

Benefits of membership

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

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

Annual membership £15

Europe £19 and rest of the world £22

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EUREKA

The magazine for members of

The ARM Club

Wakefield Show Pictures

Serviette Web Server

Ron's Help Desk



Issue 62 - 2007 No. 3

Editorial

The Editor's comments on the world of RISC OS

One of the main things that keeps me using my Risc PC is the versatility of the operating system - mainly due to it's universal draw file format. For instance I construct the centre pages in Artworks as this now has excellent PDF export facilities. However for proofing the magazine before it gets sent to the printers I like to do a printout to see if everything works properly. Because Artworks now can deal with multiple pages it is very easy to save each page either as an Artworks file or Draw file directly into the magazine's Ovation Pro file by dragging and dropping. A two second job! Other computer platforms don't generally have this facility of moving files directly into open application windows. Generally to move a file to another application you have to use the dreaded 'save as' filer window - choose a suitable format - navigate to where you need to save the file - save it - go to the other application - open a filer window - navigate to the saved file - open it in the new application. If you need to transfer a different file type you generally have to go through all that palaver again. Two seconds on RISC OS, thirty seconds on OS X or Windows.

Draw is a great program with no real equivalent on a PC or Mac. For instance it can be put to good use in music for constructing objects the original program can't do. I use the Sibelius music setting program on both RISC OS and Windows. The RISC OS still has one or two advantages over the PC version, one of which is it's ability to export to Draw. For most of my music processing nowadays I use the PC version of Sibelius as it is very quick and very good. However if you wish to draw curved shapes in it you can't do it. On the RISC PC version you would just export the file to Draw and draw the curved shapes. Done and dusted! However on the PC side the only way to save out a vector representation of the file is to save as an EPS file (Encapsulated Postscript). This can then be saved to a Vector program (Quark Express - £800, Illustrator £600 etc; there are cheaper ones). You can convert the EPS file to a PDF file but you still need a program capable of editing them. (Adobe Distiller £500)

On the RISC PC all programs work together. On the PC each program occupies it's own little universe

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



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ARM Club contest No. 235699. Spot the Missing Logo Competition. Answers on a post card, no rude ones please. £1.00 per entry. All proceeds to the ARM Club's benevolent fund for overworked editors

RISC Bytes

RISC OS news over the last couple of months

VirtualAcorn now on Macs

VirtualAcorn have announced that as part of the beta product testing scheme a limited number of VirtualRPC-AdjustSA products suitable for use on G4 and G5 PowerPC Apple Macintosh computers are now available. VirtualRPC-AdjustSA for Macintosh retails at the same price as the existing Windows product (£119 plus carriage). As this is a beta quality product potential users will need to be familiar with both RISC OS and Mac OS and will need to accept the following conditions:

1. The software is still in a Beta form and may not perform as expected.
2. Technical support available may be limited and it may not be possible to full resolve any queries you have until a non beta version is released.
3. We will use user feedback to improve the full release version of this product.
4. That the product is not suitable for mission critical purposes and that you should save your work on a regular basis.
5. Users will be provided with a free upgrade to the full release version when it becomes available.

Full product details are available from

<http://www.virtualacorn.co.uk/products/vrpcadsamac.htm>

Currently the product is only suitable for PowerPC machines with G4 or G5 processors with a minimum clock speed of 800Mhz. Potential users are advised to carefully check the specification of their machine before placing an order.

If you are not familiar with beta test software then we advise you not to purchase a copy of the product at this time and to wait for a full non-beta release in due course. If you are prepared to accept the limitations of beta software and to assist in the development process then please call so that they can check that your machine is suitable for running VirtualRPC.

NetSurf 1.0 released

The Netsurf team have announced the first release of NetSurf, a free open-source web browser for RISC OS.

NetSurf 1.0 is available now for download from <http://www.netsurf-browser.org/>

Features include

- + Lightning fast browsing
- + Easy to use interface designed for RISC OS
- + Support for most of CSS 2
- + Zoom
- + Drawfile export
- + Thumbnail history
- + Hotlist
- + Advertisement blocking
- + Cookie management
- + Search-as-you-type
- + and many more

Screenshots of NetSurf in action are at www.netsurf-browser.org/screenshots/

This release is the result of over 5 years of development by 22 developers and contributors.

NetSurf's user interface is available in English, Dutch, French, and German.

CLOSE FILES

Version 1.03 of CloseFiles application is now available to download from **<http://www.vigay.com/software/>**

CloseFiles provides a simple way of closing open files. The advantage of this utility is that you can optionally suppress common or system files, such as Fonts and system devices in order to have a nice uncluttered readout of currently open files.

This version fixes a potentially fatal bug which could occur if you loaded CloseFiles when there were no currently open files.

It's also been fully tested on the A9Home and Iyonix machines.

Messenger Pro 5

R-Comp have added some major new content “off the bat” – most notably, the way in which Messenger prints emails has been completely revamped. It now uses RISC OS outline fonts to ensure compatibility with modern printers, and that allows better page layout, bold headings and more. Messenger Pro 5 also addresses one of the major annoyances of printing from email programs, by dynamically scaling prints (within reason – text is always readable) to fit neatly to the nearest page. This means that emails which spill three or four lines onto the next page will no longer waste paper/time, but will adjust to fit on a single sheet. The combination of the new features and revamped printing architecture should ensure that printing from Messenger becomes a pleasurable, hassle-free experience.

Searching of messages has also seen a major overhaul. It should now be a little faster, and the search results are now handled so that you can refine your search (ie. search for one thing, then narrow the search), and store results without causing problems. Search results can now be dragged’n’dropped out of Messenger, saving the results to disc or to another application. The old system was quite inflexible at times, and could have nasty results, so the new system is very much welcomed!

A new choices window has been added to allow settings to be adjusted for the MsgServe “back end” (and MsgServeS, the network server version). This provides access to many previously unavailable features, for example, you can control how long Messenger keeps backups of downloaded email (useful if you ever have disc errors!) and much more. Indeed, in the light of larger hard drives, we have ensured that mail backups are kept longer anyway, to give users a “lifeline”.

The inbuilt-editor is now faster and more responsive, esp on older or unoptimised systems.

We have also expanded the ability to have different email-addresses and identities associated with your Messenger User. This makes it very easy to pick an “identity” from the menu when sending messages, and have Mpro fill in the appropriate details. For people with multiple email addresses, or several people sharing, this will be a huge boon.

More time consuming operations have been sped up, and percentage completed bars now appear to show progress. Status windows can be set to

appear only during long operations.

Threading of messages, attachments, HTML mails, scrolling, selections and more have also received updates and enhancements!

Messenger Pro 5 upgrade costs £20 inclusive from v4.

Users of v3 and earlier can upgrade for £35 which essentially buys a whole new CD/manual pack. Indeed, this offer is open to v4 owners who want a new pack (eg. for a new machine).

If you are an existing Mpro server owner, you'll receive both client and server upgrades for the standard price, so there's no extra to pay.

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

AWViewer 2.10 released

Following the introduction of multi-page ArtWorks documents with the recent ArtWorks 2.7 release, the free ArtWorks Viewer has been updated to take advantage of the new opportunities opened up by this move. AWViewer 2.10 allows users to step through the pages of multi-page documents and its new full screen mode even allows it to be used as a simple presentation package.

In addition, several bugs have been fixed in the included AWRender module, the module used by AWViewer and third-party applications (e.g., Impression, OvationPro, Easi/TechWriter) to display ArtWorks files. Therefore, AWViewer 2.10 is a recommended upgrade for all users, even those working with single page documents only.

AWViewer 2.10 can be downloaded from

<http://www.mw-software.com/software/awmodules/awrender.html#download>

The included AWRender module allows all applications that support ArtWorks files to display ArtWorks files with transparency effects on screen. Printing files with transparency requires some extra support from client applications or the operating system. Easi/TechWriter and OvationPro have been upgraded to allow printing with transparency. The new AWRender module included with AWViewer 2.10 takes advantage of a new feature of RISC OS 6 and allows other applications to print with transparency as well. Most notably, it allows Impression to print ArtWorks files with transparency when running under RISC OS 6.

ArtWorks 2.7

ArtWorks 2.7 has been released and is available for purchase. This release marks another milestone in the development of the platform's most popular advanced graphics illustration package. For the first time, users are able to create graphics work with more than one page and export high quality multi-page PDF files. Consistent layout across pages are facilitated by master layers that appear on every page or on odd/even pages only.

In addition to supporting multiple pages, Direct PDF Export has been improved significantly. Most importantly, it optionally uses internal compression for the main contents stream and for embedded bitmap images, which dramatically reduces the file size of exported PDF files. Commercial users will appreciate that spot colours and overprinting information are exported.

In addition, ArtWorks 2.7 offers various other improvements added by popular demand:

- Colours on the colour bar can be reordered (which also changes the order on the colour menu).
- Colours can be sampled from screen.
- The text in selected text lines/areas or all text on a single page or on all pages can be exported.
- The layer list can be turned into a permanent window, which makes working with layers far more productive.
- New keyboard shortcuts to quickly switch between colour separations.
- Various minor user interface enhancements.

The retail price for a full version of ArtWorks 2 remains at 169 Pounds (inc VAT). An upgrade from ArtWorks 2.6 to 2.7 costs 30 Pounds (inc VAT). Prices for other upgrades and order information can be found at:
<http://www.mw-software.com/paying.html>

Martin Wuerthner MW Software **<http://www.mw-software.com/>**

New versions of Popcorn, HALTimer, Application accelerator

Popcorn – a C library for games developers. Popcorn provides many useful facilities for writing games under RISCOS, such as fast sprite plotting, object handling and collision detection, resource management etc.

New in this version of Popcorn are:

Support for 32 bpp screen modes, and 32 bpp sprites.

Support for alpha blending of 32 bpp sprites.

Hardware acceleration on 80321 based machines (Iyonix).

New facilities, bugs fixed, tidier API.

Popcorn is free to download and use. Full source code is provided. A tutorial showing how to write a simple game using Popcorn is available from the same web page.

A StrongHelp manual documenting the API is also available.

Get Popcorn from

<http://homepage.ntlworld.com/rik.griffin/popcorn.html>

HALTimer – a module that provides timed callbacks. This module provides a similar facility to OS_CallEvery, except that the interval between callbacks can set with more precision. It is only limited by the capabilities of the hardware timer in the machine. Requires the HAL26 module on non-HAL platforms (that is to say, non RISC OS 5 machines).

Get HALTimer from

<http://homepage.ntlworld.com/rik.griffin/haltimer.html>

Application accelerator – provides an easy API to the application accelerator device in the Iyonix's 80321 CPU. This allows copying of memory at up to 300 MB per second, in parallel with whatever the CPU is doing at the time. More details are on the web page. Full source code is provided.

Get AppAcc from

<http://homepage.ntlworld.com/rik.griffin/appacc.html>

Updated VirtualRPC components for RISC OS 6

VirtualAcorn have announced that a new section has been added to the downloads part of the VirtualAcorn website.

This new section contains updated RISC OS components for use on VirtualRiscPCs running RISC OS 6. As part of the many improvements in RISC OS 6 there is much more stringent checking of file headers. Some of the existing VirtualAcorn supplied RISC OS applications do not have suitable 32bit AIF headers and so will not run without the RISC OS 6 compatibility settings enabled. As part of our continued development process we are updating our applications to conform to the requirements of RISC OS 6.

The first release of updated applications include:

*AccessSet – designed to make handling Acorn Access shares easier.
DrivePop – pop up disc manager for StrongARM VirtualAcorns.*

As well as updating these applications they are taking the opportunity to address issues that have been reported by users. Further updated applications will be made available in due course.

*The RISC OS 6 component download page can be located at
http://_www.virtualacorn.co.uk/dloadpage/ro6.htm*

About VirtualAcorn - VirtualAcorn supply a range of products that allow users to run RISC OS and RISC OS applications on non ARM based machines such as Windows PCs and PowerPC based Macintosh computers.

*Full details can be obtained from the VirtualAcorn website at:
<http://www.virtualacorn.co.uk>*

New application – StickyPad available for download

StickyPad is a “PostIt” notes application for RISC OS, in a similar style to “Stickies” on Mac OS X. which can be downloaded from

<http://www.vigay.com/software/>

StickyPad is a discrete desktop utility which will allow you to add the familiar little yellow sticky notes to your desktop. You can store handy notes on them, move them around, expand them and shrink them.

TaskSetup version 1.03

TaskSetup is a plugin for the universal !Boot configuration system and allows you to configure which applications are loaded on startup. Anyone familiar with the Mac OS 9/Classic way of enabling/disabling system extensions will recognise this simple way to determine which files get loaded or seen at boot-up.

This can be a useful diagnostic utility for switching on and off which applications and modules etc are seen on startup, as things can be easily toggled on or off without delving into the !Boot sequence. As such, it makes configuration very easy for non techies.

New in version 1.03 is a static toolbar at the top of the window so that the controls are always visible, irrespective of the scroll position. A handy 'description' help bar has been added which gives brief notes as to what each item does, just in case you're not sure whether turning on or off would be a good idea.

It's supplied with a fairly comprehensive database of help for popular modules and applications, but please feel free to offer feedback if you would like help added for any applications not listed.

It's been tested on the Iyonic, A9Home as well as the new RISC OS 6 (Select 4i2).

Please read the "Readme1st" file if upgrading from the previous version, because the default install location has changed!

TaskSetup is FREEWARE, so please enjoy.

FileCrypt version 0.04 i

This is an update to the FileCrypt application form securely protecting your files using strong GnuPG encryption.

FileCrypt is a very simple-to-use utility for protecting your privacy by encrypting your files using the strongest PGP encryption. With a simple drag-and-drop interface, anyone can now securely hide photos, documents or confidential data - so there's no excuse not to secure all your data from snooping eyes.

Version 0.04 has quite a few enhancements and bug fixes to the original, so everyone encouraged to update.

FileCrypt is FREEWARE and full source code is provided.

NetFetch 3 and UniPrint 3

NetFetch 3 (version 3.02) sees a selection of enhancements such as improved handling of RSS news feeds (eg. support for Atom format feeds, and HTML output). It should work better with very slow mail-sending SMTP servers (eg. Demon). Spam filtering has also been improved, and this version includes updates to the "bad word" filters and various tweaks to other anti spam components.

UniPrint 3.20 is a huge upgrade, which has taken several months to complete. The whole of UniPrint's VirtualAcorn support has been completely rewritten (both printing and scanning) to make it far more robust and efficient. The VirtualAcorn aspects of the product had always been added "last minute", and 3.2 gave the opportunity to sit down and re-work things properly, based on the functionality it has now (UniPrint has grown considerably beyond just printing, so going back and unifying things has helped a lot). The net result is that printing should be far better (both text mode, and normal graphic mode) with better feedback to RISC OS in case of problems.

UniPrint 3.20 also includes revamped scanning facilities. The new scanning software supports page previewing (including draggable scan-area selection), auto-detects the capabilities of your scanner, and provides far more feedback during scanning. The scan is now semi-multitasking to allow status messages during the process, and better error detection. The new VirtualAcorn code helps this too, of course, but all users of UniPrint 3 will see major improvements.

Overall, 3.20 is a major upgrade for UniPrint (both in VA and network modes) as the product should now be even more responsive, more robust, and more functional!

R-Comp 22 Robert Moffat, High Legh, Knutsford, Cheshire WA16 6PS Tel: (+44) 01925 755043 Fax: (+44) 01925 757377 <http://www.rcomp.co.uk/>

Version 2.00 of Sunfish is now available

Sunfish is an NFS client for RISC OS, that can be used to access files on any machine running an NFS server. It has been tested with servers running on various operating systems including Linux, Windows, Solaris and RISC OS. Full source code is supplied under the GPL.

The major changes in version 2.00 are:

Support for a full filing system in addition to the image filing system available previously.

A new frontend which makes it much easier to set up connections. It allows you to browse for servers on the local network, and then when a server is selected, view the available exported directories in a filer-like display.

<http://www.alexwaugh.com/networking/>

First public beta release of !ScanMod

ScanMod is a comprehensive module scanner. Something which is capable of scanning your hard drive searching out all module files, irrespective of where they may be hiding, and to compare version numbers so that you can dig out old versions or replace with newer versions.

!ScanMod is a new application which will do just this, plus more. It will also check 26/32 bit status of modules, warning you if it finds a 26 bit module installed on a 32 bit machine.

It also contains a comprehensive module database, maintained by myself, so if an old module is discovered on your machine, not only will it alert you to the fact, but it will offer notes and/or the relevant website from where you can download and install the latest version.

A local database is also maintained, so that you can check any differences in modules that may occur since the last time you used !ScanMod on the same machine.

It also contains a 'Find' facility so that you can locate 'lost' modules, and as it contains a database of web links, find the latest version of a particular module for download.

More information, and download, is available on the website at

<http://www.vigay.com/software/scanmod.html>

PLEASE read the !Help file BEFORE use though! ;-) And, please check the website for updates to the main database – there are no doubt a few 100 modules still to catalogue, even though it already contains over 500 :-)

ScanMod is FREEWARE, although donations are always welcome.

Theme Manager

There is a revised version of Theme Manager system on the website, with new versions of !Themes and !ThemeMan. Key changes are:

- The now appears as a !Configure Plug-in rather than a stand-alone application.
- The system will no longer override settings which the selected theme is agnostic about. So, if you have a feature such as Icon Boxes enabled on your system, unless the Theme Choices file explicitly chooses to alter it, your settings will be preserved.
- A system variable, Theme\$Name, is set to the name of the current theme (or '[No theme]' if none is present), allowing third-party applications to alter their appearance to suit the current desktop, if desired.
- The number of attributes controllable by the Choices file has increased, including setting the Desktop font.
- The code has been reorganised and a number of bugs squashed.
- Four themes are now supplied with the Theme Manager, including a much-extended version of 'Steel'.

A number of people have contributed ideas and feedback since the first release, which is much appreciated. Thanks are due in particular to James Lampard, who provided much assistance and some additional code.

The software is still to be treated as 'beta' quality. As both components are now installed within the !Boot structure, you should only try this software if you're confident of restoring your system in case of problems caused at startup. Although testing has been done on RISC OS 4, 5 and Select, the presence of minor differences in all three systems means that it's likely there will still be bugs to iron out. Bug reports and feedback are welcome.

Some known issues still to be resolved:

- Non-standard Mouse Pointers are not preserved across a theme change.
- Switching between themes in a session (including [No theme]) often leaves remnants of the old theme in place: a restart refreshes everything.

Subject to feedback, a stable version for all supported platforms should be released soon.

Theme Manager provides a simple interface for changing Desktop themes (collections of icons, fonts, window tools and furniture). It is intended for use on RISC OS 4.x, Select, and 5.x, and takes advantage of the extended GUI features in Select if present. The program is freeware, and may be downloaded from **www.lym.iconbar.com/themes**.

!MIDISynth now available

Liquid Silicon have announced the availability of the 26/32-bit neutral version of ESP's !MIDISynth.

A lot of work has gone into updating all of the source code, including the six support modules plus all the MIDI, MIDISupport and !Player code and finally they are in a position to release this new version.

ESP's MIDI Synthesiser is a software music synthesiser which responds to MIDI commands in a similar way that a hardware sound module or keyboard would. This means that it can respond to music played from any RISC OS music application (Sibelius, MelIDI, Rhapsody etc.) that can utilise MIDI as well as PC MIDI music programs where a machine is being used that contains a PC card.

The instruments supplied with the synthesiser conform to a standard set of MIDI instruments known as General MIDI, consisting of 128 melodic instruments and a drum bank of 46 drum sounds.

The synth requires 16-bit sound and RISC OS 3.50 or later. A StrongARM machine or faster is recommended although there are concessions available in the playback quality for slower machines.

For further information and pricing please visit

www.liquid-silicon.com/midi.htm

GCCSDK GCC 3.4.6 Release 3

It is bug fix release based on the feedback we got during that period and this during our development of the next major GCCSDK 4 release. More information on what those fixes are and how to download this release can be found at:

<URL:http://www.riscos.info/index.php/GCCSDK_Releases#GCCSDK_GCC_3.4.6_Release_3>.

InternalNH serial blockdriver now available

InternalNH (new hardware) is a serial block driver modified by Liquid Silicon, based on InternalPC by Hugo Fiennes. Main features are:

26/32-bit compatible so will work on e.g. Risc PC as well as the A9 and Iyonix.

Hardware detection removed - now reads available baud rates directly from the operating system. It should therefore work on any future hardware and attempt to drive that hardware at all available baud rates.

Only the internal port 0 is supported. For second port use try something like the Internal32 driver on the Iyonix.

Requires RISC OS 3.50 or later, i.e. the one driver will work with all machines from Risc PC/A7000 up without change.

For downloading and further information, please visit:

www.liquid-silicon.com/download

Release of ClaimASWI Module

The purpose of this module is to implement the software interrupts OS_ClaimSWI, OS_ReleaseSWI and OS_ClaimOSSWI on machines that do not otherwise support them. As such it is a small step towards re-unifying the RISC OS API.

Together with the Free Shared C Library it is anticipated that this

module will play an important part in the planned extension of the Thread Manager API announced last month, details of which can be found at **<http://www.riscpkg.org/thread-pre1.html>**

On a less ambitious scale, there is an example module called Conversions which demonstrates how the ClaimASWI module can be used to intercept individual software interrupts without resorting to assembly language.

Source code should be fetched directly from the Subversion repository, which is located at

<http://source.riscpkg.org/svn/ClaimASWI>

A package file suitable for installation using RiscPkg is available from

http://www.riscpkg.org/arm/ClaimASWI/ClaimASWI_0.0.0-0

The module by itself may currently be downloaded from:

<http://www.riscpkg.org/~gdshaw/ClaimASWI,ffa>

Testing has so far been limited exclusively to RISC OS 5, so installation on other versions of the operating system is not currently recommended.

(Note in particular that RISC OS Select and Adjust already provide the SWIs listed, therefore there is little point taking the risk of loading this module.)

ConvText

VERSION 2.03

Three new wildcardish operators added:

-FIRST -LAST -FILE Please, see the History file, or the StrongHelp manual for an explanation.

VERSION 2.04

The number of scripts, as well as the number of lines per script is now configurable. – A configuration window is added, accessible from the iconbar menu.

– A website button is added to the Info window.

– The structure of the Stronghelp manual is slightly modified.

Hopefully, it's a bit more clear, now. See the StrongHelp manual and History file for more details

The latest version can always be loaded here:

<http://www.riscos.sprie.nl/Downloads/ConvText.zip>

New version of !CloseFiles now available

1.03 of CloseFiles application is now available to download from

<http://www.vigay.com/software/>

CloseFiles provides a simple way of closing open files. The advantage of this utility is that you can optionally suppress common or system files, such as Fonts and system devices in order to have a nice uncluttered

readout of currently open files.

This version fixes a potentially fatal bug which could occur if you loaded CloseFiles when there were no currently open files.

It's also been fully tested on the A9Home and Iyonix machines.

CloseFiles is FREeware

DrawAid available

DrawAid was a commercial program written by Bill Graham many years ago. He has kindly given permission to make it available on Eddie Lord's website.

<http://www.brookhaven.plus.com/riscos/index.html>

DrawAid is an easy-to-use Wimp interface allowing a Library of Basic drawing procedures to be called by simple (or complex) User's Basic programs. From these User programs complex Drawfiles may be generated and displayed without any knowledge of the RISCOS Wimp. The application can be used to produce mathematically or parametrically defined drawings and can produce a sequence of drawfiles from the one program.

RISC OS Encyclopedia Web Site Launched on 20th Anniversary of the Acorn Archimedes

From Rebecca Shalfield Hypertour Software

Dear RISC OS Community,

It was 20 years ago today that the Archimedes came to stay... (I think that's what The Beatles sang; quite appropriate as its Paul McCartney's birthday today, 18th June). I am reliably informed that on Tuesday 16th June 1987, the release of a new computer, the Acorn Archimedes, was announced in "The Times". Two days later, on Thursday 18th June 1987, a demo machine arrived at Acorn dealer, The Data Store, in Bromley.

To celebrate this extremely important event in RISC OS's history, I wish to announce the official launch of the RISC OS Encyclopedia web site at <http://www.riscopedia.net/>.

Prune: new release

Sine Nomine Software have just released version 2.02 of the Freeware application Prune. This is available for download from <http://www.sinenomine.freemove.co.uk/software/>

The new version offers the following enhancements:

- * processing GEDCOM files where there are families and individuals with the same numbering
- * repairing broken links within GEDCOM files
- * allowing cutting out, as well as removing personal details, of persons born since a certain date
- * estimating dates of birth of all individuals, to enhance pruning by

date. (Note: the estimates are not saved in the resulting file.)

Prune is an application for cutting down GEDCOM files containing family tree data. It makes it easy to process trees to remove those unrelated to a particular individual, and to cut out living people prior to submitting the data to sites such as Genes Reunited.

!meDDLe Version 2.20

A new version of the freeware application !meDDLe (Version 2.20 1st May 2007) is now on my web-site at:

<http://www.rayfavre.me.uk/dwapps.html>

The new version has:

- Added option for user to control the amount of compression applied to sprite, drawfile and Artworks pictures.
- Added option to include picture references without processing the pictures.
- Added better progress reporting and user prompting.
- Improved handling of large picture files.
- Modified main window layout.
- Minor bug fixes.

The text, Impression and OvationPro versions of the Manual have been correspondingly updated – as has the DDL file of the Manual used in the Example folder.

Letters to the editor

From Ian Yuille

Dear Sir, Jeremy C. B. Nicoll (Eureka 61, No 2, page 19) would confine us all to the internet and do away with the printed Eureka. This letter (sent by snailmail) is intended to stir things up and possibly start a discussion.

I have been using computers since 1953 and spent much of my career finding good uses for them. In 1978 I handed over, to the designers of the Royal Navy's ships, an interactive computer aided ship design system implemented on a mini-computer. It was capable of the following:

A designer could set up, or modify, the description of a ship held on a disc store. This comprised the shape of the hull, the arrangement of decks, bulkheads and superstructures in some detail, together with representations of the equipment on board (guns, helicopters, radar, propulsive machinery etc.).

The designer could cause the characteristics of the design (weight and space analysis, stability, effects of flooding, seakeeping, propulsive power required, etc.) to be calculated, and drawings of the ship produced quickly, by programs that used the ship description to prepare their own input. If the results were not satisfactory he could modify the design.

It was further developed by the design departments and was used to design frigates, assault ships, submarines and fleet auxiliaries etc. It was still in use, on different hardware, until the last years of the twentieth century when the design of H.M. ships ceased to be carried out in house. (This is now done by contract.) I mention all this, not to boast about it, but to show that I am not averse to the use of computers when this is helpful to mankind.

In the preparation of the programs for this system I made a particular point of making them easy to use with clear documentation. Which brings me to the subject of this letter. People urge me to put my computer on the internet. Is the internet as marvellous as some would have us believe? Certainly it is a magnificent technical achievement but when I come to use it I find snags.

The websites are set up by anybody and everybody. There is no guarantee that the information in them is up to date or even correct. Every website is designed differently. There is no standard and no instructions for their use. So the user has to find his way round each site by trial and error. Some sites are well designed but others are, in my opinion, very poor. There is one that I use where I only discovered by accident that when I wished to get from the bottom of a page to the top of the next page, I had to go back to the top of the page, then find a menu and "next page". Another has various buttons named "Get your ducks in a row", and similar phrases, to navigate round the site which concerns financial information. Not very helpful!

Unless one is well versed in how to instruct it, a search engine will either find several thousand sites or sometimes none at all. The internet is the repository of an enormous amount of information but, in my opinion, it can sometimes take longer to find what one wants than would a phone call to a local library. Last year, while on holiday, I asked a friend if I might phone directory enquiries for the telephone number of a hospital where my sister was recovering from an operation. My friend insisted that we use the internet. I timed him. He found the hospital site fairly quickly but the telephone number for enquiries eluded him. It took him over five minutes to find it, although he is an expert and was using broadband.

I am told that e-mail is quicker than snailmail but, if I only have time to switch on my computer about once a week, is this really so?

Then there is the matter of SPAM. I can put unwanted adverts on my doormat straight into the recycle bin. But on a computer they have to be deleted or one must rely on a program to filter them. The Royal Institution of Naval Architects, to which I belong, last year advised its members about this:

“In a recent typical 7 day period the Institution received 970 emails, of which about 700 were intercepted by the Institution’s spam filter. Inevitably some emails are wrongly blocked and, although the quarantine folders are regularly checked, unless the subject or email address is recognised, unfortunately some non-spam emails will not be picked up. ... It is the Secretariat’s policy to reply to all emails within seven days. ... Members who have not received a response in that time are requested to repeat the email – the same email will not necessarily be intercepted by the spam filter.” I use snailmail and always get a reply from the Institution quickly enough for my purpose.

If my computer is on the internet I have to protect it from viruses. It is necessary to keep down-loading the latest information to counter the latest virus. The latest counter-measure can only be promulgated after the virus has been detected somewhere, reported and the counter measure prepared. This takes time; meanwhile the virus is at large. One could, of course, use an operating system that was less vulnerable but are the available programs able to access every website satisfactorily?

I only use the internet at my local library (where I can do so without charge) but, possibly because I know how much better it could be, I find it frustrating to use. Its failings irritate me and make me angry which is not good for my health.

Years ago I was in the vanguard of people who advocated the use of computers for everybody’s benefit. Developments since then have made me more cautious. Firms are using computers to increase profit but the needs of the customer are being ignored. For example, how long does it take you, on a premium rate telephone line, to get through to a human being in a large firm after you have worked your way through one or more lists of choices? Does an e-mail get you a quicker reply?

I recently upgraded to RISC OS 4.39. There are some of us who prefer not to use another operating system if we do not have to and, for the reasons I have given, I prefer not to use the internet if I do not have to. What arguments could drag me into the modern internet era? Until I see reasons that will convince me that the benefits outweigh the disadvantages, I shall remain on the sidelines.

So please keep on printing Eureka which I can read in the comfort of my arm chair instead of tiring my eyes out looking at a screen.

From: V L MacKinlay <vic-iona.mackinlay@orpheusmail.co.uk>

Subject: the magazine

To: eureka@wyvers.co.uk

Dear Editor,

In response to Mr Nicoll's comment about the value of the magazine I would like to give the opposite view. Especially living in Edinburgh I find that it is valuable for both formal news (product announcements, etc.) and informal news (users' experiences, opinions, etc.). During the production troubles with Qerqus/Acorn User, it was really the only printed source of information about RISC OS and its hardware.

Online sources are often only tardily updated, and it is necessary to trawl through all the potential sources instead of being presented with a package.

The failure of the government's MTAS (medical students job placement scheme) has given me ideas for an article about the PRAMS scheme, which was started on an Elliott-GEC 903/20-50 combination of computers, and which I converted and ran for many years on BBC-B and then Archimedes, with a high level of outcome satisfaction for both the students, and the medical and surgical specialties around the South-East of Scotland.

So I would urge contributors to Eureka to continue the good work.

*For up to the minute
RISC OS news visit*
DROBE

Games Section

Dominion

Dominion was originally written for Cronosoft during the course of 2004 for the BBC Micro and written using !Beebit and !6502em on RISC OS 4. However, I understand that they were unable to test it and a disk image was not made available for download. As a result, it seems none were ever sold so it's time to make it freely available. I hope you enjoy playing it as much as I did working on it.

There are two versions, one for BBC Micro and one which is slightly tweaked for the purpose of being able to play it on RISC OS.

Dominion can be downloaded from **<http://aw.drobe.co.uk>**

Sword Clash

Blasts of the Xtreme have recently released the brand new game for the RISC OS platform, Sword Clash, an adventure game for RISC OS set in Wales in the 13th century.

Sword Clash is a graphic text adventure that doesn't leave the safety of your RISC OS desktop, doesn't wear out your keyboard and doesn't burn a hole in your pocket!

Sword Clash features its own in game music, plus extensive use of graphics. (If you only have access to a much older RISC OS computer, a version without music is also supplied.) Sword Clash, unlike a lot of interactive fiction games, doesn't require you to type on the keyboard at all! All options are displayed in front of you and are only a mouse click away, so the game is ideal for all ages.

Sword Clash does not require you to sit at the computer for several hours and is ideal for those coffee-break moments. There's a simple, easy to use save game option so you don't have to lose your position in the game.

The story starts as you are captured by enemy forces while fighting for your life. You attempt to escape from captivity but it's not as easy as it seems... Evil and magic forces are at work, making your every second a nightmare. Solve the mind-boggling mystery and find the sacred items that will be your key to freedom!

Sword Clash is the first in the BOTX Budget Range of games, and for only a fiver, it's a must for anyone's collection. Only £5.00!

<http://www.blastsofthextreme.com>

New version of Popcorn

Popcorn - a C library for games developers. Popcorn provides many useful facilities for writing games under RISCOS, such as fast sprite plotting, object handling and collision detection, resource management etc.

New in this version of Popcorn are:

- Support for 32 bpp screen modes, and 32 bpp sprites.

- Support for alpha blending of 32 bpp sprites.

- Hardware acceleration on 80321 based machines (Iyonix).

- New facilities, bugs fixed, tidier API.

Popcorn is free to download and use. Full source code is provided. A tutorial showing how to write a simple game using Popcorn is available from the same web page. A StrongHelp manual documenting the API is also available.

<http://homepage.ntlworld.com/rik.griffin/popcorn.html>

Continued on page 29

Wakefield Show Pictures



The venue



The organisers



The exhibitors



The punters





The Arm Club Team

**The RISC OS
Open Team**



The A6 Team

The furry toy stand



The Archive Stand



The APDL stand



SuperDoku version 1.11 released

Sine Nomine software are pleased to announce yet another version of SuperDoku, with an exciting new range of Sudoku puzzle types. Download version 1.11 now from

<http://www.sinenomine.freemove.co.uk/software/>

A couple of bugs which have now been fixed.

The new puzzle designs include:

* Xudoku (ordinary Sudoku with two extra blocks in a X shape on the diagonals of the square) * Plus 4 (9x9 or 16x16 Sudoku with four extra square blocks) * Jigsaw (irregular shaped blocks – you can design your own shapes) * Twin (two overlapping puzzles) * Jigsaw/X twin (a jigsaw puzzle overlapping with a Xudoku puzzle)

There are now eight different basic sizes of puzzle including 5x5 and 7x7 for those who like to be different.

SuperDoku's "notepad" has now been improved for the benefit of users who prefer not to use the keyboard: you can now double-click on a little value in the notepad and that value will be inserted in the grid. Click Adjust to remove it again.

The demo version now includes over 1000 different puzzles, but doesn't allow you to load or save games. Registration costs just 5 pounds – details are given on the website.

No Dutch translation is yet available for the current version: any user who would prefer to use the software in Dutch (or any other language!) please contact the author.

New port of Battle for Wesnoth game (version 1.2.5)

Alan of Wesnoth writes:-

I have just recompiled a new version (1.2.5) of the Battle for Wesnoth game for RISC OS.

The Battle for Wesnoth is a free, turn-based strategy game with a fantasy theme. Fight a desperate battle to reclaim the throne of Wesnoth, or take hand in any number of other adventures.

For details of the game see:

<http://www.wesnoth.org>

The RISC OS port can be downloaded from:

<http://www.riscos.info/packages/games/wesnot-1.2.5-1.html>

Please note:

This is a very large game download size 60MB+. You probably need an Iyonix to run it at a reasonable speed. It may be playable on an A9Home, but I haven't tried it.

It may even run on a StrongARM RISC OS machine if it has a lot of memory, but I suspect it may be too slow.

Whatever machine you run it on you will need to turn off the music (as it is a bit choppy), and show patience as it can take minutes to startup, load scenarios and save.

It hasn't had a massive amount of testing as I've only had time to do the tutorial and the first part of the first scenario so far. I intend to do more when I get time!

Read the !Wesnoth/docs/RISCOS file for other hints/requirements for running on RISC OS.

Unfortunately it is unlikely I'll get time to do much to speed up or fix any bugs found in this application. But I am more than happy to hear of people's experiences with this port either through c.s.a.games or directly to my email address that is currently included in the RISCOS document provided with the game.

Wesnoth has been added to the GCCSDK Autobuilder (see http://www.riscos.info/index.php/GCCSDK#GCCSDK_Autobuilder) so you can build your own version if you want to.

RISC OS Christmas Show 2007



Saturday 1st December 2007


10:30 – 16:00


**Heritage Motor Centre
Banbury Road
Gaydon
Warwickshire
CV35 0BJ**

The **ARM
Club**



Getting There:

 Warwick (8 miles); Leamington Spa (8 miles) and Banbury (11 miles)

 No77
Leamington
Spa to
Stratford-
upon-Avon

 Birmingham
International
Airport

Prices at the door
Adults – £4
Under sixes – Free

Premier
Class
Venue

On-site
Catering

Disabled
Access

Small
Developer
Area

Enquiries to
rickman@argonet.co.uk

For further details visit
<http://www.mug.riscos.org/>

Discount available to
visit the Heritage Centre

Use of the cog logo by kind permission of
RISCOS Ltd and Richard Hallas

The Ron Briscoe Column

Time to turn the page.

After a few days away from Briscoe Towers I return to find that after my short period of absence a huge amount of mail, email and newsgroup postings is awaiting my perusal, amongst which is a plea for another helping of my literary tripe from our esteemed editor.

All this causes me to ponder. Do I start on my latest pile of poo, read my accumulated pile of Guardian newspapers, sort out the begging letters from my electricity and gas suppliers or read the latest Harry Potter book? No contest of course, leaving my financial advisor to sort out the bills I start reading the final book in the Harry Potter series.

After I finish reading I wander along to the brown pop shop for some brain fodder. (You don't seriously think that I write this stuff whilst sober. Do you?) This effort is to no avail, because upon returning I find that one of my sisters has made a visit to ask if we will attend her youngest daughter's wedding. I decline on the grounds that as I never went to any of my other relatives' weddings it would be unfair on them if I went to this one.

I can see that this reply will lead to a night of wheedling and pleading when a brainwave strikes. Excusing myself I retire to the bathroom and via my little used mobile phone ring a friend and arrange that he should ring the house phone in a few minutes.

Answering the phone a few minutes later I feign surprise and turning to my brother in law sayeth, "You remember Jim? Well he says that he will be in the pub in about ten

minutes and if you still want that job done he can give you a good price.” After assuring my dear sister that she could trust me to see that her hubby would not have more than one drink thus necessitating her driving the car home, we depart.

Some time later after much dickering over a fair price for the job we return to a stony silence from the two ladies. My sister departs with a hubby without, for now, a care in the world and I know in my heart of hearts that it will be some time before I can expect another visit.

I am just mentally congratulating myself on a job well done when Christine demands to know how I managed to set up the phone call. The game is up! “How did you guess?” I ask. “Because my little fat friend, you never ever answer the phone unless you have to. Yet tonight you leapt to it like a scalded cat.” I confess all and even Christine who is used to my deviousness is impressed enough to only extract one new dress out of the affair.

Meanwhile back in the RISC OS world, the ever dependable Doug gives myself and Simon Prior a lift to the Wakefield Show at its new venue. Doug used his satnav device again and apart from one wrong turning we arrived in good time and humour.

Those of you who couldn't go there missed a real treat for the new venue turned out to be a one off and even now my trusty fellow WROCC members are scouring the entire Wakefield area to find a suitable venue for next years show. Just think that you absentees will never be able to look back and fondly remember when the Wakefield show was held in a large hostelry by the side of the canal. I believe that some people even journeyed there by boat.

Once inside we split up and I go to say hello to various people who have not seen my arrival. First call of course being the ARM Club stall, where our esteemed editor risks his camera lens by photographing my bumblebee on a sunflower tie. I also purchase a Palm thingie complete with charger and manual for a fiver and a case for a 2.5 hard drive for two quid. I must say they are much better

bargains than what I get when Ralph sells me something.

I then visit the excellent Martin Wuerthner to purchase, for an inadequate amount of cash, the latest ArtWorks upgrade and quickly moving away to let the ever growing queue of punters waiting to give Martin some cash, spend a few minutes watching Mike Glover putting Easy/TechWriter through its paces. The software sold itself to another customer as I watched.

After purchasing a ROOL mousemat and coaster set and not knowing that the bar was already open I enquire about and am directed to a fellow WROCC member and ace programmer Steve Fryatt. A thoroughly nice person and so young as well.

I purchase some more goodies and enjoy some banter with various people including Vince H. who I am sorry to say does not look the handsome chap who looked after my newly purchased Iyonix for me whilst I looked for software to run on it. Far too much time galavanting about the wild countryside in his four by four and not enough time spent making WebChange 32bit is the cause in my opinion.

Because of space constraints there are no theatre presentations at the show this year but there are plenty of meetings taking place in the bar. The MUG Club has a meeting but the rest of the guys have to wait whilst Doug, Ralph and John discuss this years ARM/MUG Club Christmas Show with myself as token Joe public participant. This little meeting satisfactorily completed John and Doug join the others for the MUG Club meeting whilst I go back into the main hall to remind Graham Shaw that the arranged time for his meeting to set up what is now known as the RISC OS Future group has come.

Graham says that he needs someone to look after his stand whilst he is away and one of the on duty WROCC stewards sits in for him. I perambulate around the show some more and part with cash for goodies again.

When I pass the stall guardian some time later he is trying to deal with techie questions from someone and I do my

bit for a fellow WROCC member by advising the enquiree that Graham was the best person to ask and that he was in the bar having a meeting. Exit person and I suggest that anyone who asks about anything to with Graham should be directed to the bar.

I purchase the NetSurf version 1 CD, unfortunately it does not work when I try it at home and I have to download it from the NetSurf site. I put the CD away as a possible money spinner in the future as the only non working NetSurf version from Wakefield. This is nowhere near as bad as the free WROCC floppy disc I got from a previous Wakefield Show that when clicked on completely stiffed my Iyonix.

Doug, having finished attending all of his meetings and made his purchases conveyed Simon and me to our respective drop offs accepting little in way of recompense for his trouble. Another successful show over for another year. Everyones thanks should go to the WROCC members for all of their hard work excluding me who does nothing but goad our ex chairman.

Since then sterling work has been done by John Rickman, Doug Webb and Ralph Sillett on finding a suitable venue for the Midlands Christmas Show which is as you are by now aware taking place at the Heritage Motor Centre on Saturday the 1st of December. Just in time to buy yourself those special Christmas presents and have me pointed out so that you can either abuse or ignore me. I also understand that there is a 20 percent discount for tickets for the museum for the final icing on the cake.

Just before Wakefield ROOL announced their proposed mouse mat. Doug paid for the MUG Club logo to be part of it and said that we could ask at the next meeting for donations towards the cost. Well at the meeting I donated a fiver and the rest also donated various monies far exceeding the cost to Doug. I hear rumours of a rebate, but no, someone proposes that the excess is put into the club funds and so my hopes of extra brown pop are dashed.

ARTICLES REQUIRED FOR EUREKA

*REMEMBER THAT EVERYONE WHO CONTRIBUTES AN
ARTICLE TO THE MAGAZINE WILL HAVE THEIR
MEMBERSHIP EXTENDED, FREE OF CHARGE, FOR
EVERY ISSUE IN WHICH THEIR WORK APPEARS.*

*IF YOU FEEL LIKE WRITING AN ARTICLE OR EVEN A
SERIES THEN GET IN TOUCH WITH THE EDITOR AT:*

*EUREKA@WYVERS.CO.UK
OR EUREKA@ARMCLUB.ORG.UK*

*COPY DATE FOR NEXT ISSUE OF
EUREKA IS THE 1ST OF OCTOBER*

Serviette Web Server

Rebecca Shalfield

After years of struggling with CGI scripting languages that I just didn't take to on my Acorn RiscPC web server, I finally abandoned, a few months ago now, using my RiscPC as my web server and moved all my web sites to my Windows machine. This was to enable me to use my favourite scripting language, Python, directly on my web sites as opposed to just using Python to generate static web pages.

The RISC OS Community will be pleased to hear that I soon realised that I had lost more than I had gained. Alright, I had gained the Abyss web server, Active Server Pages, Python, Python Server Pages with Zope and Plone on the horizon should I need them, but the fun of developing/hosting web sites had disappeared due to my many battles with Windows and the simple fact that I just couldn't contemplate developing/hosting a RISC OS web site that wasn't developed and hosted on an ARM-powered RISC OS web server.

After a few more weeks of trying to work out how I could resolve the "RISC OS/Python web site incompatibility" issues, I decided the only option was to develop my own Python-based web server software capable of supporting everything I required – object publishing (mapping a URL call directly onto a Python object just like Zope), Python Server Pages (embedding Python code within an HTML page just like ASP or PHP) and the execution of CGI Python scripts. Porting an existing open source product was out of the question due to the complexities (forking, multi-threadedness, database support, components not written in Python, reliance on DLLs, etc.).

After a few more weeks, Serviette, as my Python-based web server has been named, was born. Although Serviette has been created to support my own web site activities (virtual tour web sites not to mention the 'RISC OS Encyclopedia' idea), I realise that there may well be at least one other person out there in the RISC OS Community who wants to develop their web site(s) using nothing but HTML and Python, and up until now, has been unable to achieve this on a RISC OS computer.

My Acorn RiscPC is now up and running again as my web server (<http://84.92.157.78>) with Serviette as the web server software.

Serviette is still very much in its early stages of development but out of the kindness of my heart, I am willing, for a small donation of say, 25 GBP, to make it available to anyone in the RISC OS Community. I am looking for a number of individuals that would be willing to assist me in further development of the product simply by using Serviette to host their web sites and reporting back all the problems that they encounter.

I would not recommend Serviette as a tool to learn Python because its error handling is still very poor at the moment. Equally, I would not recommend Serviette to anyone running VirtualAcorn as I have no intention of supporting such a platform.

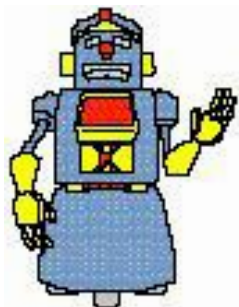
If you are interested in Serviette, please don't hesitate to get in touch.

Rebecca Shalfield Hypertour Software

Rebecca.Shalfield@hypertour.co.uk

Not Winning games with logic part 18

Barry Aulton



This time I thought I would take a break from the Fuzz and having an interest in robotics, mention some of their history, seeking out the weird and wonderful. With a certain Harvard dropout trying to put a robot in every home (Scientific American Jan 2007), it is not difficult to find websites devoted to robots and robotics, try eg. Robot Books.com and Robots! A website from The University of Birmingham, also the OU - RoboFesta web site, NASA's Robot Web Links, IEEE Robotics , the MIT website and Shawcraft Robotics.

Jacques Vaucanson's duck (see Fig 1) has to be one of the oddest creations in history. He also famous invented the punched card which was in use in computing in the 1960's. Three hundred years before the word 'robot' existed; in response to the eighteenth-century craze for animated objects with clockwork mechanisms; Jacques de Vaucanson (born in Grenoble, France, on 24 February 1709, the son of a glove-maker) presented his first complete automaton, "The Flute Player," at the Academie des Sciences. A year later (in 1740), he produced "The Tambourine Player" and "The Duck." The Flute Player was a life-size figure capable of playing a flute by fingering the instruments stops and blowing through the mouthpiece. It had a repertoire of twelve pieces, including "The Nightingale".

Vaucanson's most famous creation, "The Duck" could flap its wings, eat, and digest grain, paddle and excrete. Each wing contained over four hundred moving parts and even today remains something of a mystery. In 1741 he was appointed inspector of silk manufacture and set about reorganizing the entire industry, improving on existing machines and started using punch cards to automate weaving. The techniques Vaucanson invented were subsequently perfected by Jacquard

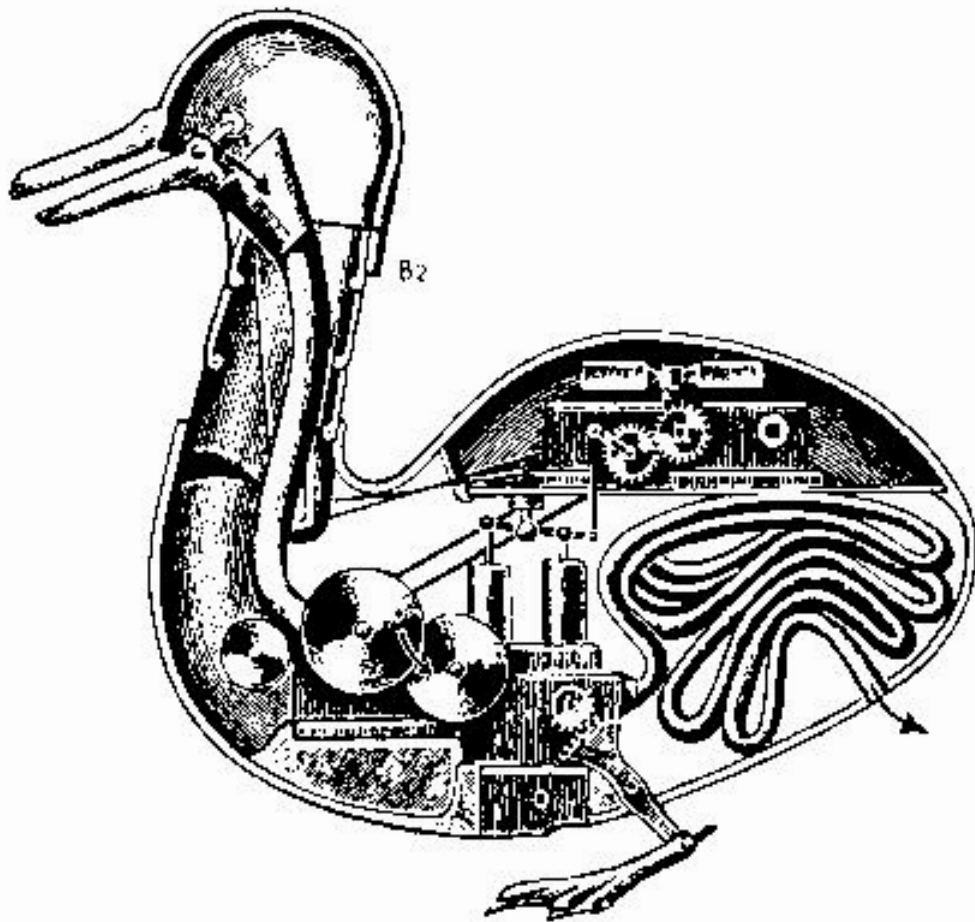


Fig 1 Replica of Vaucanson's Duck - Le Musee des Automates des Grenobles

the father of modern looms and a remote ancestor (because of the punched cards) of today's computer revolution. Vaucanson became a member of the Academie des Sciences and died in Paris in 1782. Another artisan Pierre Jacquet-Droz of Switzerland, built two intricate dolls, one who penned letters and a young women who could play the harpsichord.

In 1812 Charles Babbage designed a mechanical calculating machine. After 40 years of working on the Difference Engine; he conceived the more practical and ambitious Analytical Engine a truly programmable computer that would be able to figure out simple chess moves; but he did not complete it.

Alan Turing, English mathematician and logician worked at Bletchley Park during World War Two, where he played a vital role in the development of Colossus, the code breaking computer and the worlds first operational electronic computer. In 1948 he joined the group developing computers at

Manchester University and remained there until his early death. One of his legacies is the Turing test - which states that a machine can be called intelligent if it fools humans into believing it is human. No machine has yet passed this test; when one does the skeptics will argue that it wasn't really a test of intelligence anyway, you just can't win!

The word 'Robot' was first used in its' modern context as the name given to mechanical workers in the play R.U.R . Rossums

Universal Robots, written by Karel Capek and first shown in 1917. The robots in Capek's play develop emotions and overthrow their human masters. It was received by amazed audiences and the word Robot was popularised.

Isaac Asimov, a scientist and writer, invented the word robotics to describe the science used in the development and building of robots. You may have seen the film I Robot based on Asimov's stories, which poses ethical questions about them. "We robots will ensure mankind's continued existence. You are so like children. We must save you from yourselves" - (VIKI Virtual Interactive Kinetic Intelligence in I Robot) .

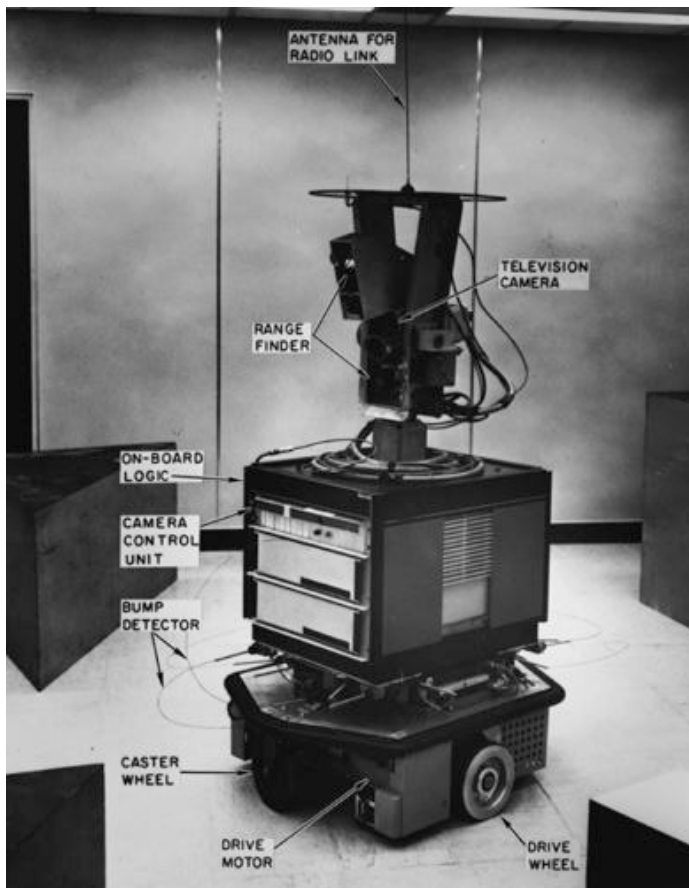


Fig 2 Shakey the robot - Shakey was the first mobile robot to reason about its actions

But robots, are just robots, aren't they? This is an extract from Wired Magazine (Issue 12 02 Dick Morley), "Copernicus demoted humanity by removing Earth from the centre of the universe. Darwin showed that, rather than being made in God's image, people were merely products of nature's experimentation. Now, advances in fields as disparate as computer science and genetics are dealing our status another blow. Researchers are learning that markets and power grids have much in common with plants and animals. ... It turns out

that many of life's properties - emergence, self-organization, reproduction, co-evolution - show up in systems generally regarded as nonliving."

Asimov's stories and science discoveries raise ethical questions about our relationships with robots and while we are at it what will we become?:-

"An extremely advanced form of neural-direct VR might be totally indistinguishable from 'real' reality. If it was introduced into a person's brain in some undetectable way, they might not know anything has happened, and not even know they're now in a 'virtual world.' Thus, the possibilities for control are immense. It would be the ultimate form of 'false consciousness.' The State could move from ideological control to total perceptual control. Dissidents could be neutralized by simply introducing their perceptions into false realities where their demands have already been met." (Steve Mizrach) - 1984 is here!

Of course, anyone who has watched terminator will know how civilisation as we know it ends; however just to rub it in, Brian Jackson on Sep. 25 2006 wrote:-

'Terminator' robots among Pentagon Warfare Plans

The United States has robots prepared to fight in the battlefield and is planning to create more complex machines in the future that think for themselves. Among the robots soon to hit the battlefield are Sword, a machine-gun equipped robot and iRobot's shotgun-totting robot. The remote controlled Talon robot will have its arm replaced with a machine gun to help out on the battlefield. Sword was approved as safe for use by the U.S. armed forces in June. Talons are lightweight, remote control robots used to detonate potential bombs in many countries, including Iraq and Afghanistan. The model can drive at high speeds and have arms that place small detonators used to disarm suspected bombs. Sword replaces Talon's arm with a machine gun. The inventors point out that a human is always in control of Sword, but that may soon change. The Pentagon Office of Naval Research issued a request in August asking for research on more complex machinery that could make its' own decisions. The robots would "understand cooperative and uncooperative" people via a stress-detecting artificial-intelligence system. Cues would be taken from speech, face and gesture recognition.

Ah but Arnie was a cyborg not a robot, no problem:-
Brian Jackson writes on:- Robots Get Human-like Skin
While gun-totting robots are hitting the battlefield, the creation of a “Terminator” robot seems all the more real with the unveiling of an artificial skin that looks and feels human. Cosmetics manufacturer Kao Corporation showed off their new skin-for-robots at the Annual Conference of the Robotics Society of Japan. They claim that 10 out of 12 people who touched the skin described it as feeling like human skin. To mimic human’s largest organ, Kao used a 1 cm thick layer of elastic silicone covered with a 0.2 mm thick layer of urethane. Tiny hexagonal indentations etched into the urethane give it a realistic texture. - Be afraid - be very afraid!

Fig 3 summarises the four main ethical questions mankind

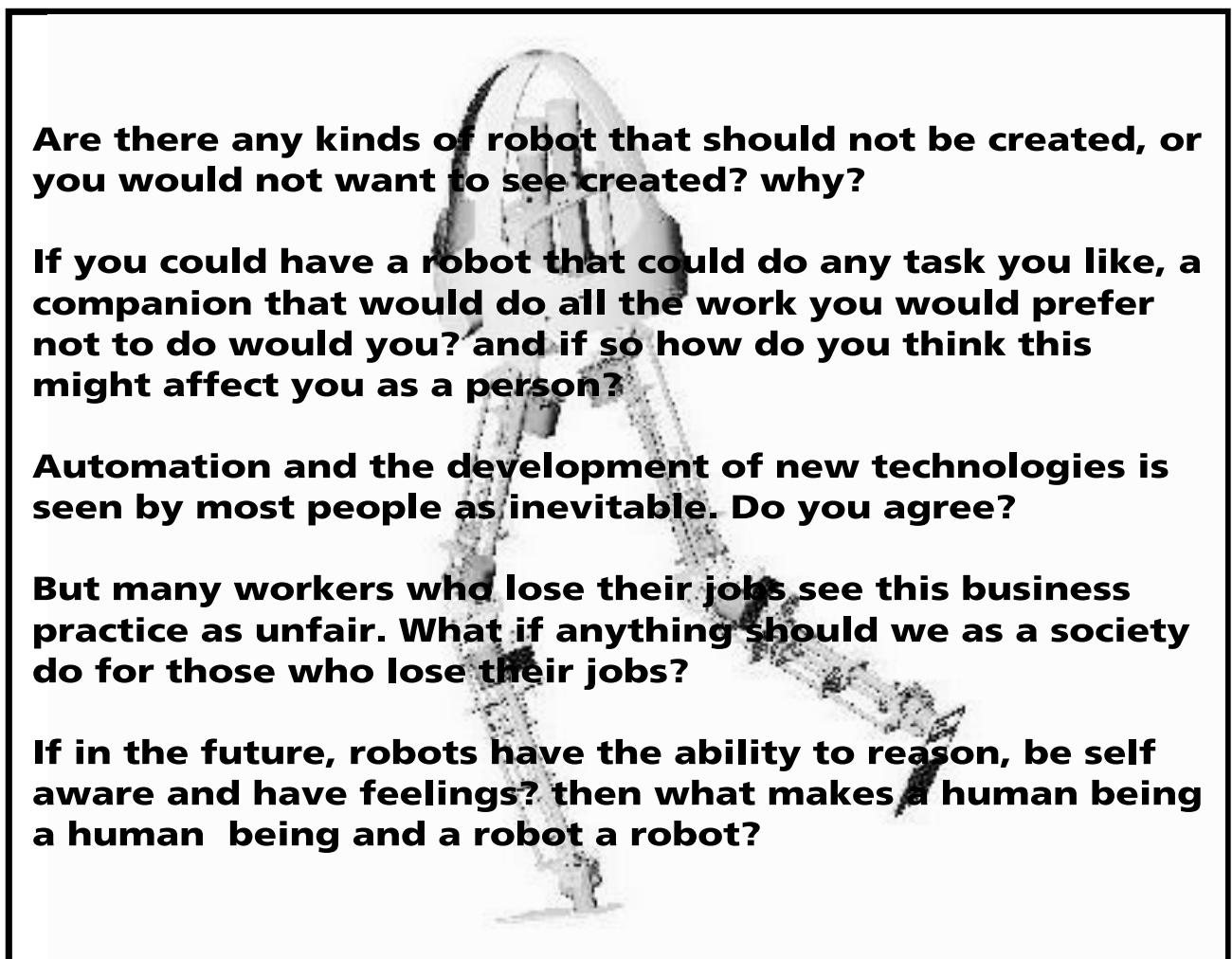


FIG 3 - Tom Shanks of the Markkula centre for applied ethics asks these questions

must face. This is just one reply:-

“Is it just me or does this sound very much like the sci-fi movies of the not so distant past? I realize that most of the movies are driven by the unknown to the general public development of the products. However doesn't it seem that giving too much power to the AI world of the future could make some of these situations become reality? Are there hidden agendas in the overall development of some of these products? Who will write these ‘governing laws’ of these artificial beings? Big Business? that is kind of scary”.

OK panic over - back to the history of robotics:-

Joseph Engleberger, inspired by Asimov's robot stories founded the world's first large scale robotics company. Unimation. The company's first industrial robot installation was completed in 1961.

In 1968 the Stanford Research Institute (SRI) built a famous Robot named Shakey, see Fig 2 (named for the way its camera which transmitted a standard TV signal and TV transmitter mast shook as it moved). Most of the time Shakey, the robot shell, stood still whilst its offboard main computer contemplated moves to accomplish its goal. The idea of planning where to go, by building up a map of the robot's surroundings, proved not to be ideal for the development of autonomous robots.

In the rush to get to the Moon, NASA initially requested that Stanford University build a 4 wheel vehicle that could be driven from earth via radio signals that would incur a 2 1/2 sec. time delay in the round trip. The CART, that used bicycle wheels and a bicycle drive chain was eventually dropped as a means to traverse the moon. However, it kept many Stanford students busy during the 1970's.

In the 1980's, it occurred to Rodney Brooks of the MIT Artificial Intelligence Laboratory that insects could do much more than any existing mobile robot at the time. They can move relatively fast whilst avoiding obstacles, evading predators and finding food and mates.

Lets take the case of the ant. Leaf cutting ants (found in South and Central America) follow pheromone trails and also communicate with each other by creating a sound by rubbing

against their abdomens. They signal for purposes of warning, attraction, grooming, recognition and discrimination, caste determination and territorial indicators. They also practice a form of division of labour, with different individuals carrying out different tasks.

It occurred to Brooks that insects did not have the brain power to construct an internal map of their environment as e.g. Shakey did.

Perhaps such a world map was not necessary. He decided that the only way he could make a robot react swiftly to its environment was to simplify the cognition process as much as possible. Brooks robots react to their sensors so quickly that they do not need to construct and maintain environmental models.

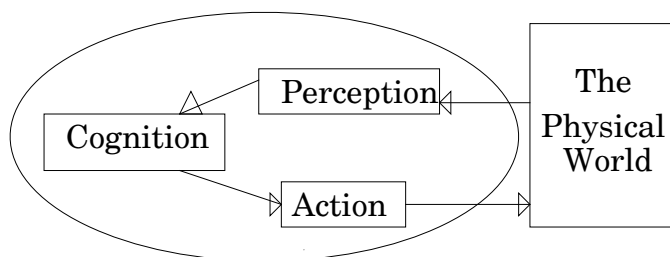
I thought I would describe I Robot - namely Rodney Brook's ATTILA in detail :-

ATTILA (see Fig 3), (the progeny of Genghis) was written by Rodney Brooks and described in the SIGART journal of August '91. of the MIT Artificial Intelligence Laboratory. It is an artificial insect, 35 cm long and 30 cm wide, having six legs. It can move around and recharge its batteries. It has a Signetics 68070 principal processor and 10 secondary processors. It has 150 sensors and 23 actuators. It also uses an infrared range sensor and a CCD camera together with a 25 cm long, movable whisker. Its main objective is to explore its environment and its learning consists in noting and storing landmarks. Once it has learned its environment, a person can indicate towards which landmark it should move, and it does so, choosing a safe, collision free, path. This is done by activating the landmark representation, which in turn activates near landmarks, although to a lower level.

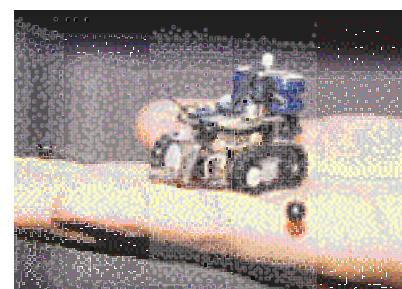
Each leg, the head, and the body were treated as a separate module complete with actuators, sensors, and a satellite microprocessor. A significant amount of hardware redundancy was included in anticipation of possible failures during a mission. From a mechanical standpoint, this redundancy took the form of multiple legs - it is well known that insects can still locomote with the loss of a leg. From a sensing standpoint, redundancy took the form of complementary sensor suites.

ATTILA's movements are not coordinated by a central brain. Each actuator has its own response rules that connect a sensation to a response. Sensory signals from different types of sensors can be combined to characterize different types of leg-terrain interaction, which is used to guide the robot's behaviour. Attila was thus very dynamic in its gait, it being an emergent property of what individual legs were encountering. By using complementary sensor suites, if a few sensors fail over the course of a mission, the remaining sensors can still be employed for robust sensing of the environment. There are some more general response rules such as standing up and sleeping, composed of many lower level response rules. All response rules are present at the start, wired or programmed. In this sense ATTILA is more similar to an insect than to a higher animal, which can learn its responses. Robots like ATTILA pointed the way to robot walking. Insects and walking robots do not build a world map and then decide where to put their next step, they stumble and then save themselves! Of course robots have moved on since ATTILA, it's only humans that haven't!

We will have a look how Fuzzy logic is used in robotics and computer games next time.



Flamingo



Ant

The original design for a robot looked like the above. The robot would perceive its physical world through noisy analog sensors, eg a 2D video image. It would then try to build up some sort of internal map of its physical world and use that to control its actions. At first the problems of cognition loomed large.

How could it build up a sufficiently accurate 'map' of its environment in real time with inaccurate sensors? A different approach was required. This was found by the study of insects.

Fig 4

Ron's Help Desk

As a change from my usual drivel I have decided that I should use my real world experience to help RISC OS users who seem to be facing insurmountable problems in getting the full pleasure from their computing experience. So here goes.

First up is Dave from Bournemouth who has been trying with no luck to get his RPC to talk to his wife's laptop running Vista. This sad state of affairs has been going on since February despite Dave appealing for help and the solution has so far eluded the best brains on RISC OS.

Well Dave one or two solutions have occurred to me.

A) Remove Vista and replace it with Windows XP. A solution advised by many Windows users for stress free computer use.

B) For a more permanent solution: I believe that you are an acknowledged expert in the use of a two pound lump of iron on a stick, tap-banging being your envied skill. Well my suggestion is that a few tap-bangs on the laptop should remove the problem once and for all.

Please let me know how you get on.

I sent the above to Dave as now and again I like to give the people I am writing about a chance to comment on the article and suggest changes. No, not really, anyone who can wield a two pound hammer with his dexterity is a man who should not be tempted to use said skills on my noggin.

The help desk is short of content for this issue. I need your problems, so please send them to me via.

ron.briscoe@blueyonder.co.uk

and the whole weight of my puny intellect will be thrown at it. Or you can send them to the editor who will send them on I am sure.

After I had posted off my article to the editor, this problem came in via email.

Uncle RON the IT Agony Uncle.

Dear Uncle RON.

I have a problem and wonder if you have some useful suggestions how I might ameliorate this problem.

I own a couple of computers each with a different OS, and have discovered I'm owning probably the closest things to a financial Black hole.

I keep pouring money into this hole, but my OS is often not quite up to date, and despite diligent efforts on my part, and a continual pouring down the hole, my software is invariable a version or two behind the latest release.

*Please advise Uncle Ron.
What should I do?*

*Yours 'faithfulnessly'
Richard Head. ;-)*

Well Richard or should I call you Dick? This is definitely a three pint problem and I will give my ill considered answer later. [Exit to the brown pop shop for the necessary brain fodder.]

Suitably refreshed and reading your headers I see that you are using RO 6.06 and possibly a variant of Windows. If you are using Vista then the upgrade path on your Windows machine should be painless (cost wise) for the next two or three years as Microsoft iron out the bugs and send you free upgrades.

As for RO 6.06, you may have as many as 10 months before you have to part with some more spondulics. However I

suspect that you feel that any day now there will be a demand for a 'Select' renewal lying on your door mat.

You mention software and in this case I fail, despite my beer fuelled brain, to see any problem. RISC OS has very little commercial software to buy and in the case of Microsoft I thought that everyone ran pirate versions of commercial software as a matter of course.

I do not see any problems on RISC OS anyway because, as the greatest polymath since Da Vinci is fond of pointing out, one can do almost everything needed using lateral thinking, the applications provided with the OS and a few other bits.

However as is well known I am a master of cunning plans and for a suitable amount of remuneration sent under plain wrapping I may be able to help you further.

Ron. (Fully paid up member of 'We saw you coming dot com'. Send for our free 'How to avoid paying American taxes' booklet.)

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Due to restraints on time of committee members who give their time voluntarily, club renewal processing is now taking up to 8 weeks. If you would like this to become quicker please step forward and apply to become the membership secretary.

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