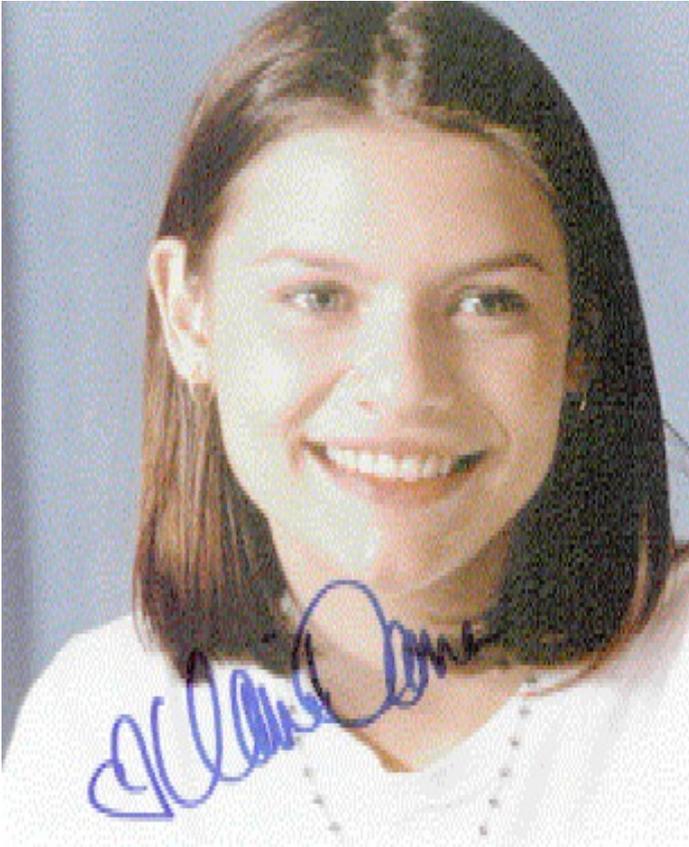


FROBNICATE

ESSENTIAL FOR ALL THOSE ACORN TECHIE-TYPES OUT THERE...

- THE INTERNET
- BUDGIEMGR
- SWIs

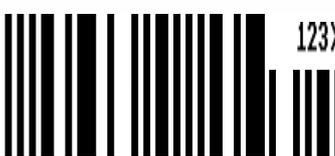


~~ISSUE~~
~~13~~
Issue 12
and a half!



Spring 1997 Issue 12.5 £0

123



Hissing Spaniards

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You may print and/or distribute this document provided it is unaltered.

The editor can be contacted by FidoNet netmail as "Richard Murray" at 2:254/86.1 or 'rmurray@argonet.co.uk'. Feel free to comment or send submissions.

Back issues, stylesheets, notes, logos and omitted articles are available from Encina BBS – contact editor if you are interested.

Back issues and information is available on the Internet from:
<http://www.argonet.co.uk/users/rmurray/farea.html>

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Frobnicate is managed by "Hissing Spinach",
the publishing division of BudgieSoft UK.

EDITORS PAGE

This draws a close to another issue of Froblicate. For you, it is the beginning. For me, it is the last thing written.

A lot has changed since the last issue. BudgieMgr is to be sold at Wakefield this weekend (I hope it does well, but...) and this little thing called the *Internet* has entered my life. Therefore much of this issue covers netish things like data 'trust' and the obligatory ISP review. We also look at a song or two, and Nava has kindly written an article on SWIs.

I wish to apologise for the delays in getting this issue ready. First was my Open University assessment, then came the chaos as I got BudgieMgr ready for the Wakefield show. Then a little more chaos when Glenn Richards rings me and says it doesn't work (it is written for Econet and he is using Ethernet - hmmm!).

Well, panic over. It looks like I can put some quality time into coding MTerm and blowing things up in StarFighter3000.

Well, I want to try something *really* special in the next issue to help boost Froblicate. If anybody has any (reasonable!) ideas, please email them to me...

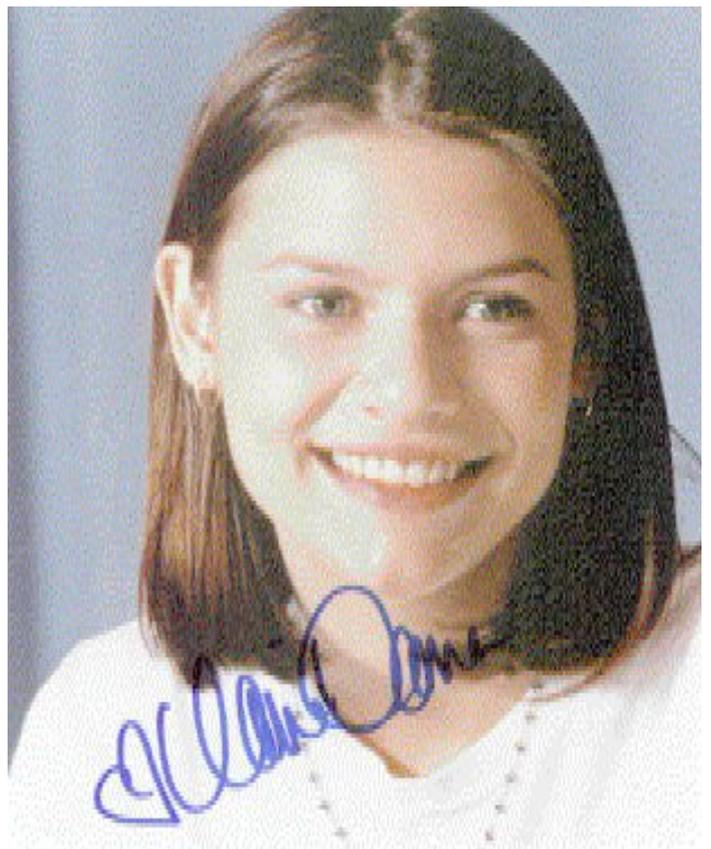
Froblicate is now on the Internet. John Surcombe is hosting the archives, but for now I'll point you to my page which has all the info – and a link to John's site.

At the time of writing this, and too late for the magazine – it was announced that the Pentium Pro suffers the good ol' floating point problems. Three cheers for Intel! :-)

My WWW site is updated at least once a week. Keep an eye on the Froblicate index for any late-breaking news stories that I think are likely to be of interest to you.

That's about it really, enjoy the issue. I'll leave you with another piccy of the love of my life (*I wish!*).

:-)



/___/ rurray@argonet.co.uk
/ \ichard. "Richard Murray", 2:254/86.1@Fidonet

Who are you *really*?

SCENARIO ONE:

My IRC (Internet Relay Chat) handle is something cute like “fluff”. I have not been on long, but long enough for observant people to know who I am and a little about me, my hobbies, my girlfriend...

Then I, or at least “fluff” gets back on IRC and starts detailing some things about the girlfriend that results in him getting kicked off of IRC.

SCENARIO TWO:

A rather repulsive email arrives from rmurray@arcticbb.demon.co.uk. It is insulting and full of bad language.

There is a dangerous trend emerging... “If it is on the computer, it must be right”. My mom was once asked my date of birth (as proof of identity?). She, naturally said 16/12/73. But hang on a moment. That is wrong. The computer said so!

We should be a little bit cynical about trusting who we are talking to electronically. Anything sensitive should be said by telephone, but as emails. After all, I can simply type “/nick pickle” on IRC if I wish to become somebody else. Or I can reconfigure the software...

As for email, well, this next little snippet was received from the sales section of Enterprise ISP:

```
From sales@enterprise.net Wed Mar 19 04:01:10 1997
Received: from relay-10.mail.demon.net by arcade.demon.co.uk
id AA2515 for rmurray; Wed, 19 Mar 1997 04:00:51 GMT
Received: from relay-9.mail.demon.net by mailstore
for RMurray@arcade.demon.co.uk id 858734961:09:04062:0;
Wed, 19 Mar 97 01:29:21 GMT
Received: from gold.compulink.co.uk ([194.153.1.10]) by
relay-9.mail.demon.net id aa0904044; 19 Mar 97 1:29 GMT
Received: from gold.compulink.co.uk (max10-103.enterprise.net
[194.72.199.103])
by gold.compulink.co.uk (8.8.4/SMI-4.1) with SMTP id BAA03762;
Wed, 19 Mar 1997 01:29:06 GMT
From: sales@enterprise.net
```

```
Received: mail.enterprise.net by XM34r21-6199.com (8.4.2/8.4.1) with
SMTP id
JAB99920 for <L1R7-5G59-1314:R>
Received: by mail.enterprise.net (8.1.9/5.970214)
Message-Id: <199438888495.LAA19972@mail.enterprise.net>
Comments: Authenticated sender is sales@enterprise.net
MIME-Version: 1.1
Content-Type: text/plain; charset=us-ascii
Date: Wed, 20 Feb 1997 05:01:01 GMT
Subject: IGNORE ANY E-MAILS FROM ENTERPRISE! - IT WASN'T US! Promise!
X-UIDL: honestly!
Priority: normal
Status: MI
X-Flags: L1R7-5G59-1314:R
```

Please do *NOT* complain to enterprise.

We don't care. We're dipping in the IP pool!

Period.

```
Begin non-PGP signed message:
KUSHRPFKUNSKLRUNFLSIRNGLSINRVLINRNLGINLIRNVLDIHGLIHDG
SRFKUHWKRUHFBKSURBPKUWBFKUWBRKGBKSURHGBKUSHRGKU
WERFKUHEWKUBFKWBRFKUWBRKFUBWRKFKUBKURBGKUSBG
SRKFUHWKUBFKWBRFKUWBFKUWBRFKUWBRKRGUBKUBRUKUW
WKERHFBWJKUEFBKUBFKUWBFKUWBRKUBERBKUWERBCK
--- eND BOLLOCKS.
```

As you can see, there is a compulink reference in the header. Also as you can see, it is authenticated. Such authentication counts for nothing if you think about it. A good hacker can pull in your life history in under an hour (sufficient to use your credit card and answer the confirmation questions correctly) so what possible security could a simple little email offer?

There is no real answer to this. If we make protection stronger, it'll be broken down. If we issue personal smartcards, they will be faked.

The only real test is not to trust the person on the other end of the line until you are satisfied as to their identity.

Even then, be cautious.

http://gobbledegook.dot.slash.dot.uk

Just what is all this Internet stuff? What does it mean when a TV or radio advert says “something.com” at the end? What is this nonsensical junk on business cards that begins “http”?

It is simple. It is an Internet ‘thing’ known as a URL. What that stands for is not important. What matters is what it does. Forget your comms software. Forget your ANSI codes. The Internet will now take you into a totally new dimension where you use loads of disc/memory hungry programs and even get to learn a little something called HTML. The one most used is called a “browser” and it allows you to access the World Wide Web (WWW). In reality this is nothing special, just a collection of documents with a very loose method of indexing – if any.

The URL is basically an address. Mine is:

`http://www.argonet.co.uk/users/rmurray/`

This breaks down as:

- | | |
|--------------------------------|---|
| <code>http://</code> | – The protocol to use. “http” is an extended version of “ftp”. Again, this does not really matter. Indeed it matters so little that most people don’t even mention it, and your ‘browser’ will happily assume it. |
| <code>www.argonet.co.uk</code> | – This bit is the “host”. The WWW server at Argonet which is a UK company. |
| <code>/users/rmurray/</code> | – Subdirectory “rmurray” in subdirectory “users”. |

You are missing the actual page to fetch, “index.html”, but again the browser and/or the WWW server can figure this much for itself. Some servers differ, maybe replacing “www” with something else (like “box”).

So what is actually there?

Well, everything and nothing. If you have time, and money, to waste then you can “surf” the Internet and discover many things. You’ll probably forget what you were looking for having been led off on many tangents. Then again what you *are* looking for might not be there. My own WWW site hosts – to my knowledge – the only active Econet (of the Acorn network variety) area; though I’m aware of another one being created.

In practice?

You get good days and you get bad days. I almost exclusively travel the Internet (no, I don’t “surf”) with the graphics turned off which speeds things greatly. The peculiarity of the Internet is that your data rates are never constant. On a BBS you can watch the Zmodem counter slowly plod along in 1K blocks. The Internet might freeze for thirty seconds then go like a bat out of hell for the next thirty. One thing for sure, it is nowhere near as fast as a BBS. But that does not matter. You *can* have four active WWW windows open, and ftp transfer **and** telnet all running at the same time. In BBS terms that is equivalent to downloading several files, viewing several menus and talking to the SysOp *all* at the same time. When you consider this and the fact that an email can pass as quickly as a minute, it is obvious why people are flocking to the Internet in droves. I myself said I wouldn’t do such a thing – but simple economics have caught up. £600 phone bills are *out* and local-rate calls are a Good Thing.

What, however, do people expect of the Internet? The media paints a picture veering sharply between sleaze, filth and eight-year old girls undressing for your pleasure to an almighty glory which the world has never seen before.

To be honest, I've not experienced either extreme. It is, to me, just another system. This time nobody is in control and politicians can't lay down laws for what is on it. Millions upon millions of messages pass each hour. Sometimes it amazes me that the whole system doesn't just fall over and die. Pipex seem to be having problems with news servers. Everybody says Demon are having problems and the week before I wrote this, Micro\$oft themselves had a system crash – only they called it “down for routine maintenance” or some such rubbish.

What the books never bother to point out is you must not post a message into a widely distributed area using your real email address. If you do, you'll get loads of junk email offering you free holidays or mass email software or sex aids or make money gun running to Mexico or... or... You cannot do much about these so-called “spams” because the spammers have got nasty. You complain, their next spam might be 'tweaked' to have come from you. With the servers straining under the weight of all these messages, the providers might begin to tidy things up for you. A spam to me promises to post 2,000,000 messages for around \$300. If each message is 2K (not uncommon) then one individual site will be spewing out 3906Mb for these messages. I have not any solid evidence, but it is my belief that several ISPs are currently prosecuting “bulk email” ISPs for wasting time, space and bandwidth for unwanted advertising.

On the next page I'll introduce my WWW site and where you can find Frobnicate. A little later on I'll introduce you to a friendly (and Acorn-aware) ISP called Argonet.

Hello to John Surcombe – he'll know why. :-)

If you do not have a trial account with Argonet ^[1], my advice is to get one... The only way you can *really* experience the Internet is to jump in and try it for yourself.

[1] You may choose any ISP, I'm not exclusively pushing Argonet. However they are, to the best of my knowledge, the only ISP that offer an all-in-one package for Acorn users. You can use the ANT suite and Demon, or how about Enterprise with MSIE? The combinations are endless but for simplicity I'd suggest the Argonet system. It demonstrates how plug'n'play ^[probably TM to Micro\$oft] *should* be.

BudgieSoft present:

Only £15

BudgieMgr

The Econet Management Suite

Powerful user editor for FileStore, awServer and Level4.
Complete with many “bells and whistles” and supplied with several stand-alone applications.

DEMO AVAILABLE!

Pay in Sterling, Francs or Pesetas.

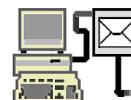
rmurray@argonet.co.uk
<http://www.argonet.co.uk/users/rmurray/bmgr.html>



Advertising in Frobnicate is **FREE**.

Contact the Editor for further information.

rmurray@argonet.co.uk



NetMail

A fully Fidonet compatible network based mailing system.
Exclusively available on the Acorn platform.

Coming soon from Squirrel Solutions

For further info E-Mail richards@arcticbb.demon.co.uk

http://www.argonet.co.uk/users/rmurray

On the left is a diagram of my "homepage". Feel free to drop by at any time.

On my site:

- About myself / BudgieSoft and programs I have written.
- BudgieMgr area with downloadable demo.
- FROBNICATE area, with links to the archive site *kindly* provided by fellow Acorn advocate – John Surcombe. **ALL BACK ISSUES ARE AVAILABLE.**
- Econet area.
- My CV (I live in hope).

And more!

Drop by and explore.

For Argonet people:

- FetchMail, my mail decoder/bouncer is available, file "fm.zip".
- Foxy, my multiple resources is available, file "foxy.zip".
- The directory ("direct.html") is now automagically created. Software available soon.

For Windoze users:

Go to "nice.html". Says it all. :-)

More interesting areas are being worked on. Your suggestions, as always, are welcome. Please note that I use graphics to augment the text, not replace it, so it isn't a particularly graphics-intensive site.

: -)

[<Jump to the index>](#)

UPDATE
 My homepage has
 been updated since this
 article was written...



BudgieSoft!

Welcome to the BudgieSoft site.

Latest news!

Comprehensive **SEARCH** page:
[Click here to search for something](#)

Finally... Got myself a piece of paper saying I know something about computers. It's an "IBT" level II (Integrated Business Technology). It was previously known as the RSA/CLAIT level II.



So looking down, pick where you would like to visit and some technological weirdness will take *my* page and display it on *your* screen. Cool huh?

The index: [\(what's new?\)](#)

[BudgieSoft programs](#) (with downloads). Or see the [MTerm development area](#).

[About BudgieSoft](#) <<< **UPDATED!** [Econet enthusiasts area](#).
[Frobnicate magazine area](#) Does windoze [anti-alias?](#) :-). <<< **NEW!**

[Need some help with anything BudgieSoftish? Here's a ready-made help form.](#)

[Links to other sites I think are maybe worth a visit](#) [Searching for something?](#)

[About Richard Murray](#)  Acorn Clan member.

My [Curriculum Vitae](#) .

[Mom's page.](#)

[Email Richard Murray via Argonet ISP.](#)
[Email Richard Murray via the fido gate.](#)

This site was last updated Monday 21st April 1997 (release 12 and a bit).
You are visitor number **00000558**

*These pages designed for use with Voyager, with 14pt body text.
Originally designed using Webite.*

*This site has been designed to be reasonably small and efficient
so that you may browse with images off and not miss everything.*

THIS SITE IS HTML 3.2 COMPLIANT



Frames? **NEVER!!!! !!!!!**

The making of *BudgieMgr*.

With the release of BudgieSoft's first commercial program, it seemed a good idea to chart the history of BudgieMgr; and to look at some of the ideas and pitfalls involved.

A while back, early 1996 if I remember correctly, I got my hands on an E01S FileStore and three Econet cards – which were duly hooked into my A5000, my A3000 and my A310. I didn't have to worry about users or anything because I was the only user. Soon I added accounts for mom and another for myself. It became apparent then that using *Commands was *not* an option.

The first version of BudgieMgr was born. It was a klutzy multitasking affair sorta thrown together to mimic those *Commands when I clicked on an icon. I looked around for some better management software and found nothing that wasn't doing what my own code was doing. So I hacked the FileStore "Passwords" file format and recoded BudgieMgr to rebuild the password file properly. A demo was released and I said I'd sell a proper working copy to anybody for £10.

Then along came Level4, a nice fast sophisticated server from Acorn. Supplied with it was !Manager (the templates from which the BudgieMgr editor is loosely based upon). The first thing I noticed about !Manager was it couldn't handle FileStore. It also seemed to rescan if you accidentally (or tidily) closed the list window and reopened it again. This, to me, was not a Good Thing.

After some thought, I figured there might actually be a market out there for something to manage Econet better. I began to code in some Level4 support into BudgieMgr and that was when I hit my first obstacle...

...the PRMs are wrong. Virtually the entire section on the Manager Interface was nothing like what I was getting. Some things were missed out altogether. Oh, and I haven't sussed the local loopback feature of RiscOS3... Hmmm!

A copy of BudgieMgr was sent to a good friend of mine, and he gave me some useful suggestions. It was about now that I read a review in one of the Acorn magazines of a rival product retailing for about £50. This, to me, seemed excessive. I have not used their software, or even seen it. However the schools still using Econet are likely to be doing so because Ethernet upgrading was too expensive. If anything, I hope my lower price will be more appealing. It should also be appealing to home users who have bought Econet stuff and networked their house.

The *standard BudgieSoft package* was defined ages ago. A CD case containing a printed insert and a floppy disc. This is what BudgieMgr was to use. A picture can be found in the advert on page 6. The rival company was said to have described their software on a single piece of paper (can't remember exactly) so I did likewise, running through the basics.

BudgieMgr was finally ready. The discs were formatted, the labels printed, the coversheets printed and the CD cases had had their CD platters removed. It was an awful trial cutting and folding the bits of paper, but I could – in half an hour or so – assemble my first four packages. If everything went to plan, I was holding the equivalent of £60.

Then I looked at the instructions and ripped them up. How can I do justice to my software on a single piece of paper?

I loaded Ovation and produced a page size slightly smaller than the CD platter, to fit inside like the song words booklet. After a long stretch typing I had a sixty-page booklet. A little more time trimmed it down by a quarter to the size we have today. It describes the major features, Econet history and lots of helpful hints such as what to do if you wipe your SYST account on a FileStore.

I spent another small eternity cutting the paper as exactly as I could. Staple and fold.... It didn't line up, but I wasn't going to figure out how to fix that. The BudgieMgr user guide is an afterthought and the cost of it is *not* included in the cost of the package.

For now, I'm happy. The first four packages are ready. If you want one, it's only £15...

You have probably noticed that I'll also accept payment in Spanish pesetas or (more preferably) French Francs. I travel to both of these countries (France more often) so it makes sense – to me at least – that £15 is £15 be it sterling, francs or pesetas. You may have some money left over from your holiday. What can you do with small amounts? Buy a copy of BudgieMgr – that's what! :-)

The rates are fixed at 150FF or 3000Ptas. This is because I only accept cash in these currencies, and it is easier for you to send me a note than to work it out down to the very last centime...

The BudgieMgr package itself is not finished. It probably will never be finished as all ideas and suggestions are welcome, so the software will develop.

A few people have expressed concerns over the use of the "key disc". This is unlike traditional key discs, and I'll explain it now:

When you first install BudgieMgr from floppy disc, it will look at the identification information within itself. Then it'll look on the disc. If the information matches, it will write into itself the names and addresses of the active servers. From this point onwards, you can copy BudgieMgr willy-nilly across your network (this doesn't include bridges) as required – there is no limit. Only one server needs to be active for BudgieMgr to recognise the network. If the servers are all different, it will request the installation disc (so it knows it is really you). In practice, nobody is likely to keep renaming their servers!

This is where the disc error comes in. You do not have a defective disc. Late in the disc, the physical format actually changes and ADFS cannot 'cope' with this, so it reports an error. This *is* intentional!

I am not a fan of draconian protection systems with keys and passwords and such. I've designed my system to cause you grief if you pass copies around, but not to cause problems in normal (legal) use.

I also wish to make it clear than I'm *not* treating my customers as potential criminals. I'm just trying to remove the temptation. I know all how easy it is to just zip up something and shove it down the line to somebody else.

However as this is currently my only commercial software selling at the low price of £15, I'd like to make some money.

That is, after all, the whole point of selling stuff. :-)

Frobnicate on the Internet...

First weekend (08/03/1997):

Approximately 15Mb of downloads.
Assuming 50% issue 12 and the others are back issues at average 270K, it works out at an average of 225K/issue or 69.17 issues downloaded *in one weekend!*
Next three days, another 10Mb...

Monday 7th April 1997:

Estimated 300 issues downloaded!!!

For Frobnicate yack, FAQ, index and so on:

<http://www.argonet.co.uk/users/rmurray/farea.html>

To just get on and download 'em:

<http://www.surcombe.demon.co.uk/frobnicate/>

or the non-tables version at:

<http://www.surcombe.demon.co.uk/notables/frobnicate/>

Again, *many* thanks to John Surcombe for providing a site for Frobnicate.



ARGONET



Everybody is clamouring to get on the 'net, to "surf", to have a homepage and to make up little business cards with indecipherable electronic addresses printed upon them. As much of this issue revolves around the Internet – it is only fitting that I provide an objective review of a company who are offering a one-stop "Internet Solution" for the Acorn machines. A recent Acorn User carried trial software on the cover disc.

Let's cut to the chase. I'm a lazy git really, so I never really bothered with the Internet in the past. I mean, I *am* a programmer but trying to get Freenet to work was like a major snooze. Then Argo decided to stick a trial thingy on the front of an Acorn User. The blurb read along the lines of "Feed this into your computer, sit back and click the mouse a few times until you are connected".

Now *that* I can do.

I was immediately disappointed that the software would not talk to my modem any faster than 19200bps. This could present a problem as the modem is baud-locked. So I hacked it – a little twiddle in the RegMsgs file (detailed in issue 12). Luckily this was only a quirk in the registration software. I typed in my name and other details and hooked up. Data was transferred and the call was terminated. I tried to log in but it wouldn't let me. I suppose it serves me right expecting to be registered late on a Sunday night.

I left it a week as I was fairly sure a big download was ahead. Sure enough, on the next Saturday the AutoUpgrader kicked in and kindly fetched me a file that was almost two megabytes. By now I was getting *really* worried. Mom has this "thing" about large phone bills. However, don't fear if you see it saying Docklands or Cambridge. It is a *lo-call* number (0645) so on a weekend it is a penny a minute all the way.

The Auto Upgrade procedure presented several problems. It would get so far along, then die with an error about disc space. The files unpacked are some three megabytes (can't remember exactly) and the installer says it needs either 6Mb or 9Mb. Try 12Mb. This, of course, won't be a problem to many people as half-gigabyte harddiscs are all too common nowadays. Wish I had one!

So. Installed, configured, set up, tweaked and ready to *rock and roll*.

I wasn't quite as impressed as I should have been. The software was fine but the Internet itself didn't live up to all the media expectations. Stupid me for considering to believe a TV advert!

The software... People have pointed out it is a rehash of Freenet. I have not looked at Freenet in any detail, but I'm sure the news reader and mail poster were created by Argo (or on their behalf). The WWW browser is currently a version of ArcWeb. By default you get 2Mb of server space for your WWW pages. These are uploaded using the ever-so-slightly pedantic "WebPack" software on this side, and the "TIMM" software at the server. You drop a packed file into the incoming directory on Argo's FTP site and it gets reconstructed into your site.

The software is consistent, works well and is relatively trouble free. I'm not going to throw criticism at it because, heck, everybody can be a back seat driver!

The stack is *standard*, being the usual Acorn stack – so adding software like Richard Sargeant's !InetTime or the !IRClient software (Matthew Godbolt) is simply a matter of loading the programs and using them.

The software is not bug free (is there such a thing as bug free software?) but it is stable. I use it daily and, well, it kicks ass, IMHO.

Quick comparisons:

- ANT suite – Good WWW browser, nifty presentation but missing many of the nice touches that ArgoNet has. Also seems less stable than ArgoNet. However one cool feature of Fresco is the ability to fetch several images at once – less time is spent waiting.
- Termite – I can't compare. Many people say it uses a non-standard stack which is a bit of a turn off for me. I did quite like the !Webite software.

Now, here comes the cool stuff.

Argo have done some kind of deal with ART so Argo users shall soon be getting the ART browser (as used in the NetStation apparently). This means they should be JAVA enabled by the end of the year. As you can see from the screenshot, it looks suave and sophisticated and it handles frames. It'll print pages in many different ways, save them in different ways, slice, dice, chop, cut and so on.....



WebLoad II	
Symbols212.wav	14 Kbytes
egozone.gif	14 Kbytes
index.html	2176 bytes
index2.html	116 bytes
limited/chat.html	1141 bytes
limited/paris1.jpg	242 Kbytes
links.zip	1153 bytes
noticebot.gif	3994 bytes
noticebrd.gif	41 Kbytes
noticetop.gif	2115 bytes
SomeFile	13 Kbytes
Symbols19	14 Kbytes

Also on the plans are a replacement to WebPack. It has always been a sticking point that you had to reupload your entire site to make changes. In the face of this, I try to update mine at least weekly. However these days should soon be over with the new software (in testing) that will apply a certain amount of IQ to the process.

There are many more rumours and ideas flying around. One gets the impression that the people behind Argo are thinking up some seriously cool ideas. Customer support is friendly, the software works well and – like D:Ream says “Things can only get better”. I can't wait.

But before I leave my review of Argonet, I wish to extend a special thank you to everybody on the argonet.zfc newsgroup. Nothing but friendly, helpful and good good fun. Thanks and keep it up!

Voyager software: £59 (there is a substantial discount voucher on Acorn User).

Subscription : £14.69 monthly, £77.55 for six months or £141 a year.

Marks out of 10 : 7/10 (and set to rise).

Argo Interactive, 7 Dukes Court, Chichester, West Sussex PO19 2FX

Qu'est-ce que c'est, ça?

First we had the Mayday Massacre; as the Daily Mail so eloquently phrased it. That was quickly followed up by a massacre in Europe as Britain amassed the single highest score at EuroVision with a nice rousing uplifting vote-for-us type of song. Something about "Love Shine A Light". The song didn't have a whole lot of substance, but it had a fair amount going for it. It sounded good, it was in English and well... It was one of those kind of songs that makes you want to get up and boogie. Fortunately for the world, I didn't do so. :-)

Yes. I am a "sad anorak" because I quite enjoy EuroVision. The fun for me is in seeing what a country thinks will win them votes. Some are, erm, a bit odd. Take for instance this EuroVision...

Denmark entered a guy described by Wogan as "Chris Evans in a fright wig". It was a rap song (!) about a guy in love with the directory enquiries girl. Danish rap – you need to hear it to believe it...

Det er oplysningen – Hallo
 Ja Hallo – det er Kaj. Kå 'jeg snakke med hende den søde
 Hven er den søde?
 Ja stemmen i mit liv

Oh yeah, you'll want it in English... :-)

Telephone voice – Directory Inquiries, Hello.
 Thomas – Hello, this is Kaj. There's a really cute girl I'd like to talk with.
 Telephone voice – Who's that?
 Thomas – She's the only voice I hear.

Then into the chorus: You turn me on but I can't reach you, 'cause you're too far away (well... Jeg tænder på dig og ka'ikk' nå dig for du så langt fra mig) – remember it is a rap song.

We were second to last. When it came to us I figured we had it bagged (in typical British way) even though the Irish were tipped to win it *again*.

The final song shocked me. Not in horror or anything Mary Whitehouseish, but because it was a brave new venture for EuroVision. The Icelandic entry... Think male singer wearing black/purple so he looks a bit goth. Think several girls around wearing fishnet tights and PVC. Think an act that looked like it was performed by a cyborg. Ummm.... Well.... This was *Minn Hinsti Dans* (My Final Dance) and it was kinda how I'd imagine an opera on Bravo... :-)

Yes, this is where everybody stops hating each other and get together to have a good old sing-song. This is Terry Wogan's paradise. People say he talks to much – but listen to him. He really cracks me up with his sarcastic comments.

One of my favourite songs is the winning Swedish entry from a few years back... Can't remember the title. This is followed by Croation Sky from 1993 (I think). One of my favourites this year was *Sentiments Songes* (Dream Feelings) from France. A young girl was singing it quite sweetly, belieing the fact that it is quite a spooky song. Lyrics are on the next page (hey, don't complain, it's a way to make Frobnicate bigger!).

If enjoying this yearly fest of madness makes me a sad excuse for a human – so be it. I'll be watching in 1998 and I hope to goodness it is held somewhere nice and not in the usual touristy spots.

Sentiments Songes

Souvent on s'fait des tours de manège à l'envers
on découvre l'amour, mais sans les belles manières
on s'invente des histoires, histoire de s'faire planer
on s'maquille la mémoire pour éviter de penser

C'est comme l'eau d'un ruisseau, ça coule sans s'arrêter
Tout c'qu'on a trouvé beau, à force, s'est cassé
Ça fait pas vraiment mal, sauf qu'on se sent à côté
Du brillant des étoiles et qu'on n'veut plus donner

Sentiments,
Sentiments songes utiles,
Utilisation pour mots d'amour fragiles

Sentiments,
Sentimentales souffrances,
Légère comme un silence
Jeu de larmes pour nuits blanches

Suppositions câlines, tendresse cache-coeur brisé
C'est comme l'arme du crime, faut l'empeinte pour prouver
Prouver qu'on s'fait du mal ou qu'on se fait du bien
Tout c'qu'est moche on l'étale, c'qu'était bon plus personne
s'en souvient

Et ça fait des souv'nirs étrangement précis
Des choses qu'on peut écrire ou ranger dans sa vie
On ne sait plus vraiment ce qui est faux ou vrai
Mais c'qui est important, c'est que tout ça, on l'ait fait

Sentiments,
Sentiments songes utiles,
Utilisation pour mots d'amour fragiles

Sentiments,
Sentimentales souffrances,
Légère comme un silence
Jeu de larmes pour nuits blanches

Life often seems completely back to front
You discover love but without the frills
You invent a story just to get away from it all
You mask you memory so you don't have to think any more

Its like a stream that runs non-stop
Everything you find attractive has to get broken
Its not all that bad in the end except that you feel left out
Of the starshine and you've got nothing left to give

Feelings
Feelings and dream feelings
Use them for tender words of love

Feelings
Feelings and suffering
As light as silence
A game of tears for sleepless nights

Tender suppositions, broken heart blues
Its like a criminal weapon, you need prints to prove things
Proving that it hurts or that it does you good
Everything ugly gets put on display and nobody remembers
what was good any more

And that makes for strangely precise memories
Of things you can write or store away in your life
You don't really know what's real any more
But what's important is that you just did it

Feelings
Feelings and dream feelings
Use them for tender words of love

Feelings
Feelings and suffering
As light as silence
A game of tears for sleepless nights

Sung by Fanny (pronounced *Fanæe*) who is 17. She began singing at 8 years. Her first album, made with EMI when she was 12, quickly went gold. Her second album followed two years later and her third is on its way.

Composed and written by Jean-Paul Dreau; who has several gold and platinum discs to his name and has written for international singers such as Elton John.

SWIs (by Nava Whiteford)

In this article I will attempt to delve into the working of SWIs (SoftWare Interrupts).

What is a SWI?

SWI stands for Software Interrupt. In RiscOS SWIs are used to access Operating System routines or modules produced by a 3rd party. Many applications use modules to provide low level external access for other applications.

Examples of SWIs are:

- The Filer SWIs, which aid reading to and from disc, setting attributes etc.
- The Printer Driver SWIs, used to well aid the use of the Parallel port for printing.
- The SWIs FreeNet/Acorn TCP/IP stack SWIs used to transmit and receive data using the TCP/IP protocol usually used for sending data over the Internet.

When used in this way, SWIs allow the Operating System to have a modular structure, meaning that the code required to create a complete operating system can be split up into a number of small parts (modules) and a module handler.

When the SWI handler gets a request for a particular routine number it finds the position of the routine and executes it, passing any data.

So how does it work?

Well first lets look at how you use it. A SWI instruction (in assembly language) looks like this:

```
SWI &02
```

or

```
SWI "OS_Write0"
```

Both these instructions are in fact the same, and would therefore assemble to the same instruction. The only difference is that the second instruction uses a string to represent the SWI number which is

&02. When a program written using the string is used, the string is first looked up before execution.

We're not going to deal with the strings here as they do not give a true representation of what it going on. They are often used to aid the clarity of a program, but are not the actual instructions that are executed.

Right lets take a look at the first instruction again:

```
SWI &02
```

What does that mean? Well, literally it means enter the SWI handler and pass value &02. In RiscOS this means execute routine number &02.

So how does it do that, how does it passed the SWI number and enter the SWI handler?

If you look at a disassembly of the first 32 bytes of memory (locations 0-&1C) and disassemble them (look at the actual ARM instructions) you should see something like this:

Address	Contents	Disassembly
00000000	: 0..â : E5000030	: STR R0,[R0,#-48]
00000004	: .óflâ : E59FF31C	: LDR PC,&00000328
00000008	: .óflâ : E59FF31C	: LDR PC,&0000032C
0000000C	: .óflâ : E59FF31C	: LDR PC,&00000330
00000010	: .óflâ : E59FF31C	: LDR PC,&00000334
00000014	: .óflâ : E59FF31C	: LDR PC,&00000338
00000018	: .óflâ : E59FF31C	: LDR PC,&0000033C
0000001C	: 2 ã : E3A0A632	: MOV R10,#&3200000

So what? You may think, well take a closer look.

Excluding the first and last instructions (which are special cases) you can see that all the instruction load the PC (Program Counter), which tells the computer where to execute the next instruction from, with a new value. The value is taken from a address in memory which is also shown. (you can take a look at this for yourself using the "Read Memory" option on the !Zap main menu.)

Now, this may seem to bare little relation to SWIs but with the following information it should make more sense.

All a SWI does is change the Mode to Supervisor and set the PC to execute the next instruction at address &08!

Putting the processor into Supervisor mode switches out 2 registers r13 and r14 and replaces these with r13_svc and r14_svc. (now it maybe useful to know a little assembler here, an article on assembly language was included in issue 11).

When entering Supervisor mode, r14_svc will also be set to the address after the SWI instruction.

This is really just like a Branch with Link to address &08 (BL &08) but with space for some data (the SWI number).

As I have said address &08 contains a instruction which jumps to another address, this is the address where the real SWI Handler is!

At this point you maybe thinking “Hang on a minute! What about the SWI number?”. Well in fact the value itself is ignored by the processor. The SWI handler obtains it using the value of r14_svc that got passed.

This is how it does it (after storing the registers r0-r12):

1. It subtracts 4 from r14 to obtain the address of the SWI instruction.
2. loads the instruction into a register.
3. Clears the last 8 bits of the instruction, getting rid of the OpCode and giving just the SWI number.
4. Uses this value to find to address of the routine of the code to be executing (using lookup tables etc.).
5. Restore the registers r0-r12.
6. Takes the processor out of Supervisor mode.
7. Jumps to the address of the routine.

Easy! ;)

Here is some example code, from the ARM610 datasheet (reformatted by editor, to fit here).

```
0x08 B Supervisor
```

```
EntryTable
  DCD ZeroRtn
  DCD ReadCRtn
  DCD WriteIRtn
  ...

Zero    EQU 0
ReadC   EQU 256
WriteI  EQU 512

; SWI has routine required in bits
; 8-23 and data (if any) in bits
; 0-7.
; Assumes R13_svc points to a
; suitable stack

STMFD R13, {r0-r2 , R14}
; Save work registers and return
; address
LDR R0,[R14,#-4]
; Get SWI instruction.
BIC R0,R0, #0xFF000000
; Clear top 8 bits.
MOV R1, R0, LSR #8
; Get routine offset.
ADR R2, EntryTable
; Get start address of entry
; table.
LDR R15,[R2,R1,LSL #2]
; Branch to appropriate routine.

WriteIRtn
; Wnte with character in R0 bits
; 0 - 7.

.....
LDMFD R13, {r0-r2 , R15}^
; Restore workspace and return,
; restoring processor mode and
; flags.
```

That’s it, that’s the basics of the SWI instruction.

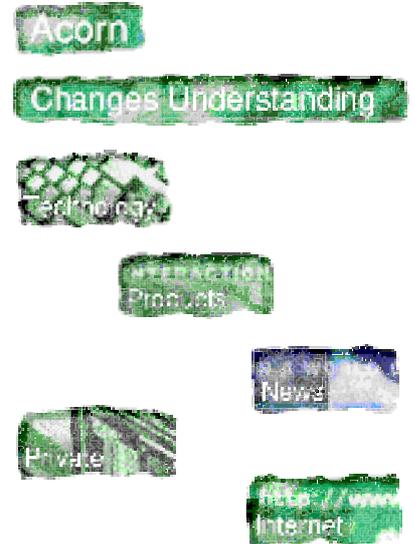
Sources:

- The ARM610 datasheet by Advanced Risc Machines
- The ARM RISC Chip - A programmers guide by van Someren Atack published by Addison Wesley

This month's recommended WWW site

Nominated several times, and redesigned since I last visited is Acorn's own WWW site. The web home of the the choice of computer for all good Frobnicate readers. :-)

<http://www.acorn.co.uk/acorn/>



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Why not submit a WWW site for possible "Recommendation". It can even be *your* site! :-)

Simply send an email to rmurray@argonet.co.uk telling me a few *good* reasons why somebody should visit the nominated site.

Also please send in submissions of any weird and wacky sites you find for a future article.

Thanks...









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