Nutshell*.

All this material, apart from the items never before made available, would

Peter Jennings finds everything you've ever read in RISC User (and more), all the monthly and special discs plus most of BEEBUG's software all on one CD-ROM.

Group). Gone was the showroom (which had always been my local supplier) and gone was the last of their magazines, RISC User.

This at least made a dignified departure at the end of Volume 12, unlike other Acorn magazines which ceased publication without prior notice.

Now all 12 volumes (the first seven as Mac files), all the magazine discs including the end-of-volume specials, most of BEEBUG's commercial software, the source files for four published books and a mass of bonus items including unpublished articles

once have cost hundreds of pounds and, even if you think you probably already have a good deal of it, you will almost certainly find enough desirable additions to make the collection worth having.

The first thing to notice is that the compiler, former RISC User Editor Richard Hallas, has painstakingly built an HTML front-end to index and allow quick access to everything on the disc, which has also been given a comprehensive Help section.

There is a complete index in ArcScan format (with ArcScan provided to read it) and even an index listing all

the instalments of the various series which have been published, with, of course, icons to click on for any you want to read.

If you haven't got a Web browser that is no problem as one is provided, along with a range of other resources such as read-only versions of Ovation Pro and ArtWorks, a special version of SparkFS (only usable on the CD) to open archived files and the necessary fonts to recreate magazine, manual and book pages. There are even programs to fix problems with some CD drivers.

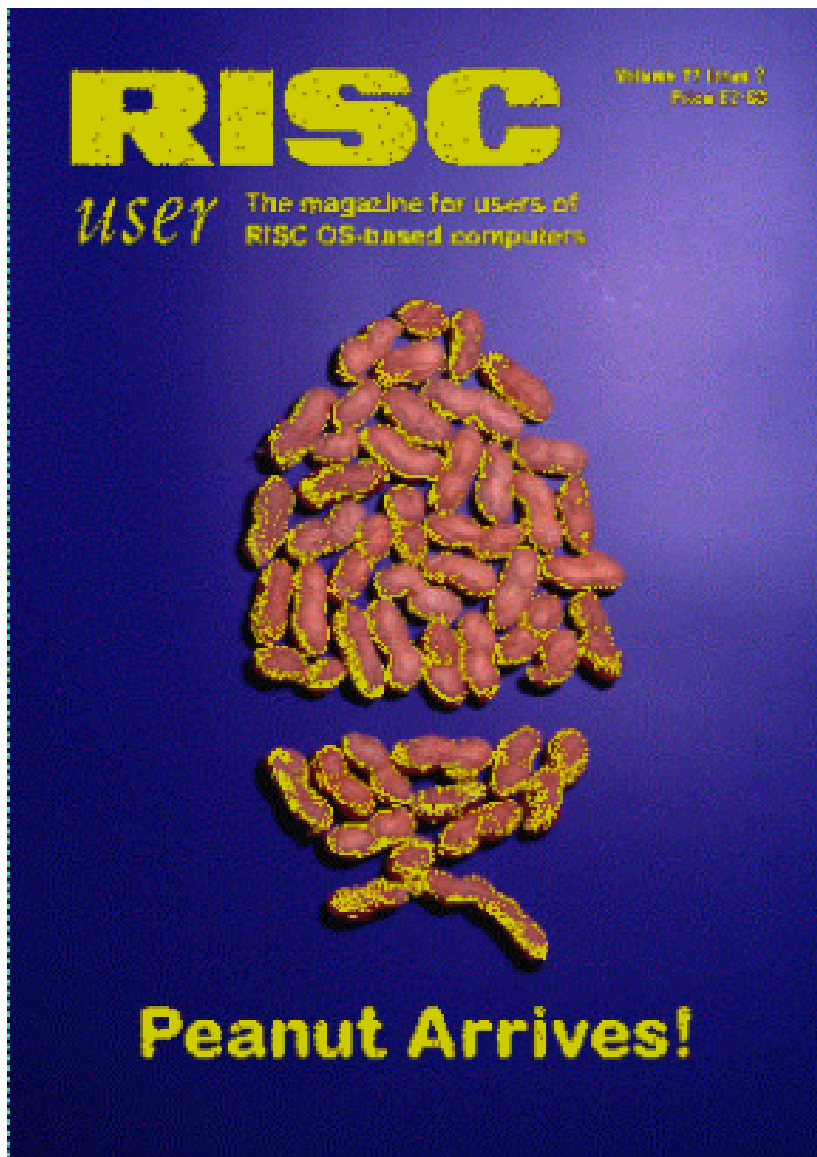
There is no reader for the first seven volumes, produced on a Mac, (which are less relevant to the current RISC OS scene) and no reader for articles written in Impression, although most of these are also available in DeskEdit text (with DeskEdit also supplied).

Apart from the huge library of information on this disc there are all



the commercial programs now made available, in their latest BEEBUG versions. These include: ArcScan III, Basic Programmer's Toolkit, ChartWell, DeskEdit 4, MenuBar, PlayBack, PolyGlot, TextAid and Wimp Programmer's Toolkit as well as the contents of five RISC User fonts discs, a collection of more fonts and font utilities and a variety of games.

The books included are: Getting Into Ovation, Internet Survival Guide, PC Survival Guide and Wimp Programming for All (complete with programs from its software disc).



unpublished material from the magazine, utilities and files relating to its production and resources relating to the material used on the CD (which, incidentally, is the only one ever produced by BEEBUG).

All pre-ordered copies of the CD-ROM have now been sent out by BEEBUG but a limited number remaining can be bought, while they last, from R-Comp.

Whether or not you were a RISC User reader the Nutshell version is well worth having.

The cover (and computer) that never made it

The CD is filled up with a diverse medley of *Bonus items* including the short-lived *Acorn Action* games magazine, digital photos taken for use in RISC User, images and logos including Acorn publicity photos and some vector clip art, desktop 'wallpaper' made up of RISC User covers, unused and previously

RISC User ...in a Nutshell
Price: £30 inclusive (£32 overseas)
Supplier: R-Comp
22 Moffat, High Legh,
Knutsford, Cheshire WA16 6PS
Tel: 01925 755043
Fax: 01925 757377
Email: rcomp@rcomp.co.uk
Web: www.rcomp.co.uk

Linux 2000 Show

The Linux operating system has been around since the early 90's but has come to the attention of the public and business only in the last few years. So it hasn't had an established show scene —until now.

exhibitors was obvious. Every stand was handing out leaflets and glossy brochures and you rapidly acquired a ton of paper to haul round.

The Linux market is dominated by the companies producing

David Ruck reports on the Show for the operating system seen as a rival to Windows and even a possible successor to RISC OS.

The Linux 2000 show (does any show this year not feature '2000' in the title?) is the second annual show to be held at London's Olympia 2. Although quite a small venue (smaller than the Acorn World's of old), it was well represented by large stands from the major Linux distributors and hardware manufacturers as well as smaller stands for a range of software products.

It reminded me very much of the old Acorn shows too. The explosion in popularity of the operating system was reflected in the large attendance for a mid week show and the enthusiasm of both the visitors and

distributions and this was reflected by the large stands for RedHat, SuSE and Corel on the first of the two floors.

As Linux is a collaborative open source project, with thousands of people working on various parts of the system, a way is needed of bringing together all the new developments and enhancements to making a stable working system. This is where the distribution companies come in; each produce a flavour of Linux which is broadly similar (and, importantly, compatible) with each other's, but differs in what tools and bundled applications are supplied and the ease of installation.

Various distributors are aiming at different markets. RedHat, which was one of the first, seeks to have the most comprehensive and up to date distribution, with a large number of additional packages covering many different types of applications. Corel is aiming more at the consumer, with ease of use and installation being its strength. One thing shared by all the distributions, and indeed stipulated by the rules under which Linux is developed, is that they are all free for download from the Internet.

However most people and businesses choose to buy a CD boxed set for a reasonable sum. This has the advantage of convenience of installing from CD and also the additional technical support which the distributor can provide.

One of the new features of the show is the attendance of the large hardware manufactures who are now putting their weight behind promoting Linux to run on their systems, rather than just acknowledging it was something the user could do if they wished.

IBM showed Linux working across their entire range from ThinkTop

portables up to large Netfinity Servers. SGI have always been known for their stunning 3D visual systems, such as flight simulators, now run Linux on their platforms, which despite now being Pentium based have far better multi-processor performance than a standard PC system.

For raw power the combination of the 64bit Alpha processor and 64bit Linux cannot be beaten. A dual Alpha system was churning out 1024x768 ray tracings in two to three seconds per frame. Last time I did any serious ray tracing, It took me an entire day to do that on my A5000 and it would still take at least half an hour on a StrongARM.

Linux has typically been making inroads into business mainly as a development and server platform and has not been well provided with off the shelf software. This is now changing with a large variety of titles either of new origin, or ported from other platforms.

A large section is still aimed at Internet and database servers but there are now serious integrated

office packages from Corel and Applixware. They consist of word processing, spreadsheet, database and presentation software and rival Microsoft Office for features and, importantly, offer file exchange with the MS Office applications.

On the entertainment side, there have been freeware versions of popular games such Doom and Quake on Linux for some time but now the latest titles are beginning to appear for the OS alongside the Windows versions.

Risc PC

One thing I wasn't expecting was to see those familiar curves of a Risc PC on the Debian stand. A version of Linux has been available for Acorn systems for a number of years but has always been notoriously difficult to install and was based on a quite old version of the RedHat distribution. Together with Aleph One (of PC card fame) some of the volunteers who form Debian are working on a port of this distribution to the Risc PC.

It aims to be much easier to install, and more up to date, allowing the use

of the modern window managers such as Knome and KDE, which do much to improve the look and feel of Linux. Currently the ARM version is built by hand each time but it will shortly be done by a build-engine, which is a machine that automates the work required and will enable it to keep up with versions released for all the other platforms supported.

Although because of their design Acorn machines are best at running RISC OS, you can run Linux quite respectably, giving you access to thousands of applications and compatibility with other systems and this serves as a good introduction without the expense of buying a second machine.

If you've already had to do the unpleasant process of getting a PC to gain access to particular Microsoft applications, installing Linux in addition to Windows is an ideal solution.

You then have a very stable system to sit alongside your RISC OS computer, which is able to provide fast and reliable file and Internet serving at no extra cost.

ARM Arena

This month I am bringing some gaming news from the Wakefield show as well as much of the latest news to be rumoured or announced on the Internet.

Dignity had the priority release date) it is an exciting prospect that the RISC OS games scene will see a new strategy game. It is disheartening sometimes to see the constant release

Andrew Weston reports on what you can play now and looks ahead to some of the exciting new projects planned for the RISC OS games scene.

I'll start with news and releases from the major publishers and then move onto other news.

Wakefield

The annual Acorn/RISC OS show was this year relatively exciting for RISC OS games enthusiasts for a number of reasons. Perhaps the main attraction was the presence of Artex who were giving working demonstrations of TEK 1608 and Iron Dignity.

TEK looked quite complex and no doubt would require some practice and a prior look at the eventual manual, I assume. Nevertheless, with a release date set for this summer (surprising myself as I thought Iron

of strategy games on the PC platform (and even dedicated magazines!) so it's to be hoped that this release proves popular.

Iron Dignity's release date has now been moved to 2001, which is disappointing in certain respects as it would be nice to have this visually impressive game to play this year.

I was later informed that the demonstration on view at Wakefield was running on a hidden PC. I have not probed into the reasons for this but on speaking to Jan Klose of Artex, he explained that he regards RISC OS as the best platform to develop on but that versions for other computer platforms must be written

simultaneously to generate sufficient sales to justify investment. With this in mind, Jan said that sales of their RISC OS games must be good for Artex to stay with the platform although I don't know how this will be worked out exactly.

Iron Dignity looked extremely impressive at the show and one could navigate one of the armed vehicles from within, looking to the external scenery. Throughout the Saturday there seemed to be a group of visitors around the stand and I'm sure Artex's releases are being anticipated enthusiastically by many. With new hardware being developed for RISC OS users, a healthy interest and the apparent commitment of Artex, the future would appear to a bit more promising.

Adding life to the games field were RComp Interactive, once again selling their excellent range of conversions and to new releases. The first was The Chaos Engine, a conversion from the 16-bit platform originally released in the early 1990s. The conversion, I understand, was largely complete a number of years ago, but for various reasons a release

was not finalised until recently, thanks mainly to the efforts of Nathan Atkinson of Visions of the Impossible (VOTI) who contacted RCI. The game has been well-received on the newsgroups and the Press and is significant in a couple of respects. As a top-down walk-about combat game it also allows the player to select from a range of characters with different attributes. That is, basic role-playing elements are included in the game. RCI also state that, if sales are good, future conversions from the original publishers may be possible.

The second major games release from RCI was the TBA Classics CD. This is released following negotiations with TBA Software who have recently announced they are to close as a publisher of RISC OS games. This comes after a large number of, in general, very high quality and enjoyable releases into the Acorn games scene. Several of their titles are included on the CD: BHP (the 3D racing game), Cobalt Seed, Command Ship, Formula 2000, Merp and Dragonball. Several of these made use of TBA's advanced graphic engine (TAG) which delivered some quite impressive results, notably BHP.

For those interested and capable of deciphering this kind of code, the source to the TAG engine, BHP and Cobalt Seed are also present on the CD.

RCI also informed me that a release of a classic-games CD is being considered. I believe this is to include a number of early Archimedes games, that is those released early in the life of the 32-bit range.

Also at Wakefield were Paradise Software who have been largely quiet for several years since the release of Inferno in 1996. They were demonstrating and selling their new title Overload—a sideways scrolling shoot-'em up. Ian Jeffray of Paradise said that the game had taken a long time to develop owing to work and study commitments by the various members of Paradise but, as he also says, releases generate more hope and interest in the games scene which will hopefully generate more demand. Overload certainly looks on the surface a polished product and I understand it will run on most Acorn computers with the top-end machines being able to run with improved graphics.

Paradise have demonstrated also the advantage of having budding games writers collaborate and contribute various parts to a game. For many people this would be necessary as coding a RISC OS game is usually a part-time effort but there are other obvious advantages to this strategy.

Other news

VOTI are planning to release an overhead-view racing game similar in principle to Micro Machines and High Risc Racing, called Eat My Dust. The release date is uncertain but the VOTI website is regularly updated so I recommend this as the latest source of information regarding any of their projects. After talking to VOTI agent Nathan Atkinson, it seems clear that VOTI hope to make the game as enjoyable and attractive as they possibly can before release.

More news from the VOTI headquarters is the departure of one of their members, Paul Thompson, whose work commitments simply do not allow him to contribute to the group's work. This is a great pity, since judging by Mr Thompson's previous work on graphical demonstrations for the DFi demo-

group and the 3D-helicopter game demonstration he released via Acorn User, he is a man of significant talent. This is a disappointing blow to VOTI in light of Nathan's aspirations given in an Acorn Arcade interview. Let's hope his work can be made use of in some way.



Another VOTI project maybe of interest to Eureka games fans is Sumisu Sam, a platform game which VOTI received incomplete from the departed GEK games group. Details, again, are on their website.

In fact, VOTI mainman Mr Atkinson has often worked hard behind the scenes to bring new leisure software to the market so its to be hoped this can continue.

PD projects

Last month I reported on two projects to update classic games, Elite and Star Fighter 3000. The good news is that these projects seem to be ongoing and progress has been made.

New features for an old favourite

Elite

Elite: The New Kind is a project to improve the original BBC disc version of Elite, imparting various new features to the game.

Several new changes have been made to the freely (I understand) available code and these are available from the website, including improved planet graphics (such as solid, fractal landscape) and support for different consoles among others.

Judging by the website for Starfighter 3000, Chris Bazley has some ambitious plans for the game and I would enthusiastically recommend



An early development screenshot of Darklands

visiting this site to read about them. Already available is a texture editor which allows the player to change the appearance of an SF3000 map. This, all being well, will develop into a full map editor allowing 'editing of all the game elements'. Next to be released will probably be a patch allowing RISC OS 4 users with StrongARM processors to play the game.

There are exciting plans for the future and, again, there is behind the scenes

work going on here. We'll have to keep an eye on the newsgroups!

Darklands

Anybody who closely surveys Gareth Moore's 32-bit gaming pages may have noticed a project called Darklands a Civilisation-type game where the player is responsible for managing the growth of a settlement and its expansion etc. In other words, often the player can act as ruler or even a God in this game-genre!

Since announced, little more has been said on this project. However, after making a few enquiries, the author, Matthew McKinnon, revealed a range of details regarding Darklands. The delay, Matthew says, is due to all his data being lost when his A3000 suffered a hard-disc failure!

The game is said to have been improved dramatically (since first previewed on the Web) in graphical terms and will run in a range of screen modes on machines using ARM2 processors to RiscPCs using StrongARMs.

Roman invasion

The player will control a population from just after the end of the Roman invasion until the Middle Ages, adopting strategies to increase technology along the way.

Multiplayer capability is to be included allowing single machine as well as network (local or remote) playing. The strategy element will be in 'real-time' (that is, events progress as in reality) and the game features battles as well as population management.

Other features promised include MIDI music with in-built support and hopefully a low memory requirement (2-4MB).

Ambitious

Overall, Darklands seems to be quite an ambitious project and I hope that it reaches completion, set at September this year. Equally appealing is the reasonable stated price-tag of £15-£20. At present there is no official website but according to Matthew, there will be one soon and it will be announced on comp.sys.acorn.games.

Overcast

If I may, I will just mention that a graphical exploration game I have created is available from my website so, if you want, have a look for yourself! A sequel is planned.

Finally

Judging from the response to the favourite-game poll I mentioned last time, I assume most people have had difficulty deciding!

If you would like to send me the name of your favourite ever 32-bit title then include the name in the title of the

email and send to me at:

awestern@argonet.co.uk

I'll hopefully include the result if a few more people respond.

Also, a quick reminder that Acorn User are planning to release a CD full of old commercial and PD games with their August issue and some of the titles mentioned on comp.sys.acorn.games suggest this could be something special.

Until next time, I hope the new releases and developments interest you. As ever, watch the newsgroups if possible or the magazines if not!

Contacts and Websites

Andrew Weston

www.argonet.co.uk/users/awestern/over2.html

Elite: The NewKind

www.newkind.co.uk/elite.html

StarFighter3000

www.dcs.ex.ac.uk/ug/cs99/cjb/my-site/sf3000/sf3000.htm

Acorn Arcade

www.acornarcade.com

Paradise

www.paradise-uk.net

36 Marlborough Drive

Sydenham

Leamington Spa

CV31 1GD

RCI

www.rcomp.co.uk

22 Robert Moffat

High Leigh

Knutsford

Cheshire

WA16 6PS

Artex

www.artexsoft.com

www.iron-dignity.de

Games distributed by RComp Interactive.

VOTI

www.visionsoftheimpossible.co.uk

42 Wales Street

Darlington

Co. Durham

DL3 0LT

Oxford Reading Tree Clip Art

The software is supplied on the standard triple format CD. The cover is part of a handy manual which not only contains instructions on how to load the software but also a host of ideas on how this CD may be used in the classroom.

Sherston and Oxford pictures/logos to lead me to information about the companies in question.

Er...No! For some odd reason, they *all* send you to the opening menu for the clip art! No, I couldn't fathom it either.

Teacher Chris Price looks through a collection of clip art containing the familiar Oxford Reading Tree characters and scenes for children to use in their own stories.

On set up you are presented with the option to use the browser (local CD use) or to install the software to the hard disc.

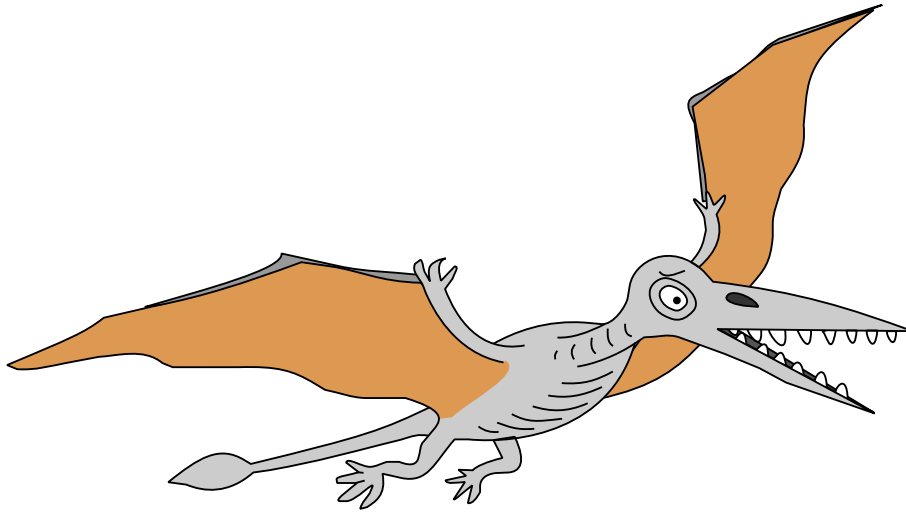
On clicking on the Browser software you reach an opening screen with a bright bubble in the centre, with the legend 'Oxford Reading Tree Clip Art' emblazoned across it and the Sherston and Oxford logos in the top corners and it was here that I encountered my first problem.

Now call me old-fashioned (I've been called much worse!) but when I see this set up I expect the central picture to lead me to the clip art and the

Anyway, onward and upward! The main menu divides the groups up into five groups: Main characters, Objects, Scenes, Story characters and Keywords and anybody familiar with the ORT will know the various characters and scenes.

Clicking at random on one of the sub groups (Objects) I was presented with a page full (12 objects) from the series.

To access these one simply has to press on one of the two buttons by the side of the object; one is grey (monochrome image) and one is coloured (polychrome image). Doing



Each sub directory consisted of at least two pages with the exception of the Keywords directory which, for obvious reasons, is rather deeper.

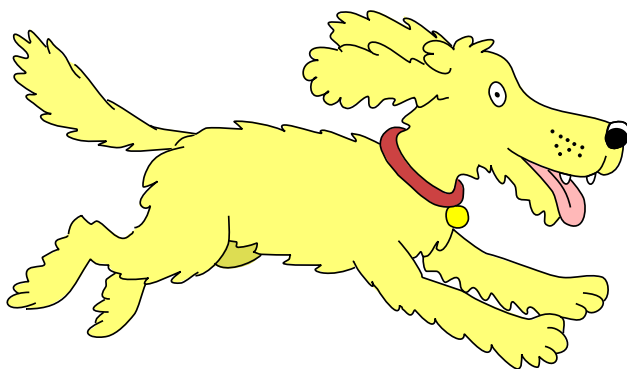
Incidentally, the font used in the

this means that a Drawfile pops up which can be dragged to the appropriate area of your hard disc.

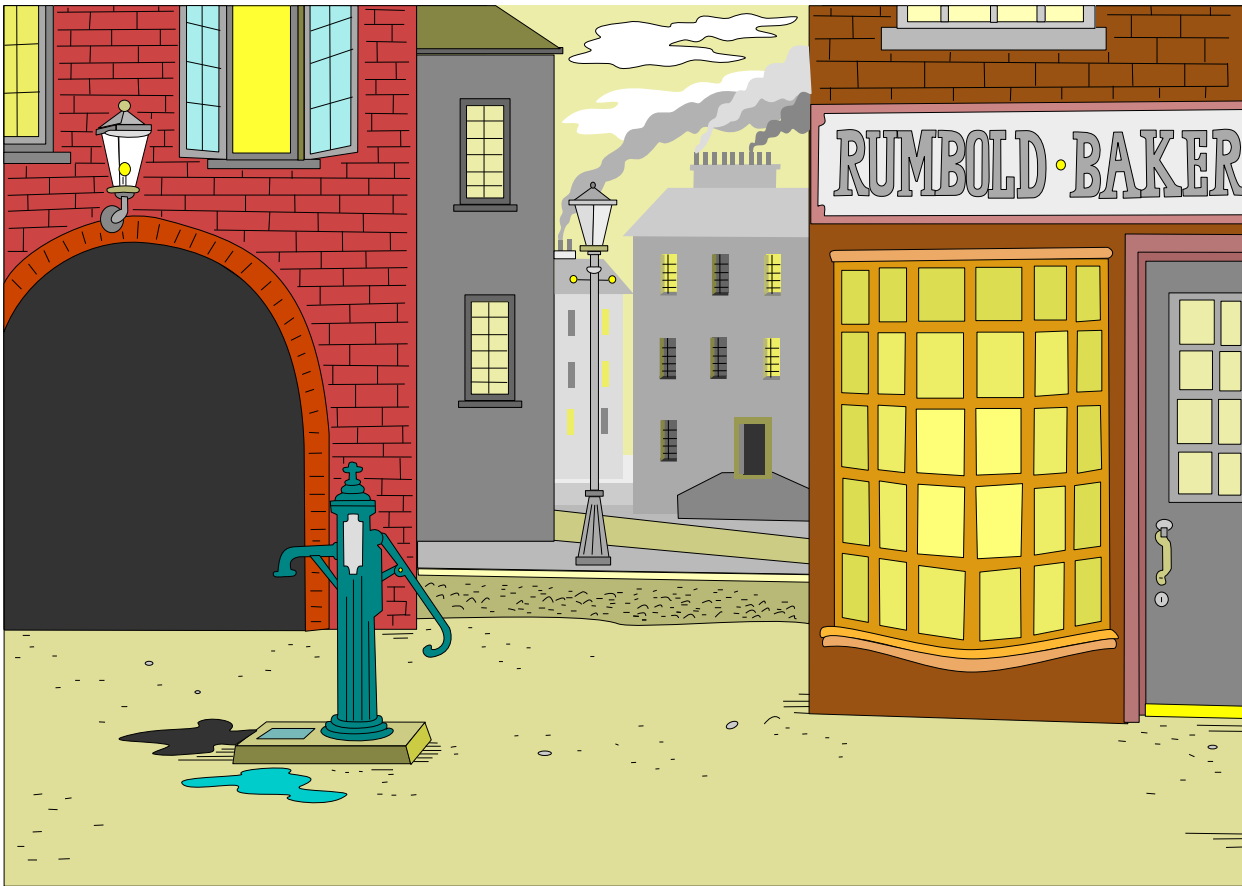
At this point I have to say that I would have liked the option to have been able to double click on an image to see it in greater detail just so that I knew that I had got the right one, but maybe I'm being pedantic.

Keywords will be familiar to anyone used to the Oxford Reading Tree, perhaps obvious but still useful to see the continuity maintained.

This is a simple idea for children to use to create their own stories or work cards. The idea is very easy to use and, within minutes, I had put up a Drawfile and was merrily dragging



Two separate pictures of a boy and his dog put together can suggest a story



A Victorian street for your setting

characters and words into it in order to make up simple stories! It would be equally feasible, given the appropriate constraints, to use a word processor to form the story, although I am not sure that this approach would be quite as flexible.

The idea of providing both a colour and black and white image is also useful as it would allow children to colour the images in themselves, either to match the ORT ones or to invent their own characters.

Again this is another simple idea that Sherston have executed with due care and diligence. Highly recommended.

Oxford Reading Tree Clip Art

Price: £25 +VAT

Supplier: Sherston Software Ltd

Angel House, Sherston

Malmesbury, Wilts SN16 0LH

Tel: 01666 843200

Fax: 01666 843216

Email: sales@sherston.co.uk

Web: www.sherston.com

Living With A PC: Having To Use It

When I first accepted that I would have to get a dreaded PC to be able to do all I needed in digital photography (as explained in the last issue) I had a sneaking feeling that I might find myself discovering more and more uses for it with its advanced

I certainly haven't come anywhere near to loving my new PC, which I still find just a necessary and intensely irritating evil.

Of course there are a few good points. It is useful to be able to put a file in a

In the second of our series, Peter Jennings reveals what he is using his newly acquired PC for and whether it is now starting to take over from his ageing Acorn.

specification and vast array of new software, at the expense of my Risc PC.

It hasn't happened! The PC is used regularly for just two purposes: it gives me free access to the Internet, easily set up without having to use a mass of separate programs, and it allows a direct connection to download and manipulate the images from my new digital camera.

I have bought just one CD-ROM, the Encyclopaedia Britannica, but for everything else I still thankfully switch on my mature but still active old Acorn.

directory by just dragging it onto the unopened directory icon and there are the neat little USB (Universal Serial Bus) sockets for connecting peripherals.

Actually, the main reason why the USB sockets seem so good is that they simplify the usually tedious business of having to install hardware to get the PC to recognise its existence.

I have to use the USB connection to download the images from the digital camera's *Smartmedia* cards; done by either plugging in the lead directly from the camera or using a reader (an

expensive optional extra) for a faster transfer. I save the images onto a PC-formatted Zip disc and, as this is fully compatible with my Acorn, I can then switch from the IBM clone to my Risc PC and use the pictures in a more friendly and familiar environment.

Digital image

Sometimes I enhance or otherwise manipulate the digital image on the PC using the free program which came with the camera.

There is also a good supply of free programs (usually cut down or older versions) on the CD-ROMs which come with PC magazines. I subscribe to one of the half a dozen or more magazines published to help Windows owners learn to use the program and to cope with its many difficulties and failings. (There has never been the need for anything similar for Acorn/RISC OS users.)

I also use a Zip disc to save emails and attachments, which I can reread at leisure on my Risc PC. These include most of the contributions to Eureka which can be dropped into an Ovation Pro page although this usually entails some change of filetype first.

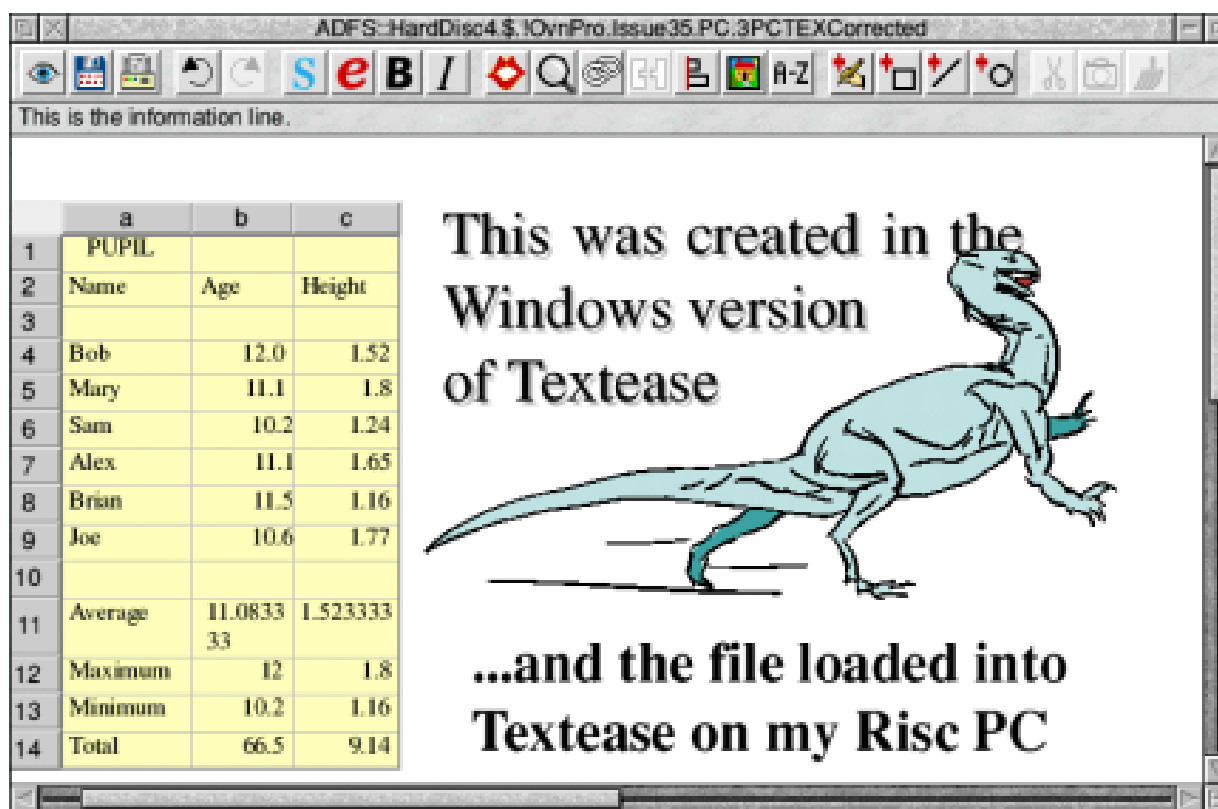
I found a problem with some archived attachments sent from RISC OS machines which Outlook Express sometimes saves out as zero sized files.

More experienced PC users may know a simpler way to deal with this but the method I use is to save the whole email, switch over to the Risc PC and select and save the attachment from the bottom of the email message. I change the DOS filetype to text and drag it onto the SparkPlug icon, which unarchives it as a data file. This can then be given its original filetype.

Compatible

This ability to use hardware and software compatible with both computers is a real asset. One of the most useful packages for this purpose is the multi-faceted Textease, which began life as a simple word processor for the Acorn and has developed into a versatile package now offering desktop processing, a spreadsheet and a database interchangeable between RISC OS, PC and Apple computers.

Files saved on any of those computers are equally at home on the others.



A live spreadsheet, text and a graphic, all in a Textease file created on a Windows PC and loaded onto a Risc PC

Where the original font does not exist on another platform the nearest match is used to preserve as near an identical appearance as possible.

We would welcome a contribution to this series from anyone who is now using a PC along with their RISC OS computer.

This ability to transfer files between machines has been found particularly valuable to schools which have a mixture of platforms.

Let us know why you have to use the PC and any of the problems you have met and how you have overcome them.

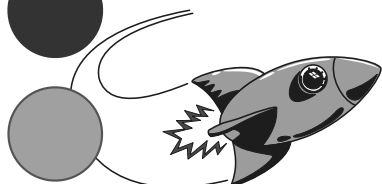
There will be a review of the new spreadsheet and database, which can be used with Textease or on their own, in the next issue of Eureka.

Send your article to The Editor at the Club's usual address, on page 80, or email to Eureka@armclub.org.uk.

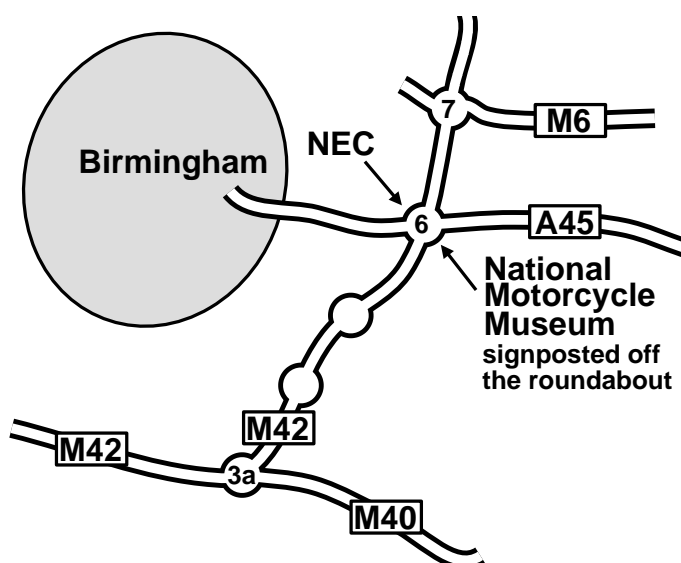
On December the 2nd 2000 rocket down to

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Tel: 01785 714535 Email: ralph@armclub.org.uk

Have A Chat With IRC

Would you like to be able to communicate directly with other Acorn/RiscOS users online in live time; have the opportunity to meet new friends, share interests, solve problems and generally have an interesting time?

If you want to take part you are welcome to join ICENI and the Welwyn Hatfield Computer Club who have their own specific 'room' where anyone with a computer interest — yes, even PC users — can join in every Tuesday from 8.30pm onwards.

Want to have a chat on line? Geoff Lane invites you to join in a regular session, where everyone's welcome, every Tuesday evening.

You can do so with IRC (Internet Relay Chat). This is one of the oldest Internet functions and was originally used by the academic institutions to exchange text messages and conduct real time discussions and lectures.

IRC has developed into an interesting facility whereby groups of people participate in keyboard conversation. Like a group within a room there can be a number of smaller groups each chatting about a different topic but each can immediately join in another.

It works by launching a special IRC program, logging on to an IRC server and then joining a 'chat' room.

Normally when an IRC program is running the screen divides and in one section is a list of people within the chat group while the other section, which is generally bigger, shows the conversation.

All you do is type what you want to say and on pressing *Return* it prefixes your input with your identity so everyone knows who's said what.

You monitor what each person is chatting about and join in whichever you want to. Once you get the hang of it it is quite simple to join in a number of chats at the same time.

<viking> wizzco: I don't think you've met Vic he's from Launceston
<Wizzco> 'ansome
<Vic> Wissco ..where be 'e frum mate?
<Wizzco> Ipswich booooy
<Vic> Long time no see Ipswish. Are the streets still as narrow as there used to be?
<Wizzco> narrower, thanks to bus lanes :(

Newcomers are always welcome

If you are new to it just join in and see what is going on. There is no need to participate but I bet you will want to.

There is no joining or registration requirement and there is no obligation to stay on for a certain period. Some participants stay on for an hour or longer and others pop in for a few minutes to say 'Hi'.

You can do all your other Internet business at the same time so while downloading that file, sending those messages, getting those Newsgroups you could be exchanging ideas and chat with other computer users.

Our meetings are not Acorn/RISC OS specific but most participants are current or former users of that platform so you will not be met with blank expressions when you mention RISC OS.

Our participants cover the complete age range from teens to senior citizen so, whatever age you are and whatever experience or interest you have, you will be made welcome.

Naturally when you learn how easy it is you may like to set up your own group meetings among friends or family across the country or globe. Give it a try and see how easy it is.

There are numerous decent IRC programs about but if you log on to www.wolfchat.org you can download Acorn or PC IRC programs.

Go on to www.bigfoot.com/~whcc and select the IRC link for an explanation about how to connect or email me directly at the address below.

Give it a try. You will not be sorry.
Geoff Lane: send2gl@bigfoot.com

ViewFinder

For years people keep coming up with wacky ideas on the newsgroups, such as “Why can’t we put an accelerated PC graphics card in a Risc PC”. I’d usually reply with reasons such as: it wouldn’t fit, you couldn’t interface the podule bus to an

and all come with features to accelerate 2D window redrawing operations and often 3D acceleration for use with games.

John has taken a small form factor ATI AGP graphics card and piggy

David Ruck said it couldn’t be done but is now delighted to find that the wacky idea of putting a PC graphics card in a Risc PC has now come true.

AGP bus at any decent speed and you’d have to re-write most RISC OS to use it. Well I’ve been proved totally wrong, John Kortink (best know for the popular graphics programs !Translator and !Creator) has done exactly that!

When the Risc PC was launched back in 1994, its graphics capabilities were phenomenal — up to 1600x1200 in 256 colours and 800x600 in 16 million colours — compared to most PCs of the day using 640x480 in 256 colours and 800x600 in only 16 colours. However, these days, PC graphics cards which can exceed the Risc PC’s capabilities are very cheap

backed it on top of a podule card so it fits in a Risc PC. The card has 8MB on memory board, which is enough provide the modes such as:-

- 1280x1024 in 256/32K/16M colours at up to 120Hz
- 1600x1200 in 256/32K/16M colours at up to 82Hz
- 1920x1440 in 256/32K colours at 60Hz

Of course you will need at least a very good 17” but preferably a 19” or larger monitor to benefit from the greater resolutions and higher refresh rates. The 17” AKF85 shipped with most Risc PCs is limited to

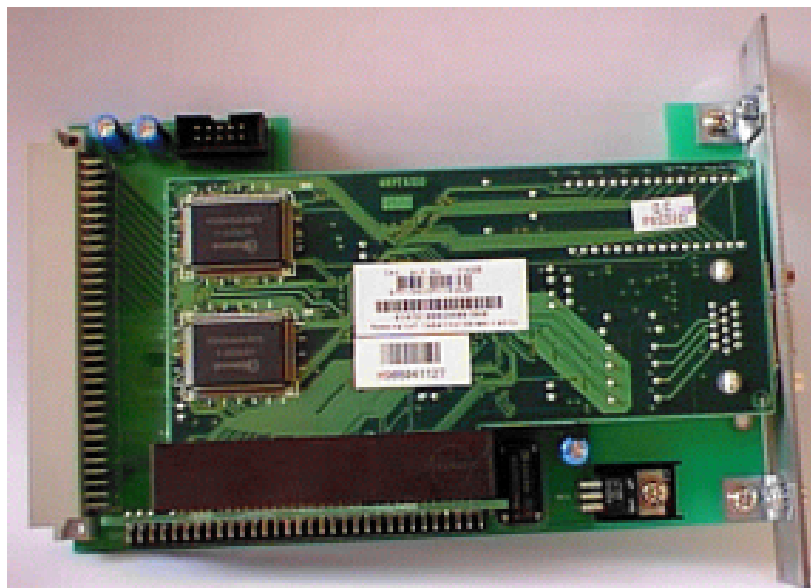
1280x1024 at 76Hz and 1600x1200 at 66Hz.

After installing the new podule, you swap the monitor cable from the socket on the motherboard to the one on the back of the podule.

The first thing you notice is that you don't see the boot messages —

currently they are still being output on the standard connector. So if you have a problem booting, you either have to swap the monitor cable back or, if your monitor supports a second input, wire in two cables.

On reaching the desktop you see, well, nothing different. The ViewFinder emulates your current mode (as long as it's 256 colours or more). On closer inspection a new monitor icon has appeared next to the display manager. This has a simple menu to allow you to select the larger modes, greater number of colours and higher refresh rates that the card gives you.



The Viewfinder piggy back podule

There is no need to write monitor definition files. So, to select a new mode which you have not previously used, just enter a string into the display manager's mode box, such as 'V X1600 Y1200 C16M F82' (note the new V for ViewFinder prefix). You can then use the menu to add this mode to the list of those available from the ViewFinder icon.

One of the main concerns of such a design is what would the speed be like? Having to transfer large amounts of data across the slow podule bus to the video memory on the graphics card is going to be slower than writing to the VRAM on the motherboard. To get round this the VF

uses the 2D acceleration features of the AGP card to speed up operations such as moving and scrolling windows and plain filling with colour. So this is actually faster in some cases than the standard Risc PC.

However the redrawing of certain applications' windows can be much slower, which makes the VF slower than the same size and colour depth mode on a standard Risc PC overall but not distractingly so.

Remember if you normally work at 1600x1200 in 256 colours and start using 16M colours there is four times as much work for the system to do.

The table opposite shows the result of timing various applications redrawing their windows when a smaller window is moved over the top 100x under program control.

Tests were done on a Risc PC StrongARM 233 with 2MB VRAM and the same machine upgraded with a Kinetic card.

The normal Risc PC used its maximum resolutions of 1600x1200 in 256 colours, 1152x896 in 32K

colours and 800x600 in 16M colours, whereas the ViewFinder used 1600x1200 in 256, 32K and 16M colours. The differences are given between the normal StrongARM with and without the ViewFinder and the Kinetic with and without the ViewFinder and the Kinetic + ViewFinder combination compared to a standard Risc PC.

The ViewFinder is able to use DMA if placed in the lower two backplane slots to improve performance and the results show that the Kinetic, which isn't able to use DMA, is slower on some tests, such as redrawing the pinboard, but is faster at most other things, making the combination worthwhile and giving redrawing speeds closer to the standard system. John promises further use of the acceleration features to improve performance with later versions of the software.

The software is still at a very early stage and there are some major issues to sort out. It is currently not possible to use programs which work outside the desktop as only the *WimpMode method for changing mode is supported. Also, the AGP card is not

Application	Colours	SA233	Kinetic	Comb
Pinboard (T6L texture)	256	50.0%	38.0%	51.9%
	32K	54.2%	29.5%	41.0%
	16M	50.0%	17.6%	35.7%
Filer Window (Large)	256	54.3%	41.1%	77.8%
	32K	49.7%	36.2%	63.1%
	16M	38.9%	22.8%	46.6%
Thump (Viewing JPEG)	256	92.6%	88.5%	128.4%
	32K	64.9%	59.9%	74.1%
	16M	39.3%	36.0%	43.4%
ArtWorks (Complex blends)	256	36.5%	44.2%	48.5%
	32K	23.5%	27.5%	25.3%
	16M	8.9%	13.3%	9.5%
Impression (Text only document)	256	80.6%	73.4%	100.0%
	32K	79.8%	70.8%	87.6%
	16M	71.4%	62.8%	77.1%
Oregano (Textual page)	256	57.0%	56.0%	86.7%
	32K	58.9%	54.4%	70.9%
	16M	78.7%	80.9%	97.3%
PhotoDesk (24bpp image)	256	47.6%	43.4%	53.3%
	32K	30.2%	27.7%	32.2%
	16M	43.5%	39.2%	47.1%
Average	256	60.1%	56.2%	77.8%
	32K	41.8%	36.7%	45.6%
	16M	33.7%	28.0%	35.8%
Overall	All	43.5%	37.5%	49.0%

capable of supporting less than 256 colours so some very old (mostly BBC era) software won't work.

John will be working on a solution to this but he is mainly concentrating on desktop performance and compatibility at first.

While most desktop applications I have tried so far work perfectly in all the new ViewFinder modes, a few desktop programs show incompatibilities with the card. Certain display options in Zap cause the program to crash, TopModel (and TMViewer) run but corrupt the screen when redrawing their windows and Photodesk displays some funny effects in 32K colours but is correct in 256 and 16M modes.

Some problems have already been tracked down and John will be working with the other authors to iron out these problems as quickly as possible.

Thanks to the ingenuity of John Kortink, a wacky idea has been turned into a very useful product. The difference of being able to work in larger screen modes and with mode colours makes photo-retouching and

all graphic work easier and more pleasurable.

Combined with the extra processing power of the Kinetic, it certainly dispels the need to looking to other platforms for better graphics facilities.

However probably the biggest question in potential purchasers' minds will be the launch of the Imago, which has even better graphics facilities (2048x1440 in 16M colours at 72Hz) and will be at least twice as fast as a Kinetic Risc PC. The Imago is still at least six months away and will cost in the region of £2,000 and so is considerably more than the combined cost of both ViewFinder and Kinetic, which are both available for purchase today.

ViewFinder

Price: £235 inc VAT & UK delivery

Supplier: CJE Micro's

78 Brighton Road, Worthing,

West Sussex BN11 2EN

Tel: 01903 523222

Fax: 01903 523679

Email: sales@cje.co.uk

Web: www.cje.co.uk

Can We Help?

DAT Drive Backup

Question:

I have a StrongARM Risc PC and have borrowed a DDS DAT Drive, which I have been trying to backup my system with. I have tried TAPEFS with very little success, and I cannot

the DAT drive supports anything greater than this you won't be able to make use of all the tape.

PowerTec's !Backup will work with tape drives, but it will only work with their SCSI interface or ones with the

Some recent queries sent to our Technical Help Service. The solutions shown are mostly composed of answers given from several members of the Help team.

find a copy of tar corrected for PC archives.

PowerROM upgrade.

Is there any other software to allow the backup of hard discs to DAT tape?

Richard Keefe

Answer:

Simply attach and terminate the DAT drive as normal, check it is listed in **Devices* then load !PowerMgr, choose 'Advanced Install' then 'Define and Create Partitions' select the DAT drive and initialise the tape. Note that RISC OS is limited to a maximum of 2GB per file (in fact it is just slightly short of 2GB) and so if

Disc drive errors

Question:

(1) I own an eight year old A5000 computer. Recently I have experienced problems with my 1.6MB floppy drive. Several discs gave an error (sometimes at &00000000 — which seems unlikely). Sometimes the disc's directory window will appear but no files can be loaded (again a disc error is given). Other times it claims that the disc is not formatted although it is formatted. Do I need a new disc drive or could I buy a head cleaning disc to fix the problem?

Programming languages

(2) Also, I would appreciate some advice on programming languages. I am already competent at using BBC BASIC and I am now beginning to use the assembler and software interrupts in my programs. I am thinking of buying a C or C++ compiler but I believe that the software is very expensive. Which is the best compiler, or are there other 'industry standard' languages that might be better?

James Shaw

Answer:

(1) You can try a drive cleaning disc, as there could be a build up on material on the head after all this time. If it doesn't work and you feel confident about taking the machine apart, examine the floppy drive for a build up of fluff and grime. Don't use anything mechanical to clean it; use a can of compressed air to remove any dust. While you are doing this you can check the floppy drive leads are firmly attached. If that still doesn't help, the heads are probably out of alignment and it is usually cheaper to obtain a replacement drive than have it fixed. Acorn dealers and Reflex

Electronics can supply replacements.

(2) There is a JAVA compiler (<http://free.prohosting.com/~choc/ky/java>) but to run it you will need Acorn's RiscCafe Java CD which is hard to obtain at the moment and does not support the latest version of the language.

Screen scan fault

Question:

I write this in the hope that it will not be interrupted by a most irritating and unpredictable fault in which the screen suddenly begins to scan rapidly but giving the impression that it is filled by about nine icon bars, all scrolling together but at a slower rate. The fault can occur at any time from start-up to shut-down and may last from a few seconds to an indefinite period and in the latter case it becomes necessary to enter a Ctrl/Break. This response usually clears the problem but, of course, will cause the loss of any unsaved file.

I have put up with the problem for well over a year although I have sought help from two Acorn dealers one of whom had my machine, a Risc PC 700 using OS 3.6, for a few days

but without experiencing the fault. I also sought the advice from Reflex Electronics who suggested that my computer equipment and cables might be too close together. This prompted me to rearrange things but without noticeable improvement until much later when I was almost led to believe that the problem had cured itself. However, disillusion has returned together with the troublesome fault.

As has often happened after 'scrolling' has cleared itself there has been no more trouble for the remainder of the session, sometimes lasting for several hours, but of course there is no certainty of this. In fact the fault occurred twice for a few seconds before starting this email which is why I began the way I did.

Ken Causer

Answer:

It may be stating the obvious, but has it been tested with a different monitor? It could be a slightly damaged monitor cable?

Is there a mobile phone/TV/radio or even a washing machine nearby?

It could be a dry joint on part of the video circuit (notoriously difficult to track down). It seems most likely to be a loss of sync, so possible on those lines, or a failure in the associated logic components. If it is a sync problem, it's still being corrected (at least temporarily) by a reset if it doesn't correct itself. That suggests that the problem lies within the VIDC20 and that something in the reset sequence is enabling it to work correctly again. Perhaps attempting a mode change (albeit blindly —so it would probably be a case of going to the command line) might recover it?

Printer driver

Question:

(a) I have an Epson Stylus 860 and, having enquired of Castle about an Acorn printer driver, they sent me a small archive with drivers for all the new Epson printers. These appear to work fine until you decide, rather than using the graphics printing of an application, to drop a text file on the printer icon to print it, whereupon you get every line printed on a new page!

(b) I also found something funny when trying to print images in the normal way. I thought it would be a

good test to print the same image in various dpi settings on the same page for comparison. So I loaded a small image into Draw at the top of the page, set up the coarsest dpi on the printer driver and printed it. Fine. Then I moved the image down the screen page a bit, reloaded the same bit of paper, set the next better definition on the printer driver and printed it. Fine. But all subsequent attempts to print anything starting more than about a third of the way down the paper cause the paper to be ejected and a new page to be loaded and printed upon, albeit in the expected place (but not the same sheet, spoiling the test).

(c) I also get the impression that in some dpi settings the *first* thing printed at the top of the paper may well be being printed in a different definition to the rest of the page, as the printer head seems to make more passes at the top of the paper than subsequently.

It seems as though the set of Epson printer drivers may be pretty much untested.

David Dade

Answer:

(a) Check the text margins for the paper size that you are using. I've found many are setup with a height of 0 lines, which will cause this sort of thing.

(b) This is the sort of thing I do a lot with my Epson Stylus Colour 600 and have not noticed a problem. It could be a small change to the printer control codes for the 860, causing it to have a problem with the large vertical movement command which will be used to skip the blank area at the top of the page. Try putting a white rectangle at the top of the page. It obviously won't print anything but might fool the driver into thinking there is something there and not using a large movement command.

(c) This could just be the arrangement of the heads. With most inkjets each colours and black are offset so that all the ink is not deposited on the same part of the paper at the same time, saturating it. The yellow nozzels are at the bottom, with cyan magenta and black further up, so for each pass of the printer yellow is layed down on clean paper, cyan covers the yellow from the previous pass, maganeta on

top of previous yellow and cyan, and back last on to of the three previous passes colour. This does mean that at the top of the page the printer has to do four passes to do one strip, where as for middle each pass does 4 strips (although still only completes one). Incidentally micro weave compounds this by doing eight passes per stip using alternate lines, so there is not an obvious join between the previous dry band and a new wet one.

I obviously can't vouch for the later drivers and printers but there have always been a few driver/firmware incompatibilities with the Epson range. My ESC600 works fine at all resolutions except 720x720 non interleaves, which just causes paper to be spat out. It's a consequence of the manufacturer not giving the RISC OS developers the information they need.

Printing from Ovation

Question:

Can you help me with a printing problem from Ovation? I changed to the New Boot structure and a different boot partition on a new hard drive and do not seem to be able to print from Ovation. An error message 'Invalid address print cancelled' or similar

pops up when I try to print. If I change the boot partition back to the old drive with the original boot structure it is business as usual. Printing from Edit is OK on the new setup. I thought I had cured it but the problem came back just now when my son wanted to print some homework. Is it an out of date module or something, or have I done something odd?

James W Robertson

Answer:

When you updated to the new Boot structure did you copy the contents of !Boot.Choices.Printers from the old to the new? Did you install an upgrade of !Printers at the same time? If so make sure you deleted the old printers completely before installing the new one. That includes the contents of both the Printing directory and !Boot.Choices.Printers.

In either case, when using the new Boot structure, try loading !Printers and removing all the existing installed printers and adding them again, remembering to do a *Save Choices* before exiting !Printers. This often solves configuration problems.

What Is FTP?

Ftp is a protocol used across the Internet for file transfer. Specifically, ftp (upper or lower case? —answers on a postcard), the File Transfer Protocol, allows a file stored on one computer to be retrieved by another computer anywhere in the

just the opposite of a download — that is, sending a file to a computer instead of retrieving (downloading) it. Not to be confused of course with what the BBC Microcomputer used to call ‘downloading’, which was to load a page of memory and then copy

Among the recent queries to the Club’s Technical Help Service was a request for some detailed information on using ftp. Darren Grant explains.

world, as long as both computers are connected to the same network (such as the Internet).

Why do we need it?

You may be wondering why we need this protocol when this seems to happen without any fuss every time you go to a web page. We say without any fuss in the belief we aren’t using Windoze. If you’ve ever used Internet Explorer on a PC you may well have experienced quite a lot more fuss, even the infamous Blue Screen of Death.

Ftp is designed specifically for large uploads and downloads (an upload is

it to a lower page, if my memory serves me correctly.

In short, ftp can be used for uploading data files to another computer for backup, for downloading public domain programs from software deposits such as Sunsite (src.doc.ic.ac.uk) or for uploading a website to a server.

Most free webspace providers (GeoCities, AngelFire, Xoom, YellowPages to name but a few) use some form of web-based upload (for security) but if you are paying for webspace or you have webspace included with your ISP (Demon,

Pipex, FreeServe etc), the chances are you will only be able to upload pages through the use of ftp.

Ftp has two sides to it: a daemon, (standing for Disk and Execution Monitor) which in Unix is generally called ftpd, which sits on the host computer (the computer you are connecting to) and multiple clients which connect to the daemon.

If you're not too sure of the relationship between the two, imagine an ftp client to be to an ftp daemon as an http client (a web browser, such as Fresco or Netscape Navigator) is to an http server (such as Apache, the free —and most popular? —web server for Unix and just about every other platform under the sun).

Unlike the web, you will always need to enter in a user name and password when accessing an ftp site. However, any public sites will allow you to log in with the user name 'anonymous' (or even easier, just 'ftp') and your email for the password. No, you won't always be forced to enter in your email, but it's polite. If you're downloading really dodgy stuff and you want to remain anonymous then

just make up a password like foo@fubar.org. The most that's ever done is that the password is checked to be in the correct format for an email but remember that nothing you ever do on the Internet is completely anonymous —your activities can nearly always be traced and if you're clever enough to stay really well hidden then you probably won't be reading this article ;-)

ftp clients for RISC OS users

In order to connect to an ftp daemon you will need an ftp client. Try FTPc from

www.c-granville.freemove.co.uk or The ARM Club's or Argonet's ftp client. They are generally quite easy to use, especially the more graphical ones, but even if you are stuck with DOS's plain-text Unix-ripoff (well, imitation is the greatest form of flattery I suppose) don't be too alarmed as a simple summary of the commands will show they are not particularly different from the Acorn CLI system.

Also, if you can't quite remember the order of parameters to a command, then generally using that command without parameters will get the ftp

client to prompt you interactively for the information it needs).

Here is a listing of all the commands DOS ftp supports:

!	glo	put
?	hash	pwd
append	help	quit
ascii	lcd	quote
bell	literal	recv
binary	ls	remotehelp
bye	mdelete	rename
cd	mmdir	rmdir
close	mget	send
debug	mkdir	status
delete	mls	trace
dir	mput	type
disconnect	open	user
get	prompt	verbose

These are all one-word commands with one or two parameters following. Opposite is a description of some of the more useful commands.

The asc and bin commands are very important. A file must be uploaded or downloaded in the correct mode for the transfer to work correctly. It's not

usually the end of the world if a plain text file is uploaded in ASCII mode but I, for one, have downloaded more than one large program file in ASCII mode only to realise the error of my ways after half an hour of downloading — in this case the Quake 3 executable ;-)

As can be seen, it's not exactly the most difficult command line interface in the world to get used to and you can just use the help command to find out all the tens of commands I've not included here.

On a PC?

As I mentioned, Windoze <insert favourite variant here> comes with a DOS ftp program which is enough for the basics. Likewise, any Unix or Linux distribution will also come with Unix ftp which will do the job for you.

Possibly your distribution also has nc-ftp (pronounced Nik-ftp) which is somewhat more powerful than any other ftp program I've ever seen; recursive uploads, downloads, resuming, blah de blah, the works. If you're stuck in Windoze, check out Cuteftp from www.cuteftp.com

open site	Open a connection to an ftp site
get file	Download a file from the server (or get remote-filename local-filename)
put file	Upload a file to the server (or put local-filename remote filename)
close	Close the connection to the current site
asc/bin	Change to ASCII or binary upload and download modes
mput	Put a directory using recursive putting. Not supported by all clients/servers
glob	Toggles file name globbing, which permits use of wildcard characters (* and ?) in local file or path names. By default, globbing is on
hash	Toggles hash (#) printing for each data block transferred. The size of a data block is 2048 bytes. By default, hash mark printing is off
pwd	Displays the current directory on the remote computer
append	Appends a local file to a file on the remote computer using the current file type setting
lcd	Changes the working directory on the local computer. By default, the working directory is the directory in which ftp was started
bell	Toggles a bell to ring after each file transfer command is completed. By default, the bell is off
ls	Displays an abbreviated list of a remote directory's files and subdirectories.
bye	Closes the connection
mdelete	Deletes (multiple) files on remote computers
rename	Renames a remote file
cd	Change the remote directory (in Unix format, so directory separators are /)
rmdir	Remove a remote directory
mget	Get multiple files from a remote directory
mkdir	Make a directory on the remote computer
delete	Take a wild guess...
help	ask the ftp client for help —try also help command

which is probably the best you'll get for no money and a serial crack off the Web. Feeling moral? Twenty bucks will sort you out with a license, but check out www.cdrom.com, www.tucows.com and any other favourite software archives for alternatives.

What about doing it with a web browser?

Most web browsers support the ftp protocol as well as the http protocol used for transmitting web pages down the line. Try entering `ftp://sunsite.org` into the URL of Netscape Navigator, Internet Explorer or any of the Acorn browsers (I'm not sure which ones support it due to my modem having gone walkies).

Note that if you connect to an ftp site in this fashion, your browser will have connected as 'anonymous' and, if you've so configured it, will have sent your email down the line as the password (the default behaviour for most industry-standard browsers). If you need to connect as a user, the format for the URL is as follows:

`ftp://username;password@site`

So, for instance,

`ftp://joebloggs;10downing@ftp.le
galofferings.org`

Well, that just about sums it up for ftp. There's really not much to say about it. It's a simple protocol to use and one that is commonly used on the Internet.

Any questions? Give a yell to:
darren@armclub.org.uk

Member's Ad

For sale

Various Acorn machines

A3000s, A420s etc. £50 ono each.
Buyer collects.

Chris Price

Merton Court School

38 Knoll Road

Sidcup, Kent DA14 4QU

Tel: 0208 302 4078

Email:

chris.mertoncourt@argonet.co.uk

Return Of The RISC OS Show

Last year saw The ARM Club enter uncharted territory with the organisation of a major two-day show. Over the years, the Club had organised many one day shows from local 'church hall' events to the larger National Motorcycle Museum Show in Birmingham.

now Wakefield) in early Summer. This had given dealers and developers two well-spaced major shows to market their wares and talk to customers.

The decision was taken that The ARM Club would mount a two-day Autumn

The big Autumn show is back, at last year's successful Ascot venue. John Sawyer tells how it has been organised and looks forward to some of the highlights.

The Wakefield Acorn User Group has, for four years, organised the superb Wakefield Show and has proved that there is a real demand for bigger events. Virtually everyone in the RISC OS/Acorn market exhibits at Wakefield, enabling visitors to see all the products and talk to the dealers and developers.

For many, Wakefield has become an annual pilgrimage but those in the South bemoaned the lack of a suitable show to replace the greatly missed Acorn World. This had traditionally been held in the Autumn; the Northern show (originally Harrogate,

show at a suitable venue. Acorn World had been at various locations around London but all suffered from poor access and parking was usually non-existent or very expensive. Eventually the Queen's Stand at Epsom Racecourse was selected as a suitable venue for the show.

Easy access

This is close to the M25, providing easy access, especially for visitors from the Continent, with the venue only two hours from the Channel Tunnel. There is ample parking and this prestigious venue is in a superb setting above the North Downs.

Naturally we hoped exhibitors and visitors would not have time to admire the view!

The Committee took on the many tasks needed to organise such a large show but much of the responsibility was borne by Mark Smith. The Club backed the show financially but it soon became obvious that enough exhibitors had been signed up to ensure the show would be financially sound.

Euphoria

The success of the show is now history but few will forget the euphoria of the first day, from the queues outside to the throng round each stand and the packed theatre.

More than a thousand people came that day and many exhibitors had to re-stock overnight.

Diana Rawnsley of RComp said “We sold out all of our Internet products — one by 2pm on Saturday”. Other exhibitors were equally complimentary: “Truly excellent” from Aaron Timbrell of iSV and “A very successful show” from Roy Heslop of RiscStation.

Success

After the success of last year it was only natural that the show would be repeated in 2000. Mark had done an excellent job with RISC OS 99 but in fairness it was necessary to spread the load more evenly.

The core of the organisational team is drawn from The ARM Club but two local user groups, Surrey and Sussex Acorn User Group and RISCOS User Group of London, have also been recruited to help. As a consequence the show team is:

Co-ordinator: Mark Smith

Venue and theatre: Rob Brown

Shell scheme: Toby Smith

Exhibitor contacts: Mark Smith and Ralph Sillett

Publicity: SASAUG (led by John Sawyer and Geoff Arnold)

Transport and first aid: David Ruck

Tickets and passes: Tom Hughes

Helper organisation: ROUGOL (led by Dan Shimin and Andrew Harmsworth)

Treasurer: Simon Burrows

The venue to be used is, once more, the Queen’s Stand at Epsom Racecourse. Shuttle buses will run from the main station in Epsom

(Please note, *not* Tattenham Corner or Epsom Downs).

By June the list of exhibitors was rapidly growing. Those planning to attend include:

Spacetech
RiscStation
Castle
CTA Direct
RComp
Cumana/Cannon Computing
Icon Technology
Softease
Akalat (Acorn Publisher)
APDL
Surftech
Archive
Warm Silence Software
Jonathan Duddington
Really Good Software Co
Acorn User
RISC OS Ltd
EFF
CJE Micros
iSV
Cerilica
The ARM Club

A big feature of the show will be the public release of the new RiscStation laptop portable RISC OS machine

previewed at the Wakefield show. Details will be available in the next month, while presentations on the machine will be given in the RISC OS 2000 Show theatre.

The RiscStation sponsored small exhibitor village is more popular than ever, with more than half the stands already booked. Other sponsors of the show are Spacetech and Acorn User.

Several of the palmtop community plan to be there including Palmtop magazine and leading Psion and other dealers supporting the growing number of RISC OS/Acorn users with such equipment. The planned implementation of RISC OS4 on the new StrongARM powered Psion adds to the relevance of the show for Psion dealers.

New exhibitors are being added all the time, so for the latest show information visit the Club web site on www.armclub.org.uk/shows/riscos/

The good news is that ARM Club, SASAUG and ROUGOL members can get in free on Sunday!

See next two pages for full details.

The

RISC OS 2000 SHOW

Organised by The ARM Club in association with SASAUG and ROUGOL

Saturday 21 October — 10:00 to 17:00

Sunday 22 October — 10:00 to 16:00

Queen's Stand, Epsom Downs Racecourse, Surrey

Tickets: £4 in advance £5 on the door

Free entry on Sunday for all members of ***The ARM Club***

- New hardware
- New software
- Presentations in the purpose built theatre
- Local clubs
- All the leading RISC OS developers and dealers

The RISC OS Show of the year

Sponsored by Spacetechn and Acorn User magazine

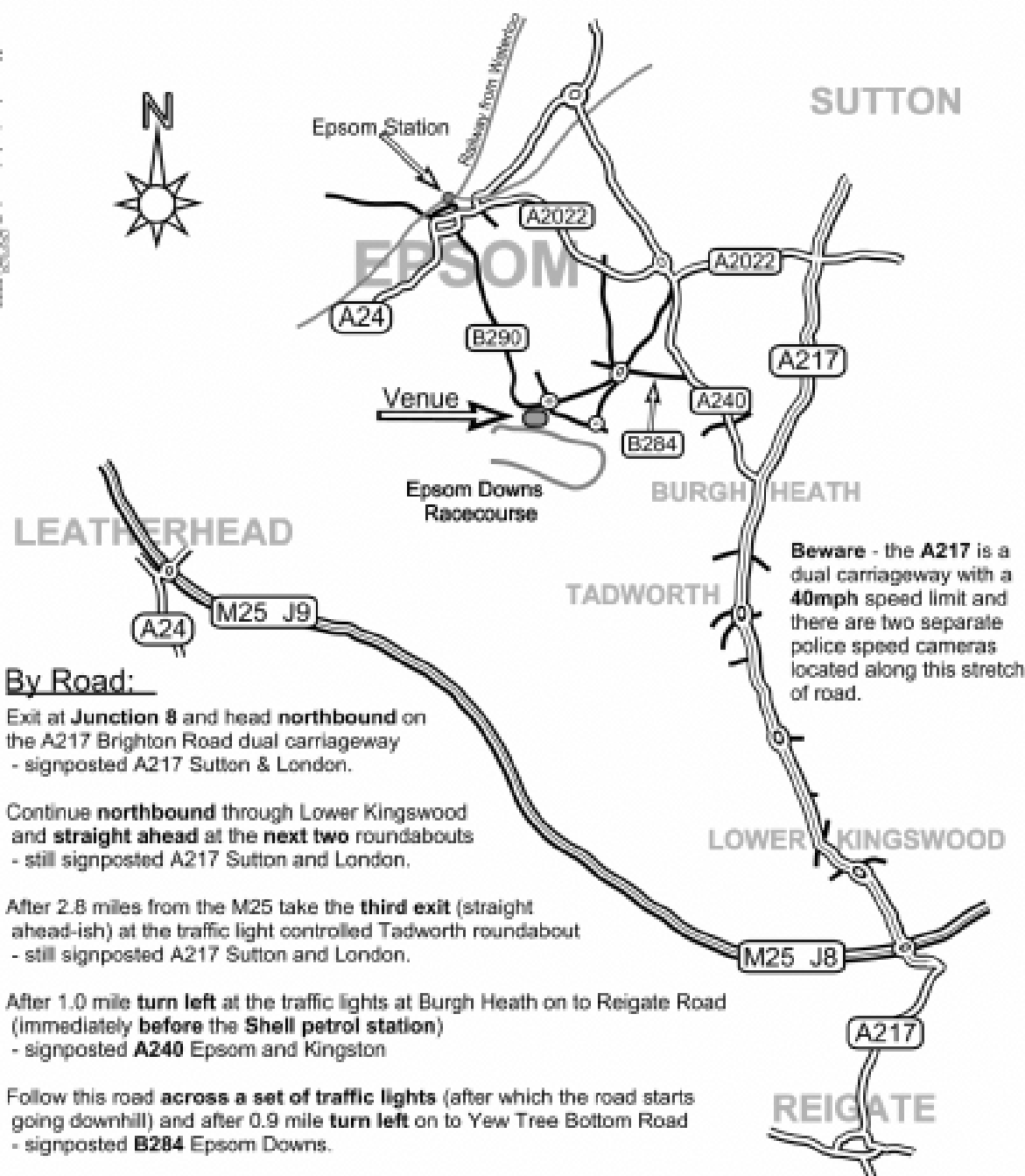
www.armclub.org.uk/riscos2000/

riscos2000@armclub.org.uk

Tel: 07050 679264 Fax: 07050 679263 (call rates higher than national rate)

Advance tickets from:

RISC OS 2000, Merton Court, 38 Knoll Road, Sidcup, Kent DA14 4QU



By Road:

Exit at **Junction 8** and head **northbound** on the A217 Brighton Road dual carriageway - signposted A217 Sutton & London.

Continue **northbound** through Lower Kingswood and **straight ahead** at the next two roundabouts - still signposted A217 Sutton and London.

After 2.8 miles from the M25 take the **third exit** (straight ahead-ish) at the traffic light controlled Tadworth roundabout - still signposted A217 Sutton and London.

After 1.0 mile **turn left** at the traffic lights at Burgh Heath on to Reigate Road (Immediately **before** the Shell petrol station) - signposted **A240** Epsom and Kingston

Follow this road **across a set of traffic lights** (after which the road starts going downhill) and after 0.9 mile **turn left** on to Yew Tree Bottom Road - signposted **B284** Epsom Downs.

After 0.5 mile take the **second exit** at the roundabout on to Grandstand Road - signposted Grandstand and Ashted.

After a further 0.6 mile the Queens Stand is located straight ahead adjacent to another roundabout - car parking will be signposted and marshalled.

By Rail:

Visitors Travelling by Rail **must** go to the main **Epsom Station** where a **free** shuttle bus will take you to the Show. Please visit our website for **updated** rail travel details. <http://www.armclub.org.uk/riscos2000/>

*Please note that **Epsom Downs** and **Tattenham Corner** stations will not be served by the shuttle bus.

RISC OS
2000
SHOW

Gill's Journal: Food For Spods

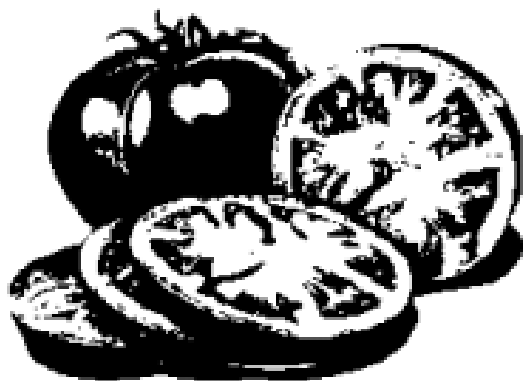
Fresh tomatoes, tomato ketchup, tomato puree, tinned tomatoes, tomato soup. What do all these have in common?

If you're as lightening fast as I'd hope from Club members, you'll have

So why, I have to ask, is it that most of the spods I meet will eat any of the above, bar the first; the fresh, the real version of tomatoes? Why do they need to be crushed, peeled, canned, creamed or packed with additives before your average spod will eat

What's round, red and fruity but can't be eaten fresh if you're a real spod? Gill Smith reveals the fruits of her research in the latest look into the pages of her Journal.

spotted that there's that word 'tomato' cropping up in all of them. I'm glad you spotted the similarity there. And based on that, you'd expect some similarity of contents—at least that a red, round fruit was somehow involved? Or is it just me?

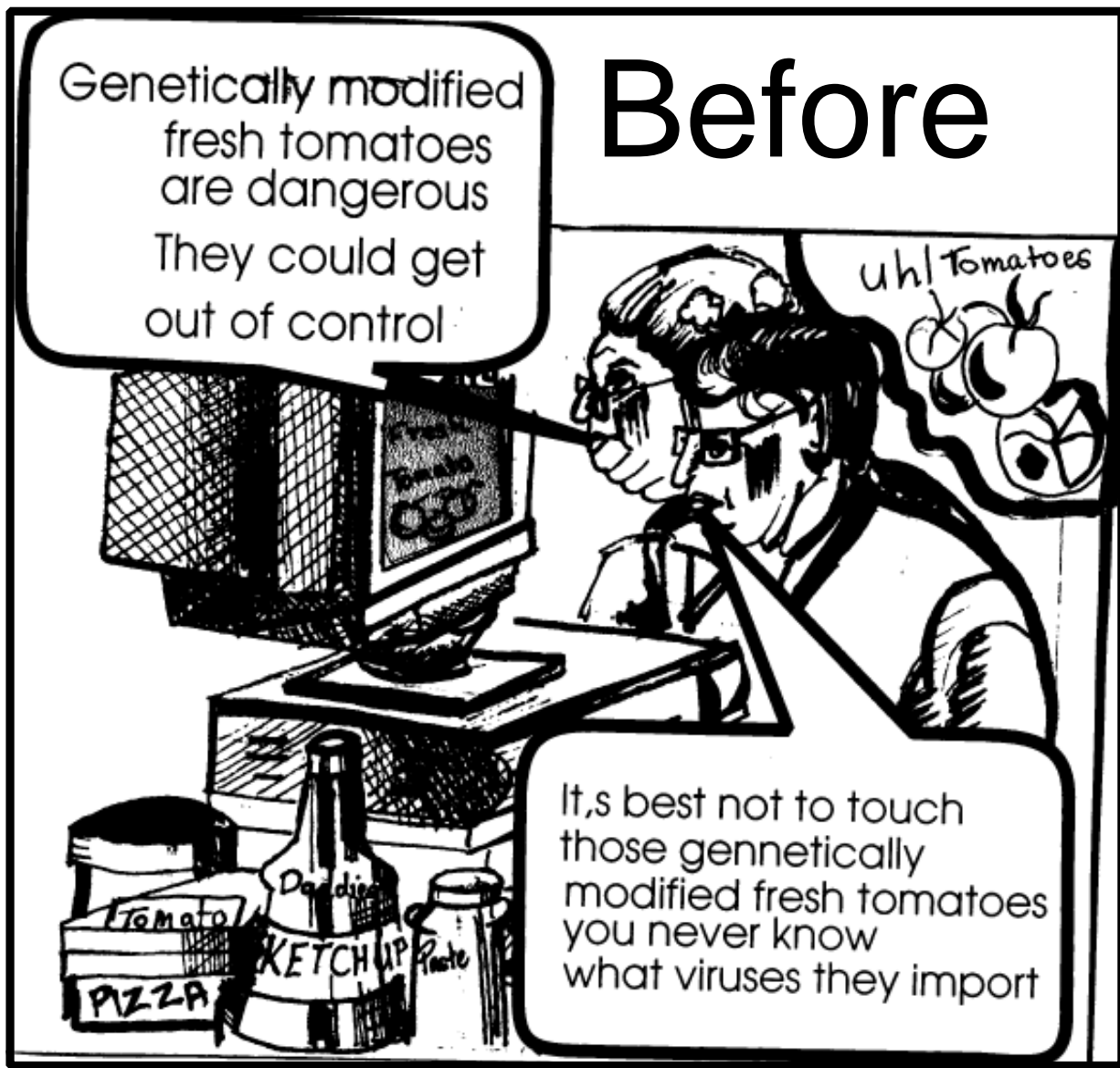


Recognise these? This is ketchup in its raw state

them? There's clearly something in the destructive process of repackaging the tomato that removes all its goodness and makes it suddenly palatable.

I've been trying to work out exactly what anyone could dislike about the innocuous tomato. Responses ranged from the articulate "It tastes nasty," to the spoddier "There's a danger that it might be good for me," with a quick tour via "Can't remember, but I've never liked them, ever since I was a child".

It warms your heart to know that these are the well-rounded individuals you



chose to steer The ARM Club through the murky waters of Acorn based catastrophes and attacks of Windows mania.

Eventually I concluded that the 'being good for you' bit must be the real problem. Tomatoes are packed with vitamins, nutrients, minerals and other stuff that's really good for you. It's that, combined with the fact that

in your fresh tomato, the pips are green. As I have been told many times by the various spods, green food is for girlies.

Mint ice cream

Such delights as broccoli, asparagus and mint ice cream are clearly a female preoccupation. Real spods don't eat green food. I presume this includes the new green ketchup that should be hitting the shops soon.



Lettuce, all million new varieties of it, and other such vegetables that frequently find their way onto the side of a plate beside a good steak, or a nice fatty pie, should be ignored. They can be pushed around a little, or cut up, in a pretence of eating something but only if the waitress happens to be nice. Due to the green hue of the pips in fresh tomatoes, they cannot be eaten, while the preservatives that allow your puree or tinned tomatoes to retain that brilliance of red also carefully hide the greenness of the pips.

Pale wan glow

It seems to come to this: eating healthy food might make you lose that pale, wan glow that allows fellow spods to recognise you as one of them, from a hundred yards across a crowded room. You can picture the scene — their eyes met across a crowded racecourse venue — there was something about the fluorescent I-sit-in-front-of-a-monitor-for-at-least-12-hours-a-day shade of her skin that instantly drew him. Moving swiftly through the sea of geeks he was suddenly by her side "Do you spod here often?"

Sinister

Now we've got to the bottom of why these poor misguided individuals dislike healthy food, it still seems that a specific dislike of tomatoes is inextricably linked with the affinity for technology. There's something more sinister going on than a mere anti-tomato prejudice. This needs more research.

My little brother used to hate tomatoes but my mother wasn't having any of it. Now aged 15, has the poor boy had his technical career unwittingly ruined by my mother insisting on feeding him his tomatoes fresh?

Or did his dislike of tomatoes just wear off when he realised that four older siblings were just too many to fight off the computer, so causing him to give up his technical leanings? Which came first, the tomato or the spod?

Force feed

Intrigued as I am, I feel it would be a little unfair to start experimenting on my cousin's small children. After all, one of the little dears isn't due until September. Mind you, if I force feed

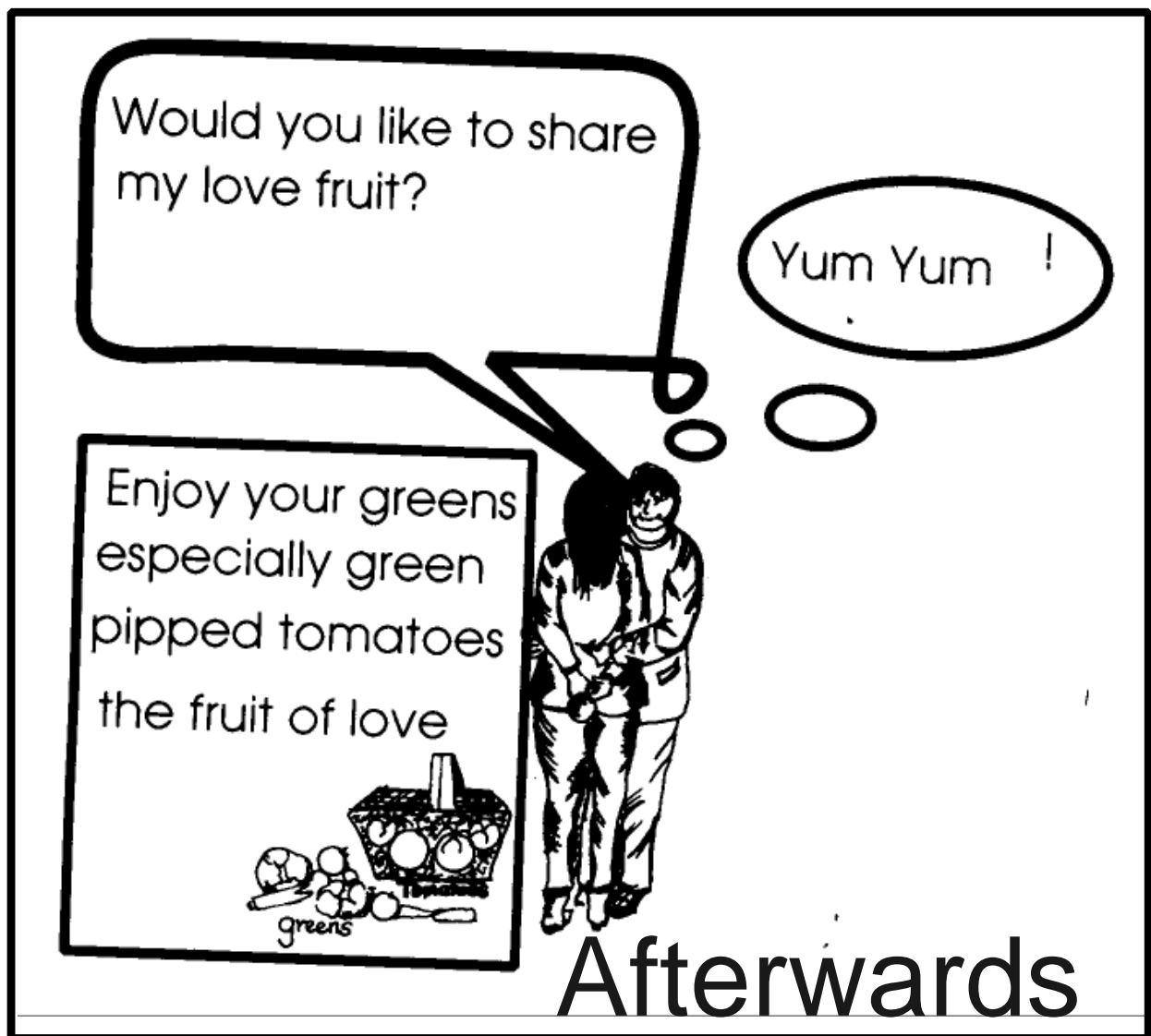
my cousin a diet of fresh tomatoes for the next couple of months, in order to get the little darling a very early start, will he turn out to love them, or to hate them and be the next Bill Gates? In terms of making his fortune that is, not in terms of being considered the devil incarnate. Well, maybe both.

As a control, of course, I really ought to ban his brother, currently exactly a year and a day old, from any form of fresh tomato. To make it really fair, he should have tomato ketchup on everything in sight and eat fresh tomato only when it's well and truly curried. (I hope I haven't ruined any spod's abilities to enjoy a vindaloo there —sorry to have to break it to you, but they do put fresh tomato into some curry dishes.

Next Steve Jobs

Again, the interesting question is whether depriving him will mean that he becomes the next Steve Jobs or will it lead to a passionate desire for fresh tomato and cause him to become an actor, or an Olympic athlete.

At this point, I should exonerate my husband, Toby. He complains that everyone assumes every sad 'spoddy'



thing in my columns is his behaviour. I ask you, why on earth would I stick to making fun of one spod, when we have them queuing up for ridicule? No, I'm the generous sort, I'll mock anyone.

Choose

Anyway, back to the case in hand. Toby not only eats fresh tomatoes when offered them, he'll even choose types of tomato in the supermarket!

And no, that's not the same as choosing brands of ketchup.

Yet, in spite of this fearlessness when it comes to that round, red fruit, Toby can out-techie some of The ARM Club Committee and is employed as a software consultant by a supposedly up-and-coming Internet site. He's even the man in charge of making sure their site runs properly on your Acorn.

Still a spod

So we've established Toby is still a spod and sent him off into the jungle of cables that is up-and-coming company's server room to do some serious research.

The first interesting specimen that he came across was the Operations Manager.

For the less techie among you, that means the bloke that keeps the really big computers up and running and he has nothing to do with your position on the NHS waiting list.

The Operations Manager also likes tomatoes. This is strange. Any man who, like Toby, delights in the arrival of a new big Sun machine the way new parents coo over a baby cannot deny being pretty technically minded.

Wives

So, other than a love for computers that are too big to fit in the lift, what do these two have in common? Wives.

Mrs Operations Manager is a lovely lady, in a non-techie profession, who puts up with the Operations pager

going off at odd hours of the day and night simply because some idiot did something strange to a computer.

Perhaps that is the key. All the previous advice I've offered about finding women may be utterly useless. Maybe all a spod needs to do to make him (or her) self more attractive to the opposite sex is to eat fresh tomato. I know it's a tough challenge but maybe, just maybe, it could be you getting your dream ticket to the girl of your fantasies.

Girl of your fantasies

OK, maybe not the girl of your fantasies, especially not yours Druck, that'd be illegal, but something coming faintly close anyway.

You never know, you may find it's so long since you tried a tomato that they aren't that bad after all —or at least the benefits may outweigh the trauma.

Perhaps the clue was there all along, as tomatoes are also called 'love apples'!

Cartoons by Jan Pearce

Mental Maths Olympics

The National Numeracy Strategy aims to improve pupils' fluency with numbers and encourage the development of mental calculation strategies with much less emphasis on formal written methods.

software has been installed to a hard drive enabling records to be kept, in the customary Sherston fashion.

The exercises are based on seven different Olympic style events:

Di Hillage finds how children can learn to do calculations in their heads and score their way to an 'Olympic' medal and a certificate of achievement.

To become fluent requires practice and this range of CDs from Sherston, currently available for Year 4 (eight to nine year olds) or Year 5 (nine to 10 Year olds), provides plenty of stimulating opportunities for such practice.

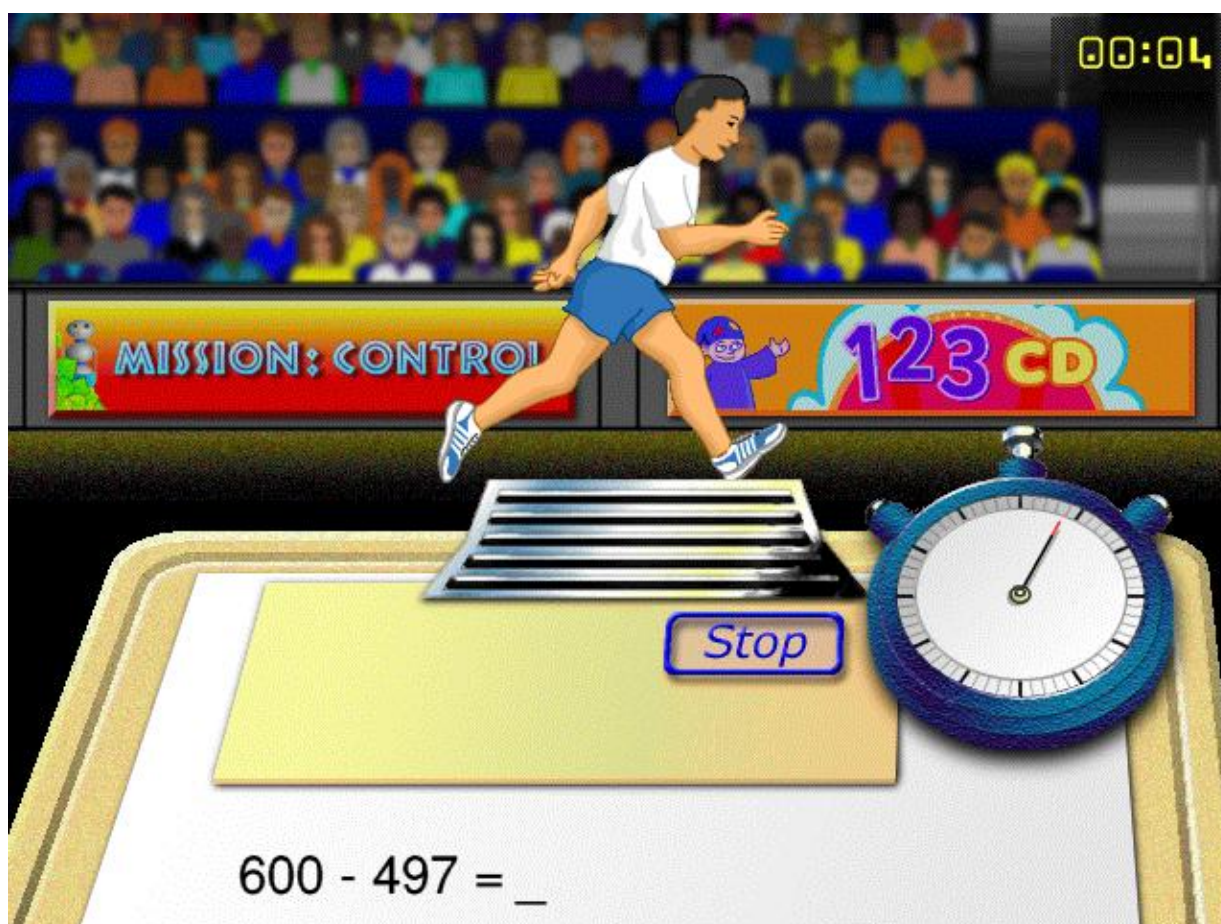
Each CD focuses on some of the calculation strategies for the year concerned, as listed in the Numeracy Strategy.

In the Year 5 example there are 21 such strategies each of which can be tackled at three levels of difficulty. A teacher control panel allows the teacher to set the strategies to be used for each pupil —providing that the

rowing, running, swimming, archery, ski jump, javelin and shot putt.

Once the user has chosen his or her event a coach will guide them through the strategy being used. Although the explanations are clear and accompanied by spoken narration and animated diagrams, it would seem very desirable for the teacher to have covered the strategy with the class beforehand, encouraging comments and explanations from the pupils as expected in this style of teaching.

Some pupils may still benefit from the coaching in the program but most would be better occupied in tackling the tasks and possibly developing



Solve the sum to be in the running for an Olympic medal

their own modifications to the suggested method.

Twelve questions are given for each event with appropriate visual and sound effects for correct and wrong answers until a final score is achieved.

A conversion chart is provided to convert these times, points or distances into medal points. The three best scores are used to compile each user's medal rating.

Some of the programs marketed as useful for maths practice contain so many sound and graphic effects that the user is distracted from the point of the exercise. This CD maintains a much better balance with sufficient motivation for the user to try to improve their scores.

A considerable amount of organisation by the teacher in setting individual levels and the strategies to be used will be needed to make full use of the idea. Nevertheless there is



Medals to be won with a printed certificate to prove it

every encouragement to do this with printed resources such as medal certificates, score sheets etc. included on the CD.

There is very little, if anything, in the Sherston catalogue that will not be of use in today's primary classrooms and this CD is yet another excellent example of a way in which computers can be used to help children learn.

Mental Maths Olympics
Year 4 & Year 5

Price: £49.95 +VAT each
(multi packs available)

Supplier: Sherston Software Ltd

Angel House, Sherston

Malmesbury, Wilts SN16 0LH

Tel: 01666 843200

Fax: 01666 843216

Email: sales@sherston.co.uk

Web: www.sherston.com

Now Read On (Part 2)...

Last month we looked at two of the four new magazines which have appeared this year: Foundation RISC User and RISC Nation. The other two preferred not to be judged on their first issue and so we agreed to hold back until the second one.



In our second look at the new magazines which have now appeared on the RISC OS scene, Peter Jennings sees what the second one on CD-ROM has to offer.

The first two copies of APDL's bi-monthly RISC World appeared in February and April, with a uniform appearance, in plastic envelopes and a similar format. There is no title page; the CD presents a collection of directories, some HTML pages, one titled *Index*. Clicking this brings up a brief Editorial welcome with links into a RISC OS section with sprites, an alternative non-RISC OS one with PNGs and JPEGs and a contact page which has details of how to get in touch, subscribe or place an advertisement.

Selecting the RISC OS section (or its alternative) leads to another copy of

the welcome message and an index of the CD's contents.

Both issues have the same basic sections, including *Regulars* comprising My World (Editorial comment), PD World, Gaming World, Puzzle World, Portable World and Disc World (supplied software). This section is followed by Features, Reviews, Programming and Advertisers, which of course all have different subjects in each issue.

There were two non-technical features in the first issue; one on using support services and a Wakefield preview. The second issue had more

techie features, on HTML authoring, TeX, and viewing PDF, as well as a look behind the scenes at Castle Technology and an article on using Ovation Pro.

Reviews covered a data analysis program and a font collection, plus some mini review in issue one and DrawWorks Millennium and the Programmers Reference Manuals on CD (reviewed by someone called Mark Smith) in issue two.

To sum up, it's an interesting read and the mandatory PD is up-to-date and useful. It would benefit from having a front end to provide an opening title page, for both presentation and ease of use for the less experienced.

There are six issues a year, reasonably priced at just under £3 an issue.

RiscAction/Smash

The fourth of the new magazines — the only one to be paper based — has changed its name from RiscAction (which, it was thought, suggested a games title) to Smash. We have not received a copy in time to review it in this issue.

RISC World

Annual sub (6 issues) £17.90 (UK)

Overseas £19.90

39 Knighton Park Road

Sydenham, London SE26 5RN

Phone: 020 8778 2659

Fax: 020 8488 0487

Email: subscriptions@riscworld.com

Web: www.riscworld.com

Smash (was RiscAction)

Price per issue: £4.50 (UK)

Europe £5.50, Others £6.50

(cheques payable to ProcAction)

40 Honiton Road, Romford

Essex RM7 9AJ

Email:

david.bradforth@smashuk.com

The RISC OS Foundation

Annual Sub: £30 + £5.25 VAT

3 Clarendon Road

Cardiff CF23 9JD

Tel: 02920 492324

Fax: 02920 440071

Email: foundation@riscos.com

RISC Nation

Annual sub (12 issues): £15

(cheques payable to V A Evans)

72a Botley Road, Park Gate

Southampton SO31 1BA

Email: kezs@ukgateway.net

Coming in Eureka 36

(If it all arrives in time!)

In our next issue we hear how a network of different Acorn computers is used, with some very special and expensive peripherals, in the work of designing gliders.

There will be a look at the amazingly easy to use new spreadsheet and database which form part of the latest Studio version of Textease.

We have the next part of our new series on sed and awk, begun in our last issue, and learn how to write a simple but useful script.

We review the latest version of BEEBUG's Hard Disc Companion backup utility.

Remember Chocks Away and Architech? There's a sentimental look at some old favourites dating back from BBC and Archimedes days which may not be entirely lost to us.

Among the regulars, there will be some more Site Seeing around the World Wide Web, we'll find some more new computer games to play, there'll be another of our popular word puzzles and Gill will be revealing more of her innermost thoughts from the pages of her Journal.

And, of course, there will be more about the big RISC OS 2000 Show at Epsom.

Look out for it all dropping through your letter box in the Winter edition of Eureka.

Club contacts

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Members' technical help	support@armclub.org.uk
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Magazine	eureka@armclub.org.uk
Software	products@amclub.org.uk

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Editor: Peter Jennings

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

**The ARM
Club**

- The Club's magazine, 'Eureka', written by members, is published and sent free of charge four times a year.
- Free software to accompany articles in Eureka is available on the Club's FTP site or can be sent to members on disc.
- Free Technical Help Service. We will do our best to solve any problems which you may have, by email, letter, telephone or fax.
- Special discounts for Club members from well-known companies.
- Regional open days and shows are regularly organised by the Club. Other events can be arranged on request.
- Special offers at shows and open days.
- Regional contact lists of other members, available on request.
- Opportunities to get involved in the running of the Club itself.
- School and Affiliate Membership available on request.
- Joining pack includes an extra copy of a recent issue of the magazine and software.

Annual membership £12 (+£3 joining pack for first year)

Europe £16 and rest of the world £19

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

Email: info@armclub.org.uk Tel: 07010 709849 (Flexitel)