Eureka
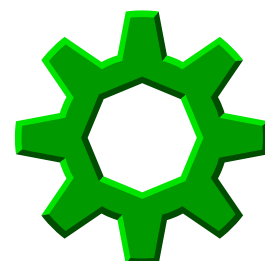
The magazine for members of

The ARM Club

RISC OS gets into gear
for the future

The RISC OS 2001 Show
from in front and
behind the scenes

Running a user group

Who are the spods?

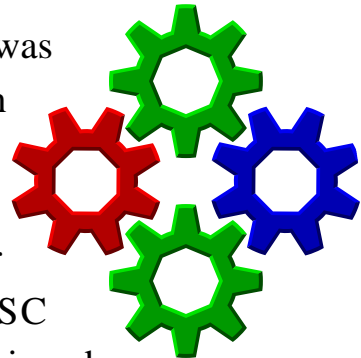**Issue 41 — Spring 2002**

RISC OS Design For The Future

S o, despite the hopes expressed in our last issue (and the two before that!), we are still waiting for Omega. At least we were when this issue went to the printers a couple of weeks before you received it. The last estimate we had was for Christmas 2001 so all we can do is wait for the next one and hope that it proves to be more positive.

In the meantime, RISCOS Ltd has been looking ahead to the future of our favourite operating system.

In the last issue of Eureka, and again on page 30 of this one, we have used a cog logo to illustrate our two-part series on the Select scheme. This is one of a set of logos which RISCOS Ltd have produced to represent RISC OS in any version, present or future.

The 3D cube, which has become so familiar, will continue to represent RISC OS 4 and the Acorn nut still survives as a trade mark now owned by Castle.

The cogwheel was chosen as an appropriate symbol for the modular system of RISC OS and was designed by Richard Hallas to be flexible enough to be used in a variety of ways and combinations, in colour or monochrome. It has eight teeth, the same number as the bits which make up a byte, and four cogwheels can be grouped together to symbolise the RISC OS 32-bit operating system.

It's good to see RISCOS Ltd with such a confident approach to the future. It would be nice to hope that the next issue of Eureka might be able to report on a new computer using RISC OS but, with all our previous optimistic hopes having been dashed, perhaps the most sensible thing to wish is that the next announcement we hear about the Omega may be that the long awaited machine is actually on sale!

Peter Jennings

CONTENTS

A fractal fern, built with Montage
(see page 66)

Write for Eureka...

Extend your membership

FREE

Have you ever thought about writing something for Eureka? If so, now is the time to do it.

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

There will be fuller details in our next issue.

In the meantime, if you surf the Web, you may be interested in a regular spot open for someone to do a series on websites worth visiting.

If you have an article, or any suggestions for one, email the Editor at eureka@armclub.org.uk or write to the address on page 80.

RISC OS 2001 Behind The Scenes

After eight months of planning, the weekend of RISC OS 2001 finally arrived.

Friday was set-up day and previous experience had shown that this was the busiest day of all (for the

The fascinating story of what went on behind the scenes at the RISC OS 2001 Show, as seen by John Sawer, who helped to organise it all.

organisers). It must have started early for Rob Brown since by the time I arrived about 10:00 am the shell scheme was completed. We arranged phone and power extensions, put up notices around the venue, organised the theatre, then the exhibitors started arriving. The ARM Club and SASAUG guys were also kept busy setting up their stands. A BT engineer arrived to sort out Chris Hornby's phone line. He discovered that the ever-helpful Blue Mountain staff didn't know too much about anything technical like ISDN lines or the location of phone outlets (or even the switchboard). I think Chris should be glad he paid a fixed fee since the two

BT guys must have been there at least two hours. Oh yes, and we had to lend them some 'gaffer' tape!

By mid-day more helpers had arrived and we were able to help unload exhibitors' vans as they appeared. The first was Robin Watts, who was his usual well-organised self, and had his stand completed in no time at all. Then the more loaded of the vans arrived. I think exhibitors must travel in convoy, since three or four would appear at the same time. The single exhibition floor sounds fine until you realise that the rear entrances were quite a long way from the vans (past the golf buggies) and also had a step. The only way of avoiding the step was to go through the main entrance.

You wouldn't believe how much some exhibitors have in their vans. Chris Evans is famed for bringing the entire shop, including counters and

The first exhibitor to arrive, Robin Watts starts to set up the WSS stand

cash till, while Paul Middleton won the award for the most you can cram into a rented Transit. At the other end of the scale, Martin Würthner arrived with just a bag, having come straight from the airport (although he was sharing a stand with ExpLAN who more than made up for Martin's 'travelling light').

We had known that some important exhibitors were missing (RiscStation, Microdigital, Cannon-Cumana) but, despite that, the exhibition area was nearly full. Castle, Cerilica, Surftec and RISCOS Ltd were building their own stands. Jack Lillingston and helper assembled the Castle stand, this seeming to have the complication of a frame tent.

Paul Middleton built his stand with a practised hand, as did Neil Farnham-Smith and helpers, but Nicholas van der Walle was still surrounded by boxes at 7:00 pm while he awaited his colleague from Liverpool bringing the Cerilica stand.

There was good business for all the stands, particularly on Saturday

RComp had supplied show bags and Rob Brown had produced 500 photocopied show guides, also several exhibitors were keen to have their publicity in the bags (what a surprise!). Consequently, having spent six hours unloading vans, the helpers then formed an assembly line to 'stuff' 500 bags. Two helpers, who had better remain anonymous, stole into the darkness to put up direction signs on lamp-posts all the way from the A329(M) and at the entrance to the Blue Mountain Centre.

Show day

Boxes of show bags were put at the entrance, Dave Ruck went off to ensure the shuttle buses were OK and well sign-posted and everybody held their breath for 10:00, hoping for a good turnout. We had anticipated that the indifferent weather would keep the golfers away but they're obviously a hardy lot and the car park was half full before the Show opened. It was rapidly completely full with visitors to the Show, but fortunately the driving range still had spare

places. Each shuttle bus brought a fresh influx of visitors and by 11am the place was pretty full. By 12 it was packed, even when the theatre was in full swing. Dave Lane was busy organising helpers to man the main door and theatre, also checking that exhibitors were happy. They were, of course, provided there were lots of people ready to spend money!

It was busy all day, few leaving before late afternoon. At 5pm the Show closed. Except that people wouldn't leave! After about three increasingly threatening announcements over the public address (by Matt Cook) the hall finally cleared about 5:30.

A count of ticket stubs showed that just over 500 people had attended on that day, a similar number to last year at Epsom.

The downside (especially for Rob) was that all the show guides had gone. Also the previous evening's 'bag stuffing' had run out of exhibitor flyers from some companies. Checking with these exhibitors showed they had almost run out of literature too but we had enough to put in a couple of hundred bags.

Although we had no show guides, we assembled 200 bags and put them to one side for the show guides to be added the next day.

Sunday

Rob had been up since early, copying another 250 show guides and arriving about ten minutes before the show opened. The guides were rapidly added to the bags and another 50 assembled. By the end of the day they had all gone, so about 260 new visitors arrived, plus some who came on Saturday, about 300 in total. It was definitely a lot quieter than Saturday. However, Paul Middleton's presentation on Sunday afternoon was still packed –- it was just that there weren't many people left in the exhibition hall.

This must call into question whether it is worth having a two-day show. What about 9:30 to 5:30 just on the Saturday? It is only Wakefield and RISC OS shows that are held over two days and for the last couple of years Wakefield has been really quiet on Sunday — even the theatre was under half full. It will be interesting to read the feedback from exhibitors and visitors.

By about 4:00 everybody was packing up and the clear-up process was under way. Exhibitors' vans were loaded, hopefully with far less to shift than on Friday. Boxes and other refuse were put in or with the dustbins, as were many unsold items from the charity stand, at which point certain people were seen trawling through the dustbins' contents! In the meanwhile, Modular Displays had arrived and took down the shell scheme. The phone and mains extensions were gathered up and the theatre was dismantled. When the rooms were clear all the glasses, plates and cups that were hidden in corners were collected up, together with litter and the room left shipshape. After all, we may need it next year!

I have not mentioned what the Show was actually like (yes I did see it)! On Saturday I went round the Show with my son. Seeing it from the other side of the fence has benefits, like admiring how well organised it was! What caught my eye? The theatre presentations by Cerilica and RISCOS Ltd were really interesting and in the hall, the working Phoebe on the AAUG stand, Red Squirrel RISC

OS emulator (for PCs) on the APDL stand and, best of all, the enthusiasm of many exhibitors and visitors. What did I buy? A manual for DrawWorks Millenium from Dave Holden (I am afraid I like printed manuals), a statistical package from Robin Edwards (the elementary one that I might be able to be understand) Textease *Presenter* and some photo printing paper. My son bought RISC OS 4 and some bits and pieces, so between us we probably spent more than two hundred pounds. Most people I have spoken to since said they had spent "more than intended". If everybody spent a hundred and twenty five pounds, the total take would have hit a hundred thousand pounds. To organise the Show cost around £15,000 and thanks to the good attendance we more than broke even.

From a personal standpoint, it is hard to believe it is all over and for a week or so I kept feeling guilty that I was not working on Show publicity!

Looking back, it is hard to believe that so much effort went into organising a two-day show. Summarising my view of the Show, there are both negative

What might have been — a working version of Phoebe on the AAUG stand

and positive aspects. Dealing with the negatives first: RiscStation and Microdigital should have attended and in my personal opinion have lost a lot of Brownie points. If companies will not support a major show I wonder if the portable and Omega will ever see the light of day. Of course we get the "too busy to attend the show" excuses but if not enough companies support shows (which are organised by enthusiasts on a non-profit making basis) there will not be any more; and we will all lose out. The positive aspects more than outnumber the negative. The attendance was better than we had dared hope and a testament to the

continued support for the RISC OS platform. The web site was a great success and the ability to purchase tickets on-line was well received (over 200, or almost 30% of all tickets, were purchased this way). I seem to remember Neil saying the site had more than 4500 unique hits and, while it is a shame only 750 came to the Show, it again shows the level of interest in the platform. My abiding memory of RISC OS 2001 is the continual buzz of conversation and crowds round all the stands all day Saturday.

That alone made the efforts of organising the Show all worthwhile.

RISC OS 2001-- A Visitor's View

I have seen the future - It Happened Yesterday

Depending on who you consult, RISC OS is either dead, dying, or alive and flourishing, albeit in a low-key fashion.

RISC OS 2001 Show visitor, G T Swain, made a two-hour journey to get to Binfield and was interested enough in what he saw to send us his comments.

The high points of the RISC OS ('ROS') user's year, are (or were) the computer shows: Wakefield in the North and this year Binfield for the rest of us. This year's October Extravaganza, occupied part of the Blue Mountains Golf course and Conference Centre's premises at Binfield, near Bracknell, situated approximately seven miles from Reading.

Well, very well attended by the cognoscenti, an ageing but well informed segment of the British Computer scene, but regrettably representing less than the full spectrum of ROS user interests.

Where were the next generation of ROS users or the software to interest either the game playing fraternity or the education sector? I am not saying that these were completely unrepresented but, compared to shows of only a few years ago, when a score or more of producers and vendors competed for our attention in each of these areas of interest, not a very impressive showing.

Where were the technical experts which used to frequent the stands of some of the larger dealers, each of whom could keep punters patiently queuing for attention, in the hope that enlightenment would be forthcoming?

Theatre presentations used to be about innovation or consisted of neatly rehearsed demonstrations professionally performed and not albeit amusing comments about Wintel, or

enthusiastic apologies for products long expected but still not ready.

I know that ROS is lovingly supported by organisations whose sales and service is legendary but the clock is ticking and we do not seem to be making much progress. Where were the promised new machines or even the upgraded operating system hinted at a year earlier?

It wasn't all bad news. I did not really mind travelling for more than two hours to get to the show and a similar length of time to get home. I did not even mind the confusion about the shuttle bus service. The chance to renew old acquaintances, together with the available bargains compensated in no small measure.

But RISC OS needs new blood in order to ensure survival. We desperately need new machines that match or exceed the Wintel and Apple hardware in terms of speed and capacity. Even more urgently we need new software. Cerilica Vantage offers some hope but we need other software of equivalent quality. We need High Street dealers who know we exist and magazine support from publishers who can appreciate what is possible, and are prepared to sing the praises of ROS in magazines like Personal Computer World or PC Plus alongside so called mainstream technology.

Perhaps this is a plea to those who regularly pontificate on what RISC OS needs in order to evolve. Stop looking inwards. Take a more provocative stance. Time to start writing to PC and Macintosh Magazines to remind their editors that we are still here. Take time to walk into PC World, Dixons or other local computer store, and enquire why they are not supporting our platform. Contact the software companies like Adobe or IBM Lotus or Macromedia and ask when we can expect to see RISC OS versions of their flagship products.

If we do not ask the questions, there may come a time sooner than we expect, when we no longer have dedicated computer shows to attend. If we are to have a future we need to get back to where we were four or five years ago, as I mentioned earlier, I Have seen the shape of the future, as it was, if not yesterday, then certainly a day or two earlier.

What *Is* A Spod?

Looking back through past issues of Eureka, I see references to 'Spod' and 'Spodess'. -Colin Sutton

You do — mainly my fault, I confess. -Gill Smith

What is the definition of a 'Spod' — it's not in my dictionaries? -CS

perhaps 'unappetising meal' or 'office' ? I thought not. I don't really agree with the definition they give as correct — 'a dull person' — with a fuller description, which implies a bookworm. Personally, I think spods are much more technologically advanced than a bookworm. Books are only in the spod's vocabulary

Colin Sutton wrote to Eureka to find out what you too may have always wanted to know but were afraid to ask. What exactly is a spod? Gill Smith supplied the answers.

Ah. It did get a Reader's Digest entry a while back (Eureka 33), so I'll start by being lazy and quote my own article:

❝ November's issue of Reader's Digest, in the regular feature *It pays to Enrich your Word Power* posed the question of what a 'spod' is. They aren't the first people to ask me such a question but they are the first to also answer it. The traditional four possibilities that RD offer mostly miss the mark but one comes close.

 Anyone favour 'garden tool'? Or

because they were one of the first products sold by e-commerce on the internet. Of course, all spods use 'Bookmarks' with abandon, but that's due to stealing the term from the dark ages, where it goes back further than the days of the Acorn Electron. ❞

I also looked up the Techie Jargon site: http://www.tuxedo.org/~esr/jargon/html/entry/spod.html and here are a couple of relevant bits.

1. A lower form of life found on talkers. The spod has few friends in real life and uses talkers instead,

finding communication easier and preferable over the net. He has all the negative traits of the computer geek without having any interest in computers per se.

(I'd argue with that one —I think spods are fascinated by the computers themselves. -*GS)*

Considering his access a God-given right, a true spod will start any conversation with "Are you male or female?" (and follow it up with "Got any good numbers/IDs/passwords?") and will not talk to someone physically present in the same terminal room until they log onto the same machine that he is using and enter talk mode.

2. A backronym (backwards acronym) for 'Sole Purpose, Obtain a Degree'. According to some self-described spods, this term is used by indifferent students to condemn their harder-working fellows.

So that's the Techie Jargon version. Does that help at all?!

Does it refer to one particular person or several people/members?

Spods can be singular, plural, male or female and the only real criteria, as I see it, are breathing and keen on technology.

Is it still used or was it just a passing phase?

You bet it is! I'm sure I'll have plenty more to say in my next article, whenever I write that (Do you think Peter passed this on to me as a subtle nag?!) I only went for 'Geek' more in the last article, because I liked the concept of 'Geek Chic.'

Recently the word has cropped up elsewhere and this has made me rather curious.

Do tell me where —you never know, it might inspire the next article and, even if not, I'd love to share it with the members —official recognition is probably cool.

Does that answer the question much or at all?

Has anyone come across any other definitions?

Do let us know. -Ed.

At Home With The Spodding Councillor

Back in the Spring of 2000 I was persuaded to stand in the local elections for a seat on Medway Council, a so-called *unitary authority* in Kent. This term means that it performs the tasks of both a district council and a county-wide authority.

could onto the Risc PC—my main computer. This is now a four-slice affair, by the way, thanks to a lot of good work by David Coronel at the Data Store in Bromley, Kent. Perhaps I ought to take a new photograph…

In the second of our visits, at home with the spods, we see how John M Ward uses his Risc PC to battle with the bumpf in his very active life as a local Councillor.

In the case of Medway, the unitary authority when it was formed in 1998 took on many —though not all —of the responsibilities of Kent County Council as well as the simultaneously merged Rochester and Gillingham district councils. This is why we have *three* main offices (ahem!)

Anyway, I was duly elected in May 2000 (a result of a huge swing away from the previous incumbent) and promptly set about learning as much as I could that would help me do what I had been elected to do.

I also started getting as much Council-related information as I

Because I have had many years' experience in on-line communications, such as a wonderful period as a regular at the Arcade Bulletin Board (hi Dave and David if you're reading this), I have been well placed to champion the cause of moving away from paper-based documentation to purely electronic forms of agenda papers, reports, letters and as much else as I can persuade our staff to send in that form.

It is a difficult task, as once again I am fighting a lot of inertia, just as I did when I was the IT support staff (yes, I was the entire IT staff!) for the south-east regional structure of
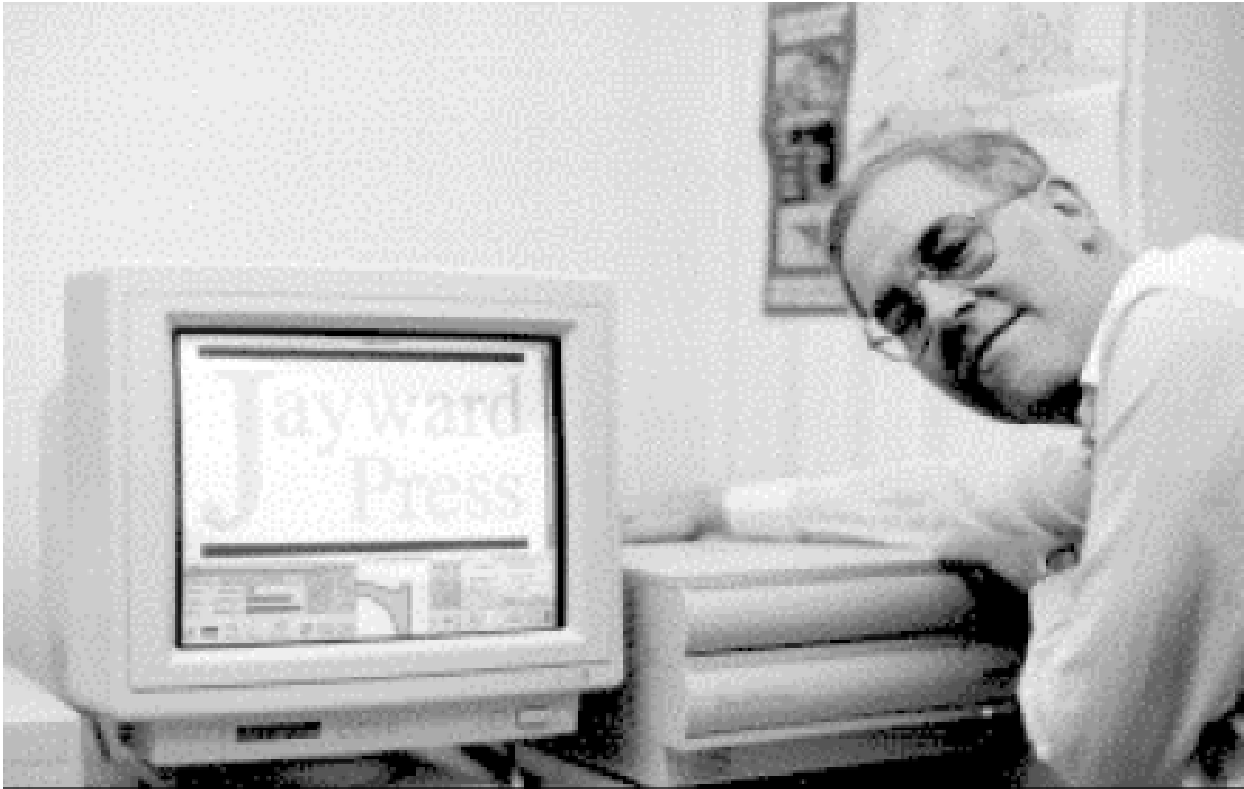
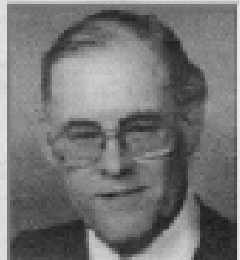*Councillor John M Ward at home with one of his computers*

the Department of Trade and Industry.

Fortunately our Chief Executive and at least some of the other senior members of staff in our council are quite keen to see more of a shift towards electronic communications, so I have high hopes of getting all offices within the council to offer their computer-produced documents to us in that form, rather than printing them out, collating and stapling them, shoving 'em in envelopes and sending those off in the post.

We members of the council are each bombarded with *several thousand sheets of paper a year* at present. It is a huge waste of forestry, quite apart from the difficulties of trying to file and store all that bumf, so you can see why I am so keen to get away from paper-based documentation.

Meanwhile, I have been busy on a couple of appropriate newsgroups: uk.gov.local and our local group in Kent, uk.local.kent (there are 'uk.local' groups for most of Britain), joining in debates and providing information and assistance on

John's own record from his Councillors' database

occasion. I am an Argonet customer and use the standard Voyager suite that was provided, upgraded several times. I have used *Termite* and the *ANT Suite* in the past, before Zynet merged with Eurobell and became all but inaccessible to Acorn/RISC OS users. That was when I switched to Argo and have never once looked back.

Away from the on-line side for a moment, all my council correspondence is written in OvationPro, I have many kinds of records, mostly kept in PipeDream and FireWorkz, and I also have an Impact database of all our Councillors. You can see my own record from that database above.

Inevitably documents that do arrive in electronic rather than paper form come as Microsoft *Word* files, so TechWriter is invaluable in handling these and converting them to more useful formats.

Soon after my election I created some pages about my council work on my website, but although it was a worthwhile effort it wasn't exactly exciting stuff. This was to change drastically in Autumn 2001, when

Medway Council and many other local authorities moved to a new form of political management, the enforced (by central Government) 'Cabinet-style Council'. Soon most if not all local authorities will have to operate on this basis, though it is clearly far less democratic than the (admittedly imperfect) system under which we have worked for many years.

Cabinet-based

The problems with Cabinet-based forms of government have always been that decisions are made by just a few of the elected representatives of the people and those decisions are usually made behind closed doors. We were determined not to be secretive and would hold all meetings that were not solely concerned with personal or other so-called 'exempt' matters in public, but it wasn't easy to show our electorate that we really meant it.

At this point I hit on the idea of putting as much information as I could on my website and letting everyone I could know about it; so I set about creating what has turned out to be a huge resource showing a vast array of information including: all

upcoming meetings and their agendas; all our Councillors, wards and political groups; links to all parties' own websites both locally and nationally; and a range of other information such as planning *Use Classes* and what declarations of interest are all about.

For my own ward, I have put up our local issues, information about and pictures of places of note within the ward, an electronic (HTML) form of our newsletters (the originals of which were created in OvationPro) with built-in links to greater detail and contacts, letters I have written to the local Press, notable speeches I have written and delivered (both of them!), lists of road works/repairs and planning applications, and contact details, for me and the other Councillor for the ward.

Something special

It really has grown into something special, and was all created using RComp's *HTMLEdit* and such utilities as ChangeFSI (to create JPEGs), WebGif2 (to create GIFs), and Imagen (for Image Map creation). All pages have been checked in Fresco and Oregano, and

Internet Explorer on my reluctantly-bought 'Time Machine'.

Yes, even I have had to get one of those dreaded Wintel boxes (and it even gets switched on occasionally!) but this is only so that I can gain access to our council website's inner chambers, so to speak, as they are not accessible by any other means at present. Not that I am giving up on that front, I might add…

The Council area of my website can be found at: www.argonet.co.uk/user s/johnward/council/

Nearly everything links to just about everything else and there is also a page of links to other sites. There are no frames, nor any Java™, JavaScript™, Flash or other adornments.

314 files

The website is currently 314 files of ordinary HTML with tables, an imagemap, lines, buttons and various graphics including drawfiles (converted to JPEGs) and photographs.

It has taken me almost a month to bring it this far, squeezed in between other activities, but at last I feel the project is effectively complete — apart from the incessant updates, of course, generally at least one per day. It has certainly been a learning experience, though I went in with my eyes fully open.

Clean design

It has genuinely been a pleasure to create such a worthwhile resource, especially knowing that I have produced a very 'clean' design, free from gimmicks, thanks to the excellent tools I have and the general philosophy that our area of the computing world espouses: keep it simple, uncluttered and never let style win out over content.

Almost every page has a link back to my home page, which not only clearly points out how the site was created and the lack of gimmicks, but also links to my RISC OS page which is a member of Paul Vigay's *RISC OS Ring* (see: www.vigay.com/cgi-bin/we bring?ring=riscos about this webring) and flies the flag for our platform, even including pictures and details of the last 'Rocket Ship' Risc PC, and as many of our user groups/clubs as I have been able to identify.

It also includes a number of categorised links, among which are links to other links pages for those who wish to explore the subject in greater depth. Have a look at: www.argonet.co.uk/users/johnward/risc_os/

On the matter of web design, I recently encountered someone who is vehemently against having anything to do with HTML and designs everything in one of those PC/Windows programs such as *Front Page* or *DreamWeaver*, never touching (and probably knowing nothing of) HTML. This person, who designs websites for a living, adamantly believes that Microsoft rules the Internet world.

Myth-buster

Despite my well-earned reputation (especially within Medway Council) as a 'myth-buster', I haven't had the heart to point out that all Internet protocols are Unix ones, that all serious servers operate under Unix, or one of its lookalikes, and that there is absolutely no Microsoft involvement in the way the mainstream 'Net runs.

I have also restrained myself to the extent that I haven't (yet!) pointed out

that the RISC OS platform conforms far more closely to the agreed standards than anything strongly influenced by Microsoft.

One day, though, when we are both at any kind of computer, I shall take great delight in showing this individual a few truths…

In the meantime, it's back to the daily —or, in my case, nightly —grind of work (I work nights, full time) as well as Council activities, website updates (another agenda has just arrived in the post), church matters, and some business for our Residents Association of which I am the secretary.

At least life here at *Château John* (as I call my home) is never dull!

Do you qualify as a spod? Have you got two or more computers at home and, if so, what do you use them for? We'd be interested to know.

Send the Editor an email, or a letter to the usual Club address, which you can find on page 80

Nuts

to your backups!
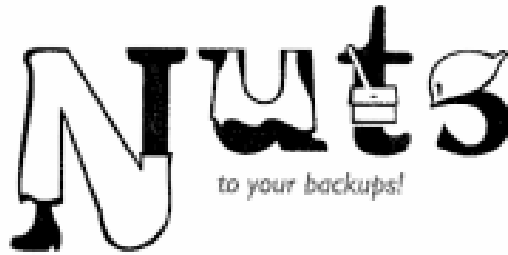
This alarmingly-titled application is, in fact, a backup generator which will work in the background thus allowing a desktop user to continue with other work undistracted.

opening the backup directory and double-clicking on the !Restore file which is created alongside the backup data file. At least that's the idea, but more of this later *(see 'Summing*

Backing up in the background is one of the facilities offered by a new easy-use utility initiated from a simple window. Andrew Weston has been putting it to the test.

Nuts has additional facilities which distinguish it from being simply a copying system which would be just duplicating a feature of the Filer. Using textfile *scripts* (files of text which direct a program), Nuts is able to back up any number of directories on your hard disc (or, presumably any chosen filing system) to any other directory that is created specially for the user. In addition, the contents of the directory can be compressed and will appear to form a single file of compressed data which can understandably be very large indeed.

The archived material can be reformed into its original form by

Up'). Another file is created which acts as an index of the archived material to ensure the files are re-created in their original layout should the unthinkable happen and the user lose his or her original material.

That is essentially how Nuts is operated and the process is initiated via a simple window from where you can view your scripts and run, or stop if necessary the backup process. Initially, one would create a new text file and drop with the shift key held down the source and backup directories into the text-editor window to display the pathnames as described on the instruction-card
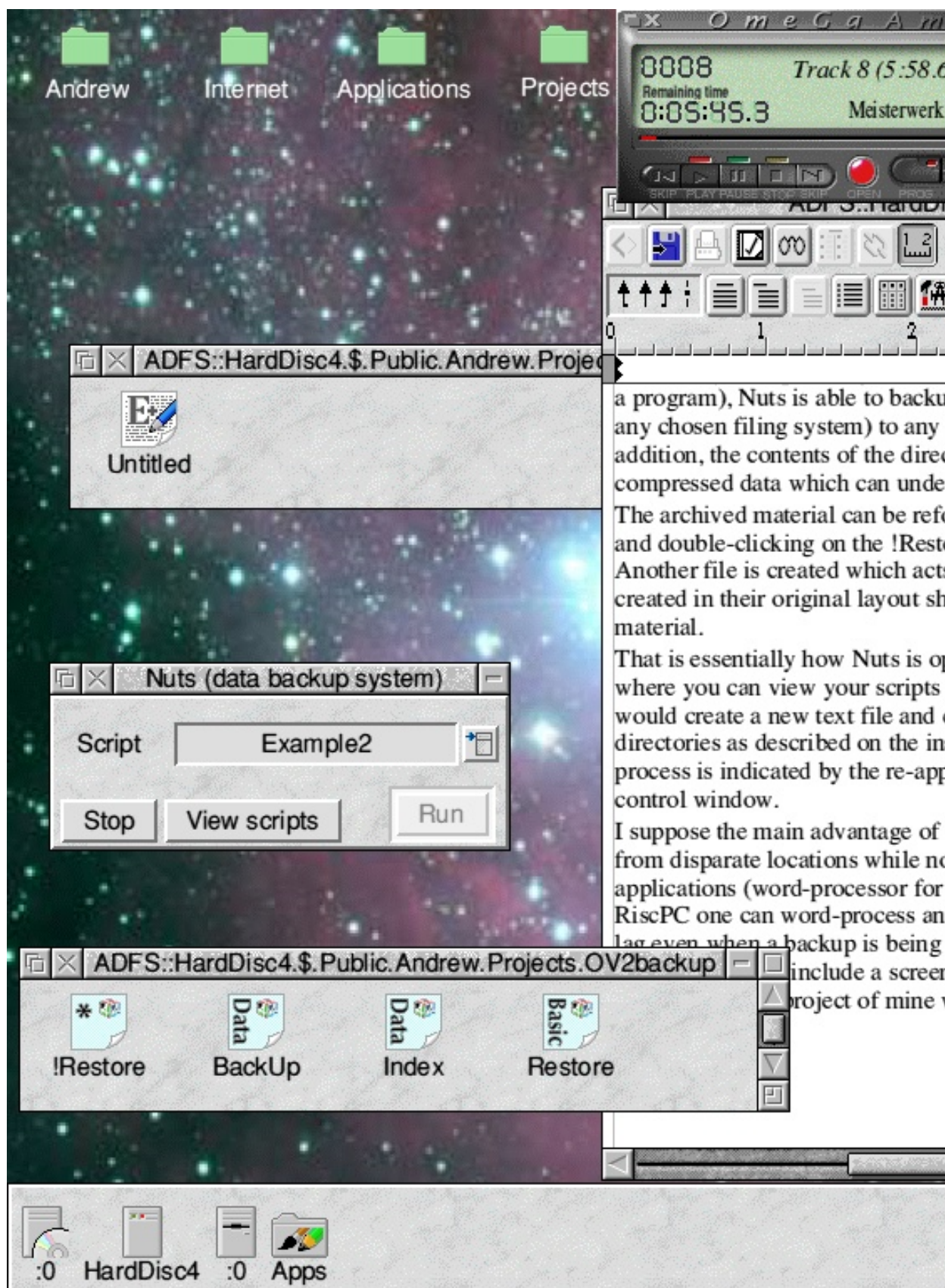
An archive being created to back up a large graphics project

accompanying the software. Completion of the process is indicated by the re-appearance of the 'run' icon from it's greyed-out status in the Nuts control window.

I suppose the main advantage of the program is its ability to operate upon multiple directories from disparate locations while not excessively impeding the computer from running the other applications (word-processor for example) currently in operation. On a standard 233MHz Risc PC one can word-process and move filer windows about without noticing any significant lag even when a backup is being compressed which would seem to be a desirable feature of any backup system. Above is a screen shot showing the contents of an archive in the process of being created to backup a games project of mine which includes a very large amount of development graphics and other files.

It shows the files present within the archive and the clear multi-tasking nature of the application. The original directory was backed up from a size of 345Mazurkas to a size of around 250Mb in less than 20 minutes.

A few other features are worthy of mention, including the relatively novel ability of the application to take advantage of the RiscStation's new hardware and power-down the computer on completion of the backup. Therefore, a RiscStation user who wanted to ensure that he or she had definitely backed up a large amount of work but who didn't have time to wait for the process could leave the application running in the knowledge that the application would finish the task and shutdown the computer for them.

The application's publishers, ImageSoft are also promising:

• Incremental backups: a 'checksum' system (presumably coded tags) which determines which files have been updated. This will I assume be used to allow updating sections of backups.

• Restoration of single files or directories to avoid having to restore a whole archive when only a subset of the original material needs to be found.

These features sound like they will be a very useful addition to already quite

handy software but it's unclear in what form they will be accessed by the user. Perhaps a list of files in a window similar to the worldwide web upload program used by owners of Argonet's Voyager internet software?At any rate, Imagesoft promise that all users will receive free upgrades as soon as they have been tested

Summing up

I mentioned earlier that there was an issue in the restoration of backed up material. I have contacted Imagesoft about this problem but the problem has not yet been resolved. Using a Risc PC with StrongARM and RISC OS 4 the index file created in the archive (which keeps a catalogue of the backed-up files) does not appear to incorporate the full pathname of the archive at its start and has to be manually edited to this effect. Once edited, the material compressed or uncompressed can be restored however. This is the one complaint I have with the software and hopefully Imagesoft will fix this before the release but it may be worth checking before you order.

Overall though, Nuts is a compact, easy-to-use and valuable utility that works quite efficiently in the background. Its value is that, even if your hard-disc breaks down, by backing up there would surely be an extra chance that at least some of the fruits of your hard-work could be recovered. At £10 per copy, Nuts in this reviewer's opinion represents good value for money. There is great play made of the virtues of public domain software but Nuts represents an example of software that is ell worth paying for. You'll receive paper documentation, support, free upgrades and the backing of a company which is actively looking to expand in a number of areas. Alongside DiscKnight from The ARM Club, you could without doubt feel more assured about the safety of your data.

Nuts
Price: £10
Supplier: Image Software (UK)
48 Hinchliffe Road
Poole
Dorset BH15 4ED
Tel: 01202 269720
Mobile: 07740 622861
Fax: 01202 685072
Email: sales@imagesoft.co.uk
Web: www.imagesoft.co.uk

Running A User Group

This article has the aim of encouraging enthusiasts to begin a new user group (or to support an existing group). It loosely draws upon my experience as chairman of the Surrey and Sussex Acorn User Group (SASAUG).

John Sawer, chairman of the successful Surrey and Sussex Acorn User Group, explains the enjoyment of membership of a local group and how to organise one.

Running a computer group can be a rewarding experience, helping to foster interest in the RISC OS platform and helping members to gain a greater appreciation of the capabilities of RISC OS machines. Arranging meetings and recruiting new members can have its frustrating moments but this is greatly compensated by the successes. To anyone considering starting or running a group, rest assured it is not particularly difficult or demanding (after all if I can do it, anybody can!).

There is no such thing as a typical computer user group. Each has its own interests and ways of working.

Although we are focussing on things Acorn/RISC OS, there are many other machines forming the focus of computer clubs. Apart from the inevitable PC/Microsoft clubs, there are user groups catering for every variety of computers and operating systems. For example, there are clubs supporting Atari, Amiga, Apple Macs and Linux.

I thought the sausage connotation of SASAUG was bad enough until I realised that Linux user groups are LUGs and Macintosh user groups are MUGs!

Now to review the essential elements of a RISC OS user group.

The primary purpose must be to bring like-minded people together to provide mutual support, also to have meetings focussing on various aspects of the platform. To organise

this sounds easy enough, but the reality is a little more complicated. Inevitably, any group will have members with a wide range of interests and abilities. The RISC OS scene is hardly booming, despite the best efforts of enthusiasts and companies still in the RISC OS market. At SASAUG we are always seeking new members, but we primarily consist of an enthusiastic core of 20 or so. The aim is to provide meetings of interest to all members, thus encouraging them to *keep the faith* and remain with the RISC OS platform. Several use a PC for the 'day job', or Internet access, yet still turn to their Risc PC whenever possible. Indeed, using a PC can often reinforce the user-friendly and powerful features of Acorn/RISC OS machines and their operating system.

The need to maintain membership requires the ability to keep most people happy most the time! This suggests certain ways of organising the group and meetings. How often and where to meet are two fundamental questions. The venue could be a pub, usually with a room that can be used for the meeting, or a separate hall. Either way means a that

the cost of the room is a fixed overhead that must be paid for on a regular basis. Other expenses could be the purchase of computers, monitors, OHP projector, video projector etc.

Beg or borrow

I work on the basis that you can beg or borrow most of these and our only 'goodies' are a monitor splitter and some 17 inch monitors, the latter being rescued (by Geoff Arnold) before they went in the skip! The revenue to pay for expenses must come from subscriptions. In our case we have only the cost of the hall so we can keep the subscription down (to £12 a year —unchanged for four years).

Most clubs meet on a monthly basis and this seems a good balance between continuity and the need to organise frequent meetings.

Meetings basically come in three types:

• Discussions
• Sales
• Talks

Open discussions tend to be led by those with a greater level of technical ability and members with little technical knowledge (which includes me) can feel left out. Nevertheless, any meeting needs a chance for discussion of individual problems and exchange of information on hardware and software releases or purchases. This is an essential function of user groups and part of each meeting must be kept free for such discussions.

A variation on an open discussion is a more structured meeting, such as a 'brains trust'. Another such is the AGM, which is rather formal and best sneaked in after a normal meeting. I made the mistake of advertising the last AGM and scarcely anyone but the committee turned up.

Sales of second hand hardware and/or software are not popular. I guess that even the biggest selection of members sale items looks pretty thin compared to the charity stand at a large show. I also fear that many people have the same magpie attitude as me. In my experience, a sale is almost as effective as an AGM in keeping people away.

This brings us to talks. I attempt to have speakers at as many of our meetings as possible, since this is by far the most popular type of format. A well advertised talk (advertising I will come to later) brings in significantly more people, including those who have not visited us before. Our record was when Chris Evans (CJE) demonstrated a pre-release version of RISC OS4 and we had almost double the usual number, just about filling the hall.

Variety of speakers

We have been very fortunate in the variety of speakers that have visited us, especially this year. To get new speakers is a constant battle and for some meetings we rely on the 'regulars'. These include Chris Hornby (Photodesk), Dave Holden (APDL) and Chris Evans. Most speakers are drawn from the local area since the time and cost of travelling from further afield are not justified. Exceptions are Chris Hornby from Portland and Mike Williams (Acorn Publisher) from Bedford. Some meetings contain presentations by our own members. Subjects have included video editing, features of a RiscStation a

demonstration of Sibelius and magazine publishing with *Impression.* Two highlights of the year, at least for me, were Chris Mercier (Printmaker) who demonstrated computer controlled vinyl cutting (for advertising), while a demonstration of Sibelius was given by my son (I admit some bias here) who demonstrated its features with a digital piano. These two talks demonstrated the flexibility, power and user friendly nature of the Acorn/RISC OS platform. Both proved thoroughly entertaining evenings and with the computer almost secondary to the application, but an essential tool.

I have said that getting new speakers is a battle and I have had several refusals by individuals or companies who were just not interested in talking to the group. Needless to say I won't be buying anything from them!

My general method of finding speakers is to browse through Acorn User and Acorn Publisher over the last 12 months, looking for advertisers and writers of articles or regular columns. Those who live within 50 miles of Horsham (where

we meet) are contacted by email or telephone. The contraction of the Risc OS market has made the search for speakers even more difficult. This is not helped by our geographical location, since the centre of gravity of RISC OS suppliers now seems to have moved North.

One idea I have is for all groups to list speakers that have appeared at their meetings. Maybe this is something that could be organised through the AAUG?

While it may be useful only for a geographic area, there are often several groups within easy travelling distance (South East groups are Southampton, SASAUG, ROUGOL, EastM25, Kent). Also some speakers will give presentations to groups when they are in the area for other reasons (Jack Lillingston visited SASAUG while in the area for the BETT show).

To form a new user group or maintain an existing, advertising is essential. This seeks to recruit new members and/or inform existing members of meetings. A range of media exists for contacting Acorn/RISC OS enthusiasts.

A group web site is invaluable, provided you can find a suitable volunteer to create it. The site should contain a location map including details of public transport and car parks, group contacts, advance notice of meetings and perhaps photographs of presenters and/or the committee members.

Electronic media used by SASAUG are principally `comp.sys.acorn.announce`, the AAUG Smartgroup, a link from the AAUG web site and emails (to existing members).

Printed media is useful because they reach more people; also they are always seeking news and hence are willing to print details of groups and meetings. Acorn User, Archive, Acorn Publisher and, of course, Eureka, are the most useful magazines. The CD ROM based Risc World and RISC OS Foundation RISC User are also worth considering. Acorn User has frequent lists of user groups, both in the UK and worldwide.

The downside of printed (or CD-ROM) media is that lead times are long. So it's not always evident which edition your article will appear in!

Local dealers will put posters or flyers in their shop. SASAUG is fortunate in having CJE and The Data Store in the area.

The indefatigable Neil Spellings has an AAUG stand at all relevent shows, with flyers for most user groups and a list of all those affiliated to AAUG. Neil is also a font of useful guidance, so make sure you use his experience.

Summarising, to form a new group you need only spend a few hours a month but, above all, you need enthusiasm. Put out notices in all the suggested places asking interested parties to contact you, also contact Neil and wait for the emails to turn up and the phone to ring.

Even if you start off with only four or five members, it can build from there. Best of all, you will realise you are not the only person in the world who prefers an Acorn/RISC OS machine to a windows PC and you will be doing your bit to keep the platform alive.

Good luck!

The Flaky Song

(To the tune of the Cadbury's Flake advert)

Only the crumbliest, flakiest software,

Makes a Geek the richest man in the world!
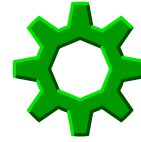
(Repeat ad nauseum)

Woefully

Inadequate

'N'

Drastically

Over-rated

Wimp

System!

Andy Burgess

RISC OS SELECT

Much has been made of RISC OS's resistance to corruption and viruses through being shipped in ROM and many people still regard soft loading with suspicion. However, developers have been using this

inclusion of more features. The only real drawback to the system is that an amount of RAM equivalent to the ROM size is used, so a minimum of 32MB is recommended for Select users.

In the concluding part of his compehensive look at the RISC OS Select scheme, David Ruck explains more of the benefits and itemises the new features you will find.

---

method for years without problems, to test first Acorn's then RISC OS Ltd's development versions of the operating system. This enables new versions to be tried without having to take the machine apart to changes ROMs on a regular basis. The ROM images are stored in compressed form on disc, so are quick to load and are protected once in memory so cannot be corrupted. If the worst should happen and your hard disc fails, you still have a full copy RISC OS 4.0 in ROM to fall back on. Moving to softloadable ROMs removes the constraint on size, allowing it to increase from 4MB to 6MB as in the current Select releases, up to a maximum of 8MB, facilitating the

When the new OS is softloaded, instead of the normal dull textual start-up screen, a much nicer graphical logo of the Select scheme is displayed, along with any registration details from the ROM, such as your name and address. On the first boot up, or if you shift boot, you will come to the hardware configuration menu. This will detect all the hardware on your machine and note any discrepancies allowing you to create or choose 'profiles' for various circumstances. This means that if you take out a component, such as a network card, a profile can be set up that does not run the network configuration, which would otherwise cause an error during

booting. This is useful if you have an expansion card you regularly swap between machines and would be really useful on a laptop where hardware is regularly fitted or removed. We can only hope that a laptop is released to exploit this before too long.

Below the banner on the start up screen, the pre-desk items flash by as usual, before the desktop is entered. However, you now do not have to stare intensely at them to spot any error messages appearing and disappearing in the blink of an eye before dumping you in the desktop, with many things not set up and a stream of other confusing error messages because of it. This is because all the messages and any errors are now recorded by the syslog module so, as soon as the desktop is entered, you can bring up a task window and type *SysLog Boot Show (this may be done by a specific tool at some stage) to see exactly what happened, allowing you to identify and correct the problem far more easily.

As the desktop is entered you are now greeted by a new desktop banner.

Gone is the RISC OS 4 cube, to be replaced with a blue RISC OS 4+ title with the strap line 'Powered by ARM Technology'. Also prominently featured is the Pace logo, to remind us who owns the ultimate rights to the operating system. The first change on the desktop you notice is the switcher icon. The RISC OS 4 cube has changed to a green cog. This theme is carried on in the icon set, with the RO4 cube, that always looked poor at small sizes, replaced throughout with the cog. A cog isn't a particularly evocative logo but it is simple and works well at small sizes. Also it's colour is reminiscent of the old Acorn nut.

Once using the desktop, you may at first be hard pushed to tell what has changed, nothing jumps out and grabs you shouting its differences. But try copying some files using the filer. As you drag to select files they are highlighted as soon as the dotted rectangle encompasses them. Then, when you drag a selection, the number of items is displayed below the icon and for a single object its name appears beneath. But hold on, hasn't it always worked that way? Going back to plain old RISC OS 4

you realise you have to finish dragging out a selection before the files are highlighted and only the package or file type icon is shown when dragging. This is one of the key points of Select, to take RISC OS's already fantastic user interface and just make it a little bit better, with features that benefit its operation but feel so natural to use you'll think they've been there forever.

While still using the filer and viewing some pictures downloaded from my digital camera, at first I didn't notice anything different but something else subtle has happened. Instead of being annoyingly arranged as 1, 10-19, 2, 20-29, 3, 30, 4, 5, 6, 7, 8, 9 they are now in the correct order 1, 2, 3, 4, 5, 6, 7, 8, 9, 10-19, 20-29, 30-39. That's going to save a bit of time as I don't need to keep renaming all the single digit names with a zero in front to get the order right. It also works with file names containing letters before the number, such as File1 and File10 etc. Plus there's some PC files downloaded from the internet, previously called LOUD.WAV and SHOUT.WAV but now displayed in a more pleasing lower case manner, loud.wav and shout.wav. However

I'm not sure I want that all the time, in case I get the case wrong when uploading to web sites but the feature is easily enabled or disabled from the filer's configure tool.

A place to get an idea of the changes that have gone on under the bonnet is in the Task Manager display, where you'll see there are now many more dynamic areas. RISC OS 4 started the trend of moving things traditionally located in the RMA to dynamic areas, such as the disc maps, but Select has extended this significantly. This has the obvious advantage of reducing the use of the RMA, that is a limited size, and preventing memory wastage due to fragmentation and, more importantly, greatly increases stability. Currently all that is needed is for a buggy module to overwrite the end of its workspace, or to write to a block of memory that has been freed, and it can end up trampling over some vital OS workspace and crash the entire machine. This is prevented by moving the OS workspace to its own dynamic area in a separate part of the memory. This memory can also be protected from any writes by normal user mode applications, removing another cause of corruption. This and

other bug fixes will make 4+ the most stable version of RISC OS ever released.

Another area where obvious changes have taken place is in the configure system. Although the jigsaw pieces in the top level window seem the same, there are now many more sub sections below them. This allows a far easier to understand structure, with each configure applet better targeted at a particular sub system, reducing the clutter of windows with too many options. It also provides more obvious places for third party applets to live, instead of always adding to the top level and turning the simple jigsaw into a 5,000 piece headache! For example, SCSI configuration would be in the discs sub section along with that for ADFS, CDs and RAM discs.

A new item in configure allows you to choose to boot in to your original RISC OS 4 ROMs or any number of softloadable 4+ images you may have. This makes it simple to swap between beta and stable versions, or to go back to standard RISC OS 4 for compatibility testing, or just to remind yourself of how tedious working without the new enhancements becomes. This makes it easy for people not technically minded to try out new features if they want to and there is no obligation always to run the latest version. If you want to stay one version behind and let other people find any potential pitfalls, that's OK too.

Spodtastic

While the enhancements of RISC OS are good news for ordinary users, there is even more advantage for programmers. You automatically get semi-commercial developer status and a listing of your products on the Foundation CD. You can now get to try out beta copies of components and provide feed back that will shape the direction of future developments.

Also, as part of the scheme, the long awaited documentation on RISC OS 4 will be produced, allowing many useful features that have so far gone unexploited, to be incorporated in your programs. Plus there will be details of the new Select APIs such as the Filer Action plug-ins which can enable the possibility of the normal file count window to be replaced with graphical display.

The bottom line

To become a Select subscriber you either have to own RISC OS 4 already or purchase it as part of the deal. That is, you cannot install it over 3.7 or any previous version (it obviously is not suitable for any 3.1 machines that RISC OS 4 is not available for). There are two reasons for this, the contract with Pace states that the original RISC OS 4 code must be supplied in ROM and they also want the substantial royalty from each sale. Secondly, if you didn't have RISC OS 4 ROMs you would not be able to use the new long filename format on all your discs, as the one with the new ROM image on it would have to remain in the old format to be accessible. The good news if you've got more than one machine for personal use, is that while you need a set of RISC OS 4 ROMs for each machine, you only need one Select subscription, which you can use on all your machines.

Many people may be tempted to skip the first year's subscription, to get all the goodies later and save some money and there is nothing to stop you doing this. But the fewer people who join from the start, the less development money and fewer goodies to get in year two. So it may not be the bargain it seems.

At the end of the day, you are still using RISC OS because there is something, often intangible, about the way it works that is better than the alternatives. Select aims to add to all things that are good about the system and fill a few of the gaps in the functionality. So if you want to keep getting the best from your system and be involved in making it better still, Select should be at the top of your list of purchases this year.

Select CD 1 Feature List

The following is the list of features expected to be on the first Select CD, subject to minor changes. The information has been reproduced from the Select Press conference pack with the permission of RISCOS Ltd.

Design goals

RISC OS Select has a number of goals which it aims to meet :

•   Improving RISC OS, based upon the work done by the original team, to make the overall system more reliable and user friendly.

- Fixes for known bugs wherever possible.

- Provide a framework upon which others may continue to develop components based on the OS.

- Integration of external components where appropriate and suitable.

The most important of these are the first and third —improving the OS and providing a framework upon which others may build.

In simpler terms, Select has more functionality for the user but, importantly, provides a lot of scope for developers and enthusiasts to provide other products. It is expected that issue will continue in this vein, providing more facilities for developers and encouraging development in a way that has not happened before.

Major changes

- Wide-scale changes to system components to move toward dynamic area use for components which previously used shared memory. This improves both the efficiency of the machine and also its stability.

- Networking components have been updated to integrate more efficiently with the system and to be more resilient. LanManFS makes inter-working with PC-systems much easier.

- Kernel components separated to reduce the size and make the system more maintainable and more easily upgradeable.

- First stage system-wide clipboard support. Clipboard support in the major OS-applications: Paint, Draw, Edit and ChangeFSI.

- Improved CDFS, capable of reading RockRidge, Joliet and VideoCD format CDs (with suitable CD drivers). Internal CDFS driver improved to support a wider range of CD drives.

- User-based configuration. Non-secure user support allows for much simpler configuration when there are multiple users of a system.

Changes over RISC OS 4

RISC OS 4, the previous release of RISC OS, came in a number of different forms and different versions,

4.02 to 4.04. The term RISC OS 4 is intended to encompass all these versions.

In the next few pages, we will look at some of the changes that have happened since the last release and the impact that this will have on users and programmers.

Kernel changes

The Kernel has changed by a reasonable amount for Select (issue 1) and it is expected to change more in future versions of the OS as it is streamlined and improvements are made.

Reduced kernel size

A number of sections of the Kernel have been split off into separate modules. This allows them to be updated independently of the Kernel, should that be necessary, to make the job of maintaining the Kernel simpler and abstract away from a single monolithic Kernel that everything relies on. Admittedly it makes a slightly-less monolithic Kernel and a couple of extra modules. The principle is that as individual components they can be tested more thoroughly and without an entire ROM image re-issue.

The components which have been split off at present include Conversions (OS_Convert* SWIs), SysVars (Sys$* variables), OSSWIs (miscellaneous high level SWIs that have little right being in the Kernel), ReadLine (separate implementation of OS_ReadLine).

Dynamic areas

In addition to this, Dynamic Areas can now be treated as OS_Heap-like areas. The effect of this is that applications that might have just used RMA, or had to think about writing a special memory manage for Dynamic Areas, can just use a couple of OS_DynamicArea calls.

System variables

System variables implemented by modules (code variables) can now be given workspace pointers. This means that they can be used more reliably from C without large amounts of support code.

Boot options

If Shift is held down, the Kernel will no longer drop to the configured language. Indeed, there is no configured language any longer. Instead, a 'BootMenu' is run. This is a

simple set of options that allow booting from a number of alternate devices.

Many other, minor, improvements have been made to the Kernel, making it more stable and providing better functionality than previously,

Internet components

The Internet components have changed to allow them to interwork much more reliably. In particular, the components now correctly respond to the death or re-birth of the Internet module. This means that replacing the Internet module with a softload, should this be necessary, can be achieved more reliably.

ShareFS

ShareFS has been split into two components: the file sharing system and the 'Hosts' management system. This means that if ShareFS is disabled, the Hosts object is still available to users of the Freeway. While very few applications use this, this divide means that future developers do not have to rely on the existence of ShareFS to provide the Hosts service.

Resolver

Resolver is now able to be configured as a DNS server. Although this facility has actually been available for many years, it has never been publicised. Small LANs can now be set up to use a single, central DNS server running on RISC OS without any other software being necessary. This is one step toward making it possible to use a RISC OS machine as a true IP gateway.

Firewalling

Firewalling is an issue that has provoked much interest recently and Select provides a mechanism for RISC OS machines to be firewalled. Based on the unix firewalling system, this allows advanced users to block out connections from 'outside' and potentially make their machine unreachable. While RISC OS is not vulnerable to many of the attacks that are prevalent, having the ability to remove these threats completely is a great advantage.

Mimemap

Recent developments from the W3C and others have brought forth various XML standards which are becoming more and more prevalent. In order to

cope with these developments, MimeMap has been improved to accept wildcarded MIME types. At the same time, the performance of the module has been improved by up to six times. As MimeMap is used for extension translations of non-native filenames, this improvement will be beneficial across the whole system.

BootP

Much improved support for BootP allows the system to be booted with almost no local configuration (assuming that the remote server provides necessary details). Automatically configured details include IP address, resolvers, hostname, time servers and LanMan settings.

DHCP

Licensing issues have prevented release of DHCP support but it is expected that DHCP support will be available in a later issue of Select.

System Time

Support for configuring the system time using a remote server is now provided. This allows the user to fetch the system time from an NTP or Time server on startup, or on demand.

Syslog

Remote logging using the well known SysLog protocol is now provided as standard. SysLog has long been used within the Unix world to provide centralised event logging. Within the RISC OS world, the Doggysoft SysLog module provided a comprehensive and versatile interface for programmers. Their API has been used to allow both local and remote logs to be used. This ensures backward compatibility as well as allowing inter-working with Unix systems. Remote logging between Unix and RISC OS systems is now not only possible but simple and very powerful. The SysLog server and remote logger implementations are compliant with the latest drafts for SysLog format compliance.

Internet speed up

Internally, Internet system calls are now processed faster than previously. Tests indicate approximately 25% speed increase on most common case. In a similar vein, Freeway now places a much lower load on the system than it did previously.

These changes are part of the ongoing work to improve the Internet stack.

Future issues of Select can expect a similar range of changes.

File systems

The file systems in Select are one area in which very little change will be seen by the average user. LanManFS is present in ROM, so accessing remote machines is made simpler for the user.

FileSwitch

The module, which controls file systems and provides almost all developer-facing filing facilities, has had minor improvements suggested by developers, as well as a few bug fixes for new file systems (including those supporting the RISC OS 4 'ioctl' interface).

ShareFS

ShareFS is now more reliable when accessing files over a remote share. Certain operations were incorrectly abandoned, where now they are reported correctly. This behaviour may have exhibited itself as a failure to access certain files under extreme circumstances.

PipeFS

PipeFS has been improved to support the internal 'GBPB' call. In addition, PipeFS data is now stored in a dynamic area rather than polluting the RMA. while PipeFS is very rarely used, these changes mean that PipeFS is many orders of magnitude faster.

ISO9660

When the CD specification ISO9660 was designed, it was with a DOS-like environment in mind. However, time moved on and extensions have been made within ISO9660 to allow extended attributes to be stored on a disc. One of these extensions was the Acorn file type information (the so-called 'ARCHIMEDES' extension) which allows the ! character to appear on CD. Joliet is a more commonly known development from Microsoft which allows the limited use of Unicode characters within filenames as well as allowing longer names than the standard disc format. In parallel with this, the 'RockRidge' standard allows potentially CD-length long filenames.

CDFS

CDFS has been improved to support these standards. As well as this, CDFS also supports reading mixed mode CDs (such as VideoCDs, or 'Enhanced audio CDs'). This is

subject to the specific CDFS driver, such as CDFSSoftSCSI, being able to read such discs with the drive fitted. The internal CDFS driver CDFSSoftATAPI has been improved to support a greater range of CD drives. It is also possible to configure booting from a CD as part of the new Boot choices.

Filer components

Filer components, in particular the Filer itself, have been improved in little ways. Changes to the Filer have been limited due to its ubiquitous nature —modifications to the Filer are much more noticeable and more likely to cause confusion than aid use.

The iconbar Filers have all been improved to allow sharing using a centralised ShareFS dialogue. This standardisation allows for other developers to provide similar facilities from their filers. It also allows Filer itself to provide a 'Share' option for directories.

Filer

It now has the ability to sort files numerically as well as alphabetically. Selections within Filer windows can perform transient highlighting. The effect of this is that, as you make a selection, you can see what you are selecting. Filenames which are all upper case can be displayed as lower case. Names which are all upper case are harder to read, in general, and therefore some users may prefer to force them to lower case. A file which is selected can be renamed by clicking select on the filename. This allows renaming without the use of the Alt-key. These features are all optional.

Resizes, or updates of a filer window while a file is being renamed now retain the renamed icon. This is very useful where a group of shared machines may be modifying the directory, or an application is writing to a file in that directory.

Shared directories

Shared directories are now indicated within Filer windows. Selecting the *New directory* menu option now allows the user to create a directory with the name 'Directory' and then rename it immediately. File drags now use the 'DragAnObject'-style drags, displaying the filename of the object, or a count of the objects being manipulated.

In addition, Filer is now much more resilient to faults occurring in the background. Filer defaults to 'confirm on delete' when no configuration has been made. This is much safer and should prevent a misclick being the cause of much annoyance.

FilerAction

The component which provides multi-tasking file operations, such as copying and counting, can now act as a proxy. What this means is that a new component can take over FilerAction's job for certain operations. If, for example, someone were to write a 'Count' tool which displayed a graphical representation of the space used, then they would hook on to FilerAction and use its proxying to communicate with the Filer. Other examples of operations which might be replaced include the 'Find' operation, or copying. Future versions of Select may include whatever extended tools people develop (subject to agreement, obviously).

ADFS Filer

This has an optional 'Quick' format which allows the actual format part of the disc format to be skipped and just the new, empty, map and directory to be written. The disc must have already been formatted with the same format. It is not a fast format, just a quick format! while floppy discs are going out of fashion in these days of multi-megabyte data files, the facilities is very useful on those occasions that a floppy disc is needed.

CDFS Filer

The new Filer, which has been re-written from scratch, provides the same facilities as the original, as well as adding information about the current disc, improved Share support (as explained above) and an automatic launch of the new CDPlayer application when an Audio CD is inserted.

RAMFS Filer

This now sports a Share option in the same way as the other filers.

Window Manager

The WindowManager has not been greatly updated but changes should be useful to developers. Various fixes have been made for a few minor issues. Icons can now be 'tinted' in an arbitrary manner. This may be useful

to developers but has yet to be used in any part of the OS at present.

Holding the pointer at the edge of the screen now sends a message to tasks. This might be useful for launcher type applications.

Desktop components

The Desktop components have had some of the largest changes of the whole system. As mentioned earlier, there is a new CDPlayer application which is simple to use and communicates with AcornCD to read track and disc names.

Graphics and others

Paint, Draw, Edit, ChangeFSI and SciCalc have all been updated to use the ClipboardHolder module. This provides simplified Clipboard facilities for applications that want to export a single filetype using the standard Clipboard protocols. Paint, Draw and Edit have also had their menus updated to be more style-guide compliant.

Paint

This has had numerous bug fixes and should be much more stable now. As well as being provided as a disc

component, rather than a ROM component, it also supports dynamic areas for its workspace. This allows it to use much larger workspace than it could previously handle. Paint will import JPEGs more reliably than before, due to restructured import code, and will also import unmasked PNGs. Paint can save single sprites as JPEGs.

Draw

It has not been modified as greatly as Paint but can export simple SVGs (W3Cs vector graphic format).

ChangeFSI

This can now import unmasked PNGs and export via the clipboard. On processing files, the ChangeFSI window is no longer forced to be centred. Where ChangeFSI creates a sprite in a post-3.5 style mode, these are given useful names rather than semi-random numbers. Decoding speed of progressive JPEGs (via djpeg) significantly improved over earlier versions.

Squash

Squash can now compress and decompress GZip files (that is, with a .gz extension *not* .zip files) in addition

to Squash files. This makes decompressing downloaded files much simpler.

Puzzle

It has been given a complete overhaul to make it a much more interesting application. It may be a small 'Diversion' but it's fun. MemNow has also been updated.

Task Manager

This has had a few visual tweaks to allow it display memory in a 'tidier' form, similar to that of FilerAction. You can also reset the machine from the shutdown dialogue. This is reflected in the external TaskManager API which now allows shutdown and restart through a single call.

Pinboard

Pinboard can now use a faded background, with different colours at the top and the bottom. It is now possible to configure so that double-click Adjust on icons has the same effect as Select (prevents the icon being removed afterward). In addition it is possible to 'pull' the Pinboard window to the front of the screen using special messages. Together with the Window Manager's edge

notification, this might be used to create a simple 'pinboard front' application or some other mechanism might be used. The facility is there for other developers to exploit as they see fit.

TaskWindow

This is now much more efficient with its use of polling and buffering. Consequently, TaskWindow applications under Select (issue 1) should use around 1% of processor time instead of 60% under normal circumstances where they use the TaskWindow_Sleep upcall. This improvement applies to TaskWindows waiting on PipeFS and most command line-based internet utilities. In addition a number of minor problems with TaskWindow have been addressed.

Graphics system

The graphics system has been improved slightly. SpriteExtend, the provider of JPEG rendering routines, now supports a greater range of JPEGs, in particular Exif and some of the stranger formats of JPEGs. The internal routines still do not support progressive JPEGs. This might be addressed in a later issue of Select.

FontManagers path handling code has been re-written from scratch. Consequently, long paths of fonts should now be reliable.

PNG decoding

This is now provided as part of the ROM. Although this does not, as yet, include support for conversion directly to sprites, or rendering, the library is made available to all for their use. This library is the de facto standard 'libpng' library and can be used as a shared library between multiple clients. This library gives Paint and ChangeFSI their ability to import PNGs.

CompressJPEG

The module used by ChangeFSI to create JPEGs has been improved to take any form of data that may exist in a sprite as input, including paletted input. CompressJPEG is also able to embed comments in the JPEG it creates. This allows creators to 'mark' their JPEGs if necessary. It is this that gives Paint the ability to export sprites as JPEGs.

Sound system

The sound system has been left idle for a long time. Select (issue 1) is no

exception to this, unfortunately. Actually, work has been done on the sound system to make it more resilient to parts being replaced 'on the fly'. Any component of the sound system (SharedSound, SoundScheduler, SoundDMA, SoundChannels, WaveSynth, StringLib or Percussion) may be replaced at any point with minimal effect on the rest of the system. In addition, SharedSound is now considered a vital part of the sound system, providing a layer above SoundDMA, notionally parallel to SoundChannels.

In addition, a 'Sound service' is issued whenever a sound occurs. Developers may use this to provide a form of visual beep, or to re-route sound to an external source should they wish to.

Configuration

The plug in configuration system in RISC OS 4 is pretty much unchanged but has the new configuration options where appropriate.

Boot configuration is unchanged but for the removal of the 'greyed' options from the 'Apps', 'Look at'

and 'Run' sections. These were unselectable because they did not apply to that section. Most of the time they just cluttered the display and made it more difficult to see what was actually happening. The new plug ins are much cleaner and clearer.

Filer configuration includes the new options for Filer windows: Active selections, Lower casing and Select to rename.

Font configuration is now categorised, using a Filer-like display similar to that of the top level Configure application.

Keyboard configuration includes the option to configure NumLock on or off. This may not be useful to most users but anyone with an infra red keyboard will find it very useful as these invariably default to num lock active.

Pinboard configuration has the option to configure the faded background and to disable 'Filer-like' clicks (Adjust removing the icon afterward).

Screen configuration is now categorised in a similar manner to that of Font setup, dividing the configuration into Monitor and Screen saver sections. A new screen saver 'Galaxy' is included with those previously provided.

Internet configuration is very similar to the original InetSetup but options are provided for configuring time servers, configuring SysLog serving and enabling the Resolver server. In addition, the firewall script can be edited from here.

Miscellaneous
In addition to the areas above, there are many other changes that have been made to the various parts of the system.

Zipper
Addition of the ZLib shared library means that any application can now use 'standard' ZLib compression or decompression. This facility is used in the PNG module described previously and in the Zipper module.

The new Zipper module provides facilities for creating and decoding Zip files. It is not a file system but a simple SWI-based API to creating Zip archives and extracting information

from them. It is expected that this would be used to extract distributions of files associated with applications, or as a simple mechanism for creating new archives.

PathUtils

A new PathUtils module provides facilities for manipulating Path variables. This may not be useful to most developers but the handy 'AppPath' and 'PrepPath' commands are simpler and less error prone than manually setting up such paths. FontManager uses PathUtils to provide reliable path manipulation.

Obey

Obey files are now always cached. This speeds up all obey files by a factor of about four times on local file systems and on remote file systems the improvement can be as high as 15-20 times.

BASIC

BASIC assembler has been updated very slightly to support some frustrating omissions.

Boot sequence

The boot sequence has been restructured since RISC OS 4.

Although the general structure remains the same, the usage is slightly different. Initially, there is support for multiple users. This selects a different set of choices for that user. Choices are actually structured as a three tiered path variable. This allows hardware configuration, 'default' configuration and user configuration.

As I said earlier, if you want to keep getting the best from your system and be involved in making it better still, Select should be at the top of your list of purchases this year.

RISC OS Select
Price (annual): £105
Foundation members: £99
Without CDs: £85
With RISC OS 4 upgrade: £179
(for first year)
Sites (over 10 machines): £300
(All prices include VAT)
Supplier: RISCOS Ltd
3 Clarendon Place
Cardiff
CF23 9JD
Tel: 02920 492324
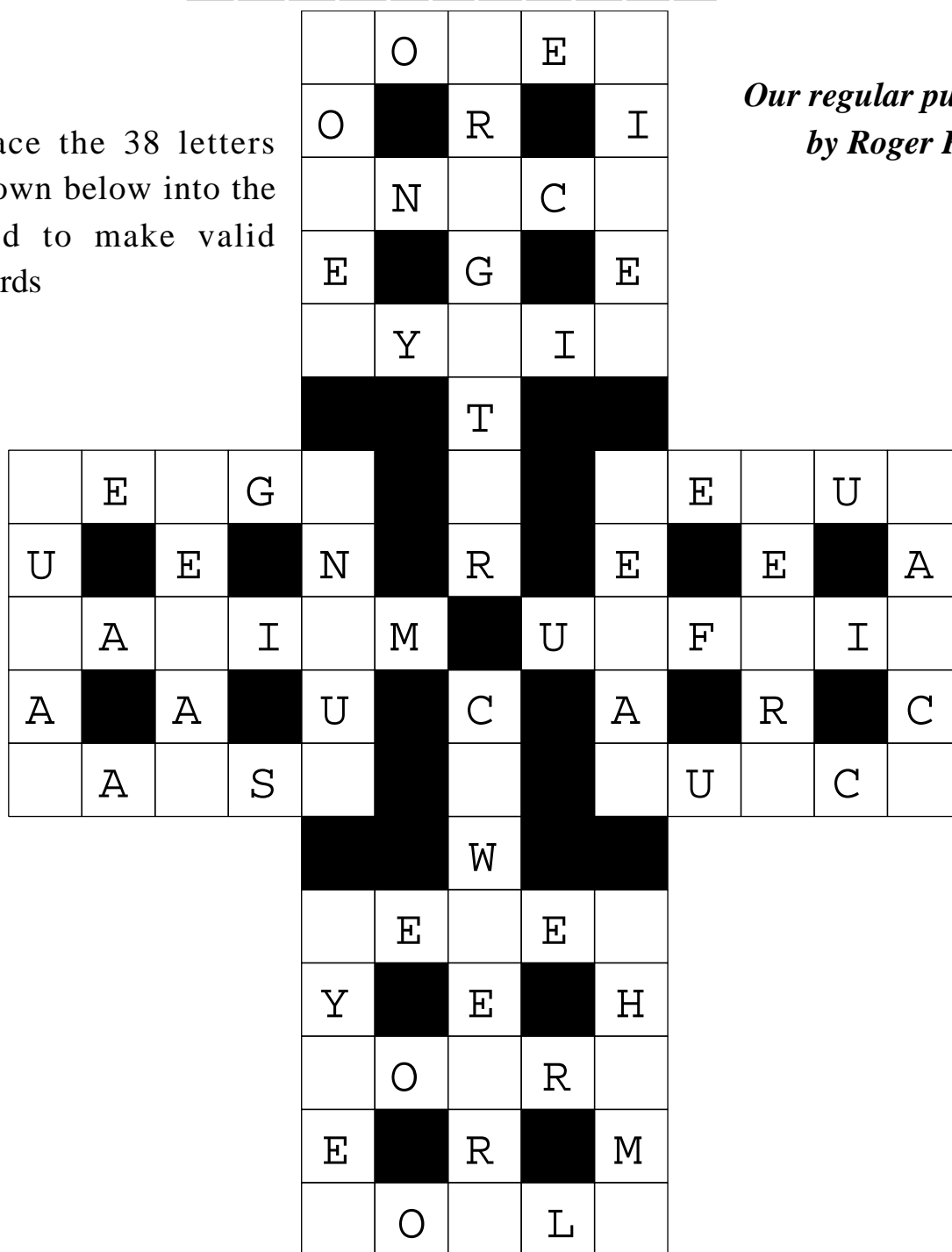Fax: 02920 492326
Email: sales@riscos.com
Web: www.riscos.com

DOUBLECROSS

Place the 38 letters shown below into the grid to make valid words

Our regular puzzle by Roger King

	O		E	
O	■	R	■	I
	N		C	
E	■	G	■	E
	Y		I	
	■	T	■	

E	G		■		■		E		U	
U	■	E	■	N	■	R	■	E	■	E	■	A
	A	I		M	■	U		F		I	
A	■	A	■	U	■	C	■	A	■	R	■	C
	A	S		■		■		U		C	

	■	W	■	
	E		E	
Y	■	E	■	H
	O		R	
E	■	R	■	M
	O		L	

```
A A B C C D E E E E
H K K L L L L L L M
M M N N N O P R R R
  R S S V X Y Y Y
```

Solution page 79

EasyClip 2+

EasyClip 2 describes itself as *The Graphical Resource Management System*, although the use of the definite article in that subtitle might be considered presumptive by some. In essence it provides a means of viewing thumbnails of a collection of

just drag the application from the supplied floppy to the hard disk and away you go.

It was at that point that things started to go wrong... I thought I would kick things off by importing a load of

Tom Hughes looks at a new version of Easy Clip 2 and is more impressed with its additional facility to generate Web pages full of thumbnails.

images grouped into folders for ease of management.

The earlier (Fabis) EasyClip 2 was reviewed in Eureka issue 30 but this new version includes *!WebThumbs*, which can generate web pages full of thumbnails to index a collection of images, so the Editor asked me to take a new look at the latest version.

I had been using the excellent freeware program *!Thump* for viewing image collections for some time, so I was pleased to be able to look at an alternative and see how well it would perform by comparison. Installation proved quick and easy —

images so that I could try out the various features of the program. I therefore grabbed a directory full of directories of images and dragged it into the EasyClip window.

That proved to be a big mistake because EasyClip grabbed control of my machine and began slowly working its way through the files taking several seconds to import each one.

All my attempts to abort this process cleanly proved in vain and I ended up having to reset the machine to get control back. Subsequent tests shows that importing a directory containing

12 photographs took 30 seconds in EasyClip 2 compared to just 2 seconds with !Thump.

I also discovered that dragging in a complete directory structure is a bad idea anyway, as the structure is not preserved. If you want to import an existing collection of images you have to create the folders manually in EasyClip 2 and then import the contents of each one at a time.

Opening an image by double clicking on a thumbnail also turned out to be excruciatingly slow —opening one JPEG image took a full 3.4 seconds compared to just 0.5 seconds in !Thump.

Editing

In addition to all the above complaints, it transpired that the user interface is severely lacking: it needs a double click to open an image but only a single click to open a folder. It won't let you delete a folder full of images —you have to go and delete the contents first and then delete the folder; renaming of folders is called editing for some strange reason and the folder tree has no context menu on the middle mouse button so you have to work out which of the icons does what you want.

Manipulation

I'm sure that the supplied 22-page manual probably explains all these little quirks quite adequately, but it really shouldn't have to as none of this is rocket science and it ought to be possible to work a piece of software like this with very little guidance. Virtually all the manipulations you do on images in an image management program like this are the same things you do in the filer so just providing the same UI would ensure that users were immediately at home.

On a related point of the similarity (or rather lack of it) between the interface of EasyClip 2 and that of the filer, the decision to use one window for all the open groups with horizontal dividers between the images is probably also a mistake although I will admit that it may be more a matter of personal choice than some of my other complaints.

At this point I decided to give up on EasyClip itself as a lost cause and move on to the included
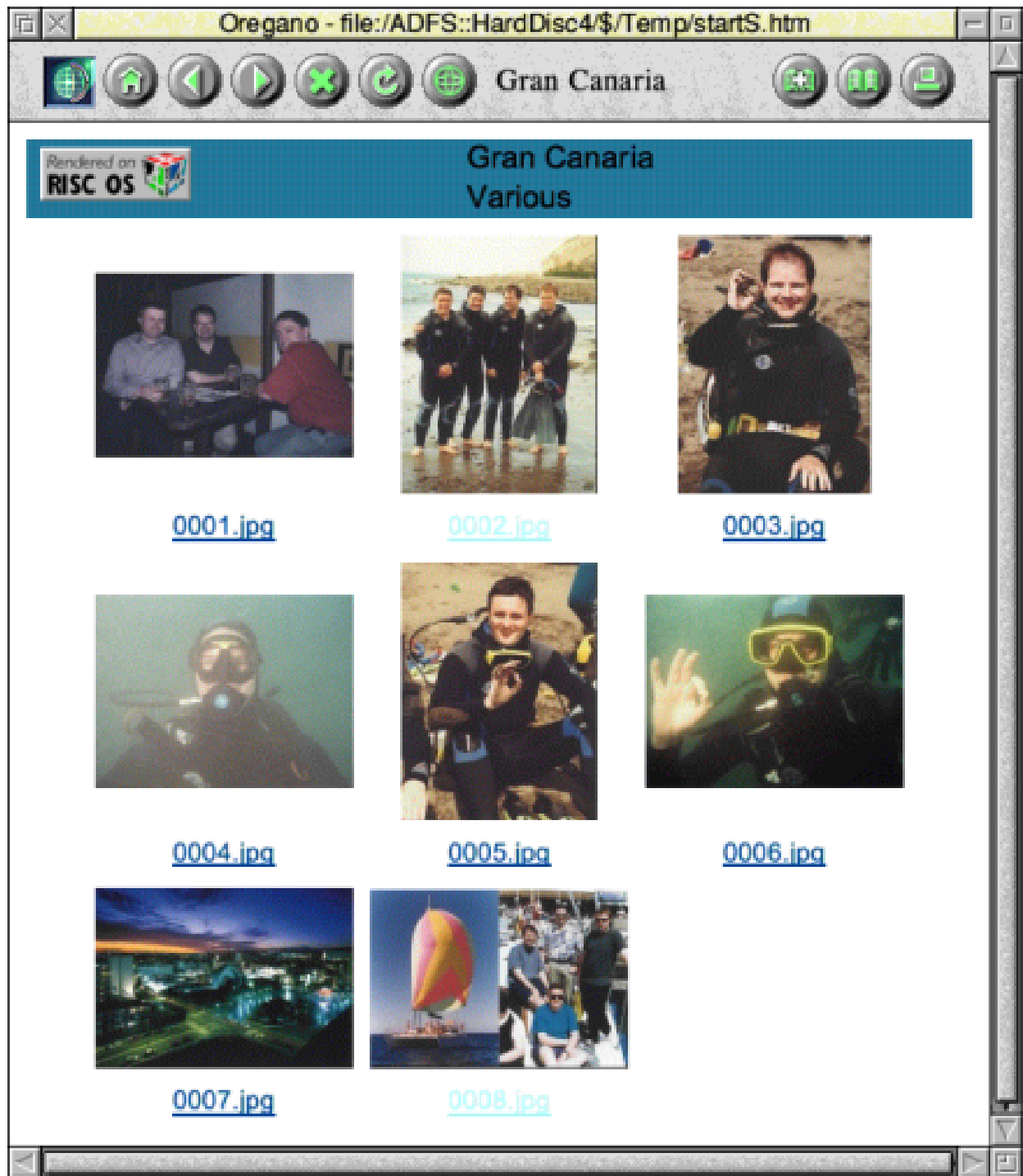
A web page full of thumbnails generated by the !WebThumb addition

!WebThumbs application to see if that was any better.

I have to say that in general !WebThumbs is far better although it does have a few annoying features in its user interface. The process of converting a set of images to a web

page is started by clicking on the !WebThumbs icon which brings up a dialogue box where you can enter the path to the images and the path to the directory where the resulting web pages should be stored.

Generate

Hitting 'Generate' then starts the process of creating the web pages and this is where one of the annoyances in the user interface bit me because it refused to continue as the output directory did not exist. This was, I felt, a little over-pedantic —it could have least have offered to create it for me. Computers are after all supposed to make things easier...

As with the main application, the process of creating the web pages is not enormously fast, and it does not multitask, but at least you do get a decent status window by default and at least it has an abort button on it unlike EasyClip 2. It would be even nicer if the abort button actually did something instead of being permanently greyed out of course, but we can't have everything, can we?

On the whole though, !WebThumbs seems to do what it says. It can lay out the thumbnails in a variety of ways and you can create option sets to describe particular layouts so that they can easily be reused in the future.

In summary therefore my conclusion is that if you need a program to generate web pages for your image collection then this may well be the software for you but if you're more interested in the traditional image management capabilities then I would suggest that there are freeware programs that can do the job far, far, better than EasyClip 2.

Archive Magazine CDs

If you don't read Archive magazine you may wonder why you should be interested in its annual set of two CDs. (If you do read it you will, of course, know.) The answer is that they contain almost everything that has

monthly disc for even just the last few years makes it of very good value. The CDs contain everything from their predecessors of the last six years plus everything from the subsequent volumn and its discs.

Peter Jennings looks at two CD-ROMs containing almost everything from the 14 years of Archive magazine and sees what they offer all RISC OS users.

appeared in Archive over its 14 years of publication and, as it claims, "probably comprises the single largest repository of information about the entire range of Acorn RISC OS machines ever collected together".

It is most comparable with *RISC User ...in a Nutshell*, which contains the material from the now defunct Beebug magazine, although it has the advantage of being up to date on developments over the past year.

Although the earlier material is obviously mainly of nostalgic interest, the information from the magazine and the programs from its

The CDs' Disc One contains all the magazine from Volume 4 Issue 5 (February 1991) onwards in the original Impression format so that they can be seen and read laid out as they appeared in print but with the addition of colour for many of the illustrations.

The magazines published before Volumn 4 Issue 5 were produced on an Apple computer and these have been scanned and can be read in HTML format on Disc 2.

There are also text versions of the contents of all the magazines. If you have enough memory on your computer you can load and browse

NightSky – Astronomical Program

through them in complete volumes. If not, they are also provided in files of a single issue each. To help you find the subject you want they can be searched with *TextFind*, which is supplied in a directory of Utilities.

Usefully, all the entries in the regular *Hints and Tips* section have been gathered together in one file, as have those in *Products,* where new and upgraded hardware and software were noted.

There are the six special supplements which were issued to cover the A4, A5000, Risc PC, DTP,

The pages can be seen and read as laid out for the magazine in Impression

News, News, News......

News from Acorn

The 0.3 Operating System and Welcome Disc "was due a few days ago" (mid-September) and is now "due any day", but I can't find out what the policy is for up-grading. In theory, having filled in your registration document (you have filled it in and sent it off, haven't you?!) you should get the up-grade automatically. Those of you who are registered on our Technical Help Service can contact us to find out the latest ETA on the 0.3 Arthur. (Please remember to quote your THS number, not your subscription number, when making an enquiry. Thanks.

The Programmers' Reference Manual is not available yet. The official Acorn line seems to be that it won't be in print until November but as soon as it is, we hope that we might be able to offer it for sale through the magazine. In the meantime, we have a copy of the draft version of it, so if THS folk have specific enquiries, give us a ring, remembering to quote your THS number

Software Received

Archimedes Tool-Kit Module from Clares Micro Supplies. This is a pre-release version 3.50 and is reviewed in this issue

Delta-base from Minerva - To be reviewed in next month's Archive magazine

Inter-Word, Inter-Sheet, Inter-Chart and Wordwise Plus - Computer Concepts are "having discussions with Acorn" over ways of presenting their software for sale. If they sell it on disc, it is so easily. copyable that they fear considerable loss of income as a result. They would like to sell it in ROM format, but we will have to wait and see.

A nostalgic look back to the first issue of Archive in October 1987

Education (BETT '94), and the Vision for the future (as seen in 1992).

The first disc also contains a complete index of magazines and the various collections of discs issued by Archive over the years as ArcScan files, which have a brief description of every entry. If you haven't got ArcScan these can also be searched and read as text files. Just load them into *Edit* and press Ctrl+F8 (or CR<->LF on the Edit menu) to reformat the text.

Other directories contain the Archive Glossary of computer terms and another of Audio Visual, in both Impression and HTML formats, and the *FactFile* of names and addresses of Acorn/RISC OS companies. The latter is set out with some companies indented by one tab to signify that it is doubtful if they are now still active in the RISC OS market.

Disc Two offers the magazine in HTML and PDF formats (for the last five volumes) and contains the discs. These come in five directories: the Magazine programs from every issue, Careware (software sold in aid of charity) and Shareware (actually freeware), Utilities and Gerald.

The Gerald discs contain material from the regular columns written by Gerald L Fitton which originally dealt with the products of Colton Software, PipeDream, Fireworkz, Wordz and Resultz (which his company, Abacus Training, has now taken over) but has widened to include other software. Demo versions of the Colton programs are included.

There is also a collection of articles on *C* programming, a directory of Multimedia examples in various formats, and another with more utilities including one for searching HTML files on the disc.

There is a great variety of material on these two CDs and you can spend many happy hours exploring them.

Archive Magazine CD Volume 14
Price: £19 (including UK postage)
Supplier: Archive Publications
Nutwood, Middle Road
Great Plumstead
Norwich NR13 5EG
Tel: 01603 722544
Fax: 01603 722528
Email: info@archivemag.co.uk
Web: www.archivemag.co.uk/

Linux & RISC OS: Part 2

Having decided to set up a Linux system and having bought the hardware and a Linux distribution, in this issue we will look at how to get a basic system up and running. The first problem you may come up against is dosutils directory with Red Hat. Clearly you will need a DOS or Windows machine available to do this, though using a Risc PC with a PC Card is an option. Although it would probably be straight forward to

In the second part of his detailed account of using Linux with RISC OS, Mark Smith explains how to establish a basic set up and get the two systems working together

booting the Linux installer, assuming that you have a completely blank hard disc.

The first thing to try is booting straight off the CD-ROM. If you have a recent motherboard and Linux distribution, you should theoretically be able to this. You'll need to set the BIOS options to boot from CD-ROM, insert the CD and see if it works.

If it doesn't then you'll need a Boot disc. One option is to buy a package that includes boot discs, though the cheap CD-ROM sets generally don't. The other option is to write one yourself, which you can do from the CD-ROM using the rawrite tool in the

write such a tool for RISC OS, I'm not aware of one currently in existence.

Most distributions will contain useful pointers on the CD-ROM. Red Hat v7.1 has a *ReadMe* file on installation disc 1 which points towards further help on their website.

Installation on many recent distributions is a GUI based affair. For the purposes of this article, I'm going to concentrate on Red Hat v7.1, though much of this will also apply to other distributions.

For additional help on installation, see the guide on the website:

www.redhat.com/docs/manuals/linux/
RHL-7.1-Manual/install-guide/

This will also be on the documentation CD if you have one.

Red Hat v7.1 allows you to proceed with one of several standard installations for Workstation, Server or Laptop use. Alternatively you may go for a custom installation and choose which functionality you wish to install.

Note the comment in the installation help regarding *xinetd*. This is required if you wish to connect to services on the Linux box from your RISC OS machine.

Partitions and the Filing System Hierarchy

Whichever option you choose, you will need to allocate some disc space for various Linux 'partitions'. Like RISC OS, Linux organises discs in a hierarchical structure, but there is one major difference. Under RISC OS, each disc has its own hierarchy, the top level, or root of which is designated by a $. So ADFS::HardDisc4.$ is the root directory on ADFS disc 'HardDisc4',

SCSI::Orange.$ is the root directory on SCSI disc 'Orange' and so on. In some cases it is possible to divide one physical disc into two or more different partitions, so that SCSI::Orange.$ and SCSI::Blue.$ may be two halves of the same disc.

By contrast, Linux organises all of its discs onto one big hierarchy. The top level of this hierarchy is designated by a forward slash, '/'. As well as being the Linux equivalent of '$', the forward slash is also used to separate directory names in a path, rather like '.' in RISC OS.

So */fred* refers to a file or directory called 'fred' which is in the top level of the hierarchy, */fred/jim* refers to a file or directory called 'jim' at the next level down.

There is a commonly observed standard structure for the hierarchy, for example:

/home normally contains private directories for users registered on the system */usr* contains installed software */var* contains system data, such as log files and data accessible to several different users, such as

databases, mail stores and so on. */etc* contains system configuration settings

The Linux installation will set all of this up for you and most software installations will assume this structure exists. The closest parallel on RISC OS is probably the !Boot structure.

The contents of the Linux root directory (/) are held on the root partition. Every Linux system must have a root partition. You may optionally define seperate partitions for the likes of /usr, /home or /var. The benefit of doing this for big, many-user configurations is that each gets its own allocation of space. This means, for example, the users can't fill up the entire disc space by creating lots of files in their private directories. The partitions may also exist on separate physical discs. However, for a small system with one disc it's often better, and certainly more flexible, to let them all occupy space on the root partition.

The other partition that all systems will have is a swap partition. The swap partition is effectively a 'memory overflow' store —areas of memory may be swapped out to disc if it is required for other purposes and swapped back into memory when needed. The swap partition is normally 'mounted' on /swap, but you can't view the contents of it in the same way as you can other areas of the hierarchy.

It is normally recommended that you make your swap partition twice the size of the total RAM that you've fitted.

On some systems, it may be necessary to create a boot partition (mounted on /boot) which contains files that are used to boot the system. This is because some PC BIOSes are only able to boot from the first part of the disc, though more modern systems don't have this limitation with recent distributions of Linux.

Users

Linux is based heavily on the multi-user concept. Everything that runs on the machine, whether or not it is interactive, runs as a user. The privileges that each user has places limits on what the processes that run under that username can do.

The most powerful user is called 'root'. When you install Linux, you must define a password for this user and it is important that you don't forget it! If you are installing the machine in an environment where many people will have access, you will need to ensure that this password is not something that any of those users are likely to guess.

As well as setting a password for root, you will be given an opportunity to set up other users. If you wish to add more later on, then this is easy to do.

More Free Documentation

A good place to look if you need more explanation on anything presented in these articles is: www.linuxdoc.org/ This contains documention on a wide range of Linux related subjects, including the invaluable 'How-Tos'.

The Red Hat Package Manager

The easiest way to install Linux packages on Red Hat is to use the Red Hat Package Manager. This takes a single file, with a .rpm extension and checks that any necessary prerequisites have already been installed. Assuming that they have, it will install all the component files in the correct places. The package manager may also be used to uninstall packages, in which case it will automatically check that the package you are trying to uninstall isn't required by anything else.

Most of the contents of the Red Hat installation CDs are supplied in the form of these packages, but you can also download most free software packages from the web in the form of RPMs.

One thing to note is that a package that contains compiled software, must have been compiled for the platform on which you are trying to install. You won't get very far if you try to install a package compiled for Alpha, Sparc or PowerPC onto one which has an Intel 386 compatible processor.

Fortunately, it's easy to tell from the RPM naming convention which platform the package has been compiled for. The tail end of the filename will be .<platform>.rpm

• i386 packages will work on anything from a 386 upwards
• i486 packages will work on anything from a 486 upwards

• i586 packages will work on anything from a Pentium upwards
• i686 packages will work on anything from a Pentium II upwards.

You may also come across other platform packages such as ppc (PowerPC), but those listed above are the ones you need for any standard PC hardware.

The most common installation syntax is simply:

```
rpm -ihv <package filename>
```

i indicates install, *h* means show progress by displaying a row of hash characters and *v* indicates verbose (informative).

Mount and unmount a CD-ROM

Unlike RISC OS, where CDs may be changed at will and the system will ask you to insert a particular CD if you load something from it, access to removable media under Linux is somewhat more primitive. Your first experience of this is likely to be when you come to manually install packages from the CD-ROMs.

As with hard disc partitions, CD-

ROMs are attached to a mount point. With Red Hat, this is normally /mnt/cdrom, though it can be anywhere you like.

With no CD-ROM mounted, /mnt/cdrom should be an empty directory. Log in as root and enter:

```
ls /mnt/cdrom
```

If it complains that /mnt/cdrom doesn't exist, you'll need to create it:

```
mkdir /mnt/cdrom
```

Now check that the CD-ROM 'device' exists. All devices which are accessible under Linux have a file in /dev. For a CD-ROM, this should be /dev/cdrom:

```
ls -l /dev/cdrom
```

If it exists it should show something like:

```
lrwxrwxrwx  1 root   root      8
Apr 26  2001 /dev/cdrom -> /dev/hdc
```

This shows that /dev/cdrom is actually a 'symbolic' link to /dev/hdc. All 'hd' devices are IDE. The suffix

letter will depend on where your CD-ROM is plugged in and whether it is set as a master or slave device:

• hda is the master IDE device on the primary bus, normally the main hard disc
• hdb is the slave IDE device on the primary bus
• hdc is the master IDE device on the secondary bus
• hdd is the slave IDE device on the secondary bus

If /dev/cdrom doesn't exist create it with: ln -s /dev/hdc /dev/cdrom.

Replace the device name with the appropriate one for your system. Now you can mount the CD-ROM: mount -t iso9660 -o ro /dev/cdrom /mnt/cdrom.

The CD-ROM (/dev/cdrom) contains a standard ISO9660 filing system and is read only. It is to be mounted on /mnt/cdrom.

ls /mnt/cdrom should now show the contents of the CD-ROM's top level directory. To unmount the CD-ROM, you first need to ensure that the current directory is not on the CD:

cd ~ takes you back to the home (private) directory for the current user.

umount /dev/cdrom or umount /mnt/cdrom will unmount the disc and you will then be allow to eject it from the drive.

Finally, the mount command can be made easier by including a line in /etc/fstab, such as: /dev/cdrom /mnt/cdrom iso9660 noauto,owner,kudzu,ro 0 0.
You can then mount the disc simply by entering: mount /mnt/cdrom

On some distributions, the CD-ROM device, mount point and fstab entry will be set up automatically. In other cases, you may have to do it.

Key components
In order to get your new Linux box working alongside your RISC OS machine, there are certain basic components that you must have installed:

Network Card Driver: If you have a card which is supported by the distribution which you are using, this should be installed for you

automatically in most cases. If not, you need to find out from the card manufacturer where to obtain the driver and install it yourself. If your card is capable of both 10 and 100 Mbit/s, and you have a direct cross-over cable linking it to the RISC OS machine, the driver may need to be configured for 10Mbit/s operation. If it is set to auto-negotiate it will not work reliably under some circumstances.

xinetd: As commented above, this package must be installed. If this is not done as part of the Linux installation, you may need to find and install the RPM yourself.

telnetd: This allows you to 'telnet' or connect to the Linux box from the RISC OS machine. Again, you may have to specifically select this for installation. Note that the RPM package name for this is telner-server.

Network Configuration

For a detailed description of how to configure network interfaces on a Linux machine, refer to the Net-HOWTO: http://www.linuxdoc.org/HOWTO/HOWTO-INDEX/Net-HOWTO/index.html.

You will need to configure both the RISC OS machine and the Linux box so that they can communicate with each other over the network. I'm using IP addresses in the range 192.168.1. with a netmask of 255.255.255.0. Use of a private range such as this one will ensure that the addresses do not conflict with anything accessible over the Internet, assuming that you want to set your Linux box up to access the Net.

On the RISC OS machine, the easiest way to configure the network is via !InetSetup. On RISC OS 4, this is part of the Configure application, accessed by double clicking on !Boot. Note that to refer to the Linux box by name (rather than IP address) from the RISC OS machine, it must be listed in the hosts file under RISC OS.

To test the network configuration, bring up a task window on the RISC OS machine and enter:

*ping 192.168.1.1

(or whatever the IP address is that you have assigned to the Linux box). If this is working, you'll see something like:

*ping 192.168.1.1
PING 192.168.1.1 (192.168.1.1): 56 data bytes
64 bytes from 192.168.1.1: icmp_seq=0 ttl=255 time=0 ms
64 bytes from 192.168.1.1: icmp_seq=1 ttl=255 time=0 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=255 time=0 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=255 time=0 ms

— 192.168.1.1 ping statistics —
4 packets transmitted, 4 packets received, 0% packet loss round-trip min/avg/max = 0.000/0.000/0.000 ms

Once ping has been shown to work, the next stage is to load a terminal emulator on the RISC OS machine, such a *FreeTerm*. This should enable you to log into the Linux box from the RISC OS machine. Note that the system is likely to be configured so that you can't log in directly as the 'root' user from another machine. This is for security reasons and you must log in as a less privileged user.

If you then need to 'switch user' to root, you can do so by entering: su - and typing the root password when prompted.

Sharing Files

Once you have basic communications set up between the two machines, the most useful thing to do next is to set up some means of accessing the Linux box's files from the RISC OS machine. This will enable you to configure other software more easily from the RISC OS desktop.

There are several ways in which you can share files from the Linux box. Probably the easiest and one of the most flexible is to set up Samba on the Linux box and use it with Warm Silence Software's LanMan98 on your RISC OS machine.
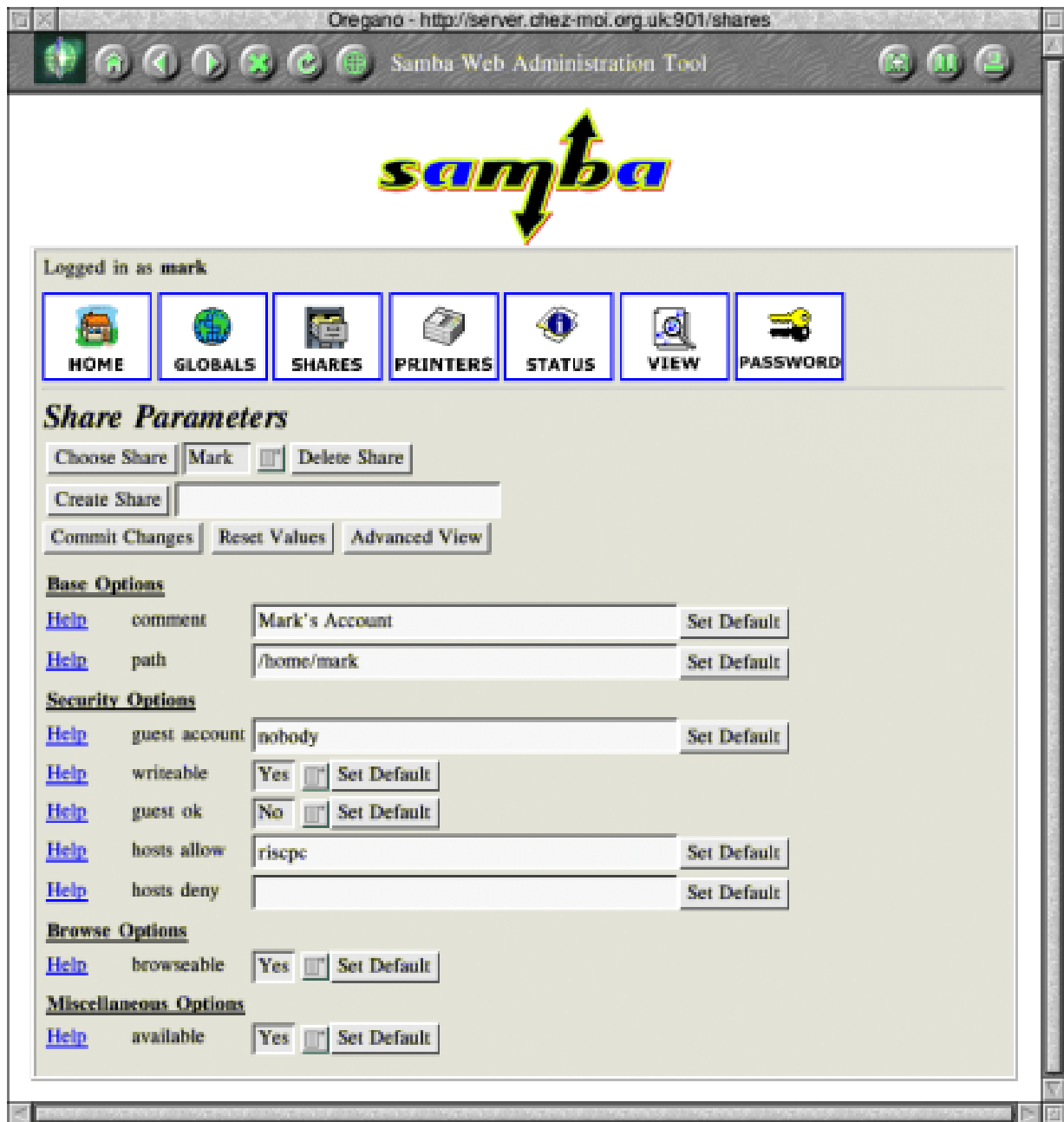
Samba

Samba is probably supplied with all modern Linux distributions, is reasonably easy to install and will allow you to access the Linux files from a PC and/or a Mac as well, if you have one on the same network.

For Red Hat 7.1, it is supplied as RPMs. If it hasn't already been installed, you need to install (in this order):

• samba-common-2.0.7-36.i386.rpm from Installation CD 1

Swat is used to create a share called Mark, which is used to allow access by Mark to his home directory (/home/mark)

• samba-2.0.7-36.i386.rpm from Installation CD 2

• samba-swat-2.0.7-36.i386.rpm from Installation CD 2

In each case, the RPMs are in Redhat/RPMS on the CD. Note that SWAT, the final package, is optional. However, this will allow you to do most of the configuration using a web
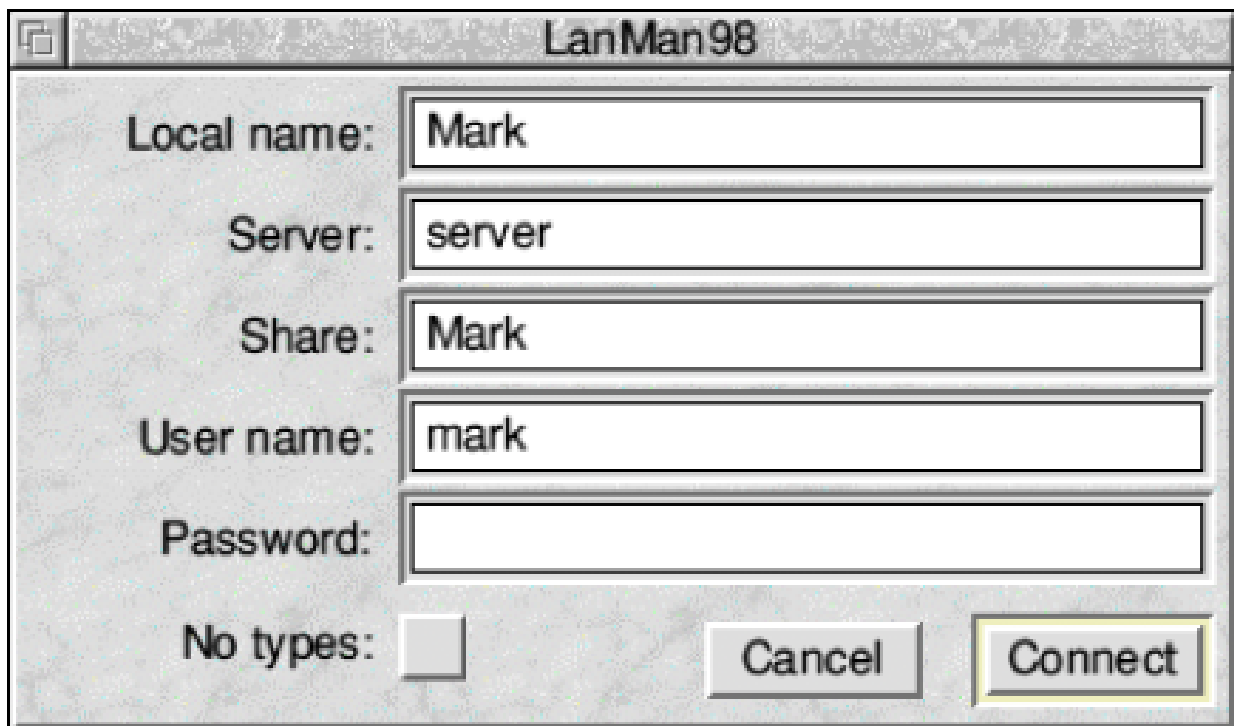
LanMan98 just needs the password to show the files

browser on your RISC OS machine, so is recommended.

Connect to SWAT

Once the packages are installed, connect to SWAT from your RISC OS browser, by entering the following into the URL field:

http://server:901/

where 'server' is the name that you gave your Linux box, or its IP address. You'll need to complete the log in box before gaining entry.

The screenshot opposite shows the creation of a share called Mark, which is used to allow access by user Mark to his home directory (/home/mark).

Configuration of LanMan98 is also equally straightforward. The screenshot (above) shows LanMan98 set up to use this share. Just enter the password and you should be able to see all the files!

Next Time

Next time, we'll look at setting up the Linux box for access to the Internet and securing it against outside hackers.

Montage Creative Fractal Art

There are not many programs still selling in the RISC OS market that have remained virtually unchanged for seven years. Montage is one that has and it obviously owes its long life to being different from all the other graphics programs which originated for Acorn machines.

in interactive mode Montage builds up the multi-layer images as you work, fast!' Got that? That was the easy bit to understand.

Before you can decide if you need an IFS Editor you probably need to know what a *ifs* are! That's where it helps to

Peter Jennings tries out a long-lived graphics program which demonstrates the remarkable artistic results you can get with a bit of mathematical control.

Its description is an *Interactive IFS Editor* to 'create stunning fractal art pictures' and promises that: 'Working

have some understanding of fractals or a good grasp of maths.

To find out what the program really does, there is an 11-page on-screen guide and a 20-page printed tutorial to help you as well as a 65-page printed manual. These explain that *iterated function systems* are collections of rules (called *affine functions*) for moving or distorting an image. These can include single or combined actions such as: rotate by a quarter turn, move left half an inch or stretch upwards to twice the size.

A spiral of spirals

At least you don't need to understand
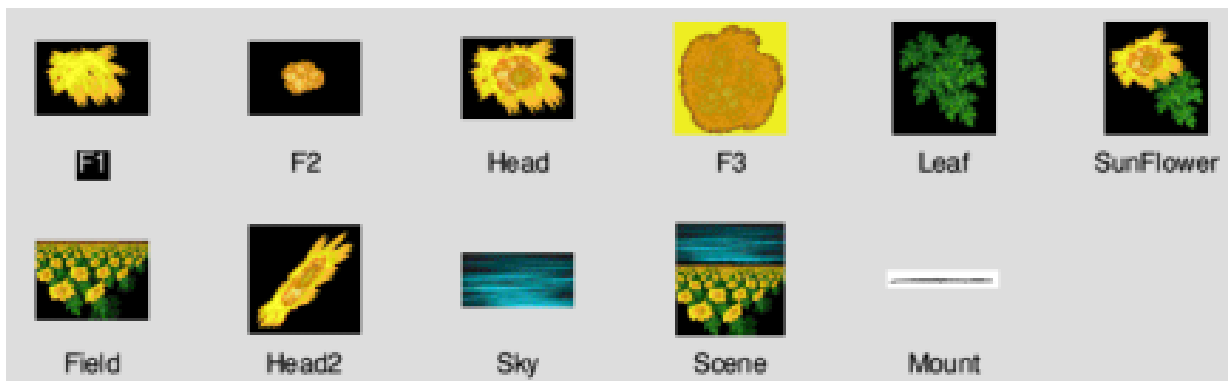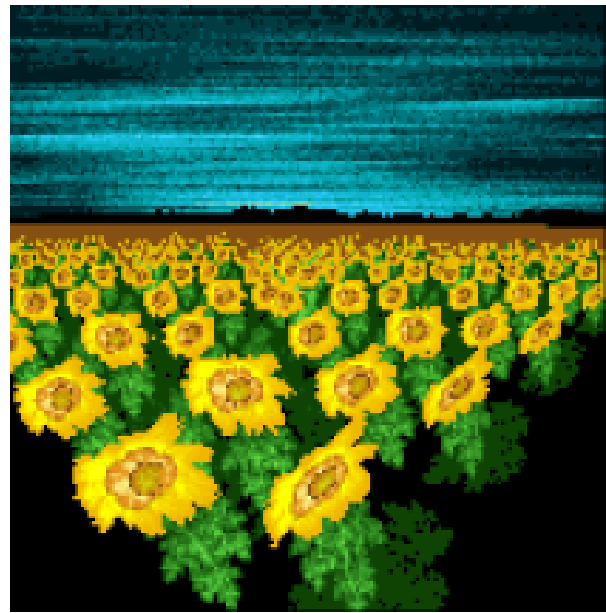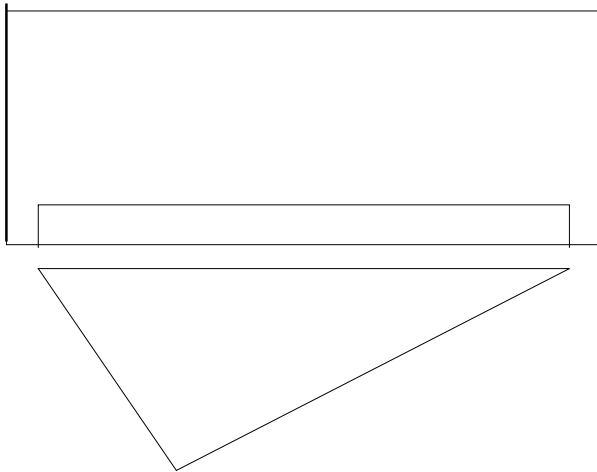
Montage uses the thumbnail images to turn the above rectangles and triangle into a field of sunflowers which grow and flourish as you watch.

how it all works. The program looks after it all for you. So let's see what it actually does.

Montage originated in pre CD-ROM days and still comes on two floppy discs, one containing the program itself and the other having a tutorial with a selection of examples from ready made ifs.

The one featured on the cover of the manual is a field of cornflowers with the forest of blooms stretching back to the horizon.

This starts life as a pair of rectangles and an inverted triangle which uses a collection of thumbnail components to be built up to the final colourful pictures, as you watch, in a matter of seconds *(see above)*.
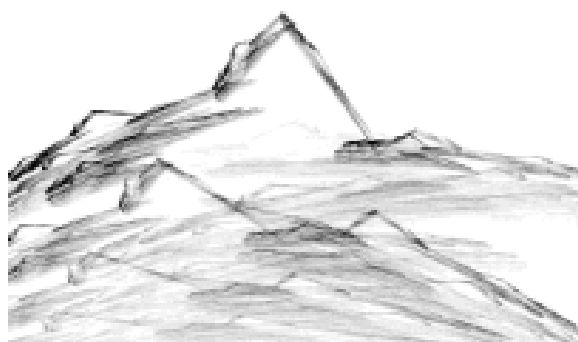
A jumble of triangles is transformed to a sketch-like mountain range

There is a varied collection of examples of ifs which do equally amazing transformations.

You can spend happy hours playing with the examples, turning a jumble of triangles into what looks just like an artist's sketch of a landscape and creating a fern made up of dozens of miniatures of itself all from a simple leaf shape.

If you can really get to grips with the program you can spend even more hours experimenting with your own designs from closed path objects which can be made up of straight lines or Bezier curves. These can be dragged into new shapes to form the basis on which the fractals will be formed. You will immediately find that, if you have not worked with fractals before, it is hard to forecast what the end results will be.
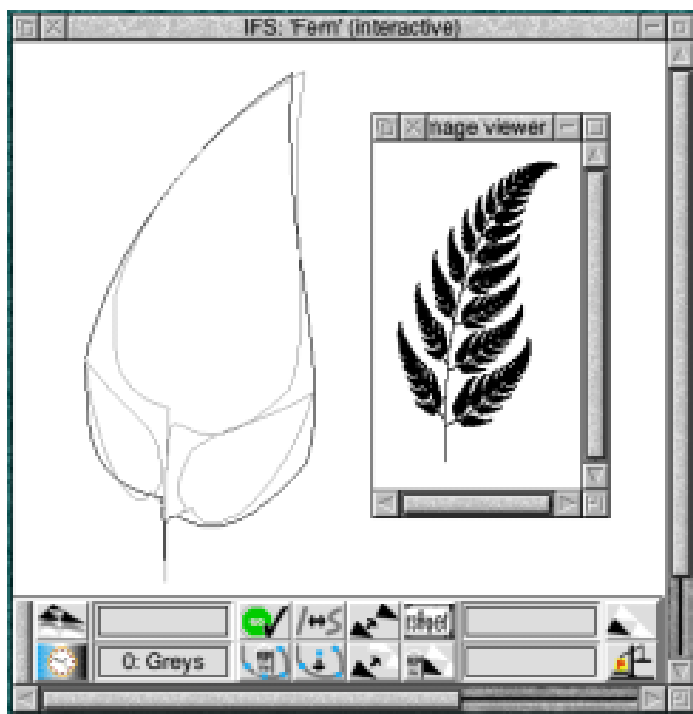
The ifs are stored in files containing one or more thumbnail images. The biggest problem is that, despite all the

A fern takes shape

Making a new ifs

• Click on the icon bar icon to open a blank ifs window.

• Click *Menu* on the window, drag the pointer across the 'New IFS' entry and enter a suitable file name.

• Edit the outline, if you like and have a shape in mind, to the boundary of the fractal object you wish to replicate.

• Add functions one at a time, which will be represented by copies of the boundary to which the given function has been applied.

• Edit these so that they cover the bounded region.

• You can enter numerical values, drag points on their boundaries around or rotate/scale/translate them.

• Then try clicking on *Go.*

• Carry on editing until you get something vaguely like what you had in mind as a desired end result.

informative literature, it is not at all clear how you can start making new ifs for yourself.

I contacted the program's author, Michael Rozdoba, asking for a simple explanation and this is reproduced in the panel alongside. He adds that if these instructions make little sense, you're probably better off starting by editing existing ifs and seeing what changes that makes to the corresponding images.

This is a very unusual program and one that mathematicians interested in art in particular will find fascinating. The rest of us will find it fun.

Gill's Party Time Journal

The recent season of goodwill and bad jokes set me to thinking. Exactly how does the spod cope with the inevitable office Christmas party? I mean, we know most of you work simply in order to have a variety of computers to play with and to be able cope? Where do you get a web-based training course to deal with these things?

Well, you'll be pleased to know that for a number of years now, I have been doing my bit for 'care in the

Still coping with the party season? Gill offers her usual sympathetic advice to all life's problems which face the spod who just wants to have fun with his computer.

to afford more. So this would seem to lead to a series of drunken festive celebrations of a few days off work, (for the rest of the company who aren't on call) to which the entire company are encouraged –- almost forced –- to attend, and drink at, regardless of spodiness.

And what about any other unavoidable social occasions that involve interaction with other human beings without any form of electronic device to separate you and the general public? You might actually have to talk! And no, I don't mean in a chat room. It sounds like a nightmare, doesn't it? How is a spod supposed to

community' —the real community, that is, not some virtual one. Yes, I've been turning up at The ARM Club's annual dinner on a regular basis. I've taken this valuable opportunity to slowly explain to your committee members that the 'green muck' on the side of their plate is in fact lettuce and should either be eaten or cunningly hidden by careful placement of the knife and fork at the end of the course. Chopsticks are a much more complicated matter, and hide far less, but at least Chinese restaurants never seem to mind sweet and sour seaweed all over the table cloth. And at some of these occasions, I've even forced some of the spods, once or twice, into

So Ms Croft, do you come here often?

Vertual Reality training for dealing with reality

conversations that aren't about computers!

Now, I know that will shock many of you. Exactly when did your committee evolve into such higher life-forms that can not only wield a knife and fork, but also have multiple topics of conversation?

Well, actually, they didn't. (Most of those non-techie conversations seem to involve analysis of the assets of any women who turn up to RISC OS shows. "Her company is going under…") No, they really haven't proved Darwin right. They just have their moments of pretending. Like apes straightening up and stretching their backs out and wandering a couple of paces, before returning to type and grabbing another branch to swing on. Not all the apes turned into early man, just like not all spods can

whether an ape evolved into man or not often came down to a simple choice between progress and a particularly fine banana.
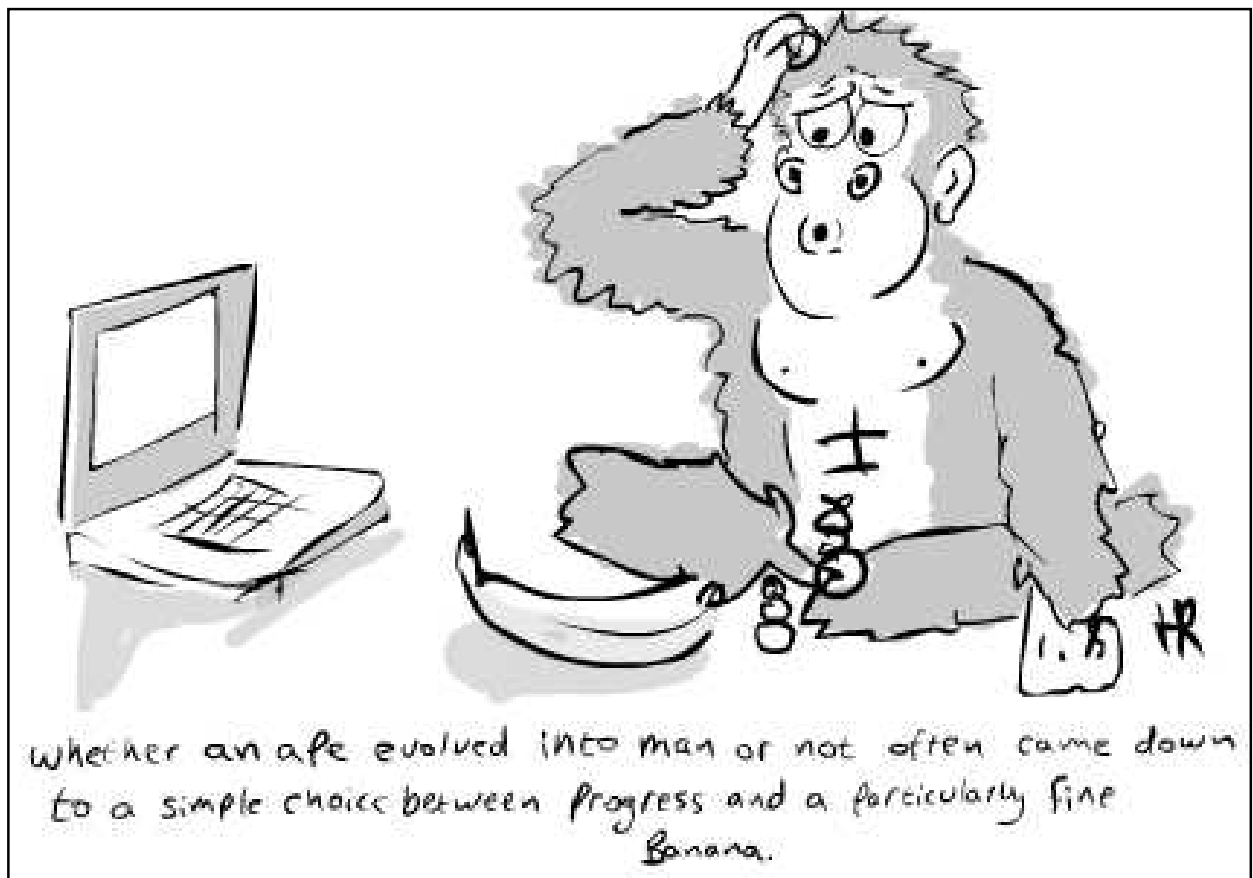
actually develop into 'IT Consultants'.

But really, that doesn't matter. Being able to bluff it at the right moments is what counts. Admittedly, if you go to the lengths of one or two of The ARM Club committee and gain wives, you need to be able to talk about other things for more hours of the day than most spods. The only cure for you is a very technical job. Become a Systems Administrator (Sys Admin) —no one at work then expects you to speak a word of sense, but they do know they need to be nice to you, or you'll check their weblogs. But for the rest of you, with a few survival and conversational tips, a few hours at an office party once a year won't kill you.

Assuming you survived the recent festivities, here are a few tips on how to get through 2002's many and varied social occasions.

When faced with a woman, or anyone else who doesn't feel the urge to run home and check their LAN is working and interacting with all seven of their computers, a helpful phrase is 'What are you drinking?' This is particularly helpful when used on women, who

will either think you are nice, or realise it's time to leave, in order to 'powder their noses.'

Powdering their noses is a very important process for women but this is not an excuse to get up close and check whether you can see any powder. Firstly, it's not meant to show; secondly, it's a euphemism for all those complicated things women do to look and feel as lovely as you like to think they are and, thirdly, if you get too close, and they do have a powder compact in their handbag, it will hurt when they smack you around the head with it.
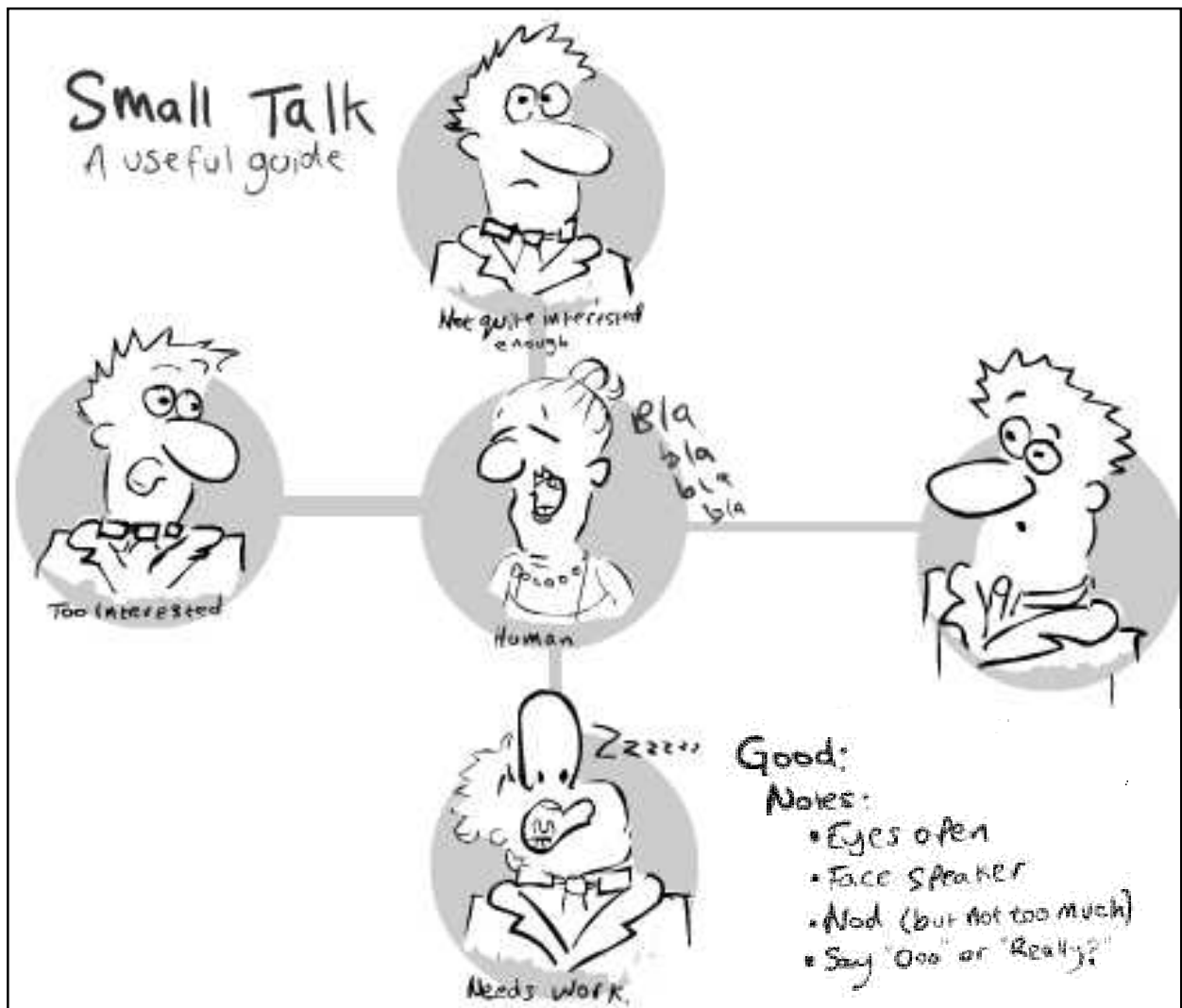
However, having asked "What are you drinking?" if you get a suitable answer (almost anything fluid, other than 'hemlock'—this would count as an unsubtle hint and time to move on.) it is traditional to go and find the bar and buy one of the particular drink they mention. Get yourself one while you're there. You don't have to drink the same girlie drink but a little alcohol might help the conversation flow.

This also has the useful effects of buying you thinking time and them

enough alcohol to not notice when you lapse into techie-talk later. If they ask for something non-alcoholic, this is your chance to appear caring and nice, by checking if they are driving, and being suitably sympathetic. Now give up and move on to someone who has had enough to drink not to notice you're a spod.

Back to the drink offer. This can be a very good way to impress a girl, but you do have to have chatted a little first, otherwise you look like a weirdo. Which you may be, but don't let her realise yet. The drink offer also looks a little odd if they, or you, have a very full glass, so you will need to find some small talk until you can make this offer.

'Small talk' does not, sadly, refer to a programming language. Nor does it mean just using short words and TLAs (three-letter acronyms). It means the sort of chat that, had you mastered it years ago, would have helped you to already know women you aren't related to. 'Small talk' means that you have to ask questions and let the other person talk and, most importantly of all, look utterly fascinated by what they are saying.

Small Talk — A useful guide

Not quite interested enough

Bla bla bla bla

Too interested

Human

Zzzz...

Good:
Notes:
- Eyes open
- Face speaker
- Nod (but not too much)
- Say "Ooo" or "Really?"

Needs work.

Pay close attention, not only so that the woman you're talking to thinks you're a gentleman but also so that you can later make reference to what she's said. This is a technique that shows you were listening and gains you lots of extra brownie points. While she's talking, look at her, not your Psion. Her eyes, that is.

Popular 'small talk' questions include "Do you live around here?" This won't work if this is the office party, at the boss's house and you are talking to the boss's wife. However, at weddings, assuming you have marriageable relatives, this is a good question. At office parties, you may be expected to know already, unless your company has many sites, in which case, you may be safe.

Another good question is "So, what do you do for a living?" This works well in almost all situations. Except when you're talking to the girl you

walk past in reception each morning, who may feel offended that you don't recognise her. Otherwise, remember what she says, as you can then ask more, related questions. Here's a sample conversation:

SPOD: So, what do you do for a living?

GIRL: I'm in advertising.

SPOD: That sounds interesting. (It is OK to lie here, if necessary!) Do you enjoy it?

GIRL: Mostly, yes. What do you do?

Now at this point, please remember, she wants a basic, simple job description —not a detailed analysis of your day.

SPOD: I'm in computers. (Now remember this one:) I won't bore you with the details. (Got that?!) What sort of thing do you advertise?

GIRL: No, do tell me more about your work. (Don't fall for it!)

SPOD: Oh, it's quite complicated, and really not that exciting. Tell me more about your job.

(At this point, we just have to hope she has sense, and starts to explain, otherwise your conversation is going nowhere. If that's the case, ask another question about some aspect of her life.)

Other good questions include "Do you have a family?"—although have a hankie to hand, just in case you manage to ask the girl who has just got divorced. Be prepared to admit to having parents. If she asks if there's 'anyone special' she is not asking whether your granny is nice. She means do you have a girlfriend.

Do not respond by rotfl-ing (rolling on the floor laughing) and saying "No, never, not a hope." She'll either realise you're sad, or assume you're gay. And unless you actually are gay, you don't want to cause a nice girl (who so blatantly asks if you're single) to think you're only talking to her while you eye up the barman. Respond with "Not at the moment."

If you're feeling brave, ask her if there's anyone in her life. This is a good point to discover that the

rugby-playing boyfriend is watching. Particularly if you've managed to keep your gaze as high as her face. The point where you've given up trying to keep your tongue from hanging out is a bit late, as rugby-playing boyfriend will have a better right hook than you. Trust me on that one.

For more small talk, try 'Do you have any hobbies?" —you can then latch onto one of them and ask her to tell you more. Pick the one that you think you'll be able to look most fascinated by and, preferably, ask intelligent questions about. It just makes it all so much easier than feigning an interest in aboriginal raffia work dolls or thimble collecting. Do not, under any circumstances, feel the urge to tell her your hobbies of searching the Web for naked pictures of your favourite pin-up. Do not, if she admits to a sporting hobby, demand details of what she wears for it. If you don't put her off now, you might one day get to see it.

Another whole area of 'Brownie point winning' is to compliment a woman on how she looks. This has to be phrased carefully, however, not to sound like a back-handed insult. For example, stick to "You look lovely tonight." Do not continue on to say 'So why do you always look such a mess for work?" Another popular one is "That dress really suits you." Do not follow it up with a detailed explanation of how the skirts she wears to work are unflattering. "You smell lovely," is enough —"You smell lovely: it beats your normal whiff," is too much. Get the idea? If not, just don't try this tactic for talking. Stay at home and compliment yourself on your well-built Linux box.

The big trouble with compliments is that women are almost always bad at knowing what to say in response — unless you've continued into the insult zone, in which case, you may get closer to a woman than you have in years, as she slaps you into next week.

Most women do not know what to say and will probably simply thank you. If you do find one that says "Yeah, I know I look really hot in this outfit," she is either trying really hard to pull you, in which case, buy her a drink (see above) or she's just scary and will soon get bored and move on.

Still, buy her a drink too —it's best to be on the right side of scary women.

As for the rest of the female population, buying a drink is, still, a good way to go from her embarrassed mutterings at your compliment. Trust me, she is pleased but you then need another approach to keep the conversation going. (See 'small talk' above.) One brilliant approach though, is to remember that (generally speaking) people like to talk about themselves —hence all that asking "Tell me about your work/ hobbies/family/anything…" So pay a compliment with a question at the end. This combination of techniques is only to be attempted after some practice of each approach individually.

One to try would be for women you recognise from work: "I like your hair like that. Have you done something different with it?" Normally, the answer will be yes. You may have to keep nodding and smiling through the traumas of the hairdresser, how badly heater rollers work and several other disasters en route to the perfect hairstyle, but she will have been impressed. If you really do like her,

and the haircut, when she runs out of explanation, look impressed, and say "It's so much easier for us men. At least, all your effort was well worth it." Flattery will get you… maybe not everywhere, but a lot further than letting her finish her story and promptly asking "Was I supposed to care?"

Now, tradition has it that you should also have something interesting to say about yourself in conversation. Well, it would be nice, but it's a lot to ask of a spod whose only interests are chat rooms and ways to automate his websurfing. No, dippy blonde presenters do not count as interests. So use and practise these tips above, to learn to get lots of information out of people, especially women, so they talk and think of you as 'a good listener.' Girls like good listeners, so this will make you popular… OK, less unpopular. Girls will think you're a nice, caring person.

Show them your sensitive side, before you show them your server room. Please!

Cartoons by Howard Read

Cartoon by Jan Pearce

...try some advice from the Omegus Family

The DOUBLECROSS Solution

The answers to the puzzle on page 47

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

You can pit your wits against Roger King again with another puzzle next issue

Club contacts

Email:

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

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

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

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

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