

The magazine for members of

The ARM Club

**Hands on
Omega Report**



**Voting on the Internet
in Council Elections**

**The RISC OS
Academy Syllabus**

**New Editors' plans
for Acorn magazines**

Issue 43 — Autumn 2002

Looking Ahead With Optimism

This issue of Eureka is one where we can finally look ahead to some imminent changes in what has seemed an almost stagnant situation in the RISC OS community since the death of Acorn.

First the Omega. So often in previous issues we have asked if Omega is finally about to appear. Now we at least have an expert assessment of what it will offer, based on an actual working machine, and MicroDigital say they have now set the release date, even if they are (probably wisely) keeping it to themselves until they actually have the computers to sell.

In addition, a RISC OS Academy has been formed, to offer lessons in BASIC, Wimp programming and HTML web design, and two Acorn magazines have named new Editors with new policies to stimulate their readerships.

Also, it seems, that those of us with an unloved PC taking up desk space beside our main computer will finally

be able to junk it when we get an Omega.

How? The answer lies in a component that has had little publicity in relation to its potential importance: a PC card.

Now many of us have a PC card in our Acorn computer already and haven't found it of very much use. So I was eager to confirm that this one really would be able to replace a separate PC machine.

The explanation — confirmed by David Atkins of MicroDigital and our own David Ruck (see his article on page 4) — is that the PCI card *is* a complete computer, with USB connections, which will run Windows software from within the Omega, making a second machine redundant.

Now all we have to do is to continue the (not so) patient wait we have all endured for so long but now with a little more optimism for the future.

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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Show Diary

The South East

RISC OS Show

Saturday November 2nd

**Guildford College
Stoke Road, Guildford**

(See pages 62 - 66)

The Midlands 2002

RISC OS Show

Saturday November 30th

**The National Motorcycle
Museum
Solihull, Nr Birmingham**

10am to 4.30pm

***There will be more
information in our
next issue***

Hands On Omega

I knew that MicroDigital were planning to be at the Dutch show with prototypes of the Omega, but I didn't want to get my hopes up. We've been awaiting another appearance since we last saw them at Wakefield 2000, with an early and

I cynically thought this may just be a ploy to retain interest in the project in case there were announcements by any other manufacturers. Luckily this is not the case and the Omega is alive and well, and close to completion.

David Ruck gets his hands on an Omega — working perfectly — and is delighted at what he finds but has some concerns about what drivers will be ready for it.

slightly flaky prototype, and rumours of attendances at other shows proved to be unfounded. But I'm pleased to say they were there in Holland, and it looks like good news at last!

Many months have passed with silence from MicroDigital and we all feared that money had run out and the project had been silently cancelled, as has happened before with RISC OS hardware projects. Just before this year's Wakefield show the silence was broken by a flurry of activity from David Atkins of MicroDigital, including a website update and many postings to newsgroups. As MicroDigital did not attend the show,

Both the Omega designers, David Atkins and David Prosser, were at the show and they'd brought along a couple of prototypes and spent the day surrounded by eager European enthusiasts and quite a few Brits that had come over especially for a glimpse of the almost finalised design. I had to wait until the show was almost deserted by everyone going to David Atkins's talk in the theatre, before getting my chance to see the new machine.

At first I wasn't sure I was looking at the right machine. After all, we've all seen a variety of stylish mini-tower cases containing RiscStations at



various shows, so could this really be it? Attached to the box was a nice 17" LCD monitor and on it was a RISC OS 4 desktop showing some very impressive Artworks and Vantage files being demonstrated. Apart from a different set of icons, it looked and worked just like any other RISC OS machine—but that's the point, it *was* working perfectly like other RISC OS machines; no display glitches, no crashes, no hangs, at least not while I was around. As David Prosser told me, the biggest anti-climax in the development of a new machine, is

Omega — working perfectly

when it finally all works. It then becomes just another RISC OS computer.

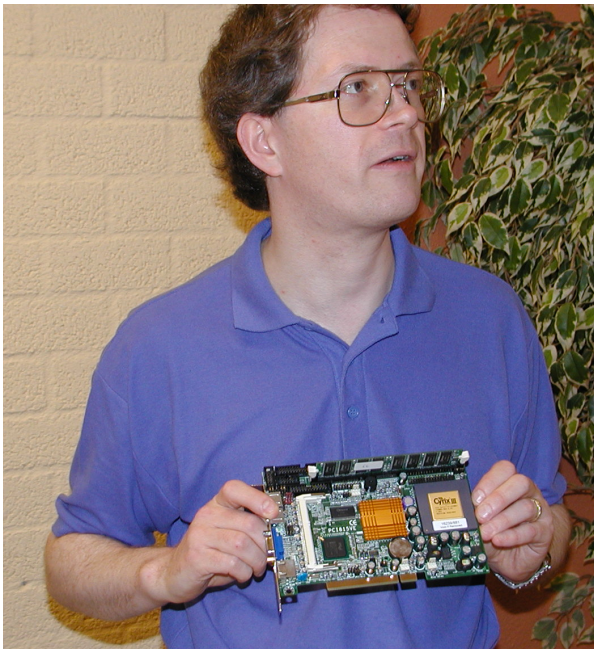
But of course that isn't quite true; this is no ordinary RISC OS computer. If you look at what is being shown; these were tremendously complex Artworks and Vantage files featuring tens of thousands of objects with full transparency and were being drawn very quickly. Sneaking a look at the display manager showed that these

were being rendered onto a 1280x1024 16 million colour screen and the list box showed that 1880x1440 in 16M colours is also selectable. I was unable to test this as it unfortunately exceeded the capabilities of the LCD monitor but I'm told that the final version will have a 10%-15% faster pixel clock that may allow resolutions of up to 2048x1536. Dragging the screen memory bar in Task Manager showed that 16MB can be allocated, which is enough for resolutions of that magnitude.

The prototype was fitted with 256MB of RAM and the machine will take up to 1GB, although I believe current versions of RISC OS may be limited to 512MB. In an attempt to squander some of the plentiful resources, I found some big 2000x3000 16M colour sprites from a digital camera. I noticed loading was far quicker than on a normal Risc PC and asked what it was using. Currently the drives are being used only in PIO mode giving around 8MB/s but the production machines will use the ATA100 standard with DMA, which should yield speeds of 20MB/s to 40MB/s depending on the drive.

The sprites appeared on screen instantly with none of the initial delay you get with Viewfinder that has to send the data over the slow podule bus. However, scrolling the large window was not as smooth as ViewFinder, which uses the AGP graphics card's on-board processor to do the work. Omega does have a custom chip called Lightning that will perform both 2D and 3D acceleration in a similar way to the graphics card but it was not enabled on the prototype.

While current StrongARMs have only 32bit wide 66MHz interface to memory, the Omega has a 64bit 133MHz interface which will allow the Lightning to perform the memory operations necessary to move and scroll the window faster than the processor can do it. Omega does not have VRAM so the video system has to share memory bandwidth with the processor but as the memory has 4x more bandwidth than the processor, depending on how cleverly it is put together, this should not impact on processor performance (as it does on ARM7500 machines), except perhaps at the very largest resolutions and colour depth.



Designer David Prosser with PCI card holding an entire PC

It was quite difficult to gauge the performance of the prototypes, without reference to some Risc PCs in a similar configuration. Not that you can get a very similar configuration as you'd need a standard RPC fitted with a Blitz to compare DMA based filing system speed, a Kinetic 300 to compare memory and processor speeds and a machine fitted with Viewfinder to compare the graphics performance. Just going on personal experience of using those systems, I'd say that from seeing Omega load and render the big Artworks and Vantage files, it's a good deal faster than a Risc PC with Blitz discs, Kinetic memory and a 300 MHz StrongARM. It's

quicker plotting to the screen than with Viewfinder but until the acceleration features are enabled you can't compare window moving and scrolling performance. It should be noted that the prototype is not even running at full speed yet.

The performance is one major selling point of the machine but the other is connectivity, as the Omega will feature industry standard interfaces such as PCI, USB and Firewire. This will allow the use of cheaper peripherals from the PC world, as long as drivers are written to allow them to be accessible from RISC OS. The Omega will have four PCI slots, of which one will be taken up by a SoundBlaster style sound card leaving three free for the user. I'm told that 10/100BaseT networking cards will be ready with the launch of the machine with SCSI following slightly after.

I have a picture of David Prosser holding a PC card (*above*). This is an entire PC on a PCI with the processor, its own memory, IDE and network interfaces and a graphics chipset. This contrasts with the Risc PC's PC Card, which was just a second processor

and used the main machine's I/O for disc and screen access. The advantage of the PCI PC card is that they are available with a wide range of processors right up to the latest Pentiums and operate at the same speeds as a desktop machine. However, currently there is no software to allow direct integration with the RISC OS desktop, like Aleph One's !PC did on the Risc PC. This means that you will have to plug the monitor's second input in to the PC card's VGA socket and get a keyboard and mouse switch to allow connection to both the Omega and PC card. It does reduce the usefulness of the PC card, to just requiring less space than two computer boxes, especially as PCI based single board computers cost around the same as a whole desktop machine from a box shifter. But it does have the potential, should the software be written, to allow the PC card to access other PCI peripherals you have and possible IDE ones such as CD readers and writers. Incidentally, there is a way to allow you to control the PC from a RISC OS window and that is to connect the PC card and Omega's network cards together and use VNC (Virtual Network Computer). This

does work quite well for driving normal PC desktop applications even over 10BaseT and should be a lot better with both machines supporting 100BaseT but is a little slow for some heavy graphic use such as PC games.

I believe one of the most important features for users will be the USB interface, as this will open up access to a vast number of "plug and play" peripherals, such as printers, scanners, digital cameras, mice and keyboards. It's not just a case of the falling costs of such equipment but rather it becoming increasingly difficult to find many types of devices that are not USB-only these days. The main challenge for MicroDigital is to ensure there are drivers for a good range of devices, so people can take advantage of these as soon as the machine is launched. But I got the impression that they have not yet decided whether to provide an API compatible with either the Castle/Pace or Simtec variants, or go their own way. I hope that they do choose to use one of the existing systems, so that drivers which have been written for the newly released Risc PC PSB modules and/or RiscStation laptop can be used.

Having a third system would be even more costly for third party developers and lead to higher prices.

I'm sure the big question most people will be asking at this point is: "Yes, I've endlessly read about the promised features for two years but when is it going to be launched?" MicroDigital were keeping quite tight lipped on this, as I gather there is quite a bit more development work before the production model is ready and then there is scaling up for a production run. September was mentioned as a possibility for the very first small run production machines but it could be a few months before any significant numbers were available. So those who haven't already got a deposit down may still have a bit of a wait. I'd be cautious about promising any as Christmas presents at this stage.

Well, to sum up, I'm very happy I've seen the machine and seen how well it works running RISC OS on the desktop. My only concern is will all the drivers be ready at launch, or will MD still be developing them, as occurred with the sound drivers for the Mico? Of course sound won't be

lacking on the Omega, as this is one of the developments that Mico was used as a test bed for, but will all the 2D and 3D graphics acceleration features be enabled and what choice of PCI cards and USB peripherals will you have? All die hard RISC OS enthusiasts would rather get the machine on their desks right now and start making use of it, rather than waiting for much longer. After all, we've been waiting for a machine which could get the best out of a StrongARM for four years since Phoebe was cancelled. But if this machine is to generate a real future for the RISC OS market it has to deliver on all that it promises and be a viable alternative to people who are considering moving to PCs.

I'm hoping that when everyone else can see the Omega taking the platform's finest software to new levels of performance, it will kick start both the hardware market, which has been suffering from the agonising wait for a new machine for far too long, and also rekindle software developers' interests in writing software to exploit the new power, as has happened with previous new generations of hardware.

Fingers crossed!

Making History On The Internet

At 9pm on Thursday 25th April I took a modest part in an historic event on the Internet. I became one of the first people in Britain to use a website to cast their vote in a local election.

Two wards in St Albans, including Verulam, where Eureka has its

This caused some people in the favoured wards to lose their votes when they tried to cast them the following week with the rest of the electorate.

This was despite a high level of publicity by personal mail, including a CD-ROM, with audio tracks and

Peter Jennings takes part in an experiment to bring elections up to date which gave voters the choice of four ways to ballot, with only one using pencil and paper.

palatial editorial headquarters (a desk in the corner of a room) were chosen for an experiment in offering a wider choice of ways to cast a vote. These included, by personal attendance at a polling station, postal and telephone as well as on the Internet.

Voters in these wards were allowed to vote a week ahead of the rest of the country and were given extra days to do so. Polling stations were open on Friday and Saturday and internet and postal voters could cast their votes from Thursday evening until Saturday.

videos which showed the alternative ways of voting, and a demonstration website.

Even those who went to a polling station in the traditional way found it a completely new experience. They could visit any polling station in the area — including one in Sainsbury's — and, with no pencil and paper on offer, cast their vote on a touch screen.

Postal voting, once hedged with restrictions as to who could use it, was now available to anyone on request and this was the only method where

WHEN YOU LIKE HOW YOU LIKE

The new voting system is easier for everyone, especially if you commute to work on polling day, if you have difficulty getting to polling stations, or you simply have other important commitments, such as a family to look after. Now, you no longer need to struggle to get to the polling station or even miss your vote because you are on a train or elsewhere. You can choose any time from 9pm on Thursday 25 April 2002 until 9pm on Saturday 27 April 2002 and vote at home by computer, when you are passing a post box, when you are near a phone, or if you prefer, at the polling station between 8am and 9pm on Friday 26 or Saturday 27 April.

The explanation offered to voters: the choice is yours

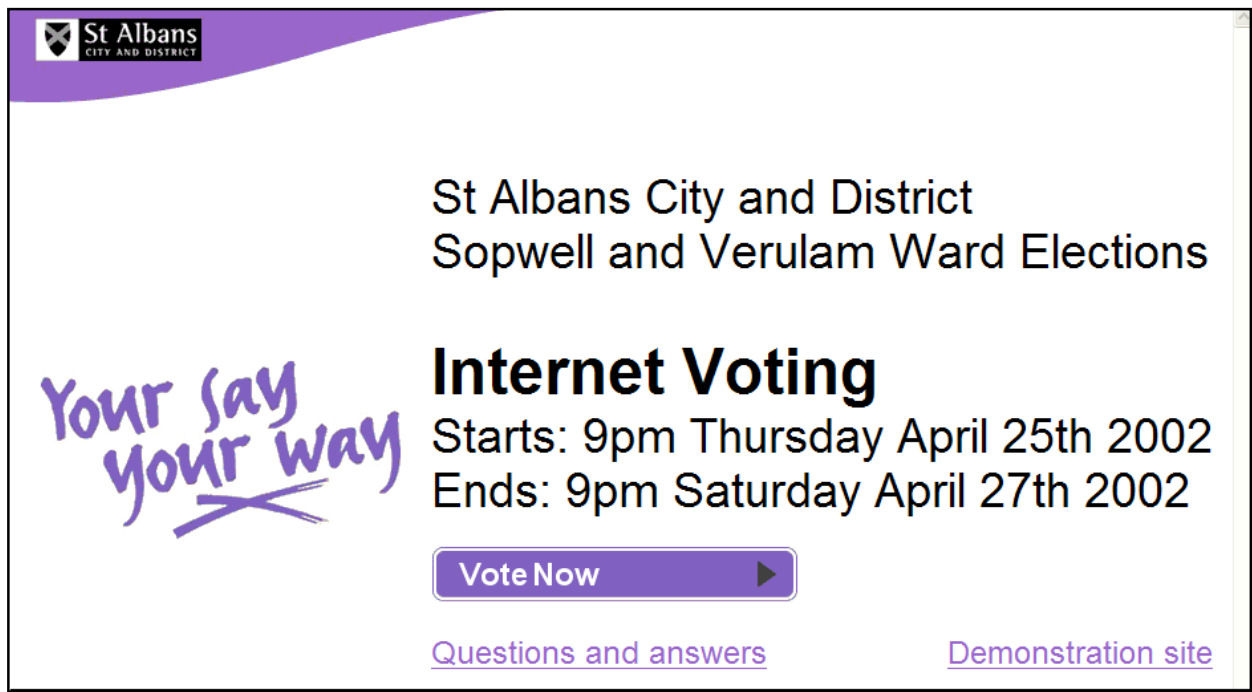
the traditional paper voting slips were still used.

Of course, when government departments decide to modernise they usually manage to make everything rather more complicated than before. So, instead of a poll card carrying just the register number which identifies you at the polling station, the card now had an additional 16-digit VIN (Voter Identification Number).

In addition to that, another piece of paper, sent separately of course, allocated a four-digit PIN (Personal Identify Number) which was also needed.

In the polling booth, the card is placed on a small scanner below the screen and the VIN is automatically read from a bar code on it. The PIN number has to be entered manually on a number pad on screen before you are finally shown the list of candidates for your choice to be made and then confirmed, all by touch.

Telephone voting could be done only with a touch tone phone. The first choice to be made was whether you wanted to use English or Bangla language. Then you had to press the two sequences of 20 buttons on the key pad to enter your VIN and PIN numbers.



The 'Your Say Your Way' website for Internet voters

Finally, a numbered list of the candidates was read out and the vote cast by pressing the appropriately numbered button and confirmed as instructed.

So, how easy was it vote with a computer? Not very!

The website was accessed at www.yoursayyourway.org.uk (why not just www.vote.org.uk?). This presented the first decision which had to be made: the not too difficult alternative of voting in English or Bangla. It then led on to a page (*see above*) which offered the choice of voting, seeing a demonstration or

reading a selection of questions (which might have been frequently asked if anyone had known enough to raise them) and answers.

VIN and PIN numbers both had to be entered of course then, finally, you could vote (or at least attempt to).

The final page all looked fairly straightforward with a list of candidates with their party affiliations. You voted by clicking on a grey button beside the appropriate name. You could then ponder your choice and change it by clicking on another if you wished or abandon the whole thing and exit. Otherwise you selected

‘confirm vote’ and awaited being told that your vote had been accepted.

Being a (reluctant) PC user I was not too surprised to be told a couple of times after I had clicked on my choice that I hadn’t voted. Then having the computer hang up for a time was all very familiar. Eventually, after a long wait, I was told that my vote had finally been recognised.

My wife is not a computer user so I went through all the preliminaries and set up the voting page for her. She made her choice —not confirmed. She tried again, and again and several more times before the website froze completely and my wife gave up and decided to go to the polling station the following day.

In the school hall, the usual row of polling booths had become separate kiosks furnished with the touch screen computers and with folding wings at each side which were closed behind the voter to hide their choice.

A group of men in suits and a casually dressed professional spod were in attendance along with the usual election staff.

One of them showed my wife what to do. Her polling card was put on the scanner below the monitor to enter her VIN number and the screening wings were pulled across. She punched in her PIN, touched the chosen candidate’s name then touched the confirmation frame.

My wife, being unfamiliar with PCs, is not used to the long waits we have all got used to enduring with Windows. Nothing appeared to happen so she repeated her vote. Still nothing so she tried again. The spod rushed over and, carefully keeping out of sight of the screen, advised that the repeated votes had just restarted the wait for confirmation all over again. Finally, another attempt, another wait and the vote was accepted. Democracy had triumphed over software.

Two months later it was announced that, after careful consideration and despite a drop in the number of people voting, the experiment had been declared a success.

Let’s hope they get some better software next time it’s tried.

The RISC OS Academy

The purpose behind the Academy is two fold; firstly to encourage and help people to learn programming using RISC OS and secondly to help the RISC OS market in general by encouraging and helping these people to continue to develop RISC OS

step to go from writing simple little 'single-tasking' programs to writing wimp based desktop applications.

Paul has been programming RISC OS since 1987 and Acorn computers since those early BBC days in 1982.

The RISC OS Academy is the brainchild of long time RISC OS advocate, Paul Vigay. Here are the ideas behind it and the courses he plans.

applications which in turn may benefit the bigger market.

The Academy was originally inspired by the number of requests received from people who missed the days of the BBC B when BBC BASIC was easy to learn and anyone could start to dabble in programming as soon as they unpacked the box and plugged their computer in.

Since those days, BBC BASIC has matured and expanded to include additional commands and facilities to write multi-tasking RISC OS applications. However, it can be a daunting and sometimes confusing

Over the years, he has taught programming to both children and adults, from total beginners to more experienced veterans.

The Academy seeks to help people make the transition from writing simple little utilities to developing wimp based applications.

Comprising a number of correspondence course style lessons, Paul will guide people from the basic principles through a number of structured lessons, which will allow people to learn and progress at their own rate and in their own time.

Benefits of The Academy are two fold. Not only do subscribers gain a whole year's access to the Academy website and resource centre but they can also gain access to personal help and advice via a one-to-one email service. Additionally a dedicated mailing list is available for all subscribers to swap notes and ideas with each other, with added

comments by Paul, where appropriate.

Membership of The Academy entitles people to access as many, or as few, of the courses as they like.

For launch, it's planned to make 12 courses available. These comprise:

General info and conversion/refresher courses

1. What is RISC OS
2. Introduction to RISC OS
3. RISC OS for Windows users
4. RISC OS for Apple Mac OS users

Introduction to Programming courses

5. Introduction to RISC OS as a development platform
6. Beginners' Introduction to BBC BASIC
7. Beginners' Introduction to Wimp Programming
8. Intermediate BBC BASIC
9. Intermediate Wimp Programming

Introduction to HTML Web Design using RISC OS

10. Beginners' Introduction to HTML Web Design
11. Intermediate level Web Design

Introduction to Internet Programming

12. Introduction to cgi programming using PERL



There's a welcome and full information on the Academy's website

Further courses are planned, depending on feedback and subscription levels.

Each course is structured via a number of lessons taking you from first principles right up to complete exercises or projects — again, progressing at your own level and speed.

Lessons are individually tailored so that you should be able to complete a lesson in one sitting — say a couple of hours. Of course, because it's all available online, you can take as long as you like and

additionally email Paul if you have any queries.

One additional benefit of the courses on BASIC programming is access to, and the ability to use, a growing library of useful routines which you are welcome to use in your own applications.

Over time this will expand into a comprehensive library of wimp routines, so as you learn more skills and feel more confident of writing your own applications, you can rapidly build new applications using previous knowledge and routines.

BBC BASIC

The choice to initially teach BBC Basic was deliberate and primarily triggered by feedback Paul has received over the years.

A lot of people who used to dabble in writing their own software back in the BBC B days feel confused or daunted by progressing onto wimp programming—which is actually no more difficult, once you know how.

The additional benefit of BASIC is that it's very quick to 'play around' with, purely because you can immediately run your program without the need for compiling or linking, as you would have to do with C or many other languages.

BASIC is a good starting point for people to learn the fundamentals of programming and then go on to either develop a career of programming or learn other languages.

BASIC is also built into RISC OS itself so everyone who owns a RISC OS computer has access to exactly the same environment as everyone else. So it's easier to help people when everyone is

starting from the same base position.

All you need to get started is a text editor and enthusiasm. Choice of text editor is also catered for in the introductory courses.

Membership

Membership runs for a year from when you subscribe and costs £50 for an individual membership or £75 for a family membership (two or more people at the same postal address).

Although the Academy will officially go live on 1st September 2002, anyone joining before that date will get a subscription that runs until 31st August 2003 — that is bonus time as if you'd waited until 1st September.

Additionally early subscribers can offer feedback and comments on the design and layout of the courses.

For more information, you can visit the Academy's website at www.vigay.com/academy/.

Designing Computer Games

Since the RISC OS game scene is not overcrowded at the moment I thought I would offer some encouragement with some ideas about writing computer games (partly based on writing for the game TEK).

Tips For Game Development

1. Write reusable designs

The design stage should be an important one. It does not matter so much what design technique is used as long as you stick to it. Things that go wrong can often be traced back to

Have you thought about writing games but not been sure how to go about it. B Aulton offers some ideas to help you avoid some design problems.

Andrew Weston has already written on writing games for RISC OS, in Eureka issue 36, so I will take a different perspective and deal with their design.

There is no recipe for designing a good game and no one agrees on the subject anyway, so feel free to disagree as I am just starting the ball rolling. I will assume there is more than one person involved in the game. Games written entirely by one person are self consistent, but there is a big danger you are writing a game no one else will want to play! This can be due to insufficient testing.

this stage if there was one. With insufficient design (the bottom up approach, that is thinking ARM code first), things get progressively more unwieldy and bugs creep in.

2. Think of creative ways the computer can be used to help

If any task, such as editing artwork, is repetitive, perhaps code should be written to automate this.

3. Know when to use existing code

Code from game programming books or other games may be easily adaptable to the game under development. It usually has fewer bugs in it and has been written in a

conventional style. Use standard memory management code if possible. It is very difficult to track down a memory problem so use a memory checker. You could start with fixed data sizes for items that do not take up much memory. This eliminates memory problems initially.

Such problems loom large at the integration stage. Just because your code works on its own and does not work when some new code is added does not mean the bug is in the new code.

4. Don't reinvent the wheel

If there are standard routines or procedures for fast bitmapping or a container class (that is list stack) use them. The risk of introducing bugs into the code by not using standard procedures is great. Tracking down bugs in game code is fraught with problems. Unfortunately you usually start with a simple routine that you decide does not need any standard code. You then keep adding to the code and never rewrite it. Ask around; can someone else in The ARM Club help? Can you get them to provide the ARM code?

5. Start small

Initial game design should not be too elaborate at this stage. Otherwise, a design could be developed right down to the last detail, only to discover there is a major implementation problem.

6. Be prepared to rethink designs

The final game may bear little resemblance to any of the initial designs. This is part of a learning process. Suppose the target machine changes, you now have legacy code written for the old machine that should be rewritten for the new one. There may be constraints on some code written for the old machine that now do not apply. If a constraint on memory or time no longer applies, consider rewriting to simplify the old code. The simplifications pay off in testing.

7. Don't over-design

There is a tendency to over-design in places and leave large gaps elsewhere. The latter can result in code being written based on false assumptions. Often these assumptions are reasonable at the time but incompatible with assumptions made elsewhere. If you

over-specify a problem you can over-constrain others and prevent their ideas being included. Suppose, for example, you wish to write a multiplayer game. You make assumptions about what data will be transmitted over the net and write code accordingly, specifying the parts of the game you know about. If the constraints on the game code due to the need to transmit data become incorrect, you are left with whole techniques and great swathes of code that become useless.

8. Toss around ideas

Games that several people have contributed to tend to be more playable.

9. Testing games takes time

Fine tuning the game may take as long as the whole design and development process. Not everyone needs to understand the raw code but an ability to make small changes to data can mean the difference between a playable game and one which isn't.

10. Variety is the spice of life

Just because you have always done things one way doesn't mean it is the best way!

A Bill Of Player's Rights?

1. Not to be killed off without warning

Give hints where possible, such as: 'enemy ship approaching'.

2. Make hints (if any) understandable

A player may get bored if he or she only ever gets to a certain stage or level by trial and error.

3. Ideally one should be able to win without experience of past lives

For example, if a mine field, flood or earthquake region is encountered without warning a player may get bored being killed off umpteen times before finding a way through or around. Another example would be to have a rocket launcher with a panel of buttons but no clue as to which is the right sequence to press.

4. To be able to win without foreknowledge of future events

Give clues to what lies ahead where disaster may be imminent.

5. Not to have the game closed off without warning

If there is somewhere that can only be visited once per game, such as a star that may shortly turn supernova

(Truffles beware!), give clues as to all that must be done there.

6. Not needing to do unlikely things

Such as: space travel is only possible by 'Chewing gum wrapper' or waiting in dull places for a supernatural being.

7. Not needing to do very repetitious things

For example, having to keep pressing a Fire key instead of being able to hold the key down.

8. To be allowed to get things slightly wrong and still win

A player might keep losing because he/she is doing the right things but in a sequence the game hasn't allowed for.

9. To have reasonable freedom of action

A series of events where the player is trapped and has very limited options gets tedious.

10. Not to depend too much on luck

A random element to a game may be interesting but too much gets very tedious.

11. Not to be given too many red herrings

Preferably give some rational reason for their existence in the game.

12. To have good reasons why something is impossible

If the lake consists of boiling sulphuric acid indicate so.

13. To know how you are doing in the game

Provide scores, encouragement and useful hints.

That should give you some ideas to think over. Now see what you can do to produce that must-keep-playing game.

Have you written any games, or other programs, for sale or as shareware or PD? We would like to review them in Eureka.

Please send anything you can offer to the Editor by email (if small enough) to eureka@armclub.org.uk or by post to the Club's usual address on page 80.

Artworks Crystal Module

I have been writing about Artworks for many years now. It has always been my favourite application, ever since Computer Concepts launched it on the Acorn market. It is intuitive to use and a considerable step up from the native !Draw; although I know not all would agree with me, particularly

on the latest 2Ghz Athlon with Windows XP, should I need to do some serious vector graphic work I nip into the wife's domain and sit in front of my old Risc PC and get on with it. It's fast, it's intuitive and it does the business better than any other system I know.

Christopher Jarman finally sees the view through his cockpit window in Artworks with the new Crystal module from Martin Wuerthner.

since Draw Works Millennium from Aaron Timbrell hit the streets!

Nevertheless, I think that the two products serve different purposes. !Draw is possibly aimed at Computer enthusiasts and Wuerthner's Artworks is for artists.

In the last few years, like many others, I have been forced to move across to the Windows PC. I have even grown to like it. However, like all RISC OS beginners we retain a huge fondness for our first love and in my case especially for Artworks. Even though I have Xara X installed

I have completely lost count of the number of upgrades to Artworks that Martin Wuerthner has made. My Artworks toolbar has 31 tool icons on it these days. I believe Martin now owns the product and the code so it should perhaps be called Wuerthner Artworks.

His improvements have actually turned it into a product which is vastly different from the original. The latest and possibly the most impressive, is the Crystal module, which finally brings transparency to what is already one of the best pieces of programming in the world. For as long as I can remember



we enthusiasts have been begging for a transparency aspect to Artworks. This was something that Corel and Xara possessed long ago. To the programming illiterates like me, it seemed crazy that *they* could have it and we could not. But now it is here.

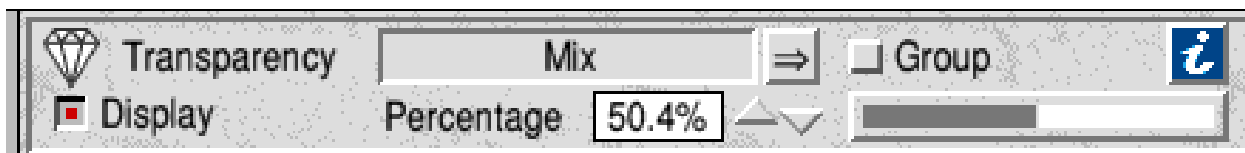
We can design a line of beer glasses and place one behind the other and see them —brilliant! We can draw those flashy cars like Len Hickman did all those years ago in Archimedes World, and make the windows ‘Seethru’ at last. Finally my aerospace models can have cockpits with real looking glass and I don’t have to fiddle about making it look transparent when it really is not.

The Crystal module comes, just like all of Martin’s other upgrades, in a

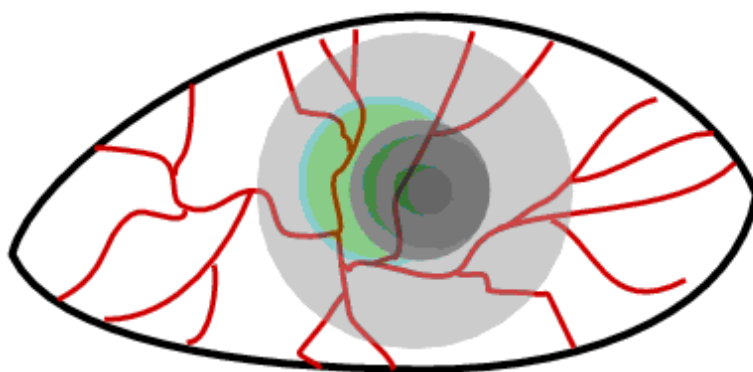
zipped archive by email. You then drop it into Artworks as per instructions. A nice looking crystal icon, looking a bit like a parachute, appears on the Artworks tool bar, and you click on it for the unique transparency info bar to pop up.

Here is a much shortened version of the extensive Help file which comes with Crystal, to give you an accurate idea of its powers.

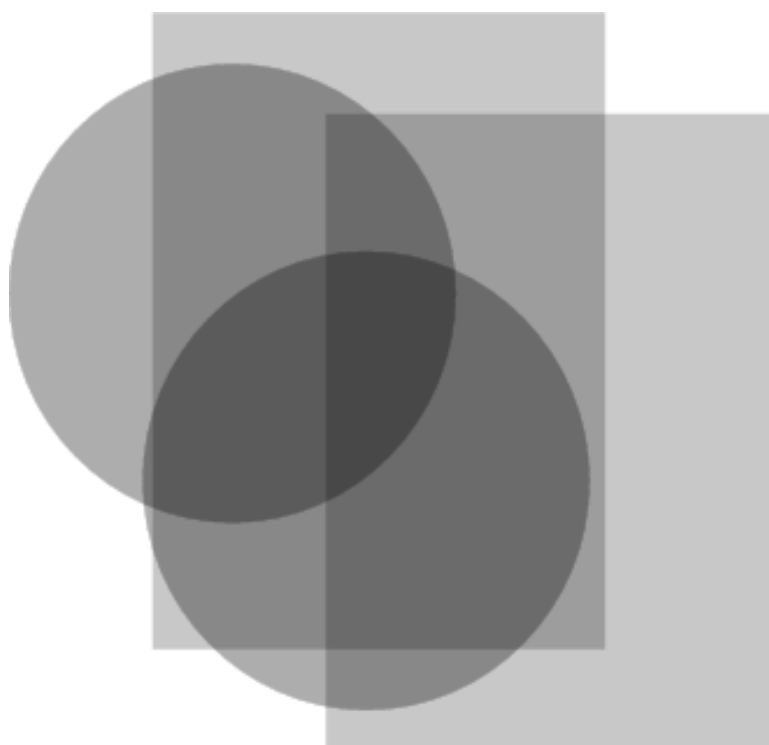
Transparency can produce many intermediate colours, so it is a good idea to switch to a true colour mode (32Kb or 16MB colours) for viewing documents with transparency. In order to apply transparency, select an object or several objects, then select the Crystal tool in the Tool Box. The Crystal Info Bar allows you to specify



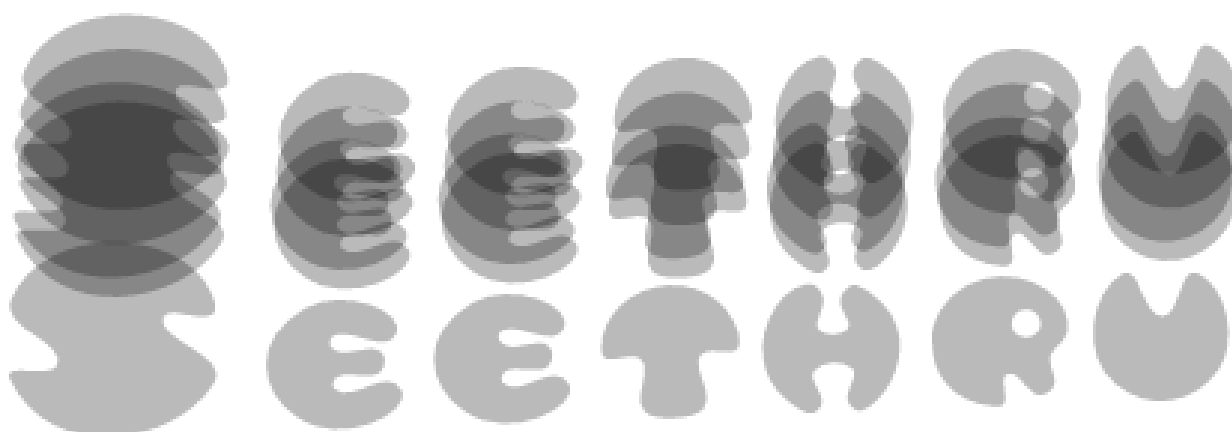
The info bar allows adjustment of the type and level of transparency



the transparency type and the transparency level (percentage) for the selected object(s). You can choose the transparency type from the pop-up menu next to the transparency type field (to the right of the word 'transparency').



The Crystal module gives you three types of transparency: Mix, Stained glass and Bleach. You can apply a transparency type and a level between 0% (fully opaque) and 100% (fully transparent) to any ArtWorks object, whether a shape, a sprite, or text.



Reproduction in black and white can give only a limited idea of the effects

Mix transparency

The colour of a transparent object is blended with colours displayed underneath according to the transparency percentage of the object. Mix transparency is probably the type you will use most.

Stained glass transparency

Stained glass transparency simulates light being filtered through stained glass, it is normally used to draw objects made of glass or other transparent material. The results, though physically more accurate, often look duller than those obtained using Mix transparency, so you might consider trying Mix as well.

Bleach transparency

Bleach transparency simulates additive colour mixing, that is several slides being projected onto a screen simultaneously. Several light sources contribute to the result, so the resulting colour is always lighter than any of the involved colours. Bleach transparency is normally used to add spotlight effects to a scene.

There are two ways in which Crystal can display group objects. Either, each individual object in the group is

displayed with its own transparency properties (this is the default behaviour) or each object in the group is displayed without transparency but the whole group is then finally displayed transparent on top of whatever was behind the group on the page. The second alternative is called 'group transparency'. Group transparency is a part of this module and is a very powerful feature that is not even offered by more advanced programs like Xara X on the PC.

It is quite impossible to do justice to Crystal in the black and white pages of Eureka. The effects are too subtle and too allied to colour, but be assured, it works superbly, and it will start a whole new enthusiasm in messing about with Artworks among all those lucky people who go for it.

Artworks Crystal module

Price: £35 emailed or +£2.50 post

Site licence: £87.50

Supplier: Martin Wuerthner

Mannheimer Str. 18

67655 Kaiserslautern, Germany

Tel: +49 (0)631 3608205

Fax: +49 (0)7034 928915

Email: martin@mw-software.com

Web: www.mw-software.com/

Site Seeing: Teachers' Aids

Over the next few issues of Eureka I'm planning to review some of the more interesting and useful sites that I come across on the Web.

Teachers are always looking for new ways to make lessons interesting and

of formats, including HTML, PDF and Word Documents. There is even a link to the RISC OS version of the PDF reader alongside the PC version. Also in the resource vault are a number of policy documents, which can be adapted.

In the first of a new series of looks at interesting Web sites, Sue Clamp suggests some helpful addresses for educational programs useful in schools.

these days much help can be found on the Web. So I'd like to kick off with a look at the ICTeachers website at icteachers.co.uk.

This site has been set up and is maintained by a group of teachers who were brought together by one of BECTA's email lists. It is a very comprehensive site with much to offer teachers and children alike. There is a comprehensive list of links, which have all been reviewed, and a resource vault which contains a huge number of downloadable worksheets.

These worksheets cover all areas of the curriculum and come in a variety

Another interesting part of the site is the photo library, containing photographs categorised by topic and which, as everything else that is downloaded from ICTeachers, can be used for free. The children's page on the site includes links to pages of Key Stage 2 SATs revision and practice questions, quizzes and cyberhunts.

There are many good sites that offer general resources for primary teachers. Among the best that I've come across are Gareth Pitchford's Primary Resources at www.primaryresources.co.uk and Mark Warner's Teaching Ideas for Primary Teachers at



The Internet's #1 site for K-8 teachers and kids

[PRIVACY POLICY](#)
[Kids](#)
[Free Games](#)
[Parents](#)
[Teachers](#)
[Quiz Lab](#)



Kids

[Search for Games](#)

Top Games

- 1) [Math Baseball](#)
- 2) [Stay Afloat](#)
- 3) [Tic Tac Toe Squares](#)
- 4) [Grammar Gorillas](#)
- 5) [Fun Match](#)

More Games

[Dare to be Square](#) **NEW**

[MathCar Racing](#)

[Where Is That?](#)

[Connect the Dots](#)

[One False Move](#)

Take a Quiz

[Take Your Teacher's Quiz](#)

[Take A Practice Quiz](#)

- [FunCards](#)
- [Brain Bowl](#)

Age: [6&under](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17&up](#)

[Numbers](#) [Words](#) [Universe](#) [Culture](#) [Extra](#)

Teachers



Quiz Lab

- Give paperless quizzes to your class.
- Quiz Lab automatically grades the quizzes and emails the results to you.
- Access thousands of assessment quizzes written by teachers like you.

[Teachers Lounge](#) [Curriculum Guide](#) [Standards Finder](#)

Parents



Participate in your child's education.

[Parents Place](#)

[FunBrain Game Finder](#) **NEW**

Find the perfect game for your child to play.

Parent-Kid Challenges

[Brain Bowl](#)

[Math Baseball \(2 player\)](#)

[Where is THAT? \(2 player\)](#)

Parent Quizzes

[School Age Children](#)

[School Age Children 2](#)

[Preschoolers](#)

[Toddlers](#)

[Infant Behavior](#)

[Infant Behavior 2](#)

www.teachingideas.co.uk. Both these sites provide a wide range of ideas and worksheets to cover all aspects of the primary curriculum.

Primary Resources has become a cluster of linked sites. Its sister site, Primary Extra, contains cartoons, poems and stories in HTML and PDF versions, while the Harry Potter Lessons site www.harrypotterlessons.co.uk contains just what it says on the label!

Funbrain (*see above*) offers something rather different. Here you have the facility to create online quizzes, tests or puzzles for whole classes to use and results are then emailed to you, saving you the trouble of marking them! There are two 'flavours' of Funbrain: Quiz Lab Basic, which is free, and Quiz Lab Pro, which isn't! You can use the free version for as long as you like and if you feel you'd like the extra facilities of the Pro version, you can upgrade at any time.

Sue's Block

				9
9		1		18
	1			9
				23
4	9		3	25
19	20	20	16	22

Try to fill in the missing numbers.

The missing numbers are integers between 0 and 9.

The numbers in each row add up to totals to the right.

The numbers in each column add up to the totals along the bottom.

The diagonal lines also add up the totals to the right.

Solution

[Visit Puzzlemaker at DiscoverySchool.com](http://www.discovery.com/puzzlemaker)

DiscoverySchool.com

(see left)

puzzlemaker.school.discovery.com/ is a puzzle generation tool where you can create and print word, number and maze puzzles of various kinds. Clip art is provided on the site that can be added to make the puzzle more attractive. You can also set up a *Custom Classroom* (free), which gives you the ability to save the puzzles you have created and access to other tools on the site:

Quiz Lab Pro allows larger numbers of children to use the tests (Basic is limited to 30 per class), and gives diagnostic reports on individual and class performance.

Funbrain can be found at www.funbrain.com. Puzzlemaker

Lesson Planner, Quiz Center (yes, it's an American site) and Worksheet Generator.

If you just want a comprehensive set of educational links that are all in one place, then you'll probably like Teacher Xpress

◎ Your Custom Classroom Tools and Files

Lesson Planner

◎ Lesson Plans

► [Go to Lesson Planner](#)

🔍 [View my lesson plans](#)

PUZZLEMAKER

◎ Puzzles

► [Go to Puzzlemaker](#)

🔍 [View my puzzles](#)

📖 [Puzzlemaker User Guide](#)

Quiz Center

◎ Quizzes

► [Go to Quiz Center](#)

🔍 [View my quizzes](#)

📖 [Quiz Center User Guide](#)

📖 [Quiz Center Tutorial](#)

Worksheet Generator

◎ Worksheets

► [Go to Worksheet Generator](#)

🔍 [View my worksheets](#)

📖 [Worksheet Generator User Guide](#)

www.teacherxpress.com. Personally, I find the page a little overcrowded with links but it is a useful site and commendably includes a link to the Castle site, listed as *Acorn*.

Other useful sites are: Teachers' Library, www.teacherslibrary.org.uk; Teacher Resource Exchange, tre.ngfl.gov.uk; Leicester University curriculum resource links,

www.le.ac.uk/education/resources/cures.html; The School Page UK, www.theschoolpage.com; and Loopy Land, freespace.virgin.net/lara.savory.

Next issue Sue looks at websites dealing with literacy. If you would like to know about sites on any subjects which interest you, email or write to the Editor at the addresses on page 80.

ARM Arena

After years of waiting TEK 1608 by Artex Software has finally been released. This is the major development of the past few months and possibly of the last year.

waiting for a turn (you may remember this is how Exodus, by Jan Klose of Artex, operated). The scenario of the game is that you are in charge of military units in a future Earth where

Andrew Weston celebrates the long awaited release of TEK and brings the latest news of new and updated games to keep the RISC OS games scene active.

It's a game which has been developed for the most part on RISC OS hardware and software and for RISC OS specifically. So this time I'll be describing what you can expect from TEK, assuming you haven't got it already, and what I believe you'll find as its positive points and possibly what could be improved in the future. As always I'll mention news on other developments in the RISC OS games area of interest.

TEK 1608

Readers of this column will remember that TEK is a real-time strategy game which refers to the player carrying out actions immediately against the other player (computer at present) as opposed to

two global corporation battle for dominance in the production of a radiation-protection pill designed in the aftermath of a global nuclear war. The game takes an overhead, isometric view of the battle-area and you use your mouse to select units and give them orders. The orders can be in the form of general directions or search / guard manoeuvres. On encountering the enemy or enemy buildings the units will generally decide what is the best course of action: whether to destroy the building or to go to the assistance of a fellow unit under attack. This is thanks to clever artificial intelligence routines which have been a significant focus of the programming. Your overall objective varies however



TEK 1608 in action at last

and this is given at the beginning of the game although you can review it during the game thanks to a con-panel which gives several other functions including save-game as well as controls for the production of your own units from your buildings. Some missions are focussed on destroying enemy installations whereas others you will have to escort vehicles across dangerous territory or even rescue hostages! The range of tasks devised by Artex is varied and imaginative

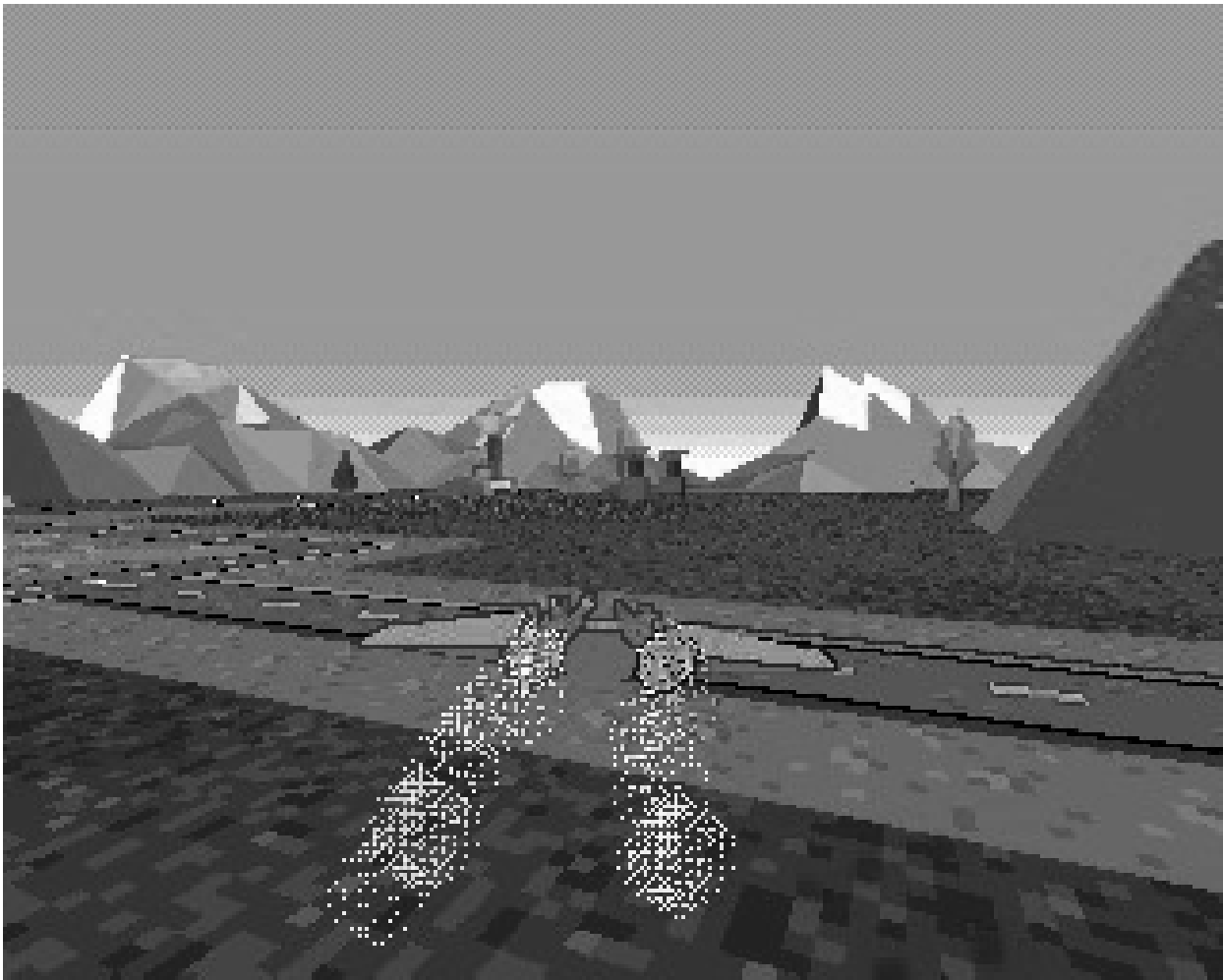
and along with the very well- drawn graphics and sound effects contributes to an urgent, warlike atmosphere. The strategy element soon becomes clear when you realise that you must get a feel of what amount of force you must use to attack the enemy and what you need to keep behind defending your HQ. One pleasing element is that as you progress through a level defeating more and more enemy the attacks on your HQ seem to occur less and so

you can bring forward a greater amount of your overall attacking force. On some levels you will find that you have very little force available and therefore you must adopt a different strategy! There are further surprises that await that I won't go into (or haven't yet discovered!) but it all contributes to the appeal of the gameplay. At first I found it difficult to adopt an effective strategy but after a few attempt at the early levels this became clearer and was a rewarding experience.

On the downside there have been stability problems and possibly this is on later versions of the operating system (RISC OS 4>) but Artex are determined to resolve this and are releasing updated versions of an easily-applied patch to solve such problems as they are reported.

Nit-picking further it can be frustrating that some units appear to get confused and block each other when they are needed urgently elsewhere. This usually requires careful movement of individual units when there are complex terrain obstacles but is not so insurmountable as to detract from the enjoyability of the game.

TEK is supplied in a smart package with manual and also with all of Artex's previous games (Ankh, Exodus, Botkiller 1 and 2) making this an incredible bargain for 30 UKP given that two of the included titles were previously full-price games. I personally really liked the detail that Artex have instilled into the background of TEK - the story and the corporations representing the two sides in the game - something I think many RISC OS games have neglected in the past. It may seem like a peripheral and unnecessary thing to do but I have always felt it adds immensely to the game and is worth the effort. Overall I would recommend TEK to most fans of arcade games, not necessarily just real-time strategy game-fans. I say this as I believe Artex have succeeded especially in the crucial area of gameplay whereby the game requires a level of thought which is rewarding in seeing its outcome but not so difficult as to discourage the player from having one more game. One could almost say that you gain something extra from it each time you play. TEK is available from RComp Interactive and certain other dealers such as Liquid Silicon.

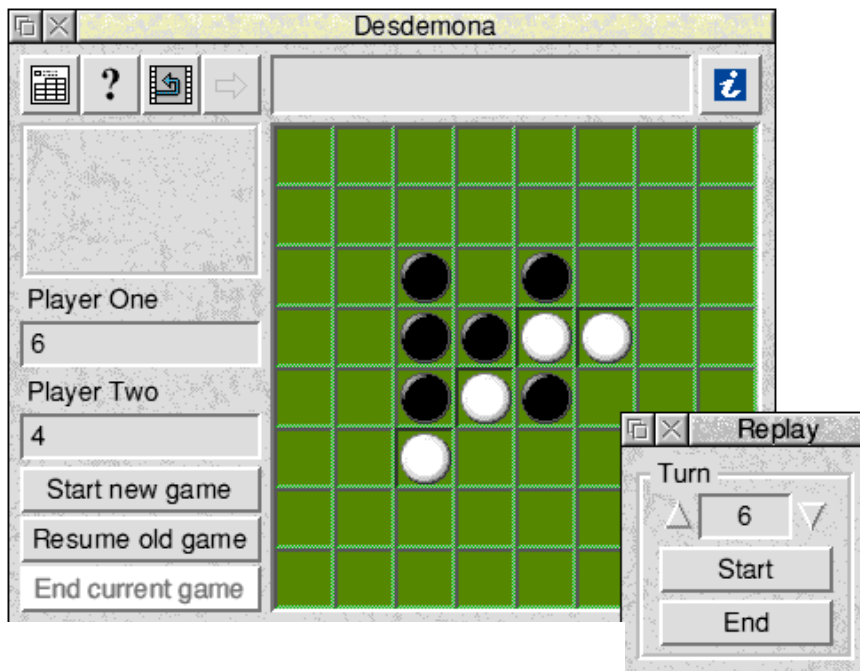


The upgraded Starfighter 3000 goes in to attack

MicroDigital Software

MicroDigital Software have recently launched a news bulletin on their website in which they have reassured the RISC OS community about the future of the Omega computer but also announced the establishment of a software brand which, perhaps in a similar way to Acorn in their early days, is intended to provide software for the new computer's initial user base. One division of the software

house will be dedicated to games and an announcement is to be made in the near future regarding a major new game for RISC OS. The game has in fact been in development for quite a while and will be released by the newly formed games-coding group *Flaymz* in which this author is personally involved and which was formed from the remnants of Visions of the Impossible (Sunburst, Superfoul Egg, Chaos Engine and the



Desdemona version of Othello

ill-fated EMD) when the founding member, Owain Cole, had to leave due to pressures of work. Both MicroDigital and Flaymz have regularly updated websites whose addresses are given below.

Starfighter 3000

One project which Nathan Atkinson from Visions of the Impossible took to market was the upgrading of Starfighter 3000 for use in StrongARM and RISC OS 4 machines. The technical work was done by Chris Bazley who maintains the Starfighter web-pages (see at end) and Chris is still actively developing the game further to add enhancements and editors to extend the lifetime of

the game. Several improvements in addition to greater compatibility were included in the re-release, Other Worlds, formerly by iSV Products, now sold by APDL. However Chris has recently announced the availability of a patch from his website to

add features such as positional sound effects (stereo and volume vary according to position relative to the player) and joystick support (something which was quite a noticeable shortcoming from the original). The full list of these impressive enhancements are detailed at the website.

Forgotten address

I mentioned last time that Superior Software are still selling certain games from their 8-bit range which you may like to use with emulators and appropriate hardware (5.25" discs, tape-reading hardware etc.). However I forgot to include the address which is as follows:

3 Manor Drive, Scawby, Brigg,
North Lincs DN20 9AX.

Tel: 01652 658585

Cost £10 inc P&P. Format 3.5 inch disc
(if lucky), otherwise 5.25 inch disc.

Little Yellow Moon

One piece of gaming news which appeared inconspicuously recently was the release of Desdemona, a shareware Othello game. which costs £4 to register from Little Yellow Moon software, who are based on the web at The Icon Bar at the address given at the end of this article. Their site indicates that they have several projects which are as yet unfinished so it may be worthwhile to call back at their site from time to time to see their progress.

Endgame

As I frequently say, the games scene continues to tick along steadily with a trickle of releases appearing throughout the year. Occasionally there is something really special and this time it was TEK which I'm sure will provide a lot of fun for many people for some time to come. More news on the MicroDigital Software announcement as I get it.

Contact details

RComp Interactive

www.rcomp.co.uk

Tel: 01925 757377

Artex Software:

www.artexsoft.com

(RCI are UK distributors for
Artex games.)

Liquid Silicon

www.liquid-silicon.com

Tel: 01592 592265

MicroDigital

www.microdigital.co.uk

Tel: 01274 618 774

Flaymz

www.flaymz.co.uk

Email: flaymz@flaymz.co.uk

Starfighter 3000

<http://starfighter.acornarcade.com>

APDL

www.apdl.co.uk

Tel: 020 8778 2659

Little Yellow Moon

www.lym.iconbar.com

Linux & RISC OS: Part 4

So you now have your Linux box set up and connecting to the Internet, but what about the most popular of the Internet services, email?

The core of the email setup on your Linux box is called the Message Transport Agent, or MTA for short.

Personally, I have stuck with Sendmail, making only minor amendments to the default configuration.

(Note that RedHat 7.3 comes with Postfix as an alternative MTA which can be selected on installation, should you wish to use it.)

In the final instalment of his comprehensive series, Mark Smith takes a detailed look at using email with Linux on your RISC OS computer.

The MTA is responsible for receiving incoming messages and forwarding them or ensuring that they are correctly delivered to a local user. All incoming and outgoing email is handled by the MTA.

The default MTA supplied with RedHat 7.1 is called Sendmail. This popular package is in widespread use on a whole range of UNIX platforms, but is generally considered quite difficult to configure. Alternative MTAs such as Exim are available for Linux, but you will have to install them yourself if you wish to use them.

In addition to the MTA you may wish to install other, optional, mail components. In order to make your mail available across a local network, so that you can read it from your RISC OS machine for example, you can install an IMAP server. IMAP stands for Internet Mail Access Protocol and is simply a means of storing all your mail in one place, but making it available to other machines on your network. I use the Cyrus IMAP mail server, developed by Carnegie Mellon University in the US to use as part of their Campus mail system but also freely available and

supplied on the RedHat 7.1 Powertools CD.

If you are using one of the majority of ISPs which will only allow you to collect mail using the POP3 protocol, you will also need a package such as Fetchmail in order to retrieve your mail from the ISP and send it to the MTA. This is not required if your ISP will deliver your mail using the SMTP protocol on connection, (e.g. Demon Internet).

Finally if you wish to read email on a RISC OS machine, you'll need an IMAP mail client. Messenger Pro Online from RComp comes highly recommended, but this is the one piece of software which you're going to have to pay for.

Cyrus IMAP Server

The first stage is to install the Cyrus IMAP server. First you need the Cyrus SASL library (for security/authentication) from Installation CD 1 if not already installed. Mount the CD and install the following from /mnt/cdrom/RedHat/RPMS:

```
[root@gandalf /root]# rpm -ihv cyrus-
```

```
sasl-1.5.24-17.i386.rpm
```

Then unmount the CD (remember to CD to a directory which isn't under /mnt/cdrom first).

If you have the RedHat 7.1 Powertools CD, mount the CD and install the following package from /mnt/cdrom/RedHat/RPMS:

```
[root@gandalf /root]# rpm -ihv cyrus-  
imapd-2.0.9-3.i386.rpm
```

If you don't have the Powertools CD, then you can download the package from RedHat's website:

www.redhat.com/swr/i386/cyrus-imapd-2.0.9-3.i386.html

Note that later versions of RedHat are not supplied with Cyrus, though you can still download the RPM from RedHat's website.

Having installed the package, most of the general configuration is controlled through two files in /etc:

cyrus.conf controls which services are provided by Cyrus, plus actions which happen at startup and in

response to certain events. You probably don't need to change this file.

imapd.conf defines the locations of the of the main configuration and message stores (normally /var/imap and /var/spool/imap respectively), plus the identification of admin users (e.g. root and cyrus) and whether anonymous logins are allowed (normally not). The final line in this file defines how the user authentication works and is set to sasl原因 by default.

SASLDB vs PAM Authentication

Most user authentication on a RedHat Linux installation occurs using the Password Authentication Module (or PAM for short). This includes, for example, every time you log in to the machine.

The Cyrus IMAP server can also use PAM. However, there is a complication...

It is normal on recent distributions for passwords to be stored in a 'shadow' password file which is accessible only to the root user. Although the passwords are encrypted anyway, this

is considered to be more secure. Unfortunately, the Cyrus IMAP server doesn't run under the root user. Instead it runs under its own 'cyrus' user, which doesn't have access to the shadow passwords file. As a result, PAM authentication will not work on the Cyrus server if you have shadow passwords enabled. This is a common cause of Cyrus installation problems!

If you wish to turn off shadow passwords, this can be done (as root) with the command:

```
[root@gandalf /root]# pwunconv
```

and re-enabled with:

```
[root@gandalf /root]# pwconv
```

Alternatively, you can use a separate password database for the IMAP server. This means that users will have a different password for mail (unless they are kept in step), but it avoids the problem detailed above.

To use sasl原因, the last line in imapd.conf must simply read 'sasl原因'. To set up initial sasl原因 passwords, use the saslpasswd command (as root) and enter the desired password twice.

For example:

```
[root@gandalf /root]# saslpasswd  
mark
```

Password:

Again (for verification):

Mailbox Administration

The basic setup is now complete and it should now be possible to start the IMAP server:

```
[root@gandalf /root]# service cyrus  
start
```

Starting Cyrus IMAP: [OK]

It is now possible to use the Cyrus Administration tool to set up some mailboxes and the available access to those mailboxes on a per user basis:

```
[root@gandalf /root]# cyradm  
localhost  
Please enter your password:  
localhost>
```

The password entered here should be the IMAP password for the root user. So if you are using `sasldb`, you must set up a password for root first.

Entering the command `'lm'` at the prompt will list all the folders that

exist on the server and may contain messages. At this stage you won't have any folders set up, but you can now create some:

```
localhost> cm INBOX  
localhost> cm INBOX.outgoing.mail
```

These commands will create an inbox for 'root' and an outgoing mail folder as well. Note that 'INBOX' refers to the user which we are logged in as. To create folders for user 'mark', you would enter:

```
localhost> cm user.mark  
localhost> cm user.mark.outgoing.mail
```

List the access rights to a folder as follows:

```
localhost> lam user.mark  
mark lrswipcda
```

Shows that user 'mark' has the rights to do everything to the messages in his inbox, but no other user has any access to it.

You may wish to allow user 'anonymous' access to create messages in the folders that you create as this may avoid problems

with the delivery of incoming mail later:

```
localhost> sam user.mark anonymous p
localhost> lam user.mark
mark lrsnipcda
anonymous p
```

User anonymous can create messages in the folder but can't do anything else.

Leave cyradm as follows:

```
localhost> exit
[root@gandalf /root]#
```

For more information about the available commands enter:

```
[root@gandalf /root]# man cyradm
```

Sendmail Configuration

Having set up Cyrus, we now need to configure the MTA so that it delivers local mail to the IMAP server for filing away in the folders that have been created. We are also going to allow for mail to be filtered into different folders, depending on the message headers. This allows you, for example, to automatically file away messages belonging to particular mailing lists, or messages sent by certain organisations.

Although the Sendmail has a very cryptic and often large configuration file in `/etc/sendmail.cf`, it does allow for a simplified configuration based on a macro language known as M4. By using this approach, it's possible to keep the detail hidden in the standard macros whilst still retaining a lot of control over the behaviour of the mail server.

On a RedHat 7.1 installation you will find a directory `/etc/mail` containing the mail configuration files. Within this, `sendmail.mc` is the macro based configuration file.

This file contains a series of lines, most of which are one of:

- * `include` — includes a specific macro file or files
- * `define` — specify a configuration setting
- * `undefine` — ensure that a particular setting is undefined
- * `feature` — indicate that Sendmail should work in a certain manner
- * `mailer` — specify the use of certain transmission methods / protocols

Anything on a line following 'dnl' is ignored, so you can use that to include

comments in the file for future reference.

Most of this file can be left as per the standard setup. However, the following changes may be useful/necessary:

1) If your mail is being delivered to you from your ISP using the SMTP protocol (e.g. Demon Internet) then remove (or prefix with `dnl`) the line which specifies that mail should not be accepted over the network. such as:

```
dnl DAEMON_OPTIONS( Port=smtp
,Addr=127.0.0.1, Name=MTA')
```

2) I have created a macro to send incoming mail to the Cyrus IMAP server via a procmail filter script. The macro (`filter.m4`) can be found in the supporting files on the website (`/etc/filtermail/filter.m4`), along with an example procmail script.

To invoke this, remove or comment the following lines from the default `sendmail.mc`:

```
dnl FEATURE(local_procmail)
dnl MAILER(procmail)
```

and ensure that you have the following towards the bottom of the file:

```
dnl Define mailers to be used:
dnl Filter local mail using procmail
and send external mail with SMTP
dnl
include( ` /etc/filtermail/filter.m4' )
MAILER(smtp)
define( ` confLOCAL_MAILER', ` filter')
```

Any changes to `sendmail.mc` need to be reflect in the full configuration file. To do this, enter the following:

```
[root@gandalf /root]# m4 /etc/mail/se
ndmail.mc > /etc/sendmail.cf
```

There are one or two other files that may need setting up in `/etc/mail`. Some of these may have been set up correctly as part of the RedHat installation, but it's worth checking.

Firstly, Sendmail needs to know where it is allowed to relay mail from. Relaying is the act of passing on messages destined for addresses elsewhere on the Internet and should be restricted to prevent anyone out there using your machine as a means of trying to hide the real source of the

messages they are sending. However, you do want to enable relaying from other machines on your local network, so that email can get out.

`/etc/mail/access` contains a list of hostnames and domains for which relaying is allowed. By default this will be the “localhost” (i.e. the server itself), but you probably also want to add other machines in your domain. such as:

```
chez-moi.org.uk    RELAY
```

After making any changes, rebuild the map database with:

```
[root@gandalf /root]# makemap  
hash access.db < access
```

`/etc/mail/local-host-names` contains a list of mail domains for which mail is delivered locally. In my case this shows:

```
gandalf.chez-moi.org.uk  
chez-moi.org.uk  
findon.demon.co.uk
```

This indicates that all externally addressed mail to `<anyone>@chez-moi.org.uk` is

delivered locally, but also that mail collected from my old Demon account (`findon.demon.co.uk`) should be delivered locally, as should mail from any processes running on the machine itself, which may deliver mail to an address specifying the full hostname, such as: `root@gandalf.chez-moi.org.uk`.

Note that any mail which is addressed to domains that aren’t listed here will be assumed to be external and sent on. As a result, failure to include all domains in this list can result in mail going round in circles!

Finally, restart Sendmail after making your configuration changes:

```
[root@gandalf /root]# service  
sendmail restart
```

Procmail filtering

The procmail filter delivers the mail into different Cyrus folders, depending on content or who has sent them. The filter script contains a series of rules, based on:

a) Who the original message was sent to. Sendmail supports addresses of the format `user+folder@domain` as

well as the more common user@domain. The folder may be used to specify a particular folder belonging to the user instead of their main inbox and the procmail script can contain rules based on that specified folder.

b) The contents of the message, normally entries in the header such as who the mail has been received from.

So, using my filter macro, a rule such as:

```
# Filter faxes into a public folder
#
:0
* ? test $USER = "root"
* ? test $FOLDER = "fax"
| /usr/cyrus/bin/deliver -e -m public.F
axes
```

Would filter everything sent to root+fax@domain to IMAP folder public.faxes, whereas:

```
# Filter 101CD mail
#
:0
* ? test $USER = "mark"
{
# 101CD
```

```
:0
* ^From:.*@101cd\com
| /usr/cyrus/bin/deliver -e -m Comm
ercial.101CD —mark
}
```

would filter everything sent to mark@domain into user.mark.Commercial.101CD if it has a From header indicating that the mail has come from <anyone>@101cd.com, regardless of whether a folder is specified in the email address.

For more information, there are several manual pages relating to procmail. This includes procmailex, which will give you some worked examples. For more information about the Cyrus deliver command, have a look at the deliver man page.

Messenger Pro

In order to read mail held on the Cyrus server from any machine on your local network, you will require a IMAP mail client. On the RISC OS platform, this is provided by the ‘Online’ version of RComp’s excellent Messenger Pro, though it may also be possible with alternatives such as ANT Marcel.

Setting up Messenger to work with your server is very straight forward.

When running it for the first time, it will prompt you to create a !NewsDir folder somewhere on your hard disc. Then simply enter your login name (a valid user on your server for whom you have set up an Inbox), email address, real name and organisation (which may be blank).

The installation will then prompt you for site identification and server details. Note that the hostname in the site identification section should be set to the name of the RISC OS machine (bilbo.chez-moi.org.uk in my case), the mail domain should be what follows the @ on your email addresses (e.g. chez-moi.org.uk) and the mail and news servers would normally be the hostname of your Linux server (e.g. gandalf.chez-moi.org.uk).

Note that the News server entry should be left blank unless you have installed a news server (e.g. INN) on your Linux server. Otherwise, you will be unable to log in using Messenger.

Once all that is set up, log in using your IMAP password and you should be able to see the contents of your inbox, if there is anything there.

Testing

Before opening up your setup to real incoming email, it's a good idea to test that it actually all works. The easiest way to do this is to send yourself an email.

It doesn't matter what you put in the mail. When you send it, you should see it arrive back in your inbox.

If you have problems, more information can be found on the man pages for Cyrus, Sendmail or Procmail.

Useful websites are as follows:

Sendmail: www.sendmail.org/

Cyrus: asg.web.cmu.edu/cyrus/

Procmail: www.procmail.org/

RComp: www.rcomp.co.uk/

In most cases you will find mailing lists or newsgroups that you can subscribe to and these are often a good source of help and information.

Receiving Incoming Mail

Having successfully tested that you can send mail to yourself, you need to complete the final step of collecting your incoming mail. There are two possible means of doing this, which will largely depend on who your ISP is.

Fetchmail

If your ISP makes incoming mail available for collection using the POP3 protocol, you can collect it using Fetchmail.

If it is not already installed, you will find Fetchmail as an RPM on RedHat 7.1 installation CD 1:

```
[root@gandalf /root]# rpm -ihv  
/mnt/cdrom/RedHat/RPMS/fetchmail-  
5.7.4-4.rpm
```

Fetchmail requires a configuration file to tell it where to get the mail from and other pertinent details such as those required to log in. This will normally exist as a file called `.fetchmailrc` in the home directory of the user who runs it. Assuming that the root user will collect mail for all users as an automatic background job, the configuration will be in `/root/.fetchmailrc`.

For example:

```
poll pop3.myisp.co.uk proto pop3  
localdomains mynode.myisp.co.uk  
user "mynode" password "*****" to  
root *
```

The configuration above might be used to connect to `pop3.myisp.co.uk` and collect mail for `<anyone>@mynode.myisp.co.uk`.

If you have demand dial access set up using Diald, as discussed in the last issue, you can automate the email collection on connection by adding the following to `/etc/dialup/ip-up.bash`:

```
/usr/bin/fetchmail
```

For full information on Fetchmail, refer to the website at:

www.tuxedo.org/~esr/fetchmail

SMTP Delivery

If your ISP delivers mail to you using SMTP, then you don't require Fetchmail. However, you will need to open your firewall to SMTP connections. Assuming that you have a firewall as set up in the last part of

this series, you'll have a file defining the firewall rules in `/etc/rc.d/rc.firewall`.

The rule in there allows connection from Demon Internet's mail servers only, i.e. only machines with an IP address starting with 194.217.242.:

```
ipchains -A input -p tcp -s 194.217.242.0/24 -d 158.152.186.172 25 -y -j ACCEPT
```

Taking out the source (-s) specification from this rule would allow connections from any machine on the Internet, theoretically increasing the risk of someone trying to hack in this way, but secure as long as no-one finds a security hole in Sendmail. However, if you don't know and can't find out the IP addresses of the machines that will be sending your mail, or your setup is such that anyone on the Internet sends mail to you directly to your server, you will need to remove the source address specification.

The destination address (-d) specification should be whatever your external IP address is.

Outgoing mail

Outgoing mail is sent using the SMTP protocol, both from your IMAP mail client to your sever and then on to the recipient. In most cases, the default configuration should suffice.

If you are using Diald for demand dial Internet access, you should find that Diald will automatically dial up whenever you send an email. However, the default configuration of Sendmail will cause Messenger Pro to hang until a connection is established.

If this proves to be inconvenient, there is a way around it through changes to the `sendmail.mc` configuration file:

1) Set the delivery type to 'deferred':

```
define(`confDELIVERY_MODE',`deferred')
```

2) Set Sendmail to accept mail from 'unresolvable domains'—it won't be able to look anything up until a connection is established:

```
FEATURE(`accept_unresolvable_domains')
```

3) Set Sendmail to relay for all domains:

```
FEATURE(`promiscuous_relay')
```

Mail queued

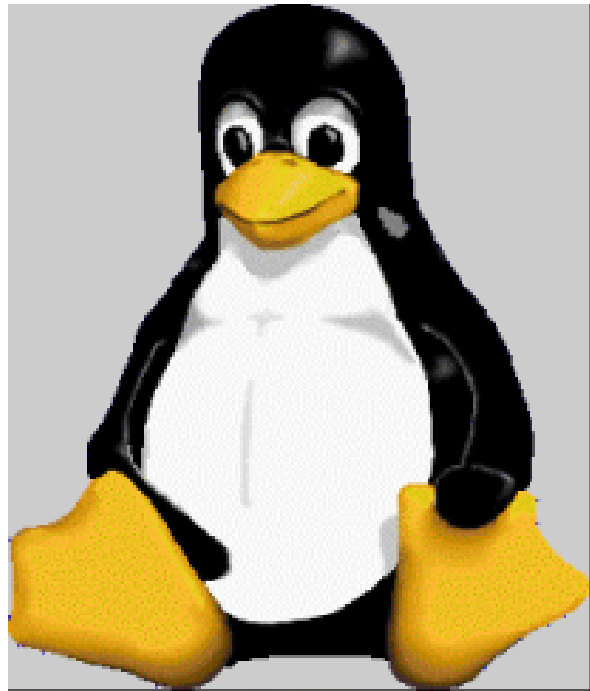
This will cause mail to simply be queued by Sendmail and will not attempt to send the messages until the next queue run, which happens at regular intervals. You can instruct Sendmail to change this interval to whatever you like, such as:

```
[root@gandalf /root]# sendmail -q30s
```

This will cause the queue to be checked every 30s.

Because this effectively turns your server into an open mail relay, this is only recommended if you have some other means of preventing others abusing this. If your firewall does not allow incoming SMTP connections, or only connections from particular hosts at your ISP, this should be OK.

Don't forget to update the main configuration in `sendmail.cf` and then restart Sendmail (as described above) after making any changes.



You can find programming examples on The ARM Club's website at:

www.armclub.org.uk/files/eureka43/linux-examples.zip

And Finally...

This concludes the series on using Linux with RISC OS. Hopefully it will have got you started on all the basics and whet your appetite to experiment further.

Don't forget that the vast majority of this software is free and often developed by people in their spare time. Patience is sometimes required to get it to work in the way that you would like, but it is usually worth the effort!

The Word Puzzle...

Test your computer knowledge in our latest puzzle from Roger King.

Clues

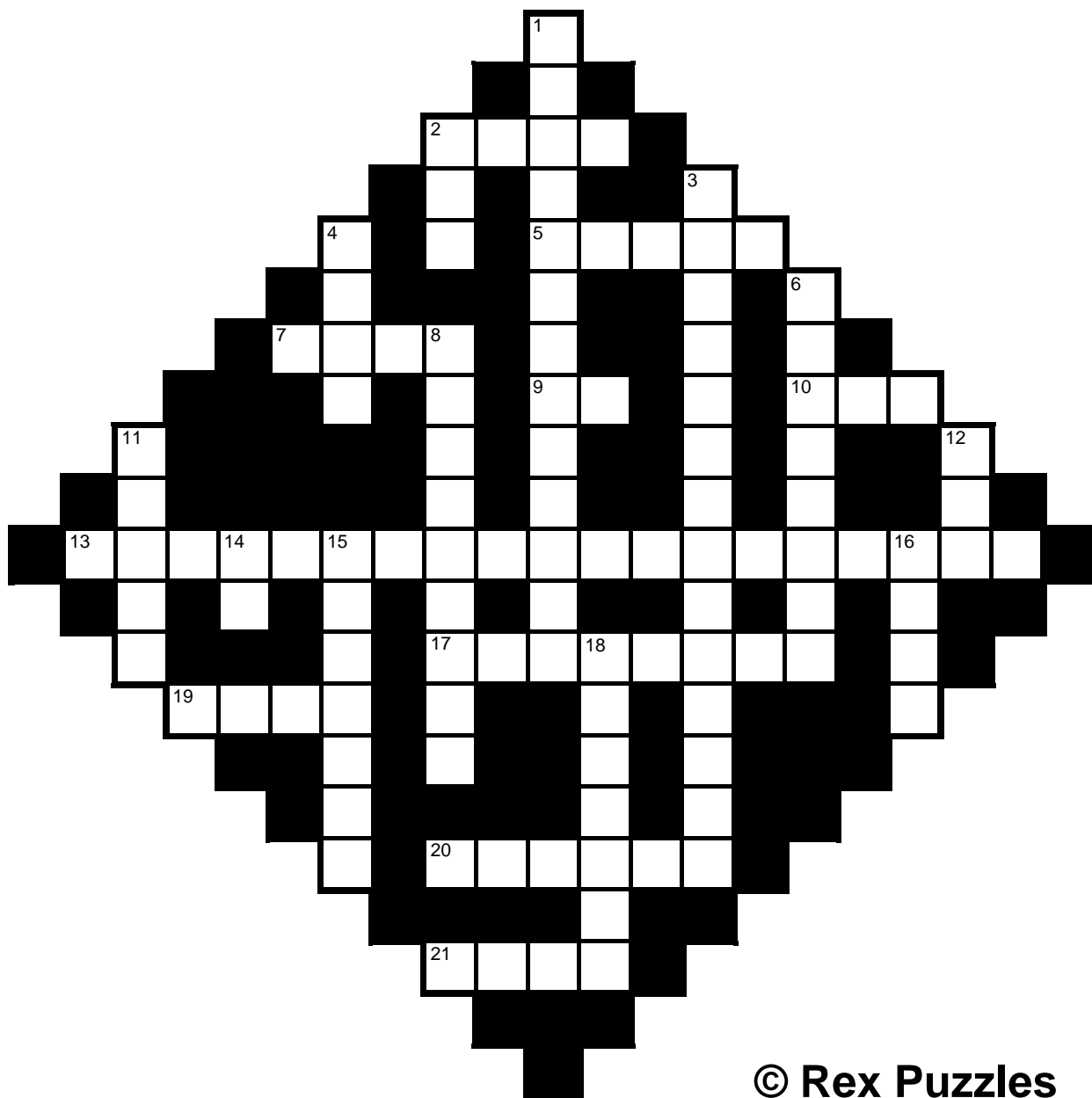
Across

- 2 and 14 d Supplied with every Acorn computer (4,2)
- 5 A code used by computers and printers (5)
- 7 A high-level programming language (4)
- 9 Windoze operating system (2)
- 10 A program allowing connection to a network (3)
- 13 A description issued with hard disc drives (11,8)
- 17 The speed by which computers pass information (4,4)
- 19 What the middle button of an Acorn mouse supplies (4)
- 21 A method of sending information over the Web (4)

Down

- 1 A list of options could be provided by this (9,4)
- 3 What you need to interface your VDU to your computer (7,7)
- 4 A computer operating system (4)
- 6 Without it your computer would be useless (8)
- 8 An error checking method used in data communications (6,3)
- 11 A popular operating system (5)
- 12 Part of a byte (3)
- 15 Relating to a mode or modulation (7)
- 16 One of many in a directory (4)
- 18 What you'll see when your computer has finished booting (7)

...Computer Crossword



© Rex Puzzles

Left any blanks? You can check the solution on page 67

The invitation for me, as the new editor of Acorn User, to write a piece for Eureka came as something of a pleasant surprise as The ARM Club and its members are well-known for giving their all in the name of RISC OS.

working hard in his advertising sales hat and talking to companies that haven't promoted themselves in the RISC OS market for years. You will be very surprised to see some of the advertisers in the 250th issue.

The new name in the Editor's chair at Acorn User, Rob Donaldson, celebrates a big anniversary with an optimistic look to the future of the whole RISC OS scene.

It also happened to coincide with the 250th issue of Acorn User and its 20th anniversary, which I am very happy to be associated with. It is an amazing milestone which no specialist computer magazine has achieved before.

It's a funny old world. Strangely, at the time when perhaps RISC OS seems to be at its lowest ebb, now is the time when we should really be looking forward to the future.

The 250th issue of Acorn User is a milestone, but not one that looks back. I cannot deny a smidgin of nostalgia. Steve Turnbull has been

But we have not indulged in nostalgia in the editorial. There's no need to fill up space with the past, there is plenty of future coming.

An important thing to look at is that any shrinkage in the RISC OS arena is mirrored throughout the computer market. There was an occasion when Acorn User was unfavourably compared to Computer Shopper in size. The person concerned failed to note however that Computer Shopper has nearly halved in size in the last two years. People are becoming disillusioned with computers in general (which means PCs) and the company that dominates that market.

Businesses are very unhappy with the way that Microsoft are tying them up in knots and forcing more money out of them. They are looking for alternatives.

Into this scene we have the imminent (at last) arrival of the Microdigital Omega, the release date of which is wisely not being even suggested.

And there are other moves afoot which even I am not supposed to be privy to, but which will bring about a radical shake-up in the market.

And the companies involved in these changes are not stupid, they do know what they are doing and do have plans that will take them outside the current RISC OS market and into pastures new.

There are problems. Success will be very hard on companies in the market, only those businesses run by people with a truly professional outlook stand any chance of keeping up with potential expansion. There will be those who will never be able to expand no matter how the market improves. On the other hand, there are many big and successful companies

with RISC OS experience who, given expansion of the RISC OS market, will come back.

There are professional software conversions that must be achieved, Sherston Software, for example, would be very willing to go back to triple format if the industry standard software they currently use was extended to RISC OS.

It can be done. Steve and I have spoken to large independent PC software companies. The people who run these companies do not like Microsoft, if there was a cost-effective way to bypass Microsoft and make it lose money and power they would use it.

Linux is not the answer, there was a time when many people thought it was. But Linux is too complex, there are too many options, too many possibilities, a business person wants simplicity, they need to be told and understand “the solution to your problem is this”. Simple, no options and complexities. You can see that that is exactly what Microsoft does. It says “this is the solution”. And you take what they give you.

There is a future but it needs dedication and a belief that it can be done.

There are many in the market who believe we have already lost. And, of course they have, simply by believing it. The degree of in-fighting among users and even companies is an indicator of people who think they cannot win. Those who believe that would do the market more good by simply leaving it for good, and that goes for those running the businesses as well. The last thing any group needs are people pretending to be working in the same direction while in truth they hold it back by petty griping or worse, malicious lies.

I was asked how my 'reign' would differ from earlier editors. The foregoing paragraph is the answer. I call a shovel a shovel, and I will show up those who I would call traitors. Harsh word? Look what it means: someone who betrays trust. If you believe a person is working in your favour (perhaps even claims he is) but in truth is working against you, then he's a traitor. Look at the newsgroups. There is a clique of (very few) people who attack everything and everyone

who has a positive attitude. They make a lot of noise, all of it bad. This group of people has already succeeded in blowing a multi-million pound deal for one RISC OS company, because the potential customers took one look at `comp.sys.acorn.misc` and were horrified. They dropped the deal like a hot potato. To cap it all one of these nasties has done work for the company he has helped to ruin. They always claim that they have a "right" to say what they like, those who destroy always hide behind their "rights".

The future can be rosy and that is the future Acorn User will portray. Your subscription will be welcome.

Acorn User

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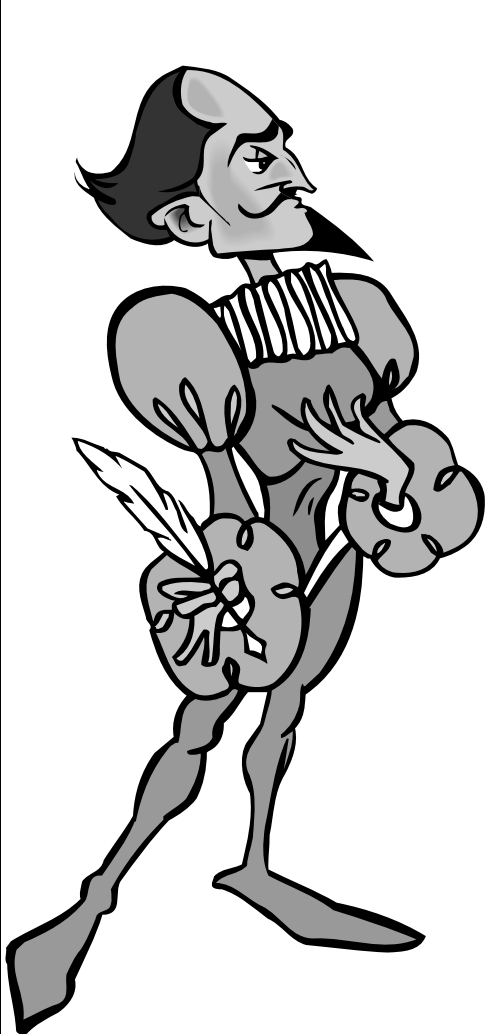
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Email: subscrip@acornuser.com

Web: www.acornuser.com

Odd Odes *Shakespeare at the RISC OS Show*



Francis Bacon

Perchance to dream.

Is this an Omega that I see
before me,
the keyboard towards my hand?
Come, let me clutch thee.
I have thee not and yet I want
thee still.

Tomorrow and tomorrow and
tomorrow,
creeps on this petty pace from
day to day
while I await Omega a
record time.

Waiting is such sweet
sorrow
But all things come
to he who waits
So I must wait until
tomorrow.

A Wider Range For

The logo for 'Acorn Publisher' is displayed in a stylized, blocky font. The word 'Acorn' is in a smaller font size above the word 'Publisher'. The background of the logo is a dark, textured rectangle.

Acorn Publisher? That's no good for me - I'm not a publisher.

But: do you use any graphics applications on your RISC OS machine? Do you produce a website, for yourself or others? Do you use

The very first decision I took when agreeing to take on Acorn Publisher was to keep the current team of contributors. While other magazines may have a set of columns that have to be filled every month, come what may, Acorn Publisher produces series

Acorn Publisher's new Editor, John Cartmell of Fleur Designs, plans a wider range of interests for a magazine which may so far have escaped your attention.

EasiWriter or Ovation Pro or any other desktop publishing program?

If the answer to any of these questions is yes then you should certainly be reading Acorn Publisher. You don't have to be a publisher of anything to be a subscriber —honest!

Despite its name, Acorn Publisher is widely read well beyond the publishing field and has many very satisfied readers; a problem for anyone intending to take over the magazine after eight years' of successful publication. Mike Williams, its editor for those eight years, is a tough act to follow.

of articles from some of the best experts available. When a series reaches its natural conclusion it makes way for another series. And all are designed for RISC OS readers who take pride in the work they produce on their machines, whether the result is for public or private consumption. Over the last eight years this has built up a superb resource and I aim to continue in the same style.

So, if I'm not making changes, why have I taken on the magazine?

In the first place, I've acquired Acorn Publisher as part of Mike Williams' s

retirement strategy. He long ago decided to lay down his editor's blue pencil at the end of volume eight. Mike will still be writing for Acorn Publisher and Akalat will continue to publish other material so he's only taking one step into retirement!

Secondly, there will be some changes despite my comments above. The magazine itself will be modified. Acorn Publisher will be actively marketed to *all* RISC OS users — its contents have always been appropriate for a far wider range of readership than its title indicated — and elsewhere. In addition to the current range of articles we will add reviews and tutorials for programs that may not be directly related to publishing or graphics but which are likely to be used by anyone making serious use of their computer. We won't forget hardware. There will be some exciting hardware releases over the next few months and we will be reporting on the ability of new and existing hardware to cope with real work.

The more astute among you may have noticed an 'and elsewhere' a few sentences ago.

We know that Linux, maybe Mac, and even some forced to be Windows users, read Acorn Publisher. Good practice is universal and we're quite happy to share our ideas. We won't desert RISC OS users but we will report on conversions of RISC OS software and, as in the past, try to ensure that much of our advice is relevant no matter what hardware or software is used. It's even possible that some of our readers from elsewhere may be persuaded to try using this 'other' operating system!

Acorn Publisher is to be sold as: a magazine for computer graphics, desktop publishing and web design. The magazine for *all* RISC OS users

Our other changes are even more major but again they will add to Acorn Publisher's current content rather than replace it:

1. The emphasis in the past has been to produce articles that will last; even early back issues are still sought and sold as tutorials and explanations for software and techniques. We thought readers would appreciate easy access to lists of the magazine's past contents together with extracts from past articles.



Now aimed at all RISC OS users

2. Acorn Publisher has never included a cover CD yet has many articles that would benefit from examples that readers could copy directly onto their own machines. This is particularly true with tutorials on graphics and web design.

3. Although it includes some news, Acorn Publisher is not a news magazine and, as it's published every two months, cannot pretend to be one. Most news is best left to general and club magazines like Eureka and

internet newsgroups that have the advantage of immediacy. However, some news needs comment from the perspective of Acorn Publisher.

Taking all the above into account, we have decided that we need to provide specialist web pages for Acorn Publisher subscribers. Details are still being discussed but it is likely that contents, some extracts and most news comment, will be available on a web site for everyone to see, while subscribers will have private access to examples accompanying current series, more extracts from earlier series, and their own chance to comment on current articles. Would-be subscribers will be able to purchase subscriptions —and back issues —by credit card, using a secure shopping site. Feedback will be faster, possibly in time to be reflected in the subsequent magazine article, and everyone should gain from the interaction between the permanency of the printed page and the speed and informality of the web.

By supplementing the magazine with a web site we can ensure that web references in the magazine are repeated on the web site (making

access easy) and these can be updated as soon as we hear that they have been changed. It also means that we can offer up to date web links to advertisers, contributors and other areas of the RISC OS community such as user groups. Subscribers without access to the internet will gain from internet feedback that can be digested and incorporated into the next issue of Acorn Publisher itself.

All of the web options should be available from the start of volume nine (October 2002) but its usefulness will grow the more it is used. It will take time for lists of all the past contents of the magazine to be included on the site and for the discussion groups to mature but we'll be working hard to ensure there's plenty available from day one, in October 2002.

Annual subscriptions to Acorn Publisher are available for £29.95 in the UK (overseas readers should contact us for other rates) and back issues can be purchased for £5 (where available) or, if ordered at the same time as a subscription, for £3 + p&p.

There's one thing that we haven't managed to organise in time for this

article: we haven't got a name for our company! Mike Williams is keeping the name Akalat for his other work and we can't use Fleur Designs as there are too many clashes with similarly named companies. So we're going to have to find a new name. By the time you read this it should all be sorted out and you'll be able to find the new name if you take a look on the web at www.acornpublisher.com. The magazine itself will continue as Acorn Publisher.

While we're sorting out our name, if you can't wait to get your subscription started, then you can send your subscription cheque made out to me.

If only someone could tell me where I'll find room for all those back issues!

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Optical Mice

Optical mice – bah! – why would I want one of those? Nothing wrong with my original Acorn mouse, had it since I bought the computer. Well I have had to change the cable

Regardless of what angle you held and moved the mouse, it only produced motion aligned with the mat and the resolution was low, leading to jerky pointer motion.

David Ruck gives up a spod's normal regular exercise and upgrades to the glows, flashes and easy glide of a ball-less optical mouse.

when the buttons started getting dodgy, and put a new heavier ball in it so it wouldn't slip so much, and I've been through half a dozen mouse mats, and I have to de-gunk it on a regular basis but, apart from that, it's fine.

That's what I thought until I got an optical mouse with a new machine at work, so perhaps it was time to take another look.

The last time I used optical mice was with a Sun workstation many years ago, and I was not impressed. You had to use it on its own tiny four inch square rigid mat, which featured horizontal and vertical lines that were picked up by its twin sensors.

Well they aren't like that any more. A modern optical mouse is an entirely different beast. Its single high-resolution sensor allows it to work on almost any surface, apart from entirely featureless black, white or highly polished surfaces such as stainless steel or glass. MDF or wood grain desk tops are fine.

You don't need to use a mouse mat but, if you do want one, you can choose artistic designs with shiny surfaces, rather than looking for those with a rough texture that work better with normal mice. It will also operate quite well on irregular or not quite flat surfaces, such as a table cloth or even your leg, making it an ideal travelling companion for a laptop.

The main advantage of the optical mouse is its smoothness to operate and the precision of the pointer movement on screen. It's like going from an old push-along cylinder lawn mower to a modern hover mower. You no longer have to shove round a mouse containing a heavy ball

that sucks up fluff and crumbs, often moving erratically or stopping completely until you've performed the fiddly action of cleaning the rollers with your finger nail. In contrast, the optical mouse glides over the surface, almost friction free and the pointer never sticks, allowing very precise movement ideal for use in drawing programs.

The amount of movement needed to traverse the screen is usually less than with a normal mouse meaning you don't need to compromise the ability to hit every pixel on the screen by turning up the mouse velocity.

Optical mice have been available for RISC OS users for some time now in both standard and cordless varieties.



The optical mouse flashes red in action

The majority are PS2 or USB+PS2, and will plug straight in to an A7000, A7000+ or RiscStation. The Risc PC requires a PS2 to quadrature adaptor that looks like a very short extension cable, which is available separately or with the mouse from a RISC OS dealer and adds around £15 to £20 to the price.

I looked at a number of Logitech optical mice and decided that despite the tempting gimmick appeal of a cordless mouse I preferred the normal variety, as I've never found the lead has got in the way where I use my machine. People have commented that some cordless mice were not as sensitive and that they feel heavier due to having to contain batteries. Personally, I do without another

device eating its way through batteries, especially as Ni-Cd or NMiH rechargeables have insufficient voltage to work the optics, so you have to use alkaline ones which you will need to replace every few months. That left a choice of several models, most of which were functionally identical except for differences in the colour and shape, which ranged from gently curved symmetrical designs to the more lopsided ergonomic style. I think the ergonomic ones look a bit odd and don't really fit my hand better and so decided on the more traditional pilot design in white, which is the cheapest of the range at around £25.

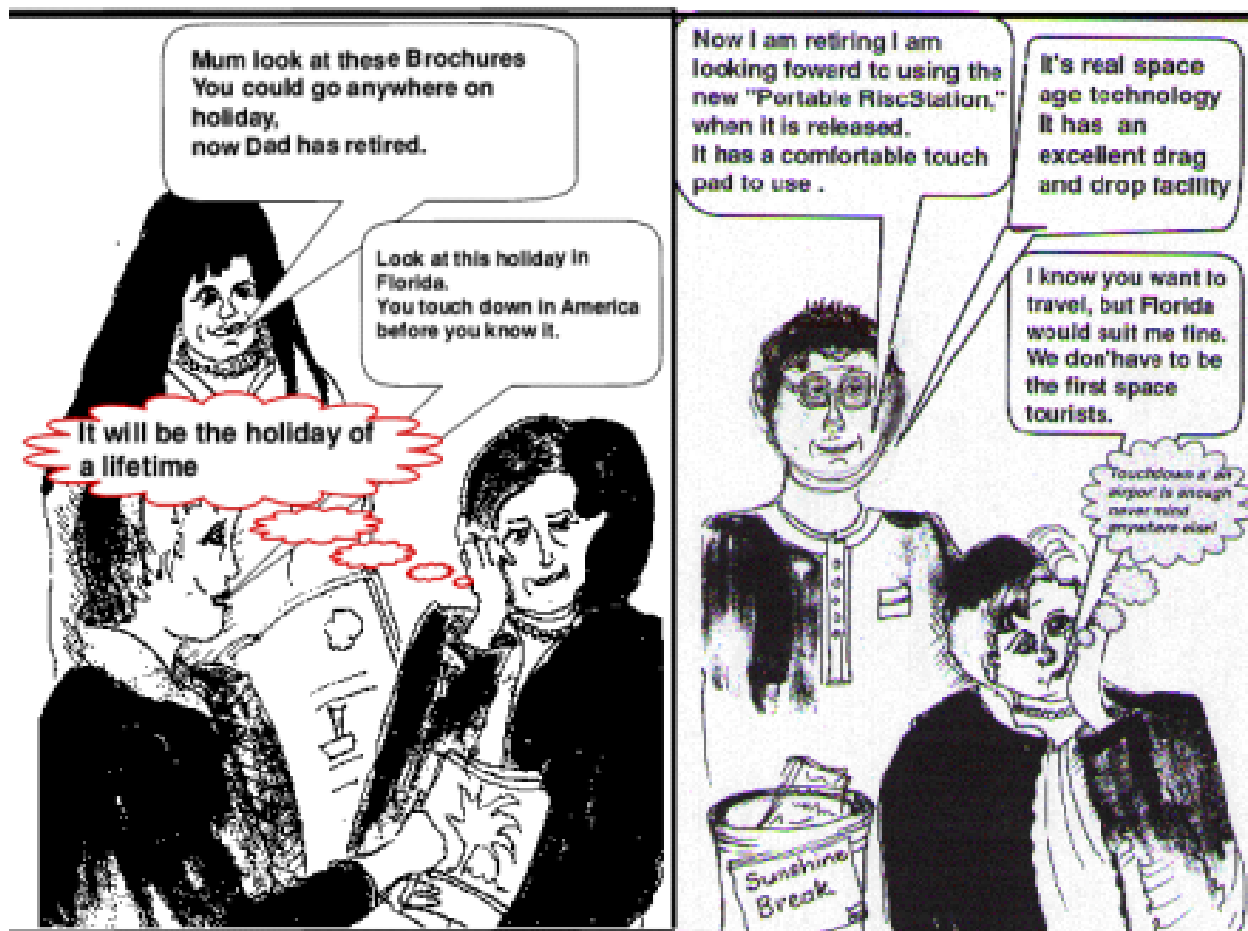
The first thing you notice about the mouse is that, when plugged in, the translucent base has a faint red glow from the optics and when moved this flashes to full brightness before returning to a glow again. This reduces the power used by the mouse when not in use for laptops and isn't as distracting as it sounds — except to any cats watching! The next thing you notice is that you have just moved from one side of the screen to the other without any effort, as there isn't the same resistance from having to push

the mechanics in a normal mouse.

The only thing that worried me about these mice is that they do not have a normal middle button but instead have a wheel. This is used on PCs to scroll windows (due to their lack of reversible scroll buttons and two dimensional scroll bar dragging with the adjust button that we have in RISC OS). If the wheel is pressed, it works as a button and, although it feels a little small and stiff at first, you soon get used to it. Incidentally turning the wheel doesn't do anything useful under RISC OS at the moment but future software may be written to take advantage of it.

I had thought that the expense of upgrading the Risc PC with an optical mouse would not be worthwhile, at least until my original mouse had choked on its last fluff ball. But after using it for only a few days I could not go back to a normal mouse, I prefer the effortless interaction with the machine from the optical variety. My one concern is that without the exercise of pushing round a ball mouse, the average spod's fitness will decline even further!

Happy Holidays



Cartoon by Jan Pearce

Member's Advertisement

A quantity of Acorn educational software for sale at
bargain prices

For details contact Christopher Price

Tel: 0208 302 4078

Email: chris.mertoncourt@argonet.co.uk

Getting A New South East Show

It became evident earlier this year there was no RISC OS show planned to take place in the South East of England. We are all aware that the RISC OS market is shrinking, but not having a RISC OS show in the

became evident that the concept of a high profile show at a prestigious venue was unlikely to be financially viable in future. RISC OS 2001 ultimately made a small profit, but it was a close run thing.

John Sawyer explains the problems and considerations involved in organising a new RISC OS show for the South East and how plans were made and changed.

most populous area of the country seemed a sad state of affairs.

Acorn World now seems a distant memory, but only a couple of years ago we had a one day show at St Albans and the major two day show at Epsom. Last year we had only the two day show at Bracknell, but in 2002... nothing? The problem of organising a major show such as Wakefield, Epsom or Bracknell should not be underestimated. Eureka readers will recall my account of the complexities and hard work behind RISC OS 2000. Key to this was the substantial investment in resources by the ARM Club. During the organisation of RISC OS 2001 it

Two obvious difficulties for South East shows are the cost of venues and changes in geographical location of companies in the RISC OS market. In the North we have the likes of RiscStation, Microdigital, Acorn User, RComp and Stuart Tyrell. In the West are Cerilica, ExpLAN, RISC OS Ltd and Photodesk, while on the other side of the country are Castle, Archive and ITC.

This means that many exhibitors have to travel a long distance to a S-E show with consequent travel and accommodation costs. Exhibitors have to balance potential profits against the cost of the stand, travel and accommodation, and perhaps

wages. This results in a difficulty in attracting exhibitors, a frustration experienced at RISC OS 2001. For a show to be successful in the South East, cost reductions must be made for it to make commercial sense to exhibitors (that is, they will make money!) yet not lose money for the organisers.

Despite all the above difficulties, Surrey and Sussex Acorn User Group (SASAUG) decided to 'bite the bullet' and organise a show in the South East. Before we finally became committed to the show, a straw poll was taken among exhibitors at Wakefield. Comments were universally in favour; one exhibitor basically saying "That's great, I thought I was going to organise it myself".

SASAUG had been part of the strong team behind the RISC OS 2000 and 2001 shows and this had given an insight into the mechanics and costs associated with the organisation of such a show. In deciding to organise a South East show, two difficulties immediately presented themselves. Responsibility of organising the show would inevitably fall on a small

number of members (previous shows had a committee of around 10 drawn from The ARM Club and user groups). The second problem is a lack of finance. SASAUG is far from broke, but the Bracknell show cost some £10,000 to organise and we are certainly not in that league.

Before we establish a solution to these problems, the first requirement was to find a venue. Neil Thurlow (secretary of SASAUG) works at Guildford College. In the embryonic stage of the show, Neil was asked to explore the possibility of holding the show there. It turned out that the main hall is available for hire and for a reasonable cost.

Several of us turned up one evening to measure up the hall. Not only did it seem adequate in size but removable partitions also meant we could have a theatre, or additional stands, or refreshment area, either as part of, or separate to, the main hall. Guildford College offers a tremendous range of courses, many of which are held in the evening (visit their web site www.guildford.ac.uk). This meant that if we wanted to set up on Friday evening, the show date would have to

be at the end of half term, namely 2nd November. The hall is only available on Saturdays, thus the show could be only one day. This seemed sensible since most two-day shows are quiet on Sunday, also a one-day show would mean that exhibitors need only one night's accommodation. The location offers excellent road and rail links and adequate parking. Guildford London Road and Central stations are 10 to 15 minutes walk, thus there is no need for shuttle buses.

A hall plan was drawn and a preliminary stand layout generated. This used as a basis the available tables at the college, which were six foot long. In more modern terms, this gave a four square meter floor area for each stand and allowed 33 stands to be fitted in the main hall. This seemed more than enough but initially did not allow for exhibitors to bring their own stands. The necessary adjustment, together with many exhibitors wanting more than one unit results in a maximum number of around 25. The cost of stands was kept as low as possible to encourage even small or part time companies to exhibit. A further incentive is in the form of a small developer 'village', an idea

borrowed from the RISC OS shows. The general stands comprise a covered table and the exhibitor's name. Extras include a backdrop and a small contribution to public liability insurance, the latter where the exhibitor does not have their own.

The cost of a professional shell scheme was untenable. The idea for a backdrop came from a local contact. He has a number of 'six panel' units which form a two metre high and two meter long backdrop, allowing posters and other advertising, plus the exhibitor name, to be displayed prominently. The price, even if used on every stand, is less than 10% of a professionally erected shell scheme. Moreover, it is flexible in that the backdrop can be erected only where required by the exhibitor. The cost can thus be passed on to the individual stand.

What of finance? Much of the initial work is time consuming but free. Exhibitors pay a small deposit which provides working capital. This permits the hall to be booked and insurance to be obtained. When full payment is in hand, the table covers, notices, tickets, first aid etc can be

paid for. The overall concept was to offer value for money for exhibitors and visitors. Nevertheless, we hope not only to break even, but create a fund to allow us to present a show next year.

Visitors are attracted by the number of exhibitors and anything new from exhibitors. So how are we getting on? The proof of the pudding of our concept is in the response of the exhibitors. As I write this, the show is three months away and my main concern is that I might not be able to fit everybody in, having to turn late exhibitors away (something I am loath to do!).

Currently the list includes:

The ARM Club
Acorn User
Acorn Publisher
Archive
APDL
Association of Acorn User Groups
Castle
CJE Micros
Electronic Font Foundry
Icon Technology
ITC
Photodesk

RComp
RiscStation
Serious Statistical Software
Surftec
Virtual Acorn

This is the situation in July. Several exhibitors are being chased and we are hopefully of netting some more 'high profile' companies.

Questions that visitors will ask about the show are: What will be new? How do I find the venue? Why should I come to the show? How do I buy tickets?

We originally were not going to have a theatre, reasoning that exhibitors would prefer to have visitors in the hall. Also it would liberate this area for extra stands. However, certain exhibitors told us that there was important product news, hence a theatre is needed to make announcements. Who they are and what is being released I am not at liberty to say. Come along and find out!

To find the venue is easy. The indefatigable Phil Spiegelhalter has generated a web site that has road maps, train timetables and everything

else you need to know. Visit www.fillin.co.uk/seshow/ for essential visitor information.

Shows are about seeing what is new, meeting old friends and (I hope) spending money on a bargain, or that piece of equipment or software you have been promising yourself. It also demonstrates your support for the RISC OS platform and helps persuade exhibitors that this is a market they should stay in. Lots of visitors lead to a good show, happy exhibitors and an increased chance of a show next year.

You buy tickets on the door; no advance tickets are being sold. Our reasoning is that advance tickets are expected to be cheaper, also are generally bought by credit card, hence we lose money on both counts. Being realistic, the cost of entry (and we have yet to decide that) is small compared to the cost of getting to Guildford and all that money you are going to spend at the show!

So, put November 2nd in your diary and see you at Guildford.

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November Sat 2nd

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Show Special

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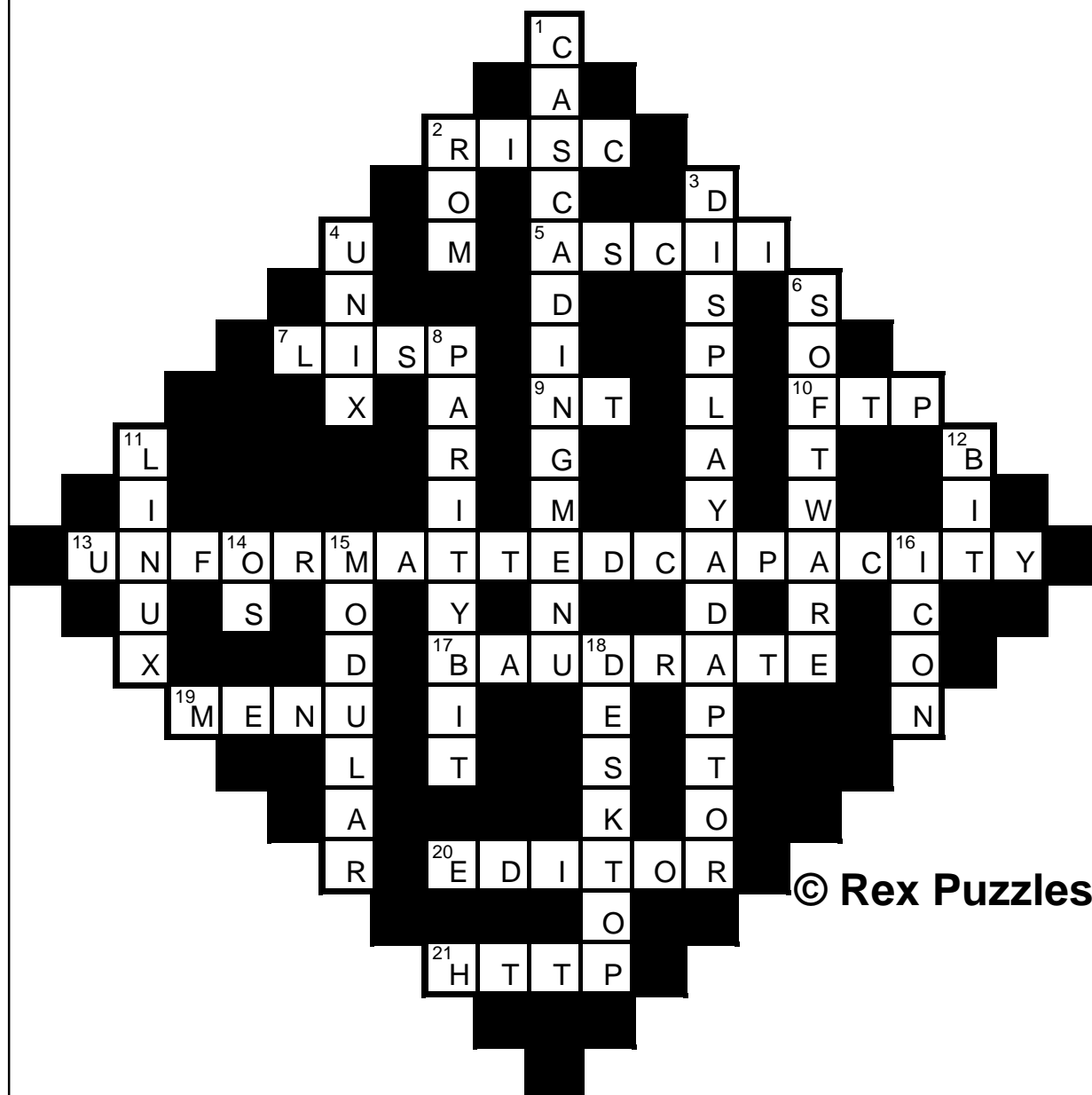
at Guildford College SE Show

Stoke Road Guildford

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

Computer Crossword Solution

Here are all the answers to the puzzle on pages 48 and 49.



© Rex Puzzles

There will be another word puzzle from Roger King in our next issue.

Problems Solved

Multiple problems

Question:

I seem to have gone and done it, what, I do not know but whatever it is I have done it.

Answer:

1. You normally get this if some system paths have not been setup when you try to run an application. Press Ctrl+F12 and type:

Our Technical Help Team, co-ordinated by David Ruck, come to the rescue with more advice and solutions to help solve members' problems.

I have a SA Risc PC and I removed some old programs and tidied up my hard drive. At least that is what I was meant to do.

Show Boot

Show Choices

Show System

When I boot up now, my machine does not fully function every thing goes well and then I get a report:

1. 'Filing system or path not present'.
2. My floppy Disc does not operate or even appear on the task bar for that matter.
3. My SCSI drive does not operate.

You should see some variables listed, with valid filing system paths after them. Check that Boot\$Dir, Boot\$Path, BootResources\$Dir, BootResources\$Path, Choices\$Path, Choices\$Write, System\$Dir, System\$Path are present. If any of these are missing/blank/invalid your boot sequence is corrupt.

2. Also in a taskwindow type

What have I done ? What will I have to do to rectify any one or all of the problems?

*Status Floppies

It should display 1. If not then type:

*Configure Floppies 1

Derek D Kennedy

3. I suspect you have also unconfigured your SCSI. Try running the set up utility that came with the card.

What have you done? I suspect you have deleted something critical in the !Boot directory. You may find it easier to rename this, and install a new copy. If you have a StrongARM CD you will find a version on there, or you can download a RISC OS 3.7 sequence from www.riscos.com/.

CD error message

Question:

I have been given a CD-R with many JPEGs recorded on it but I am unable to look at the contents of the CD due to the following error:

Error when reading
CDFS::Hudd'field_Nar.\$- Invalid CD-ROM disc name.

If I switch to the PC Card with Windows 98 the CD can be read as normal and has the name *Hudd_field_*. The RPC operating system is RISC OS 4.29 and I have a Blitz IDE interface. Can you advise what the problem may be?

Chris Majer

Answer:

This a problem with some discs produced on the PC which have disc names using characters which are not valid in the disc title such as:

' and .

(The ISO9660 says only A to Z and _ are valid).

You might be able to circumvent this on RISC OS by using the the Task Manager new task menu and typing:

Filer_OpenDir CDFS::0.\$

If this doesn't work, as you have *Select* you should raise this problem on the mailing list, as a fix may be incorporated in to the next OS release.

Alternatively, you might want to consider Warm Silence's CDRMFs which tends to work with more lax formatted CDs from PCs.

Drawfile to PC vector

Question:

Can you help me? Is there a way to convert a Drawfile to a PC platform vector file?

Eric Petterson

Answer:

The PD program !Draw->WMF will convert draw files to the similar (but lower quality) Windows Meta File format, which is available from: www.mirror.ac.uk/collections/hensa-micros/local/riscos/converters/

A commercial alternative !Draw2WMF from Sherston Software used to be available, but their website seems to be down.

Some PC graphics programs will read EPS (Encapsulated Postscript files) These can be produced by !Draw2EPS from: www.ee.ed.ac.uk/~pmh/ART/Draw.html

DrawWorks Millenium will import and export EPS: www.apdl.co.uk/isv/dwnm.htm

On the PC there are two programs that will read Draw files directly:

OakDraw:
www.dialsolutions.com/oakdraw.html
Xara X:
www.xara.com/ (trial version available).

Wimp\$Scrap

Question:

This morning I pulled down my mail as normal, found a piece I wanted to print so I went into my normal routine which is:

Open an Easiwriter window, use the save button on the mail message to get a text file and then drag/drop the text file onto the Easiwriter window in which I would then just manipulate/print the message

I got a 'Message from Marcel' box saying: 'Cannot write to <Wimp\$Scrap>' and an 'OK' box. Hitting the OK button gave me a 'Message from Easiwriter' box saying: 'Could not complete your request because: Object is a directory, not a file'. Hitting the *Continue* button left me with an empty Easiwriter window.

I also tried using Impression getting the same message from Marcel and a message box: 'Error from Impression Style' with a 'Can't read file' message and an 'OK' button.

I would like to know how to fix the problem and to understand how I

managed to cause the problem to occur in the first place (so as to avoid doing it again).

Answer:

What's happened is the scrap file used to transfer data between applications has been left behind by an uncompleted operation and this is preventing anything else using it, leading to errors.

Open:

`!Boot.Resources.!Scrap.ScrapDirs`

There will either be a single directory called ScrapDir or several extra ones named IDxxxxxxx. On each, open them and for anything called ScrapFile use the filer menu

File ScrapFile->Access->Unprotected

Then delete the object. This should then allow the programs to work.

Digi Tip

If you use a Digital Camera with CompactFlash (not SmartMedia) and own a Psion 5 (or derivative) you can use the Psion to upload to the Acorn, providing you have the connections and software from the Psion to the Acorn.

- First remove the CompactFlash cartridge from your camera.
- Open your Psion 5 'flash drive' door (the larger of the two, underneath the 'pencil').
- Insert your camera's CompactFlash cartridge into the Psion with the ridge away from the Psion (if it won't go in easily then turn it around).
- Select drive D from the Psion's system window (menu->Disk->Current Disk->D) (or shift+ctrl+D) and you should see the contents of your Flash card with the '?' file icon for each file.
- Use your Psion link to copy the files (I copied onto C drive first, as it wasn't my CompactFlash card) to your Acorn and *SetType* them to be JPEG. Hey presto — JPEGs on an Acorn without having to use a PC!

Andy Burgess

Gill's Wedding Journal

Last weekend Toby and I had the privilege of attending a wedding... no, not one of my sisters —this was a spod getting married. Yes, some weeks ago the invite arrived in Toby's inbox... OK, I'm not being fair there —I should

But with a wedding's worth of presents, I suspect the joys of a comprehensive who-gave-what list provided by the store ranks higher in helping write thank-you letters than the fun of guess-who-gave-what. Anyway, growing up, my relatives

Former bride Gill Smith offers some well-informed advice on how to attend a spod's wedding and, if you're so inclined, perhaps even lead on to one of your own.

explain. The invite only arrived by email because the paper version had somehow ended up at an old postal address. The bride's parents by then needed to know numbers and we needed the details, if we were going to get there at all.

So the spod in question having managed to 'snail mail' his original invites, what about the wedding list? This was something you could view online, buy online and even send heartfelt messages by typing them into a text box online. Is it just me, or was it fun, as a kid, when you could work out who a present or card was from by looking at the handwriting on the label?

seemed to send a lot of parcels with my mother's handwriting on them and looked quite surprised when I made sure I remembered to thank them for whatever they apparently gave me... it was just a waste of the effort of making sure you played with it in front of them!

Thankfully, this particular wedding list wasn't all credit-card software downloads (that would be too spoddy) and a dinner service was very much in evidence. It's the great joy of a list —going around picking things, without having to pay for them! Don't you wish ARM Club shows were like that? If you have imaginative friends,

they can throw in a few surprises —preferably nice ones! I doubt that, in this case, the bride would have considered her very own A7000 the best of surprises...but then who needs a wedding to end up with one or two things we only get out when the friend or relative who gave it to us comes to visit?

Anyway, one of the joys of my very own laptop and a permanent internet connection (doesn't he give me romantic things!

Yeah, OK, I wouldn't be without either..) is that between us, Toby and I had managed to email a reply to the wedding invitation, look up how to get to the reception venue and order a piece of china as a wedding present, all within minutes of getting the details. We'd even been able to see clear pictures of our gift to them.

Here's hoping the bride knows how one is supposed to use a dinner service...I have vivid memories of the groom once having difficulties



When Gill was the bride

with a paper plate and a take-away Chinese. No, alcohol wasn't involved, not until later, anyway.

So, the question a spodess has to ask herself is whether this wedding came about all thanks to my brilliant advice about tomato-rich diets, not dithering and dressing in style? Because, if this is the case, everyone else better get on with following my wise words and I'd better take out shares in www.confetti.com!



A tomato-rich diet — the love apple way to romance?

Well, I have to confess, I completely forgot to check the groom's plate to see if he had left any of his side-salad but I'm confident that the tomato advice was sound.

I caught two single spods leaving tomatoes during the day (you know who you are!) Excuses such as "I only like tomatoes cooked" or "I do eat tomatoes but only raw" are clearly not as attractive a prospect, in the view of young, single, attractive women, as that of a man munching his way through a bit of beef tomato, or

tucking into a vine-ripened slice. (NB: to add to previous discussions on tomatoes, I have recently concluded that eating tomatoes that suffer the heresy of being sundried is not good enough and probably should be considered worse than eating no tomatoes at all. Well, I don't like them and I'm saving you suffering.)

The other advice I've offered over the years? Well, if the lucky man had dithered through a proposal, how would his gorgeous lady have known when she could say yes? (Presumably a female spod would have dithered over her response?) Dithering heart never won fair lady and decisively asking her out is likely to lead to better success than merely standing around the same room (or city centre square) as her.

Another example for you: the groom dressing in style was quite clearly in evidence, although I have my

suspensions that the morning suit may have gone back to Moss Bros on Monday. Men don't know how lucky they are that the entire bridal party get to wear the same thing and that this doesn't need any thought at all.

The wedding itself was thoroughly enjoyable, although I'm sure the bride and groom spent far more time kneeling at the altar than can possibly be healthy for a spod, trained only in sitting in front of glowing monitors.

The bride wore white and the groom showed no signs of Phoebe case yellow and only a very pale shade of purple for the cravat. The speed of their signing the register implies that the groom hasn't forgotten how to write and thankfully didn't need to log onto the church network to download his PGP signature.

The pair promised to love each other through sickness and health, although, worryingly, there was no mention of how they would deal with a dodgy internet connection. Maybe that's covered in 'for worse'. They also exchanged wedding rings and I did check later that these were metal, not Token Rings.

The bride's father, groom and best man all made speeches, without any mention of the groom's reckless youth, when he'd leave several computers around his flat, without even putting their cases on. Whatever exploits he got up to at shows from Wakefield to Merton Court remain a mystery to his Mrs. (Although feel free to send me any good stories...) I'm told that even the stag party was a tame affair and no one stripped the groom's motherboard, or tied the threads in his mail to a lamp post in www.aberdeencity.gov.uk.

Bachelor geek

So, just how does a spod progress from bachelor geek, less than four years ago when Toby and I got married, to today's happy husband? The spod who just achieved this is, I hope, busy enjoying his honeymoon, so I'm afraid I can't provide you with a full interview. However, I did get a brief run down of the major changes in his life over these four years.

These changes are very simple and can be imitated by any spod aspiring to a wife. The groom is now the owner of at least one suit and has learned to dance. Unless the suit was the



No wild and reckless dancing

morning suit he married in, I haven't been able to check the quality of the groom's new attire —the weekend's one was pretty similar to that the bride's father wore. I don't think, however, that this should be taken as a suggestion to stalk her father until you know where he buys his polo-

necks. Weddings are different. What I can say about the apparel at the event is that other spods attending did look very smart, so this bodes well for more confetti throwing and online wedding-list shopping in the future.

The groom's dancing I did get to see. And when he said he'd learnt to dance, he really meant it. This wasn't merely hitting the beat with each shuffle from foot to foot and was a great improvement on occasional spoddy scenes of wild and reckless arm-waving, leaving the rest of the dance floor in danger of a black eye. The bride and groom met through salsa classes and in spite

of being introduced to each other, they had clearly managed to pay attention in lessons. That's one set of classes where they really got their money's worth!

Clearly the ability to gyrate correctly to more tunes than 'the Birdy song'

and to make the right moves for music more complex than ‘Aga Doo’ has a positive effect with women. The groom got to put his arms around his bride, rather than merely mime holding a chicken in the air and sticking a deckchair up his nose in the same vicinity as her. More importantly, she didn’t have to take a firm grasp of his limbs in order to stop him acting out ‘Disco 2000’ (your house...was very small...etc!)

A plus point

Being able to dance without either injury, or hideous embarrassment to yourself and all those around you is clearly a plus point I have missed out previously when offering you advice. Go and look up your nearest local class.

Let’s face it, I can confirm from many sources (mostly disappointed and female) that women completely outnumber men in almost all dancing classes, from salsa to waltz to line dancing (so I’m told — I’m not recommending line dancing to anyone who doesn’t own a large Texan ranch and a hat almost as big.) So even if you don’t learn elegantly gliding around the dance floor, you

might still get a conversation as you and your choice of partner try to master the technicalities of the tango.

Salsa class

Anyway, back to the wedding. For an added twist —which could refer to the couple’s stylish dancing, or their sense of humour —after a full meal and alcohol liberally flowing, we were all treated to a salsa class. I believe everyone there actually understood that this wasn’t about cooking up a dip for tortilla chips but did in fact involve moving their feet. And at very least, getting to hold hands with someone of the opposite gender.

I really do hope that everyone found this a more pleasant prospect than if they had been forced to learn to mash the dreaded tomatoes into a tangy sauce.

Now, apart from the fun of learning a new dance, this lesson gave the spods an interesting opportunity. The tutors simply lined up the men on one side, the women on the other and then made the men go find a lady to dance with. I was most impressed that, at this point, instead of muttering



Raise a glass — or coffee mug

excuses and dashing for the gents, those spods attending found themselves all set to salsa with various pretty young women. And I didn't hear any screams of feet being trodden on —in fact, I'm pretty sure I saw some smiles! Even from the lovely ladies partnering spods who refused their tomatoes.

Young single blonde women

One, or both of the happy couple had kindly had the foresight to invite a number of young, single blonde women to their happy day and this was clearly much appreciated by the guest spods. After the lessons some of the young ladies then went on to demonstrate that they already knew plenty more steps and didn't even

seem to mind being watched in the process.

Clearly, however, one subject I haven't covered in enough detail is that of asking a lady to dance. It's not a problem when the six-foot-something dance instructor insists but clearly becomes one shortly after. What excuses did they offer? The usual trips to the bar and having a full drink but also that the ladies dancing were too good.

My gender allows me to offer one piece of advice here: women would prefer to dance with men than each other. Obviously, this does depend to a degree on the man but short of actually having three left feet, or a spare head (which set of eyes to gaze lovingly into? It'd be too complicated a decision!) you, the spod, make a better dancing partner than thin air.

We women have egos too, you know and like to think just one of you men—even spods—would prefer to dance with us than stare into your pint of Stella, while making small talk about your latest updates to your OS. It can make a girl feel terribly unattractive to think that the details of

how many ARM Club members renewed this quarter (much as we appreciate you doing so), is a greater thrill than the opportunity to put your arm round her waist.

Hopefully the mental scars these young ladies will suffer, caused by geeks refusing to go nearer them than just hovering on the edges of dance floors, will not be permanent. They may have been healed a touch by a few spods ambling onto the edges of the area, during the odd song that didn't involve salsa-swirling past the waiting crowds of aunties who secretly wouldn't mind a dance but have already lost the uncles to the distant bar area for well-just-the-one-cigar-then, since a wedding is such a good excuse. Thank goodness no one put on the hokey-cokey...the spods would never have stood a chance!

So, now you know what to do and can put that permanent internet connection to good use. Go and look up a local dancing class. Do a search until you find something suitable.

Please note that, if you are an absolute beginner, it may be best to try something that takes less energy than

salsa. Start gently with a waltz and refuse to cha-cha until your fitness has improved a little. Once you've joined the class, all you have to do is ask one of the lonely bored young ladies if she'll be so kind as to dance with you and it might not be that long before I get to go shopping again for a new hat for your wedding. And you'd hate to deprive me of that fun.

Raise a glass

Anyway, I'd like you all to raise a glass —or coffee mug, if it happens to be nearer—to last weekend's bride and groom. I'm sure you'll all join me in wishing them both health, wealth and happiness. While we're here, we should wish her computers that have their cases on and just a limited house network. And we wish he'd share his secret!

Back pages

(If you missed any of the columns I'm talking about and can actually be bothered to go and check them, www.gillsmith.co.uk has the lot and is meant to be all-browser friendly.)

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