

Developers' Newsletter

No 28 - March 1993

Contents:

General News

Acorn's Annual Results
AUN - Special Offer for Registered Developers
On-site service products
Prices for upgrades etc.
Number of RISC OS 3 upgrades sold
Multimedia Expansion Unit
Double Density and High Density Discs
T-Pieces and Blanking Panels
23 February Developer Meeting
A5000 Serial Port
Developers and the Acorn Pocket Book
Pocket Book developments list
Education Product Directory, Issue 4, CD-ROM and input for future directories
Email
Computer PCB upgrades

Marketing News

Lotus Turbo Challenge
Direct Mail Campaigns
Advance
Customer feedback from Acorn User Show 1992
Tesco Computers for Schools promotion
Acorn at exhibitions and events in 1993

Technical News

Style Guide Update (for Issue 2) main points
Technical information on Double and High Density Discs
TCP/IP, Ethernet and AUN
RISC OS 3.I Printer Drivers
EMC Shielding
Expansion Card Electrical Spec
Technical Reference Manuals
Floating Point Accelerator CD-Recordable
Versions of RISC OS 3
ADFS buffers
65Host emulator v I.61 Support
for Developers using C Serial Port
and RISC OS 3 Developer Disc 28
- contents list

News from non-Acorn sources

From ARM Ltd
From Clares Micro Supplies
Eesox services for CD-ROM Developers
Fortran Friends

Enclosures

Acorn Education Directory, Issue 4 (as appropriate)
Developer Disc 28
Acorn Retail Price List
Developer Discount Price List
AUN Special Offer Order Form and Agreement

The Acorn logo features the word "Acorn" in a serif font, followed by a stylized green acorn icon.

General News

Acorn's Annual Results

We are pleased to inform you that The Acorn Computer Group Results for 1992 were released to the Stock Exchange on 24 March 1993. 1992 was a very successful year for Acorn on a number of fronts. In terms of Financials:

Turnover up 18% to £48.2M from £40.9M
Operating Profit up 40% to £1.5M from £1.1M
Net Profit increased to £13M from £0.3M
Earnings per Share up to 2.0p from 0.4p. Ending the year in a net cash position of £23M

AUN Special Offer for Developers

Following Acorn's policy of offering special offers to Developers to assist them in keeping abreast of new Acorn products, we are pleased to announce a very special offer, for Registered Developers, on AES40, the AUN/Level 4 FileServer software. The offer price for a site licence is £97.40 exc VAT and will be available for three months. An order form and a special agreement form are enclosed. Please ensure that you complete both documents and send them, together with your payment, to Developer Support if you wish to take advantage of this offer. Stock is expected in the warehouse by the end of March.

On-site service products

You will notice, from the revised price list enclosed, that most computer products ordered from Developer Support now include three-year on-site support/extended warranty service. The retail prices (exc VAT) of the service package product are:

| | | |
|-------|----------------|-----------------|
| TSA35 | A5000 | £84 |
| TSA34 | A4000/A3020 HD | £102 |
| TSA33 | A3010/A3020 FD | £85 |

We believe that the small additional cost provides excellent value for money for busy Developers who cannot afford to be without their computers should anything go wrong.

The Service and Warranty product includes the monitor if purchased with the computer. It does not include a monitor purchased separately, nor any printer or upgrade. It is not available as a separate product, nor is it available retrospectively on products already purchased nor may Developers (except those overseas) purchase an A5000, A4000 or A3000 series computer system from Developer Service without the Service and Warranty product. We regret that the Service and Warranty product is not available to overseas Developers.

Prices for upgrades etc.

Prices are now available for various A3000/A4000 upgrades. They are as follows:

| | | RRP exc VAT |
|-------|-------------------------------|-------------|
| AGA11 | 1MB upgrade A3010/A3020/A4000 | £49.00 |
| ALA60 | 2MB upgrade A3020/A4000 | £99.00 |
| AGA24 | A3020 Hard Drive Upgrade | £249.00 |
| AEH52 | Econet Module for A3020/A4000 | £49.00 |

Developer prices are included in the enclosed Developer Price List which supersedes that issued in November 1992 and is operative from 1 April 1993.

Number of RISC OS 3 upgrades sold

Developers may be interested to learn that sales to date of RISC OS 3.1 upgrade kits now total over 45,000. With an installed base, in the Autumn of 1992, of approximately 200,000 RISC OS 2 and RISC OS 3 (v 3.00) machines, this implies that around 22% of these customers have upgraded to RISC OS 3.1. In addition to these RISC OS 3.1 upgrade sales, can be added the installed base of around 40,000 RISC OS 3.1 machine sales.

Currently, therefore, around 35% of machines have RISC OS 3.1 fitted. We would expect this percentage to double (approximately) by the end of 1993.

Multimedia Expansion Unit

The Acorn Multimedia Expansion Unit, which was shown at the BETT show at Olympia in January, consists of a metal box containing a CD-ROM drive with space for an additional drive as outlined below. It is style and colour matched to A4000s and A5000s and will sit on top or underneath either, subject to a maximum load bearing limit of 16Kg. The cables are long enough to allow it to sit alongside Acorn's other Archimedes computers (A3000, 400/1 series etc.).

To drive this product you need a SCSI expansion card. Where a card is ordered with the the Multimedia Expansion Unit, Acorn will provide either an 8-bit mini-podule (for the A3000 and A4000 range of computers) or a 16-bit expansion card (for other machines in the Archimedes range). The cards supplied will, in general, be Cumana cards.

You don't have to buy a SCSI card with the Multimedia Expansion Unit if you already have one but you will need a new SCSI/CDFS EPROM for your existing card, as CDFS has a new driver added for the Sony CDU-561 drive which is integral to the Multimedia Expansion Unit product. Acorn & Cumana ROM upgrades will be available at the same time as the product. Other Developers who distribute CDFS under licence have been provided with the revised code (i.e. CDFS version 2.13). Customers should contact them if they need new SCIFS/CDFS firmware.

Acorn will only be selling the Cumana SCSI cards with the Multimedia Expansion Unit; the Cumana cards will not be available separately from Acorn.

CDFS v 2.13, as supplied by Acorn (either with the Acorn card, the Cumana card or as part of the Acorn ROM upgrade), requires RISC OS 3 v 3.10 or later. This is clearly indicated on the outside of the carton. Other suppliers' products may have a similar requirement for RISC OS 3.10 or later, depending on the design of their

products.

Upgrading the Multimedia Expansion Unit

1. The base model *is* sold by Acorn and is an Acorn product. Acorn will NOT sell any upgrades but expect that Developers will take the opportunity to offer upgrades.

2. The unit can take two additional SCSI devices, one of which can have front panel access (and hence have interchangeable media), with the following provisos:

The completely internal device MUST be 3.5 inch format (there *is* no room for anything bigger).

Any device that has front panel access can be a nominally 5.25 inch device. The fascia aperture is designed to take another of the same type of Sony CD player which is 5.25 inches wide but of half height, so full height 5.25 inch devices will not fit 5.25 inch half height Magneto-Optical devices will also not *fit*, owing to their length (they would foul the PSU) although shorter ones are beginning to become available. (We already have early details of a half height 5.25 SCSI MO from Pioneer and others may follow.) Any 3.5 inch device should be fine but will require a 5.25 to 3.5 inch converter surround to fill the extra width of the fascia aperture.

3. The unit is also designed to take an internal power-amp as an optional upgrade.

4. The box *is* 'designed and manufactured to comply with EN60950/BS7002'. Part of the requirements are that the metal box forms a fire enclosure' and there is a metal blanking panel that fills the lower metalwork aperture for the second front panel access device to ensure that the base unit complies. If a device is fitted in this position that does not completely (or very nearly) fill the aperture in the lower metalwork, then the resultant gaps must be filled in (by a new metal panel or two) to ensure continued compliance.

5. In order to keep costs as low as possible, the PSU in the unit is of limited capability. As a rough guide, there should be enough power spare for any ONE upgrade (NB the power-amp counts *as an* upgrade) to be fitted before the PSU needs to be changed for one of higher specification. Note that Magneto-Optical drives may require a more powerful PSU, as these tend to be rather power-hungry. Full specifications of available power will be in the manual. Acorn does not itself expect to market larger PSUs for the Multimedia Expansion Unit.

There are both space and fitting points for a small fan within the unit. A fan may be required if the PSU is being fully loaded.

Double Density and High Density Discs

There continues to be much discussion in the computer press and on bulletin boards about the interchangeability of discs for High Density drives. Whatever you or your customers may find, works at the time, please note the following rules should be adhered to if you want reliable operation.

Double density discs i.e. those not marked with 'HD' and also having only one protect (square) hole must not be formatted for 1.44 or 1.6 MByte formats. Similarly, do not format High Density discs i.e. those marked with 'HD' and having two protect holes for 720K or 800K.

Please see the information in the Technical News section of this newsletter for the technical details.

T-Pieces and Blanking Panels

Following Developers' enthusiastic response in ordering these items, we have been able to order in larger quantities and thus to reduce the price. Revised prices will apply from 1 April 1993 and are *as* follows:

| | |
|----------------------------|----------------|
| T-Pieces: | £40.00 per 100 |
| Half width blanking panels | £60.00 per 100 |

Both items are available in packs of 100.

23 February Developer Meeting

A general meeting of Developers was held at Duxford on 23 February. The two main issues of the day were: the migration to industry standard monitors along with the *need* for *screen* mode independence and revisions to the RISC OS Style Guide.

The attendees were given a general picture of the monitor market and how it affects the Acorn markets. In short, market pressures of availability and price will direct Acorn towards VGA monitors in the *near* future. It is even possible that customers will choose, or will already have chosen, to attach VGA monitors to their Archimedes computers. Software which is not screen mode independent will fail to run on such monitors leaving the suppliers of those applications with a reduced market in which their products can be sold. Developers were exhorted to take every step to try to make their software mode independent. In the afternoon session, pointers were given as to how mode independence might be achieved and Developers were encouraged to raise questions for discussion.

The handouts provided to attendees are available to other Developers on request. Please drop a line to Developer Support if you would like copies.

The text of the Style Guide handout follows in the Technical News.

A5000 Serial Port

Some customers and Developers have experienced problems with the Serial Port on the A5000 computer. In some cases, this has been due to an assembly problem on early build machines. These will be repaired free-of-charge if the customer contacts his Dealer.

It has become apparent recently that some Serial Port failures have been caused by, we believe, static discharge. We are still investigating this problem. In the meantime,

we advise that you or your customers exercise some care in the use of the Serial Port. A braid-screened cable should be used with the braid connected to the connector shells at both ends of the cable. You should avoid connecting the cable whilst equipment is powered i.e. switch the devices on after connecting the cable. These precautions should minimise the risk of Serial Port failure through static or induced high-voltage spikes.

Developers and the Acorn Pocket Book

Developers writing software for the the Acorn Pocket Book may require support of a different order from those developing products for Archimedes computers. In general, Acorn Developer Support will act as a 'clearing house' for queries. We expect, shortly, to be in electronic mail contact with Psion technical staff so that we can refer to them for help with queries we cannot answer from our own knowledge. In addition, Acorn Registered Developers will be able to purchase Psion's C development package (Psion SIBO C Software Development Kit) at Psion Developer prices, provided that their order *is* accompanied by a letter of affirmation from Acorn. If you wish to take advantage of this, please contact Acorn Developer Support for the letter, price and option details.

For those Developers who wish to have a closer relationship with Psion and/or who wish to take advantage of Psion's marketing and SSD duplicating services, we are pleased to announce that, following discussions with Psion UK Ltd, Acorn Registered Developers may join the Psion Registered Developers' Scheme at the reduced subscription of £50 per annum (payable in January each year). Developers paying this special subscription will be entitled to all the services normally available to Psion Registered Developers but the special subscription excludes the fee for the Psion Developers' Conference (in early October this year). If you need details of this 'secondary' membership of the Psion scheme, please contact Acorn Developer Support. Pocket Book applications can be written either in OPL or in C. In general, an application written in C will be more responsive than one written in OPL. Large applications and those which are critically dependent on speed will benefit from being written in C. For many applications, however, unless the programmer is already conversant with C, OPL involves a much smaller learning curve. For OPL, you can write the program in Edit on Archimedes and transfer it, via the A-Link, to the Pocket Book. For C development you will need a PC (it can be run under the PC Emulator on Archimedes, but for serious development with the C package, you will need a PC), a text editor for the PC, the Psion 3Link cable and software and, of course, a Pocket Book.

Pocket Book developments list

It has been suggested that we keep a 'register' of Acorn's and Developers' development projects for the Pocket Book. Developers would lodge details of their projects with Developer Support and could call in to discover whether any other Developer had already lodged details of a similar project. The register would be largely confidential; unless prior permission had been granted, we would not divulge the more than the general nature of the project nor would

we give details of the Developer working on it. The idea is that by learning of a similar project already under way, Developers could better gauge the viability of developing the product they had in mind.

If you are developing products for the Pocket Book, please do send details taking care to mark the document as confidential and highlighting any areas of particular confidentiality. Initially, we don't expect to be in a position to provide much information - we need to be provided with some first! - but we can tell you that more than one company *is* working on a diary application. Some of the applications you may wish to consider are a graphical calculator, school record keeping and registration applications, the provision of databases of information such as the periodic table, world geography data, historical data etc., all in a format which allows easy transfer into Archimedes databases or applications.

Education Product Directory Issue 4, CD-ROM and input for future directories

A copy of the Education Directory Issue 4 and a letter and form requesting amendment/update have been mailed to each supplier listed within the directory. Registered Developers who have not yet been sent a copy should find one enclosed with this newsletter. Shortly, Acorn's Education Department will issue a CD-ROM containing the same information *as is in the* paper copy of issue 4.

Those Developers who have sent corrections and/or new information for the product directory database should note that the amendments have not been made for the CD-ROM but that they will be added to the database for future directories. We are grateful for the feedback.

It is expected that the next directory will be a general directory for end users and that it will be published at the Acorn World Show in October. The deadline for information for that directory *is* 30 June. Any information arriving after that date will be entered if we have time; we cannot guarantee inclusion of late entries/amendments.

Email

Development work between Acorn Computers and Computer Concepts on email communications may enable Developer Support, in the near future, to offer email access to Acorn for Developers using a Computer Concepts fax card and suitable email client software. If you would like to take advantage of this in the near future please write or fax to Developer Support and we will add your name to a list. We will send you more information in due course.

Computer PCB upgrades

With the advent of Acorn's Fastrack PCB repair system on recent machines, the fitting of permanently-fitted, third-party hardware upgrades is becoming an increasing problem. In addition to the difficulty of recycling a PCB through the repair system to another customer, there is the possible problem of a debate over the cause of the PCB failure.

Where possible, Acorn will be issuing interface specifications to enable Developers to self-certify their upgrade products against the published interface specification. More information will follow on this in the future. We would advise suppliers of upgrades that involve permanent fitting to the main PCB to take account of the following:

- The fitting of an upgrade involving a modification to the PCB may invalidate the Acorn Warranty if it jeopardises the integrity of the PCB.
- Wherever possible the upgrade should be easily

removable in a workshop to return the PCB to its original state.

- The design of the upgrade should not violate the reliability of the PCB in meeting its functional performance over Acorn's full environmental range of use.
- The customer having the upgrade fitted to his or her machine should be advised to return the computer to the upgrade supplier or fitting agent in the event of any PCB problems inside or outside of warranty. This will make it easier to resolve any concerns relating to Fastrack or local component repair.

Marketing News

Lotus Turbo Challenge

Acorn has launched a promotional campaign in conjunction with Lotus Cars. Customers can purchase a special A3010 Family Turbo Pack between the 15 March 1993 and 31 August 1993. Purchasers will receive a copy of Lotus Turbo Challenge II together with a free joystick. They will also have the opportunity to participate in a competition leading to a possible trip to the Italian Grand Prix in September 1993 if they win.

Direct Mail Campaigns

1993 brings a whole series of Direct Mail Campaigns by Acorn to the Educational market. These include mailings for the first part of 1993 to School Governors, teachers under the Acorn Assist scheme, Primary schools and ITTE (teacher training) institutions. Secondary schools were mailed late 1992/early 1993.

If you require further details of any of these mailings please contact Developer Support or the Educational Business Unit.

Advance

Acorn's integrated software suite, the Advance package, comprising word processor, spreadsheet, database and business graphics applications, is now available. The RRP is £99 exc VAT.

Customer feedback from Acorn User Show 1992

A survey was carried out at last year's Acorn User Show. Some of the findings which may be of interest to Developers are listed below.

A self-completion questionnaire was handed out to visitors as they entered the hall. Respondents were asked to complete the questionnaire, which included some competition questions, and then to return it to Acorn either at the show or by post. An incentive of ten chances to win £50 was offered to entrants.

In total, 5000 questionnaires were handed out to the 10,500 visitors on the three days of the show. By the competition closing date 350 questionnaires had been returned.

Ownership and use of computers

Not surprisingly over 90% of visitors owned an Acorn computer, the A3000 and BBC Model B being the most popular makes. About one third own some other type of computer, mainly a PC.

Access to Acorn machines at school/work was limited to just over half of visitors. Almost one half have access to PCs.

Excluding extra memory, the average number of expansion items connected to Acorn machines was two. The most common of these items was a hard disc.

Word processing/DTP was the most popular use for Acorn computers (as with all computers). Games and graphics were second and third most popular.

About three-quarters of Archimedes owners use the PC emulator. Mainly this use is rare or occasional.

On average, visitors claimed to own 26 professionally written software titles and estimated that they spent £216 on software a year.

Profile of the visitors

| | | |
|------|------------|----|
| Sex: | Male | 87 |
| | Female | 13 |
| Age: | 11~20 | 21 |
| | 21-30 | 12 |
| | 31-40 | 16 |
| | 41-50 | 32 |
| | 51-60 | 8 |
| | 60+ | 5 |
| | Not stated | 6 |

What Acorn computers are used for

| | |
|-------------------------------|----|
| Word processing/DTP | 91 |
| Games | 70 |
| Drawing/graphics work | 68 |
| Programming/creating software | 47 |
| Education - school | 35 |
| Education - home | 35 |
| Business | 25 |
| Music | 24 |
| Other | 3 |

Expansion facilities added

| | |
|-------------------|----|
| Extra memory | 72 |
| Hard disk | 63 |
| Modem | 24 |
| Joystick | 22 |
| Scanner | 17 |
| MIDI | 13 |
| Sampler | 12 |
| Digitiser/genlock | 11 |
| CD ROM | 5 |
| None of these | 10 |

Number of professionally written programs/applications owned

| | |
|---------|----------|
| 0-10 | 28 |
| 11-20 | 25 |
| 21-30 | 19 |
| 31-50 | 17 |
| 50+ | 11 |
| Average | 26 owned |

Annual expenditure on software

| | |
|-----------|------|
| £0-£50 | 17 |
| £51-£100 | 9 |
| £101-£150 | 17 |
| £151-£250 | 31 |
| £251-£500 | 14 |
| £500+ | 12 |
| Average | £216 |

Technical News

Style Guide Update (for Issue 2) main points

1. Introduction

The original RISC OS Style Guide (AKJ18) first became available in 1991. Whilst the underlying message and much of the original content remain valid, work on a second edition of the Guide has been underway for some time. In addition to fixing obvious mistakes, the new Guide reflects changes in RISC OS and incorporates comments from both the developer and user communities.

This document describes the rationale behind the new Guide and highlights the significant changes. In particular, we have made a conscious decision to follow de facto standards unless we can show that a proprietary solution is substantially better and gives us clear added value.

The plan is to make the Style Guide a part of the RISC OS 3 Programmers Reference Manual package, although it will continue to be available as a separate volume. The Guide is currently between its first and second drafts and is scheduled for availability during Q293. Early PRM purchasers will receive a voucher entitling them to a copy of the Guide when it becomes available; all Registered Developers will also be sent a copy.

2. General points

The new Guide adopts a slightly less formal style; it

Tesco Computers for Schools promotion

Those of you who shop at Tesco will have seen that Tesco are repeating the Computers for Schools promotion which was so successful last year, not only in terms of actual sales but also in promoting the Acorn name and making customers aware of the wide range of applications available.

The list of software from which schools may choose was decided after consultation between the ESPA, Acorn and Tesco.

Acorn at exhibitions and events in 1993

Here are a few dates from the diary:

| | |
|--------------------|-------------------------------|
| 17 March -12 April | Ideal Home Exhibition |
| 24 - 31 March | CeBIT, Germany |
| 24 - 26 March | Naidex, Glasgow |
| 15 -17 April | Sping Acorn User Show |
| 16 - 18 April | NCET |
| 26 - 27 April | Education Wales |
| 24 - 25 May | Naidex, Manchester |
| 20 June- 2 July | Australai/NZ Developer Eyents |
| 9 - 10 July | Access IT |
| 25-27 August | Interactive Learning '93 |
| 16 - 20 Sept | Liye 93 |
| 28 - 30 Sept | Naidex, NEC |
| 6 -10 Oct | Micros for Special Needs |
| 29 - 31 Oa | Acorn World |
| 11 - 13 Noy | DesTec |

acknowledges that style evolves and that we don't necessarily have all the answers. It is explicit where it needs to be and gives guidelines where it is not possible to be algorithmic; it also contains more examples. It is oriented towards RISC OS 3 functionality although many of the issues remain valid for RISC OS 2.

3. Significant changes

a. Adoption of a 3D 'Look and Feel'

A decision to define and promote a 'standard' 3D Look for RISC OS was made during last year and the new Style Guide re-inforces this by using 3D components throughout. This includes:

- window 'furniture' (toolsprites)
- other 'gadgets' (iconsprites).

The sections on dialogue box design describe the use of new validation strings and give precise dimensions for components like writeable icons, display icons, and adjuster arrows, groups etc.

The 3D Look (delivered by means of an application called 'Newlook') will be made generally and freely available prior to the Style Guide.

b. Adoption of Cut and Paste

Cut and Paste will be defined as the standard mechanism for dealing with selections in all new applications. A protocol enabling Cut and Paste operations between applications has been defined; details will be available in an application note rather than in the Guide itself.

The new Guide also includes references to the 'Drag and Drop' method of dealing with selections. We feel that Drag and Drop is a good match with the other components of the RISC OS user interface and that this technique will be suitable for use in a variety of applications, possibly becoming the method of choice in the longer term. However, we believe that the dynamics of the mechanism require further prototyping before the system can be adopted on a large scale.

c. Modified font selection mechanism

RISC OS 3 now provides support for hierarchical font menu trees and the new guide considers this approach to be the base functionality in any application delivering fonts. The Guide also defines a font selector dbox (modified in line with the 3D design principles referred to above) and a more sophisticated menu structure which enables boldening and italicisation to be applied as separate 'effects'

An application note covering the code required to implement this mechanism will be made available shortly.

d. Modified Save as dbox

An area of difference between many applications has been that of offering:

Save -> Selection
or
Selection -> Save

The new guide defines a modified, general-purpose Save as dialogue box which incorporates a selection option.

e. Menu structures

The new Guide now contains guidelines on menu design with the aim of increasing the degree of standardisation between applications. Writeable icons in, or hanging from menu trees are now deprecated in favour of (small) dialogue boxes.

f. Representation of numeric quantities

The new Guide deprecates the use of 255ths in favour of percentages for representing numeric quantities in dboxes. This will be implemented in the standard desktop colour selector (which also changes in detail as a result of the move to 3D).

4. Other changes/additions

Software protection - The guide now contains a definition of the approved mechanism for preventing unauthorised use of software.

Network considerations - Emphasis on the need for software to be Filing System independent.

CD-ROM considerations - Recognition of the comparatively slow access time and read only nature of the medium.

Screen mode independence - Increased emphasis on the need to support all monitor types.

Technical information on Double and High Density Discs

The need to be cautious in the choice of appropriate floppy discs is based around the fact that the High Density format requires the minute 'dipole-magnet' particles on the disc to

be twice as close as for the earlier Double Density discs. To avoid these dipoles interacting, disc manufacturers normally use combinations of higher coercivity magnetic material and different coating thicknesses for HD discs. Double Density discs wrongly used may acquire disc errors over time. Similarly High Density discs used in earlier disc drives may also suffer occasional read/write errors due to inadequate magnetising force and/or different head gaps.

Magnetic media and drive heads will vary between manufacturers and the fact that some users find no problems should not be taken as a reliable indication that the above rules can be broken.

TCP/IP, Ethernet and AUN

Users of Acorn's TCP/IP Protocol Suite and Ethernet cards may be interested in the possible compatibility issues with these products and the development of Release 2 of the Protocol Suite to address these issues.

The current TCP/IP Release 1 product, AES32 is not compatible with Acorn's Ethernet III card, AEH54. An interim driver, Internet version 1.05, is required and can be provided by Developer Support. Conversely, current stocks of Acorn's AUN/Level 4 File-Server product do not include a driver for the Ethernet I card. This can also be supplied on request. Future production will include this driver.

TCP/IP Protocol Suite Release 2 is currently in beta trials. This product includes drivers for all versions of the Ethernet card and various bug-fixes. If you have specific system problems with any current products, please contact Developer Support for advice.

RISC OS 3.1 Printer Drivers

Although the printer drivers supplied with RISC OS 3.1 are in general much more flexible than those provided with RISC OS 2, several developers and customers have highlighted some specific new problems. We are aware of some of these and will be addressing them over the next few months. If you are aware of any problems which are affecting your products, please summarise these to Developer Support with as much detail as possible.

EMC Shielding

The drawing for the A3010/A3020 Mini-Podule EMC Shield, 0294,081, has now been finished and the part tested. Developer Support *will* now be arranging for parts to be made available for sale to Developers once manufacturing tooling *is* complete. Developers may wish to include this part in their mini-Podule products particularly in countries where there are mandatory EMC requirements.

Expansion Card Electrical Spec

Issue 4 of this specification will shortly be available from Developer Support. The changes to the core specification are minor, but the document now includes Mini-Podule

details as an Appendix. The complete specification will be included in all future Technical Reference Manuals for convenience. Copies of Issue 4 will be sent to all recorded recipients of previous Issues. If you would like a copy and do not receive it automatically within four weeks, please ask for one.

Technical Reference Manuals

The TRM for the A4 (ALJ22) is due to be published in April. The A30x0/A4000 TRM (AGJ03) is expected to be published at the end of May.

Floating Point Accelerator

Development of this chip progresses well. Prototype chip tests have been generally successful and initial pre-production wafer orders have been placed. The support software is under way with both Acorn and ARM Ltd tackling parts of the code. Unless there are unexpected problems, initial stocks of product can be expected by end QTR 2, with full production early QTR 3. Developers should note that an updated version of the FPE will be needed to be compatible with the FPA chip. As soon as this is available, it will be supplied to Developers on request to supersede version 2.80.

CD-Recordable

Acorn is working on an application to drive a CD WORM device so that users will be able to record their own work onto CD-Recordable medium that can subsequently be used in the same way as a standard CD. Beta test sites will shortly be set up. Beta sites will require a Philips CDD 521 Compact Disc Recorder, Philips Professional CD Recordable 63 minute media, an A5000 or A540 with Acorn SCSI card and a standard CD-ROM drive for test purposes as well as ISOForm, CDWrite, SCSIFS and CDFS. Strongly recommended additional items are a 1 gigabyte winchester Fujitsu M2266S-512 drive partitioned into 500MB for RISC OS and 500MB for ISO image; a Sony SMO-C501 600 MB 5.25 inch magneto-optical drive (or a Sony SMO-C301 128 MB 3.5 inch magneto-optical drive); ISO Image Test Application (See Eesox information in the 'News from other sources' section of this newsletter).

If you wish to be considered as a beta test site and have all (or are prepared to purchase) the required items, please contact Developer Support and we will pass on your request.

Versions of RISC OS 3

Please note that there are three versions of RISC OS 3 which your customers may have:

- v 3.00 - supplied on A5000s prior to Sept 1992
- v 3.10 - supplied as an upgrade and on new machines from Sept 1992
- v 3.11 - now being shipped

Version 3.11 differs from 3.10 in two respects. ADFSUtils has been included to work round a problem suffered by a

small number of (mainly 1MB machine) users. ADFSUtils is not available as a soft-loadable module but details of a workaround for 3.10 users are given below. In addition to ADFSUtils, NetUtils is included in 3.11 for network users. NetUtils can be soft-loaded and is available to 3.10 users who require it.

ADFS buffers

Under certain circumstances, most commonly found on 1MB machines, files written to floppy disc can be corrupted. The remedy under RISC OS 3.0 and 3.10 is to configure ADFS buffers to 0 instead of the default. This results in a slight performance loss when accessing the floppy and needs to be reconfigured if a power on reset is performed.

65Host emulator v 1.61

Following the note in the supplement to Developer Newsletter No 27, several Developers have asked for a copy of the new version of 65Host. You can find 65Host v 1.61 on the RISC OS 3 v 3.10 Applications Disc 2.

You should substitute v 1.61 for 1.60 if you have a licence to distribute the emulator with your products. 65Host was found to include some of the illegal code sequences mentioned in earlier newsletters and has, therefore, been fixed.

Support for Developers using C

Developer Support will no longer provide support to Developers using Release 3 of C. Support for C will be confined to Desktop C. Those Developers who have not upgraded may still order Desktop C and/or Desktop Assembler from Developer Support at the special Registered Developer upgrade prices which are as follows:

| Product | RRP inc VAT | Dev. upgrade inc VAT |
|-----------|-------------|----------------------|
| C | £269.08 | £79.87 |
| Assembler | £175.08 | £68.12 |

To order, please send your original discs (once you've taken a copy to use in the meantime) together with a cheque for the appropriate amount to Developer Support.

NB This is not the DDE beta (which is available, in addition, to Desktop C users at £12 exe VAT) which relies on you having Desktop C already.

Serial Port and RISC OS 3

Some third party software (typically that shipped with expansion cards) turns off interrupts to boost performance ratings. If interrupts are turned off like this for long enough, the Serial Port may fail. The correct methods for writing expansion card software are documented in the RISC OS PRM. Refer to the section on Expansion Cards and Extension ROMs.

One effect of this 'antisocial' behaviour is to make other applications, e.g. the Pocket Book A-Link software, appear to fail. This is clearly unacceptable.

The A-Link software includes a re-try mechanism in an attempt to get round the problem however this cannot completely fix it. To users, it will may seem *as if* the A-Link is faulty but the actual culprit can be elsewhere. Please be aware of the need to use interrupts wisely.

Developer Disc 28 - contents list

The disc includes the following items:

Press - recent Acorn news releases are included in this directory for your information.

News from non Acorn sources

From ARM Ltd

Tired of seeing the Intel Inside' logo? What about some ARM product awareness, you cry? Certainly something smarter, catchier and more gripping ... a response is now at hand in the form of the ARM Powered campaign.

Designed by a leading Californian graphics designer, the ARM Powered logo will be appearing in a wide range of new, innovative ARM-based products targetted at the international consumer marketplace. In the same way that the Dolby symbol has become an international standard, the ARM partners - VLSI, GPS and most recently SHARP are applying concerted efforts to establish this brand logo.

The driving force behind the campaign is creating a pull toward products which are ARM-based. Apple and Acorn have already endorsed the logo campaign and already Acorn are shipping thousands of products with ARM Powered tags attached.

Any Developer selling product which incorporates an ARM chip is eligible to use the ARM Powered logo on packaging, promotional literature, merchandising or product itself - logo usage may be an adhesive sticker, swing tag, polo shirts etc.

Bromides and style guides for interested parties are available from ARM. Contact Pete Magowan at ARM on (0223) 813000 or fax (0223) 812800.

From Clares Micro Supplies

Tiller Offer to Registered Developers

The product:

Titler is a sophisticated yet easy to use video titling and presentation package. Titler links you with the world of professional video via your Archimedes computer. Titler is already in use with TaylorMade Films who produce programs for New Zealand Television. Titler consists of two main programs. The first is Tiller itself which provides you with all of the tools to produce title screens for use with the Sequencer. Sequencer is then used to sequence the screens and present them on screen in a pre-determined way using various fade and wipe effects. As well as the obvious use in video titling, this package is ideally suited as a presentation medium. Your presentation can include

NewsLets - contents lists from recent Developers' Newsletters

SysRes - System Resources for RISC OS 2 including IRQUtils 0.14 which replaces 0.12. These resources may be distributed by Registered Developers with their software, provided that the conditions in the Readme file are observed (see also Developers' Newsletter No 26).

ElecReq - electronic applications for Developers requesting allocations, reservations etc. as previously provided on Developers' disc 27.

Titler screens, music, animations, etc. If you have to make presentations then you can now do them, easily and quickly, using your Archimedes computer. Also, because you can save the whole thing as a standalone application you can pass copies of your presentation to your audience or even use it to create demonstration discs - easily.

Clares are prepared to offer Titler to Registered Developers for their own in-site use for demos and presentations at a special site licence price of £10. Please contact Clares for details (Fax: 0606 48512).

MIDI card suppliers

Clares sell sound and music software some of which requires the user to have a MIDI card fitted. Please contact Dave Clare if you produce such a card. He is keen to discuss details of on-card cache with you.

Eesox services for CD-ROM Developers

Eesox have developed an Archimedes CD Simulator which is a complete CD-ROM simulation package designed to help you to create and test Archimedes CD-ROM applications at all stages of development. Eesox can also provide a CD-ROM mastering service. Contact Mark Watson at Eesox for details:

Eesox
5 Hillfield Road
Comberton
Cambridge
CB3 7DB

Fortran Friends

Kate Crennell, one of our Registered Developers, wrote to the New Scientist magazine (Number 1842, p 51, 10 October 1992).

In the letter Kate Crennell first writes in support of Fortran for scientific work, following an article by Michael Metcalf in 12 September issue. There are two other letters with a similar tone. Kate then goes on to say:

"I have both a PC clone and an Acorn RISC-based Archimedes microcomputer in my office; I find the latter significantly easier to develop my Fortran-based graphics programs. I cannot understand why neither Acorn nor the scientific community is aware of the potential of this great little machine. I wonder whether anyone is planning to release a version of Fortran 90 for the Archimedes?"

Since Acorn offers little support for Fortran I have organised a "self-help" user group known as Fortran Friends. Your readers are welcome to join."

Acorn *is* grateful to Kate for the commendation. We are aware that Fortran *is* important to the Scientific community but the decision to discontinue the Fortran product was a commercial one. We just didn't sell enough copies to justify retaining it on the price list.

Kate has asked me to mention that they have made a 'Fortran Development Environment' for Fortran77 (release 2) together with applications libraries callable from Fortran77 for graphics, Wimp, SpriteOp, Draw file creation. These are available as Shareware 44 from Norwich Computer Services. She has also formed a Fortran Friends' group to collect together useful libraries and is looking for any news of Fortran to pass on to the group.

If you are a Fortran user or, more importantly, if you are developing/have developed a Fortran 90 compiler, do write to Developer Support and well *pass* your letter on to Kate.

Enclosures:

Developers' Disc 28

Acorn Education Directory, Issue 4 (as appropriate)

Acorn Retail Price List

Developer Discount Price List

AUN Special Offer Order Form and Agreement

Every effort has been made to ensure that the information in this newsletter *is* true and correct at the time of printing. Products described in this newsletter, however, are subject to continuous development and improvements and Acorn Computers Ltd and other contributors reserve the right to change their specifications at any time. Acorn Computers Ltd cannot accept liability for any loss or damage arising from the use of any information or particulars in this newsletter.

ACORN and ARCHIMEDES are trademarks of Acorn Computers Ltd.

Copyright © Acorn Computers Ltd 1992

*Developer Support
Acorn Computers Ltd
Fulbourn Road
Cherry Hinton
Cambridge CB1 4JN*

*Developers' direct line: 0223 .254248
Direct fax: 0223 254164*

This newsletter was produced using EasiWriter from Icon Technology