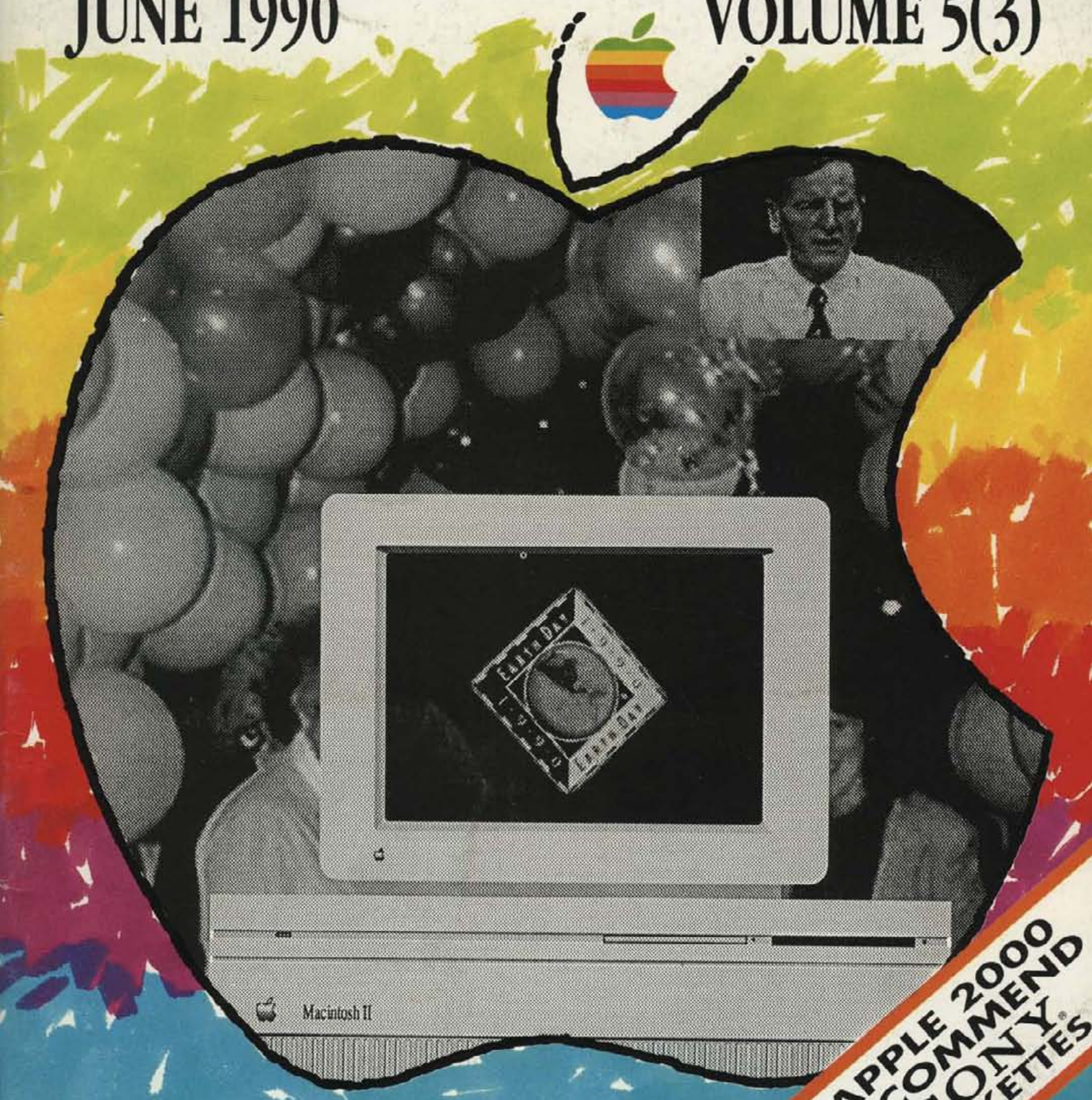
Apple2000

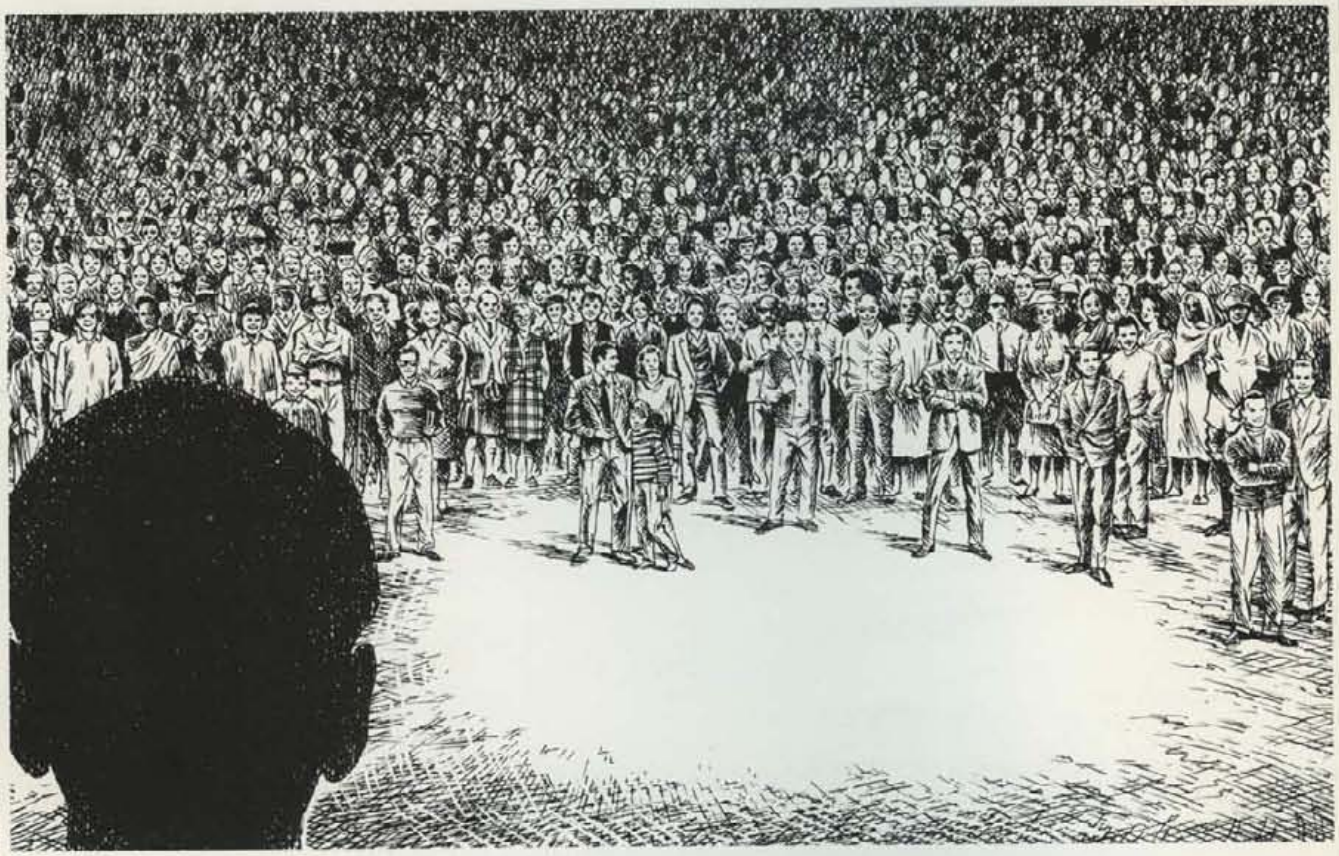
THE NATIONAL APPLE USERS GROUP

JUNE 1990 VOLUME 5(3)



APPLE 2000 RECOMMEND SONY® DISKETTES

YOUR INTRODUCTION TO A WORLD OF INFORMATION



CompuServe Forum. The world's largest on-line information service for PC's. And now it's here, in the UK. For you.

- *550,000+ members worldwide.*
- *Contact with over 100 countries.*
- *Nearly 200 special interest groups (everything from current affairs to the latest software developments).*
- *More than 1400 information databases.*
- *27,000+ public domain and shareware programs available to download.*
- *Extensive electronic mail connections throughout the world (including Internet, MCI mail, Telex, Fax and Postal delivery).*

FREE second membership, for a strictly limited period, with every new membership. Plus additional free usage credit for you.

Find out about the best on-line club in the world. Call our sales support team free on the number below. Now. Or write to: CompuServe Forum, FREEPOST (BS6971), P.O. Box 676, Bristol BS99 1NZ. And get on-line to the world.

F R E E P H O N E

0800 289 378

9.00 am - 9.00 pm (Mon-Fri)

CompuServe
F O R U M

Apple2000
The All Apple
User Group
Committed to
All Apple Users
including Macintosh

Apple2000

June 1990

Apple2000
P.O.Box 3,
Liverpool,
L21 8PY
051 928 4142
Fax. 051 949 0307

CONTENTS

Chairman's Corner	Ewen Wannop	2
Letter Box		3
Hardcore Pips	Cliff Wooton	6
Compuserve/Forum		8
Smart Money GS — A review	John Beattie	14
Memory Moan	Bryn Jones	15
New London Phone Codes — A macro	Harvey Nyman	16
Apple Finder Update	Elizabeth Littlewood	16
AppleXtras P8 and IIgs		18
Its Free by Air!	J.J. Taylor	20
Date Arithmetic in AppleWorks	Andreas Wennborg	22
Nite Owl Battery — A review	Dave Ward	24
Quickie Scanner — A review	John Beattie	24
SoftCat Corner	Jon Gurr	25
Rumour Factory	Kenneth Gluckman	26
TransWarp LightSpeed	Charlie Stillman	27
Hotline News	Dave Ward	29
Vulcan Hits Back! — A review	Jihad Jaafar	30
Mastertype — A review	Terry Morris	32
AppleShare and the Apple II	Dennis Doms	33
The Nibbler		38
GS/OS Error Finder		39
MacChat		42
Mathematica — A review	John Arnold	44
The Mac CAD/CAM Book — A review	David Durling	48
INITHound		48
Hypercard Forum		50
Virex v 2.7 — Press Release		53
A/UX 2.0		54
For FullWrite Fans		58
Network News		60
TN # 251 Safe cdevs		64
System 6.0.5		64
TN # 253 'SICN'		65
MacWorld Expo, San Francisco	Dave & Irene Flaxman	66
The Omnis Connection	Bill Pearce	68
Thanks for the Memory	Bill Mealey	69
Club Business	AGM Minutes	70
Hewlett Packard's DeskWriter		75
AppleXtras Macintosh disk 3		76
Mac Library		77
Local Groups		78
Members' Small Ads.		80
Advertisers' Index		80

Apple2000 supports users of all the Apple computers. The **ITT 2020, I, II, II+, //e, //c, //c+, IIgs, IIgs+, ///. Lisa, XL, Mac 128, 512 MacPlus, SE, SE/30, Mac II, IIcx, IIci, IIx, IIfx** and **Portable** Contributions and articles for the magazine are always welcome. We can handle any disk size or format. Please send to the PO Box, L21 8PY.

NOTE:
In general the front half of the magazine is for the Apple II, Apple IIgs and Apple /// The back half for the Macintosh and Lisa. Look out for the descriptive page icons.

Key:
Apple II, //e and //c
Apple ///
Apple IIgs
Macintosh, Lisa
Macintosh II

There are a number of ways to contact Apple2000.

Force users who have a query about the service can contact the administrator, John Lee, directly for help and advice. Call him on the number opposite or send a message to his box on the Force.

If you wish to order goods or services from Apple2000, call Irene on 051 928 4142 or (during office hours) call Alison on 0753 740115. Both have Ansafones, in case they're not around. Alternatively you can Fax. to 051 949 0307, write to the PO Box or (if you use comms) you can leave orders on TABBS addressed to the SYSOP.

If you are experiencing problems with Apple hardware or software Dave Ward and Tony Dart run the Hotlines and will try and help you.

We are very interested in the activities of local user groups, and if you have any information which you would like publicised John Lee would like to hear from you.

We reserve the right to publish, without prejudice, any advice or comments given to members in the journals of Apple2000.

A little praise for a few of our authors wouldn't go amiss. Send all comments, and contributions, via the PO box, especially suggestions about what you would like to see in **your** magazine.

Contact Points

The Force and Local Groups
John Lee
Voice 0373 64861

Administration
Irene Flaxman
051 928 4142
Fax 051 949 0307

Apple II Hotline
Dave Ward
0689 56289
Mon-Fri 1900-2100

Macintosh Hotline
Tony Dart
0494 35463
Mon-Fri 1900-2100

TABBS
Ewen Wannop - SYSOP
Modem 0225 743797

Chairman's Corner

1980-1990

The AGM has come and gone and the new committee are in place.

We had hoped to have more members come along for the day and join in the workshop. Perhaps it was the late announcement that prevented you coming to Luton. We are trying to find a suitable venue well in advance for the AGM next year. That way we can have a full workshop and set of events that should certainly attract you all.

If you know of a suitable venue that is either free or at a very nominal cost, please let us know.

Apple (UK) go from strength to strength. Their attack on the Education market has had an effect. Over 30% of their business is now in that field, and they continue to make headway in the face of the IBM spectre. It has been rumoured that IBM will try and attack the low end of the market once more. Evidently they have been hard hit by the clone market and want to try and introduce a cheap machine. They tried this once before with the PC Junior and came a cropper. If they manage it this time, what will Apple do to retaliate? We hear rumours of a colour Mac that will sell for a $1000. Is this just wishful thinking or can Apple really do it? Of course they have a machine already that is colour and could be enhanced to provide Mac/like capability. But the IIgs future is another story ...

While on the subject of Mac's and Education, I presume all of you who are either teachers, lecturers or students are aware that you are eligible for educational discounts. Check with your local Educational dealer, and produce some proof that you are within education, and you will get around 30% discount on original Apple equipment.

I have not had a great response from the new CompuServe/Forum members in sending in your CIS ID's. If you are to be contacted through the EasyPlex mail service we need to know your ID. Your password of course you must not divulge to anyone. The ID's I already have are:

Ewen Wannop	76224,211
Andreas Wennborg	72451,3104
Elizabeth Littlewood	100016,401
Jeremy Quinn	100016,560

Compuserve is an addictive experience. I have included the edited text later in the magazine from a two and a half hour conference that Apple2000 took part in. It was quite a sobering experience to think that I was sitting at home talking with others all round the world, with no barriers other than the way we use our common language of English. Quite a lot of the edited material concerned the different meanings that we put on words in different countries.

At one stage we were talking about how beer was made. I mentioned that malt was used to make beer in England. This tickled the American's pink to think that beer in England was made from malted milk shakes!

With a long hot summer hopefully started as you read this. Why not get a cool drink and keep out of the harmful rays of the sun by writing an article for your favourite Apple2000 magazine?

Ewen Wannop

Annual subscription rates are £25.00 for UK residents, £30.00 for E.E.C. residents and £35.00 for other overseas members.

Apple2000™ is a trading name of BASUG Ltd, a non-profit making independent company limited by guarantee.

The contents of this journal are copyright of BASUG Ltd and/or the respective authors. Permission is granted for non-commercial reproduction providing the author and source are properly credited and a copy of the relevant journal is sent. The opinions and views expressed are those of the various contributors, and are not necessarily endorsed by BASUG Ltd.

This journal is published bi-monthly by BASUG Ltd as a benefit of membership in February, April, June, August, October and December. The copy date is the 1st day of the month preceding publication. Advertising rates are available on request.

Apple™ and the Apple logo are trademarks of Apple Computer Inc. Macintosh™ is a trademark of Macintosh Laboratory Inc and used with the express permission of the owner. Telecom Gold™ is a trademark of British Telecom plc. The FORCE™ and Apple2000™ are trademarks of BASUG Ltd.

The Editorial team is:

Apple II
Ewen Wannop

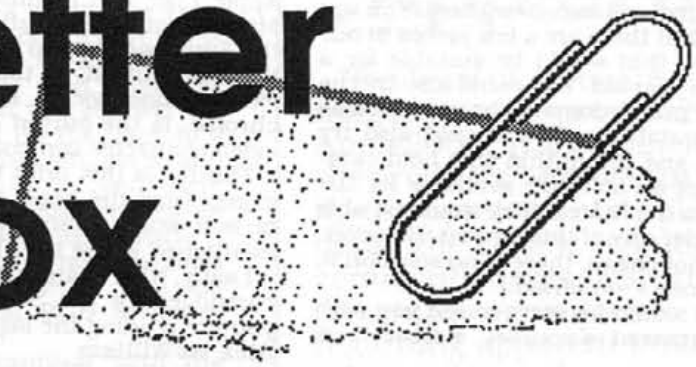
Macintosh
Norah Arnold
Irene Flaxman

Many thanks to all those who work behind the scenes and who receive no personal credit. These people are the stalwarts of Apple2000.

Additional thanks to Walter Lewis of Old Roan Press (051-227-4818) for our printing service, and to Ian Sharp of Sharp Studios (051-227-2788) for our cover design.

Apple2000 are Founder Members and Wholehearted Supporters of the **Apple User Group Council**

Letter Box



General LetterBox

Hawkhurst
Kent

Dear Ewen and fellow members of the committee,

Thinking about the morning's events on the way home from the Apple2000 AGM on Saturday afternoon, I felt that I have tow rite and thank you and your colleagues on the committee for all the hard work you put in to keep this club running.

You may be interested to hear of two recent occasions which highlighted to me once again how important a club such as Apple2000 is for ordinary members. The first concerns my colleague in Denmark. He bought an Apple //c several years ago for his personal use and that of his son, and they have been trying for some time to find enhancements and add-ons for this machine. They only know the Apple company as a possible source, and you know how uninterested they are in their 'old' models. I was not surprised to hear that they drew a total blank on all fronts. I told them about Apple2000 and hope that he has signed up. Anyway, I will remind him when I next go over there.

The second concerns a friend of mine, also a man in his sixties, who retired from regular work and started up as a consultant, for which purpose he bought himself a computer to do his word processing and data base work. Although the dealer from whom he bought the machine set it up for him, he was absolutely helpless on what to do next and didn't know where to turn. He had no clue on where to find programs, how to load one up when he got hold of it, format a disk (he didn't even know that disks needed to be formatted), read what was on his hard disk, how to make the printer work, etc. Being in a business environment it was an IBM clone, because that was the sort of machine he had been working on before and there was no point in directing him to Apple2000, Fortunately I was able to help him from my very limited knowledge, but I was alerted to the total absence of a similar organisation for the IBM clones. It is interesting to note in passing that while training is available it costs around £150 per day and they take three days to teach DOS! If there are any enthusiasts around, they are not very visible and charge plenty!

I thought these snippets might interest you as an indication of the value Apple2000 to the computing community. It also made me think a bit about the Macintosh members needs which came up briefly during the meeting. I believe I am right in thinking that the Mac is much more of a user's machine than the II series which is a version for enthusiasts. The inside of the Mac is as much a black box as the IBM clones. Users might therefore be much more interested in possible applications, availability of programs and what such a machine can and cannot do. Not only the commercially available programs for the serious user, but possible shareware items for the off-duty hours, if there is such a thing for Mac software. I bought a family tree genealogy program on IBM shareware for which I was not prepared to pay the commercial price of £150. Once a user knows what a spreadsheet can do he may well be prepared to pay a serious price for a good one. For example, I would not dream of doing my engineering calculations any other way, and am looking actively for a good sketching and drawing program.

You may therefore like to poll Mac members in the next issue of Apple2000 magazine if they would support a workshop on applications, combined perhaps with a listing and analysis of available software. Make them answer by filling in a postcard and sending it back, so that you collect some directions in which to prepare a workshop. I hope this idea is of value.

Meanwhile, again many thanks for all your efforts.

Mike Worth

P.S. The Mac is an expensive machine which implies that the owners have money. Would they be prepared to pay for a bit of a workshop and thus give the organisers more scope and elbow room?

❑ Thank you for all the kind words about Apple2000, it is always good to meet people face to face at events such as the AGM who have just been names up until then.

I was interested in your two stories. There are a few Apple User Groups round the European area, and perhaps the nearest to your friend in Denmark would be the Swedish Apple User group. If he has a modem, the whole world becomes accessible to him for help with his Apple. This can be through Bulletin Boards like TABBS or CompuServe. As to your friend with the IBM clone, perhaps he would like to contact:

PC Independent User Group,
The Computer Advice Centre,
87 High Street,
Tonbridge,
Kent. TN9 1RX.

They are an independent group who try to provide for the PC what we do for the Apple.

Your comments on workshops for the Macintosh are interesting. We have tried workshops both as teaching workshops and on a basis similar to the workshops held at Bidmuthin for the Apple II. It is sad to say that the response was very disheartening. We can but try again of course and would therefore like a vigorous response from the Mac members as to what they would like and what they would be prepared to pay for. Your comment about Mac owners having money is not altogether true. Usually they have no money left after they have bought their Mac! Either that or they are using Mac's at work rather than their own machines.

Ewen Wannop

AppleWorks LetterBox

[redacted]

Dear Editor,

Would your correspondent Terry Morris indicate the string containing the elusive '$' byte in SEG.SS of AppleWorks so that I could find it with a string search program please?

George Shiffner

❑ The conversion of '$' signs and other characters that are country specifc has been extensively dealt with by our friends in Sweden. If Terry still needs help we can ask them to give us details.

Ewen Wannop

Please submit all letters and articles to the magazine on disk wherever possible. The disks will be returned to you when the magazine is published. If you have a modem, send us letters, articles and Public Domain programs either to BSG005 or to TABBS [redacted].

TABS Card Wanted

London Colney Anodising Co. Ltd.
Lyon Way
Hatfield Road
St. Albans
Herts
AL4 0LB
0727-34231

Dear Sir,

We are looking for a Tabs Software Interface card to fit either an Apple //e or a II+ machine.

Trevor Francis

❑ I know of no direct sources of these cards these days. You could try Eric Sausse [illegible] who sells various cards and manuals for the II series. If any member has one that they do not need, please get in touch with Trevor. **Editor**

IIgs LetterBox

Penn
Wolverhampton

Dear Sirs,

I am currently trying to decide whether to pass my Apple IIgs on to my seven year old daughter or whether to trade it in for an Amstrad or similar which has a wealth of educational software.

I am led to believe that there is very little suitable software for children and that what is available is very expensive. I would be grateful for any information you may be able to let me have to expedite my decision.

A.M. Andrew

❑ The Apple IIgs has been considerably undersold in this country and so much of the software has simply not been brought over into the UK. It is however the standard machine in the American schools and there is a wealth of software over there. You will find that there are a few pieces in our library that would be suitable for a seven year old. You could also try the other public domain libraries such as Computability. You should also try MGA and Bidmuthin who hold catalogs of all software available for the IIgs in the States, they would be able to order any of this for you. However, it is not cheap, there is no solution to that one I am afraid.

We would be sorry to see you with an Amstrad of course! **Editor**

//c LetterBox

Langport
Somerset

Dear Sir,

Having purchased an Apple //c a few weeks ago and now joined Apple2000 I hope you will be able to help me with a few problems. I bought the computer in Germany (2nd user). Included was a monochrome monitor, Apple Scribe printer, associated cables and AppleWorks V1.2. I have since purchased a second drive and Cirtech Z80 card from MGA SoftCat.

My first problem is with AppleWorks. On trying to load file.4 a memory full error occurred and I was unable to load the file. Is this due to the version of AppleWorks? I have noticed on the bottom right corner "55k Avail." is there on startup. "53k TPA" is mentioned when booting CP/M Plus V3.0. Is there something wrong here? By the way "55k Avail." was there before I fitted the Z80 card.

My second problem is with the Phillips Video Monitor CM 8500 which has a colour composite video and sound input at the rear (both phono sockets). How do I connect this to my Apple //c? The Technical Reference Manual mutters on about NTSC for the American version but I found out that the output at the Apple //c's video phono socket is only monochrome. Is the output at the D-type video connector composite video?

Thirdly, is this print the best I can expect from the Apple Scribe printer or is it worth changing the head as mentioned in the user handbook?

Lastly, where can I purchase ribbon cartridges for the Scribe printer as you are reading the last one?

Alex McWilliam

❑ It would be advisable for you to upgrade to AppleWorks V2.0 if you can. This version of AppleWorks has greater support with additions like the TimeOut series than you will get with V1.2. You are rightly confused by the 53k and 55k messages. The Apple //c has a total memory of 128k. CP/M uses part of this memory and gives you an apparent memory size of 53k. AppleWorks and the operating system ProDOS take up some of the memory as well. The 55k message is simply telling you how much desktop you have left after these program has been loaded. On a machine with a 1mb memory card, you would see a message saying you had something like '995k Avail'. File.4 was created on a IIgs with full memory. As you have found it will not load on a machine without extra memory of some sort, as it is just too big.

The //c gives you NTSC composite colour at the phone socket on the back. //c's sold in the UK had a special PAL colour adaptor packed with them. This Apple adaptor

The Apple Bulletin Board System

Speeds: V21(300) to V22bis(2400) 8N1 24 hours

The Apple2000 Bulletin Board System

```
>>>>> TABBS TOP MENU <<<<<

<#>Endcall <.>Utilities
<;>Time <G>oodbye

<1> Apple ][ folder
<2> Apple IIgs folder
<3> Macintosh folder
<4> Apple2000 folder
<5> Developers folder
<6> Public areas

<D>ownload Libraries
<M>ailbox
<N>ews Columns
<A>dvertisment Hoarding
<S>hopping Mall
<W>hat's new on TABBS
<H>elp files for TABBS
```

❑ The TABBS message system is more than just a Bulletin Board. With a shopping mall where you can browse the Apple2000 catalogues and order the goods you require; a library with over 60mb of compressed files for the Apple II, IIgs and Macintosh; the NewsBytes™ news files updated weekly bring you the latest in world computer news; a private and public E-mail service; file transfers that can be enclosed in private or public mail; message areas covering many topics including the Apple II, the IIgs and Macintosh; Xmodem, 1k Xmodem and Ymodem file transfers; multi-speed access at all common speeds; 24 hour operation; and much, much more make TABBS the premier Apple Bulletin Board serving Europe.

Give TABBS a call today.

Ring **TABBS** on [illegible] at any speed through V21, V22, V23 to V22bis 8N1

TABBS is available 24 hours a day

plugged in to the video 'D' socket on the back gives composite PAL colour and sound that can be plugged in to a monitor or video recorder. If you do not have one of these adaptors, try Eric Sausse (0724-855795) who might be able to help. If you connect the phono output on the back to a PAL monitor you will get monochrome output as you have found. The 'D' connector does not have composite video as such, it does have a rather non-standard RGB colour however. This will not fit normal RGB monitors unfortunately!

I am not familiar with the Scribe printer, but the print quality does seem to be lacking somewhat, it could well be worth changing the head. Try Eric Sausse or MGA for ribbons. I suspect however it may not be possible to get a new head or ribbons this side of the Atlantic.
The Boffin

General LetterBox

[redacted]
London

Dear Editor,

I sometimes wish that Apple 2000 could have a wider range of articles. For instance, there were two mathematical programs of interest to computer owners. One on "chaos" was in "New Scientist", the other , on Julia functions, appeared in Beebug, the BBC owners magazine.

Ewen Wannop tells me that Apple 2000 cannot afford to pay its contributors. Would it help if members were asked to state their professions when joining BASUG? Then maths lecturers could be asked directly to help with articles - a surer way of acquiring contributions than waiting for volunteers.
Arthur Robinson.

❑ I agree with you. It would indeed be nice to have a wider range of articles in the magazine.

We are of course a User Group run as a non-profit making concern. We are all volunteers and do what is needed either through sheer pleasure, or maschocism! We rely on the help that members can give to make the whole process a two-way event.

Members can contribute and give in return by writing articles as Arthur suggests. Unfortunately the editorial team rarely have the time to chase up all the leads that we might. There are just not enough hours in the day to achieve that! I hope that this letter stirs some of you into action.
Ewen Wannop

Apple2000 Reviews

"Reviews of software and hardware in the Apple2000 magazine are provided in the main by members of Apple2000. The comments and opinions of members on the products reviewed in this magazine are not necessarily the opinions of Apple2000. Apple2000 does not endorse the review results, nor does it suggest that any comments necessarily provide any recommendation for any purchasing decision. If you have specific questions regarding apparent limitations or aspirations for a certain product, please contact the supplier or dealer for further details."

NEW PRICING

Address Book (MUSE) £19.95
Store 700 names and addresses, then print envelopes and mailing labels. Use with "Form Letter" (£19.95) to Print "SuperText" (£27.95) formletters, or use stand-alone. For 48K][+ or //e etc... Was $49.95!!!

Sensible Speller IV £99.95
DOS 3.3 & CP/M spell checker for AppleWriter][& //e, Bank Street Writer, Format-80, HomeWord, pfs:Write, ScreenWriter, SuperText, WordStar, Word Handler, ED, Magicwand, TED, Typewriter.

How to Use Your Apple //e (ATI) £49.45

Word Attack Plus - French (Davidson) *£39.95

Fay: The Word Hunter (DIDATECH) £24.95

Printshop Lovers Utility Set (BRCC) *£34.95

Scrabble (Leisure Genius) £29.95

Test Drive II : The Duel (Acolade) £34.95
For IIGS only.

NEW SOFTWARE

Trial Size Toolbox (R. Wagner) *£4.00
150 new toolbox commands for Applesoft with 50 page manual on disk.

Silpheed (Sierra) *£29.95
Japan's hottest new action game for the 512K GS from the designers of "Thexder". Arcade action space shoot-up with 20 levels of action, 30 enemy types, 9 original musical scores, - requires keyboard or joystick.

RAM 3.3 *£40.00
DOS 3.3 patching program for the IIGS memory expansion RAM. User invisible software that creates up to eight 192K RAM drives. RAM 3.3 is compatible with AmDOS 3.5, UniDOS, & Sider Hard Disk. The RAM 3.3 user menu lets you install the patch in memory, install the software on another disk, and automatically copy files from specified floppy disks to the RAM drives.

Dragon's Keep (Sierra) *£24.95
Hi-res educational game for ages 7&up. A captivating adventure into dragon teritory to recue 16 animals. It helps children develop reading comprehension. The vocabulary is controlled so that any young adventurer who can read around age 7 level can play the game without help. Skill focus:-
- Reading Maps
- Identifying Details
- Making Inferences
- Drawing Conclusions

COMPUSEC (Compunetics) *£79.50
Stock Portfolio Manager for all Apple IIs
>>>Apple 2000 reviewer required<<<

Record Master v2.5 (Bridget) *£59.95
A highly rated full-featured database program offering arithmetic capability, global update, macro entry, mail labels, computed fields, file restructure, multi-level search & sort, and full report generation capability with automatic print breaks & totals. Any Apple II.

Graph Master (Bridget) *£35.00
Plot bar, line, pie, & scatter (X-Y) graphs as well as user-inputted mathematical functions. Reduce up to 400 data points. Totals or averages, actuals or cumlatives, stacking, overlays, disk save, and much more. Any Apple II.

Letter Master (Bridget) £20.00
Easy to use, line-orientated word processor. Change, insert, delete text. Convert your computer into a smart electronic typewriter with macro entry, printer control, form letters, disk save, multiple print, & more.

Dark Castle (Three-Sixty) *£34.95
Famous MAC graphic adventure now converted for the 768K IIGS.

Music Studio v2.0 (Activision) *£69.95
Now contains both system v2.1 version for 512K IIGS and GS/OS version for 768K machines. Now not copy-protected, new features include real time MIDI input/output, change key signature anywhere, change note stem direction, automatically insert measure bars, change note division automatically, over 20 new digitised sounds, change volume and tempo at any time, merge songs together, automatically number measure bars, "jukebox" plays multiple songs automatically.

Wizardry Trilogy (Sir-Tech) *£39.95
The best loved Wizardry 1+2+3 now in a new bundle. Over 1.5 million copies sold worldwide.

Arkanoid II : Revenge of DOH (Taito) £24.95
Requires 512K GS. Sophisticated hi-res "brickout" game with stereo sound.

Dungeon Master (FTL) £29.95
1Mb IIGS. Digital stereo sound, includes free "Kid Dungeon".
Step into the world of Dungeon Master and see fantasy come to life. Set in the depths of the mysterious underground, Dungeon Master puts you inside the most detailed dungeon ever created in software. Every twist and turn, every nook and every corner looks real. Everything moves & works! Pick up the objects with the mouse and take them with you - or, pick up the key and try it in the locked door. Maybe there's treasure on the other side, or maybe there's a hungry monster. Choose your comrades in your adventure carefully, because you'll need strong fighters and powerful magicians to survive. Their skills will be tested by the intricate puzzles and cunning traps hidden inside. Live the Fantasy!

VISA

MGA SoftCat (0797) 226601
41 Cinque Ports St., Rye, E.Sussex TN31 7AD

MasterCard

Clearance prices valid for current stocks only, all prices include VAT, & *-prices also include UK p&p. E.& O.E.

Hardcore Pips

Unpublished in Hardcore August 1983

Cliff Wooton shows us how to convert Hexadecimal to Hex in Assembler

Decimal to Hex

Some time ago while poring over a disassembly of the Apple DOS, trying to find out about the syntax checker (just you try and find that in amongst 10k of dissassembled code) I came across a nifty little routine that was quite intriguing, and the approach used to solve the problem was quite original.

The obvious way to multiply a number by ten would be to set up an indexed loop so that a number was added to itself 10 times. The approach used in DOS would operate quite a bit faster if there was a significant amount of multiplying by ten to be done. Basically you multiply by two, then store that value and multiply the original by two and two again. You then add the values together. On the face of it this is fairly simple. The clever bit is how to multiply by 2 each time.

When you shift a value either in memory or accumulator, the carry is left holding the value that would have gone into the bit bucket, whilst a zero is lobbed into the other end. If you shift in the right direction, that is to the left - no, let me put that another way - if you shift left, right? Oh shift! If you ASL the operand it will be multiplied by two. If you ASL, ASL, and ASL the operand again it will be multiplied by eight. So ASL it, save it, ASL it, ASL it, then add them together and you will have multiplied by ten. That was easy wasn't it? No? O.K. then, looking at the flow chart and program steps below the operation should be clear enough.

```
LDA  #OPERAND GET OPERAND
ASL  A        MULT BY 2
STA  TEMP     SAVE IT
ASL  A        MULT BY 2 (4)
ASL  A        MULT BY 2 (8)
CLC           CLEAR CARRY
ADC  TEMP     ADD THE 2
RTS           GO HOME
```

Fig 1. Multiply operand by 10

Aha! I hear you say, but what about multiple precision integers to be multiplied by decenary numerals. You did say that didn't you? If you look closely (but not too closely) at the flow chart and program, you will see that there is a CLC hidden amongst the code. This is not just there to take up space. It is there (wonder of wonders) to Clear the Carry flag. This has been provided (Oh thank you great and wonderous Mostek) to clear out any spurious data that fell into the bit bucket during the ASL operation. Since it is there we might (or might not) do something useful with it. A short digression is called for here since we have to discuss another type of machine code instruction.

As a companion to the ASL and LSR instructions, there are another pair of similar instructions called ROR and ROL. The function of ROR and ROL is very similar to ASL and LSR, the only difference being that the data that went into the carry flag last time is popped into the back end of the operand instead of a zero. That is why they are called ROtate Left and ROtate Right. They will, if coded correctly, behave as a pair of contra-rotating ring counters.

Now assuming we have used an ASL on the least significant byte of the operand (so as not to stuff any garbage into the bottom end), we can use a series of ROL instructions on each successive byte, moving all the time towards the most significant.

In this way, the original program can be extended to allow the user to multiply for instance a two byte operand. This is illustrated in the flow diagram and associated listing below.

```
ASL  BYTE1  FIRST MULTIPLY BT 2
ROL  BYTE2
LDA  BYTE1
ASL  A
TAX
LDA  BYTE2  SECOND MULTIPLY BY 2
ROL  A
TAY
TXA
ASL  A
TAX
TYA
ROL  A      THIRD MULTIPLY BY 2
TAY
CLC
TXA
ADC  BYTE1
STA  BYTE1
TYA         ADD THE 2 AND 8
            TIMES TOGETHER
ADC  BYTE2
STA  BYTE2
RTS
```

Fig 2 A two byte multiply by 10 routine.

You will notice that I have not optimised the code by using a subroutine to perform the ASL/ROL with an indexed loop. That is because it would have been harder to understand than it is already and since this article is aimed at the little applers and munchkins, I wanted to keep it as simple as possible. That's my excuse any way? If you can optimise it, then feel free to send in a revised version tor the next issue.

The routine becomes very useful when used to convert a decimal number with several digits. By setting up a loop around the multiply routine so that the accumulator holds each digit, the following routine could evolve

```
1*
2*
3* MULTIPLY ACCUMULATOR 2 BY 2 *
4*
5*
6  ACC2X2   ASL ACC2L
7           ROL ACC2H
8           RTS
9*
10*
11* SHIFT MASK ADD & MULT ACC2
BY 10 *
12*
13*
14 ACC2X10B LSR A
15          LSR A
16          LSR A
17          LSR A
18*
19*
20* MASK ADD & MULT ACC2 BY 10 *
21*
22*
23 ACC2X10A AND #$0F
24          CLC
25          ADC ACC2L
26          STA ACC2L
27          LDA #$00
28          ADC ACC2H
29          STA ACC2H
20*
31*
32* MULT ACC2 BY 10 *
33*
34*
35 ACC2X10  JSR ACC2X2
36          LDA ACC2H
37          STA ACC2H
38          LDA ACC2L
39          STA ACC3L
40          JSR ACC2X2
41          JSR ACC2X2
42          CLC
43          LDA ACC2L
44          ADC ACC3L
45          STA ACC2L
46          LDA ACC2H
47          ADC ACC3H
48          STA ACC2H
```

```
50*
51*
52* ACCUMULATOR 1 DEC TO HEX
CONVERSION *
53*
54*
55 CONVERT  LDA  #$00
56         STA  ACC2H
57         STA  ACC2L
58         STA  ACC3H
59         STA  ACC3L
60         LDA  ACC1H
61         JSR  ACC2X10B
62         LDA  ACC1H
63         JSR  ACC2X10A
64         LDA  ACC1L
65         JSR  ACC2X10B
66         LDA  ACC1L
67         AND  #$0F
68         CLC
69         ADC  ACC2L
70         STA  ACC4L
71         LDA  #$00
72         ADC  ACC2H
73         STA  ACC4H
74         RTS
75 *
```

This is more or less how the routine appears in the DOS disassembly when it is located at $21B9-$2202. For the purposes of the listing ACC1,ACC2,ACC3 and ACC4 are two byte accumulators. ACC1 is the source operand, while ACC$ is the destination. ACC2 and ACC3 are working storage only.

Handling very long Integers.

In theory we could quite easily make the operand 48k bytes long but there would be little point in this, since we would then have no room left for the DOS or the program to perform the calculation. This being the case, I have prepared a special version of the DOS for this particular application. The DOS itself runs in the language card (copies available direct at 200 dollars each). With this DOS you get the program to multiply the number stored in the 48k bytes of RAM and instructions on how to enter the number (unfortunately by hand using the 0:— — convention from the monitor). There were several problems involved, mostly due to the fact that the CPU wanted some of the memory for use by the screen editor, the stack and the keyboard input buffer. These problems are easy to cure, simply unplug the CPU, keyboard and any other interfering chips. This will ensure that the memory is completely empty, allowing you to use the RAM for whatever purposes you wish.

Cliff Wooton

Editorial August 83

Recently there have been criticisms that Hardcore lacks "bite". Could this be because we are too polite? Certainly one person admitted that having looked at a product in order to review it, she felt unable to put pen to paper as the product was so awful! Another reason, I feel, is that we have too many willing reviewers. People kindly offer to look at a product for a few days and then write about it. This seems fine, but in fact it is very unlikely that in such a short time a reviewer would find the more obscure faults or disadvantages that crop up with long use. Also there is a tendency to read the accompanying manuals and assume that what they say about their product must be true! This is a USER group after all. The people that should be writing about products should be those that actually use them. Let's face it, if someone is contemplating buying a product, they want to know if there is a problem with it. If the product is good then there is no reason to worry if any member buys it. Of course we are happy to print that a product is good if it is, But we really need YOU, the User, to write and tell us if there is anything about a product that is not good. It could save someone from making a costly mistake. The whole point of a User Group is to exchange information that is not normally available to the general public.

Yvette Raikes

❑ Things do not seem to have changed in 1990. Yvette's comments about feedback and being a User Group still apply.

Ewen Wannop

HARD-TO-FIND, UNIQUE PRODUCTS FOR APPLE II ENTHUSIASTS

from the most reputable fax/phone/mail order company serving the Apple II community

IIgs Batteries

When your IIgs loses track of time and can't remember your control panel settings, it means your battery is dead. Since the IIgs battery is soldered to the motherboard, some dealers actually want you to pay for a motherboard exchange to fix the problem. Instead, just clip off your old battery and slide-on one of these new replacements. No soldering necessary. Kit includes fully compatible lithium battery and complete installation instructions.

NO-001 Slide-On Battery for IIgs $14.95

Cheap 3.5 drives

For months you've been asking us to carry inexpensive 3.5 drives. For months what you've wanted simply wasn't available in a drive we could support. But now AMR has produced an 800K 3.5 drive that's just like an Apple 3.5 at a fraction of Apple's $429 price. Plugs into IIgs or IIc-Plus disk daisychain. Also works on a IIe with AMR's disk controller or on your Macintosh.

AM-001 AMR 3.5 drive $199.00
AM-002 AMR 3.5 controller for IIe $59.00

Prosel 8 and 16

Prosel is a comprehensive disk utility package. Prosel 8 works in the ProDOS 8 environment, Prosel 16 (includes Prosel 8) in the GS/OS environment of the Apple IIgs. Includes file and disk copy and backup utilities, program selector, scheduler, and much more.

GB-001 *Prosel 8* $40.00
GB-002 *Prosel 16* $60.00

Stack Support

Stacks have arrived in the Apple II kingdom and we're ready to offer charter subscriptions to the first Apple II publication about hypermedia. It's published 6 times a year as a set of stacks and distributed on 3.5 disks. ***Stack-Central*** includes the latest information on Apple II hypermedia developments, authoring tips, clip art and sounds, and samples of the best public domain and shareware stacks we can find. Requires *HyperStudio*.

SC-1 ***Stack-Central*, six 3.5 disks $42.00**

HyperStudio

HyperStudio is the first program to take full advantage of the sound and graphics of the Apple IIgs. It's HyperCard-like, for those of you familiar with the Macintosh, but cards can use the full-color capabilities of the IIgs and no scripting language is required. You can create stacks and add sounds by point and click.

RW-005 ***HyperStudio*** $129.00
SCWH-1 Special HyperStudio/Stack-Central $139.00

Network Connectors

These are the connectors you need to create an AppleTalk network. Not only do they cost less than Apple's connectors, these work with inexpensive telephone wire (not supplied) rather than Apple's expensive, special cables. You need one connector for each computer and printer on the network.

OE-001 ***ModuNet 8-pin*** $34.95
OE-002 ***ModuNet 9-pin*** $34.95

News and solutions

Are you tired of Apple Computer's incessant message that only the Macintosh is a serious computer? Thousands of people like you subscribe to our monthly Apple II newsletter, ***A2-Central***. It's a small, personalized publication concerned only with the exchange of meaningful information about the Apple II.

Just 8 pages thin, each issue is professionally typeset and packed tight with answers to the questions Apple II users around the world are asking. It's punched for a three-ring binder, indexed each February, and is considered by many to be the single most important information resource in the Apple II world.

A 3.5 disk subscription is also available, which includes both a paper newsletter and the full text of that issue in a disk file for full-text searches. The remainder of the disk is filled with programs from our subscribers, from our library on GEnie, tech notes, system disk updates, and other hot stuff.

A2-N1 ***A2-Central*, paper, 1 yr** $28.00
A2-D1 ***A2-Central*, 3.5 disk, 1 yr** $84.00

Apple II books

We carry in stock virtually every book in print that's about the Apple II. From Addison-Wesley's **Apple Technical Library** to **Sams Computerfacts manuals** to *AppleWorks Tips and Techniques*, we have them all. Write for our free catalog or call and ask about the book you're interested in. We also have in stock the accompanying disks for many books.

Full Set Specials

You can get every issue of ***A2-Central*** we've ever published—five years worth of Apple II tips, tricks, and solutions to your problems—for just $39. Paper back issues are bound and indexed. Back issues on disk are for full-text searches using software such as *FastData Pro* and include six 3.5 disks—well over 4 megabytes of information.

FS-N Indexed back issues, paper $39.00
FS-D Back issue text on 3.5 disks $39.00
FD-001 ***FastData Pro*, for searches** $49.00

No Risk Guaranteed If you aren't completely satisfied with your purchase, return the merchandise in its original package and we will refund your money in full. **We back our products!** Our 45-day unconditional guarantee means you take no risk on any product you buy from us.

A2-Central

A2-Central PO Box 11250, Overland Park, KS 66207 U.S.A. voice: 913-469-6502 fax: 913-469-6507

item #	qty	price

☐ Send me your full catalog FREE!

name _____

adr _____

_____

_____

☐ Visa ☐ MasterCard

card number ☐☐☐☐-☐☐☐☐-☐☐☐☐-☐☐☐☐ expiration date ☐☐-☐☐

M291

Prices are in U.S. dollars. All prices include shipping; airmail for A2-Central and Stack-Central, surface shipping otherwise. Request airmail and we'll add the postage to what we charge you.

CompuServe/Forum®

Our Free Offer to join Compuserve is still open. We bring you two reports from AppleFest N.J. to attract you!

The Conference

❑ As part of the recent AppleFest show held in New Jersey, Apple2000 took part in an International Online Conference organised by MAUG at the show. These are the highlights of a two and a half hour session!

Some of the cast of Characters

User ID	Name
76703,1031	LM/AppleFest
73647,1506	Bill Dooley
72451,3104	Andy - Sweden
76702,1007	JW/AppleFest
76535,1306	the Dutch...
71260,2752	Los Angeles:Dave
73710,1626	Corey
100016,401	Elsby
100016,401	bill
76703,1034	Shawn — MAUG Zoo
76004,3333	Apple2000
73220,1624	AFest Chicago
76702,756	Paul Miller

Entering AppleFest!! room...

(JW/AppleFest) Hi Apple2000./
(Apple2000) Hello there from England
(JW/AppleFest) Greetings from the AppleFest in New Jersey! How are things in blighty old? Nice to have a user group around! I am from Albuquerque, New Mexico.
(JW/AppleFest) Genesys is shipping.
(JW/AppleFest) The Zip GS is not.
(JW/AppleFest) No Apple here, no AE, no Claris. Other major names missing as well.
(JW/AppleFest) Glen Bredon was here earlier, showing off the hot new ProSel version.
(LM/AppleFest) The booth was jammed the whole time Glen was here.
(the Dutch...) Pleeeeese tell more...
(JW/AppleFest) Andy Nicholas showed up a. while back.
(JW/AppleFest) We now stretch from Los Angeles thru NJ to England, Holland and Sweden.
(Andy - Sweden) What is the hi spot of the Fest?
(JW/AppleFest) There are about ten people in the booth right now. It varies second to second! The hi spot? I don't know. Probably just the MAUGers hanging around....
(the Dutch...) JW how is Jason's new SHC?
(JW/AppleFest) We've also been showing a demo version of SHRConvert2.7b1. It's real impressive. He messaged me earlier that On Three is not going to market it after all, so he's looking for a new publisher.
(JW/AppleFest) Well, I think he's waiting on CIS to settle the GIF standard anyway.
(Andy - Sweden) I'm in a sofa, with feet on the coffe table, the GS is connected to 27" TV!!
(JW/AppleFest) Wow! That must be great for video games!
(Apple2000) Got a pair of field glasses as well?
(Andy - Sweden) Well Granny is not to keen on Arkanoid.
(Elsby) Is Andy that short-sighted?
(JW/AppleFest) Cheung Ma says his high point was seeing a 40 meg hard card for the IIgs and //e. From the Ingenuity folks.
(LM/AppleFest) Marc Farnum Rendino says the high point for him was meeting Glen Bredon.
(JW/AppleFest) Meeting Glen was certainly a major point, yes.
(JW/AppleFest) Irwin Parness, a passerby, says the high point has been being able to speak to the people who create the products.
(Apple2000) We get the impression here in the UK that Glen must never leave his keyboard
(JW/AppleFest) Loren brought a Minicam and ComputerEyes, and has been digitising MAUGers. We hope to upload some pics today!
(JW/AppleFest) I asked Glen how big the source code is these days, and he indicated by holding his hands one over the other almost a foot apart. He did say he hasn't printed it out recently.
(Shawn) Hello, World-wide folks!
(LM/AppleFest) Shawn is logged on with a museum piece.
(Bill Dooley) Hello from Escondido, near San Diego.
(Shawn) I'm across the street at the MAUG hotel
(JW/AppleFest) Not to be confused with the Macintosh Inn. :-)
(Apple2000) Using two tin cans and string Shawn?
(Shawn) Nope, an Apple Lisa (or MAC XL)
(Shawn — MAUG Zoo) Glen is at the booth last time I looked (Glen Bredon)
(JW/AppleFest) He's not here at the moment.
(Shawn — MAUG Zoo) Probably went to fix some code
(JW/AppleFest) Just adding an automatic coffee maker and disk swapper for 8.48. :-)
(Apple2000) The Zip GS I gather is not going to appear for some time, any comments anyone?
(the Dutch...) LM — did Apple leave anything behind like 2 new disks?
(JW/AppleFest) Somehow, I don't think so.
(Shawn — MAUG Zoo) Looking for Glen, right?
(the Dutch...) Yeah it's for the instant ProSel beer cooler fix! Or maybe a conversion form Apple to Pepsi. Has any Apple official been beaten lately on this fest?
(LM/AppleFest) We can't find any Apple Officials....
(JW/AppleFest) No Apple officials here. Not stupid! Oh, Larry and I saw the GS+ yesterday. Yes, I spelled it right!
(Corey) Huh...
(Andy - Sweden) GS+ the magazine or the MACHINE??
(Corey) GS +?
(LM/AppleFest) It was the magazine, not the computer.
(Andy - Sweden) Don't joke about thing like that JW :-)
(Corey) How does the Magazine look,BTW
(bill) what is the latest level for the ORCA software
(JW/AppleFest) Can you be specific, Bill? Which package? We'll ask.
(the Dutch...) ORCA-still firmly on place, oh yeah they have Zaplink..
(JW/AppleFest) MFR says ORCA/C is still in B11, unreleased. ORCA/COBOL is not out yet. :-)
(Shawn — MAUG Zoo) What about ORCA/Fortran?
(bill) we got the lot except for RES recently
(Apple2000) How about ORCA/AppleSoft Basic?
(bill) and the shell says its 1.0B
(JW/AppleFest) MDBasic is selling
(Shawn — MAUG Zoo) Where? I want to buy it
(JW/AppleFest) I think ORCA/Applesoft is waiting for ORCA/Integer BASIC first.
(the Dutch...) hahahahha
(Shawn — MAUG Zoo) No, I mean I want to get MDBasic...is it available at the show?
(Apple2000) Thought so. I suppose that we shall see the 13 sector single sided disk before we see Mac disk support on an FST!
(Andy - Sweden) JW Does HS 2.1 compiles to stand-alone stacks?
(JW/AppleFest) I'm not sure, but I think there is a separate run-time module to do that. We think it's a separately available product, proba-

bly doesn't cost much itself, if anything, but stacks you create with it are free if the stack is distributed noncommercially. $100 license fee if you sell it.
(Andy - Sweden) Uhm... ouch. Was hoping for ready to run stacks.
(JW/AppleFest) They'll be there before long. As soon as this winds down,....
(Corey) How big is the HHGTM stack completed?
(JW/AppleFest) The HHGTM stack is between 1 and 1.5 megs complete. It fits on two floppies now! The individual stacks are small enough that it works on a one meg machine still.
(the Dutch...) JW tell us about the new memory card.
(JW/AppleFest) It's supposedly DMA-compat (Shawn asked), costs about $90, goes to 4 meg with 1 meg SIMMs. It's called GS-Sauce or something like that. From the SSSI (Genesys) people.
(the Dutch...) Do they sell Genesys right now?
(JW/AppleFest) Dutch, I think so. I didn't see any packages, but Shawn says they have a few under the counter they will sell if asked.
(Andy/Sweden) Huhu, Granny want's the TV... Eurovision song contest now on. Back granny, No put away the hatchet... No.... arrg..
(JW/AppleFest) Great timing, Andy!
(Andy/Sweden) Hooray, beat her to the Uzi. can be online for a bit more now, hehe
(JW/AppleFest) MFR says MIDI Synth is a tool, it will be on a System Disk.
(JW/AppleFest) It's "released officially in beta." Available from APDA for something like $20 Comes with a development tool that lets you create your own sequences. And it kicks butt!
(AFest Chicago) Ask someone if they've seen an Apple II CD. :) I read the report on SHRC 2.7. Sounds much easier to use.
(JW/AppleFest) Not so much easier as more flexible and capable. The same functions take the same efforts, but there are a lot of new functions and conversions. Some great features! Jason does nice work.
(LM/AppleFest) The only thing that's easier is looking at big pictures that need to scroll.
(AFest Chicago) Can it convert a MacPaint file with a $0000 auxtype? Or must the auxtype still be changed, first?
(JW/AppleFest) I don't know offhand, Ed. Peter suggested that the pic of Glen should be the next ProSel-16 startup screen. :-)
(Apple2000) Great, it is always an amazing experience to see what legends look like!
(AFest Chicago) I need a picture of Glen for my shrine.
(LM/AppleFest) Hi, FTA!!!
(Andy-Sweden) Bon soir FTA
(LM/AppleFest) FTA—your demos have been in lots and lots of booths!
(FTA) What's new overseas?
(Andy-Sweden) FTA - I run all your programs at a user group meeting today. They all loved your work!!

❑ This was a choice selection of over two and a half hours of chat. It was an addictive experience and one that Apple2000 will certainly do again!

The Show Report

❑ The following is taken from a series of reports filed "live" from the AppleFest held in Somerset, NJ from May 4 to 6, 1990.

The report centers on the activities and observations of interest to members of MAUG(R), the Micronetworked Apple User Group on the CompuServe Information Service. Where MAUGers go, there is always fun!

During the course of the show, I had the help of several MAUGers in assembling this, including Mike Enarson, David Winograd, Robert Rosenberg, Peter Chin, Shawn Goodin, Ray Merlin, Kathryn Beth Willig, Larry Miller, Merry Perry, Marc Farnum Rendino, Loren Damewood, Gene Whitehouse, Robert Rosenberg, Gary Utter, and David Alden.

DAY ZERO - THURSDAY, 03 MAY 90

Greetings from the AppleFest/ComputerFest/BusFest! It's Thursday, traditionally known as "Raid the Fest Day." This raid, as you will see, was not much of a challenge.

EMI (formerly Cambridge Marketing, and now Exposition Manglement or some such) is on the job, and the security forces are in place and living up to the standards they have repeatedly set and maintained down through the years.

The MAUG Zoo is established in the Holiday Inn across the street from the Center, which makes moving back and forth easy. No waiting on the shuttle buses!

The MAUG booth (which was promised to be in a beautiful location but somehow got moved into an urban renewal zone) is next to the Quality Computers booth, and two spots down from the Apple IIgs Buyer's Guide booth. The appearance of the latter came as quite a surprise to the GSBG staffers in attendance, most of whom were not notified that the GSBG was going to be there.

(That booth later got relocated as well, and we learned that the people manning the booth were folks we'd never heard of. Strangely, by about halfway through Saturday, they were gone anyway.)

An interesting thing about the Quality booth is that the sign on the booth originally read Zip Technology, and Quality had previously announced that they were not planning to attend this Fest. We don't know the whole story on this, but somehow Quality ended up with the booth.

Things not seen: Apple booth, Applied Engineering, Claris, Chuck's Big Pencils, Zip Tech, and helium.

New things seen: Lots of non-Apple stuff (who cares?), the new issue of the Apple IIgs Buyer's Guide (which includes a two-page ad from Apple featuring the Mac SE _and_ the Apple IIgs. The IIgs photo is larger), the CDA "Serial Number Removal" booth...

Roger Wagner was setting up his booth, and had the little touch-screen kiosk set up running a HyperStudio stack that lets Festgoers locate booths and subjects of interest.

Checking out the kiosk, Kathryn Beth noted a subject named "Online Services," and hit the button to see the list. GUESS WHICH SERVICE WAS MISSING FROM THE LIST.

We gave Roger some serious hell about this, and made him correct the oversight on the spot.

After things were pretty well together at the MAUG booth (with the usual Cambridge-type flair for thoroughness, our three rented GS's are missing one CPU with a SCSI card and two modem cables), we all adjourned over to the Zoo and from there, caravaned over to Catari's for Italian food and good times.

DAY ONE - FRIDAY, 04 MAY 90

Activity at the MAUG booth was lively from the start. We had people coming in all day, asking all sorts of questions. Some samples:

"What does that MAUG thing stand for?" "How do I join?" "Is this the CompuServe booth?" "Is this one of those things you have to buy a modem to use?" "Is this NAUG?" "I have a CompuServe account, how do I join your Forum?"

And so on. Variations were endless. Some folks had short questions, others needed a half hour or so to deal with. Having two online-capable machines handy really helped; we were able to actually show some people how to do something they hadn't figured out.

We opened the booth with no sign; the official one hadn't arrived yet. We found a "Hello, my name is..." sticker, wrote MAUG on it in big letters, and stuck it up on the back curtain. Looked great. Later, a slightly larger sign appeared. We picked up a dot-matrix printed banner somewhere mentioning MAUG and Apple II productivity. Then Neil Laubenthal arrived with a banner he had printed up for us that expanded the MAUG acronym and listed the "best place" motto. It must have been confusing for some Festgoers who, upon passing by more than once, probably thought we had a lot of booths.

The missing components from yesterday arrived, and we spent some time trying to get all three GS's up and running at once.

At various times throughout the day, the machines ran telecomm programs as we appeared live online and demonstrated the Forum, the

"Hitchhiker's Guide to MAUG" HyperStudio stack, and a demo of a super new SHRConvert version (no, it's not out yet, yell at Jason please). Sometimes, MAUGers with new software toys would fire them up and run them as well. The diversity of the screen displays seemed to help get attention; people would stop in to see what in the world we were doing.

The SHRConvert version mentioned above was 2.7b1, and was not released outside the MAUG staff. It was provided by Jason as a demo of the version 3.0 yet to come. Several new features were apparent, including easy (and FAST!) mouse-based scrolling of tall pictures, zoom to 4x, conversions from Amigas and some other new formats, import & export of Finder icons, capture of TDM 40- and 80-column screens, flexible size and aspect adjustment, cropping, printing, and much much more. All the file utilities (delete, rename, redefine type, etc.) are now combined into a single dialog box; pick a file and pick what you want to do with it. There was a lot more to this extensive revision, and we hope to see the release of the new package before the too-distant future.

Oh, and the AOL Sysops came by and saw it and got this REAL hungry look in their eyes. They wanted it BAD

No, they didn't get it.

The panel sponsored by MAUG on Personal Productivity Using Your Apple went moderately well. Robert Rosenberg couldn't find the location for the panel and he walked in while Larry Miller was discussing hardware. Robert also nearly fell off the rear of the speaker's platform (hey, it was dark, there wasn't much room, and no one could make out who any of the panelists were anyway). Robert was also upstaged just a tiny bit by Barry Fox's discussion of desktop publishing.

Shawn apologized for the sound of his voice (which grew worse as the day went on) and commented that "he must've caught a virus from his computer." He spoke on telecommunications, mentioning both commercial services and local BBS systems. Gary Utter discussed program launchers and hard disks and Merry Perry compared database programs.

David Winograd showed up to moderate the panel and to show off his expen$ive $uit. Major problems seemed to center around the quality of the sound system, the noise of the background, and the inability of the GEnie folks to get enough light to videotape us.

The show crowds weren't exactly huge, but considering that this was a work day, the number of people that were there portends well for the rest of the Fest. Two EMI reps, when asked, said the turnout was "better than expected."

Larry Miller showed up early in the day, and Glen Bredon stopped by to say hello. He had along a number of ProSel-16 disks, which he would happily swap for an original disk, should you happen to have yours along. Anyway, MAUGers were most pleased to meet Glen for the first time, as many have long believed he didn't exist anyway. He does, and so does Mike Dodge. But that's another story.

Michael Fischer came by several times during the day to say hello. Roger Wagner came by to see if anyone had a copy of the Utilities disk for the new SCSI card. Whoops!

On the subject, HyperStudio 2.1 is now out and around, and shows a number of obvious visible differences from its predecessors. As it's a free upgrade from 2.0, expect it to become the standard very quickly. This is important, as 2.1-saved stacks cannot be loaded by 2.0.

Shawn convinced Pam Wagner to give him a 2.1 update disk, but she made him promise to provide his HyperStudio disk serial number no later than tomorrow or face a future with the Vienna Boy's Choir.

Roger's booth was busy all day, one of the busiest at the show. Apple users as well as users of those alien machines were captivated by the scenes they were seeing. Roger was also selling some new clip art and stack disks, Stack Central demo disks, and his other utilities of course.

Well, here we are in the fifth paragraph in a row about Roger Wagner, so that should cue you in to what's coming next. Could it be? Is that what it looks like?

After last September's AppleFest, many of the Speakers and direct participants received an apparently personal letter thanking us individually for being the single most important person in the show (or something along that line). In the letter, mention was made that the crowd of "nearly 20,000" was "the largest ever at an AppleFest." Today, Larry found some show literature that mentioned that over "its past five shows, AppleFest has drawn an average of 26,000 attendees to each one." Think about that.

Loren stopped by the Prodigy booth, and told a rep that he was real impressed with the software, and wanted to see the Apple II version. The rep told him there wasn't one, and there was no intention of making any. When asked why, he went into the usual spiel about how the Apple II was dead, no one was buying or interested in buying Apple II software, and so on. Loren said, "That's too bad, I'd sure like to buy an Apple II version of your software." "You and a lot of other people." Loren told him to think about what he had just said.

At the Quality Computers booth, three packages happened to be displayed next to each other: PublishIt 3, GraphicWriter III, and the 8 MHz Zip Chip. Sort of a Famous Vaporware Expo.

We checked at several dealers, and surprisingly none of them seem to have any CompuServe startup kits. Unfortunate, as we have had several folks express a desire to pick one up.

Peter discovered an interesting freebie most of us would have missed. On an unattended table, there was a stack of 8x10 green envelopes advertising "a sweet deal from Commodore." Peter discovered that inside the envelope were nice little packages of jelly beans (along with promotional material for some kind of computer).

The Thunderware folks were borrowing a part of Roger's booth to demonstrate the Lightning Scanner. They had this hysterical pamphlet that pictured a scan of a woman's face labeled "Lightning Scan." The same picture was right below it, labeled "Thunderscan." Looked about the same. Under that was another scan labeled "Quickie." It was little more than a thick black outline of her face. The fellow was demonstrating the device, and it appeared to work quite well, generating nice 640-mode B&W scans quickly and easily. He was scanning and loading the scans into HyperStudio.

Genesys apparently is shipping. Many told us so, and their literature implies so, but we couldn't find any Genesys packages at their booth.

BEHIND EVERY ZIPPER...

Late in the day, someone noticed the name tag on a fellow standing at the Broderbund booth (directly across the aisle from us). The tag read "Tony Vece." No Zip booth, but Zip people! He did not stop by the MAUG booth at all.

Anyway, he and another gentleman from Zip were removing a cover from a GS in the Broderbund booth. They got the cover off, and removed an interesting looking interface card from the machine. The card was shaped a lot like a well-known GS accelerator card from another manufacturer, and had a ribbon cable leading to an obvious 65-series microprocessor pin array. They put it into a box and left the booth for parts unknown. Peter got a good look at it at another booth, and reports that it is clearly a wire-wrapped prototype and still tends to crash easily in certain combinations. Running for the checkbook yet

Kathryn Beth Willig spoke with the Seven Hills people, and learned that they are working on IIgs drivers for the H-P DeskJet and DeskJet Plus laser printers. When? They don't know. How much? They don't know. "Maybe September." Bets?

INTERLUDE

One of the advantages of having machines available on the show floor is that we can check in and see the latest messages and to some extent maintain conversations about cur-

rent events in the show.

In an early logon, we discovered a message had been posted by Bob Consorti in response to the earlier reports. Bob was particularly surprised by the story about the Zip GS, saying, "I'm quite surprised that Zip isn't showing their Zip GS board. Two weeks ago at the National Apple Users Group meeting in Chicago,

Zip had a booth and was passing out a flyer on the 8 mhz Zip GS board that they were 'RELEASING' at AppleFest in NJ."

Well, some of us weren't surprised.

There was already a reply posted to that message, from Ed Floden. Ed commented that on another online service, Vece had been "happily announcing that Zip Tech would be displaying their wire-wrapped prototype at AppleFest."

Gary Utter, who was at the Fest, ran across Vece and the mythical vaporboard, and engaged him in conversation without identifying his MAUG affiliation. As Gary later put it, "He showed me the board, let me hold it and examine it up close. The chip count is quite low, and the board itself is much smaller than a [TransWarp GS]. Tony SUGGESTED that they anticipate eventually being able to put it on a chip. He stated that it only draws a few milliamps, as opposed to two or three amps like 'some other cards' that he said (with a sly smile) that he could not name. He then went on to state that Zip did not intend to ship their cards with anything so unfriendly as a ROM chip that needed to be updated by the manufacturer. No no no...THEY will do the configuration with any of the following: NDA, CDA, CDEV or a System program. ALL of these will be shipped on a disk, and in addition, the card will have a set of DIP switches, so the user can configure it manually, and never have to worry about it again. (MUCH better than what some OTHER cards use, eh?)"

Referring to the show's lack of new products, Shawn told Ken, "Ingenuity, INC had a couple of interesting things at Barney [Stone]'s booth– a 40 meg hard disk on a card for the II, and their C drive for the //c. I also noted very little from IBM or Commodore, though Commodore had a nice booth. I think this indicates that EMI may have misjudged the audience here, did not do sufficient planning or marketing for this fest (witness the lack of vendor participation and the sound/lighting problems of the seminars), and disappointed many folks who attended. The Fest was fair to poor, not the best one in the world, but not as bad as it could have been. While we high-powered users tend to attend for the marketing/price value, many others come for the education that they can receive and be able to talk to the 'movers and shakers' in the industry."

GARY'S REVIEW OF THE APPLEFEST:

First the bad points, there were no significant new hardware or software releases. The conferences were RUINED by the poor lighting and terrible acoustics. And there was an absolute DEARTH of decent souvenirs! Even the memorabilia that was for SALE stank. The people that sell Apple logo stuff to dealers and citizens could have made a FORTUNE with a booth. (Yes, I'm sorry, but it's true, neat souvenirs can ALMOST make up for no hardware or software.)

Now the GOOD points... I had a wonderful time. It was great meeting everybody, even though no one (except Tony Vece, of course) was anything like what I expected. I got to spend lots of time talking to almost all my friends and made several new ones. I got to spend a bunch of time talking to people like Dave Hill and George Wilde, planting the seeds of new features. And I especially enjoyed my chat with Neil.

And the low attendance had ONE good point, less competition for prizes! While I was busy working the booth and the crowd, Susan was busy entering drawings, and we came away with $400 worth of software. On the whole, quite satisfying.

Since this was my first Fest, I don't really have a basis for comparison, so I am not as disappointed as I might be, heck, I LOVED IT TO DEATH!

DAY TWO - SATURDAY, 05 MAY 90

Hello again from the AppleFest! Day Two is in the archives, and the MAUGers are tired but hanging in there. Still one day to go!

Today was substantially different from yesterday. Not being a school or workday, Saturday brought out people en masse. This was one crowded Fest!

Glen Bredon stopped by again this morning. Seems that Loren had immediately spotted a bug in ProSel-16 8.47, which Glen had brought by yesterday. Today Glen had a fixed 8.47 for us already. He hung around the booth for a while rapping with the crowd. He took a keyboard for a while and showed us how the new ProSel appointment calendar works. Loren showed him a way to crash ProSel with a tactical application of TDM (Loren says that technique is Finder-hazardous as well).

The booth was incredibly crowded during the time Glen was there; word got around. After he'd left, some GEnie folks came by, asking if it was true that The Master had really been there. When we told them it was so, they looked a lot like the AOL people who had seen SHRConvert 2.7b1 yesterday.

The big thing for the day was the First International MAUG Online Conference. It started about 2:00pm Eastern time and didn't wind down until just after 5:00. It was kind of interesting to watch the CO grow. It started out consisting only of myself and Larry, on machines about two feet apart. Then Andreas Wennborg signed in from Sweden, widening the scope of the CO considerably in one shot. Then Dave Gair popped in from Los Angeles, and we were widespread indeed!

There were up to 15 members in conference at a time, from such diverse places as Los Angeles, Chicago, Sweden, England and Holland. We had two machines online in the booth, and during the CO both Peter and Shawn happened to make trips back to their hotel rooms, and logged on from there. At one time we had four local machines on!

On a couple of occasions, someone would ask about a certain product or if a certain acquaintance was in a nearby booth. If we didn't have the answer offhand, we'd dispatch someone to find out. It was a neat way to allow MAUGers to participate in the Fest even though they weren't here.

Larry and I had some fun at one point when there were only a couple of users in the conference; asked what was the most interesting thing we'd seen, we told them it was the GS+, which we and Shawn had seen Friday. After they choked for a while, we mentioned offhandedly that we were referring to the magazine by that name, which has a booth here. Wonder what they were thinking of?

ALIEN MINDS...

Synnovation was demonstrating (at a user group booth) a prototype of their TurboRez graphics board for the GS; looked real impressive, but clearly it's not ready to ship. Their literature mentioned that they're aiming for a September release, though they're not committing themselves to that date.

The Ingenuity folks had a demo of two products, the internal hard disk for the //c, and a "hard card" hard disk on a card for the IIgs and //e. Neither is shipping yet.

I kept trying to stop by and say hello to Mike Westerfield at the Byte Works booth, but he always had a crowd of hackers about, and all were talking in hex. Hard to get his attention; had to pop a flashbulb in his face to get him to look up long enough to say hi!

Tom Weishaar is here, and is often seen walking about the show floor and talking to anyone who says hello. Shawn spoke with him, and Tom graciously invited the MAUG folks to the GEnie party for tonight.

Marc found a "computer furniture" booth with a IIgs set up (it was one of those tables where you look thru a glass plate on the tabletop to see the computer display underneath). Marc was taking pity on these folks, as they had absolutely no software to run on the machine, not even a System Disk. So Marc gave them one. Andy Nicholas came over to do a ShrinkIt GS

demo, and the fellow in the booth lamented that he did not understand what was going on with his computers. Marc was highly impressed with the demo.

DAY THREE - SUNDAY, 06 MAY, 1990

Sunday wasn't as packed as Saturday. There were a LOT less people present on the last day of the show.

Larry Miller and I happened into the Commodore booth and asked for a demo of the new Amiga 3000. The rep spent a good half of the "demo" telling us how bad Apple is and how poorly Apple designed the Macintosh and how Apple wasted its ROM space by putting a picture of the design team within it (he really emphasized that one) and so on. The demo consisted of showing us how windows work on the Amiga. Slightly different than the Apple desktop interface, but mostly familiar. It moved smoothly, looked very pretty and sort of NeXT-like, and allowed easy icon editing on the fly, and could even make windows larger than the screen.

Over at the Beagle booth, a couple of recent TimeOut releases, TextTools and MacroEase, were being showcased, but due to bad timing, I couldn't seem to hit the place at a time when someone was available to demo either of them. They both looked interesting, particularly TextTools, which Mark Munz described to me as "a way to make you feel really lazy in the AppleWorks word processor."

At Barney Stone's booth, a fellow from Ingenuity was showing prototypes of two interesting products. One was an internal 40-meg hard disk for the //c. This nifty little package replaces the //c internal drive (the demo machine was a IIc+, but the drive will work with either //c model). The removed drive, either 5.25 or 3.5, can be placed into an optional external case and chained from the smartport. Just the thing for the traveling Apple user! Shipping? Don't know. "Real Soon Now." "As soon as we get the parts in." Sounds a little familiar.

The other product was a hard disk on a card for the //e and IIgs models. Very light, very small. Didn't get any real details, and no idea how far it is from shipping, but I have a feeling it'll do well.

Barney Stone later corrected this for me: "The Ingenuity C-Drive is 20, not 40 megabytes (they may do a 40 later on), and is already shipping in limited quantities. We should have some soon. The price is $499. The InnerCard is 40 megabytes, it's a few weeks away from shipping, and the price will be $699."

The Triad folks, makers of GDL, the Graphic Disk Labeler, were taking up some space at Roger Wagner's booth, demonstrating their program and printing lots of colorful disk labels made from IIgs graphics and printed on the ImageWriter II with a color ribbon. At least one merry MAUGer bought one.

Neil Shapiro appeared at the MAUG booth in late morning, and everyone was glad to see him. He brought along the whole family, and they seemed to have a good time too. Tom Weishaar, Oli Roosevelt and Kent Fillmore—past and present Sysops on competing systems— all got a chance to chat with him.

Neil seemed pleased with the way things were going in the booth, and took some time to wander about the show and see what there was to see.

Twilight Zone occurrences: You may know there are two Peter Chins that tend to show up at these things. Ours, and "the other one." Well, on Sunday Larry and I were walking about the show when we ran into Peter Chin. Peter asked if we knew where Peter Chin was. We pointed at the MAUG booth. Peter immediately took off in the other direction... Larry and I are still puzzling over that one.

GENERAL OBSERVATIONS:

The dealer booths appeared to be doing brisk business throughout the show. Quality Software, next to the MAUG booth, never seemed to have a moment without at least a small crowd around it.

In reality, the show itself, considered as a national-class Apple II show, was a major letdown. It was very small, the keynote speakers really had nothing to do with the Apple II, the show was promoted as a multiple-machine show in which the Apple II would be grudgingly permitted to participate, Apple itself didn't bother to show, and most of the major Apple II publishers and manufactures skipped it. Had I spent my money to travel to, stay near, eat during, and attend this show with no connection to a booth or other show operation, I'd be awfully angry about now. It really would not have been worth it.

The floor space of the entire building was about the same as the exhibit floors at the last couple of AppleFests, but there were no separate classrooms at all, so the seminars were held on the show floor in curtained-off areas. Further, about half of the remaining space was taken up by the food concession and two large curtained off areas that contained NOTHING. There were four and one half aisles of exhibitors, and just over half of these were Apple II related. That's right, the Apple II managed to dominate the show even though EMI tried real hard to attract everyone BUT the Apple II folks.

Nonetheless, I have the feeling that the upcoming Arizona Apple Fiesta is going to be significantly larger than this show (with respect to the Apple II and Macintosh).

Incidentally, have you noticed a lack of mention of the Mac in these reports? That's because it was barely even evident at the show! Sure, there were Macs at a few booths (even the Beagle Bros booth), but there were very very few (if any) Mac-specific booths present.

Nor were there that many MS-DOS based displays; IBM itself (Northern NJ Marketing Group or some such) had a large booth set up with a couple of dozen PS/2's running, but there was no significant interest in it. We never saw more than a few IBM employees and maybe two or three attendees standing around in it. In contrast, the "AppleFest Hands-On" booth, featuring as many Apple II and Macintosh computers, was always crowded, with people sometimes standing in line to use an Apple.

Atari? Invisible. If there was anything Atari-related at the show, I didn't see it. And I did look, though not that hard.

The "generic" booths, stressing no particular computer type (dealers, the Nada-chair folks, educational organizations, etc) seemed to have some interest, though more than one MAUGer noted that at the dealer booths, the Apple software had the only crowds around, and the IBM and other stuff was pretty much ignored.

The Commodore booth seemed to be the only non-Apple booth that really generated interest.

Clearly, even though EMI advertised the non-Apple aspects of the show to Apple users, they must have somehow sent the message to the non-Apple people that it's an Apple show. At least, that's how it appeared.

It would be hard to recommend this show to anyone outside of MAUG or some organization with a separate reason to be there. A local resident would have a worthwhile time, but travel from halfway or more across the country would be hard to justify.

Peter Chin said, "If it wasn't for the MAUG booth, we'd be bored to death." Ken Buchholz spent two hours looking about the place and left in disgust. While Peter and I were talking to Mike Dodge, a Festgoer stepped up and asked Dodge if the show floor was the entire show; when Dodge informed him that it was so, the fellow began to express extreme disappointment and chagrin; Peter and I remembered we had to be somewhere else.

AppleFest is headed downhill. Since they've been trying to reduce Apple II involvement and increase the number of machines involved in the show, it's been getting smaller and smaller. I'd sure like to see a national Apple II show, and I believe it would do quite well.

Of course, the show was a great success for MAUG and MAUGers! As long as we're going there as a group, the trip will be worthwhile.

See you at the next one!

This report has been edited down from the full text version to be found on MAUG

InSyder

A new dawn

The dawn of a new decade heralds the arrival of an exciting new concept in hard disk technology. In true future spirit, Cirtech's pioneering design team brings you InSyder, a *slot-in* hard disk card for the Apple //.

InSyder simply plugs into a standard slot in the Apple //e or IIGS – there's NO power supply replacement, NO noisy fan and NO awkward cables! InSyder is fully compatible with GS/OS, ProDOS and the major operating systems. And with direct hardware access and full disk caching, InSyder supplies the performance demanded by the serious Apple user.

Available in 20 and 40 Megabyte capacities, InSyder also provides a full feature SCSI port, supporting external devices. You can even share an external hard disk with up to seven other users. An optional Printer Adaptor also allows you to connect a parallel printer without losing valuable slot space!

InSyder's superior specification provides the totally integrated solution for the needs of the dedicated Apple user.

InSyder – the dawn of the future!

InSyder 20 Megabytes – £488.00 InSyder 40 Megabytes – £588.00

(Prices exclude VAT)

CIRTECH — *the way forward*

CIRTECH (UK) Limited, Currie Road Industrial Estate, Galashiels, Selkirkshire, TD1 2BP, Scotland
Telephone: (0896) 57790
Telex: 9312130256 (CI G)

Smart Money GS

John Beattie takes a look at an accounting package for the IIgs

A little knowledge may be a dangerous thing, but sometimes too much knowledge can be a real pain in the neck.

It seemed obvious to me that, as an accountant, I was ideally suited to review this Financial Manager package from Sierra On-line. It is ProDOS 16 based; installs on a hard disk and is full of useful features such as graphs.

However, in the same way as I imagine a trained musician would find many music making programs to be confusing, I found I had problems with Smart Money GS due to its very ease of use. It reminded me of the 3 rules: if something doesn't work - hit it; if it still doesn't work - try a new battery; and, finally, if all else fails, read the instructions. I know none of you would ignore the manual, but being an accountant with 25 years experience made me think I knew it all.

Smart Money GS (there is a //e and//c version, but I haven't seen them) lets you set up accounts, record transactions and prepare statements showing income and expenditure and net worth among other things, all through pull down menus and mouseclicks. The program almost follows the Apple standard for keystroke equivalents, although I would have preferred Open Apple-O to open a file, rather than to start up the Automatic Transactions portion of the program. Making a mistake like this will not, however, cause any problems and can easily be stepped back from.

To start you off on the right foot, there is a tutorial which, with a demo file provided on the program disk, I would advise you to run through. It covers all aspects of the program and explains clearly what is happening at each stage. In any case, the program has been written so that errors (should you make them) can be corrected easily. The electronic equivalent of tearing a loose leaf sheet out of the book or using Tipp-ex to hide a mistake is important in any package like this.

In addition to all the expected features of an accounting package, there are 2 extra headings on the menu bar, Planning and Miscellaneous.

"Planning" gives access to small but useful features to calculate Loan Amortization (the calculation of repayments showing their component capital and interest parts), Compound Interest and Annuities, plus a Calculator which is very rudimentary indeed.

Under the heading "Miscellaneous" on the Menu Bar, there are a number of useful additions: Reconcile lets you check off items, particularly in a bank, credit card or building society account to make sure that your figures and theirs agree; Graphs lets you

easily show (and print) bar charts of accounts information, plotting actual against budgets and showing last year's figures if required, on a month by month basis; Print Checks would allow American users to print out cheques to creditors but I am not sure if this is allowable under British banking rules; New Year creates a new file but brings forward balances on all asset and liability accounts, setting things up easily for the new year; Extend File allows you to make room in your data file by deleting all the transactions which you no longer need; Import File lets users of older versions import files; Export Files allows a file to be saved in the DIF format which lets AppleWorks users open it and manipulate the data in any way they want; Preferences lets you specify and save to disk information about your printer.

As in all the pull down menus, the last item is "About....." and gives considerable help in context in each case.

Reports, either in the formats given with the program or made up by the user, can be printed out or displayed using various criteria for the information to be sorted on: dates, accounts, types of transactions etc. As I said above, files can also be exported to AppleWorks and the information manipulated there.

Appendices to the main reference manual include a very sensible personal note from the President of Sierra On-Line which gives a wealth of down to earth advice including the classic "Don't panic". He includes one or two tips which only a very experienced user would have thought of and goes step by step through the trauma of trying to reconcile a bank account. A further appendix sets out some commonly used accounting and financial terms with clear explanations of their meanings.

There are a couple of things I didn't like: the dates are in American format and, while this is obvious once you're past the 12th of each month, it can be annoying to type in the wrong date - a minor point and one which could surely be easily corrected. Smart Money GS was designed primarily as a personal financial and bookkeeping package rather than as a medium to record the transactions of a small business, so the reports and graphs assume that your year runs from January to December. If this is not the case, this can lead to some strange looking graphs and printouts, although as long as you remember the problem, it may spoil the look of the graphs, but it isn't fatal. Personally, I feel that the convenience of installing it on a hard disk and the mouse based interface make it very usable and while it may not have been designed to accommodate a small business, with a bit of forethought and planning when adding new accounts, it can easily be used to do so.

Smart Money GS needs an Apple IIgs with a minimum of 512K of Ram.

John Beattie

info

Product : Smart Money GS
Publisher : Sierra On-Line
Available from :
MGA SoftCat
41 Cinque Port Street
Rye
East Sussex TN31 7AD
0797-226601
Price : £79.95 WYSIWYP

Value : 🍎🍎🍎
Performance : 🍎🍎🍎🍎
Documentation : 🍎🍎🍎🍎

Memory Moan

A concerted whinge about pre-GS memory management by Bryn Jones

Memory Moan
(Memory maps are simplified.)

New Era
When the][e was introduced, it contained facilities for a 128k banked memory system. All you needed to implement this was an extended 80 column card.

Old Era
Using the un-extended 64k][e was like using a][Plus with a language card. DOS3.3 and the graphics screens remained where they were. For historical reasons, the latter were stranded in the middle of main memory. Graphics programs were put before them, after them, or wrapped around them. To add insult to injury, the graphics suffered from chronic colour anomalies.

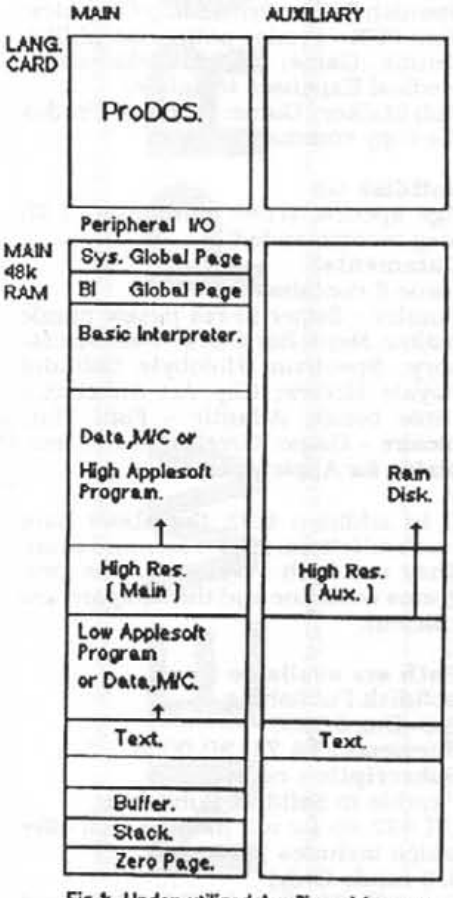


Fig 1: Under-utilised Auxiliary Memory.
(ProDOS with BASIC System.)

Solution?
So Apple solved all this by placing a new, improved, graphics system totally in aux, right?

Wrong! Instead, double high res. arrived. Something of an afterthought, it banked with standard res., and occupied the same central site in aux which had caused so much trouble in main before. There wasn't even any Applesoft support for it.

See ProDOS (Fig. 1)

Oh well, eventually they will give us a new operating system to utilise the banked memory, right?

Wrong! Along comes ProDOS: it's not only hierarchical, it's HUGE. So they put it all in main memory! True they use the language card area, but there is still no more room for our programs than in 48k DOS3.3 days. Maybe enthusiasts don't write many big programs, but what about the developers?

Ram Disk
Wait a minute. Those crafty Apple chaps have solved all this by using aux. for a ram disk. At least you can instantly transfer code galore into what's left of main memory. All you need now is a lot of fancy ProDOS compilers with graphics circumnavigation and overlay facilities to do it.

Well there's Aztec C isn't there!

PS: Don't forget to put an 8k dummy file in /RAM if you want to avoid having a hole bashed in your double res. auxiliary screen!

More Banks
So you add that AE/Checkmate memory expansion job. It's just more banks to swap with the one you've already got, but by installing a 65816 board as well, you can access the memory linearly too. All you need is an OS to support the new sixteen bit system. Rumour has it, the chap who was writing it went on his honeymoon, and returned to find GS's in the shops. Oh well, at least you can use sixteen bit assembler with eight bit languages (using ORCA/M 4.1) Isys Forth supports it too, but thats about all.

No DOS
Dyed-in-the-wool Forth programmer, he say: who needs DOS? It clutters up memory with a huge chunk of code, much of which remains unused by the average program anyway. 'Just give me a super efficient driver to put Forth blocks on disk; I'll write the rest from scratch.'

Great idea, but what about the new driver needed for each new mass storage device that comes along?

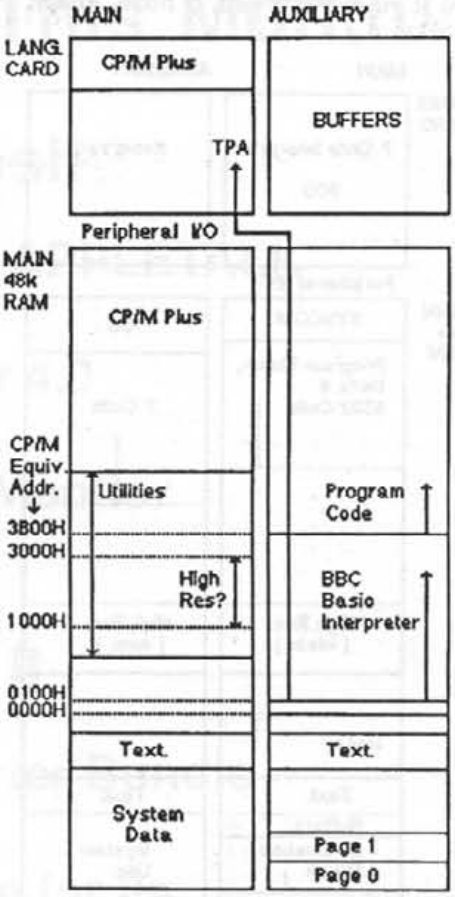


Fig 2: Large TPA with banked OS.
(Cirtech CP/M+ & BBC Basic.)

So let's try Cirtech's CP/M Plus. Now these chaps really know what they're doing. Main programmable memory (the Transient Program Area or TPA) starts at 0100Hex in AUXILIARY memory. It transfers to the main language card area for the last bit of memory before reaching the code which bank switches and calls the OS. The bulk of the OS is in main 48k ram. Result: A great big TPA. Granted CP/M Plus isn't hierarchical, but it does have 16 user areas. On any particular drive, you only see those files which are applicable to your current area. General utility files can be kept in User 0 as 'System' files which are universally accessible. That's not bad at all. What's more, plenty of good compilers are available, and tons of PD software.

At this point, the astute will see that the OS in main memory does not overlay the area where the video system expects to find standard res. graphics. Obviously, those Cirtech

chaps will have provided banked graphics support for selected interpreters and compilers, right?

Wrong! They've provided patches for MBASIC and GBASIC. The latter has it's interpreter wrapped around the graphics area. This is for Apple graphics under standard CP/M, but should no longer be necessary for CP/M plus (unless your providing double res. support) So it's back to Apple][programmer's solution number one: Do it your ****** self. (I have, and it works)

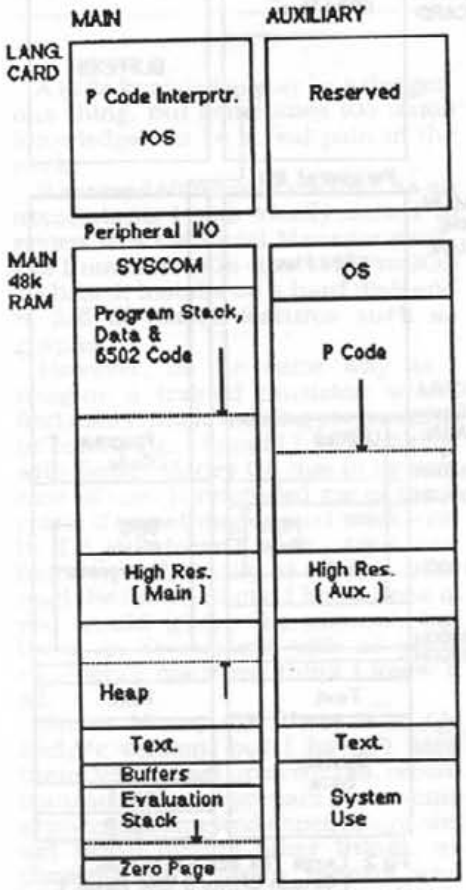


Fig 3: Double Res. Piggy-in-the-Middle. [128k Pascal 1.3]

Perhaps this is Apple's ultimate solution. There is a 128k version which makes full use of banked memory. You can even squeeze double resolution graphics into the middle! It's a great language with fabulous documentation. Unfortunately the Apple Pascal OS is specific to the language, and is not exactly everybody's cup-of-tea. Nevertheless, many swear by it. It is a pity Apple no longer supports it, but who supports anything pre GS these days?

Digisolve

Why not banish that middle memory bottleneck with Digisolve Graphics. Not only does this system provide vastly superior graphics for the][Plus/][e user, it uses it's own memory too. You can program it from any environment you care to choose. Just access the Digisolve registers via the input/output area. Of course, they stopped making it years ago, but keep your eyes open for that second hand bargain!

What Now?

Buy a GS? I'm still waiting for the Mac IIcx to come down to five hundred quid!

Bryn Jones

The New London Telephone Codes

I, like I am sure many users, was faced with altering telephone numbers on my address and other databases. However AppleWorks plus Ultramacros as so often can provide a very elegant solution. The series of macros set out below will make all the necessary amendments correctly for the various London exchanges.

With the database in single record layout, and the cursor on the telephone number field, Solid Apple T will start the process.

```
start
T:<adb:
onerr stop:
begin:
{loop through records}
$9=cell:
{capture current tel number}
$1=left $9,2:
{check if 01- exchange}
if $1="01" then
sa-c:
{subroutine to change number}
else oa-down:
{goto next record}
endif:
rpt>!
C:<adb:
{subroutine to change number}
$2=mid $9,4,3:
{current exchange number}
$3=right $9,5:
{current telephone number}
$4 = left $2,2:
{store first 2 digits exchange
no}
if $4 = "21" or $4 = "22" or $4
= "23" or $4 = "24" or $4 = "25"
or $4 = "26" or $4 = "27" or $4
= "28" or $4 = "32" or $4 = "35"
or $4 = "37" or $4 = "38" or $4
= "40" or $4 = "43" or $4 = "48"
or $4 = "49" or $4 = "58" or $4
= "60" or $4 = "61" or $4 = "62"
or $4 = "63" or $4 = "70" or $4
= "72" or $4 = "73" or $4 = "79"
or $4 = "82" or $4 = "83" or $4
= "92" or $4 = "93" or $2 =
"473" or $2 = "474" or $2 =
"476" or $2 = "511" or $2 =
"512" or $2 = "515" or $2 =
"537" or $2 = "538" or $2 =
"976" or $2 = "978" or $2 =
"987"
{check exchange to change to
071}
then sa-D:
{subroutine for 071 exchange}
else sa-E:
{subroutine for 081 exchange}
endif:
sa-T>!
D:<adb:
oa-y:
{clear current number}
$5="071-"+$2+$3:
{construct new number}
print $5:rtn:
{enter $5 as number}
oa-down:oa-tab>!
{goto next record in no field}
E:<adb:
oa-y:
{clear current number}
$5="081-"+$2+$3:
{construct new number}
print $5:rtn:
{enter $5 as number}
oa-down:oa-tab>!
{goto next record in no field}
```

I hope it may not be too late to save some members a lot of tedious work!

Harvey Nyman

Apple Finder Update

Softdisk

For Apple II+, IIc, IIgs and Laser 128 computers.

Comments:

Issue 99 contained:-
Spanish Tutor; Print Shop Graphics; Font PFX - Prodos pathname utility; Tennis - Game; Appleworks lesson: Medical Expenses template; Sub Stalker - Game; Procopy - Prodos file copy command.

Softdisk-GS

IIgs specific (768k minimum, 1.25 meg recommended).

Comments:

Issue 6 contained:-
Puzzler - Super hi-res jigsaw puzzle maker; Menu Bar Clock - Desk Accessory; Spectrum Holobyte Solitaire Royale Review; Clip Art Jukebox - three songs; Atlantic - Font Marbleaire - Game; Greeting Card Templates for Appleworks GS.

❑ In addition both the above have readers' letters, game clues and so on. They are both very good. The programs work fine and the company are efficient.

Both are available from:

Softdisk Publishing
P.O. Box 30008
Shreveport LA 71130-0008.

Subscription rates:

Payable to Softdisk Publishing,
UK $27.95 for a 3 months trial offer which includes 1 free disk.
(US funds Only)
Or call 0101-318-221-8718 and quote a MasterCard or Visa number.

BIDMUTHIN

NEW PRODUCTS

New Products This Month

Macintosh

HP DeskWriter with APPLETALK

PageMaker 4.0

Radius Pivot Monitor

Apple II

New PC Transporter Bundle

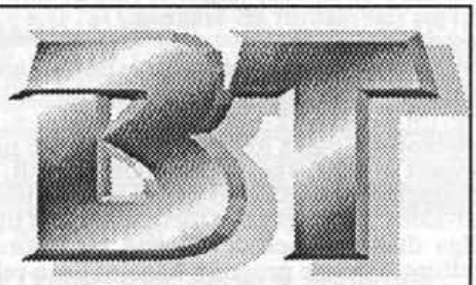
New 3.5" Drive for IIe

Insyder 40Mb

Call for details.

Bidmuthin Technologies Ltd.

Brent House
214 Kenton Road
Harrow Middx
HA3 8BT



Tel: 081-907-8516
Fax: 081-907-2756

AppleXtras

❑ The second issue of the AppleXtras disk went more smoothly than the first. The only reported problem is from those members who have still not upgraded to an enhanced //e, they were unable to run some of the programs on the P8 disk.

If you refer to the article by Alan Remu in the April 1990 issue of Apple2000, you will see that the unenhanced //e was only sold for about 12 months from its introduction in 1983. Since 1984 the //e has only been released in its enhanced form sharing a software compatibility with the //c and the IIgs. However, many of the //e's in the UK were sold in that first 12 months, and there are quite a few that have still not been upgraded. Most of the new software being released assumes that you have the enhancement fitted or you are running on a //c or IIgs. There are an increasing number of programs in the ProDOS library which require this enhancement.

To enhance a //e you must change four chips. The CPU must be changed from a normal 6502 to a Rockwell R65C02. There are other 65C02 chips around, but only the Rockwell one has the full enhanced instruction set required by Apple software. Changing the CPU will allow much of the software requiring the enhancement to be run, but to get the full capability of an enhanced //e, the monitor Roms and character generator must also be changed.

The enhanced Roms do not have the cassette tape routines but instead they re-introduce the mini-assembler. They also have a much enhanced 80 column scrolling capability. The new character generator chip has the full set of MouseText characters used by many of the newer programs.

Two routes are available for upgrading. Either you buy a ready made kit or you get the chips and do it yourself. The original Apple upgrade kit is no longer available as new in the UK. You may however be able to find an odd kit in one of your dealers, but if this is not possible, try MGA for an enhancement kit or try Eric Sausse (0724-855795) who may also be able to help. To do it yourself, you will need a Rockwell 65C02, three 2764 EPROM's, an EPROM burner and either the source code for the chips or a friend with an already enhanced //e. I must emphasise that the code in these Rom's is the copyright of Apple, and may only be copied for use within an original //e. The //e Rom's are not yet out of copyright.

The 65C02 and blank chips may be obtained from Electromail (0536-204555) or Maplin (0702-554155).

❑ This months disks are described in the next columns. However I would like to mention that it is becoming increasingly impossible to make these disks completely 'stand-alone', and yet keep them fresh and up-to-date! On the IIgs disk we include a song for SoundSmith. The SoundSmith music program has not been released on the Xtras disks, but is available on 2GS029 or TABBS.

ShrinkIt is one of the most invaluable programs to be distributed as FreeWare. The new version on the IIgs Xtras disk should be used from now on for any shrunk files issued. Improvements in the NuFx process mean that files created with the new version may not extract under previous versions of ShrinkIt Files on the P8 disks are only shrunk with the IIPlus ShrinkIt from the Xtras No. 1 disk.

/XTRAS.P8.NO.3/

```
 =WORDSEARCH        $E0      130   8-MAY-90
 =APPLE.UNIX        $E0       33   8-MAY-90
 =LONDON.CODES      $E0       18   8-MAY-90
 =GARFIELD          BAS       17  11-DEC-87
 =PSEUDOFRACTAL     BAS        1  18-APR-90
 =CYBERFIND.1.1     BAS       11  31-JUL-88
 =MANDEL.SETS       DIR        1   8-MAY-90
    =MANSET.DOC        TXT       22   1-APR-90
    =MANSET            BAS       12  31-MAR-90
    =SQUARE            BIN        1   1-APR-90
 =AW.SCREEN.MACRO   AWP        7  22-DEC-89
 =SON.OF.RAMSET     BAS        3  17-MAR-90
```

/XTRAS.GS.NO.3/

```
 =PRODOS            SYS       32   8-JUL-88
 =PROGRAMS          DIR        1   8-MAY-90
    =SHRINKIT302.BXY $E0      110  13-MAY-90
    =DA.S              DIR        1   8-MAY-90
       =SUPERINFO         DIR        1   8-MAY-90
          =SUPER.INFO        $B8       51   4-MAR-90
          =SI.YOUR1          TXT        3   4-MAR-90
          =SI.YOUR2          TXT        1   4-MAR-90
          =OS.ERRORS         DIR        1   8-MAY-90
             =OS.CALLS           TXT   4  25-MAR-90
             =OS.ERRORS          TXT   4  25-MAR-90
       =PAINT.DA          DIR        1   8-MAY-90
          =D.T.PAINTER       $B8      125 4-APR-90
          =D.T.PAINT.NOTES   TXT       17 4-APR-90
       =KEYCAPS           DIR        1   8-MAY-90
          =KEYCAPS22         $B8       47 27-JAN-90
          =KEYCAPS.DOC       AWP       10 27-JAN-90
       =DFC.V1.3          DIR        1   8-MAY-90
          =DFC.DOCS          TXT       15 11-MAR-90
          =DFC.NDA.V1.3      $B8       49 11-MAR-90
    =ALF               DIR        1   8-MAY-90
       =WOWBASS           $D8       12  30-JUN-89
       =BASSDRUM.2        $D8        8  30-JUN-89
       =POPSNARE.2        $D8       10  30-JUN-89
       =KORG.FILTER       $D8        8  24-JUN-89
       =LASER             $D8       52  17-SEP-89
       =YEAH              $D8       18  30-JUN-89
       =HIHAT2            $D8        6  10-AUG-89
       =ALF               $D5       16   8-DEC-89
 =TECH.NOTES        $E0      172   8-MAY-90
 =GAMES             DIR        1   8-MAY-90
    =BACKGAMMON        DIR        1   8-MAY-90
       =BACKGAMMON        $B3       131  28-DEC-88
       =BG.V1.1.NOTES     TXT        4  14-JAN-89
    =ONEARM.BXY        TXT      602  10-MAR-90
 =TITLE             $C1       65   8-MAY-90
 =BOOT.SYSTEM       SYS        1   6-JAN-90
```

AppleXtras 5.25
ProDOS disk for the IIgs, //e and //c

The first three files on this disk must be unpacked with ShrinkIt from Xtras.P8.No.1.

WORDSEARCH
Wordsearch Version 3.0 - Wordsearch produces Wordsearch puzzles that help with vocabulary reinforcement for children. The program creates and prints puzzles up to 80 words.

APPLE.UNIX
Anix.System - A Unix like shell for ProDOS. You will need a working knowledge of Unix commands to operate within the shell.

LONDON.CODES
London.Codes - AppleWorks DataBase files with the new London codes. There is also a macro to convert to the new London phone numbers.

GARFIELD
Garfield - This will draw a HiRes picture of your favourite cat!

PSEUDOFRACTAL
PseudoFractal - A short and simple Basic program that draws fractal like objects.

CYBERFIND.1.1
Cyberfind.1.1 - Finds files infected with the CyberAIDS or Festering Hate virus.

MANDEL.SETS
Manset - Generates MandelBrot sets on the Apple // series of computers.

AW.SCREEN.MACRO
AW.Screen.Macro - Saves snapshots of the AppleWorks screen to disk files.

SON.OF.RAMSET
Son.of.RamSet - An undocumented patch for AppleWorks to allow banks to be preserved for a Ram Disk.
ONLY USE WITH A COPY OF APPLEWORKS.

AppleXtras 3.5
ProDOS disk for the IIgs

Programs Folder

SHRINKIT302.BXY
ShrinkIt V3.02 - Unshrink to produce the latest version of this outstanding program. You should use this version of ShrinkIt from now on as files we shrink using it will not extract with the older versions of the program.

DA's - **SUPERINFO**
Super.Info - An comprehensive NDA that gives you a great deal of useful information about your IIgs.
OS.Errors - Use these files instead of the 'Your' files in the Super.Info directory to display the GS/OS calls and errors descriptions.

DA's - **PAINT.DA**
D.T.Painter - A complete and comprehensive paint package in an NDA It will work under 320 or 640 resolution.

DA's - **KEYCAPS**
KeyCaps22 - Displays the complete character set available under an installed font. Allows you to see what characters you can obtain with the Option keys.

DA's - **DFC.V1.3**
DFC.NDA.V1.3 - A useful file utility to copy, delete, view and otherwise work with files. Enhances any program to have these facilties available from the desktop.

Music - **ALF**
ALF - A music file and instruments to use with the music program SoundSmith. SoundSmith can be found on library disk 2GS029 or on TABBS.

TECH.NOTES
Technical Notes - The January set of Technical notes from Apple. This file contains many notes and needs to be extracted using ShrinkIt.

Games Folder

Games - **BACKGAMMON**
Backgammon - An excellent game of Backgammon. This program was written using TML Pascal.

Games - **ONEARM.BXY**
One Arm Battle - An addictive fruit machine simulation. It has excellent sound and graphics. As this program has resource forks, it must be extracted using ShrinkIt to a blank disk. Once it has been extracted, it can only be copied using the Finder.

COMPUTER DOWN !

- FAST TURNROUND - NORMALLY 2 DAYS
- 3 MONTH WARRANTY
- COMPETITIVE PRICES ON ALL SERVICES
- TRADE ENQUIRIES WELCOME
- Most makes of COMPUTER, MONITOR, PRINTER

EXAMPLES ALL INCLUSIVE PRICES

APPLE][+ OR //e Power Supply	£32
APPLE][+ OR //e Motherboard	£32
Apple Interface Card (most makes)	£25
Disk Drive - cleaned & aligned	£25

Please ring for other repair prices or send equipment for free estimate
Quantity Discounts available

SUPERCHARGE YOUR MACINTOSH AVAILABLE NOW !
1MB SIMM'S - EASY TO INSTALL
Take your Mac+/SE to 2.5MB or even 4MB
Take your Mac II to 5MB or even 8MB
WE WILL NOT BE BEATEN ON PRICE
TRADE ENQUIRIES WELCOME

NOW IN STOCK
MacPlus Connectors, Serial & AppleTalk
Price depends on quantity

COMTEC
UNIT G, SUNDERLAND HOUSE
SUNDERLAND STREET
MACCLESFIELD, CHESHIRE. SK11 6JF
TEL (0625) 34691

Its Free by Air!

Introduction to Amateur Packet Radio

by J.J. Taylor - G6XD

Parallel to the spectacular increase in use of home computers and modems for communication by land lines, there has been a similar enthusiastic response by the Radio Amateur fraternity to the possibilities of world wide data communications. This article will deal 'lightly' with one mode in use for communicating via the airwaves, namely 'Packet Radio', and while many computers with RS232 serial interfaces may be used, the Apple II series is eminently suitable.

What is Packet Radio

Packet radio is an error free data communications system used over the air.It is very economical of the radio spectrum by allowing several stations to use the same frequency.

We all know of the tremendous growth in mobile telephones, satellite communications,personal pagers, local radio,and other sectional interests, unimagined even a decade ago, so this may become an important consideration in future frequency allocations.

A Packet message on transmission by amateur radio is broken into character groups of up to 256 characters, and added to each group are 2 flag bytes, callsigns, control field, and frame checksum, the whole being the 'Packet'.

Without going too deeply into this structure, a dispatched packet will have its checksum compared by the receiving station. If they agree, the acknowledgement is sent signifying acceptance of this, as error free, otherwise the packet will be sent again after a suitable interval.

Because they also contain the unique Radio Amateur's callsigns, each packet may have only one destination, and thus several stations may share a channel as mentioned previously.Each will send in turn, the whole controlled by an agreed protocol.

Equipment

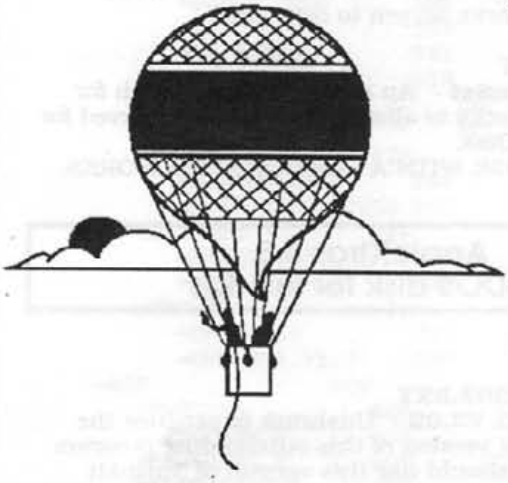
The equipment required to transmit Packet over the Amateur broadcasting bands is:

1. Suitable Modem (known as a Terminal Node Controller or TNC). This, by means of eprom based firmware, controls the switching between transmit and receive, and also amongst other duties, handles the deciphering and encoding of the received and transmitted audio tones.

Like the Apple system Rom, this firmware is continuously being updated and improved by the writers, the latest version offering a small Personal Mail Box for the user. These TNC's are often constructed by the capable radio amateur, or can be obtained ready built from various sources.

2. A Transmitter which may be of the simple VHF type using the 2 metre FM amateur band, (relatively short range), or on HF (Higher Frequencies, and greater distances), any of the Single Sideband (SSB) transmitters.

Packet activity on the 2 metre band can be heard on 144.650MHz or 144.675Mhz. Baud rate is 1200bd on this band and 300bd on HF frequencies which are much more prone to both man made, and natural interference.



3. An Apple, or other home computer with a serial interface. I use a Super Serial Card in one of the I/O slots of my Apple IIe.

The computer may use one of the many excellent communications software programs available to us these days. Mousetalk and Modem Manager are two examples commonly in use with Apple II computers.

Connections

The TNC is connected to the home computer by the usual RS232C cable, also to the transmitter by three cables for audio (tones) IN/OUT, and the transmit/ receive PTT (PRESS TO TALK) line.

Making a Packet Contact

When the equipment is set up,and the working frequency chosen, the communications software is run, and the TNC switched on. From the keyboard the TNC is given the callsign which all radio amateurs will have been issued with on licensing.

This together with other important and necessary amendable parameters, is maintained in RAM by a small cell.

To make the connection, (CONNECT) with the required station.the operator keys..

```
CONNECT G6ABC followed by C/R.
```

The C/R indicates to the TNC that the connect packet is to be sent. If the called station (callsign G6ABC) is switched on, the packet will be acknowledged and the connection is established.From this a two way conversation can be pursued, until either party sends the DISCONNECT packet. If the called station is beyond the range of the transmitter it is often possible to pass the packets via an intermediate station, which, if it finds its own callsign in the address field will retransmit the group on to its destination.

The term 'digipeating' has been coined for this, and a system of 'Digipeaters' has been established in good locations round the country by enthusiastic amateur groups to make an effective national network.

To connect to a station via a digipeater one keys..

```
CONNECT G6ABC VIA G6XYZ        C/R
```

or indeed this may be extended via up to 8 digipeaters..

```
CONNECT G6ABC VIA
G6DEF,G6GHI,G6JKL    etc...
```

Packet Radio Bulletin Boards (PBBS)

In most of the major towns, under license from the Radio Society of Great Britain and the DTI, individual Radio Amateurs have set up and run

Bulletin boards which are very similar to those of the telephone variety, but without the dreaded quarterly bill!.

These often contain many hundreds of technical and personal files relating to the hobby, and like using TABBS one can often get the answer to that seemingly insoluble problem. The files are forwarded automatically from BBS to BBS via the intelligent network nodes, which search out the best routings.

Here is an example of a connect to an area PBBS (GLPBBS), via a digipeater (IPP2), and download of a file originating in France, the 'path' being via many Bulletin Boards and intermediate stations into the English network.

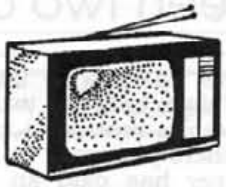
You will notice by the message numbers the incredible amount of activity there is on these mailboxes, so the commands enable comprehensive manipulation and search routines while online.

```
CONNECT IPP2

*** CONNECTED to IPP2

CONNECT GLPBBS

IPP2:G6GLP-2> Connected to
GLPBBS:GB7GLP

Hello John, Welcome to the
GB7GLP MailBox. Operated by
Tony in Devon, Connected to
Port A/Task 1 at 0949z on
900319 You last connected at
1134 on 900314, and your
Home BBS is GB7GLP

Type H for Help. Type I for
Information about this
system.

GB7GLP MBX
(B,C,D,H,?,I,J,K,L,N,R,S,T,U,V,W)
[0] 1> LL 8

 Msg# Stat Size  To     From
@ BBS  Date/Time Title 17245
B     1257 IBMPC  G8JFF  GBR
0319/0904 IBM PC/XT 17244 B
1275 ALL     FC1OMS EU
0319/0903 HELP ICOM 17241 BF
251 G4GUN  G3GNR0319/0852 4
mtr node 17240 BF     272
G4WRW  G3GNR  GB7SDN 0319/
0848 SP G4WRW 17239 B
337 GB7GLP G3GNR0319/0843 SP
GB7GLP 17238 B      507 G6XD
G0DNZ0319/0825 Apple Rom.
17234 B      234 ALL     G8NXD
GBR     0318/2358 1296 Mcs
17223 B     4019 ALL     G0JMS
GBR     0318/1625 Top Band
D.F. Meetings GB7GLP MBX
(B,C,D,H,?,I,J,K,L,N,R,S,T,U,V,W)
[17223] 1> R 17244

Date: 09 Mar 90 15:59 Mes-
sage-ID: <0@FE6BIG> From:
FC1OMS@FE6BIG To: ALL@EU Sub-
ject: HELP ICOM Path:
GB7PLY!GB7BNM!GB7XJZ!GB7HJP!
GB7ZZZ!GB7SEK!GB7ZAA!ON4HU!
F6BVL!FF6RAE!F6DEG!FF5KAR!
F6ABJ!FF6PTT!FC1LIL!FE6BIG

From: FC1OMS@FE6BIG.FRA.EU To  :
ALL@EU I SEARCH FOR THE DIAGRAM
OR THE MAINTENANCE BOOK OF TRAN-
SCEIVER ICOM IC 211E. IF YOU CAN
HELP. PLEASE CONTACT : RENE
D.... 121 HAMEAU DU CHATEAU
38360 FRANCE OR VIA PACKET :MBBS
FC1OMS-1 (ACCESS BY THENET
FF1LUU-2 THEN FF5KG-2) ALL COST
REPAY.THANK YOU RENE.

GB7GLP MBX
(B,C,D,H,?,I,J,K,L,N,R,S,T,U,V,W)
[17244] 1> BYE *** DISCONNECTED
```

In conclusion, this is of necessity a brief outline of Packet Radio, which itself is just one of several data communications modes available to the computer owner who also has a Radio Amateurs license.

Many of the new generation multimode modems can decode Morse, RTTY, Navtex, Amtor, in addition to Packet data when linked to your Apple computer. So why not consider joining the exciting world of the Radio Amateur..you will not regret the effort.

J.J.Taylor G6XD March 1990



MORE NEW PRICES

Shape Mechanic (Beagle Bros) *£33.95

Font Mechanic (Beagle Bros) *£25.45

Triple Dump (Beagle Bros) *£33.95

Power Print (Beagle Bros) *£33.95

Printrix Monster Font Pak Vol 1 (Data-Transforms) *£24.95

Screenwriter II (Sierra) *£129.95
Extensive word processing system with 70 - column upper & lower case monitor display without extra hardware. Includes Dictionary, spell-checker - originally sold at $229.90. Works on min 48K][+, o.k for //e, //c, GS too.. 65,000 character documents! Uses extra RAM cards. Print spooling, mail merge facility with extra hardware.

The General Manager (Sierra) *£179.95
Extensive hierarchical database ideal for creating accounting/stock-control systems and other complicated linked filing jobs. Perfect also for the simplest jobs too, like pricelists, mailing lists, etc... Originally $229.95. Maximum file size 16000k.

Envoy (Asky) *£170.00
The only Apple II card that allows you to use low-cost IBM-PC type FDDs for both increased ProDOS storage (IBM drives are 360K 5.25" or 720K 3.5") and also bi-directional ProDOS/MS-DOS information transfer.

Typing Tutor IV (Simon & Schuster) *£39.95
For Apple][or IIGS.

Rampage (Activision) £24.95
For 128K //e, //c, IIGS.
Official version of the Bally/Midway monster arcade hit.

VIP Professional GS (VIP) £228.85
Lotus 1-2-3 compatible spreadsheet with database/ business graphics/ macros. Reads AppleWorks files, and yet gives you a Lotus-identical spreadsheet/ database/ graphics with absolute .WKS file compatibility, complete macro support and identical menu command structure. Requires 1Mb IIGS

VIP Professional // £199.95
As above, for //e, //c.

Castle Wolfenstein Combo (MUSE) *£24.95
Get both "Castle Wolfenstein" AND "Beyond Castle Wolfenstein" for under £25.00!
List price $64.00!!!

MUSE Combo (MUSE) *£24.95
Get "Titan Empire" plus "Robot War" for under £25.00!
Was worth $74.00!!!

MousePrintz v5.0 (Dark Star) *£19.95
When MousePaint's "Print a file" leaves you a few options, take a look at MousePrintz. With MousePrintz you can magnify, stretch, crop, invert, flip, rotate and shade your MousePaint screen image to your own specifications, then print it on virtually any dot matrix printer (including Epsons!). Was £28.75!

ScreenSnapper (Dark Star) *£24.95
Sophisticated printing utility that supports most dot matrix printers with features like colour, cropping, enlargement, rotation, inversion etc... Full details on request - replaces TripleDump as our standard print utility. Was £34.50!

TV Modulator V8 *£39.95
This module for running a colour TV off a //e regrettably goes up effectively £5. The V8 unit is for video only, if you want sound through the TV, order a V8S. You need this device if you want to try your hand at putting title screens onto your videotapes (ask about "VCR Companion").

TV Modulator V8S *£49.95
As V8, but supplies sound to the TV which effectively gives you a volume control.

Graphic Exchange (Roger Wagner) £39.95
768K IIGS that converts:-
Lo-Res <> Double Lo-Res <> Hi-Res Colour <> Hi-Res B/W <> Double Hi-Res Colour <> Double Hi-Res B/W <> 320 Super Hi-Res Colour <> 640 Hi-Re<>Colour <> 640 Super Hi-Res Colour <> 640 Super Hi-Res B/W <> PrintShop <> PrintShop GS <> Newsroom Clip Art <> Newsroom Photo <> MacPaint (YES! - This program actually allows you to read Macintosh 400K / 800K / MFS / AFS disks in your GS 3.5" drive!).

Smart Money GS (Sierra) *£79.95
Home accounting system for 512K IIGS.

CLEARANCE ITEMS

Graphics Scrapbook II: Off The Wall (EPYX) *£9.95
A world of outrageous graphics comes to PrintMagic, Printrix, Publish-It! 2/3, and other printShop compatible programs.

- Offbeat, hilarious, different and downright outrageous.
- Over 100 graphics for you to choose from.
- The most fun you've ever had with your graphics program.
- A disk with arms & legs, skull & crossbones, a punk teddy-bear.
- A party animal, unusual hearts, a cool Santa Claus, and more.
- If you've laughed at it, dreamed it, or feared it, its probably here.

VISA

MGA SoftCat (0797) 226601
41 Cinque Ports St., Rye, E.Sussex TN31 7AD

MasterCard

Clearance prices valid for current stocks only, all prices include VAT, & *-prices also include UK p&p. E.& O.E.

Date Arithmetic in AppleWorks

Andreas Wennborg shows us how to calculate the number of days between two dates.

Sometimes one has to know the number of days between two dates, e.g. in accounts receivable in bookkeeping, where you want to know if the customer has paid an invoice within stipulated time. In this article it will be explained one way to calculate the number of days elapsed between two random events using an AppleWorks' spreadsheet. The spreadsheet file used is small and it may readily be copied to other spreadsheet files. - If you add a few lines of code to the original template you will have the bonus of getting also the day of week for the two dates.

The mathematics of the template is taken from an Basic program which my father wrote ten years ago (on a Sinclair ZX80; 1k of memory!). Through the years I have polished the routines a little, and I think it is now as optimised as it could be. I also use the BASIC-routine in "real life context" in some Applesoft- and ZBASIC-programs which I have written for my business.

I came across some Public Domain Spreadsheet templates in May, 1989, which did much the same thing as my own version, but they often had limits regarding number of years (e.g. valid only between 1901 and 1999). The Spreadsheet template presented here has no such limitations. That is to say that as long as the dates are based upon the Gregorian calendar, then the day of week and the number of days are correct. The Gregorian calendar was introduced in most countries in the 18th or 19th century (exception: Russia, introduced after the 1917 revolution).

Furthermore, the Public Domain spreadsheets I came across were very large, hardly something one would be eager to copy into another spreadsheet. At that time (May 1989) I got the idea to try to make AppleWorks do the same thing as the BASIC routine. That was surprisingly easy to accomplish. For those who are interested the main routine in Applesoft is presented in fig. 1.

How does it work?

Fundamentally you count the number of days since the year 0 for each date. The difference in days between the two is the value you want. Sounds easy?

Well, there are after all some difficulties, such as leap years and the last year of each century, which must be divisible by four to be a leap year. For instance, the year 1900 was not a leap year, but 2000 will be. The Julian calendar lacked this correction. Pope Gregorius found that, if nothing was done we should all be celebrating Christmas in the middle of the summer (on the northern hemisphere).

By the way, the last year of a century is not xx99 but xx00. Hurry up and cancel your bookings in posh restaurants if you had intended to celebrate the new century on New Years Eve 1999...

Step by step

Let us enter the date arithmetic spreadsheet. Make a new spreadsheet and name it "CountDays". It is implied here that you are somewhat familiar with AppleWorks' spreadsheet program - if not you are very welcome to send an empty diskette and return mail charge to me and I will return your diskette with the template on it to you. You will find my address at the end of this article.

Use the following column-widths: Columns B and C: two characters wide. D and E: three characters wide. F, G, I, J and K: one character wide

Put the cursor in the column to be adjusted:

<openapple-L>
<C>
mark the columns
<rtn>
<C>
adjust with <openapple-leftarrow>
<rtn>

Now enter all text according to fig.2. It is now time to enter the formulas:

Cell G5:
+B5*100+C5*365+(31*(D5-1))+E5
Estimate number of days since year 0.

H5: @IF(D5>=3,G5-@INT(.4*D5+2.3),G5)
Adjust number of days if the month is not Jan or Feb.
I5: @IF(D5<3,B5*100+C5-1,B5*100+C5)
Adjust number of days if the month is Jan or Feb.

J5: +H5+@INT(I5/4)-@INT(.75+(@INT(I5/100)*.75))
Final adjustment, check after every 4th century.

If you are not interested in the days of the week or if you use AppleWorks 2.x then skip K5 and L5

K5: +J5-(@INT(J5/7)*7)
Which day of the week?
Cosmetic change: use <openapple-L> to change the number of decimals for this entry to two decimals.

L5:
@CHOOSE(K5,"Sun","Mon","Tues","Wednes","Thurs","Fri","Sat")
Print the day of the week.
Cosmetic change: use <openapple-L> to change the label layout to right justify for this entry.

I hope you were very thorough when you entered the formulas? If you were, copy cells G5, H5, I5, J5, K5 and L5 to corresponding cells in the row below. Put the cursor in cell G5:

<openapple-C>
<return>
<rightarrow> 5 times
<return>
<downarrow>
<return>
<R> 21 times (All cell references are relative)

L8: +J6-J5
Result.

Check the spreadsheet, enter the dates in accordance with fig. 3 and compare the results. Observe that in B5 only two figures are entered for the century. The separation is done to simplify entering the century; in most cases it is of course 1900. If you don't like the order of the date entry, you could easily <oa-M>ove the colums to your liking - the text around will of course be garbled

At another time we will use parts of this spreadsheet to make one that calculates the calendar of one month.

Andreas Wennborg

```
 5 REM Y=YEAR, M=MONTH, D=DAY, R=RESULT
 10 R = 365 * Y + 31 * (M - 1) + D
 20  IF M >  = 3 THEN R = R -  INT (.4 * M +
2.3)
 30  IF M < 3 THEN Y = Y - 1
 40 R = R +  INT (Y / 4) -  INT (.75 +  INT (Y
/ 100) * .75)
```

Figure 1

Contact:
Andreas Wennborg
Gamlestadsvagen 2
415 02 Gothenburg
Sweden.
CIS 72451,3104

Translated by:
Paul Mitlid

Screen shots were made with:
The
Desktop Manager (IIGS)

```
File: CountDays                    REVIEW/ADD/CHANGE                    Escape:
========A====B=C==D==E=FGHIJK====L========M========N========O========
  1!
  2!Count the number of days between two dates
  3!-----------------------
  4!          YYYY MM DD
  5!1st date                                  day
  6!2nd date                                  day
  7!
  8!Days between 1st & 2nd
  9!
 10!
 11!
 12!
 13!
 14!
```

Figure 2

```
File: CountDays                                                    Escape: Main
=========A====B=C==D==E=FGHIJK====L========M========N========O=====P==Q=RST
  1!
  2!Count the number of days between two dates
  3!-----------------------
  4!          YYYY MM DD
  5!1st date 1960 12 22 #####     Thursday
  6!2nd date 20 0 12 31 #####       Sunday
  7!
  8!Days between 1st & 2nd        14619
  9!
 10!
 11!
 12!
 13!
 14!
```

Figure 3

All prices include VAT for Apple 2000 members, others please add 15% VAT.
Carriage included for orders of £100.00 and over. Under £100 add £6.50. Discounts available on 'bundled' similar items. Prices correct as at 25th April 1990. Subject to change without notice. Visa & Access orders accepted. Call for complete product & price list. See our advertisement later in the magazine for Macintosh and more general & new items.

NEW! For Appleworks, Outliner 3, ReportWriter v2, SuperFonts Activity Guide, UltraMacros Primer,
NEW! MacroEase,TextTools. Glen Bredon's Prosel 8 & 16 and other utilities. Jem Software.
NEW! SCSI Internal & External drives from Ingenuity for all Apple IIs.
NEW! Checkmate Technologies MultiRAM & RGB & Battery back-up unit.
NEW! CD-ROM Drives & accessories, discs available on a vast range of subjects - please call.
NEW! High capacity hard disc kits, internal and external by Toshiba & Siemens for most machines from 106mb
NEW! formatted, 20ms - £840 all the way up to 680mb formatted, 14ms - £2600. Other drives etc., please call.

Appleworks enhancements
Beagle Bros & Time Out
Any version Appleworks
upgrade to ver 3 or GS 70.00
s/h packs + upgrades call
Time Out TeleComm 55.00
ReportWriter 59.00
Thesaurus 45.00
SuperFonts 55.00
Graph 65.00
UltraMacros 51.00
SideSpread 45.00
SpreadTools 51.00
QuickSpell 55.00
DeskTools I 45.00
DeskTools II 45.00
FileMaster 45.00
PowerPack 45.00
MacroTools 28.00
TextTools 45.00

Path Finder 30.00
Late Nite Patches 30.00
AW 3.0 Companion 37.00
MacroEase 37.00
SuperFonts Activity 45.00
Appleworks 3 175.00
Appleworks GS 215.00
Point-to-Point 69.00
Program Writer 45.00
GS Font Editor 45.00
BeagleWrite 65.00
BeagleWrite GS 80.00
GS Desk Accessories 50.00
Glen Bredon's Prosel 8 45.00
Prosel 16 60.00

Checkmate Technology
MultiRam IIe (756k) 245.00
MultiRam RGB (1meg) 319.00
MultiRam + (1meg x 8) 499.00
EPM battery unit 59.00

Ingenuity
InnerDrives, internal hard discs and power supply replacements for all Apple IIs
OverDrives, Falcon, external hard discs.
OverDrive 20 meg 408.00
40 meg 475.00
Falcon 10 meg 280.00
InnerDrive 20 meg 465.00
40 meg 575.00
SCSI 20 575.00
SCSI 40 680.00
SCSI 100 1100.00
Interface cards supplied with above drives except SCSI
SCSI card 80.00
Ram/Fast SCSI card 180.00
CDrive 20 & 40 meg,
CKeeper 256 & 1 meg for IIc & IIc+ soon.

RamCards for GS
Ingenuity
Juice Plus 0 meg 89.00
1 meg 190.00
2 meg 308.00
4 meg 527.00
Apricorn RAMPro IIGS
0 meg 80.00
1 meg 170.00
2 meg 280.00
4 meg 490.00
DRAM s (8) 256k x 1 33.00
1 meg x 1 97.00
Nite Owl Battery GS 13.00
Sony 3.5" discs DSDD 0.82
DSHD 2.20
Unbranded discs from 0.60
Imagewriter ribbons blk 2.25
colour 7.75

CLOCKTOWER Phone & Facsimile 081-341 9023
P.O. Box 1417, London, N8 9PW. Call Alan between 9.00 and 5.00 or fax at any time.

Nite Owl Battery Quickie Scanner

Dave Ward tells the time once more and John Beattie finds the quickest way to scan into HyperStudio

Nite Owl

For most users of the Apple IIgs the battery maintaining the 256 bytes of RAM and clock is very important, particularly if they are not in the US of A. Resetting the clock and parts of the control panel each time the machine is booted can be very tedious. When the Apple IIgs was introduced in late 1986 Apple Computer Inc., it would appear, genuinely thought that the lithium battery would last about 10 years. Some may well do that but a large number seemed to have already failed; mine lasted just about 6 months, failing in July 1987. The nub of the problem is that on the original boards the battery was soldered on which understandably puts the repair beyond many users. Apple IIgs engineers have now solved this problem by making the attery a clip-in unit on the latest motherboard.

Until now you had to change the motherboard!!! or follow some of the excellent directions given in articles in magazines for replacing ones dead battery. For me and perhaps many other users clipping off the old battery and soldering-in a new one was an unacceptable risk; I want to use my Apple IIgs soon after!

Over the last few issues A2 Central, previously known as Open-Apple, advertised a replacement battery in their catalog which, on the face of it, appeared to remove almost all of the objections to battery replacement. So I ordered one and here is the result :-

The Nite Owl Slide-On battery arrives in plastic bubble on a two page card, it claims :

- Fantastic Savings
- Easy Installation
- No Solder Required
- Complete Instructions
- 10 Year Shelf Life
- Top Quality Lithium

The instructions are excellent, with three useful photographs, no solder is required and the installation is a snip, well two, actually. Following the directions took me just 5 minutes to complete the job and a good deal of that time was spent in finding a place for the monitor on my untidy desk! To do the job you simply :

1) Switch off the computer.
2) Remove the lid.
3) Remove the power pack.
4) Cut off the old battery leaving 10mm vertical stubs.
5) The battery has it's terminal wires wound into coils which fit tightly over the two stubs.

That's it!

About the most expensive way to replace your battery is to get Apple Computer Inc. to replace your motherboard. The cheapest way is to buy a battery and solder it in. The easiest way, in my opinion, is to buy a Nite Owl at $14.95 plus postage from A2 Central.

Dave Ward

The Quickie Scanner

The Quickie hand scanner for the GS comes in 3 parts: the scanner itself, a controller card with a matching socket for the plug on the card and software on a 3.5 inch disk.

The hardest part of the task of setting it up is installing the card: this can be done in any available slot from 1 to 7 with the exceptions of 3 and 4. Installing the card does not occupy the slot as far as the GS is concerned and the slot can still be used for its normal function. Once installed, the scanner can be plugged in and you're ready to go.

The software comes in 2 versions: as a stand alone program and as an NDA. The program is not protected (I imagine it would be useless without the scanner anyway!) and can be copied over onto a hard disk or another 3.5 disk. The NDA should of course be copied into the Desk Accessories folder in your system folder on your boot disk.

Double click on the program's icon or select the Quickie NDA from under the apple on the menu bar and the scanner lights up to show it's ready.

On screen options let you set Black & White or Grey-Scale mode for the scanned image and let you select whether or not you want to show the image onscreen while scanning, have an audio feedback (or buzz to you and me) during scanning and have the scanner automatically switch off after 10 seconds have elapsed since it received any image data. It isn't possible to see the image during scanning where the resolution is so great or the size of image so large that memory is needed for scanning rather than displaying.

Resolution can be selected at 100, 200, 300 or 400 DPI by means of a sliding switch on the scanner. Another switch allows the selection of Photo or Letter settings, while a thumbwheel allows adjustment for lighter or darker source materials. Once you have made these choices, you simply place the scanner at the top of the item to be scanned, press the start button on the scanner and draw it slowly (about 1 inch per second) down the source material.

Once the image has been scanned, it is displayed on the screen and can be adjusted for contrast and brightness and cropped before being saved in any of 4 formats: Screen, Apple Preferred, Paint or Finder Icon. The scanned image can then be imported into a GS/OS paint program such as Paintworks Gold and touched up to your satisfaction. If it is saved as an Icon, it can be edited using one of the Icon Editor programs such as IconEd or Diced.

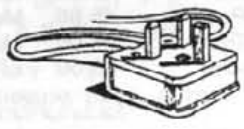
The scanning process is so quick and so easy that a certain amount of trial and error to find the best settings for various images takes no great time and the provision of the program in the form of an NDA means you don't even have to quit your paint program to scan an image.

I bought the scanner mainly to provide images for use in HyperStudio and I can't sing its praises enough. It takes next to no time to set up and the results, provided you pick your originals carefully and are prepared to spend a little time to smarten them up, are far superior to anything I could produce with a mouse and paint program alone. As the sales lady on the telephone said to me when I ordered it

"It's a really great scanner. It does just what it says it does". Not every bit of computer software or hardware can do that!

The Quickie Scanner by Vitesse Inc. needs an Apple IIgs with 1 meg. It can be obtained from MGA for a WYSIWYP price of £249.95.

John Beattie



SoftCat Corner

❑ **CHEAP IMAGEWRITERS?**

Because of the fag of changing paper/labels, over the years I've been pretty lazy about label printing. I know it doesn't take long really, it's just a pain. So when MGA moved to Rye, I insisted that I have a second printer installed on my IIGS through an 8-pin switchbox. As I already had a 2nd-user ImageWriter II, the natural move was to acquire another. At around £300 each, that makes for a lot of money tied up on one desk, especially when you can only use one at a time. However, my productivity rocketed, and mini mailshots and press releases started going out regularly again, and everything started getting labeled properly, and perhaps more importantly; attractively. I use Labels, Labels, Labels but this is just a matter of choice as I can use the IW II to get multi-colour.

Anyway, one of our clients in Jersey talked me into selling one of the IW IIs to him so he could also use it for LLL. Reluctantly I gave up one of them, hoping another 2nd-user unit would turn up soon. This didn't happen, and my productivity took a downturn.

Despondent, half-crazed with longing for the 'lost' IW II, I thought about the possibility of using an old 2nd-user Apple DMP we had in stock. (Note: just because I run a computer business, it doesn't mean I have to throw hard-earned money at a hardware problem to solve it; like most small businesses, I like to find a cost-effective solution that works...). On the surface, this seemed like a reasonable prospect, as both the IW & DMP seem to share the same control codes, thus assuring a likelihood of compatibility. Snag. To use the DMP I would need to install a parallel printer card somewhere, and scratch the idea of simple switching. This I was prepared to do, but had forgotten that I had no free slots in my IIGS. It's a shame really, because I have actually got slots 1/3/4/5 vacant, its just that they're not usable, as they are effectively used up by the printer port, 80-columns, mouse, and disk ports respectively. My next thought was that as I use one of the printers solely for black printing on plain paper, it doesn't have to be an IW II, as I'm simply not using the colour features. So, what about a 2nd-user IW I? Yep, that was the answer, but could I find one at the right price? - Nope...

So, more thinking required, as I could in theory wait forever for another IW I/II. Eureka! - Grappler-GS to the rescue! It occured to me one day on the train, that if I connected a serial-to-parallel converter to my vacant switchbox port, and the other end to the DMP, it may well be a solution. So this afternoon, (while I was waiting forever for my IBM-PC DTP program to print a full-page ad to my Centronics laser printer), I popped out a Grappler-GS, set the switches for a NEC-8023, plugged both ends in, and went to make a cup of coffee.

When I got back, the ad had printed on the laser, and I thought I'd better quickly try & configure AW to test out the gameplan, and not waste too much time on it, (my theory is, that if you can get AppleWorks to print everything you want the way you want it, then you're on a pretty safe bet that almost all other Apple II software will work with the setup).

So, into AppleWorks v3.0 main menu, 5. Other Activities, 6. Select standard settings for AppleWorks, 6. Specify information about your printer(s), 2. Add a printer (maximum of 3), [select] Apple Dot Matrix, [enter] Apple DMP, 1. Slot 1, [then ESC/ESC/ESC back to the main menu without changing any of the DMP interface cards/printer codes etc]. That's all! I loaded a small address book database, selected a label print format, loaded some labels in the printer, told AW to print, - and it did! Game on! Game over!

❑ That's all there is to using the Grappler-GS, and getting an ImageWriter I clone into the bargain. Total cost on the street is about £99.95 for the printer and the same for the Grappler-GS. O.K., I know you could probably pick up a 2nd-user IW I for the same price as my total outlay, but I couldn't wait...

You may be thinking that this is a fairly long narrative to explain the simple use of a pre-configured serial-to-parallel converter. You are certainly right on that score, but there is more to this business than meets the eye. Extending the ideas a little, I started thinking about ways for us poor Applers to get cheap Apple-compatible printers on a regular basis.

You may have noticed above that I set the Grappler-GS switches for an NEC-8023, that was because I know that the two printers are to all intents and purposes exactly the same.

❑ Extending this, it is useful to note that also the same as the Apple DMP, are C.Itoh-8510/1550, C.Itoh-310/315, C.Itoh 7500/9500-series, ACT Apricot-8510A, ACT ApricotWriter-12, DEC LA-50, IBM 4714/4971, NCR-11-1150/8510, NEC-30/PC-8023B-C/BE-C, Newbury Data 1550/8510A/8510S, and Victor System-9000. So you can see that if you see any of these printers for sale 2nd-hand, on the cheap, they could well be a great bargain. Parallel units should be chosen by preference for][+ & //e users, although there is a wealth of dirt-cheap 2nd-user serial cards knocking around. If serial units are available, (such as the C.Itoh 1550 which I know was available as both or maybe with dual interfaces), then these would be ideal for Mac, //c, and IIGS users as no serial/parallel converter would be required. Just one thing; if at all possible, take your computer to the seller and try it out before buying... I know that this isn't always going to be possible, so I can tell you that I have successfully used the C.Itoh-8510, C.Itoh-1550, ApricotWriter-12, and all the listed Newbury Data units configured as Apple DMP.

❑ Extending this even further, (can you bear it?), although the printers don't look anything like each other, a little sleuthing uncovered the fact that the Apple DMP and C.Itoh ProWriter both use the same switch settings, and indeed, the same control codes etc. Remembering pictures of the C.Itoh ProWriter brought me to the next discovery; - it looks just like the Amstrad DMP-3000 series! So I checked my old archive files, and sure enough, the ProWriter was identical to old Alan Sugar's DMP-3000. Having got one attached to an Amstrad PC-1512, I unplugged it, stuck it on my //e with parallel card, loaded AppleWorks, reconfigured it for Apple DMP, and whizzo! - It works!

❑ Now, these little Amstrads really are a bargain, nobody seems to think they've got any resale value, and they go for peanuts in papers like Computer Shopper, MicroMart, etc... And if you fancy a new unit, the current model, Amstrad DMP-3160, retails for just £149+VAT, - check out the discounters for a real bargain! The slightly faster DMP-3250di has both parallel and serial interfaces, so could be ideal for //c, IIGS, and Mac users, (although this hasn't been checked out, it's very likely you could stick a DMP-3250di straight onto a IIGS or Mac using Apple's very own mini 8-pin/D-25 ImageWriter-I cable & configuring your software for Apple ImageWriter! - someone please tell me if this works, because if it does, this could be a major breakthrough in low-cost Apple-compatible printing...).

❑ Thanks for staying with me, and I hope some of you can get a cheap printer using this information...

❑ **FONTRIX #-SIGNS**

Following The Nibbler's request, (A-2000 2/90 pp38) for help to Bill Rees' need for sterling pound-signs, we can tell you that Fontrix FontPak Vol.14 - "General purpose typesetting fonts" is the answer.

Available on the £25 WYSIWYP disk are the following:- Benguiat Gothic, British Condensed, Caslon, Caslon Black, Clearface, Perpetua, and Quadrata, all of which contain the essential #-sign. There are three other fonts on the disk which don't contain £-signs. Although some users might think that its not much good having just these fonts

when all the rest of their fonts don't have them, but when I used to use Fontrix for creating my Apple 2000 ads, and MGA leaflets, I simply loaded one of these fonts, printed the £-sign, and then reverted to my original font. As a matter of interest to Fontrix users, if you can afford it, get yourself a RAMworks card, and load both your graffile and your most oft-used fonts onto it, it's staggering! You can zoom around your document without waiting for the sectors to load & save to disk! Current price for a 256K Ramworks Basic is £139.90.

❑ **AppleWorks FOOTNOTES**

Peter Mohr's question, (A-2000 2/90 pp4) may be solved by some clever use of various TimeOut enhancements/ macros, but the only answer we found for one user was to provide him with a copy of Word Perfect which as far as we know is the only available Apple II program which supports footnotes. A WP utility included allows you to convert AppleWorks files. Two versions are available - v1.1 for //ec, and v2.1 for IIGS, at £179.00 each.

❑ **AppleWorks / ImageWriter II SUPERSCRIPTS**

Firstly, if Peter selects ImageWriter II instead of the ImageWriter" driver he is currently using, he will find that the OA-O +B/+E commands to turn on/off superscripts will work fine.

Secondly, the ImageWriter II doesn't support italics so a way to get these is to load "PowerPrint" from Beagle Bros before you load AppleWorks. PowerPrint downloads a custom font to various printers (including IW I/II), and this font may be an italic font which can be selected from AppleWorks using a special code. The original IW II fonts can still be used as normal. PowerPrint works with all software that prints using the printers supported.These best way to get italics, however, is to install TimeOut SuperFonts onto your AppleWorks. [PowerPrint £39.95, TimeoUt SuperFonts £53.95]

❑ **3.5" DRIVE FOR £149.95 INCLUDING CARD?**

If you are a //e user who thinks this is a bit unlikely, have you considered looking at Mac 400K drives which must litter the countryside? When Apple introduced the 800K 3.5" drive, hundreds and hundreds of Mac users virtually threw away their old 400K drives.

With Laser's Universal Disk Controller Card selling for just £89.95, you can probably pick up a couple of these drives plus card for under £200.

❑ **LABEL PRINTING TIP**

If you are using labels, it is quite nice to print individual ones for address labels. However, printing one label, and form-feeding the printer wastes lots of labels and very often loses the top of form position as the printer does 66-line tof, whereas usually labels are on 72-line webs. Similarly, when you've finished a label run, the last couple of labels are still inside the printer, necessitating the dreaded formfeed or wind on.

Having got fed up with this, I thought that there must be a simple answer...

My interim solution was to do the following (using AppleWorks, although any database will do):-

1. Set up a new file from scratch (called "Dummy")
2. Make 8 fields labeled 1-8
3. Enter 2 (or however many labels you need to turn up to get your last label out) records, (all you need to do is put an * or anything in the first field of each record.
4. Make a label report format just as you would for ordinary mailing labels.

Now all you need to do to get at your last few labels and keep the correct tof is to call up the dummy, and print all the records. In my case, the printer prints an *, formfeeds 9-lines to the next label, prints another * & formfeeds again. This happens in seconds, and I can happily cut or tear off my individual label or complete label run. The two labels with asterixes on are used internally so there is no waste!

Jon Gurr (Apple II Product Manager, MGA SoftCat)

Rumour Factory

#: 24415 S15/Community Square
15-May-90 16:40:41
Sb: New Apple II???
Fm: Kenneth I. Gluckman 73250,2572
To: All

It looks like we've been underestimating Apple on its plans for the next Apple II. From an article in the May 14 issue of PC Week on the Motorola vs. Hitachi lawsuit over rights to the 68030 processor (the one in the Mac SE30 and Mac II):

"...Apple maintains only an eight-day supply of the 68030 chip, which is vital to about half of its computer line, including the Macintosh and Apple II."

Another quote from the same issue is less entertaining. Headlined "Apple II No Longer at Head of the Class" the article states:

"The Apple II's share in computers sold to schools is down this year...Meanwhile IBM's share in school sales has grown from 10% to 25% The Macintosh, however, is pulling Apple Computer Inc.'s overall share up, accounting for 10% of

shipments to schools this year. In a recent edition of P.C. Letter, an industry newsletter ..., publisher Stewart Alsop urges Apple to keep its grip on the school market by giving teachers a 60% discount on Macintoshes. 'Apple needs to be a little bit crazy to really live up to its potential,' he wrote"

#: 24390 S15/Community Square
15-May-90 11:47:54
Sb: Apple II-compatible Mac
Fm: Owen Linzmayer 74710,13
To: all

The May 15 issue of MacWEEK contains the following article on page 5.

Apple II-compatible Mac due on teachers' desks By Henry Norr and Carolyn Said

Cupertino, Calif - Attempting to shore up its position in the K-12 market, Apple is set to cut prices for educational institutions on several Mac models, sources said. The cuts reportedly could come as early as nest week. In a videocassette mailed early this month to 10,000 teachers and school administrators, Apple CEO John Sculley also promised that a low-cost color Mac II and an Apple IIGS version of

HyperCard will be available during the 1990-91 school year.

The new Mac will be able to run Apple II software. "I see that as an absolutely essential step in helping our customers maintain their investment in Apple II technology," said Bernard Gifford, AppleUs vice president for eduction. "Education is deep in the roots of Apple," Sculley said on the tape. "It's where we began; it's the most important long-term strategic objective that we have for our company."

The latest Apple moves come in the aftermath of recent steps by IBM to increase its share of the K-12 market, including the announcement that it will market an add-in board that lets low-end PS/2 models run Apple II software, and the introduction of the Model 25 286, an new PC aimed for the education market.

❑ Extracts from the Community Square Forum on the MAUG section of Compuserve are courtesy of a download by Andreas Wennborg in Sweden

TransWarp LightSpeed

.... or how to take your IIgs into orbit the dangerous way!

❑ The following article may be obtained by sending a self-addressed stamped envelope to:

Western Design Center, Inc.
2166 East Brown Road
Mesa, Arizona 85203
U.S.A.
602-962-4545

I re-keyed the following from the original mailing sent by Western Design Center.

If you order from WDC, you would do well to request this information direct from them. They may have updated the recommendations since the original mailing.
[Charlie Stillman, TechAlliance (too chicken to attempt the upgrade)].

UPGRADING A TRANSWARP GS

Prepared for the Western Design Center, Inc. by Andrew Hall 12 March 1990

(DISCLAIMER: the following document contains suggestions from various people who have upgraded Transwarp.GS boards. The author himself has not tried these! Follow these suggestions at your own risk. The author nor anyone else guarantees any of the procedures or tips below. The author nor any of the companies mentioned within will not (sic) be held responsible for any costs or damages incurred as a result of attempting to upgrade a Transwarp.GS board.)

WDC created this document to help some special users of the Apple IIGS, journalists, consultants, engineers, and Apple Computer experiment with faster Apple IIGS systems and faster W65C816 microprocessors. New applications will be found when higher speed W65C816's exist. WDC also has engineering samples planned on other chips such as W65C02, the W65C134, and the W65C265 (when it exists). Engineering parts are tested for extremes of voltage and temperature. Some engineering W65C816, W65C02, and W65C134 microprocessors have a specification of 1.2 volts (watch battery). In short, this is applications engineering information.

When the Mensch Micro Computer Company has boards out then WDC/Mensch will concentrate on the Mensch Micro Computer rather than the Apple IIGS.)

SPEEDING IT ALL UP

Applied Engineering's Apple IIGS accelerator card, the Transwarp.GS, accelerates the IIGS to 7 MHZ. Even though AE does not yet sell a faster board or offer an upgrade, it is possible to increase the speed of a TWGS beyond 7 MHZ. Some users have had their boards running reliably as fast as 13 MHZ.

Yes, if you can't wait for an Applied Engineering upgrade, it is possible to upgrade the board yourself. Unfortunately, despite what you might have heard or read in InCider magazine, THE UPGRADE IS NOT TRIVIAL! This is one reason why AE does not yet offer faster boards.

By replacing the microprocessor and the oscillator on TWGS, you **may** be able to get a TWGS board up to 9 MHZ. To go any faster than 9 MHZ, you will have to do a lot of messy soldering to replace 3 static RAMs and change the power supply.

If you don't have any experience working with this sort of thing or if you are not a technical person, we highly recommend not attempting an upgrade like this. If you try the upgrade and you mess up your Transwarp board, you're on your own. WDC does not guarantee these engineering parts and does not offer further technical assistance for these upgrades. If you blow a W65C816, you're out $95. If you wreck your TWGS board, you're out $300.

Your TWGS board MUST have version 1.5 or greater to be able to run beyond 7 MHZ. Applied Engineering should provide a free upgrade ROM for you (AE: 214-241-6060).

Below, then, are four upgrade steps. You need not carry out all the steps, but each step will allow your TWGS to run faster.

UPGRADE STEPS:
1. REPLACE THE CRYSTAL OSCILLATOR

The TWGS oscillator runs at 4 times the microprocessor speed (i.e., 28 MHZ for TWGS). You will therefore need to get an oscillator 4 times faster than the speed at which you want the TWGS to run.

A "standard" TTL oscillator plugs into a standard 14-pin DIP socket. On TWGS, AE used a "1/2 TTL oscillator", which fits into a smaller 8-pin DIP socket. Unfortunately, this oscillator is not yet widely available in a variety of frequencies.

Supposedly, several Asian companies make the 1/2 TTL oscillator, but parts seem difficult to find. One American company that is supposed to make them is RXD (Nebraska: 1-800-228-8108). The part you want is called "RXD H-T-2". Unless they happen to have the frequency you want (unlikely), they may require 6-8 weeks to make you a sample, if at all.

Your best bet is to get a standard TTL oscillator, which is bigger than the 1/2 TTL but has its four pins in the same orientation as the 1/2 TTL package, and solder leads onto the pins to fit into the oscillator socket on the TWGS. Look for the dot on top of the oscillator indicating Pin 1.

You can get standard TTL oscillators by calling local electronics suppliers. RADIO SHACK DOES NOT CARRY THEM. If you're stuck, try Digi-Key: 1-800-344-4539 (Minnesota). They accept Visa/MasterCard. A 40 MHZ oscillator from Digi-Key is Digi-Key part# X120; the 50 MHZ is X121. Each will run you about $6.00 plus shipping.

(you might want to get at least two oscillators in different frequencies to play around with different speeds.)

2. REPLACE THE MICROPROCESSOR

Because it requires no soldering, this is probably the easiest step. Western Design Center sells fast W65C816's in PLCC packages (the one used on TWGS) for about $95 dollars.

WDC has two kinds of W65C816 parts that you can plug into a TWGS: "full-spec" parts and so-called "engineering parts." Engineering parts are a bit faster than the full-spec parts, but they have some current leakage problems that may make a system fail at lower clock frequencies (in the 100 KHZ range). An Apple IIGS running at 1 MHZ or faster should have no problem with this.

If you call WDC to order a fast W65C816, TELL THEM you are upgrading a Transwarp.GS board. Get an engineering part if WDC has any; otherwise, get the fastest standard parts available. (WDC: 602-962-4545).

Each engineering part is INDIVIDUALLY screened for high speeds. Some parts run as fast as 13 MHZ (you will need to check with WDC as to availability). For each engineering part sold, WDC supplies a "shmoo" plot.

The shmoo shows if the part passes its high speed test over a certain volt-

age range. The horizontal axis of the plot shows the PHI2 cycle time against the VDD input voltage on the vertical. An 'X' at a point indicates that the part passed the test at that voltage and cycle time. The operating frequency is calculated by: FREQ = 1/ cycle time (denoted "TR" on the shmoo). Generally, increasing the voltage will increase the operating frequency.

The W65C816 PLCC chip is normally removed from its socket with a special tool. However, you can remove it with a stiff wire if you are careful. There are four holes on the PLCC socket, one on each corner. Carefully stick the wire into each hole and pry the chip out. Pry it out a corner at a time until it comes loose.

Note that the PLCC package is specially shaped or "keyed" so that you can't plug the chip in sideways.

3. REPLACE THE CACHE SRAMS ON THE TWGS

The removable "piggy-back" board on the TWGS contains 3 8Kx8 static RAMs (SRAMS) and an EPROM. Unfortunately the three RAM chips are soldered to the piggy-back board. You will have to de-solder the three chips from the board and replace them with 28-pin DIP sockets. Note that you may destroy the RAM chips that are already on the board. Remove the EPROM before you start soldering. SPEND THE EXTRA DOLLAR AND SOLDER IN SOCKETS INSTEAD OF SOLDERING IN NEW RAMS, then plug the new RAMs into the sockets. (Sockets: Digi-Key part #C8928).

Most TWGS boards come with 45 ns static RAMs. You will need (probably) 20 or 25 ns RAMs to go any faster than about 9 MHZ. If you want to get into the 13 MHZ range, be sure to get 15 ns RAMs.

Try local distributors, or look for ads in the back of computer magazines; many companies sell RAMs these days (Digi-Key does not sell them) You want an 8Kx8 Static RAM, 28-pin DIP (Widebody), plastic package. Low power RAMs (as opposed to standard power) are recommended.

The following companies manufacture fast 8Kx8 SRAMS: Toshiba, National (who just bought Fairchild), Integrated Device Technology (IDT), Cypress, and others. Prices may vary from $12 up to about $30, so check around if you can. The faster RAMs and the low power RAMs will cost more.

4. INCREASING THE TWGS POWER SUPPLY

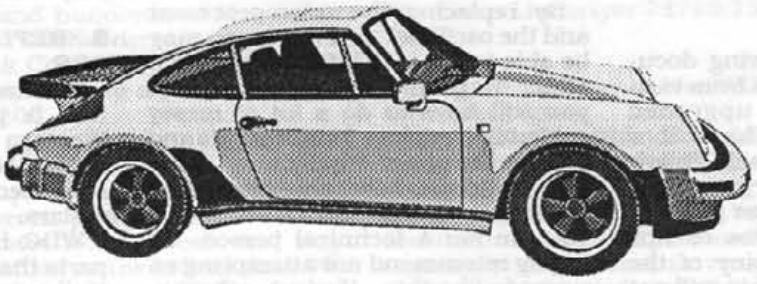
(Warning: This step requires you to cut wire traces on the TWGS PC Board. Cut the wrong trace, and you could wreck your board. Don't even **think** of attempting this step unless you really know what you're doing.)

The TWGS normally uses the Apple +5 volt supply. However, you can get a little more speed out of the board by increasing the power supply voltage. You can use the + 12 volt supply from TWGS edge card and an adjustable voltage regulator to produce a power supply voltage between 5-6 Volts. Make sure the voltage regulator is rated to at least 2 Amps; a 13 MHZ Transwarp card will draw a lot of current! Be careful with the power supply; if you have other cards that use the + 12 volt supply, you could really be taxing the supply. The Apple IIGS power supply is rated at 2.5 A at +12V.

How high should you adjust the voltage? If you got an engineering part from WDC, use the shmoo plot to determine what voltage will allow the part to run at the speed you're aiming for. It is not recommended that you raise the supply higher than about 5.8 volts.

Note:
DO NOT RUN THE TWGS HIGHER THAN 6 VOLTS OR YOU WILL DESTROY IT!!!

You must disconnect the +5V supply in two places: near the edge card connector and on the DIP header cable (the little cable that plugs into the IIGS microprocessor socket). Cut the trace on the front of the TWGS PC board from pin 25 on the edge card (this is +5V). The trace is marked with a + on the TWGS. Also, cut the wire on the DIP header cable coming from pin 8 (VDD) on the microprocessor socket.



ClickArt® EPS Illustrations ©1988 T/Maker Co.

There is no easy way to describe which wire is connected to pin 8. Use an ohm meter to find out which wire is pin eight on the DIP header and cut that wire. You can also get the connectors to build a new cable. The IDC connector is a standard 40-pin connector (Ansley 609-4030 or Circuit Assembly CA40-IDC). However, there are two kinds of 40-pin DIP headers. The one used on TWGS is the less common type with the pin rows reversed. Try a Circuit Assembly CA-401DP.

HOW FAST CAN TWGS GO?

You should be able to get 8 MHZ out of *any* TWGS board by carrying out steps one and two; if you can find the 1/2 TTL oscillator, you won't even need to pick up the soldering iron. Some TWGS boards could run at 9 MHZ by doing these steps (you will need to try it for yourself) If you think the speed increase from 7 MHZ to 8 or 9 MHZ is worth $100, fine.

By carrying out the first three steps (replacing the RAMs as well as the CPU and oscillator), you should be able to get your TWGS up to 10 MHZ.

To get into the 13 MHZ range, you will need to raise the power supply as described in step four. As noted there, be sure you know what you're doing before you try this, or you could ruin your TWGS.

Remember that you must have TWGS firmware version 1.5 or greater to perform the upgrade.

IS IT RELIABLE?

The steps above are only part of the work involved in upgrading the TWGS. The rest involves testing your upgraded board.

Even if your newly upgraded TWGS works fine right after you turn on the power, it may not work flawlessly under all conditions. Let the board run for a few hours until it gets warm. Try "worst case" conditions (the way you would normally use your computer), **then** see how it works. Generally, raising the temperature of IC's reduces their performance. Note that microprocessors and memory chips all vary a bit in their performance; some TWGS's may work better than others.

Run the TWGS desk accessory self-tests (the speed switch test may fail; this might be OK). Run software that you normally use as part of the reliability test. If you have Appleworks.GS, try running that. Several people have claimed that this will really prove whether a TWGS is reliable. Try running all the modules after the board gets warm.

Don't brush off this last important step. You wouldn't want to find out right in the middle of some important work that your TWGS bombs when it gets hot.

If you find that your upgraded TWGS is unreliable, you may need to try a slower oscillator or a faster microprocessor (or raising the supply voltage for those so daring).

IS IT WORTH THE EXTRA COST?

Users who upgrade their boards do so at their own risk. You may spend about $150 just to try. If you really don't *need* the speed, wait for Applied Engineering to come out with an upgrade. In the meantime, try to

appreciate how well your Apple IIGS performs at 7 MHZ.

ORDER AND INFORMATION FORM W65C816PL-ENG

Western Design offers faster W65C816 microprocessors for increasing the speed of the Transwarp GS card as a service to the public – we are not set up for retail trade.

HOWEVER, THE FOLLOWING CONDITIONS MUST BE UNDERSTOOD:

We have engineering chips that sometimes test out at higher speeds than our normal "off the shelf" stock. These chips are tested for the performance of that individual chip. Each one of these has its own shmoo (In other words, what voltage provides what speed.) From these plots, we can sometimes find a few that run at 10 Mhz and up to 13 MHz.

(NOTE: FOR THE TRANSWARP.GS BOARD, VOLTAGE IS AN IMPORTANT FACTOR – READ THE ENCLOSED SUGGESTIONS/WARNINGS).

Generally, we have engineering chips that have tested out at 10 Mhz at some voltage on the plot. As each order comes in, we take the best looking plot to fill that order. If you place your order now, your order will be filled from current engineering stock. If you would like faster, we can put you on a list for the next time we have an engineering lot tested.

Engineering chips cost $95.00 each – due to limited numbers, we cannot guarantee availability.

We offer no guarantees or refunds on these chips; we know they work when they leave our door. Due to the sensitive nature of a chip, WDC CANNOT BE RESPONSIBLE FOR DAMAGES THAT OCCUR AFTER LEAVING OUR FACILITY. Every precaution is taken by us to protect the chip (i.e. anti-static packaging) while in our care and in our shipping methods.

Suggestions for upgrading your board are attached. We offer these as a way for you to prequalify yourself for the task. We cannot help you troubleshoot problems. We have no technical support for the Transwarp.GS.

YOU ARE ON YOUR OWN IF YOU DECIDE TO BUY A W65C816-ENG.

❑ Please check with Western Design Centre for current prices. The chip is in the order of $95 with around $3-$10 postage.

Hotline News

Does anybody have access to a colour printer driver for the Seikosha colour printer GP700A, apparently Beagle Bros. in their Triple Dump package supply a monochrome version? Please let me know through the PO Box 3 in Liverpool.

On at least six occasions I have been asked if it is possible to boot a GSOS disk from an Apple //e. The simple answer is YES; I used this when reviewing the Cirtech InSyder hard disk so that I could transfer it from Apple IIgs machines to the classic Apple // computers.

The technique is quite simple, really all one needs is a boot ProDos file that checks the machine and then runs the appropriate ProDos file! A copy of the version I use will be posted on TABBS and an article explaining the technique and listings will appear soon.

A tip I heard the other day sounds to be worth trying. Those of you with DeskJet printers will know that you can change that ink cartridge quite easily. But has it occurred to you that you can fill the DeskJet cartridges with ordinary fountain pen ink?

There is a small air hole in the top of the cartridge by a green arrow. Using an eye dropper, pour in some 20ccs of ink. Please let us all know if this works it could save some of you a lot of money!

Dave Ward

NEW LITERATURE

UNDERSTANDING THE APPLE][(QS) £19.99

The definitive source of information about how the Apple][works. Jim Sather has conducted an exhaustive analysis of the inner workings of the Apple][computer and has documented his findings in a way that will benefit everyone interested in microcomputer technology.

- Documents all motherboard circuits, including some discussed nowhere else.
- Describes disk controller operation, including previously undocumented details of the logic state sequencer.
- Explains RAM and ROM card operation.
- Reveals previously unnoticed features of Apple graphics.
- Contains 23 software and hardware Application Notes including shift key mod, disk write protect mod, and EPROM mods.
- Includes a chapter on maintenance that provides simple troubleshooting steps.

If you are at all curious about how the Apple][works, you are sure to find *Understanding the Apple][* very valuable. It is an ideal book for a microcomputer fundamentals course based on the Apple.

Understanding The Apple //e (QS) £19.99

AP Book CAT *FREE

This new CATalogue describes all the books for Apple][+, //e, //c & IIGS available from MGA.

Apple IIGS ToolBox Reference Vol 3 (Apple) £35.95

Six brand new and previously undocumented tool sets are now available with the new system software v5.0 for the Apple IIGS. These tool sets help programmers create quality applications far more quickly. Vol 3 describes these tool sets, provides programming examples, and also presents other new features of the system software v5.0.

UK-AW-0-201-55019-9 (1100pp Hardback).

Inside AppleTalk : 2nd Edition (Addison-Wesley) £31.95

AppleTalk is Apple Computer's network system that is incorporated into MAC & Apple IIGS computers. This book was written for programmers who are creating applications for this network. This 2nd edition includes information on the most recent release of AppleTalk, "Phase 2", which allows thousands of computers to be hooked into an AppleTalk network.

Programmer's OnLine Companion: Apple IIGS Toolbox Reference Vols I-II £44.95

Steve Capps

This on-disk reference utility for the Apple IIGS allows for the insertion of system calls form the Apple IIGS Toolbox Reference Manuals directly into any language editor, elimintaing the need to look them up and type them in. The keyboard-driven program is user-modifiable and works under any standard ProDOS 16 language development system, as well as programs running in Apple //e emulation mode and all environments on the IIGS

Using AppleWorks GS £17.95

Douglas I. Brown

AppleWorks GS is a new integrated software package that includes six high-quality applications - a word processor, a database manager, a spreadsheet, a graphics application, a page layout application, and a communications package. Using AppleWorks GS covers the features, functions, and commands for all six AppleWorks GS applications. The initial chapters provide introductory material on the AppleWorks GS desktop interface and how to launch the program. Then the book discusses each application individually, with a description of the basic functions that get the user up and running quickly, followed by advanced features, shortcuts, and sample applications. This book is a comprehensive guide to a comprehensive, powerful software package.

MORE NEW SOFTWARE

Math Wizard (Unicorn) *£34.95

Education, ages 6-11 768K IIGS.

This talking program includes four math activities for one or two players covering addition, subtraction, multiplication and division on three difficulty levels. Includes a word problem module where Max the friendly troll gives you prizes for correct answers. Dragons, elves and the Math Wizard will captivate children's interest and make practicing math fun.

Also available in IIGS School Version, IIGS Lab Pack, and Amiga format.

New Print Shop (Broderbund) *£39.95

Now includes:-

- On-screen preview.
- Multiple graphics / fonts per page.
- Text / pictures anywhere on page.
- Calenders (daily, weekly, monthly, and yearly).
- Uses all older PrintShop borders, fonts, pix.
- New user interface.
- Higher resolution graphics.

[Part-exchange upgrade *£24.95]

VISA

MGA SoftCat (0797) 226601

41 Cinque Ports St., Rye, E.Sussex TN31 7AD

MasterCard

Clearance prices valid for current stocks only, all prices include VAT, & *-prices also include UK p&p. E.& O.E.

Vulcan Hits Back!

Jihad Jaafar looks at Applied Engineering's Inner Drive for the Apple //e and IIgs

Well Applied Engineering have done it again they were the first people to say they were doing a inner drive for the Apple II series. Well then they brought it out and called it the "Vulcan".

I got the drive to review from Holdens Computer Services (they have a next day delivery services as well). When the box arrived it was well packed and took a while to take it out of the box. When I opened the box I got the drive the card a plastic card which protected the card in slot one from the Vulcan drive because it extended out towards it. As well as that I got the manual and three sets of disks, two 5.25" and one 3.5".

The Vulcan drive extends to the right, at the bottom of the drive. It has a fuse on the left side (I like this idea because if the fuse blows you don't have to undo the Vulcan too get at it). On the side it has got 230v / 110v switch to allow it to work worldwide.

Installing the Drive

When I was reading the manual on how to install the drive. I came across the part about the card and it had information on how to make the card go in slot 5, but the machine will think its in slot 7 by changing 4 dip switches, (what I mean is that by configurating the switches to tell the card where it should be; this was difficult to understand from the book but it was set to go into slot 7 already).

Once all the setting has all been done I take off the cover of the GS and put it aside,I took the power supply unit out remembering to take out the power cord. (If you have a card in slot one, take that out to give you more room to work with). I Connected the vulcan card with the ribbon cable which was coming out of the vulcan drive, once that's done I put the vulcan drive in where the power supply was but first I connected the power supply cord to the mother board.(I have found by putting the cord first it was easier than doing it the other way round). Once all of that is done I put the vulcan card in slot 7, (but if you have changed the dip switches on the card to represent a different slot put it where you want it to be. If you have taken a card out of slot one, stick the plastic card on the right side of the vulcan drive which is most extended and then put the card in slot one, this is to protect the card from touching the metal casing of the vulcan drive).

Checking it Out

We have finished installing it so put the cover on the GS and put it all together. When I switched on the machine it booted up the vulcan drive and loaded up GS/OS and it took 19 sec to get to the finder (if one your machine it boots the 5.25" or the 3.5" drive you have not changed the start slot in the control panel to "scan". What I have found when I looked in the disk was the program Back It Up II, Basic System, Park.Heads and Part.Manager (partition manager). When I looked in the control panel I found a CDA for the vulcan which had set boot partition, write protect park heads, about vulcan.

Partitioning the Drive

Using the partition manager it allowed me to partition the vulcan drive so it could have pascal, DOS 3.3, CP/M and PRODOS but it can only handle 16 partitions. When I got back to the finder I copied across to the Vulcan drive Apple Works GS and Apple Works v 3.0 as well as hyper studio and Shrink it. Apple Works GS with all modules took 15 sec to load, it took Apple Works v 3.0 14 sec, Hyper studio 17 sec, Shrink it 5 sec. I did some other tests which were launching Apple soft basic took 2 secs. and "bye" to exit Apple soft basic to the finder which was 2 seconds.

Using DOS 3.3

I had a look at the DOS 3.3 disk which had a patch for DOS 3.3 to recognize theVulcan hard disk as well as a enhanced FID program a partition manager, a park heads program and a boot PRODOS partition program. By the way the fan that I forgot to mention at the begining is quiet and efficient, in the manual it says if you have got more than about 5 cards in your system you should put another fan into your system. (I wonder about this because with that many cards and the vulcan drive there would not be enough room for another fan?).

Conclusions

My conclusion about this drive will be based on both the advantages and disadvantages. First the disadvantages:

1. The programs that came with it were text based because the IIGS is capable of desk top graphics it should use it.

2. I would have liked to see more Shareware and public domain programs to get the user started quicker.

3. Some users might want to get another hard disk in the future; The vulcan card wont allow you to use the same slot as the external hard disk interface, so another slot has to be used for the external hard disk and this wastes two slots when one is enough.

Now the advantages:

1. A quiet fan

2. The ability to select which slot the Vulcan card should be in if the slot you want is blocked by something else.

3. The fuse on the outside.

4. The ability to put PRODOS, CPM, PASCAL and DOS 3.3 on the Vulcan drive.

5. The ability to lock partitioned areas.

Overall this is a very good hard disk, quick and out of site so there are no wires dangling outside the machine.

Jihad Jaafar

info

Product : Vulcan Inner Drive
Maker : Applied Engineering
Available from :
Holdens
Chapel Lane
Longton
Preston PR4 5EB
0772-615512
Price : £425 + VAT for 20 mb

Value :
Performance :
Documentation :

Your Authorised Apple Dealer for all

APPLIED ENGINEERING PRODUCTS

APPLE II+, IIE, IIGS

GS RAM 512K (Expandable to 1MB)	£149.00
GS RAM Plus 1MB (Expandable to 6MB)	179.00
GS RAM 2MB Expander	339.00
PC Transporter with 768K (640K PC)	269.00
Installation Kit for Apple IIGS	29.00
Installation Kit for Apple IIe/II+	29.00
TransDrive 360K Single-Drive	149.00
TransDrive 360K Dual-Drive	229.00
360K Half-height TransDrive mechanism	79.00
IBM-style Keyboard including Cable	89.00
Digital RGB adaptor cable IIe	15.00
ColorSwitch Analog RGB adaptor	29.00
8087-2 Math Co-processor Chip (Transporter)	149.00
Buffer Pro 32K	69.00
Parallel Pro	69.00
Serial Pro	89.00
RamFactor 256K	179.00
RamFactor 512k	209.00
RamFactor 1MB	279.00
TimeMaster HO	69.00
Phasor	99.00
A/D + D/A Card	119.00
16 Channel, 12 Bit A/D	179.00
High Output Power Supply (Not IIGS)	69.00
Vulcan Internal Hard Disk 20MB inc SCSI	445.00
Vulcan Internal Hard Disk 40MB inc SCSI	555.00
Vulcan Internal Hard Disk 100MB inc SCSI	1095.00

APPLE IIE

RamWorks III 256K	139.00
RamWorks III 512K	169.00
RamWorks III 1Meg	239.00
TransWarp III Accelerator Card	129.00

APPLE IIGS

RamKeeper IIGS	119.00
Sonic Blaster IIGS	85.00
Transwarp IIGS	279.00

MACINTOSH

DataLink Mac II Internal Modem 2400HC	249.00

All prices subject to VAT

HOLDENS COMPUTER SERVICES
The Mansions, Chapel Lane
Longton, Preston PR4 5EB
Fax 0772 615919 Tel 0772 615512

Mastertype

Terry Morris learns to type all over again with a program suitable for the Apple II+ to IIgs

Introduction

In the January edition of Apple2000 I gave a good report on Typing Tutor IV, a learn-to-type program for the Apple IIgs which is also available for the Macintosh. Additional versions are also alleged to exist for the rest of the Apple II family, but as the massed ranks of the MGA purchasing department have been unable to to track them down they sent me Mastertype "the original typing game" to review. Owners of these machines should not now feel left out. A companion word processing program - Mastertype's Writer - is also available, but more of this another time.

Mastertype Program Requirements

The single copy-protected 51/4" disk contains two versions, one for the Apple II, II Plus and 64k IIe. This version requires 48k. The other is for the IIc and 128k IIe. The latter program offers improved (ie double hires) graphics, the recording of the high game scores on disk, and exercises for the Dvorak keyboard as well as the qwerty keyboard. Also required is one human being aged 7 to adult.

The program runs under an altered DOS so Prodos program selectors to launch this program cannot be used. I actually tested the program with a IIgs with the system speed changed to normal to replicate the rest of the II series as closely as I could.

The Training Ground

The Mastertype program splits into two distinct parts, the training ground and the game proper. Beginners are advised to start on the training ground to prepare themselves for the battles ahead.

The Training Ground has four parts:

1 Fingering Chart

This is an animated display where the correct "finger" moves on the screen for a key typed at the keyboard. Not all keys are covered though nothing significant is omitted. However, for the key "6" the wrong finger is shown!

2 Timed Finger Practice

A choice of eight lessons and 3 speeds is offered for this practice to the computer's metronome. This is a good idea as it offers the chance to get rhythm into your typing at an early stage. I think that this aspect of Mastertype is likely to be of interest to more than beginners, though the fastest speed available is not going test the experienced typist.

3 Sentence Practice

A choice of 6 lessons of short sentences which must be typed in your own time. If any errors are made then a Wizard strolls along just below the sentence and shoots the offending letters. The sentence then has to be retyped. You are not permitted to progress to the next sentence until the current one has been typed entirely accurately. This can be rather frustrating but is another good habit the program is trying to ingrain. A running count of errors and the speed achieved is given at the end of each sentence. No corrections are permitted during a sentence and if a letter is missed out (and the rest of the sentence typed correctly) then the program considers that all the rest of the typing is wrong and a high error count is given by the wizard. (When the novelty has worn off it seems to take an age for him to do this).

4 Training Game

This is a simple game to prepare the user for the big one. Two sets of letters are attacking the Wizard and you help defend them by typing the correct letter when it begins to flash. A score keeps track of your progress.

The training ground provides a sound introduction to the basic art of typing for beginners, though it is a little restricted in that only letters are tested and no use of the shift key is called for.

The Mastertype Game

The idea of the game is simplicity itself - either you are defending a rather clever spinning globe from the bad guys (double high resolution graphics) or you are defending a more simply drawn spaceship. Either way your home will gradually be blown up unless you type the "words" which appear on the screen. There is a choice of lessons of different difficulty and these "words" can be either single letters or whole words according to the level chosen. Each lesson is intended to be completed before proceeding to the next. A score is given as you progress through the lesson. At the end of the session a summary of progress is given, which can be printed out, though I was unable to get a print-out when using double-res graphics. This summary includes the score, the average typing speed in words per minute, errors made, and a short homily on how you did (eg "your score could use some improvement") and what to do next ("keep working on this lesson", or "you are ready to go on to the next lesson").

There are various options available to customize the lessons. The speed goal can be set (from 0 - 1 words per minute to 238 - 536 words per minute; this should cover most requirements). Changing the speed goal changes the speed at which you are attacked by the bad guys. Upper and lower case can be turned on (in fact it must be turned on every lesson if you want it, as the default is off), and the "commander" mode can be chosen. This means that you cannot see what you have typed, and although not as intellectually demanding as blindfold chess it does provide an interesting extension to the game with relevance to typing in the real world. Another good feature is that you can take time out from the game and practice a difficult group of letters - sometimes

this is the only way to make progress.

There is a fairly wide choice of lessons already designed for the user, including one devoted to the "words" use in basic programming. This is a good idea of relevance to most Apple II series owners.

It is also possible to make your own lessons. It is a bit tedious to do this but once done a lesson can saved to disk for future use. It is a valuable program feature.

The program is not especially as convenient in use - it takes over two minutes to get to a lesson from turning the computer on, and you cannot

escape from the program without a re-boot on slot 6. I believe that this is partly due to the copy protection (for example, "Return to main menu" actually involves re-booting, as does changing the lesson!), and partly due to the fact that it runs on a wide variety of machines. The current convention of "Esc" to back up a step is not supported. You cannot transfer it to a hard disk.

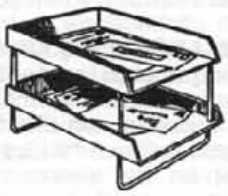
The acid test, however, is whether the program will teach the user to type, and I believe that it will do this well. The lessons are good, the play angle is well developed and so the motivation to continue is likely to remain high.The feedback of data so that progress can be measure is not bad either.

Overview

For those who have an Apple IIgs, and can thus run either MasterType or Typing Tutor IV, I believe that the latter is the better program, if money is not the primary issue. Though a lot more expensive, the presentation is better, the exercises more varied, the treatment of the use of the shift key is better. It belongs to the more modern generation of programs with the lack of copy protection and greater ease of use.

To be fair, the shortcomings of MasterType compared to Typing Tutor IV are mostly those of the earlier Apple machines compared to the GS. For those who do not have the choice, MasterType will provide a good way to learn to type - at a very reasonable cost - and that is its pure and simple aim.

Terry Morris



info

Product : Mastertype
Publisher : Mindscape
Available from :
MGA SoftCat
41 Cinque Port Street
Rye
East Sussex TN31 7AD
0797-226601
Price : £14.95 WYSIWYP

Value :
Performance :
Documentation :

AppleShare and the Apple II

By kind permission of A2 - Central we bring you a primer on AppleShare

by Dennis Doms

A2-Central September 1989
Vol 5 No 8 page 5.59

After what seemed an interminable wait following the Mac and MS-DOS versions, Apple released AppleShare support for the Apple II computers last September. The AppleShare IIgs WorkStation Software used the IIgs's built-in AppleTalk facility to connect to AppleShare and an Apple II Work-Station Card was released to connect (128K enhanced) Apple IIe's to the network.

The AppleShare IIgs Workstation Software used the equivalent of System Disk 3.2. The incorporation of AppleShare support into the new IIgs System Software 5.0, however, does away with the need for special workstation software and has produced an environment that we hope to adapt to our office situation. We'd like to share some of the details we've discovered for others interested in seeing what networking may mean to their future and to the continuing future of the Apple II.

THE INTENT OF A NETWORK is to let several computer users have common access to the same resources. This allows, for example, many computers to share the use of a single large hard disk for mass storage or the use of a single printer. Even with the added expense of the extra hardware and software needed to operate a network, the ability to share resources that each individual on the network may use only a small percentage of the time can offset the extra expense. For example, it is more sensible for several computers to use one expensive LaserWriter on a network than to buy a LaserWriter for each computer. Each individual user usually won't keep a printer busy 100 per cent of the time and an idle printer may as well be put to use by someone else.

The network also saves time by automating the use of a network resource. Several users can share a printer attached to a computer dedicated to printing documents, but each person has to constantly check see when the computer and printer are available. In a network situation, a computer can be configured as a print server to accept print requests from other computers on the network. The documents in these requests can be accepted, stored on the server's mass storage device, and sent to the printer one by one as the printer becomes available in a process called spooling. This keeps users on the network from having to wait for the previous printing job to complete itself and makes it appear almost as if they have exclusive access to the printer.

Flexibility can be added by using the network's ability to connect several alternative printers for selection by a user. An ImageWriter II may be selected if it is deemed more suitable for a printing task than a LaserWriter. Various printers can also be prepared to print on specific letterhead or forms and users can route their document to the printer with the proper configuration. A network "Chooser" program can be used to select the proper printer, and a "Namer" can be used to give the printer a representative name (such as "Letterhead") if desired.

In addition, AppleShare can facilitate accessing of common files by users, either by sharing the use of programs, by transferring data via inter-user "file copy" operations, or by allowing several users to operate "interactively" on a file. AppleShare as supplied by Apple is not sufficient to carry out these activities by itself; for example, there is no "mail" system in place for Apple II users yet. Appleshare does support mechanisms to implement such a system, though. Multi-user applications are not common now, but AppleShare for the II is new and such applications (we hope) will come.

Apple refers to the basic network unit as LocalTalk. Each LocalTalk network can contain up to a total of 32 devices (a mixture of computers, printers, or other AppleTalk devices). LocalTalk networks can be connected to each other or even to other types of networks to form an internet using an interfacing device which Apple refers to as a "router" (you may also see it referred to as a "bridge"). The networks within an internet can also be grouped and identified to the network

as zones. Internets can be very large and complicated; we'll stick with AppleShare in a simple single LocalTalk unit for our discussion here.

INGREDIENTS FOR AN APPLESHARE SYSTEM include a computer to manage the network resources (the server), the computers individuals use to connect with the network (workstations), and any supporting hardware that people on the network may want to use (printers are a common example).

The most useful peripheral you can add to a network is a hard disk. The software for sharing a hard disk is called a "file server"; in computer jargon, the computer managing the network, the hard disk, and the software are often called "the server". It's helpful to remember that to a user "the server" looks like and acts like a relatively slow hard disk connected directly to the user's computer, except that other users can also access it.

In AppleShare, a dedicated Macintosh must be used as the file server. "Dedicated" means the Mac can only be used to run the server software; it will not be available to run Macintosh software. You'll need at least one hard disk attached to the Macintosh to use as the server volume accessible to the other computers on the network. Additional server volumes (or even servers) can be added to the network if desired.

To prepare the Macintosh for use as a server, you'll need Version 2.0 or later of the AppleShare File Server software ($799 per server); previous versions do not support Apple II workstations.

If you plan to use network printers, you may also want to obtain the AppleShare Print Server software ($299 per server) that allows the server to arbitrate printing jobs to up to five printers assigned to the network. This arbitration includes the "spooling" ability mentioned earlier. You can also elect direct access to any of the five "captured" printers, or to additional printers available on the network, but these direct print jobs won't be automatically spooled by the server if the selected printer is busy. You'll have to wait for the printer to complete any previous job before your computer can begin its printing operation.

An ImageWriter II or ImageWriter LQ can be added to the network if an ImageWriter II/LQ AppleTalk Option ($139) is installed. The LaserWriter, on the other hand, includes an AppleTalk interface; the expense of a LaserWriter becomes more justifiable as you increase the number of workstations that use it, especially if you need high-quality printouts. If a user desires a "local" printer dedicated to his workstation alone, one can be connected via a normally configured serial port on the workstation.

Apple II workstations can be 128K enhanced IIe computers with an Apple II Workstation Card ($249), or a 512K (minimum) Apple IIgs using its internal AppleTalk hardware. To boot from the server, you must upgrade the IIgs memory to at least 768K. Apple II Workstation Software for the IIe is supplied with the Workstation Card. The Apple IIgs workstation support is integral with IIgs System Software 5.0; the 5.0 distribution package even includes a Macintosh-format disk with the new system software update ready to install on the server.

To connect the server, workstations, and peripherals you can use LocalTalk connector kits from Apple dealers, or alternatives such as PhoneNet (from Farallon Computing, 2150 Kittredge, Berkeley, CA 94704, 415-849-2331) or DataSpec ModuNet (from A2-Central) connectors. We recommend the alternative methods because they use very inexpensive four-conductor phone wire for connections, as opposed to Apple's expensive LocalTalk cabling, and often offer more flexibility in configuring the network topology ("topology" refers to the "shape" of the network based on the path of the connections). You need one connector for each device (computer, printer, etc.) on the network.

TO MAKE THE MAC USABLE AS A SERVER, you first install the server software. The file server software comes in two "flavors": one set of disks for the Macintosh 512e, and another set for the Macintosh Plus/SE/II series. Apple does not encourage using a Mac 512e as a server and recommends an upgrade to the minimum of a Mac Plus. The software disks include the Macintosh Installer program, with "scripts" for the installation of version 6.0 of the Macintosh System Software and the server software for the various members of the Mac family. Also included is the application AppleShare Admin, which allows the network administrator to prepare the server to accept users and to control the access users have to various files on the server. You use the Installer to place the necessary software on the hard disk to be used as the server volume.

An Apple II Setup supplemental software disk is provided with the AppleShare server software version 2.0; this disk contains the equivalent of IIgs System Software 3.2. IIgs owners will want to be sure and use the Apple II Setup disk that comes with System Software 5.0 instead. The Apple II support must be installed to allow use of Apple II workstations with the server.

The Print Server software is sold separately, and its use is optional. If you do decide to install the print server support on your file server, you can elect to have the print server run "concurrently" with AppleShare; that is, when the file server is running, the print server software is also active.

After you have installed the server software on your Macintosh boot volume, you need to run AppleShare Admin to prepare the hard disk for use as a server volume. On our system, we elected to actually use an external hard disk as the server volume and reserve our Mac SE's internal hard disk for use in case we needed the Mac for itself (be assured this is a rare occurrence). We connected the external drive to the Mac SCSI port and prepared it for use, then "skipped" the internal hard disk when selecting volumes for use as server volumes. One of the options within AppleShare Admin is "Select Concurrent Startup Application" (below the "Server" item in the menu bar); here is where you can elect to have the printer server functions (if installed) also enabled when the server is powered up.

Once completed, when you start up the Macintosh from the server volume you are eventually greeted by the AppleShare status display screen, unless you have the print server set to run concurrently (in which case the print server status screen will be presented). The status screen information is basically limited to showing the available server volumes, the users that are using the server ("logged in"), and the activity of the server regarding the network as a scale from "idle" to "busy".

The AppleShare File Server Administrator's Guide and the Supplement for Apple II Workstations supplied with the AppleShare software explains most of the details of working with the server itself. The organization of the users and their folders on the server requires some planning.

SYSTEM ADMINISTRATION is the most complicated part of working with AppleShare. Administration involves creating and identifying the users, groups, and "folders" (subdirectories) on the server volume in such a manner that everyone has access to what they need, but no one has access to places they shouldn't be allowed. A "user" is an individual who should be allowed access to the server through a workstation. A "group" is a defined set of users; a group is usually created to give several users a common set of privileges to access files or folders on the server. A server "folder" is analogous to a ProDOS subdirectory.

The first time you run AppleShare Admin, you must supply a name to identify the server (computer) on the network, and a password to use when working at the server to allow future access to the administration program. The password keeps someone from just walking up to the server and identifying themselves as the administrator; however, the password won't prevent someone from booting from a

floppy on the Mac and re-formatting the server volume. For the latter reason, you need to keep the server in a physically secure place away from possible vandals or someone who may destroy your work while "playing" with the server files.

To activate the Apple II functionality of the AppleShare server from AppleShare Admin, you select the "Server Info" item from the "Server" menu. In the window that appears is a checkbox item marked "Apple II Admin"; mark the box and wait a few moments for the server to prepare itself. Once this is complete, an "Apple II" item at the far right of the menu bar will activate.

Each user is added by selecting "Create User" from the "Users" menu. In the "User" information box that appears, you then enter the name of the new user; this should correspond to a valid ProDOS filename since it is also used as the name on a folder containing the user's parameters. An initial password can be specified and the administrator can select whether the user is allowed to change it (currently, IIe owners do not have a way to do this from the workstation), and whether the user is allowed to log in. Press "Return" to save the user name and you will see the name show up in a "User List" window on the desktop (if the window isn't open, it can be displayed from the "Users" menu). Up to 8190 users can be registered. Once a user is created, the lower half of the "User" window becomes active which allows you to specify "groups" to which the user belongs, and the startup prefix and application as well as a default (network) printer for the user.

In the "Apple II" menu, there is a "Startup Info" option to allow defining the startup application, user prefix, and default printer for the displayed user. The startup and prefix options are used for situations where a workstation is booted from the network rather than from a disk drive attached to the workstation; once the user identifies himself by logging in to the server, the startup application is executed and the working prefix for that user is set to the indicated folder. On our system, we created a specific folder for each anticipated user on the system, transferred ownership of the folder to that user, and entered that folder's pathname as the prefix for the user. For a startup application for the IIe, we specified BASIC.SYSTEM; for the IIgs users, we specified the System 5.0 Finder once we had completed the IIgs System Software installation from a workstation.

Access privileges for folders can be set by the administrator for any folder on the system. This means the administrator can see everything on the server, including files and folders other users "own". In addition, a user is given ownership for any folders the user creates; the owner is allowed to modify the access privileges for the folder and files (including other folders) later added to it.

AppleShare Admin allows you to assign users to a group via the "Create Group" item on the "Groups" menu. A window will open that allows you to name the group, and then you "drag" a copy of the icon of any user you wish to add from the "Users" window to the "Members" list in the "Group" window. You can also select an existing Group for modification by double-clicking on the Group name within the "Group List"

PREPARING THE IIE WORKSTATION. On the IIe, the workstation card can be installed in any available slot; we used slot 1 since the card imitates a more "classic" serial interface in addition to the AppleTalk port and can double as a printer interface card for a serial printer without AppleTalk. After making a working copy of the disk included with the Workstation card, the copy can be booted from a drive attached to the IIe. A menu is presented; among the options are "Log in to a file server". If you select this item, you will be prompted to "Select a file server" (if you have more than one server on the network). Once the server is selected, you are able to elect to log on as a "Guest" (a user who has not been identified to the server), or as a "Registered User" known to the server. If you select "Guest", you will be able to access the server with privileges allowed to a generic "<Any User>" as defined by the administrator. If you select "Registered user", you will be prompted for your user name and password; if you supply a correct combination, you will be given access appropriate to your user name.

You can also elect to boot from the server by booting from the Workstation card as if it were a disk drive interface. The exception is that, when using a command such as "PR#n" (where "n" is the Workstation card's slot) to boot from BASIC, you must hold down the open-apple key as you press "Return" to execute the command. Your system will be booted using the ProDOS 8 version available on the server, then you will presented with the log in screen prompts mentioned previously. When you log in, you will be assigned the prefix specified for your user name (or "<Any User>") and the associated "startup" application will be executed. The default is normally BASIC.SYSTEM in the SYSTEM folder created when the server is prepared, but the administrator has the power to change this.

The Apple II Workstation software supplied has several useful network utilities: a Chooser to select the network printer or other resources you need, a Namer to alter the name of certain devices on the network (so far, we've been able to stick to the defaults), a version of System Utilities which will work on network volumes, an Access program so you can review and change access privileges on folders (where permitted), and a program to allow you to log off from the network gracefully. You may want to copy some or all of these utilities to the network volume; if you intend to use a IIe as a "diskless workstation" (using only the server volume as a disk drive), you will definitely need to place the Chooser, Access, System Utilities, and Logoff utilities in an accessible folder on the server volume.

We found most of the utilities reasonably usable, although somewhat confusing at times. System Utilities is not our favorite set of file/disk utilities, but most of our "classic" utilities (Copy II Plus, Cat Doctor) violate AppleShare programming principles for some functions. The Access program seems to have been designed by a numerologist; rather than using some translation of the Apple Human Interface Guidelines for keyboard commands, Access uses open-Apple non-intuitive number key equivalents for many functions such as "Open". It's difficult to understand how Apple can comment on "inferior" user interfaces when Apple remains guilty of not applying its own principles uniformly.

Finally, the selector Apple supplies on the IIe Workstation disk is not transportable to the network volume, which leaves the user without a method to run the various programs. Apple's solution for this is Aristotle ($199 per server), which is intended for a classroom situation where a teacher assigns lessons to a group of students. We couldn't work with the rigid structure imposed, and instead installed the Windows selector and file reader from our monthly disk to use as a selector for the IIe.

APPLETALK FOR THE IIGS is activated by setting the Control Panel slot configuration to "Your Card" for either slot 1 or 2 (the printer or modem port), and by selecting "Built in AppleTalk" as the option for slot 7 if you have a IIgs with ROM version 01. The LocalTalk (or alternative) connector for that IIgs should be attached to the port assigned to "Your Card" for AppleTalk. To boot over the server, you must also set slot 7 as the boot device; "Scan" won't work.

To configure a boot disk to recognize the server, you must use the System 5.0 Installer to install the appropriate support files on your boot volume. If you have an 800K drive, you should select "Appleshare on a 3.5 Disk" to install the files on a copy of your System Disk. This option will remove many files from the boot disk, including BASIC.SYSTEM and BASIC.LAUNCHER, in order to free enough room for the AppleShare support files. If you intend to use additional fonts, desk accessories, etc., that GS/OS expects to find on

your boot volume, you are probably going to need a boot volume larger than 800K, such as a hard disk. The alternative is to use the server as the boot volume and configure it appropriately.

If you boot the disk configured for AppleShare while AppleTalk is active during the boot, you will be prompted for a user name. Upon entering the Finder or another IIgs Desktop-based program, select the Control Panel NDA and click on the AppleShare icon. If a server is found, you will be asked to select the server you wish to use (in case there is more than one); in the same window your user name is displayed to accept or modify. Once you have elected to log on, you are prompted to specify whether you are to be considered a "guest" or a registered user. Answering "registered user" requires you to verify your user name and enter your password. There is also a "Change password" option available if you want to alter your password periodically for more security. Once you log in successfully, you are asked to mark any server volumes you wish to access. You can also elect to save the server volume selections, your user name, and optionally your password to the disk so that you will be logged on to the server automatically when you next boot the disk. If you don't have tight rein on the disk, electing not to save the password prevents someone who has "borrowed" your disk from logging on under your user name. On the other hand, you can easily have several "user names" for different things you do by creating several boot disks.

When you close the Control Panel window after logging in, an AppleShare Icon will appear on the Finder Desktop that can be accessed as a disk drive. If you double-click on the icon to open it, you'll be presented with a window containing the files and folders in the server's volume directory. There will be some differences from a "standard" device; you can't drag icons from the server onto the desktop, for example. A set of flashing arrows to the far left of the menu bar indicates communication with the network.

You may also notice some file or folder names that don't follow the ProDOS FST naming conventions. On the IIgs, GS/OS interfaces to the network using a special AppleShare FST (file system translator). This FST is not confined to using ProDOS filenames so you can use Mac-like filenames of up to 30 characters and containing any ASCII character except the colon (":"); names such as "Apple //gs" are legal on the server. In GS/OS applications, the colon will replace the ProDOS FST "/" path/filename separator for any such names; you'll notice that pathnames that are displayed under ProDOS 8 as "/SV/ANY.USER/" will be displayed as ":SV:ANY.USER" from GS/OS applications. Be careful with using non-ProDOS names for any files you may want to access from ProDOS 8; illegal characters will be translated to question marks ("?") in file displays, and you won't be able to access these files. Files with illegal ProDOS names will have to be renamed when moved to ProDOS volumes.

With the configured AppleShare boot disk, you can access the server volume from a IIgs. Once you install System Software 5.0 on the server volume, you will also be able to boot a IIgs from the server. You need to have read, modify, and write privileges for the SYSTEM folder on the server to install 5.0; in our case, we created a user named "Admin" that the administrator could use to log in from a IIgs, giving him free rein. From the IIgs, Installer was used to put the "Latest System files" on the server, as well as the server volume version of the AppleShare support files ("Server network startup"). Verify that you have any needed drivers (including printer drivers) installed on the server for all IIgs configurations anticipated on the network.

To log off the server, just drag it's "disk" icon into the trash can.

To boot the IIgs from the server, do a "control- open-Apple- reset" (or power up the computer) while the server is active. You'll see a series of "moving dots" on the text screen below the "Apple IIgs" indicating the server is communicating with the IIgs, and then a "Starting up over Mac Server" as the server sends some additional information to the IIgs. Next, you are presented with the text-based "Log in" screens described for the IIe Workstation software. Once you have identified yourself, the server boots you through GS/OS; the process takes less than two minutes to reach the Finder Desktop (our IIgs startup application) if you are the only user on the network.

Finder will always throw you into the root directory on the server, and therefore the "prefix" items we have defined aren't really of consequence here. The user folders we designate are designed to serve as the application folder for any "private" applications a user wishes to install and run on the server volume.

On the IIgs, when you open a folder on the server any restrictions on your access to the current contents are displayed in the upper left-hand corner of the window. A "pen" with a line through it indicates you can't modify the contents of the folder. A crossed-out file folder means you can't see enclosed folders, and a crossed-out "document" icon means you can't see any enclosed files.

For folders within the window, various shadings of each folder indicate any restrictions on your access privileges. If you have the correct privileges, access attributes for a folder can be modified from the Finder by highlighting a folder's icon and selecting the "Icon info" item from the "Special" menu. A dialog resembling a spiral-bound card deck appears, and one of the descending "index tabs" on the deck is "Access". Click this tab to display the current attributes; the card that appears has several boxes with "pop up" menus that allow you to re-define the attributes. Pre-defined options are "Private" (only the owner can see and modify the contents), "Public" (everyone can see and modify the contents), "Drop folder" (everyone can drop files into the folder, but only the owner of the folder can access them), and "Bulletin Board" (everyone can view the contents, but only the owner can make changes). You can also customize the access privileges of "See Files", "See Folders", and "Make Changes" for the "Owner", a specified "Group", and "Everyone".

Chooser on the IIgs is implemented in the Control Panel NDA. Open the NDA and locate the icon for the type of printer you want and click on the icon. You'll be presented with a list of available printers of that type, from which you can make your selection.

There is only a single SYSTEM subdirectory on the server, which means that any fonts, drivers, FSTs, or other IIgs system support files that need to be available to IIgs's that boot over the network will have to be installed in the appropriate place in the SYSTEM directory. To protect SYSTEM from unscheduled changes, we elected to only allow "write" access to the administrator. Unfortunately, the GS/OS printer Chooser seems to want to save information into the SYSTEM folder; we get an error telling us to contact the System Administrator every time we select the printer. We've made a habit of running Chooser every time we log on.

Most of the user information is kept in a special USERS file on the server which contains a folder for each user (under the user's name). The user's folder holds the SETUP folder with user settings; other network-aware applications can store configuration information in the user's folder. SETUP can also hold any private initialization files, such as desk accessories that users want executed only on their machine when they boot GS/OS from the network. Desk accessories and initialization files that should be available to all users should be placed in the appropriate place in the SYSTEM folder, of course.

THE ORGANIZATION OF FILES ON THE SERVER essentially resembles that for a normal hard disk, except that the organization should be done with the idea that certain applications should be accessible only to certain users. Our assignment of folders is intended to allow individual users to keep "private" applications on the

server, as well as have access to "public" information. We have set up our server "/SV/" with the following users:

"Admin" group
  Admin
"Teacher" group
  Dennis
  TomW
"Student" group
  Dennis
  Sally
  Steve
  TomV
  TomW

"/SV/SALLY/" is a folder on the server that the administrator has set up with (the user) Sally as the owner, and has its access set so that the following privileges are enabled:

	See files	See Folders	Make Changes
Owner	yes	yes	yes
Group	yes	no	no
Everyone	no	no	no

This means that anyone else in Sally's group can see files within the folder "/SV/SALLY", but they can't see any folders. So if "SALLY" contains the files:

STARTUP	BAS
APPLEWORKS	DIR
TO.GROUP	TXT

another user in the group will only see:

STARTUP	BAS
TO.GROUP	TXT

Sally can place a file in "/SV/SALLY/" such as "TO.GROUP" that other members of her group are allowed access to view and copy. But the group may not make changes in "/SV/SALLY/", including deleting or renaming files, or copying files into the folder. And since the "See folders" option isn't enabled for the group, they can't even see the "APPLEWORKS" folder that Sally uses. This keeps anyone but Sally (and the administrator, who knows better) from running Sally's AppleWorks.

On our server, we have created a folder "ANY.USER" for "<Any User>" that contains the common utilities needed on the server; things like the Apple II System Utilities, Access, Chooser, Logoff, etc. Apple's licensing for this software has a very reasonable policy of allowing it to be installed for all users on a single server. You therefore only need to purchase one copy of the software for each server in use.

CURRENT PROGRAMS MAY WORK ON THE SERVER if they are "AppleShare-aware". The AppleShare Programmer's Guide for the Apple IIgs (which also applies to the Workstation Card for the IIe) classifies programs as single-user (allows one person to make changes to the program's files), multi-user (allows many users to make changes to the same data file), single-launch (only one user may launch and use the program), and multi-launch (many users may launch and use a copy of the same program).

Programs that don't write to data file files should be multi-launch. Examples would be many games that just "load and run" and don't save player information on the disk.

Programs that can be launched and then will write to unique data files are also multi-launch. An example is the ProDOS 8 Chooser facility provided with the Workstation card; the settings are saved on the network in a folder associated with the individual user. The same copy of the master program can be run by several users at once, but the data written will go to a unique file for each user. User information is kept on the server in the folder USERS within a folder with the user's name. This is why the user name must be a valid ProDOS name, so that the user has access to his or her own user information.

Programs that write to a file assuming they will be the only program to access the file are single-user; an example is the classic single-user version of AppleWorks, which always writes updates for user settings to the file SEG.PR in the directory from which AppleWorks is launched. In order to use such a program safely on a network, it should be placed in a private folder belonging to (and only accessible to) a single user.

Whether placing a program on a network is legal is subject to any terms and conditions of use for the program; you should consult the program's documentation or the manufacturer. Normally, a program should not be placed on a network in such a manner that more than one person can use it simultaneously (unless approval is explicitly given for that purpose); to do so violates the intention of copyright by providing multiple copies of a single program to several users.

Multi-user Apple II programs are rare at this stage; an example would be a database that allows several users to access and modify separate records in the same database file at the same time. Such a program must be carefully written to avoid loss of data.

APPLESHARE CAUSES SOME HEADACHES WITH SEVERAL EXISTING PROGRAMS. Slot 7 also becomes the printer slot, which confuses some programs into oblivion when trying to print. AppleTalk also generates periodic signals called interrupts which cause programs unprepared for an interrupting environment to have problems in execution. The frequency of the interrupts also cause some communications programs to lose incoming characters. Speed is traded for the network flexibility; as obvious by the boot time for the IIgs, access to a hard disk via AppleShare is slower than for a local disk drive.

AppleShare is not tolerant of using Reset to exit from a runaway program. If you have to hit "Reset", you'll disconnect your workstation from the server; the server will eventually log you off once it discovers you're gone.

OUR VISION FOR THE APPLESHARE OFFICE IS, OF COURSE, APPLE II BASED. Two of our IIgs systems are occupied maintaining a large customer database; these are essentially dedicated machines for data entry and generation of the self-mailers you see and other reports and forms we use. We have two IIgs workstations used for writing the newsletter, programming, testing, and other general purposes. One IIgs also has a modem attached for getting our mail from GEnie and other services. We also have a couple of IIc's used for other tasks. We also have a "computerized typesetting terminal" (it says "Macintosh" on the front, but that's a coincidence) that we use for desktop publishing of the newsletter itself.

One plan we have for the network is to be able to facilitate an internal electronic mail system. In addition to passing messages and files from one workstation to another via the server, we'd like to have one workstation able to dial up GEnie under program control, download our mail, identify the recipient(s), and distribute it to the appropriate people without having to have someone manually log in, grab the mail, and sort it every morning. If the system could do this just before we open for business in the morning, that would free up the computer with the modem for an extra hour or so each day.

Another plan is to create a multi-user database so that we can have more timely access to the customer file. Currently, we are so busy working with the database that we usually can't look up items until the database hits an "idle" period; these are few. While we may not want to have several people able to actually modify data in the same database, which can be facilitated with AppleShare, it would be very helpful to be able to access the current data from several "terminals" within the office. If we decide to keep the data entry secured to one person, another person could call up a customer's record, make note of any orders or changes, and "mail" the result to the Keeper of the Database to record the transaction.

We aren't aware of current software that will facilitate these tasks, so we are experimenting with writing them internally. We'd be interested in hearing about any products applicable to these tasks, as well as products that could be used in the Apple II network. -DJD

The Nibbler

ClockTower

I have mentioned Alan Finn in this column before, and have been pleased to see his growth into a full fledged dealer. You will remember the 'ClockTower' flyer with the May AppleSlices and you will see the two advertisements in this issue of Apple2000. Alan is setting up on his own and is attempting to break the high prices normally associated with products for the Apple. Apple2000 members get a discount automatically by simply not including the VAT. Alan will need proof of membership, a Fax or photo-copy of your membership card will be sufficient. I wish him well.

MGA Update //

Talking about dealers, MGA have just issued their 'update // ' 1990. They should shortly be issuing 'update GS' to cater for all the GS enthusiasts. The update is packed full of goodies and software for the Apple II. If you are not yet on Jon's mailing list down in Rye, give him a ring on 0797-226601.

Laser too Expensive?

If you are using a Mac and have a tight budget to work with, you are probably outputting to an ImageWriter and long for the high quality of a LaserWriter. Although these have recently dropped in price, the IINT will still cost you upwards of £3000 ex VAT. An alternative printer to the LaserWriter is the Hewlett Packard DeskWriter at around £750 ex VAT.

This printer gives a print quality of 300 dpi and the results are almost indistinguishable from a laser. I had an opportunity to examine one closely at the Bidmuthin Open Day recently, and came away much impressed. It is a little slower than a laser but apart from that the only two drawbacks are that the pages come out slightly wet and there is no PostScript in the printer. The first one is cleverly catered for by Hewlett Packard as the sheets hesitate before they drop into the bin as they are printed. Just don't pull it out until its dry and you will be all right. The lack of PostScript could be a problem, but if you have Adobe Type Manager installed or are using the new System 7.0 (when we actually get it ...), this also is no problem. The examples I brought away with me from Bidmuthin are excellent.

Apple Pricing

Talking of the LaserWriter dropping in price, I should also note that the Mac Portable has dropped to £3600 ex VAT for the hard disk version the CD ROM has dropped to £610 ex VAT and the standard SE HD is now only available in a 2/40 configuration.

We are seeing a steady drop in price, or more for your money, if you prefer to see it that way. However the Apple IIgs has not changed in price since the day it was launched. Something very wrong here I think!

Zip Promises

We have had promises that did not materialise for some time from the Zip people before. You will see the references to the ZIP GS in the AppleFest conference reports. We received just the other day a FAX from the Zip people. In it they tell us all about the new board but do not mention a release date. I am told that they are expecting to release it by the time you read this, I shall wait and see!

They tell us that the Zip GS runs at 8mhz, is 100% compatible with all IIgs hardware and software. Speaker, paddle and slot speeds are controlled independently and that the Zip GS is DMA compatible at any speed. There are only 15 parts, with an 8k cache upgradeable to 64k. With a faster CPU the board can be user upgraded to even faster speeds.

I wish them luck and would hope they really can get it released soon. Meanwhile if you want further details contact them on 010-213-337-1313.

Special Interest Groups

I have mentioned SIG's many times before. The problem at Apple2000 is that there is too much to do and too few people actually doing it. We are a self-help unpaid group of Apple enthusiasts. Many members recognise this and support the group with contributions of one sort or another. I also take this opportunity to thank all those who thank us for what we do.

We have been unable to support formal SIG's mainly because of the lack of volunteers. John Richey has volunteered to be the coordinator of an AppleWorks SIG and also to run a 'hotline' on AppleWorks. Contact John on 0252-723993.

If anyone else would like to volunteer to start such a SIG please get in touch with us and let us know.

CompuServe

Our special FREE offer to join CompuServe got off to a roaring start. The offer is still open, if you have not yet got your starter pack ring or write to CompuServe/Forum at Bristol. You will see their advertisement on the inside front cover of this issue.

Apple2000 as you will see took part in a world-wide conference on MAUG during the recent AppleFest, there are a large number of members who have already joined or are thinking of joining.

Don't delay, you are missing out on a mouthwatering feast of Apple goodies and software, quite apart from the wealth of other information to be had on CIS. See you all there ...

The Nibbler

GS/OS ERROR FINDER

GS/OS System Calls

Create	$01
Set Mark	$16
Get FST Info	$2B
Destroy	$02
Get Mark	$17
D_Info	$2C
OS Shutdown	$03
Set EOF	$18
D_Status	$2D
Change Path	$04
Get EOF	$19
D_Control	$2E
Set File Info	$05
Set Level	$1A
D_Read	$2F
Get File Info	$06
Get Level	$1B
D_Write	$30
Volume	$08
Get Dir Entry	$1C
Bind Int	$31
Set Prefix	$09
Begin Session	$1D
Unbind Int	$32
Get Prefix	$0A
End Session	$1E
FST Specific	$33
Clear Backup	$0B
Session Status	$1F
Add Notify Proc	$34
Set Sys Prefix	$0C
Get Dev Number	$20
Del Notify Proc	$35
Null	$0D
* Get Last Dev	$21
D_Rename	$36
Expand Path	$0E
* Read Block	$22
Get Sys Prefix	$0F
* Write Block	$23
Open	$10
Format	$24
New Line	$11
Erase Disk	$25
Read	$12
Get Name	$27
Class 0	$00xx
Write	$13
Get Boot Vol	$28
Class 1	$20xx
Close	$14
QUIT	$29
Flush	$15
Get Version	$2A

* = Class 0 only

GS/OS Error Codes

No_Error	$00	Dup_Pathname	$47	Invalid_Access	$4E
Drvr_Off_Line	$2F	OS_Unsupported	$5D	Invalid_FST_Op	$65
Dup_Volume	$57	Drvr_Bad_Code	$21	Drvr_No_Dev	$28
Bad_System_Call	$01	Volume_Full	$48	Buff_Too_Small	$4F
Bad_Path_Syntax	$40	Stack_Overflow	$5F	FST_Caution	$66
Not_Block_Dev	$58	Drvr_Bad_Parm	$22	Drvr_Busy	$29
Invalid_Pcount	$04	Vol_Dir_Full	$49	File_Busy	$50
Invalid_Ref_Num	$43	Data_Unavail	$60	Dup_Device	$67
Invalid_Level	$59	Drvr_Not_Open	$23	Drvr_Wr_Prot	$2B
GSOS_Active	$07	Version_Error	$4A	Dir_Error	$51
Path_Not_Found	$44	End_Of_Dir	$61	Dev_List_Full	$68
Damaged_Bitmap	$5A	Drvr_Prior_Open	$24	Drvr_Bad_Count	$2C
Dev_Not_Found	$10	Bad_Stor_Type	$4B	Unknown_Vol	$52
Vol_Not_Found	$45	Invalid_Class	$62	Sup_List_Full	$69
Bad_Path_Names	$5B	IRQ_Table_Full	$25	Drvr_Bad_Block	$2D
Invalid_Dev_Num	$11	End_Of_File	$4C	Parm_Range_Err	$53
File_Not_Found	$46	Res_Not_Found	$63	Resource_Exist	$70
Not_System_File	$5C	Drvr_No_Resrc	$26	Drvr_Disk_Sw	$2E
Drvr_Bad_Req	$20	Out_Of_Range	$4D	Out_Of_Mem	$54
		Invalid_FST_ID	$64	Res_Add_Err	$71
		Drvr_IO_Error	$27		

NEW KIT

Falcon (Applied Ingenuity) *£349.95

At last! - An affordable hard disk drive supporting DOS 3.3 or ProDOS. Falcon comes with card/ cable/ support software and has auto-sensing power supply unit for use anywhere in the world. 10Mb is the only size available.

Juice Plus (Applied ingenuity) *£249.00

1-4 Mb memory board for the IIGS. 100% compatible with Apple's card. Supplied at 1Mb, with extra Megs costing just *£89.95!

CS-800-A-1 Mouse (Contriver) *£39.95

Perfect for //c, or for //e with card (card *£90.00 extra).

PrinterPro (Apricorn) *£45.00

Our standard parallel printer card for the Apple][+, //e & IIGS. Includes 6' cable and is "Apple Parallel Interface Card" compatible.

Upper / Lower Case Adaptor (Apricorn) £19.95

Gives][+ users better features for word processing (with AppleWriter II for example).

Parallel Printer Extension Cable 0.25m £6.95

Centronics 36-way male/female IDC ribbon cable

0.5 m £7.95
0.75m £8.95
1.0m £9.95

InSyder (Cirtech) *£561.20

28ms 20Mb SCSI hard disk on a card for Apple][, //e or IIGS. No noisy fan, no cables, and fully compatible with GS/OS, ProDOS, DOS 3.3, Pascal 1.3, & CP/M. Easily upgradeable, and includes an SCSI port to connect up to 7 additional devices. 40Mb version also available at *£676.20. When ordered from MGA this price includes UK courier delivery and Copy II Plus v8.xx utility software..

Apple High-Speed SCSI Card (Apple) £TBA

Whilst retaining compatibility with the older Apple II Card, this one supports DMA raising throughput to 1Mb/sec on IIGS and 511Kb/sec on //e. Now enhanced to provide ANSI-standard compliance. Includes 3.5 & 5.25" disks with device drivers for hard disks & CD-ROMs. New backup utilities for GS/OS "extended" file storage type. Should be same price as old card (£74.75).

MORE NEW SOFTWARE

MicroDot (Kitchen Sink - KS) *£29.95

Replaces ProDOS BASIC.SYSTEM to give you 45K of program and variable space. Less than 4K in size, uses fast BASIC overlays instead of slow CHAINing, format disks from BASIC. Pac/unpack hi-rers pictures to/from disk with no buffer. Fully compatible, yet frees 7K for programs!!!

Robot Assembly Lab I (KS) *£39.95

Educational program for teaching/learning thinking skills and creative problem solving.

Robot Assembly Lab II (KS) £19.95
Robot Assembly Lab I + II (KS) *£49.95

CNC Trainer (KS) *£49.95
CNC Trainer: Bridgeport Driver (KS) *£29.95
CNC Trainer: DYNA Driver (KS) *£29.95
CADDraw System (Beagle / KS) *£124.50
(CADDraw + Triple Dump + Cookie Control)
CADDraw (KS) *£59.50
CADDraw Exterior Elevation Symbols (KS) £24.95
CADDraw Kitchen Planner Symbols (KS) *£39.95
CADDraw Wood Projects (KS) £14.95
CADDraw Sheet Metal Projects (KS) £24.95
CADDraw Bend, Forge & Bench Projects (KS) £19.95

Fancy Signs Graffiles (PD) *£12.00

Over 1.5Mb of graphics packed on one 3.5" ProDOS disk. Primarily for Printrix, these graffiles may also be converted to DOS 3.3 for Fontrix. These signs are great for adding your text with Printrix or GrafType. Average graffile size is 10x22 (Add £7.95 if 5.25" disks required).

DADS Answer (Asky) *£150.00

Disk [D]rive [A]nalysis [D]iskette [S]ystem is a diskette based service tool used to diagnose and align a floppy disk drive (FDD) on-site. Ideal for companies with large quantities of drives who want to cut down on maintenance bills or for computer engineers wishing to offer a drive alignment service (Also available for IBM-PC).

STAT (Asky) *£60.00

[S]piral [T]rack [A]nalysis [T]ool is a diagnostic system for establishing performance standards on FDDs. Regularly run autotest for complete drive performance confidence. (Also available for IBM-PC FDDs).

Bubble Bobble (Taito) £14.95

Arcade game for one or two players with 100 action screens.

VCR Companion (Broderbund) £39.95

Creativity tool for computer and VCR owners. Create titles, credits, intros, intermissions and endings for video tapes. Used with other Broderbund products you can easily create entire cartoons, movies or rolling demos.

VISA

MGA SoftCat (0797) 226601

41 Cinque Ports St., Rye, E.Sussex TN31 7AD

MasterCard

Clearance prices valid for current stocks only, all prices include VAT, & *-prices also include UK p&p. E.& O.E.

MacLine

MacLine

FAX 081 642 4621

081 643 4626

WREN HOUSE • SUTTON COURT ROAD • SUTTON • SURREY • SM1 4TL • VAT No 452 3149 66

Utilities & DA's

1st Aid Kit DeLuxe (the pro's file & disk recovery) .... 115.
A.M.E. (very sophisticated data security) .... 195.
After Dark (user definable screen saver) .... 29.
Calculator Constructor 2 (create DA calculators) .... 54.
Calendar Maker (customise calendars) .... 39.
Can Opener (view data files without the application) .... 75.
Complete Undelete (recover trashed documents) .... 36.
Copy II Mac (backup protected software) .... 29.
Disk Express II (speed up, unfragment hard drives) .... 59.
DiskLock (excellent data file security) .... 125.
Disk Quick (catalogues floppy and hard discs) .... 32.
Disk Tools Plus (9 essential DA's) .... 39.
Disk Top 4 (powerful DA finder) .... 69.
DiskDoubler (file compaction to save space) .... 45.
DynoDex (phone/adr database with filofax printout) .... 75.
Empower II (complete file & data security) .... 345.
Exposure (screen dump with paint tools) .... 60.
FileGuard (data encryption) .... 135.
Gofer (search key words in multiple text files) .... 54.
Hyper DA (read HyperCard files from a DA) .... 49.
InitPicker 2.0 (choose startup Inits) .... 42.
MacSafe II (file security) .... 125.
MacIntUse (register time spent on applications) .... 59.
Master Juggler (Suitcase II rival) .... 59.
MultiClip 2.0 (multiple copies & pastes) .... 75.
MultiDisk (best hard disk partitioner) .... 44.
Nightwatch (hard disk security) .... 150.
Norton Utilities (hard disk utils from the PC) .... call.
Now Utilities (12 wonderful utilities) .... 95.
On Cue (switch between progs avoiding finder) .... 39.
On Location (lightning fast file location) .... 75.
QuicKeys (macro maker, time saver utility) .... 69.
QuickDex (lightning fast DA database, essential) .... 35.
QuickLock (lock out prying eyes from your data) .... 75.
Redux (best backup program on the market) .... 59.
Retrospect (most sophisticated archival backup) .... 150.
Shortcut (extra commands in open dialogue box) .... 49.
Stepping Out 2 (software big screen extender) .... 65.
Smart Alarms (DA reminder/diary system) .... 55.
Smart Alarms multi user (network diary version) .... call.
SmartScrap & Clipper (enhanced scrapbook) .... 55.
S.P.A.M.M. (software maths co-processor) .... 57.
StopWatch (logs time usage of applications) .... 69.
Suitcase 2 (manages 100's DA's & fonts) .... 49.
SuperGlue II (print images to disk) .... 69.
SuperSpool (best ImageWriter spooler) .... 59.
SuperLaserSpool (Laser & ImageWriter spooler) .... 89.
SAM 2.0 (Symantec's anti virus utility) .... 79.
SUM II (essential utilities plus guard against crashes) .... 89.
Tempo II (the most powerful macro maker) .... 99.
Virex 2.6 (best virus tracer & eradicator of all) .... 59.

Word Processing

Acta Advantage (outliner includes DA version) .... 95.
Expressionist 2 (DA equation processor) .... 85.
Grammatik (proofreads for grammar, style & more) .... 79.
MindWrite (amazing outliner WP) .... 155.
MacWrite II (major update handles graphics) .... 155.
Microsoft Word 4 (the new standard) .... 175.
Nisus (our WP choice with macros, GREPS, graphics) .... 220.
Thunder II (the best spelling checker around) .... 59.
Vantage (excellent DA WP that was MacSink) .... 60.
Wordfinder (220,000 word DA Thesaurus) .... 39.

Graphics

Canvas 2 (amazing power, colour paint & draw) .... 195.
ColourStudio (32 bit photo retouching) .... 1150.
Comic Strip Factory (create your own comics) .... 49.
The Curator (graphics database & organiser) .... 85.
Claris CAD (state of the art CAD) .... 475.
Desk Paint (full paint/draw progs in a DA) .... 75.
Dreams (new generation CAD) .... 249.
Freehand (PostScript art and text) .... 365.
Illustrator 88 (auto trace, colour, blending ...) .... 415.
Image Studio (grey scale image control) .... 415.
MacDraw II (the classic draw program) .... 275.
MacroMind Director (state of art animation) .... 450.
Mini Cad (superb 3D graphics CAD) .... 495.
Model Shop (2D & 3D rendering) .... 425.
PhotoShop (24 bit colour retouching) .... 695.
Pixel Paint Professional (32 bit state of the art) .... 385.
Streamline (Adobe autotracer) .... 299.
Swivel 3D (top class 3D tool) .... 350.
SuperGlue 2 (save and transfer any file or image) .... 69.
Super 3D ver 2 (colour Mac II support) .... 299.
Studio 1 (amazing B&W animation and painting) .... 75.
Studio 8 (colour draw/paint 8 bit program) .... 255.
UltraPaint (great new colour draw/paint 8 bit) .... 140.

Desk Top Publishing

DesignStudio (yet another page layout program) .... 595.
LetraStudio (font manipulation DTP) .... 385.
MacKern (build your own tables for any font) .... 125.
Metamorphosis (font outliner/converter) .... 195.
Multi Ad Creator (powerful page layout) .... 675.
PageMaker 4.0 (the most intuitive) .... 545.
PageMaker Studio (collection of templates) .... 89.
Partner (link & auto update graphics in DTP files) .... 65.
Publish It (most features, exceptional value) .... 250.
Quark Xpress 2.1 (the most powerful) .... 495.
Ready,Set,Go 4.5 (the second most features) .... 399.
Smart Art 1,2,3 (text manipulation DA) .... each 99.
TypeStyler (manipulate text & fonts) .... 155.
TypeAlign (allows text manipulation with ATM) .... 79.

Fonts

Adobe Fonts (full range at discount prices) .... call.
Adobe Type Manager (outline screen fonts) .... 69.
ATM Plus Pack (rest of outline fonts for above) .... 130.
Adobe Type Reunion (condenses font menu) .... 49.
Art Importer (turns PostScript into fonts) .... 95.
Bitstream Fonts (full range at discount prices) .... call.
Fraction Fonts (in Helvetica & Times faces) .... 45.
FontStudio (PostScript font design) .... 450.
Fontastic Plus 2 (bitmap font creator/editor) .... 65.
Fontographer 3 (laser font creator/editor) .... 295.
Fluent Fonts (2 excellent discs of bitmap fonts) .... 36.
Fluent Laser Fonts (quality laser fonts) .... 59.
Monotype Fonts (full range at discount prices) .... call.
World Class Fonts (2 disc sets of good fonts) .... each 49.
"The Originals", "The Stylish", "The Giants"
and now "The Triples" useful for LQ and IISC printers

Clip Art

Visual Arts (10 MB of quality PostScript Art) .... 150.
MacAtlas EPSF (high quality scalable maps) .... 115.
Comic People (cartoon characters) .... 29.
WetPaint (best bit map art around) .... each 49.
"Classic Clip Art", "Animal Kingdom", "Printers Helper",
"Old Earth Almanac", "Industrial Revolution", "For Publishing", "Special Occasions", "Island Life", "People".

Programming

Programmers Online Companion .... 35.
Prototyper II (quick and easy programming) .... 195.
QuickBasic (Microsoft's version) .... 59.
SmallTalk V (the original object language) .... 139.
Think C 4.0 (with source level debugger) .... 135.
Think Pascal 3.0 (top rated) .... 135.
TMON (superb debugging tool) .... 98.
ZBasic 5 (the fastest Basic available) .... 125.

Business

101 Macros Excel (diverse and useful macros) .... 49.
Access Bookeeper (with 2hours free telesupport) .... 495.
Business Plan Toolkit (essential Excel templates) .... 85.
Cricket Graph (top graphing tool) .... 120.
DeltaGraph (2D & 3D charts & graphics) .... 105.
Extend (the best simulation program) .... 320.
InvoiceIt UK (invoice module for MacMoney) .... 65.
KeyPlan (management & project planning) .... 250.
MacMoney 3 UK (home, small business accounts) .... 75.
MacProject II (superior new version) .... 325.
Microsoft Excel (the power spreadsheet) .... 175.
Microsoft Works 2 (5 integrated programs) .... 159.
Microsoft Office (Excel, Word & PowerPoint in one) 425.
More II (planning, writing, desk top presentation) .... 225.
Persuasion (Aldus' top end presentation tool) .... 365.
PowerPoint (desktop presentation program) .... 175.
RagTime 3 (DTP, Spreadheet, WP in one package) .... 350.
Sales & Marketing Toolkit (Excel templates) .... 110.
SmartForms Designer (Claris' forms package) .... 275.
Super Anova (award winning stats package) .... 425.
Theorist (better than Mathematica they say) .... 250.
Visual Business No. 5 (business graphics) .... 299.
Wall St. Investor (share portfolio management) .... 395.
Wingz (best spreadsheet available) .... 245.

Databases

C.A.T (contacts, activities, time-sales aid) .... 235.
DAtabase (full featured DA database) .... 75.
Double Helix II (easiest major database) .... 350.
FileMaker II (versatile and powerful, superb) .... 195.
Foxbase+Mac 2 (now even faster than before) .... 390.
Omnis 3 Plus (now the best value by far) .... 175.
Omnis 5 (fast & PC compatible) .... 425.
Panorama (spreadsheet like database) .... 225.
QuickDex (essential lightning fast DA database) .... 35.

HyperCard

DTP Advisor (tips and advice on layouts) .... 59.
EuroStack (user adaptable info for schools) .... 35.
Icon Factory (2000 icons plus editor) .... 55.
HyperAnimator (sync sound and animation) .... 115.
HyperBible (King James version on a stack) .... 150.
HyperTutor (stack teaching stack) .... 39.
Plus 2.0 (takes HyperCard into a new dimension) .... 265.
Reports! (reports designer plus improved printing) .... 75.
Script Expert (HyperTalk in a stack) .... 49.
SuperCard (colour Hypercard & more) .... 125.

PC Compatibility

MacLink Plus (port PC to Mac with codes) .... 135.
MacLink Plus Translators (for other progs) .... 110.
Soft PC Mac OS (PC emulation in software) .... 250.
Tops Flashcard (LocalTalk Net card for PCs) .... 110.
Tops DOS 3.0 (PC software for TOPs network) .... 125.

Communications

InterFax (brilliant combined fax & modem) .... 350.
InterFax 9600 (full speed version & 2400 modem) .... 525.
In/Out (network "who is where" 10 user pack) .... 210.
Microsoft Mail Server (new version) .... 185.
Microsoft Mail 10 User (new version) .... 395.
QuickMail 2.2 10 User (new version) .... 325.
Timbuktu 3.0 (operate networked Macs) .... 95.
Timbuktu Remote (operate remote Macs) .... 130.
TOPS 3.0 (new version now with In Box) .... 145.
TopMail (best value network mail) .... 95.
Vicom 3 (friendliest & best comms software) .... 140.
VersatermPro (terminal emulator) .... 180.
WS3000 Modem (300 &1200 baud) .... 235.
WS3000 V22 BIS (up to 2400 baud) .... 295.
Courier HST (up to 9600baud) .... 595.

Accessories

Cables (ring us with your requirements) .... call.
DD Floppy Disks (Sony unbranded) .... 0.90.
HD Floppy Disks (Sony unbranded) .... 1.50.
ImageWriter Ribbons (to suffer the...) .... 3.75.

ALL OUR PRODUCTS ARE SOURCED FROM THE OFFICIAL UK DISTRIBUTOR WHERE ONE EXISTS. THIS ENTITLES YOU TO FULL BACKUP AND SUPPORT IN THIS COUNTRY, NOT THE UNITED STATES. ACCEPT NO LESS. THIS MAY BE MORE EXPENSIVE IN THE SHORT TERM BUT CONSIDER WHAT HAPPENS WHEN AN UPGRADE IS RELEASED?

MacLine

MacLine Policy

- *Credit cards will not be charged until the order is shipped.
- *If a partial order is despatched, the balance is posted free of additional postage charges.
- *All goods are sent by Recorded First Class Mail or by a courier service. A signature is required on delivery.
- *Same day motorcycle delivery in London area is available.
- *Defective software is replaced immediately.
- *Refunds will only be given on unopened packages that are returned within 7 days of receipt.
- *Prices are correct at time of going to press.

Toner Cartridge NT (nice black ones) ..... 75.
Anet (Local(Apple)Talk set at half the price) ..... 25.
MacNet (PhoneNet set at half the price) ..... 19.
Anti Glare Screen (and anti rad to fit SE) ..... 59.
MacPlus Mouse (optical mouse, smooth-) ..... 55.
SE & II Mouse (runner, never gets dirty) ..... 69.
Cordless Mouse (infra red cordless mouse) ..... 89.
Security System (Mac anti theft cable and lock) ..... 39.
Mac II Stand (vertical floor stand with long cables) ..... 69.
Joystick MacPlus (something you've...) ..... 45.
Joystick Mac SE or II (..always wanted) ..... 59.
Gravis MouseStick ADB (top class joystick) ..... 95.
Gravis MouseStick (for MacPlus only) ..... 80.
Mac Carry Case (bag for SE or Plus wth ext kybd) ..... 59.
Toolkit (open your Plus or SE safely) ..... 15.
Wiz (multi button mouse tablet. ADB only) ..... 179.

Hardware & Portables

Radius Accelerator (for Plus or SE) ..... 545.
Irwin 68000 16Mhz (double speed Mac SE) ..... 150.
SIMMS (portable, FX and 80 nano low profiles) ..... check.
Kurta Graphics Tablet (Plus model extra) ..... 295.
MacRecorder II (brilliant audio digitiser) ..... 165.
Psion 400 (portable computer with large screen) ..... 795.
Agenda 32K (pocket computer with Mac linker) ..... 155.
Z88 MacLite (portable with MacLink) ..... 299.

Monitors

Radius Full Page Mac II ..... 825.
Radius Full Page Plus, SE, SE30 ..... 895.
Radius Pivot Mac II, SE30 ..... 995.
¥ Raster Ops 19" 8 bit Mac II ..... 3225.
¥ Raster Ops 19" 8 bit SE30 ..... 3295.
Hitachi Mono 21" Mac II ..... 1100.
¥ NEC 20" 8 bit colour Mac II with Raster Ops Card ..... 2595.

Printers

Epson LQ (serial printer driver software) ..... 69.
Grappler LX (Epson LQ & HP Desk&LaserJet driver) 130.
HP DeskWriter (300dpi inkjet printer) ..... 795.
HP PaintJet (low cost colour printing) ..... 995.
LabelWriter (wonderful address label printer) ..... 195.

Scanning

ScanMan (hand held 4" wide 32 halftones) ..... 245.
Thunderscan (amazing quality for low cost) ..... 189.
¥ HP ScanJet Plus (including interface) ..... 1545.
¥ Sharp JX 300 (including interface & software) ..... 2495.
Sharp Colour Hand Held (including software) ..... 620.
¥ Sharp Colour A3 (including software) ..... 5995.
¥ Agfa Focus II 800GS (including software) ..... 4230.
Panasonic (excellent new flatbed at low price) ..... 1395.
Colorset (turn B&W scanners into colour) ..... 275.
Omni Page (high end Optical Character Recognition) .550.
Read-It 2 (OCR software for most scanners) ..... 285.
Read-It Personal (for ScanMan & Thunderscan) ..... 120.

SPECIAL OFFER

CUTTING EDGE

extremely fast, reliable and high quality drives at new breakthrough low prices.

20 Mb Hard Drive
£295.00

45 Mb Hard Drive
£395.00

45 Mb Syquest Removable
£625.00

Access VISA

All prices are exclusive of VAT.

No terms are available for products prefaced with the ¥ symbol. Cash only.

Data Storage

miniQisk 42 Mb ..... 435.
miniQisk 70 Mb ..... 535.
miniQisk 100 Mb ..... 720.
miniQisk 210 Mb ..... 995.
Toshiba CD ROM Drive ..... 695.
External 800K Floppy Drive ..... 175.
Cutting Edge 45 Mb Syquest Removable ..... 625.
Cutting Edge 20 Mb Hard Drive ..... 295.
Cutting Edge 45 Mb Hard Drive ..... 395.
Panasonic WORM Drive 940 Mb ..... 2350.
Sumo Optical Drive 600 Mb ..... 3595.

Childrens

Cosmic Osmo (interactive HyperCard story) ..... 47.
KidsTime (5 fun games for 3 to 7 year olds) ..... 35.
KidsMath (sister to above for arithmetic) ..... 35.
The Manhole (suitable from ages 4 - 84) ..... 35.
Math Rabbit (talking arithmetic tutor) ..... 39.
NumberMaze (learn to count and have fun) ..... 35.
Reader Rabbit (good reading trainer) ..... 39.
Talking Tiles (reading training with voice) ..... 35.
Where in World is CSDiego? (10+geography advtr) ..35.
Where in Europe is CSDiego? (10+geography advtr) 35.

Training And Educational

Special ***very low*** Education prices are available on some products to authorized educational establishments only with official purchase orders. These include **Claris, Microsoft, Letraset, Adobe, Symantec** and others. Please call us before placing an order if in doubt as to whether you qualify.

PageMaker College (tutorial lessons) ..... 175.
Typing Instructor Encore (excellent way to learn) ..... 29.
Word Torture French, Spanish German or Russian (HyperCard stack vocabulary drill) ..... each 35.
Starting Series French, Spanish or Russian (HyperCard stack pronunciation tutor) ..... each 55.
Learn FileMaker II (4 modules (all 4 for £140)) ..... each 39.
Learn Illustrator 88 (4 modules (all 4 for £140)) .... each 39.
MacTeach (specify Mac and if HD or floppy) ..... each 39.
(2 modules Macintosh training) ..... both for £72
TEACH YOURSELF GUIDES TO:
4th Dimension, Microsoft Excel, Microsoft Word 4, Quark Xpress, PageMaker, HyperCard ..... each 69.
these are the best step by step training guides we have seen

Just because you can't see the product you require does not mean we don't have it or cannot get it for you.

Music

Concertware + (8 voice composer, player) ..... 49.
Concertware + MIDI (new features) ..... 125.
Jam Session (play like a professional) ..... 39.
Practica Musica (learn music principals) ..... 80.
Super Studio Session (now works on Mac II) ..... 69.
HyperComposer (sound and music scripts) ..... 45.

Books

Apple Macintosh Book 19.95
Dr. Macintosh 17.95
Big Mac Book 25.95
Inside Mac Vols 1, 2, 4, 5 ..... each 23.95
Inside Mac Vol 3 ..... 19.25
Macintosh Bible 2nd Edition 24.95
Macintosh Font Book 19.80
Macintosh Revealed Vols 1 & 2 ..... each 23.95
Understanding Hard Disk Management 21.95
Complete Hypercard Handbook 27.45
Excel Advanced User Guide 17.95
Mastering Excel 2.2 ..... 22.95
Mastering Adobe Illustrator 88 ..... 21.95
SuperCard Handbook 23.95
Using Aldus PageMaker 3.0 ..... 22.95
4th Dimension 19.95
Design for DTP 12.50
Using Microsoft Word 4 ..... 19.95
Flying in PageMaker 5.95

Ordering & Payment

- *To order call Monday - Friday, 9.00 am to 6.00 pm.
- *Add £2.50 per order under £150 in value for Recorded Delivery. On orders over £150 in value add £5.00 for 48hr delivery **OR** £9.00 for 24hr delivery.
- *Add VAT to the total price, except on books.
- *Payment is by credit card, cheque or money order.
- *Government depts, Educational establishments, and PLC companies are welcome to purchase with an official order.
- *International orders accepted with credit card only. Postage added at cost.

Games

+Ancient Art of War (quality war simulation) ..... 29.
+Ancient Art of War at Sea (salty war simulation) ... 29.
✓Arthur (adventures of the round table) ..... 32.
+Balance of Power (use strategy to keep peace) ..... 24.
→Balance of Power 1990 (geopolitics, strategy) ..... 24.
→Balance of the Planet (save the environment) ..... 35.
✓Bridge (from novice to advanced player levels) ..... 29.
→Beyond Dark Castle (more of the classic game) ..... 27.
✓ChessMaster 2100 (best Chess game) ..... 25.
✓Chuck Yeager Flight Trainer (colour!) ..... 25.
✓Citadel (fantasy adventure) ..... 29.
✓Crystal Quest 2 (Britain's favourite game) ..... 29.
✓Crystal Quest with Critter Editor ..... 49.
✓Colony ("Best game 1988" MacWorld) ..... 24.
+Dark Castle (the classic Mac game) ..... 27.
+Deja Vu (private detective adventure) ..... 24.
✓Deja Vu II (Lost in Las Vegas) ..... 24.
+Flight Simulator (the famous Microsoft one) ..... 39.
+4th and Inches (American Football) ..... 29.
✓Falcon 2 (networkable flight simulator) ..... 34.
✓Ferrari Grand Prix (formula one simulation) ..... 36.
✓Fokker Triplane (WWI flight simulator) ..... 29.
✓Gauntlet (colour arcade game) ..... 32.
✓Guns & Butter (run your own country) ..... call.
→Harrier Strike Mission (jump jet combat action) .... 32.
+Hunt For Red October (sub simulation) ..... 32.
+Leather Godesses (raunchy witty adventure) ..... 15.
✓Life and Death (perform actual operations!) ..... 24.
+MacGolf (superb graphics (Plus & 1Mb SE only!)) ..... 35.
✓MacGolf Colour (highly addictive (all other Macs)) ..... 56.
+MacCourses (extra courses for MacGolf) ..... 25.
✓Manhunter NY (excellent graphic adventure) ..... 35.
✓Manhunter S.Frisco (the adventure continues) ..... 35.
✓Mean 18 (alternative colour Golf game) ..... 29.
✓NetTrek (network space warfare) ..... 42.
+Patton vs Rommel (strategy war game) ..... 19.
→PipeDream (arcade game from Lucas Films) ..... 29.
✓P51 Mustang (fast & furious flying) ..... 39.
→PT 109 (patrol boat graphic simulation) ..... 29.
→QuarterStaff (role playing with colour) ..... 33.
→Reach For The Stars (galactic war game) ..... 29.
→Shadowgate (text/graphic adventure) ..... 24.
✓Shanghai (Mah Jonghish, stunning colour) ..... 21.
→Shufflepuck (air table ice hockey) ..... 29.
✓Sim City (design and run a city) ..... 32.
✓Sim City Colour (design and run a colour city!) ..... 52.
+Solitaire (9 different patience games) ..... 24.
✓Solitaire Colour (beautiful graphics) ..... 24.
✓Space Rogue (equivalent of Elite only better) ..... 27.
✓Super Hang On (motorcycle racing) ..... 29.
✓Star Wars (great shoot em up game) ..... 25.
✓Strategic Conquest 2.0 (war simulation) ..... 39.
✓Tetris (award winning colour Soviet game) ..... 24.
+Trust & Betrayal (intuition, ethics not bullets) ..... 24.
+Uninvited (text/graphic adventure) ..... 24.
→Zork 0 (classic adventure now in colour) ..... 39.

+ Works on Plus & SE only
→ Works on Mac II, Plus, SE
✓ Works on all Macs inc CX & SE30
Many games do not work on the Ci and Portable

£59.00

MEMORY

These are 80 nanosecond simms which will work in all current Macintoshes. Please call to check that this price is still current as memory prices appear to be rising rather than falling. We also have memory for the new Mac IIfx as well as 3rd party upgrades for the Portable.

£59.00

MacChat

Norah Arnold looks at products available from the Apple Developer's Group.

VIP v2.5 from Mainstay

Visual Interactive Programming is a new type of program development system where a graphic interface replaces the traditional text editor. The merit of this approach lies in the match of the graphic editor to graphic environment for which it was designed. The editor is an integral part of the programming language and cannot be separated from it. A V.I.P. program is developed as a flowchart whose individual elements can be easily manipulated. The underlying language is structured, close to Pascal or C. Classic logic structures like if...then ...else... and loops like while...do and for...next are displayed graphically. The structural unity of a V.I.P. program is automatically assured by the editor. The only rules to learn are those for writing mathematical expressions. These are largely standard and don't impede learning the programming language. Getting to know and use V.I.P. effectively is usually a matter of only a few hours of effort.

Basic Characteristics of V.I.P.

First, visual programming based on a flowchart; next, interactive support at all levels, and finally, a library of powerful, easy to use procedures. The integration of these three concepts provides the significant productivity improvement that one can expect when programming with V.I.P. Program interaction serves to help the programmer produce a coherent program. V.I.P. constantly watches over a programmer's actions. It will analyse them and point out errors immediately. Even in the editing phase, a V.I.P. program is assured to be correct in terms of syntax. Semantic errors are checked at the latest just before program execution. At this point, the only errors that can remain are logic errors.

An integrated debugger working at the flowchart level allows one to follow program operation step by step. From the semantic point of view, V.I.P. executes a set of procedures which act on objects. The sequence of execution depends on program structure and objects are the equivalent of variables in classic higher level languages.

At this level, V.I.P. appears as a traditional procedural language. The absence of originality at this level is deliberate; it allows the use of recognised programming techniques and the acquired experience of generations of programmers. This results in an immediate productivity increase and eliminates additional learning or re-learning. Procedures, which are the heart of V.I.P.'s language, are the lowest level elements which translate computer actions to specific objects which are arguments of these procedures. The spectrum of procedures cover traditional programming functions like assignment of input/output, and also facilitate programming elements of the graphic interface: menu bars, dialogs, windows,...V.I.P.'s procedures form a coherent core, easy to access and particularly robust with the intent to free the programmer from ancillary non-productive tasks.

V.I.P. is now available from the Apple Developer's Group, Tel. 031-557 5719 Price £135.00 + VAT.

Translators

V.I.P. is an interpreted language; that is, each instruction is analysed and converted into machine understandable code just before being executed. Rather than developing a V.I.P. compiler, it was decided to produce a totally stand-alone application.

There are several advantages to the translators. In addition to the speed gain due to compilation (3 to 10 times faster than the V.I.P), there's also the advantage of reduced size and ability to keep others from accessing the code. Reduced size since the compiled application will be smaller than the V.I.P. program plus V.I.P. itself. Safety since, after compilation, no one can modify your program nor read or copy a part of it.

Translators are available for the following compilers: THINK C or Pascal or MPW™ C or Pascal and Turbo Pascal.

Telecom Manager

This manager is ideal for connectivity applications with other computers and devices and custom terminal emulations. It was programmed entirely in assembly language for maximum speed by Yves Lempereur, author of Telescape, BinHex and MCS (Multi Channel Communication).

An example terminal emulator is also provided.

Advanced Manager I

This manager increases the power of the V.I.P. standard procedure classes and also provides new capabilities.

Procedures support binary math, fixed point math, string pattern matching and replacement, region and other graphics functions, basic colour, screen size and machine sensing, improved dialog, menu and record control, extended I/O, lower level printing and time access, resource control, new "text edit" routines, a parser for input of mathematical expressions which can include intrinsic functions, and direct access to PICT and MacDraw files.

Advanced Manager II

This manager provides capability for 3D, AppleTalk, Colour, Palettes, SCSI, Sound and Scripts.

A wide variety of applications ranging from CAD to foreign language programs can be facilitated with procedures from this manager.

Colour and Palette are compat-

ible with the Mac II.

The Script manager facilitates foreign scripts like Kanji, Hebrew and Arabic.

The Sound Manager handles the new sound resources including a MIDI synthesiser.

These products are also available from the Apple Developer's Group, Tel. 031-557 5719

Translator to MPW Pascal - £89.95 + VAT

Translator toTHINK Pascal - £89.95 + VAT

Translator to MPW C - £89.95 + VAT

Translator to THINK C - £89.95 + VAT

Telecom Manager - £110.00 + VAT

Advanced Manager I - £95.00 + VAT

Advanced Manager II - £95.00 + VAT

TIFF File Library Package v1.0

DEST Corporation's TIFF Library Package for the Apple Macintosh™ is designed to assist developer's in producing Macintosh applications that read and write current TIFF files.

The main components of the TIFF Library Package are:

• A library of routines, the TIFF Library, that can be used to build applications that read and write TIFF files.

• A set of sample TIFF files, the TIFF Validation Suite, that can be used to test applications that read TIFF files.

The TIFF Library was created initially by Bear River Associates, Inc., for use in DEST Corporations's Publish application. Publish Pac controls DEST scanners connected to Macintosh personal computers and manipulates the images produced by the scanners. The TIFF Library is used by Publish Pac to read and write TIFF files. The code has thus been extensively field tested and DEST assert that it has proven to be reliable.

In this package the library is supplemented with a sample program, a file dump utility, and supporting documentation. The sample program demonstrates how to use the TIFF library to read and write TIFF files from a Macintosh application. The file dump utility displays TIFF files in a readable format. The documentation includes manual pages for the library routines and general information about TIFF and the TIFF Library.

The double-sided Macintosh diskettes include the TIFF Library in both compiled and source form. The sample and utility programs are likewise provided in both executable and source form. These library routines and programs were written and compiled under Apple's Macintosh Programmer's Workshop (MPW) environment. The language for all source code in this package is MPW C.

The TIFF Validation Suite is a collection of files generated from a variety of applications that write TIFF. All are legal TIFF files and should be recognised as such by any application designed to read TIFF. All have been tested for readability with three widely-used Macintosh applications: DEST's Publish Pac, Aldus' PageMaker, and LetraSet's Image studio. They are provided as an initial test bed for any application that reads TIFF, whether or not the application uses the TIFF Library.

Like the TIFF specification itself, DEST's TIFF Library Package is in the public domain. This means that you are free to distribute the validation suite and to include the library (and code from the sample program, if you wish) directly into any application that you are building. You may also modify the library source code in any way that you choose, including porting it to other environments, and use the modified code in you application.

The Tiff Library Package for the Apple Macintosh is now available from the Apple Developer's Group, Tel. 031-557 5719. Price £35.00 + VAT.

IRIS Intermedia v3.0

IRIS Intermedia v3.0 originates from the Institute for Research in Information and Scholarship of Brown University.

Iris Intermedia is an A/UX-based multiuser hypermedia system with a powerful, integrated application environment. Developed by the Institute of Research in Information and Scholarship (IRIS), at Brown University, it provides non-programmers with a means of developing sophisticated, interconnected webs of information.

IRIS Intermedia includes InterWord, a text editor; InterDraw, a structured graphics editor; InterVal, a timeline editor; and InterPix, a scanned image viewer. With IRIS Intermedia, you can create relationships between ideas and information by establishing links among material in any of the above media. Establishing links among related information is as easy as copying and pasting. Creating and traversing links may be interspersed with browsing through materials created on the system or through creating and editing documents. IRIS Intermedia's link markets provide quick means of retrieving information. Links can be established between blocks of information of any size - a word, paragraph, graphics object, or even a whole document - in order to provide exact referencing.

IRIS Intermedia also provides a multiuser environment. Multiple workstations have access to the same "ideabases," so you and your colleagues can share resources and jointly explore information. Intermedia allows multiple users to simultaneously access and annotate the same documents. Additional features include a powerful access rights system, a multiple window display, and "infinite" undo and redo commands. IRIS Intermedia also allows you to import existing documents created with Microsoft Word, MacDraw, MacPaint, and other Macintosh O/S applications. Separate online dictionary server and example webware are available separately from IRIS/Brown University.

• System Requirements:

For Networked installation: one dedicated A/UX 1.1 System with at least 4MB RAM to act as the server, and one or more A/UX 1.1 Systems with at least 4MB RAM designated as Intermedia clients for other users on the network, and an EtherTalk card for the server and each client machine.

For single-user installation: one A/UX 1.1 System with at least 4 MB RAM. For storing large databases with many documents and links, an additional 40 or 80 MB hard disk or server is recommended.

• Contains four disks of IRIS Intermedia software, four manuals. Now Available from the Apple Developer's Group, Tel 031-557 5719. Price £110.00 + VAT.

Mathematica™

A powerful mathematical package from Wolfram Research Inc. reviewed by John Arnold.

Introduction

Having earlier reviewed Stephen Wolfram's book Mathematica, I am now able to continue by writing a review of Mathematica itself, as I have now been given an opportunity to study it.

It is a very large program, requiring a fair amount of memory in which to run comfortably (2.5 Mb recommended as a minimum, with at least 4 Mb preferred), I have tried it on an SE with 2 Mb and found that the 'small' amount of memory did indeed cause problems. So an SE with 4 Megabytes, or one of the Mac II family with 4 or more Megabytes seems to be a requirement before Mathematica is worth considering. If you satisfy that requirement, then there is a further condition that is essential I feel, and that is that you have an interest in, and a desire to do, mathematics using a computer, because that is what Mathematica is about. Indeed it is called by its originator 'A System for Doing Mathematics by Computer'. Without some mathematical knowledge a user probably would not get too far into the program, although having said that, I see one of its main attractions as providing a mathematical teaching aid for those fortunate enough to have the opportunity to use it.

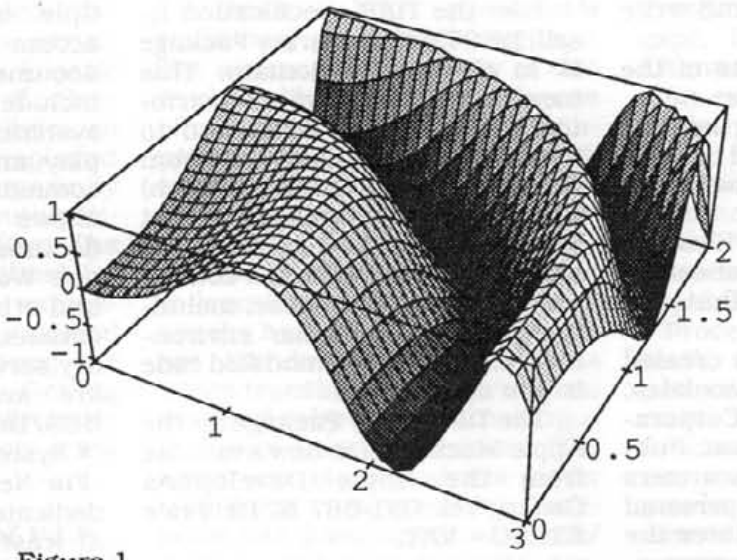


Figure 1

Mathematica is supplied on eight 400K disks, with Wolfram's book on Mathematica, and some smaller user guides, the latter being specific to the Macintosh. I have found the book to be invaluable, and as I indicated in the earlier review, should be obtained by any serious users (here I am thinking of students, for example). Incidentally there is a new book by R. Maeder: Programming Mathematica: Addison Wesley, now available which I hope to review in a later issue. (Addison Wesley books can be ordered through Apple 2000).

Mathematica is not one of those programs you can completely know in a few days, as a user's understanding of it can extend to several levels, and it has sufficient content within it to keep them happy discovering what it can and cannot do, over a period of several months.

It naturally follows that a short review is not going to be able to deal with more than a superficial look at what is a very important mathematical package of considerable power.

Using Mathematica

Mathematica consists of a number of parts:-

(a) A front end package, which is specific to the Macintosh and presents to the user the familiar window environment, with menus etc.

(b) The Kernel, this being the essential part of Mathematica, for without this component calculations are not possible, and finally -

(c) external packages, either those provided, or those written by the user or by other sources. These packages extend the capabilities of Mathematica by adding features not provided within the Kernel.

To start up Mathematica double click the Mathematica™ icon. Depending on the startup file the front end is loaded, with maybe the Kernel, if this latter is not initially loaded then it will be at the first evaluation you ask it to perform.

You then have to think of something mathematical to perform, convert your requirement into a Mathematica command, or sequence of commands, then press the enter key, and Mathematica responds with some sort of output.

Mathematica understands some 700 commands, these can be nested together, or put into sequence to perform a surprising number of mathematical tasks, ranging from simple ones using one command to substantial sequences of nested commands (in fact Mathematica programs) performing very sophisti-

cated mathematical evaluations.

What sort of things can it do?
Give lists of prime numbers:
Expand algebraic expressions:
Evaluate expressions for values of the variables:
Partial fractions:
Solve equations:
Simplify trigonometric expressions:
Differentiate expressions:
Integrate expressions:
Solve differential equations:
Expand functions in series:
Find Laplace Transforms:
Manipulate lists of objects:
Plot two dimensional graphs:
Plot surfaces:
Draw contours:
Solve differential equations numerically using the Runge-Kutta method:
Use matrices:
Perform a range of statistical calculations:
etc., etc.

The numerical answers can be given to any number of digits, how many digits are possible is only limited by the amount of memory in the machine, there is no built in upper limit.

Examples of a selection of the above.
The items below are a minute illustration of some of the capabilities of Mathematica.

Give the numerical value of Pi to 30 digits
In[1]
N[Pi,30]
Out[1]
3.14159265358979323846264338328

Factorize expressions
In[3]
Factor[6 + 13x - 2x^2 - 7x^3 + 2x^4]
Out[3]
(-3 + x)(-2 + x)(1 + x)(1 + 2x)

Differentiate expressions
In[5]
D[Cos[x^x],x]
Out[5]
-((x^x + x^x*Log[x])*Sin[x^x])

This is the unformatted form of the output.

Find the roots of an equation
In[7]
Solve[x^2-3x+2==0]
Out[7]
{{x -> 2}, {x -> 1}}

■ Partial Fractions

eg. let n be an algebraic expression

```
n = (1+x^2)/((1+x)(1+2x)^2(2-x))
                2
          1 + x
--------------------------
                        2
(2 - x) (1 + x) (1 + 2 x)
```

then to obtain the partial fractions use:-

```
Apart[n]
    -1            2                  -2        6
----------- + --------- + (1 + 2 x)   - -----------
15 (-2 + x)   3 (1 + x)                 5 (1 + 2 x)
```

■ Expand functions into infinite series

```
Series[Exp[-x] Sin[3 x],{x,0,7}]
                                  5       6       7
          2      3      4      x     13 x    83 x      8
3 x - 3 x  - 3 x  + 4 x  - -- - ----- + ----- + O[x]
                             10     10      210
```

■ Can be used to solve simultaneous equations

```
N[Solve[{2x+y-3z==2,x-y-z==5,4x-2y-z==3},{x,y,z}]]
{{x -> -1.90909, y -> -3.72727, z -> -3.18182}}
```

■ Expand algebraic expressions

```
Expand[(x^3+2x-4)^4]
                    2        3        4        5        6
256 - 512 x + 384 x  - 384 x  + 400 x  - 192 x  + 128 x  -
      7        8        9       10       12
  96 x  + 24 x  - 16 x  + 8 x   + x
```

As a programming language:
Define a function to make a table of the first n prime numbers
In[8]
f[n_]:=Table[Prime[i],{i,n}]
and then use it
In[9]
f[10]
Out[9]
{2, 3, 5, 7, 11, 13, 17, 19, 23, 29}

The above is a trivial example of what can be done to

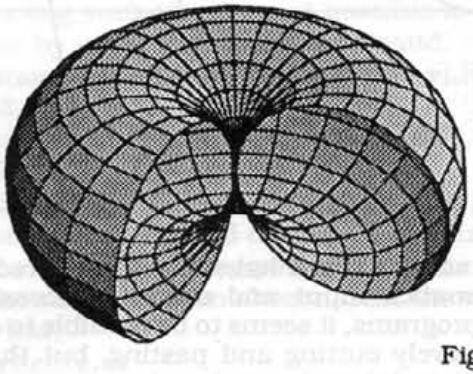


Figure 2

program Mathematica. The language used is a mixture of parts from a number of standard languages, for example Pascal, C, Lisp, etc. The programs can themselves be substantial, the Wolfram book gives some guidance, but Maeder's book expands on a number of programming aspects.

What can't it do?
I'm sure there are lots of things it cannot do, but I need to have used it rather more, because it is only by using it that you will find what is missing. One or two things I have however found, or had pointed out to me:- not everything that integrates to a closed solution is known to Mathematica, the solution of second order differential equations has not yet been built into the kernel, and surprisingly the solution of triangles seems not to be catered for, although a package for doing this was distributed with the earlier versions of Mathematica. As this was something I needed to do for answers to an example sheet, I dug the old version out and modified the package

to save me from the tedium of solving triangles using a calculator. Fourier series also gave me a problem, but as yet I haven't had time to look into it. I have found the contour drawing algorithm sometimes does curious things.There may be more, I am sure to eventually come across them!

What are the problems?

Complicated graphics demand a large slice of the memory, and if there are a number of such graphics, Mathematica may will shut off the kernel.

Printing from Mathematica itself seems to have no particular problems, although the mathematical printing of expressions may not satisfy the purists, for example the integral sign doesn't get printed. For those familiar with TEX, the Mathematica output can be changed to TEX form, and pasted into a TEX program. I haven't been able to try this as I have no access to such a program, but I have been told that this method does work satisfactorily.

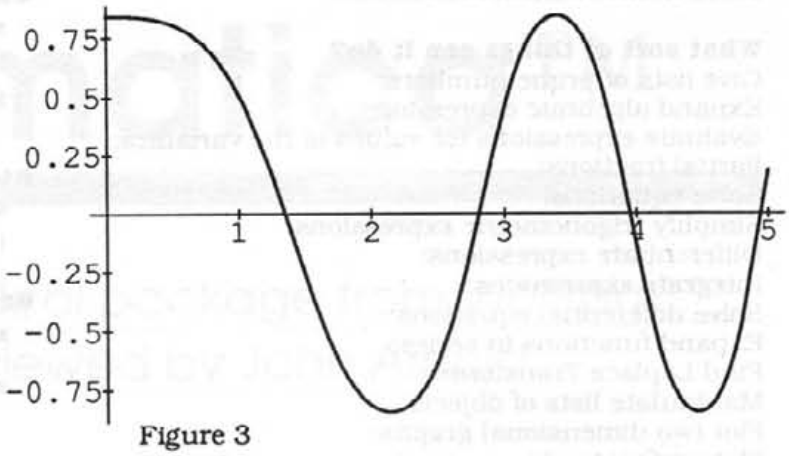


Figure 3

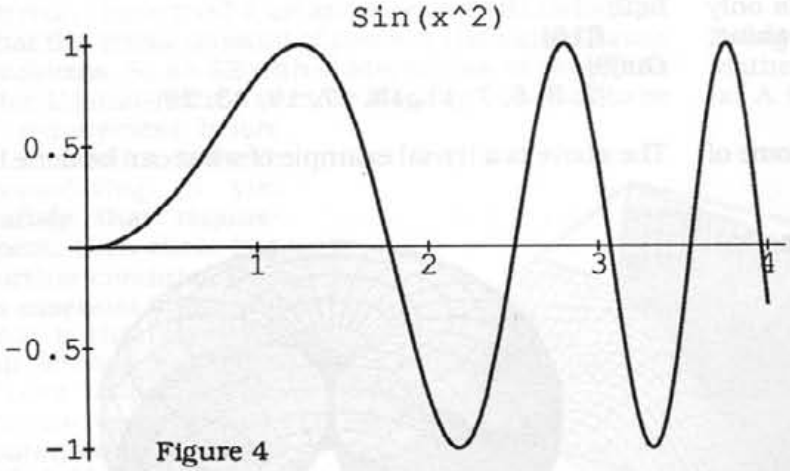


Figure 4

In a similar vein I haven't yet mastered putting Mathematica input and output successfully into other programs, it seems to be possible to do this by successively cutting and pasting, but this can be tedious, and there has to be a better way of doing it. I was hoping that writing this review would concentrate the 'little grey cells' on the problem!

Cells

Mathematica puts all input and output into 'cells'. The cells can have a number of different attributes associated with them, they also be grouped and nested as required. The contents of the cells can be made visible (cell open) or hidden (closed) with just the cell header visible. Input and output are actually stored as elements of arrays In and Out and can be used as such if required.

PostScript

Graphic output is generated in PostScript form and is shown on the screen as a normal graphic, which can be selected and stretched or shrunk using the usual handles, but further, the actual PostScript can be shown and for those familiar with the PostScript language, the PostScript can be edited and redisplayed. I have actually needed to do this as one of the graphic options is to have a box drawn around the graphic, and for some reason the lefthand edge of the box interferes with the ordinate values, however by slightly doctoring the PostScript the edge of the box can be moved away from the vertical axis. Because the graphic output is in PostScript it prints extremely well on a LaserWriter, for those wishing to print on non PostScript printers the graphic output can be changed to a number of different forms, including PICT.

Animation

A sequence of graphic cells can be animated, with control over the number of frames displayed per second, etc.

Final comments

As I hope can be seen from what I have written above, there is indeed work for more than one or two days or even one or two months discovering all that Mathematica has to offer. It is a program that is rich in content and consequently, although giving some frustrations, should also give a considerable amount of pleasure to those prepared to put in the not inconsiderable effort it will take to discover all its capabilities and possibilities. I would welcome hearing from anyone who is using Mathematica, I can be contacted either through Apple 2000, or at:-

Luton College of Higher Education,
Faculty of Applied Sciences,

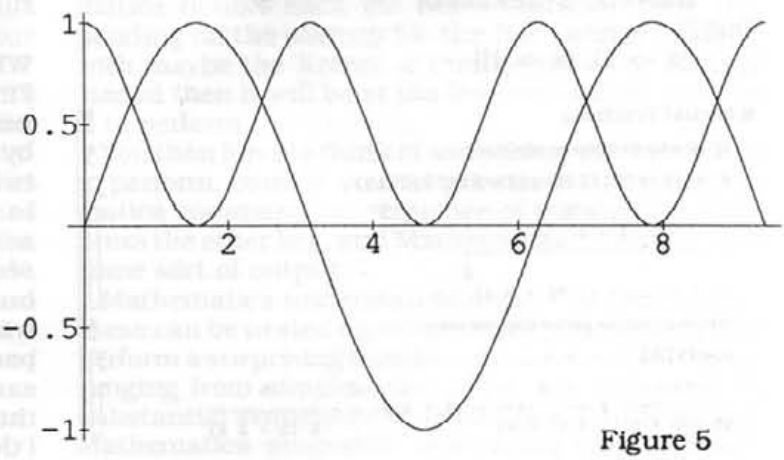


Figure 5

Park Square, LUTON, Beds.
Thanks to Luton College for allowing time to enable me to begin to study the capabilities of Mathematica.

Footnote

Since starting to write this review I have been asked to evaluate the use of Textures, a TeX based application, specifically its use with Mathematica TeX output, this hopefully will resolve some of the problems I had with producing good printed output. Secondly I have been involved in showing Mathematica to some of my colleagues with the intention that we will be using it for the production of teaching material, and they seem to be quite impressed with its capabilities. Thirdly I have seen a preview issue of the Mathematica Journal to be published by Addison Wesley during 1990, and it looks very promising. Fourthly I have just bought the first mathematics textbook that uses some Mathematica graphics, Calculus by Finney & Thomas: Addison Wesley 1990. Fifthly I have been told that I can 'play' with a NeXT computer for a week or two, and that has Mathematica as part of its supplied software, but that's another story.....

Two Mathematica demonstration disks are now available from Apple 2000; see the MacLibrary section for details of their contents.

Details of the commands used to produce the illustrations:-

1. An example of a three-D plot.

```
Plot3D[Sin[x^2+y^3],{x,0,3},{y,0,2},PlotPoints->30]
```

2. This requires a file from the supplied Packages Folder to be loaded.

```
<<ParametricPlot.m
SphericalPlot3D[theta],{theta,0,Pi,Pi/24},{phi,0,3Pi/2,Pi/12},Boxed->False]
```

3. A simple two-D graph showing the default appearance.

```
Plot[Sin[Cos[x^1.5]],{x,0,5}]
```

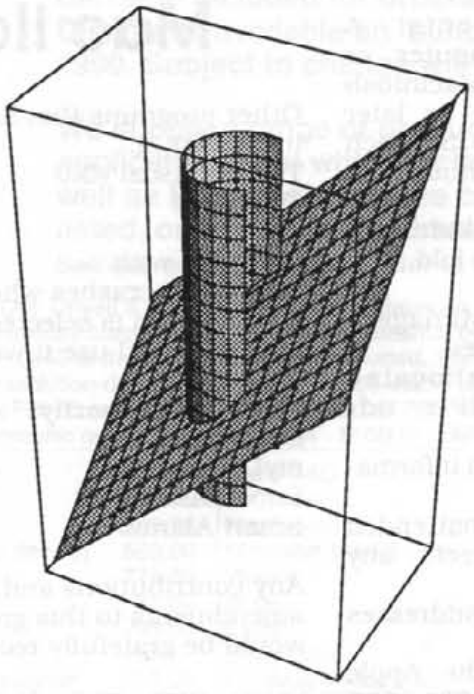


Figure 6

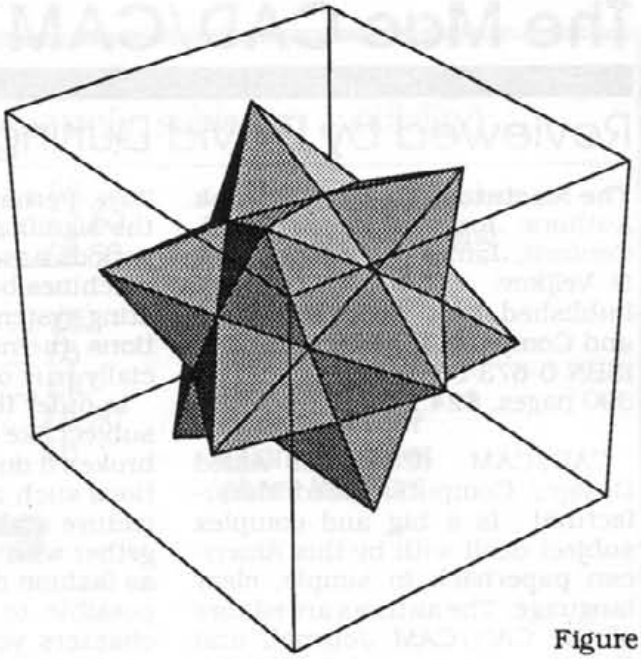


Figure 7

4. The graph can be titled using one of the options available with the Plot command.

```
Plot[Sin[x^2],{x,0,4},PlotLabel->"Sin(x^2)"]
```

5. More than one graph can be shown at once, and also in this example the PostScript lines have been set to thin (one of the menu choices).

```
Plot[{Sin[x],Cos[x]^2},{x,0,3Pi}]
```

6. This shows that Mathematica is able to show intersecting surfaces, it is not possible to do this however by using the Plot3D command.

```
P1=ParametricPlot3D[{Cos[u],Sin[u],v},{u,-5,-1},{v,-3,4}];
P2=ParametricPlot3D[{u,v,u+v},{u,-3,3},{v,-2,2}];
Show[P1,P2]
```

7. Again loading a file from the Packages Folder and then calling up and drawing a standard solid, with the viewpoint being pasted into the command after the view has been chosen from the viewpoint dialog box,.

```
<<polyhedra.m
Show[Graphics3D[Stellate[Dodecahedron[]],ViewPoint>{-3.527, 2.727, 2.734}]]
```

info

Product : Mathematica™
Publisher : Wolfram Research Inc.
P O Box 6059
Champaign, IL 61821
USA
Tel: 217-398-0700
Price : Standard Macintosh $495
Macintosh II $795

Value : ★★★★
Performance : ★★★★★
Documentation : ★★★★★

The Mac CAD/CAM Book

Reviewed by David Durling

The Macintosh CAD/CAM Book
Authors: Joseph Greco, Frank J. Conforti, James K. Anders, Mark D. Veljkov.
Published by: Scott, Forsman and Company, Illinois, 1989.
ISBN 0-673-38446-2
390 pages, $24.95.

CAD/CAM (Computer Aided Design/ Computer Aided Manufacture) is a big and complex subject dealt with by this American paperback in simple, clear language. The authors are editors of the CAD/CAM Journal, and their experience and knowledge shows through, the book being packed full of practical advice.

A useful checklist is given for planning a system based on user requirements. Some interesting figures are given on the well known Peat Marwick Main & Co. study on Macintosh efficiency among several Fortune 500 companies which showed that Mac increased productivity by some 25%. Perhaps less well known are the significantly greater learning periods associated with MS-DOS machines both in respect of operating systems and in the applications themselves: this is especially true of CAD.

In order to deal with a complex subject like this, the authors have broken it down into main applications such as engineering, architecture and industrial design together with less likely areas such as fashion design. It is therefore possible to be selective in the chapters you read, but specific applications are preceded by the basics of modelling methods, data representation etc. and followed by lists of both good and bad aspects of various software. There is a particularly good explanation of computer aided electronic engineering.

I found the chapters relating to CAM less satisfying. This is not an easy subject to get across and seemed too widely focussed. Similarly, a foray into the intricacies of CIM (Computer Integrated Manufacture) could only give a taste of a subject which probably demands a book of its own.

One pleasant surprise was the quantity of related design software tools available. Anyone wanting to do finite element analysis from a DA would seem to be well catered for, so too are designers of yacht hulls, and many others.

The authors are not afraid to talk real money (a lot of it in some cases, but of course always in US$) nor are they afraid to name software packages and offer critical appraisal. There is a good glossary and a comprehensive list of software and suppliers including addresses and telephone numbers.

Who is it aimed at? Well, anyone might benefit who has even a passing interest in CAD on the Mac together with a wide range of related subjects. It is at least a very good summary of the state of CAD/CAM on the Mac today.

David Durling
Edge Ltd., Chartered Designers,
108 Totley Brook Road, Sheffield,
South Yorkshire, S17 3QU

INIThound

Some bugs can dog your system!

INIThound is INIT tracking software from Cambridge Information Ware. INIThound v 1.1 is a temporary INIT that monitors the INIT 31 start-up process and detects all traps patched, VBL/Time Manager/ Shutdown tasks installed, modifications to low-memory globals, driver/ drive/ volume/ file activity, and memory allocation. A detailed record is generated for each INIT file. These records include the INIT file name and version information, the Macintosh environment information, and all addresses (handles, pointers, queues, executables, VCB's FCB's and more). INIT hound removes itself and releases all its storage when the INIT 31 process terminates. Every aspect of INIThound's startup behavior is configurable from the Control Panel. The Control Panel interface is also used to generate reports on INIT activity, to disable groups of INITs from executing, and to examine the details of memory allocation. Reports can be viewed in a text window or sent to a file. Online help is available.

System Requirements: A Macintosh 512K computer or later model running Macintosh System Software v3.2 or later version. Contains one 3.5-inch disk and a 70-page manual.

INIThound facilities include:
Record traps patched (old new addresses).
Record VBL/Time Manager/ Shutdown tasks installed
Record memory allocated (handle/pointer/BufPtr addresses).
Records INIT file version information.
Response clock for unattended operation. Accepts/rejects any INIT during startup.
Supplies breakpoint addresses for debugging any INIT.
Now available from the Apple Developer's Group - 031 557 5719. Price £90.00 + VAT.

Update on last issue Mac IIci

Other programs that are working (so far...):
THINK Pascal v3.0
QuickDex

Problems with:
After Dark crashes when the Demo option is selected, otherwise in actual use it works fine.

To be tested shortly:
DiskFinder
myDiskLabeler
SuperLaserSpool
Smart Alarms

Any contributions and/or amendments to this growing list would be gratefully received.

Martin W Twelftree: Principal of Chameleon Software

Special Offers (for this issue only, subject to avalibility)

3.5" Sony 2DD disks, box of 10 ..... £9
Ribbons for Epson LX80 / 86 (compt. black) £2.50
Ribbons for Star LC10 (ditto) £3.50
Please telephone for other ribbons
Cable, mini 8 pin to mini 8 pin, for printer etc £5
Cable, mini 8 pin to 25 way D, for modem £6
Cable, SCSI, 25 way D to 50 way Cent. £10
Storage Box, lockable, for 50 5.25" disks..... £4.50
Storage Box, lockable, for 100 3.5" disks £6

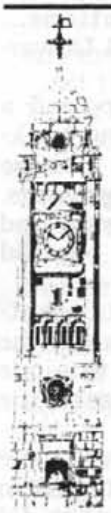
Many other disks and ribbons etc, are at discount.

RasterOps cards
HP DeskWriter
GCC PLP II laser
Quantium drives
phone for prices

Computer Images
15 Grove Market Place
Eltham
London, SE9 5PU

All prices include VAT
Carriage free

Access / Visa card orders, Telephone 081 - 850 3883



CLOCKTOWER Phone & Fax 081-341 9023

P.O. Box 1417, London, N8 9PW. Phone Alan between 9.00 and 5.00 or fax at any time.

All prices include VAT for Apple 2000 members, otherwise please add 15% VAT.

Carriage included for orders of £100.00 and over. Under £100 add £6.50. Discounts available on 'bundled' similar items. Prices correct as at 25th April 1990. Subject to change without notice. Visa & Access orders accepted.

We supply a range of products, hardware and software for most machines and applications, but with special affection for Apple products, the Apple II range as well as Macintosh. Please call or fax us for any more information on the items listed, or any other requirement. Ask for our complete product & price list.
See our advertisement earlier in the magazine for Apple II and more general & new items.

NEW! CD-ROM Drives & accessories, discs available on a vast range of subjects - please call
NEW! High capacity hard disc kits, internal and external by Toshiba & Siemens for most machines from 106mb formatted, 20ms - £840 all the way up to 680mb formatted, 14ms - £2600. Other drives etc., please call for more information.
NEW! High resolution displays by Radius, Hitachi etc.. Radius Pivot - £1175. Radius Two Page /21 - £1695. Hitachi Full A3 mono 1 bit - £1300 4 bit - £1700 8 bit - £2100. A3 colour 8 bit - £3750. Hitachi Vy-Mac colour printer, photographic quality rendering on A4 - £10000. All interfaces and cables included, please call for more information.

Cricket Draw	178.00	Claris CAD	535.00	File	115.00	Berol Symbol Libraries	69.00
Illustrator 88	445.00	Filemaker II	215.00	Adobe Type Manager	69.00	Jasmine BackPace fr.	580.00
QuarkStyle	260.00	MacProject II	365.00	Pagemaker Mac	485.00	Jasmine Direct from	480.00
QuarkXpress (inc v3)	560.00	Microsoft Works	180.00	Ready Set Go 4.5	455.00	Kyocera Laser Print.	5200.00
SoftPC	274.00	Word 4	250.00	Vicom III	159.00	Logitech Scanman	290.00
Xtree Mac	65.00	Write	112.00	PC Tools Deluxe Mac	70.00	Thunderscan	260.00
MacDraw II	295.00	Excel	250.00	OmniPage 2.1	585.00	Lightningscan	370.00
Adobe Fonts	call	dBase Mac	361.00	Omnis 3 Plus	180.00	Bitstream Fonts	105.00
Smartform Designer	295.00	FoxBase + Mac 2.00	435.00	Omnis 5	455.00	Summagraphics	call

Sony 3.5" discs DSDD 82p DSHD 2.20. Unbranded from 60p. Imagewriter ribbons black 2.25 colour 7.75. Any other items please call.

HyperCard Forum

Questions and answers on HyperCard programming.

Subject: Re: **HyperCard based mail**
From: Michael Rees @ SICS Bond University
I have a stack called 'BRUIT Mail' which uses TCP/IP (MacTCP) to send and receive Internet mail. It does not use SMTP for security reasons, but uses the Telnet port to login, collect and send mail, and logoff in the usual way. It can be made available to those interested.
Michael J Rees
Bond Research into User Interface Technologies (BRUIT)
Info & Computing Sciences,
Bond University,
Gold Coast, Qld 4229, Australia

Subject: Re: **HyperCard based mail**
From: Reinhard Doelz @ Biocomputing, University of Basel, Switzerland
I am interested in your stack called 'BRUIT Mail.'
Any idea whether the DEC-Apple liason will produce something similar in functionality on the DECnet side ?
Dr. Reinhard Doelz
Biocomputing
Biozentrum der Universitaet

Subject: Re: **HyperCard based mail**
From: Jim O'Dell @ Information Technology, Boston University, Boston, MA, USA
I Have a hypercard stack that interfaces to Mac/gnuucp. This allows you to send mail via a dialup line.
I'd be interested in a few beta testers before I make a general posting to the net.
Jim
Subject: Re: **HyperCard/SuperCard Debugger**
From: David Sherman @ Law Society of Upper Canada, Toronto
"Yes, there is a debugger for HyperCard. It is called HyperTMON, and is available from Icom Simulations.
I have never used it, but have used (but don't own) TMON, an assembly/C debugger and was impressed."

HyperTMON's feature are impressive. However, I have not been able to get it to work on my IIci — on large scripts (the ones which most need HyperTMON), it hangs the Mac. And even on small scripts, the single-step debugger seems not to understand the line-continuation character, a fatal problem for complex programs.
I called ICOM's technical support about the hanging, and was told to mail them a disk demonstrating the problem. I did that, on February 27, and have not had a reply. Nor have I heard back from the technical support person, when I called a week ago to follow up and left a message.
David Sherman
Toronto

Subject: Re: **HyperCard/SuperCard Debugger**
From: gft_robert @ University of Chicago Graduate School of Business
I've had similar experiences with HyperTMON. I was writing a fairly complex stack for a consulting project and got HyperTMON 'cause I was sick of writing "put into msg" statements. HyperTMON was no help at all: although my stack ran fine, HyperTMON would often complain that it couldn't understand portions of my stack. And sometimes it would crash.
So I called up ICOM tech support. They were very helpful and suggested I send in an example of the problems I was having. So I mailed them a letter with some source code. That was in January. I have called them about 4 times since then. In February they told me that an update to HyperTMON was coming out RSN. They told me this in March, too. And again a couple of weeks ago. I've never received an update, and I've never received an answer to my problems.
Upshot? ICOM has very pleasant tech support staff, but I wouldn't recommend buying HyperTMON.
Robert

Subject: Re: **HyperCard/SuperCard Debugger**
From: Jann VanOver @ Boeing Computer Services AI Center, Seattle
Count me as one more who had scripts hang with HyperTMON. It wasn't important enough for my project to spend time with the vendor. Sounds like it would have been wasted time! Please - if anyone gets satisfaction from them, Please post the results to the net!
Jann VanOver

Subject: **More Bkgnd Buttons...**
From: Jonathan Dick @ University of Rochester
A few articles back, I posted a question regarding hiding background buttons. Thanks to those of you who offered suggestions. I've tried a couple of them, and while some succeeded, one did not. A brief recap:
I have these five navigation buttons that I use on every card in the stack, except one. On this one card, I'd like to hide & disable the bkgnd buttons.
Most suggestions I received were along the lines of covering them with an opaque button that did nothing. While this seems to work, it seems somewhat inelegant, so I tried the following suggestion in the card script:

```
on opencard
 hide bkgnd button "Main Menu"
end opencard

on closecard
 show bkgnd button "Main Menu"
end closecard
```

...and a number of variations. What happens is that the button

hides just fine, but the show command is getting confused. When I try to leave the card, I get a dialog box asking "Where is Background Button Main Menu?" Does anyone know what causes this?
– Still confused, but still trying
Jonathan Dick
PS: Other suggestions included using multiple backgrounds. From what I've read, and what I've tried, this can be a big headache. Anyone out there used multiple bkgnds who was happy with the results?
Thanks again.

Subject: Re: **More Bkgnd Buttons...**
Summary: visible, not hide
From: Barry J. Berenberg @ Los Alamos Natl Lab, Los Alamos, N.M.
(Just tried your code. Not sure what causes the error (unless the button name is spelled incorrectly?), but here's something that worked:

```
on openCard
  set the visible of bkgnd button "Main Menu" to false
end openCard

on closeCard
  set the visible of bkgnd button "Main Menu" to true
end closeCard
```

This seemed to work just fine.
Barry Berenberg

Subject: Re: **More Bkgnd Buttons...**
From: Jonathan Dick @ University of Rochester
Exactly what I finally used after a bit of playing this afternoon! Haven't had any problems since then. Thanks to all who replied to my first and second postings.
JD

Subject: **More Bkgnd Buttons...**
From: Leo Bores @ FidoNet
You could change the script in this manner: put the hide button script in the CARD and the show button script in the background. The background opens before the card does. Thus:

```
on openBackground
  show bkgnd btn "Main Menu"
end openBackground
```

in the card:

```
on openCard
  hide bkgnd btn "Main Menu"
end openCard
```

Leo Bores

Subject: re: **More Bkgnd Buttons...**
From: KOFOID@cc.utah.edu
I just finished setting up a test stack exactly per Jonathan Dick above and it worked as it ought to. Therefore, you are doing something strange which you haven't noticed yet. For instance, do you have an option-space separating the word "Main" from "Menu" in your closeCard handler?
Cheers,
Eric Kofoid;
Dept. Biology, U. of Utah

Subject: Re: **More Bkgnd Buttons...**
From: Ed Gibler @ University of Houston
Check to see if the command you are using is actually "Show". The only time I've come across the "Where is..." dialog box is when I use the "OPEN..." command. If you are inadvertently telling HyperCard to "Open button X", HyperCard will think that "button X" is the name of a stack somewhere. If HyperCard couldn't find a hidden button, I believe you would get a message like: "NEVER HEARD OF BACKGROUND BUTTON NAMED X".
If the problem doesn't lie in your code, the only suggestion I have is to make sure that you are really still on the same background as the hidden button.
Hope this helps!
Ed Gibler

Subject: Re: **Background Buttons Question**
From: Tim Maroney @ Eclectic Software, San Francisco
A word about all the calls for using opaque buttons in the card layer to hide unwanted background buttons for a particular card – this only works against a flat white background, and flat white backgrounds are usually pretty unattractive. Some shade of gray is usually greatly preferable. So stick with the openCard and closeCard handlers. And do use lock screen while hiding or showing more than one button, so they'll pop up in a synchronized way.
Tim Maroney

Subject: Re: **Background Buttons Question**
From: D. Jay Newman @ Penn State University
I prefer to put a card button over the background button, however, if I have a graphic, I paint over the background button AND use a transparent card button to ignore the mouse clicks.
I find this solution better than having openCard and closeCard handles to hide and show background buttons. To me it seems more intuitive.
Depending upon the size of the graphic needed to cover up the button, the hide/show solution may be more memory efficient, however.
D. Jay Newman
Learning Technologies Group

Subject: **Looking for HC stack explaining boot problems**
From: David Roessli @ University of Geneva, Switzerland
Hello world,
I've been encountering some trouble while booting lately, (after having installed new devices ..), and all these weird and frightening sounds came up. Being rather new to Macintosh, I guess they relate to some specific setup problem (RAM, ROM, PRAM ?). Different jingles were heard.
Does anybody know of a HyperCard stack (or anything else) that would illustrate and explain the diagnosis related to these curious noises?
Thanks, David C. Roessli
Dpt Anthropologie & Ecologie
University of Geneva

Subject: **Search Weirdness**
From: Darren Handler @ SUNY Binghamton
A while ago I posted a question on how to search an external file for a word that was selected in a field and display some lines from the file. Greg Anderson hooked me up with his Grep routine which worked great.
Here is the problem...it only seems to work with the "main" letters. If I perform the operation on a word with a character I generated with an option key, it won't work. Is this perhaps a bug in HyperCard?
Greg, are you out there?!?
Darren 'Mac Hack' Handler

SUNY-B Computer Consultants

Subject: Re: **Search Weirdness**
From: Greg Anderson @ UC Santa Cruz; Division of Social Sciences
I'm here. It is possible that grep only looks at the low 7 bits of the character being searched against. This would be pretty dumb, but not long ago I realized that grep wouldn't let you search for control characters (no, I have _no_ idea why I special-checked them out). I'll look at the source and see if I did anything equally inane with option characters.
At any rate, I'll let you know what I come up with. I've never grep'ed on option characters before, but I'm going to need to do it soon, so I might as well get it working now.
Greg Anderson
Social Sciences Computing
University of California, Santa Cruz

Subject: **Disapearing insertion point**
From: Chris Younger @ Monash Uni. Computer Science, Australia
I know nothing about Hypercard myself but a friend is doing some scripting and came across the following problem and asked me to post this for him.
The problem:
I am trying to create a card that contains various entry fields and a field showing the Current Time. However, when using the "on idle" script as in the Home Card the insertion point disapears every time the "time" field is updated and is not returned to the field I was working in. Is there some way of getting the cursor to return to the last open field or will I need to disable the clock while working in other fields to stop the cursor from disapearing?
Can anyone solve my friend's problem?
Chris Younger,
Computer Science Honours Student,
Monash University, AUSTRALIA
Subject: Re: **Disapearing insertion point**
From: Steven Martin @ TI Computer Science Center, Dallas
Try this:

```
on idle
 if the time is not field "time" then
   -- "if" so you don't update it needlessly
    get the selectedchunk
    -- preserve what was selected
    put the time into field "time"
    select it
    -- reselect what was selected
 end if
end idle
```

Steve Martin

Subject: Re: **Disapearing insertion point**
From: Gary Davis @ primate.wisc.edu
This should work:

```
on idle
   get the selectedChunk
   put the time into field "Current time" -- or whatever
   if it is not empty then select it
end idle
```

Gary Davis

Subject: Re: **Hypercard for PC - does it exist? (and SUN!)**
From: Cris Bailiff @ University of Surrey, Guildford
I am currently working on a HyperCard 'viewer' - i.e. a program to display stacks (at present in read-only mode) on a Sun system.
According to the interview in the front of Danny Goodmans Book "The HyperCard Handbook", the file format of HyperCard is (was intended to be) in the public domain, so that developers could produce compatable versions of HyperCard on other platforms.
I haven't yet managed to locate any source of this information, and so I am asking here on the net. Any help would be welcome.
The finished viewer is not intended for commercial release, so if and when it is in a suitably completed state I am quite prepared to zap it out to the rest of the world. As it is in C, and uses only a little of the SunView library, it should be fairly portable to other machines/ graphics environments.
The viewer is aimed at a project being developed jointly on a Mac/ Sun base, to avoid duplication of a user interface, and so my implemented subset will be aimed at this project, but should provide a fairly general subset.
Any help gratefully received.
Cris Bailiff
University of Surrey,
Guildford, Surrey, UK. GU2 5XH

Subject: **How to detect a switch out of HyperCard in Multifinder?**
From: Jay van Achterberg @ Worcester Polytechnic Institute, Worcester, Mass.
A stack I'm writing changes the volume level of the Mac's speaker to 7 on openStack and resets it to the original setting on closeStack. Unfortunately, I run my Mac using Multifinder all the time, and I keep finding that I switch out of HyperCard while this stack is open, do something to get a beep, and <BEEP!> the beep is set to 7 (I normally have it at 1, quite an annoying difference).
Is there any HyperCard system message that I can set a trap for in the stack to set the volume back to the original if the user switches out in Multifinder and another message when he switches back where I can set the volume back to seven? I know it's possible to trap the "play" command and set the volume to 7 before playing, and then set it back after playing or on idle, but I want to be able to play sounds quickly in succession, and this method won't do that very well, especially since the speaker makes a slight "click" when the volume is changed, which would be really annoying.
Thanks! Jay
Johan van Achterberg
Worcester Polytechnic Institute
Worcester, Massachussets, USA

Subject: **print file with <appl> fails if <appl> already running**
From: David Sherman @ Law Society of Upper Canada, Toronto
In a stack I'm building, I'm providing a print facility which goes beyond Hypercard's own print capabilities. As suggested in some of the literature, I pass off to an application, in this case Microsoft Word, to print.
The command is

print fileName with "<whatever-path>:MS Word"

This works fine, unless Word is already running under MultiFinder. (I often leave it running with all windows closed, to allow faster opening of files.) If Word is running, control switches from Hypercard to Word, but the file isn't opened and the print dialog isn't started.
Is there any workaround, short of waiting for HC 2.0 with its better printing capability?
David Sherman, Toronto.

Virex 2.7 upgrade
to combat M-DEF

Virex anti-virus software has been updated to combat the M-DEF virus. This is the sixteenth virus known to the Macintosh community.

The new virus was discovered at a New York university. Apparently, it does not damage data, but it does cause system crashes.

Virex was the first commercially-distributed anti-virus software, and it is probably still the best-known. The original company (HJC Software Inc.) has been taken over by Microcom Software Division, but this does not seem to have affected the product line — the program is still being upgraded to combat any new viruses which are reported to the company.

The upgrades have been alarmingly frequent, lately, as each new virus is discovered—e.g. Mosaic, Fontfinder, Virus info, ZUC. The upgrade to version 2.7 has been released specifically to combat the new threat from M-DEF.

The UK price for Virex is £69.00 + VAT, with an option to subscribe to an upgrade service for 12 months at a cost of £75.00 + VAT.

Softline Distribution Ltd have exclusive distribution rights in the UK. They may be conntacted on 081 642 4242.

A solution for everyone . . .

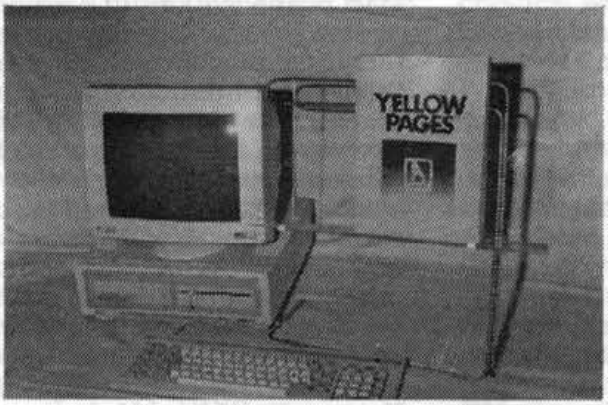
We offer the full range of Apple II and Macintosh 512K, Plus, SE and II computers, accessories and software from individual items to sophisticated systems for the latest applications in desk top publishing or computer aided design at competitive prices.

Whatever your interests as a newcomer, enthusiast, professional, small business or large public company, we can provide new and used equipment, with excellent service, reliability and after-sales maintenance, training and support.

With such a wide range of Apple Macintosh equipment and applications, why not call us to discuss your requirements.

ROGER D'ARCY COMPUTERS

Tel.: Oxford (0865) 728787



HOW TO MAKE HEALTHIER USE OF VDUs.

Reports on the use of VDUs recommend that documents should be positioned on the same level as the VDU's screen, in order to reduce strain on neck and eyes.

This ingenious design of document holder can support books, etc of at least 1.2 Kg. The height of the support can be adjusted to suit most computers' VDU screens. To last for years, the frame is made of stainless steel.

The holder's transparent A3-size surface can be used to absorb the low-level ultra-violet radiation from VDU screens. Eyes may be harmed by long-term exposure to ultra-violet.

The price is only £17.99; total cost (incl p&p and VAT) £24.75 each.

Further information:- Dept.4, COSY HOB, 137 Old Ford End Road, Queens Park, Bedford, MK40 4NG. Tel: 0234 65997

Chameleon Software

The Apple Specialists: Tel 0775 85481

Sale Sale Sale Sale Sale Sale

All second user stock must go: books, hardware and software. Ring or write for full list. Lots of items at bargain prices, we intend to clear the lot and will be open to reasonable offers.

Other lists available: Mac Series; Apple II Series; Books; Cable Guide. Coming soon: Telephones & Office Equipment.

Do you run an office with one phone line? Does the £150 plus quarterly charge for a second line make a fax machine an unrealistic option? Not any more! You need Dialatron FAXLINK, the faxswitch. Incoming calls are intercepted and diverted to the right place: Fax machine, modem or voice. ONLY £69 + Vat Compatible with answering machines too!

FREEPOST
Pinchbeck
SPALDING
Lincs. PE11 3XT

Access® VISA®

A/UX 2.0 - Truly Amazing

A dialogue between fans of A/UX downloaded from Usenet.

Subject: Re: **A/UX 2.0: Truly an Amazing bargain**
From: Ted Woodward @ U. Texas CS Dept., Austin, Texas
In his article Tony Cooper writes:
"Jordan Mattson writes:
"A/UX 2.0 can surely run more than one application. It gives you full MultiFinder functionality and you are only limited by the number of applications that can fit into your 8MB address space."
This is not true. UNIX has virtual memory so you can run a 40Mb program in 8Mb of RAM if you want. This means that MultiFinder can have as much memory as you have disk swap space for. It makes Virtual INIT redundant (and is not limited to 15 or so Mb as Virtual is). A/UX 2.0 on a 80Mb hard drive has about 20Mb of swap space so you can have 20Mb of Mac applications running at once.
Tony Cooper."

But the Mac OS is limited to 8MB RAM right now, and that is what is being used, 6.0.x, patched to work with A/UX.
Now, you have 8MB, even tho you may only have 5 on board, because A/UX uses virtual memory for the Multifinder process, and also preemptively multitasks between processes (Multifinder gets a time slice, not each individual application.)
I got to play around with A/UX on a Mac IIci a few weeks ago, when the Apple guys demo'd the fx, the cards, and A/UX 2.0 to our support staff here. I filled up the 8 megs in Multifinder, had a bunch of stuff going in shells, and it worked just fine.
I like the idea of more than one finder or Multifinder...in fact, I asked if it could be done then, and the guy said no...:-(
One thing I really liked is the way it handles floppies. If you are in Multifinder and put in a MacOS floppy, it will come up normally. If you are in A/UX, with Multifinder in the background, up comes a dialog which asks you whether you want to mount it as an A/UX or MacOS volume. And I really like the way you can us the Mac interface with Unix files, kinda like aufs (Apple Unix file system, mounting a Unix volume as a server is what we used it for)
Ted Woodward
Someone shot the food...

Subject: Re: **A/UX 2.0: Truly an Amazing bargain**
From: Amanda Walker @ InterCon Systems Corporation, Herndon, VA
In his article Ted Woodward writes:
"But the Mac OS is limited to 8MB RAM right now, and that is what is being used, 6.0.x, patched to work with A/UX."

A/UX 2.0 will, however, run in 32-bit mode since it does not use the old memory manager. By default, the Macintosh partition comes up at whatever your physical memory is, but you can run it up to as much swap space as you have. You could run a 64M Macintosh if you added another disk :-).
Amanda Walker, InterCon Systems Corporation
"Y'know, you can't have, like, a light, without a dark to stick it in... You know what I'm sayin'?"
—Arlo Guthrie

Subject: Re: **A/UX 2.0: Truly an Amazing bargain**
From: Norman William Franke, III @ Class of '92, Carnegie Mellon, Pittsburgh, PA
I don't know if this has been mentioned, but I would think it would be pretty easy to get premptive multitasking for MacOS applications under A/UX.
Just run multiple MacOS partitions, one for each MacOS program you want to use. Then modify the Finder, so when running under A/UX, to launch applications under their own A/UX partition. This gives each application lots of memory, like 8 megs each, and if one Mac application crashes, just that one dies. This seems perfect!
However it leaves one problem, how does one switch between applications? One could run the MacOS applications in a window, or make some key flip between them. Or maybe even do something like Multifinder, of course this version of Multifinder would have to be totally rewritten, because it's so different. Is this all possible? I'm pretty sure Mac can run multiple MacOS layers, so how about A/UX? I'd actually purchase A/UX if it could do this, because programming the Mac tends to cause a few nice system crashes. :-)
Norman Franke

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Edward Joseph Bennett @ Class of '91, Carnegie Mellon, Pittsburgh, PA
Mario writes:
"Am I the only one who disagrees with this?? I have had application crashes under MultiFinder that don't take the system or other applications down. The message that comes up is "Application has unexpectedly quit" with an OK box.
The application affected goes away (crashes) and the other applications keep running. This

is the second mention today that applications crashing under MultiFinder cause everything to crash, and though this does happen sometimes, there are times when it doesn't just like any other OS."

You're right when one program crashes (or quits for what ever reason) it doesn't always take the whole system with it. I think the point is that MacOS takes no precautions to protect applications from violating each others memory space which is a big source of crashes (I presume) that bring down the whole system. I guess the point is a lot of crashes (maybe most of) that bring down the whole system could be prevented by memory protection.
This is the best I can do with this. Can anyone else elaborate or point out any errors I may have made.
Ed

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Robert Minich @ Oklahoma State Univ., Stillwater
Mark Hargrove asks:
"My question (unanswered to my satisfaction) is this: Given A/UX 2.0, what the heck do we need System 7.0 for?"

Well, I s'pose you could almost forget about 7.0 if all you want is to be able have the ToolBox calls (I find it hard to draw the line separating the ToolBox from the OS, since they like to be close...) but what if you don't happen to have a Mac II (ie, the majority of Mac owners) or you don't want to put up with some of the administration that ALL UNIX systems require.
Sure A/UX makes just about all day to day work as intuitive as the Mac's native OS, but what about things like getting it all set up in the first place, doing backups, and other administrivia that most UNIX users (and alas most non-UNIX users...sigh) never bother to consider. (Unless of course something goes wrong!)
I don't think the average Mac user quite ready for all that. Hey, there are plenty who have problems even with the Mac OS.
Robert Minich
Oklahoma State University

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Darren Handler @ SUNY Binghamton
"Am I the only one who disagrees with this?? I have had application crashes under MultiFinder that don't take the system or other applications down. The message that comes up is "Application has unexpectedly quit" with an OK box. The application affected goes away (crashes) and the other applications keep running. This is the second mention today that applications crashing under MultiFinder cause everything to crash, and though this does happen sometimes, there are times when it doesn't just like any other OS.
PS There's also the possibility that I don't understand what you all are talking about or what the difference between an application crashing and unexpectedly quitting is."

There is a slight difference, usually when an application unexpectedly quits, it is because it has exceeded the memory size it was allocated when it was launched. When it crashes, you know it crashes! Wow!
Darren 'Mac Hack' Handler
SUNY-B Computer Consultants
I don't know if I am going to heaven or hell, I just hope God grades on a curve

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Boyd Ostroff @ Instructional Computing Center, SUNY at Oswego, Oswego, NY
In his article Edward Joseph Bennett writes:
""Mario writes:
Am I the only one who disagrees with this?? I have had application crashes under MultiFinder that don't take the system or other applications down. The message that comes up is "Application has unexpectedly quit" with an OK box."
You're right when one program crashes (or quits for what ever reason) it doesn't always take the whole system with it.
This is the best I can do with this. Can anyone else elaborate or point out any errors I may have made?"

I think the point is that when an application "unexpectedly quits" you really don't know what damage it may have done. In the absence of real hardware memory management, it may have trashed parts of other applications which were currently active, or even the System/Multifinder.
If you continue to go about your business after one of these messages, who knows what's liable to happen. If you value the files which are open at that time, you should quit from your other applications and do a "restart" to avoid additional "unexpected" problems.
Boyd Ostroff
Tech Director
Dept of Theatre
SUNY Oswego

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Dennis Francis Heffernan
RE Crashing applications
I've seen this happen, on Macs and Amigas. One application crashing might not bring down the whole machine, but it will wreck things you can't see. There's an Amiga program that's supposed to help recover from this- I assume there's a Mac one, too- but it's still a good idea to save your work and reboot after something gives up the ghost.
As a previous poster pointed out, this is due to the lack of hardware memory protection on both machines. When something crashes, it's likely to stomp on memory belonging to other programs, which makes them likely to crash in the near future.
Dennis Francis Heffernan
"Remember the words of your teacher, your master: Evil moves fast, but Good moves faster!"
Original text (c) 1990 —Partners in Crime, Ninja Turtle Rap

Subject: Re: **A/UX 2.0: Truly Amazing**
From: David Berry @ Apple Computer
In their articles Mario Herodotus, Mark Hargrove and Michael Thomas Niehaus have asked:
"My question (unanswered to my satisfaction) is this: Given A/UX 2.0, what the heck do we need System 7.0 for?"
"Do Mac applications running under A/UX 2.0 take advantage of virtual memory? If not that's one reason we need System 7.0"

Programs running under A/UX >always< take advantage of virtual memory. Paged virtual memory to be precise (as opposed to segmented...) Under A/UX 2.0 you are allowed to create a Mac with up to 16Meg of memory. To the Macintosh code it all looks like physical memory, however, it all sits on top of the normal A/UX paging stuff, so it's really paged virtual.
David W. Berry
A/UX Toolbox Engineer
Apple Computer

Subject: Re: **A/UX 2.0: Truly Amazing**
From: John Petrangleo @ Worcester Polytechnic Institute, Worcester, MA
David Berry writes:
"Paged virtual memory to be precise (as opposed to segmented...) Under A/UX 2.0 you are allowed to create a Mac with up to 16Meg of memory."

But I though that the MacOS would only allow 8 megs no matter how much memory you physically had installed.
John Petrangleo

Subject: Re: **A/UX 2.0: Truly Amazing**
From: David Berry @ Apple Computer
John Petrangleo writes:
"But I though that the MacOS would only allow 8 megs no matter how much memory you physically had installed."

When the MacOS is run in 24-bit mode (currently the default) the ROM starts at 8 Meg and the slots at 9 Meg. Thus, you are limited to 8 Meg of memory. Since A/UX runs the MacOS in 32-bit mode, the lowest non-ram address is the ROM at 0x40800000. At least in theory we could create a Mac with as much as 4 gazillion bytes of memory. Currently we have a limit of 16 meg.
David W. Berry
A/UX Toolbox Engineer
Apple Computer

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Paul Campbell @ Taniwha Systems Design, Oakland
no no no .....
0x40000000 is only ONE gazillion :-)
Paul

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Peter Kocks @ Academic Information Resources
I use Unix (on a DEC machine) and a Mac all the time and I don't see why people would want to use Mac A/UX as a substitute for the Mac. The only people with any real reason for using Unix are programmers.
There are many nice features about Unix which make it ideal for programming; the most notable being that it prevents your program from crashing the whole system (of course many other OSes do this also).
How often does the Mac crash because of some application going nuts? That used to happen all the time, but it rarely happens to me anymore. Really, it rarely does. Of course, I often remember when it did, but it is not a problem.
Most people will be happy with the Mac, except those that use programs that crash, i.e. developers or poorly designed programs, and those that use Unix specific programs (most of which are difficult to learn and explains why people want them AND MUST HAVE UNIX).
Peter Kocks

Subject: Re: **A/UX 2.0: Truly Amazing**
From: David Edmondson @ Computer Science Dept, QMW, University of London, UK.
In answer to Peter Kocks:
We are a computer science department and use A/UX for teaching since it lets you use Mac Applications as well as Unix, this does not disagree with what you have said. However the experience of also looking after a lab of Macs with a mix of MacOS and A/UX would incline me suggest that anybody who looks after publicly accessible Macs should consider using A/UX2 when it becomes available. A/UX gives you proper access control so your Geography Mac lab doesn't get filled with Engineers printing project reports and throwing away your carefully installed graphical database to install their CAD package.
Using our "blow" package we can re-install the disk image every night to ensure that the machines are clean and up to date. We also have the facility to control who can use which machines and when and to throw them off (after a suitable warning) if they outstay their welcome. File serving can be done automatically, you don't even have to call up AppleShare. I'm sure many or all of these things can be done under MacOS but Unix puts them all together rather than having to rely on half a dozen proprietory or shareware utilities.
The Mac, like all personal computers, is designed to sit on someone's desk and be cossetted. When they are put in a shared environment they get filled with trash and generally abused.
In answer to your question people might well want to use A/UX as a substiute for MacOS (even if they are not programming or doing other Unixy things) if:
a: They have to administrate shared labs of Macs.
b: They want to use a shared lab of Macs which are consistent and available.
David Edmondson
Dept of Computer Science
Queen Mary & Westfield College
Mile End Road
LONDON, E1 4NS, UK

Subject: Re: **A/UX 2.0: Truly Amazing**
From: Joseph A Brownlee @ AT&T Bell Laboratories
Peter Kocks writes:
"How often does the Mac crash because of some application going nuts?
That used to happen all the time, but it rarely happens to me anymore. Really, it rarely does."

I believe you, but some of us run some rather ill behaved applications. My worst offender is Deluxe Music Construction Set 2.5. If you use it for more than 15 minutes, you are almost guaranteed to lock up, or at the very least, have it decide that it no longer wants to accept any text you try to enter, requiring that you exit and start the application over again.
I occasionally have problems with MacTools from Copy II 7.1 and Pixel Paint 1.1, too. I'm sure many readers know of other widely used applications that cause problems. At least many companies fix bugs. In the last update to DMCS, Electronic Arts did not fix ONE BUG that I have found in the program.

I am seriously thinking of abandoning DMCS, myself.
Joe Brownlee,
Analysts International Corp. @ AT&T Network Systems
"Scotty, we need warp drive in 3 minutes or we're all dead!" — James T. Kirk

Subject: **Memory Expansion** (Was: A/UX 2.0: Truly Amazing)
From: Russell Donnan @ Convex Computer Corp, Richardson, TX, USA
In answer to John Petrangleo and David Berry:
I have to disagree with you, in theory at least. Since the majority of us Mac users still use: 128k, 512k, 512ke, Mac Plus, Mac SE, Mac II, and Mac IIx; without some funny finageling, we are always going to be limited to 8Mb because of the change in HW required to use 4Mb SIMMs.
Now, you may argue that you can plug 4 1Mb SIMMs into a single SIMM socket, and you can. BUT, this is not a simple nor readily available solution. I'm also not certain whether or not an SE power supply would appreciate 128 RAM chips (16Mb x 8 1Mbx1) dragging on it.
(^20W?) If this theoretical system had an internal HD, and a video card... It would be a burden even on a II series, no doubt, depending on the size of internal HD, and how many NuBus cards you had. Looks like the memory upgrade path for the II, IIx -> IIfx; and SE -> SE/30.
Russ Donnan,
Convex Computer Corporation,
3000 Waterview Parkway,
Richardson, TX
"To capture the essence of an opinion takes but one lawyer."

Subject: **Maximum Memory** (was Re: A/UX 2.0: Truly Amazing)
From: Warwick Daw @ UCLA Mathematics Department
David Berry) writes:
"When the MacOS is run in 24-bit mode (currently the default) the ROM starts at 8 Meg and the slots at 9 Meg. Thus, you are limited to 8 Meg of memory.
Since A/UX runs the MacOS in 32-bit mode, the lowest non-ram address is the ROM at 0x40800000. At least in theory we could create a Mac with as much as 4 gazillion bytes of memory. Currently we have a limit of 16 meg."

This raises a question I had thought I had found the answer to yesterday. According to my owner's manual, the II's and the SE/30 can have up to 128MB installed in them (when 16MB SIMMs become available).
Now, if I were to install 16MB SIMMs (or the available 4MB SIMMs), could I get the MacOS to recognize the additional memory? The question is purely hypothetical for me, since I don't even have the spare cash to get four 1MB SIMMs right now. I'm just curious.
Warwick Daw

Subject: Re: **Maximum Memory** (was Re: A/UX 2.0: Truly Amazing)
From: David Berry @ Apple Computer
In answer to Warwick Daw:
The MacOS would currently recognize them as 1 Meg SIMMs. Whether that's a yes or a no... In any case, you would only be allowed to use 8 Meg of it. Under A/UX, it would all be used, although the Mac partition would still be limited to 16 meg.
David W. Berry
A/UX Toolbox Engineer
Apple Computer

Subject: Re: **A/UX 2.0: Where can you get it?**
From: Robert K Shull @ Engineering Computer Network, University of Oklahoma, Norman, OK
Darren Handler writes:
"Call up your local authorized Apple Mac dealer. He can order A/UX from Apple on the following things for you:
1) An Apple 80 Meg HD
2) An Apple 160 Meg HD
3) An Apple CD-ROM
4) An Apple 40 Meg Tape
5) A (large) set of 800k disks"

They can supply it this way to educational sites, so (hopefully) a dealer could order it.
Robert K. Shull

Subject: Re: **A/UX 2.0: Fortran 77?**
From: John F. Mansfield @ University of Michigan Electron Microbeam Analysis Lab.
The heading says it all, does A/UX 2.0 have a "built-in" F77 compiler?
I bought I.0 and the Fortran compiler which was supplied didn't work, and the toolbox interface was non existant, so I reinitialized my drives to MacOS. From what I have seen of the new version I may upgrade if I can get my Fortran code running on it!!!!
Sorry guys I'm a physicist bought up on Fortran and I can't suddenly switch to C or Pascal.
John Mansfield,
North Campus Electron Microbeam Analysis Laboratory,
University of Michigan,
2455 Hayward, Ann Arbor,
Michigan 48109-2143.

Subject: Re: **A/UX 2.0: Fortran 77?**
From: dwb@sticks.Apple.com David Berry @ Apple Computer)

All known bugs have been fixed in the Fortran77 compiler for 2.0, give it a try.
David W. Berry
A/UX Toolbox Engineer
Apple Computer

Subject: Re: **A/UX 2.0: Where can you get it?**
From: Paul Eric Menchen @ University of Pennsylvania
Darren Handler writes:
"Call up your local authorized Apple Mac dealer. He can order A/UX from Apple on the following things for you:
1) An Apple 80 Meg HD
2) An Apple 160 Meg HD
3) An Apple CD-ROM
4) An Apple 40 Meg Tape
5) A (large) set of 800k disks"

Can it run off a CD-ROM given a smaller (<80meg) hard disk partition to work with? I can forsee problems with speed and the like, but it seems theoretically possible. I wouldn't want to have to have 80 megs of hard drive dedicated to AUX, but plopping in the CD when I want it would be nice.
Paul Eric Menchen

Usenet is a loosely-coupled network of co-operating academic and commercial computer systems.
It is a non-profit network whose primary aim is the sharing of technical information and the spreading of research results.

For FullWrite Fans

FullWrite books and chat from Usenet.

Books on FullWrite Professional

Bixby, Robert.
Using FullWrite Professional.
CIP, 1989, $21.95.

Eckhardt, Robert C.
FullWrite Professional Handbook.
Bra, 1989, $29.95.

Kenyon, Rebecca A.
Using FullWrite Professional.
Que, 1989, $21.95.

Leban, Roy and Morrish, Robert.
FullWrite Professional Advanced Techniques.
A-T, 1989, $24.95.

Merriman, Greg.
Using FullWrite.
OMH, 1989, $22.95.

Salkind, Neil J.
FullWrite Professional Complete.
SFC, 1989, $21.95.

Thompson, Keith and Peterson, Theodore.
FullWrite Professional: A User's Guide.
A-T, 1988, $24.95.

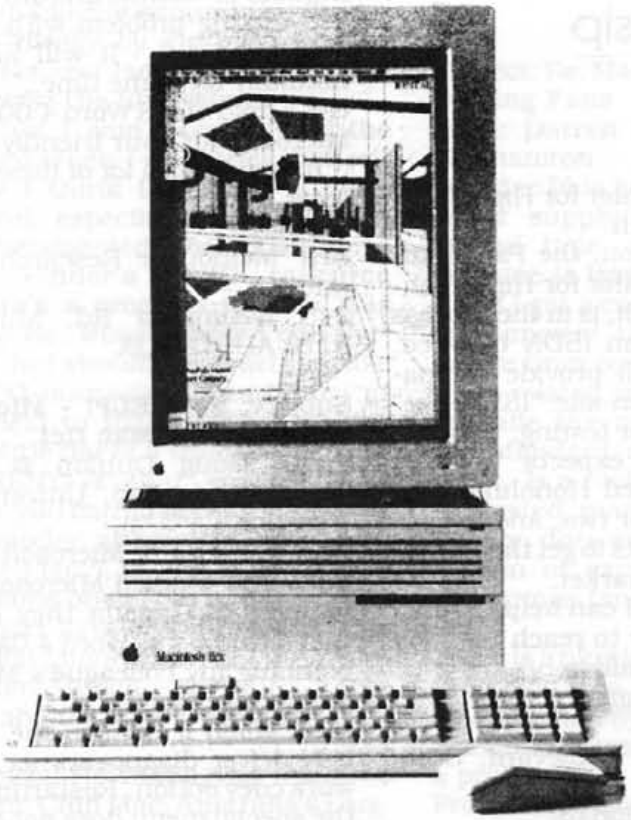
Chat

Subject: Re: Ashton-Tate FULLWRITE PROFESSIONAL for $150!
From: Philip Machanick @ Computer Science Department, Stanford University
Michael Gilbert writes:
"I don't know if they still are, but MacConnection was selling version 1.0 for $55 not long ago, and you get the upgrade to 1.1 (newest version?) for free. Does anyone know if this deal is still on, and why it was even on in the first place?"
I don't know about MacConnection, but I got a copy from MacWarehouse last week for $49+$3 for shipping. They've been offering this deal for at least 2 months (in fact, the price has slipped from $59). Why? The package I got had old versions of system software, and was still 1.0. I assume Ashton-Tate over-estimated sales by an order of magnitude or 2, and are dumping/buying market share (or maybe MacWarehouse and MacConnection both over stocked?).
Why did I buy it? I like to support shareware authors. It's a pretty good buy at $49 (if you Mac has the performance to support it).
Question: do I get 1.1 automatically by sending in my registration card, or do I have to ask? (These shareware guys can't afford an 800 number.)
Philip Machanick

Subject: Re: Ashton-Tate FULLWRITE PROFESSIONAL for $150!
From: Mario Herodotus - Digital Customer Support Center
I sent my registration card in and got my update to 1.1 in 2 weeks. I got my copy of FullWrite free with 4 Meg of RAM from Technology Works. At the time MacConnection wasn't selling FullWrite for $55. Now that I look back I feel I got ripped off.
I asked an Ashton Tate rep why this was selling so cheap with a free upgrade and he said the reason is they are planning major upgrades to all their products and want to get a larger installed user base. I read that as...get'em to buy it, give'em the first upgrade free (the version being offered for $55 is 1.0 with a free upgrade to 1.1) then charge'em for the next update.
I guess they did over estimate sales and have a bunch of the older versions they want to dump. So what??? We benefit here right? I love FullWrite!!!
I have a IIcx with 5 Meg and I think it's fast enough and has more features than I could have asked for, but now I'm using them. I even love Ashton Tate.
I guess that requires an explanation—they send me a monthly newsletter with new tips for better using their software. They sent me an update to V1.1 in 2 weeks without my having to do anything. They acknowledge that FullWrite lacks table making functions and offered Tycho Table Maker to registered owners for only $12 (retail price is over $150). I placed an order for it but it hasn't arrived yet. They even sent a coupon to get a free copy of "FullWrite Professional Advanced Techniques". I took advantage of that and received the book in about a week. Now I find out the MACconnection has an even better deal on Ashton Tate software. You can get FullWrite, FullImpact, and dBase together (that's right all 3) for $99 while supplies last at MacConnection.
This weeks issue of MACweek had a story about the upgrade planned by Ashton Tate to dBase, it sounds hot!
I think FullWrite is a great program if you have enough memory to run it. I read about the Hot Links Ashton Tate has planned for FullWrite, FullImpact, and dBase and have been considering buying the package of all three. If I do you may see my second copy of FullWrite for sale here, but the price would be better then $150 (how about $35...)
My only Ashton Tate complaint is that they didn't offer registered users as good a deal on their software as MacConnection did.
Mario Herodotus
Digital Equipment Corporation
Customer Support Center
305 Rockrimmon Blvd.
Colorado Springs, CO 80919

Subject: Re: Ashton-Tate FULLWRITE PROFESSIONAL for $150!
From: Jim von Schmacht @ Ashton-Tate, Torrance, CA
It's nice to get a positive AT comment once in a while....*sigh*
Jim von Schmacht
Senior Member,
Project Test Staff
Ashton Tate Corporation
"It isn't the years - it's the mileage"
-Indiana Jones

Friendly Solutions at Celtip Computers AppleCentre[SM] Kidderminster



- DESKTOP PUBLISHING
- PROFESSIONAL PUBLISHING
- GRAPHIC DESIGN
- COMPUTER AIDED DESIGN
- COMMS & NETWORKING
- FINANCIAL SYSTEMS
- EDUCATIONAL SOFTWARE
- TRAINING
- CONSULTANCY

Celtip Computers have been Apple™ dealers for almost 11 years, and in that time have gained extensive specialist knowledge of Apple™ computers. As operators of AppleCentre Kidderminster we are among the foremost computer and software suppliers in the Midlands, with a client base covering the UK. We offer service and support for the full range of Macintosh™ and Apple™ II computers. Our expertise covers a wide range of specialist areas, including Computer Aided Design, Desktop Publishing and Presentations, Professional Publishing, Financial Systems and specialist Educational software.

Call us today for further information.

Celtip Computers : AppleCentre Kidderminster

Lower Mill Street, Kidderminster, Worcs, DY10 2JG

Tel: 0562 822222, Fax: 0562 67202

CeltipCare

AppleCentre is a service mark of Apple Computer, Inc.

Network News

The latest news, tips and gossip from the networks.

From Usenet

Subject: **Looking for ISDN test markets**
From: Greg Corson @ Math. Dept., Univ. of Notre Dame
Is anyone out there aware of any ISDN test market projects where ISDN service is being made available to individual consumers/ homes on a test basis?
I have several products/services that I've run on traditional modems but would like to "soup up" by adding features which only the high data rates of ISDN can support. Problem is, whenever I call a phone company their response is usually "ISDN, what's that!". Obviously I'm not calling the right people.
If anyone can direct me to people/ companies involved in test projects or "concept development" (like the recent "concept house" shown on CNN that displayed the "house of the future" telecommunications products) I would appreciate it.
Most of the products I have are already in working condition but could be greatly enhanced by ISDN data rates. They are all consumer in nature such as multi-user bulletin board/ conferencing systems and multiplayer interactive realtime games (where you play directly against other people).
Hope you can help, phone numbers, names, addresses (particularly E-Mail) would
all be helpful!
Greg Corson
19141 Summers Drive
South Bend, IN 46637
(219) 277-5306

Subject: Re: **Looking for ISDN test markets**
From: Mike Morgan @ Pacific International Center for High Technology Research
Our organization, the Pacific International Center for High Technology Research, is in the process of setting up an ISDN test-bed. Initially we will provide companies with an on-site "ISDN-like" environment for testing;
Hawaiian Tel expects to have ISDN to selected Honolulu sites within a year or two, and we will work with clients to get their products into the market.
Let me know if I can help. E-mail is the best way to reach me. My other contact info is:
Michael L. Morgan
PICHTR
711 Kapiolani Boulevard, Suite 200
Honolulu, HI 96813.

Subject: Re: **Looking for ISDN test markets**
From: Norman Soley @ Oracle Corporation Canada, Toronto
In his article Laurence R. Brothers writes:
"ISDN: "It Still Does Nothing"
I prefer: "I Smell Dollars Now"
Norman Soley
Systems Administrator
Oracle Corporation Canada
155 University Ave.
Suite 400 Toronto,
Ontario (416)-362-7953 X646

Subject: **Need help with international systems**
From: Saiid Paryavi @ Kansas State University, Dept of Computing & Information Sciences
I am trying to copy the necessary resources from Arabic and Hebrew systems (6.0.3) to System 6.0.5. Does anyone know what all the resources are that I need to copy over?
Thanks for any help
Saiid Paryavi
CIS Department
Nichols Hall, KSU
Manhattan, KS 66506

Subject: Re: **HELP! - Microsoft Word and the Mac IIci**
From: Ian Hoyle @ none
John F. Mansfield writes:
" I have had a MacIIci now for a number of months and am having a recurring problem with Microsoft Word 4.0. It will function normally for some time.."
Get a hold of MS Word 4.00B from Microsoft (or your friendly dealer :- It should fix a lot of these problems.
Ian Hoyle
BHP Melbourne Research Laboratories
245 Wellington Rd, Mulgrave, 3170 AUSTRALIA

Subject: Re: **HELP! - Microsoft Word and the Mac IIci**
From: Doug Dunlop @ Earth Observations Lab, University of Waterloo
We have 4.0a of Microsoft Word, but when I called Microsoft tech support in Canada they denied that 4.0b exists. Word 4.0a is still bombing my colleague's Mac IIci and he needs a fix.
Also, when it bombs, the Ethertalk driver disappears as a network cdev option. Restarting from the special menu does not restore it, but rather the machine must be powered down and then rebooted.
Has anyone else seen this behaviour or should we be looking for a hardware problem?
Doug Dunlop
Earth Observations Lab
University of Waterloo

Subject: Re: **Managing Windows**
From: Robert Minich @ Oklahoma State Univ., Stillwater
"This was a very useful feature – if I opened a folder or two [using option-Open or option-dbl_click] to get to an application, I would not have to close them after I finished with the application.
Unfortunately, on this machine, with system 6.0.4 and the [Uni-] finder with it, pressing option while opening a folder causes the new folder to open, and the folder containing it to be closed. This is far from what I wanted to do. When I open a folder for an application, I rarely want the top-level folder for the hard disk closed! What changed, why, and how can

one get the documentation to keep up?"
I believe the change was intended to make 6.0.4 act like 7.0 will. Since Multifinder will ALWAYS be active under 7.0, the little trick would never have any effect. The new option-Open action is called "tunneling", and is intended to make moving around the Finder less messy by closing the door behind you (so to speak) as you traverse the file system.
At first I said "Hey, I liked the closed-when-i-quit trick better!" Now I think tunneling is more useful, especially if you use an undocumented modification to the Finder's LAYO resource (there's a program just for this purpose, whose name I can't recall, but should be something like LAYO-manager, available at sumex) to make option-clicking the title bar of a window open the PARENT of that window. This way, you can go backwards up the hierarchy, although it is not tunnelled (sp?). ie, the child window remains open. Too bad the finder doesn't have a pref box with this option (among others).
Robert Minich
Oklahoma State University

Subject: Re: **Managing Windows**
From: Club Mac, Australia's Largest Mac Users Group @ RUNX Unix Timeshare. Sydney, Australia.)
Correction. To reopen current folder's parent, you must change the LAYO 128 resource with say ResEdit and double-click on the folder window's title bar.
Jason Haines, Vice-President
Club Mac - Australia's Largest Macintosh Users Group
P.O. Box 213, Holme Building, Sydney University, NSW 2006
"We come in peace,shoot to kill,shoot to kill" - Captain Kirk, Star Trekkin'

Subject: **Problem with finder 6.0.5**
From: Eric Feigenson @ MIT Artificial Intelligence Lab
I'm having a little trouble with the finder in system 6.0.5. As in my previous system (6.0.3) I used ResEdit to change the LAYO resource in the finder to set my Icon Horiz. Spacing to a larger number so my icon titles wouldn't trip over each other in their folders. This worked just fine in 6.0.3, and it also works in 6.0.5 *BUT* there seems to be this side-effect that when I do this, and then view by name, the items in the folder are really spaced far apart (vertically, that is).
Anyone have any idea why (or how to fix it???)
Thanks!
Eric

Subject: Re: **Mac+ Power Supply, Cooling Fans**
From: Darren Handler @ SUNY Binghamton
"My Mac Plus has recently had its power supply replaced for the second time, even though the machine is less than three years old. If I got a cooling fan, would it help prevent this power supply failure from occuring so often?
On a related matter, I intend to upgrade the memory (presently the standard one meg) to four megs. Is a cooling fan irrelevant, suggested, mandatory, or what?
Finally, does anyone have a suggestion or experience regarding the various fans now on the market?"
There is a plus (sorry) and a minus to cooling fans. I myself have had a Kensington System Saver on my Plus for two years and haven't had a problem.
Pro: This is obvious, it keeps the machine cooler, thus prolonging life.
Con: The fan sucks in dust which just loves to coat the components of the computers, especially all of the nice electro-static parts of the power supply. After a while, the dust build-up traps the heat inside of the components and the device blows because the fan was doing its job too well.
I regularly open up my machine and clean all of the dust out. I was thinking of getting some sort of filter to cover the vents on the sides and over the drive door, but haven't done it yet.
Darren Handler
SUNY-B Computer Consultants
I don't know if I am going to heaven or hell, I just hope God grades on a curve

Subject: **BlackBox** (was Re: System 8 (What enhancements.))
From: Ross Ward Comer @ Class of '91, Carnegie Mellon, Pittsburgh, PA
Michael A. Libes writes:
" Take a look at the INIT Black Box. [rest removed]
" BlackBoxINIT crashes 99% of the time. There is a Shareware product called _Launch which provides an icon dock. It runs on all Macs except Pluses, IIci's, and IIfx's. Lots of people find it useful."
I have used BlackBox on an SE/30 for 5 months now with NOT ONE CRASH caused by it. This is both under Finder and Multifinder, sometimes with Stepping Out II, and always with lots of other inits and cdevs. If you can afford the screen space, BlackBox is a terrific time saver!
Ross Ward Comer
Carnegie Mellon University

Subject: Re: **SilverServer**
From: Alan D Danziger @ Organization? Of course I'm not Organized!
Steve Hix writes:
"Hi, I'm very interested in hearing from anyone who has had experiences (good, bad or otherwise) with LaCie's SilverServer." I might be able to tell you more...after I get SilverLining and run it before I install SilverServer. (There's no indication on the SilverServer packaging that SilverLining is required to use file sharing with SS.
I've used SilverServero on a network of 3 Mac Pluses and a IIcx, wit the Pluses running off a 105 meg LaCie drive, and let me tell you... don't try to run the system over the Appletalk network. It's SLOW!
Silverlining worked like a charm (eventually, after I had to almost read the manual), but the Appletalk network was so slow that we eventually had to switch to using TOPS and Ethernet. However, this required that we buy small hard drives for each Plus anyway, so giving up the Appletalk/SilverServer combination turned out to be a waste anyway.
SUMMARY:
The problem with SilverServer was that we were running it over an Appletalk network, which is SLOW. If we ran it strictly as a file server, rather than trying to substitute it for hard drives at first, we would have been happy with it. Now we've spent over $1000 to get a slightly faster but equally functional system.
Alan D Danziger

MB 3130/Brandeis University
PO Box 9110 Waltham MA 02254

Subject: Re: **Eschatology**
From: Brandon S. Allbery @ North Coast Public Access UN*X, Cleveland, OH
Dale A. Samuelsen) writes:
"So what exactly is eschatology? I've asked SEVERAL people here, but none seem to know what it is... AND I'M CURIOUS, DAMMIT!"
"More precisely, Webster defines eschatology as "a branch of theology concerned with the final events in the history of the world or mankind."
"Not really, since Apple's HDSC Setup program can make eschatology partitions for AUX, and my reply (change in accounts, but it's me) asking what it is was to a question about AUX on partitions..."
In that case, it's probably either a power-fail restart partition or the place that Unix writes its core dump in the case of a system panic. Since a theological envisionment of the former would be reincarnation, I strongly suspect that the latter interpretation is intended.
Perhaps someone at Apple forgot the ":-)" on that option.... ;-)
Brandon S. Allbery (human)

Subject: Re: **Eschatology**
From: Brandon S. Allbery KB8JRR @ North Coast Public Access UN*X, Cleveland, OH
As quoted from David J. Harr:
"Disclaimer: I don't know anything abput CDC, except I've heard that their size. I don't REALLY believe that their drives are particularly prone to failure. If, however, someone on the net feels mortally offended that I have..."
I should note that even the best product occasionally has some duds. We had a CDC Imprimis drive whose head mechanism apparently *popped loose*. It made some really interesting noises when it spun up....
Brandon S. Allbery

Article 15408 of 15555, Wed 02:08.
Subject: Re: **Eschatology**
From:Richard Todd @ Ministry of Silly Walks
Well, your second guess is definitely wrong, because A/UX doesn't write core dumps in the event of a panic (even though they *do* have a DUMPDEV kernel config parameter. Go figure...). Actually, it's a special backup partition that contains copies of certain critical files. You can configure SASH (the Standalone Shell, the MacOS program that boots Unix) to automatically run a program to scan the filesystem before Unix boots, and if it finds certain vital files, like /etc/init or /bin/sh or /unix missing or corrupt, it puts a copy in from the Eschatology partition.
Richard Todd

Subject: **HD SetUp Secret Features**
From: John DeRosa @ Motorola Inc., Cellular Infrastructure Div., Arlington Heights, IL
I read in an issue of MacWeek or MacUser or MacWorld (its all a blur when you read too many journals) that there is a secret feature in Apple's HD SetUp.
If you type in the word "ski" at the screen following the opening copywrite screen, you can choose which wait icon you want for your system; horu glass, fingers counting, world turning or a wrist watch. This is on version 6.0.4 and 6.0.5 I believe. Can't get it to work on my IIcx. I still only get the default wait icon, while I have choosen the world turning. Has anyone had any luck?
John DeRosa,
Motorola, Inc.
Cellular Infrastructure Division.

Subject: Re: **HD SetUp Secret Features**
From: Bolo @ Engineering Computer Network, University of Oklahoma, Norman, OK
Actually, this is in the the new "Installer", not HD Setup.
Robert K. Shull

Subject: Re: **HD SetUp Secret Features (Actually Installer 3.0)**
From:John T. Chapman
Well, I've done some testing and I'd like to try and clear a few things up:
Actually, it's in Installer 3.0 (sys6.0.4/6.0.5)
From what I could see, all you are really choosing is what cursor the Installer uses as a 'busy' cursor while installing your system software.
It looked like a 'feature' of the Installer, and not of the System Software (i.e. you won't see any funky wait cursors normally, no matter what you choose here)
Hope this helps...
John T. Chapman
Witty message under repair...

Subject: **Trouble with GIF & VisionLab**
From: Brian S. Lev @ NASA Goddard Space Flight Center - Greenbelt, MD, USA
I picked up VisionLab via anon ftp (I've forgotten from which site!) and happily set about taking a peek at some of the GIF files I've heard so much about...
..and ran into an interesting problem. I'm using a Mac SE with 1 MB of RAM so I can't look at the files in color. When I open a GIF file with VisionLab, I get a fairly decent picture – but I can't resize the window (it refuses to grow in any direction from its [small] starting size), and I never seem to get more than the top 1/3 or 1/4 of the picture!
Is there any way I can see the WHOLE picture?
Thanks in advance...
Brian Lev
NASA Goddard Space Flight Center
Advanced Data Flow Technology Office
Code 630.4
Greenbelt, MD 20771
"The ability of a network to knit together the members of a sprawling community has proved to be the most powerful way of fostering scientific advancement yet discovered." – Peter Denning
DISCLAIMER: I DON'T SPEAK FOR NASA OR STX AND THEY DON'T SPEAK FOR ME!

Subject: **Check-book summary**
From: Joseph Wagner @ U of Iowa, Iowa City, IA
About a week ago, I posted a request for a good free/share-ware program to keep track of a checkbook. Well the answers I received were pretty much unanimous (sp?). Nobody knew of a good non-commercial program to do what I wanted but everybody recommends Quicken, a relatively inexpensive prgram (about $40) that is quite versatile. Thanks to all those to responded to my original posting.
Joe Wagner
Virtue is insufficient temptation

George Bernard Shaw

Subject: **Looking for HC stack explaining boot problems**
From: David Roessli @ University of Geneva, Switzerlnd
Hello world,
I've been encountering some trouble while booting lately, (after having installed new devices ..), and all these weird and frightening sounds came up. Being rather new to Macintosh, I guess they relate to some specific setup problem (RAM, ROM, PRAM?). Different jingles were heard.
Does anybody know of a HyperCard stack (or anything else) that would illustrate and explain the diagnosis related to these curious noises ?
Thanks
David C. Roessli
Dpt Anthropologie & Ecologie
University of Geneva
12, rue Gustave-Revilliod
CH-1227 Geneva SWITZERLAND
Fax : +41(22)3000.351

Subject: Re: **HP LaserJet IIP Use**
From: John A. Weeks III @ NeWave Communications Ltd, Eden Prairie, MN
In article <9373 Brian Blood writes:
"Could somebody tell me of their experience with the HP LaserJet IIP and its use with the Macintosh."
I use an Epson EPL-6000 with my Mac Plus, and my brother uses the IIP with his SE. Each works very well. You will need a printer driver, so plan on shelling out $100-$150 for a driver (MacPrint or JetLink). Check out past issues of MacUser or MacWorld for a comparison of the two Laserjet drivers (it was in one of them in Jan or Feb or thereabouts).
"I am seriuosly considering buying one. The school comp. store has them for sale at $888. What other hardware/software is needed?"
Excellent price. Other than the printer driver, plan on adding at least an extra 512K to get full page graphics at 300 DPI. Don't pay for HP's memory. It is too expensive. Look in Byte or PCWeek or Info World for sources of cheap memory for the IIP.
"I know to get really good output I need to get the PostScript cartridge and more memory."
With the LaserJet, you will only be able to work with progams that do not expect a PostScript printer. You will still get excellent output with most wordprocessors, all paint programs, and with many drawing programs (like MacDraw).
John A. Weeks III
NeWave Communications

Subject: Re: **Edit 2.1 + Sys 6.0.5 = trashed hard disk**
From: Philip Machanick @ Computer Science Department, Stanford University
In his article Anthony Rich writes:
"A couple of nights ago Edit 2.1 crashed on my Mac II under System 6.0.5 when I was editing some text files downloaded from a Unix system (something I normally do with no problems). All I had done was select a few lines of text and press the DELETE key. Mystified, I rebooted and tried again.
Another crash, same place. Another reboot.
I'm pretty sure it's the combination of Edit 2.1 and System 6.0.5 that's the problem (INITs don't seem to matter), but I could be wrong. If anyone wants to verify that, *BE SURE TO DO A BACKUP FIRST*! (If I'm right, then has System 6.0.5 made Edit 2.1 a kind of innocent Trojan horse?
Questions:
1. Can Edit 2.1 be fixed to work under System 6.0.5? I don't want to have to back off to 6.0.4. 2. Does Apple have Edit's source code, or can its binary be patched by some MacNosy wizard?"
Edit used to be sold as an Apple product. It has now reverted to its maker (so to speak), Consulair Corp, who still sell it (and presumably maintain it) as part of their CDS 68000 assembler development system. They can be contacted at PO Box 2192, Ketchum, ID 83340; (208)726-1401. I'd be interested to hear what support if any they give, since I'm thinking of using their assembler.
Can anyone comment?
Philip Machanick

Subject: Re: **Edit 2.1 + Sys 6.0.5 = trashed hard disk**
From: Steve Baumgarten @ Davis Polk & Wardwell
Yeah, Edit has about had it. I started having problems with it when I upgraded to 6.0.4 (or possibly when I added one font too many to my system), so although it's a very useful application it had to be trashed.
You might want to try Vantage, the commercial version of McSink. It opens any size files (up to available memory), can have 32 open at once, and it's extensible via macros and XCMD-like code modules.
It also works with traditional Mac text files (i.e., files that don't have returns after every line), and it handles tabs just fine. Plus it has a nice (small and fast) spelling checker, and of course it does all kinds of text manipulation (add/strip line feeds, tabs to spaces, etc., etc.).
I think McSink does most of this, but Vantage seems to be a better performer. It's replaced McSink, miniWRITER, and SigmaEdit in my Apple menu, and I think it's well worth the $59 MacConnection is charging for it.
Steve Baumgarten
Davis Polk & Wardwell

Subject: Re: **Edit 2.1 + Sys 6.0.5 = trashed hard disk**
From: Ralph Martin @ University of Wales College of Cardiff, Cardiff, WALES, UK.
I think its 6.0.5. As I said in an earlier message to this list, I've lost 2 hard disks on different machines since installing 6.0.5, quite possibly as a result of system crashes in Wingz and or other products.
I hope someone from Apple will take this seriously, and look into it. I was running 6.0.4 happily for ages before this.
Ralph

Info-Mac digests consist of submissions by individuals on the academic computer networks. Submission and distribution of these digests is by network, moderated by volunteers at Stanford University.
Usenet is a loosely-coupled network of co-operating academic and commercial computer systems. It is a non-profit network whose primary aim is the sharing of technical information and the spreading of research results.
Delphi is a commercial timesharing and bulletin board system. The Delphi Digests are made available thanks to Jeffrey Shulman of Rutgers University.

Macintosh Technical Note #251
Safe cdevs

#251: Safe cdevs

Written by: John Harvey
August 1989

This Technical Note describes a potential problem with Control Panel devices (cdevs) that contain EditText fields and presents a way to avoid it.

The Control Panel chapter in Inside Macintosh, Volume 5 describes, in detail, how run-time errors are handled by the Control Panel and a cdev. There is, however, a potential problem with cdevs that contain EditText items that this chapter does not cover.

When a cdev is called by the Control Panel, the cdev's 'DITL' resource is concatenated to the Control Panel's 'DITL'. The Control Panel then lets the Dialog Manager update the window. If the cdev contains an item of type EditText, the Dialog Manager allocates and activates a TEHandle to be used for displaying and editing text. All of this action happens before the cdev gets the initDev message from the Control Panel.

As detailed in The Control Panel chapter, if an error occurs from which a cdev cannot recover, the cdev should dispose of any private memory and return the appropriate error code or a NIL value to the Control Panel. The Control Panel then grays out the cdev's area, displays the appropriate error dialog, and then deletes the items that were added to its 'DITL'.

All of this is fine, except that the TEHandle does not get deallocated. The EditText items get thrown away, including the strings in the item list that the Dialog Manager would use to store text entered into the EditText field, but the TEHandle stays there and stays active.

Figure 1 below illustrates what this would look like.

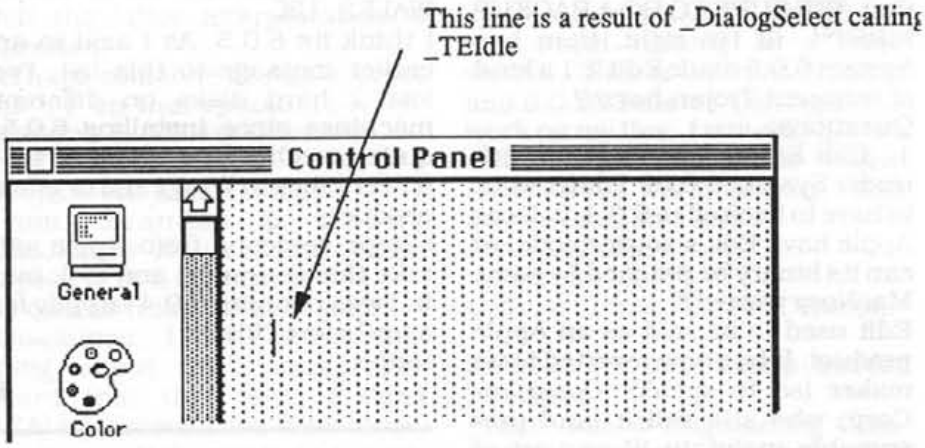


Figure 1–Erroneous Insertion Point

So the Dialog Manager, knowing that it allocated a TEHandle for an item that was visible, goes merrily on its way flashing the insertion point. The problem is not simply one of appearance. If a user hits a key, the Dialog Manager tries to process the key-down event just as if the EditText item was still available, and this series of events causes a rather nasty crash.

Fortunately, the solution for this problem is a very simple one. If an EditText item is hidden with a _HideDItem call, the Dialog Manager does not consider it active and will not try to process key-down events for it. So if your cdev contains EditText items, part of your error handling should be to first hide the EditText items with a call to _HideDItem before returning an error code or a NIL as the cdev's function result.

Further Reference:

- Inside Macintosh, Volume I, The Dialog Manager
- Inside Macintosh, Volume IV, The Dialog Manager
- Inside Macintosh, Volume V, The Control Panel

System 6.0.5

System 6.0.5 is required when using any of the following products: Macintosh IIfx, Macintosh Display Cards 8•24 and 8•24 GC, and third party software or hardware products that require System 6.0.5 (these third party products carry the label "requires 6.0.5 or later" on the outside of their packaging).

In addition, Apple recommends using System 6.0.5 with any of the following products:

Macintosh Portable, Macintosh IIci, and 32-Bit QuickDraw.

The recommended version of HyperCard for use with System 6.0.5 is 1.2.5.

On all Macintosh models the following improvements will be found. Floppy disk initialization is more reliable. Comms applications no longer drop characters when changing monitor settings. MacroMaker: playback now works properly with more applications; switch-launching works; and problems pulling down menus no longer occur. Creating a screen shot works properly when using a colour video card that requires 32-Bit QuickDraw. Apple HD SC Setup now erases all data when initializing (or erasing) any Apple hard disk.

Macintosh Technical Note #253
'SICN' Tired of Large Icons in Menus?

#253: 'SICN' Tired of Large Icons in Menus?

Revised by: Dennis Hescox October 1989
Written by: Dennis Hescox August 1989

This Technical Note describes a new facility of the Menu Manager which allows you to add reduced icons and small icons to your menus.
Changes since August 1989: Corrected references to SetItemCmd from SetItmCmd.

Since the release of MultiFinder, you may have noticed the appearance of small icons ('SICN') in the menus of some System Software. At that time, the Menu Manager was modified to allow the capability of showing both 'SICN' resources and 'ICON' resources reduced to 'SICN' size.

How to Add Less
To add one of the smaller icons to a menu item with Rez or ResEdit, do the following:

Reduced Icon
- Place a value of $1D into the cmdChr field of the menuItem.
- Place the resource ID number of the 'ICON' to use, minus 256, into the itemIcon field of the menuItem.

Small Icon
- Place a value of $1E into the cmdChr field of the menuItem.
- Place the resource ID number of the 'SICN' to use, minus 256, into the itemIcon field of the menuItem.

In the ResEdit 'MENU' template, the cmdChr field is called "Key equiv" and the itemIcon field is called "Icon#."

For setting or changing the menu from within your program, use the following:

```
SetItemCmd(theMenu,item,$1D)
{ mark menu item as having a reduced icon }
SetItemIcon(theMenu,item,icon)
```

or

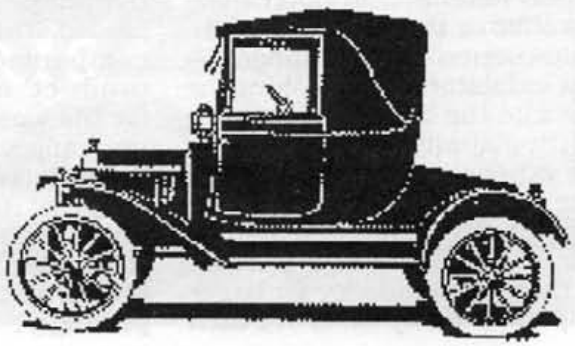
```
SetItemCmd(theMenu,item,$1E)
{ mark menu item as having a SICN }
SetItemIcon(theMenu,item,icon)
```

Note that the resource ID that you indicate to the Menu Manager is 256 less than the icon's real resource ID. This means that you can only use icons starting with resource ID of 257 (remember that a zero indicates no icon). Figure 1 illustrates a menu with 'SICN' resources in the first three items, a normal 'ICON' in the fourth item, and a reduced version of the normal 'ICON' in the fifth item.

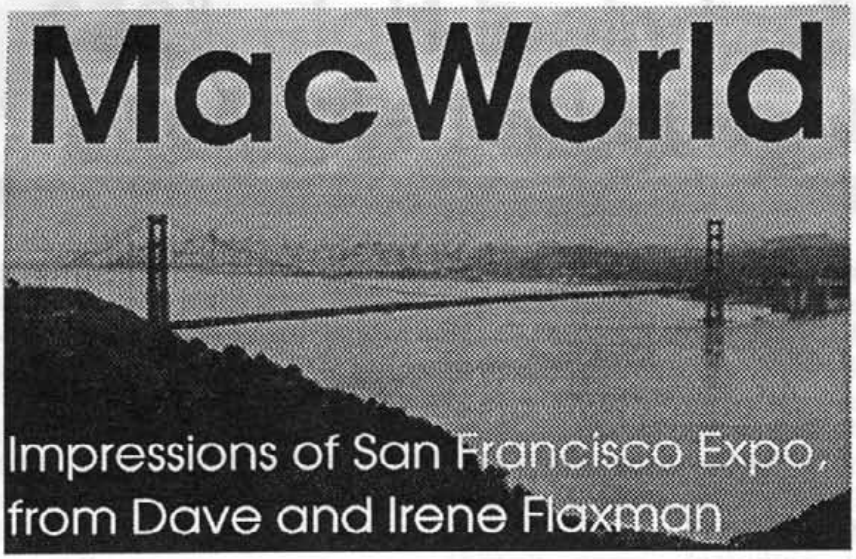
Figure 1–Menu Containing a 'SICN', an 'ICON', and a Reduced 'ICON'

You Win Some; You Lose Some
Note that this new facility does not come for free. A menu item that contains a 'SICN' or a reduced icon cannot also have a command key equivalent. Because the addition of a smaller icon must be somehow recorded into the existing menu record, the cmdChr field of your menu item that used to contain the command key equivalent is now used to indicate both the command key to use or the use of a smaller icon.

Further Reference:
- *Inside Macintosh*, Volume I, The Menu Manager
- Inside Macintosh Volume V, The Menu Manager



MacWorld



Impressions of San Francisco Expo, from Dave and Irene Flaxman

The MacWorld Expos are increasing in number every year — there are promises that a new one will be organised in Berlin next year, but definite details are not yet available.

Traditionally, the USA have hosted two regular Expos — San Francisco in January, and Boston in August. Last year saw the first change in this schedule, with a third Expo in Washington, but all accounts rated that new event quite low and currently there is no repeat performance scheduled. The second change in the schedule happened this year, when the San Francisco MacWorld Expo was scheduled for April instead of January — it actually took place during Easter week, finishing on Good Friday.

The venues were the same as last year, with shuttle services running between the Moscone Centre and Brooks/Civic Halls. The atmosphere was somehow different, though — maybe it was due to the change of date? Maybe it was the attendees — there were far more suits and ties in evidence than has been the case at previous Expos, and the atmosphere did not seem as relaxed.

There were around 500 exhibitors offering their wares, but the market seems to have changed — most exhibitors were looking for sales into the large corporations, and the majority of products were very expensive. There were still some smaller companies around, though, with useful little utilities selling at a reasonable price — but there is a tendency for larger companies to buy them out then close them down to reduce competition. Many of the friends we had made at earlier expos were sadly missing, or just visiting — some had been taken over in this way, others could not afford the costs of exhibiting, all were agreed that the expo had changed (as had the target market).

The entrance fee was $35 for the exhibition only, or $80 for the exhibition and seminars. This allowed access for all three days of the expo, and for both locations. Tickets are always sold for cash only — no cheques or credit cards accepted. The Tuesday prior to the expo was again designated as a "Business Day", when exhibitors could invite potential customers to review the expo at no cost. The exhibition hall was opened for four hours, and it proved a popular event — so popular, that several thousand tickets were forged.

The keynote speech from John Sculley took place on Wednesday morning at Brooks Hall. The hall was pretty full, as you would expect. I was somewhat disappointed, I'm afraid. I've always found his speeches to be impressive as well as entertaining, and there are generally some innovative ideas or new products included. This year, John was accompanied by the product managers for the various product ranges, as each demonstrated features of their own areas of interest — including Mac Plus, Mac II, Mac IIfx. Surprisingly, very few Mac IIfx's were in evidence at the expo.

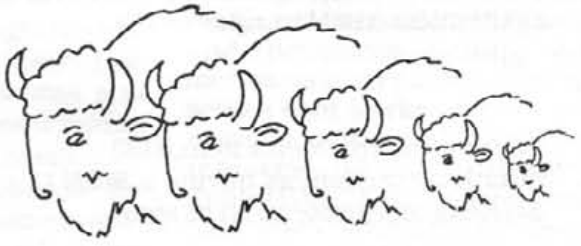
Third party products were featured in the demonstrations — such as Farallon's MacRecorder, CE's QuickMail — as they demonstrated the use of electronic mail facilities and interfaces with video recorders, etc. The demonstrations were quite impressive (although parts did not actually work!), but there were no new announcements from Apple.

Earth Day was imminent, so this topic featured prominently in the series of demonstrations. Apple had been selected as a finalist in the first Northern California Environmental Achievement in Business Awards competition, for their company-wide paper recycling project — but they have also been criticised for the amount of non-recyclable packaging materials used for each item shipped.

We had to be impressed by the final animated sequence, which explored the new Mac IIfx — the combination of sound and animated sequences was exceptionally well prepared, and showed off the new machine's capabilities admirably. Although the term "multimedia" has been created to describe this concept, John Sculley preferred the term "interactive media" — and perhaps he's right?

MultiMedia was regarded as the main theme of the expo, with an opening presentation on the subject, and a resident display at Brooks Hall which had been coordinated by Microtech but which included represented from a number of companies developing products which could fit into that category.

A company called Bright Star featured strongly in the presentation, by reference to their interFACE software. This program allows the combination of animation and digitised sound to create "agents" on-screen. The "agents" are based on photographs of ac-



tual people, the program synchronises lip movements and sounds to give a lifelike appearance to the "agents". One obvious application is for teaching aids, where the "agents" can guide the student through the topic. When we visited their stand, they were demonstrating an application designed to teach young children to spell — it was good fun, as well as being an effective teaching tool.

Many of the products on display at the expo were exciting but expensive. Colour processing dominated the exhibition halls — colour scanners, colour printers, colour video capture cards, colour imaging software. All were very impressive — most were also very expensive, and far outside the range affordable by visitors such as ourselves. One exception to the "high price" syndrome was Color MacCheese, a colour paint application at $99 from Delta Tao — a small, young, company determined to provide good low-cost software — they admit to cutting corners, but only the corners which they regard as unimportant (e.g. fancy packaging, expensive advertising). We wish them luck, they were real Mac enthusiasts (reminiscent of the "good old days" before "big business" took over to hide the enthusiasm and add to the selling prices).

There were a number of stands demonstrating music products, which took full advantage of the Mac's sound capabilities. Opcode were joined by Roland to demonstrate their EZ-Vision program, and their stand was constantly busy. Digidesign were located almost directly opposite them, with their new products for the Macintosh.

Opcode hosted a multimedia presentation immediately following the close of the preview Business Day. We felt that this was the highlight of our four days. The venue was reminiscent of a church interior — complete with vaulted ceiling, stained glass windows and balcony. The lights were dim, but the atmosphere was electric. There must have been at least 20 projectors to project images on all walls and the vaulted ceiling. The music and graphics were Mac-controlled, and accompanied the live

performance of "Invisible Site" by Pamela Z. She gave three live performances of the work, which was a short preview of a larger work which was scheduled for completion in August. She had trained for opera works, and demonstrated a very strong voice with an incredible vocal range. Hers was not a static performance, as she climbed up and down steps located at various points around the stage — she even continued singing whilst twisting and turning in a large gyro wheel, and with no deterioration in the quality of her voice! Thanks to Opcode and their colleagues for a very entertaining evening.

Numerous competitions and prize draws were under way right around the expo — designed, of course, to increase the mailing lists! In theory, we could have come away with free disk drives, computers, bicycles and cars — but we didn't win any prizes. The number of free gifts seems to have decreased, too — pens, bugs, bags were around, but they were not always easy to find.

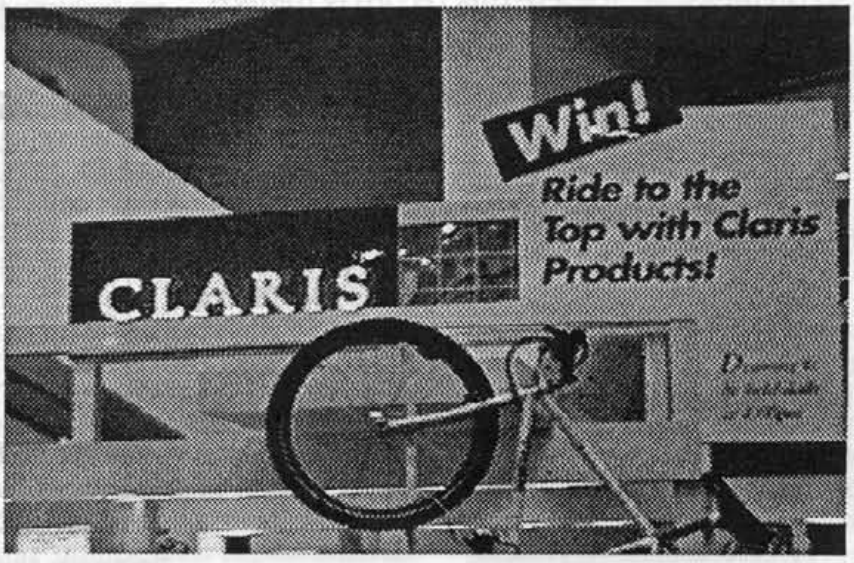
The Smack-a-Mac dolls were still popular, and the company have brought out some new products — teeshirts, dust covers, etc. There were other stands, too, carrying "fun" products — mouse kennels, personalised dust covers and mouse mats.

Radius' new "pivot" monitor was impressive — the A4-size display can be viewed in portrait or landscape orientation. The orientation of the screen could be turned through 90°, whilst still within an application.

Aaps' MicroTV was on display, with a colour version promised imminently. MacroMind were showing a new version of Director. Peter Norton is well-known in the IBM world, but a new set of Norton Utilities for the Macintosh was introduced at this show — the IBM version is well-respected, but it was claimed that the Mac version is even better.

We spent four days at the expo, and came away quite tired. I felt somewhat disappointed, though. There were plenty of exhibitors with their glossy stands, all eager to demonstrate and sell their products, but the atmosphere was not as friendly and relaxed as in previous years. Another strange phenomenon was the fact that we did not feel pressurised due to lack of time. In previous years, we have found ourselves racing around on the last day because we still had so many products to see; this year, we did not feel that there were any outstanding priorities — even though the number of exhibitors had increased.

Despite the above comments, which may be regarded as rather negative, we still enjoyed the expo — and there's no doubt that we shall return next year, when the date reverts to January (as usual!).



THE OMNIS CONNECTION

Bill Pearce shares some hints and tips, and shows how to have fun with Omnis

I have no doubt that most users of Omnis, all versions, are delighted to discover how easy it is to connect files so that records created in the 'child' file are automatically linked to the current record in the 'parent' file. No hassle. Something for nothing. There has to be a catch. Sure enough, there is. In fact, there are many. Some have a work-round, others do not. Once you are aware of what they are, you can then decide whether it will pay to create your own links.

Here is a work-round for the commonest problem, how to delete the 'parent' and 'child' records at one go. As far as I can remember, no example is quoted in any version of Omnis. They avoid the problem by printing a message 'Have you deleted all the connected records?'

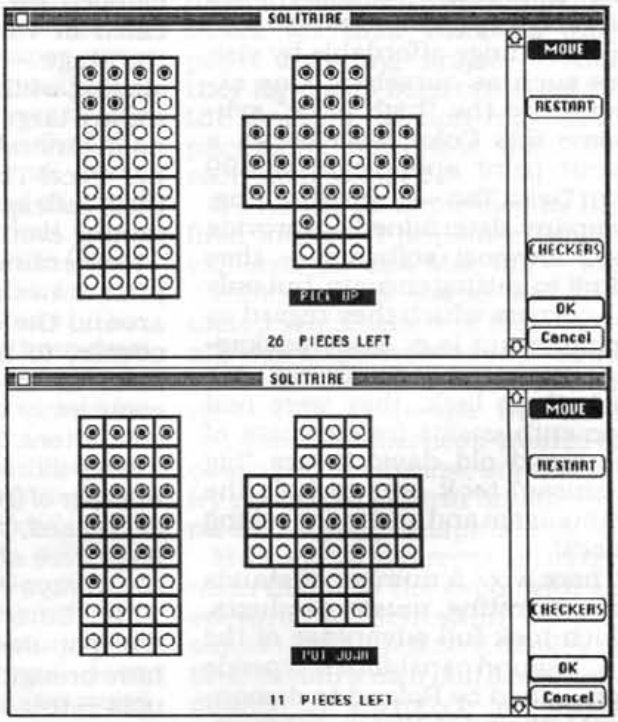
The problem is caused by the cleverness of the connection. When any child record is in memory it automatically finds its parent. So if you use a simple 'Repeat....Until flag false', you get rid of the children, but you have lost the parent. The best solution is to use a temporary field as a holding variable to 'remember' any indexed field that has a unique value. The following lines illustrate the method:-

```
Set main file {FDEALHEAD}
Test for a current record
If flag true
 Yes/No message {Delete this record & items?}
 If flag true
   Calculate #11 as DHSEQ
   Set main file {FDEALITEMS}
   Repeat
     Find on DHSEQ (Exact match) {DHSEQ}
     If flag true
        Working message (Repeat count) {DE-
LETING ITEMS}
       Delete
     End if
   Until flag false
   Set main file {FDEALHEAD}
   Find on DHSEQ (Exact match) {#11}
   Delete
   Clear all files
   Redraw windows
  End if
End if
```

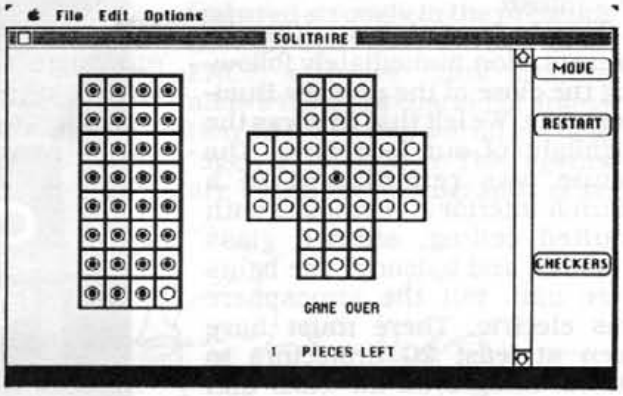
FUN WITH OMNIS

Did you know that earlier versions of Omnis (at least 3.2 and 3.3) have a host of special characters in the Monaco fonts (sizes 9 point and 12 point). I could type them here, but they would get lost in the post. It is very easy to draw a draughts board, with pieces, print it in a report, and even play the game, though the sequences are not long enough to define the legal moves. Solitaire however (the **board** game, not a card game), can be given all the sequences it needs to play right through, with illegal moves ruled out, and even to knowing when you have finished the game.

If you care to go to the trouble, you can give your application a title page with giant block capitals flashing on and off.



The Solitaire screen is in full control of the situation. It will let you pick up any piece but will not let you put it down illegally. One amendment I intend to make is to show where the picked-up piece was situated, because as you see from the lower screen, if you have picked up a piece that has no legal move, the only position that will accept it is its place of origin. You might need to try every empty place to find where it belongs.



I had forgotten how to solve this puzzle until I relearned using this program. There is still no saved data file, simply a dummy file as in Checkers and the array of temporary variables. The moves are quite fast considering how many calculations are needed to check validity.

There is no menu. It is entirely button driven.

Thanks for the Memory

First experiences with a Macitosh, by Bill Mealey

Graphics from the Electronic Pen Ltd Visual Arts Collection — thanks to Macline

I finally got a Macintosh! I bought an SE with 2 Drives and a 40SC Hard- Disk with 1 MB. of memory. (I have not deserted the Apple IIGS, it works too well to be discarded). I need DTP more and more lately, so I got a MAC. with Xpress, Freehand and WriteNow, to help out, the Macintosh soon put me right, if you want to run that software, you'll need more memory,..... so the messages on the video..... repeatedly told me.

So that was it,..... get more memory or else,..... out came the Apple 2000 Magazines, looking at the adverts in the back copies, I noticed that the prices had come down over the last few months, MacLine offered 1MB. NSIMMs for £69., also the advert, warned readers that prices may have to go up soon, that was all the encouragement I needed.

A telephone call to MacLine asking for their Macintosh memory man, I was told that 2 x 1MB. NSIMMs would be needed to bring the SE to 2.5MB.
as this was the next upgrade for my model, when I asked, do I have to have these fitted by a dealer, I was told that the warranty would be void, if an unauthorised person did the work, as the warranty period had expired I asked what was involved. ... Was it something I could do for myself ? .. The SE has 4 X 250 kb. Simms, 2 have to be removed and replaced with 2 X 1MB SIMMs, I needed a Torx ™. screwdriver a long one, a "CASE CRACKER" to open the Macintosh, an earthing gadget to prevent possible damage by static. MacLine had all everthing in stock, also good news, the price of the NSIMs had been reduced to £65. per 1MB.

I placed my order, 48hrs later the items arrived, the NSIMs packed in a
well padded box, with the manual and the tools I needed. The manual is well laid out, with full installation instructions, the illustrations show the different type of processor boards that hold the NSIMMs, the SE has 2 types of processor boards, the older model has a resistor in place for the 256kb RAM, when fitting 2.5 or 4MB this resistor has to be removed, it is fitted on the processor board just above socket that holds SIMM 1/2, the later model has a jumper in the same place this has to be removed.

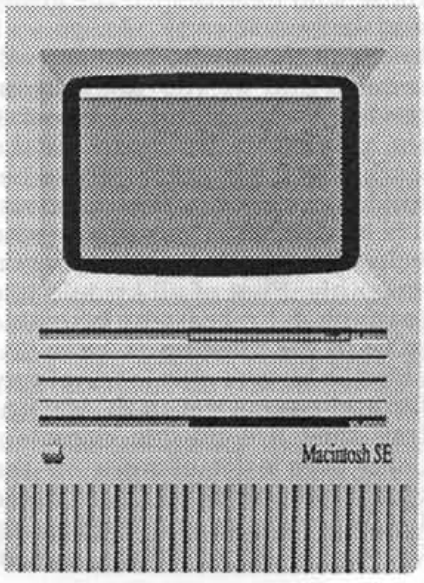
After carefully reading the manual, I donned my "GROUNDING STRAP" to minimize the risk of electrostatic damage to both the NSIM modules and other components inside the Macintosh. To open the case I used the special long screwdriver and the "CASE CRACKER" this tool prises open the case without doing any damage. I removed the power/video and disk drive cable connectors from the board, these cables have polarized connectors, I noted their position for replacement. The processor board slides out from the bottom, the connector to the speaker was removed.

My processor board had the **resistor** in place under the label "**RAMSIZE**" "**R36**" easy to get at, I removed this as instructed, the 4 x 256kb SIMMs in sockets 1 to 4, they are held in place by **EXTREMELY FRAGILE PLASTIC TABS** at the edges of the connector, with care I bent them away and eased out the SIMMs, I installed the 1MB Nsims into sockets 1/2 and reinstalled existing 2 x 256KB SIMMs in sockets 3/4 making 2.5MB. RAM.

In reverse order the Macintosh was smoothly put back together, all the parts fitted well, it was a pleasant task without any hitches, the whole operation could not have taken more than a few minutes.

It is a joy to work with the Macintosh, with the extra memory I can use MultiFinder and my software works as it was meant to. Once you get on to the extra memory you start thinking ofsystems that would not just work before. I know I will have to go to 4MB in the near future, when I have a few minutes to spare, that's the next job.

To the memory man, may I say **THANKS FOR THE MEMORY.**



Club Business

Minutes of the Annual General Meeting of B.A.S.U.G. Ltd., April 28th, 1990.

Minutes of the Annual General Meeting of B.A.S.U.G. Ltd.
Twenty-three members of the club were present and a further eighteen were represented by proxy.
The meeting was opened at 11.10 a.m.

1. Minutes of the last Annual General Meeting held on April 8th, 1989.
The attention of those present was drawn to the minutes for the AGM of 1989 which were published in the magazine for June 1989. The Chairman asked for comments on these but none were forthcoming.
Mike Worth proposed that the minutes of the AGM of 1989 were accepted as a true record of that meeting and this was seconded by Ron Thompson. The proposal was passed unanimously and the Chairman signed and dated the minutes.

2. The Chairman's Report from Ewen Wannop
First of all I would like to thank all those who have helped the group and helped it work. As you all know all those who help are volunteers and we rely not only on the hard work of the members of the committee but also on the work of a lot of other people behind the scenes, some more visible to members than others, who help the whole process to run smoothly. First of all I would like to thank John Lee, who is unable to be at the meeting as he is disabled so he isn't able to travel very far and cannot get to AGM's unless they are on his doorstep. John does a lot of work for the group, not only sending out Apple II Library Disks and duplicating those, but he organises a local user group, helps all kinds of people with problems. John does an awful lot of work behind the scenes for the group and I would like to thank him especially. I would also like to report that during the year the committee decided to give John a life membership of Apple2000. We have done this once before for another disabled member, Tony Game, and we have done it for John Lee as well because he puts so much into the group and on a disability pension it was difficult for him to afford the fee, so we awarded him a life membership.
I would like also to thank Alison Davies who is our administrator. Alison organises all the advertising for the magazine, duplicates all the Macintosh Library disks and has a great deal of contact with dealers and advertisers in the magazine.
I would like to thank especially Dave Ward and Tony Dart who run the two 'Hotlines'. Both of them are very dedicated and sit there answering all kinds of obscure questions and redirecting those that they cannot answer to a panel of experts.
I would like to thank Keith Chamberlain for quietly keeping the database going, printing all the mailing labels, managing the Force accounts, duplicating the Introductory Disks and for all the other various things that he does. Dave Flaxman gets very little mention usually but he does almost as much as Irene very quietly behind the scenes helping things to run smoothly. Alison's husband Mike Davies, although not a member of the group, organises workshops occasionally throughout the year and we are grateful for his help and hope that he will continue to organise workshops for us.
And finally, all the other contributors to the magazine and to TABBS, and the many dealers who actively support us through advertising, discounts to members and so on.
We must not forget that much of the magazine is filled with material which has been contributed by members, and we rely on their continued support and would like to thank them.
There must also be a special word of mention for Derek Baker at Apple Computer UK, who is now the contact for user groups at Apple. Derek is doing his best to get the relationship between the user groups and Apple on the right footing. This relationship has been a little unpredictable a in the past but Derek is trying to get things going in the right direction again.
During the year we have done various things as a group. In order to make ourselves known to new users and to attract new memberships, we attend various shows throughout the year. As you know, we are a non-profitmaking organisation and we certainly cannot afford to attend all the shows that take place, because many of the shows charge phenomenal amounts just to have a stand there. However, where we can we do attend shows.
We attended the PC Show at Earls Court last year, the MacUser Show at Olympia and the British Education Training and Technology Exhibition at the Barbican. The PC Show is a regular which we attend every year as part of the BACC group. We usually try to attend the MacUser Show and gained more members from the show this year than at any previous show.
This year was the first time that we had been to the BETTE show. I was pleasantly surprised at the size and extent of this exhibition as it was my first visit. Apple Computer UK asked us to go along and represent users on their stand. We were very pleased to do this and we had a great interest from teachers in the work of the group. A lot of very useful leads and contacts were made from there, and many new members were gained from that exhibition.
Overall the membership is grow-

ing dramatically at the moment and I think that this represents a lot of goodwill with Apple and the dealers as well.
In relation to other activities, the Force is continuing but not expanding and perhaps is not getting the support that it deserves. For those who do not know, the Force is a closed Apple2000 group on Telecom Gold which has its own menu structure so that you are within an Apple2000 environment within Gold. All the normal facilities of Telecom Gold are also available to you, you can send and receive telex, send fax but not receive it. I would like to see the Force getting more support and perhaps people using telex and sending fax for business could use it and support it.
There are twenty to thirty calls a day to TABBS, the Apple2000 electronic bulletin board. It is getting to the point where people cannot always get on when they would like, because it is a single line system. Twenty calls a day at an average of twenty minutes a time takes up a fair amount of the day and it can sometimes be difficult to get on at the most popular times. We have approximately 60 megabytes of files on TABBS at the moment which are all 'squeezed' or 'stuffed' in one way or another. The files on TABBS are samples of what is in the public domain libraries and we are not trying to be an alternative to our libraries and you will not get everything that is in the libraries from TABBS.
The messaging side of TABBS is very important it means that we can communicate with people, solve problems, etc. Also TABBS is not closed to Apple2000 members, only the library files are closed, so that means that anyone can call and TABBS acts as a showcase for the group and we pick up an average of one or two members a week from TABBS.
There is a steady flow of articles from members to support the Apple II side of the magazine but we need far more input from Macintosh members to their side of the magazine. Most of the new members to the group are people that own Macintosh machines, so whereas the membership used to be split 50/50 it is now going very much more to the Macintosh, but we feel that the Mac enthusiast is a different kind of enthusiast to the Apple II enthusiast, and this has an effect as to why we get more material in on the Apple II side. We would like to see Macintosh members contributing more reviews and articles to the magazine.
The latest thing that we have done, which you may have seen in Slices, is the CompuServe offer. This only applies to people who have modems, of course. CompuServe is one of the biggest databases in the world and we have done a special deal where instead of paying the £29.95 joining fee you join as members for nothing with $15 credit for online usage. This also allows access to CompuServe from the UK.
Some of us have been members of CompuServe for years, but it has been a rather expensive system to use in the past. Now that special links have been set up through the ISTEL network, you can access for a total inclusive charge of £14 an hour. This compares very favourably, for instance, with the cost of Telecom Gold. Also as time goes on, they are going to open up European elements to this because at the moment it is only to the United States. At the moment the European headquarters are in Switzerland and it is hoped to develop this eventually into a network with a European focus and interests.
Finally, it is our tenth birthday this year and we are actually older than Apple UK. We started before Apple UK was in place, when Apples were brought into the UK by another firm. We have seen the machines develop over the years and the Macintosh IIfx is the latest one. We are still dedicated to supporting all Apple computers whether they are Apple II+ or Macintosh IIfx, or the Lisa or Apple III, or any new machine which Apple brings into production in the future. Whatever new line appears we will support that as well.

3. Secretary's Report from Norah Arnold

I think that the Secretary's Report will be shorter this year than it has been in some previous years because it has been a very settled year. The committee that was elected at the last AGM comprised Ewen as Chairman, Irene as Treasurer, myself as Secretary and at that time the committee members who were elected were John Lee, Roy Wainwright and Keith Rookledge. It has been the most settled year on the committee for a long time in that we have had no mid-year resignations from people who have suddenly found that their work or family commitments have become so heavy that they have had to resign in order to reduce pressure on themselves. The only change that took place during the year was that we did co-opt my husband John Arnold to the committee on January 7th 1990. The reason that we felt we had to do that is rather sad. If I tell you more about the attendance of committee members at committee meetings you will no doubt understand why we felt we had to do that.
The three officers to the committee, Irene, Ewen and myself have attended all committee meetings making a total of seven meetings during the year. Those meetings are usually held on Sundays at various locations. Roy Wainwright attended the first four meetings but has not attended a meeting since last October. Keith Rookledge attended three times, twice shortly after the last AGM. Then there was a gap of almost seven months before Keith attended the last committee meeting before this AGM. So although we thank Roy and Keith for the help they gave initially, we hope you will understand why we felt we needed a little more support and co-opted John to the committee.
John Lee, has Ewen has already mentioned, cannot always be present at committee meetings but when we need his input we can link up to him by telephone. Ewen always makes sure that John knows what is to be discussed and I hope that he does not feel that he is left out of the decision making process.
Very little has happened in the field of the legal business of the club. The Data Protection Registrar has accepted our request for our entry to be continued for a further year. The draft of the Annual Return for this year has been completed and sent to the auditors who are dealing with it.
I would like to thank the other members of the committee, par-

ticularly Ewen and Irene. I think that we all realise that it would be rather difficult to see how the group would function if one of the three of us were to drop out and we had not previously identified a person with the relevant expertise and willingness to take on the level of involvement which we maintain. This gives us some concern.

With regard to the ten year anniversary celebrations, I have a particular interest in those. When the group first started and was known as B.A.S.U.G., the very first meeting was held in someone's home and was a very small meeting. At the second meeting, my husband attended and that was the very first official meeting of the group. When the next meeting was due, both my husband and I went went along, so we feel that we have been connected with the group from its origin, for the whole of the past ten years. When I recovered from the shock of realising that it had been ten years, I started to try to get in touch with some of the people who had been involved at the beginning to ask them to write articles so that we can perhaps celebrate the fact that we have reached our tenth anniversary in some way.

Lastly I would like to confirm what Ewen has already said about the magazine. What we definitely need is a bit more human interest on the Macintosh side, right at the basic level of saying - here is a Mac member writing about what they do. What are their favourite programs on the Mac? What do they use it for? What are their interests? Where did their interests stem from? That is the kind of basic level at which I would like to get some more input. I hope that some people present today might be able to contribute at that level, because we are all interested in reading about other people like ourselves who are using the machines. So if you are a Mac member, don't feel that you have nothing to contribute, because I feel that you have.

Perhaps some people think that because the Mac doesn't attract the same kind of technical interest with the machine that the Apple II range did when we were all using that a great deal more than we do now, that there is nothing to write about, but I think there is a whole human interest area which we are not at the moment covering on the Macintosh side. As Macintosh Editor, I would welcome any articles that would add to the human interest of the Macintosh section.

4. Treasurer's Report from Irene Flaxman

The accounts were distributed to all members with the March issue of Apple Slices, as is required by law. So I shall take some of those as read, but I would like to make a few comments on them. We view the state of the company's financial affairs as satisfactory at the moment. We still maintain our non-profitmaking status but we have tried to improve the services provided to members, while keeping the same price levels and pruning our administrative costs. The income and expenditure account this year shows a slight deficit. This is the first time that this has happened since I took over as Treasurer a few years ago. There are obviously numerous factors affecting the net surplus or deficit and we could have altered that position by increasing subscriptions, increasing the prices charged for items sold or putting up advertising rates. We chose to do none of these things. One exceptional item which contributed to that situation was a bad debt provision which we put in at the last minute. One of our advertisers let us down very badly. We had not realised that they were a partnership, we thought they were a sole trader. The partnership went into dissolution and they left us with a heavy bad debt of close on £900 for a number of advertisements. We are still pursuing this through the courts, but since it had been going on this long we thought it prudent to actually make a bad debt provision. Actually that was not in the original draft of the accounts which showed a surplus, but with that provision, at the end of the day we show a deficit and that was a contributory factor.

Another factor which has contributed in this year was the purchase of fixed assets. Those of you who have been to previous AGM may remember that we have always brought up this question of fixed assets, The company is very much reliant on the goodwill of the officers and other volunteers for the provision of equipment, their own personal equipment, to enable them to perform the task undertaken. Over the years some equipment has been purchased, like machines to run the bulletin board, various answerphones and hard disks and other things like that, but the majority of equipment is actually provided by the people actually doing the job. Over the years we have always stated that we would like to become more self sufficient and we decided to make a strong investment in fixed assets during the year 1988/89. We went into negotiation with various people and got a reasonable discount and therefore we felt that it was a good time to do it. We do see it as beneficial to the company, because at the end of the day we would like to think that the company was self sufficient, ie. if a key person was taken out of action for some reason we would like to be able to say someone else can do the job and here are the tools for doing it. We are still not in that position. We are a little bit better than we were, but we are still not there. We still rely very heavily on the use of private equipment, but we hope that that will gradually fall away. At the moment we have no specific plans for any further major expenditure at this time.

We have consciously attempted to reduce administrative overheads, but we are also aware that the level of service to members must be maintained and if possible we have to improve upon it. We feel that we have actually achieved this because as you will see in a moment when we look at the actual figures in the accounts, we have reduced the administrative costs, but yet the feedback that we are getting from the members is that we are doing a good job and they are quite complimentary. Yes, we do get criticism but we also get compliments as well.

Just to pick out a few items from the accounts - on the income side, our highest source of income has traditionally been the membership subscriptions. this year we have seen a slight change in that, because they have been overtaken by an increase in sales to members. The membership continues to increase and Keith looks

after the database for us, as Ewen said when he thanked him for that. Keith is always pointing out that we still lose a lot of members, even though the membership increases, some still drop off. We always ask why people fall off, and most people say that it is because they have moved from Apple machines to others such as IBM. Sometimes people say that our particular service is not meeting their precise needs. There is no easy answer to that because we are never going to please everybody even though we do the best we can. Hopefully we have the balance about right.

The advertising revenue increased by about 10% in the year ended June 1989. That did not actually keep pace with the increase in costs of producing the magazine and only about 60% of the magazine costs are covered by the advertising revenue, the remainder comes out of the general fund of subscriptions and surplus on sales.

Force usage is our other main source of income and again, thanks to Keith Chamberlain for looking after that, because Keith actually maintains all the Force accounts for me and simply reports to me at the end of each month. This makes that particular task a lot easier so thankyou for that. The usage had reduced quite considerably and we have about £1000 outstanding at the end of each month.

On the expenditure side the credit card charges increased by a considerable amount last year. I think that reflects an increase in the use of the credit card facilities. I finally managed to persuade Visa that we were a suitable candidate for taking their cards and obviously the commission charges are levied against anything that we accept a credit card on.

Travel costs have reduced quite significantly by over 40% and this comes back partly to what Norah was saying earlier. The committee travelling costs are the main item in there and we have fewer committee members and fewer committee meetings and we have not had 100% attendance so therefore the costs have reduced. Also a lot of people who are coming to help at shows have been very generous and have not put any expenses in, so our thanks to them for their generosity.

Advertising costs have reduced basically because we have not done a lot of advertising. We found that advertising in some magazines was not particularly beneficial, and obviously we do keep statistics as to the source of members as best we can from what they tell us. We found that we got very few new members from magazine advertisements. The cost of such advertising has increased phenomenally in 88/99 and have maintained their high level so we cut back dramatically on that front, although we take advantage of free mentions whenever we get the chance. We did try our first mailshot in the year to the people who used to subscribe to Apple User and we had quite a good response to that and about 15% of the people targeted actually joined Apple2000.

Our promotional expenses increased and that included attendance at shows and such like, and also incentives to join the group such as free coffee mugs and things like that. We had a credit note scheme also if people renewed early and things like that.

The last thing I want to mention is the bank charges. They increased from £173 in the year ending June 88, to £556 in the year ended June 89, and when you consider that we were permanently in credit that was more than a bit of a shock. when I asked the bank why they had increased so dramatically, they had changed the format of their charges but they had not actually told us of this, and they were charging us 55 pence for every £100 pounds of turnover going through the books and regardless of the fact that we kept a very good account we were very heavily charged. That and a couple of other problems with the bank meant that we actually changed our bank at the end of last year.

The Treasurer then asked if there were any questions from the floor. David Dewey asked a question about the bank charges and the Treasurer explained that the account had been moved from the National Westminster to the Midland bank, who charged for items going out such as cheques and direct debit. There was then some discussion of relative bank charges and the use of building societies was raised. The treasurer explained that when the matter had been investigated some time ago, it was felt that our account was inappropriate for a building society for various reasons.

5. Adoption of the Accounts

Ron Thompson proposed the adoption of the accounts and David Dewey seconded. The accounts were accepted unanimously.

6. Election of Officers

Before the election of the officers, Ron Thompson said that he would like to propose a vote of thanks to the Committee and others who had helped for all they had done during the past year.

Norah Arnold said that eighteen members were represented by proxy.

One nomination had been received for Chairman in the name of Ewen Wannop.

One nomination had been received for Secretary in the name of Norah Arnold.

One nomination had been received for Treasurer in the name of Irene Flaxman.

Nominations for Committee Members had been received in the names of John Lee, John Arnold, and Elizabeth Littlewood.

Ron Thompson proposed that all the nominations be accepted and this was seconded by Mike Worth. The proposal was accepted unanimously.

7. Any Other Business

The Chairman, Ewen Wannop, reminded those present that the membership subscription had remained at £25 for several years but that postal and printing costs had risen sharply making the magazine more expensive to print and mail to members. He therefore proposed that the normal membership subscription was raised to £30. No firm date was proposed for this rise as the Committee would like to think about what date would be appropriate in view of the fact that they would like to offer advantageous rates to existing members renewing, etc., but if the proposal was accepted the subscription would

Supreme Mac Software Ltd.

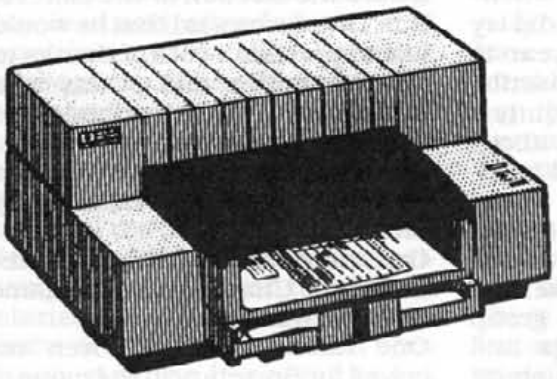
COMPUTER PRODUCTS DEALER

The new Networking DeskWriter

Available May 1990

* £699-00 incl. serial cable

* Ink cartridges £14-99



DeskWriterTools

To make your output grow

* T-Script. Postsript interpreter for use with DeskWriter & LaserJet £195.

* Super Laser Spool. New DeskWriter spooler to give you back your Mac. £89.

* Phone Net Connectors.

Low cost networking. £19.00 each.

* Adobe Type Manager £69
* Adobe Plus Pack Fonts £149
* Adobe Extra Packs £99 each.

Birminghams own LOW-COST Macintosh CENTRE

021 327 0666 / 0808 Fax 021 327 0110

most likely be raised between September and the end of the year. The Chairman's proposal was seconded by Irene Flaxman.
There was a brief discussion of the effect of the increasing use by members of credit cards. David Dewey suggested that a note should go in the subscription renewal notice to remind members that it was beneficial to the group if they were to renew by cheque rather than by credit card.
Mike Worth said that it probably did not matter to most members which way they paid, and they were most likely unaware that the group loses money by the use of credit cards.
The Chairman pointed out that we had special membership rates for the disabled, OAPs and students, so included in his proposal was the suggestion that all other rates go up in line, eg. the disabled, OAPs and students would now pay £20 instead of £15.
A vote was taken on the proposal, which was passed unanimously.
The Chairman then asked if anyone had any other business they would like to raise.

Colin Hunter then asked a question concerning the Apple IIe AppleXtras disks, which was answered by Ewen Wannop. Ewen explained that he had come to the conclusion that it was sensible for there to be only ProDos IIe material on the 5.25 inch disk and IIgs specific material on the 3.5 inch so that IIgs owners could have both disks if they wanted. He appreciated that some would like IIe material to be on 3.5 inch disks.
Mike Worth raised the question of cooperation with groups on the continent. Ewen pointed out that Apple2000 has many continental members already. Members in Spain and Sweden were regular callers to TABBS and we have close contacts with the Apple II group in Sweden. The number of members in Spain was growing and the number in France was rising rapidly because of strong French interest in the IIgs. Ewen also mentioned members in France and Holland.
There was then some discussion of AppleWorks and the pricing of the IIgs which did not compare well with machines from other companies. Ewen said that if someone bought an Apple IIe secondhand on the market and put a Transporter into it, they could have an XT and an Apple IIe for the price of an XT.
Ewen discussed the change in the distribution of machines among the membership and said that the proportion of members with Macintosh machines was on the increase. Many members were using their IIe machines for business use and were very satisfied and did not wish to change, but those who wanted to do DTP or image processing had to go to the Macintosh.
Mike Worth pointed out that to be at the leading edge of technology costs cash which many people could not spare. There was then some discussion of the future pricing of various machines.
The meeting closed at 12.10 p.m.

The Committee would like to thank all members who attended the AGM, or who participated by sending in their proxy.

THE HEWLETT-PACKARD's
DESKWRITER

At last, there's a non-Apple printer that can be used with a Mac without the need for computerese. The Hewlett-Packard DeskWriter is as easy to install and use as an ImageWriter, has a better manual, offers significantly better quality output and comes with a 12 Months manufacturers on-site guarantee.

The actual output may not be quite as good as the LaserWriter, 300 dots of ink cannot be the equal of 300 dots of laser-charged toner dust. Graphics, however can be decidedly sparkling, with the DeskWriter producing a devastating midnight black; with an intelligent choice of fonts and sizes you can almost achieve laser quality.

Light and Easy

The DeskWriter is inordinately light, the power supply has been placed in a separate block type, transformer housing for easy installation.

The DeskWriter has the easiest of installations yet devised for any non-Apple printer. You just connect the standard Apple-Mac cable (Mac+ to ImageWriter II, not included) and power lead, load paper into the top loading tray, drag the DeskWriter icon into the System Folder and load the set of HP-supplied fonts into the HP-Fonts Folder and drop this into your System. A colourful and thoughtful schematic is supplied to visually guide you through. (see opposite).

Type Out

The DeskWriter software includes four fonts: Times, Triumvirate (a Helvetica substitute), Courier and Symbol. Choosing Font Substitution in the Page Setup gives exactly what you see on the screen printed on your page. The DeskWriter is not a PostScript device and as such the printed output is slightly jagier than the LaserWriter, however, using the fonts HP supply, a close impression is achieved. Another plus is the additional seven font families now available for £149, providing all the usual 35 Typefaces of the LaserWriter and achieving faster page throughput than if you were to use the larger point size fonts i.e; 48 &72 point to reproduce 12 & 18 at 300dpi, this rule is applied to text output for the ImageWriter LQ.

Paper and Ink

Working with solid graphics can leave large wet areas and care should be provided when handling the paper before it has had chance to dry to avoid smudging, normally a minute or so. Text does not suffer nearly as much with only the normal time allowed for the paper to drop into it's catchment tray (15-30 seconds). Use only high quality paper products, the better the paper, the better the print output. A good 80 gram copier bond is recommended. The DeskWriter is designed for light to medium personal use, rated at 50 pages-a-day maximum (12,000 a year). Another nice touch to the DeskWriter is the inbuilt envelope feed, which when used alongside any DA Database such as 'QuickDEX' is simply a realy slick, foolproof way to address any standard 3.7" x 8.0" envelope. Ink cartridges cost £14.90 and produce approximately 400 - 500 pages (some users have reported upwards of 1000 pages depending on font type & character's per page).

Low-Cost Option

The Hewlett-Packard DeskWriter is the answer for many users who have longed for a letter quality printer, without the high price tag attributed to the LaserWriter or the ear shattering noise of a 24pin dot matrix.

The latest release from Hewlett Packard is being supplied with a Local Area Network facility allowing the DeskWriter to be shared, bring down the cost even more for siting into small offices and team ventures.

Part of the Hewlett Packard

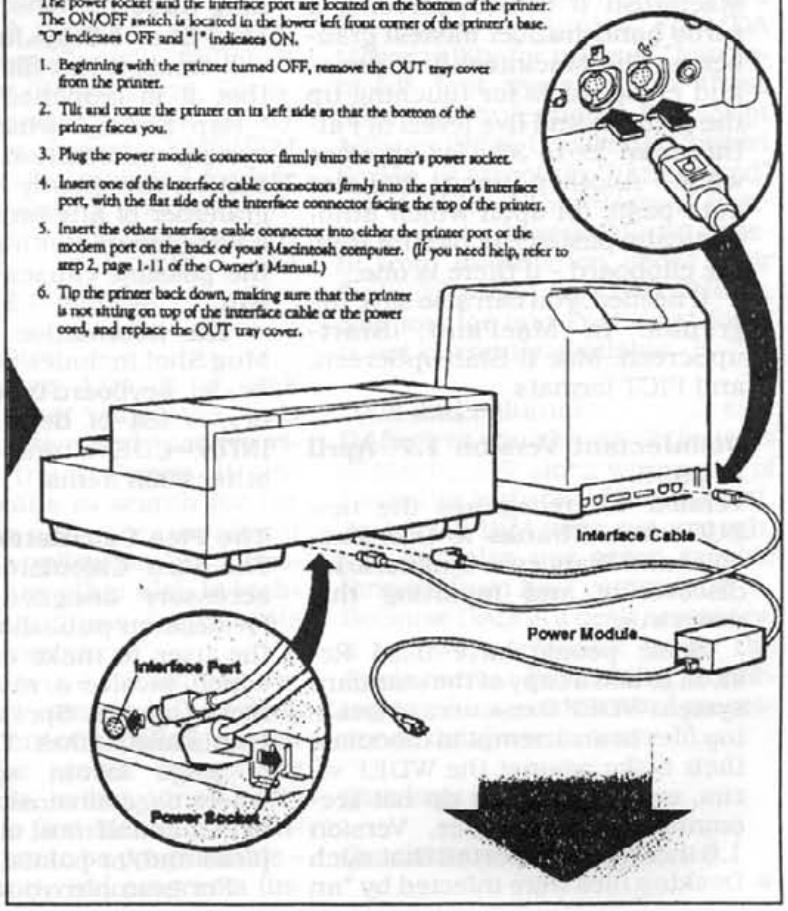
Printer Set-up instructions clearly defined for easy installation.

Making Connections

Before you begin, open the printer top cover and remove the tape securing the print cartridge cradle.

The power socket and the interface port are located on the bottom of the printer. The ON/OFF switch is located in the lower left front corner of the printer's base. "O" indicates OFF and "|" indicates ON.

1. Beginning with the printer turned OFF, remove the OUT tray cover from the printer.
2. Tilt and rotate the printer on its left side so that the bottom of the printer faces you.
3. Plug the power module connector firmly into the printer's power socket.
4. Insert one of the interface cable connectors *firmly* into the printer's interface port, with the flat side of the interface connector facing the top of the printer.
5. Insert the other interface cable connector into either the printer port or the modem port on the back of your Macintosh computer. (If you need help, refer to step 2, page 1-11 of the Owner's Manual.)
6. Tip the printer back down, making sure that the printer is not sitting on top of the interface cable or the power cord, and replace the OUT tray cover.



AppleXtras

Mac 3

Here are some of the programs to be found on this month's AppleXtras Macintosh disk.

Turbo View

Turbo View is a desk accessory which is a graphics viewing utility. Turbo View offers the standard viewing capabilities you expect: the ability to view MacPaint®, StartupScreen, and PICT files; a selection tool for copying portions to the clipboard; and picture scrolling for viewing large pictures.

But Turbo View also has features for the more experienced Macintosh user (a.k.a. Power User). These features include the ability to view GIF™, RLE, and Macintosh II StartupScreens; a turbo hand grabber (fastest grabber on the Macintosh!); a pencil and eraser tools for touching up the picture; and five levels of FatBits from 2x to 32x for up close work. Another luxury includes auto-paste on open which automatically pastes the picture from the clipboard - if there is one.

If needed, you can also save the graphic in MacPaint, StartupScreen, Mac II StartupScreen, and PICT formats.

Disinfectant Version 1.7. April 2, 1990.

Version 1.7 recognizes the new ZUC virus. Thanks to Don Zucchini and Francesco Giagnorio for discovering and reporting this new virus.

Some people have used ResEdit to add a copy of the standard system WDEF 0 resource to Desktop files in an attempt to inoculate their disks against the WDEF virus, even though we do not recommend this practice. Version 1.6 incorrectly reported that such Desktop files were infected by "an unknown strain of WDEF." This problem has been fixed in version 1.7.

Some of the nVIR clones have offensive names. These names appeared in plain text in various resources in Disinfectant version 1.6, and caused concern for some people who discovered them using ResEdit or a file editor. Version 1.7 encodes the resources so that the names do not appear in plain text.

Version 1.6 contained an error which could cause crashes, hangs, unexpected error messages, or other unusual behavior in some circumstances. The error is corrected in version 1.7.

Mug Shot

Mug Shot 1.0 by James K Miles will create a text file in the folder that it is launched from called "_Rap Sheet_" which lists vital system information. This information can greatly help the programmer of any product you are having trouble with narrow down the possible causes of the problem.

The information provided by Mug Shot includes the Macintosh model, keyboard type, total memory, a list of desk accessories, INITs, CDEVs and FKEYs and other such items.

The Pica Calculator

The Pica Calculator is a desk accessory designed specifically for desktop publishing. It allows the user to make computations which involve a mixture of numeric formats. Specifically, Picas, Points and Inches. This is typical of page layout specifications where page dimensions are given in inches and most others given in picas and/or points.

For example: you are asked to create an Xpress layout = 3 columns at 14 picas each in a 7 x 10 live trimmed to 8 1/2 x 11. The formula required to determine the correct gutter value can be defined as follows:

GutterWidth = (LiveWidth-(No.Columns x ColumnWidth)) / (No.Columns - 1)

Just substituting the supplied values yields:

GutterWidth = (7"-(3 x 14p)) / (3-1)

Before you can complete the operation you would normally have to convert either the picas or the inches to a common numbering base. If you convert inches to picas ,which would be the easiest, you may find yourself dividing picas. This example isn't so bad, the divisor is 2 and that is pretty easy to handle. What if the layout called for six columns - the divisor would then be 5. Something like 3p6 divided by 5 could slow you down a bit. With the Pica Calculator you skip all of the conversions and perform the calculation directly.

The Pica Calculator displays up to 16 digits of precision. Values occurring which are greater than 16 digits are rounded for display purposes only, all calculations are carried out in 20 digit rounded precision. This precision is probably more than enough for most people, the display precision can be changed so that displayed values are automatically rounded to a number of places between 0 and 16 inclusive.

Gobbler

Gobbler is a snake-eats-mushroom game, starring a snake named Hedda, a variety of stones, some delicious-looking mushrooms, and, occasionally, some bonus chests. Gobbler plays in colour on a colour monitor (II family.)

Also on the disk are a number of desk accessories. Fontview lets you look at any of the fonts in your system. Timer is a very neat stopwatch desk accessory. There are several other utility DAs.

Mac Library

Disk 394
Mathematica Demonstration Disk.
The disk contains the application MathReader and two Mathematica files plus an animation folder. The two files are in the notebook form with the file "Read This First!" giving details of how to use the notebooks and of their structure.
MathReader allows users to read but not write to, or edit the Mathematica files, or indeed evaluate any input line. MathReader will work on any Macintosh .
The file "A Sampling of Mathematica" gives a range of typical calculations that are possible with Mathematica, starting with Numerical Calculations, continuing with Algebraic Calculations, Graphics, Animated Graphics, examples of programming from within Mathematica, and the User Interface used by Mathematica. The notebook has all the various input lines with the corresponding outputs.
The animation folder contains two 'Movies', on black and white, and the other for those with colour machines. The notebook contains a sequence of grahics generated by Mathematica which can be animated from within MathReader. The animation shows a surface moving.

Disk 395
Mathematica Help Disk.
This is a Demo version of a Hypercard stack produced by 'Variable Symbols.'
The stack is intended to give all the possible Mathematica commands arranged in a number of categories, such as Procedure, Logic, rules, etc. Clicking on one of the categories leads to a card displaying all the commands applicable to the chosen category. Clicking on one of the commands should lead in turn to a card displaying the syntax of the command, and a description. Further buttons on this card lead to examples of the command and what it produces as output, another button will give details of the options and defaults for the command. However as this is a demo stack only some of the commands lead to the complete details.

Disk 396
MacWrite II Demo

Disk 397
MacWrite II Help and Dictionaries

Disk 398 Utilities 20
Term Plus
Term-Plus© is a smart terminal program for all Apple Macintosh computers with at least 512K of memory. It is MFS/HFS compatible, and you can use it with any modem. Term-Plus© offers many special features to help users of the commercial telecommunications services CompuServe™ and GEnie™, but it is flexible enough to be used with any telecommunications service or local bulletin board.
Term-Plus© is initially configured to emulate CompuServe's VIDTEX™ terminal type for cursor control and graphics, and supports CompuServe's Quick-B protocol for file transfers. Term-Plus© supports the MacBinary file transfer format. XMODEM support is also provided for use with other services and local bulletin boards, including the 1K XMODEM, YMODEM, and YMODEM-g protocols.

VirusDetective
VirusDetective 4.0a is a desk accessory that unearths and sniffs out active and inactive viruses and Trojan Horses. It provides a means to search for the fingerprints a virus leaves after it infects an application (your System file or any other file). In technical jargon, these fingerprints are called "resources".
Virus Detective searches resources by means of various matching criteria called search strings. The search strings are programable. In fact, VirusDetective was the first Macintosh anti-viral program to be programable – all other anti-viral programs (including commercial programs) that are changing over to be programable are VirusDetective "copy cats".

HMG™ ResEdit Tutorial
This file provides some help for users of ResEdit.

CompuServe Settings
A file of settings and scripts for CompuServe users.

Disk 399 Utilities 21
Advanced Dungeons and Dragons Utilities
This folder comprises of a set of FileMaker II database files. If you haven't got Filemaker, or don't play AD&D, then this is of no use to you ... sorry!
These formats are designed to dramatically ease the creation of new characters, and the maintenance of existing ones in Advanced Dungeons and Dragons (2nd Edition).

TheFONDler
theFONDler has been created as a alternative to Apple's Font/DA Mover utility for users of "harmonized" font systems like those from the Professional Postscript Alliance (PPA), Linotronic Concert Series, or any other "harmonized" set of fonts. Other users of Postscript fonts, in general, can benefit from information about their fonts provided by theFONDler. Support for non-Postscript fonts is not currently available.

DAfx (Ltd edititon)
DAfx gives you almost all the tools of MacPaint® along with some of the better features of Super Paint. And, as if that were not enough, you can also use seven graphic formats from four computers!
Because DAfx is a desk accessory, it is always available under the Apple menu. So creating or editing graphics inside a word processor or database is easy.

Quickeys Patches

Quickformat 6.2 (demo)

User Groups

London Region

ESSEX GROUP

CONTACT - Pat Bermingham Tel : [illegible]
VENUE - The Y.M.C.A., Victoria Road, Chelmsford
MEETS - Third Friday of every month

CROYDON APPLE USERS GROUP

CONTACT - Graham Attwood Tel : [illegible]
VENUE - 515, Limpfield Road, Warlingham, Surrey
MEETS - 7.30pm on the third Thursday of every month

HERTS & BEDS GROUP

CONTACT - Norah Arnold Tel : [illegible]
VENUE - The Old School, 1, Branch Road, Park Street Village, St Albans, Herts.
MEETS - 8.00pm on the first Tuesday of each month

KENT GROUP

CONTACT - Richard Daniels Tel : [illegible]
VENUE -
MEETS - Contact Richard

LONDON APPLE II GROUP

CONTACT - Chris Williams Tel : [illegible]
VENUE -
MEETS - Contact Chris

LONDON MACINTOSH GROUP

CONTACT - Maureen de Saxe Tel : [illegible]
VENUE - Room 683, London University Institute of Education, Bedford Way, London, WC1
MEETS - 6.00pm on the second Tuesday of every month.

M25 BUSINESS MAC GROUP

CONTACT - Jim Panks Tel : [illegible]
VENUE - Sir Mark Collett Pavilion, Heaverham Road, Kemsing, Sevenoaks, Kent
MEETS - Phone Jim for details

SOUTH EAST ESSEX MAC GROUP

CONTACT - Mick Foy Tel : [illegible]
VENUE - D.P.S. Acorn House, Little Oaks, Basildon, Essex
MEETS - First Monday of each month

South

POOLE MACINTOSH USER GROUP

CONTACT - David Huckle Tel : [illegible]
VENUE - Deverill Computers (dealer) Itec House, 34-40 West Street, Poole, Dorset BH15 1LA
MEETS - Four times a year

SOUTHAMPTON

CONTACT - Geoff Parson Tel : [illegible] (work)
Tel : [illegible] (home)
VENUE - Contact Geoff for details

Wales and West

BRISTOL GROUP (B.A.U.D)

CONTACT - Malcolm Ingsley Tel : [illegible]
VENUE - Decimal Business Machines Three Queens Lane, Redcliffe
MEETS - 7th day of each month, or the Thursday nearest to it if the 7th falls on a Friday, Saturday or Sunday.

HANTS & BERKS GROUP

CONTACT - Joe Cade Tel : [illegible]
VENUE - Thames Valley Systems (Apple Dealer), 128 High Street, Maidenhead, Berkshire, SL6 1PT Tel 0628-25361
MEETS - 7.00pm on the second Monday of every month

MACTAFF - SOUTH WALES MAC GROUP

CONTACT -
VENUE - Apple Centre South Wales, Longcross Court 47 Newport Road, Cardiff
MEETS - Contact Apple Centre

Midlands

CAMBRIDGE APPLE USERS GROUP

CONTACT - Ian Archibald Tel : [illegible]
Mac Richard Boyd Tel : [illegible]
VENUE - Impington Village College, New Rd, Impington, Histon.
MEETS - Fortnightly during term time with both Mac and Apple II on deck each night.

EAST MIDLANDS MAC USER GROUP

CONTACT - Tel :
VENUE - Wilford Cricket & Rugby Club, Nottingham
MEETS - 8.00pm on the first and third Wednesday of every month.

GATEWAY COMPUTER CLUB

CONTACT - Vern Tel : [illegible]
Robin Boyd Tel : [illegible]
VENUE - Bob Hope Recreation Centre, R.A.F Mildenhall
MEETS - AMS conference room, Mildenhall base. Normally at weekends, check with Robin
NOTE : Although the venue is on a service base it is not in a security restricted area so the club is open to interested parties.

LEICESTER GROUP

CONTACT - Bob Bown Tel : [illegible]
VENUE - Shakespeare Pub, Braunstone Lane, Leicester
MEETS - 7.30pm to 10.0pm on the first Wednesday of every month

LIVERPOOL GROUP

CONTACT - Irene Flaxman Tel : [illegible]
VENUE - Check with Irene
MEETS - Second Monday of every month.

MIDAPPLE

CONTACT - Dave Ward Tel : [illegible]
VENUE - I.T.E.C., Tildasley Street, West Bromwich, West Midlands
MEETS - 7.00pm on the second Friday of every month

THE MIDLAND MAC GROUP

CONTACT - Ivan Knezovich Tel : [illegible]
VENUE - Spring Grove House, West Midland Safari Park, Bewdley, Worcestershire.
MEETS - 8.00pm on the first Tuesday of every month

WEST MIDLANDS AMATEUR COMPUTER CLUB

CONTACT - John Tracey Tel : [illegible]
VENUE - Hill Crest School, Simms Lane, Netherton, Near Dudley.
MEETS - 7.00pm on the second and fourth Thursdays of each month.
NOTE - - This is not an Apple user club, it is a general interest club which welcomes users of all machines. There are currently two Apple user members.

North

BURNLEY APPLE USER GROUP

CONTACT - Rod Turnough Tel : [illegible]
VENUE - Michelin Sports Centre
MEETS - 2nd Wednesday of each month

CREW COMPUTER USER CLUB

CONTACT - Paul Edmonds
25 Oak Tree Drive, Crewe, Cheshire CW1 1LB
VENUE - Christ Church Hall, Crewe
MEETS - Fortnightly, Fridays, 7.30pm to 10.00pm
NOTE: this is a general interest group with Apple users among its members

HARROGATE AREA

CONTACT - Peter Sutton Tel : [illegible]
No active organised group in this area but there are a number of keen Apple users in contact with each other.

THE NORTH EAST APPLE COMPUTER CLUB

CONTACT - Philip Dixon Tel : [illegible]
VENUE - Apple Centre North East, Ponteland Road, Ponteland, Newcastle-on-Tyne
MEETS - First Wednesday of every month

THE NORTH WEST APPLE COMPUTER CLUB

CONTACT - Ken Dawson Tel: [illegible]
VENUE - The Coachman's, on the A49, about 1 mile south of the junction with the M62
MEETS - Second Thursday of every month

THE NORTH WEST APPLE USERS GROUP

CONTACT - Max Parrot
Tel : [illegible]
Tel : [illegible]
VENUE -
MEETS - Ring Max

Scotland

EDINBURGH GROUP

CONTACT - Ricky Pollock Tel : [illegible]
VENUE -
MEETS - Meetings monthly, check with Ricky

Postal

APPLE II PROGRAMMERS CLUB

CONTACT - Philip Dixon TEL : [illegible]
VENUE - None established yet
MEETS - No meetings yet, has operated through postal newsletter published quarterly
NOTE : Philip started the club some time ago based on a membership fee of £1.00 to cover the cost of newsletters. Original intention was to concentrate on BASIC and Assembler programming.

New Groups

BROADSTONE APPLE II USERS GROUP

CONTACT - Ron Hoare Tel : [illegible]
VENUE - Stuart Magnus & Co., Station Rd, Broadstone
MEETS Meeting on June 20th at 7.30pm

ORPINGTON COMPUTER CLUB

CONTACT - Terry Wheeler Tel : [illegible]
VENUE - G.E.A. Hall, Woodhurst Avenue, Petworth
MEETS - Contact Terry

DONCASTER SOUTH YORKSHIRE

CONTACT - Colin Withington Tel : [illegible]
VENUE -
MEETS - Contact Colin

LEEDS

CONTACT - Bob Miller Tel : [illegible]
- T Veluppillai Tel : [illegible]
VENUE -
MEETS - Contact Bob

If you want to start a group, find out about a group that might be near you, please write or contact John Lee the Local Group Organiser at the PO Box in Liverpool, or phone John Lee on [illegible].

If you are a local group organiser and have not been in touch with John Lee, please contact John with details of your group, or any changes there may be to the above details.

Members' Small Adverts are FREE. Please help us to help you. Send your advertisements to us on a disk, in Mac or Apple II text format. We will return the disk, of course. This saves us time, and avoids errors.

Members' Small Ads

Members Small Adverts are FREE. We reserve the right to edit and or omit them. They are placed in this Magazine in good faith. Apple2000 holds no responsibility over items advertised, and buyers purchase at their own risk.

WARNING: The sale of copied or pirated software is illegal.
Please ensure that items offered for sale are new or are re-registered.

FOR SALE

Mac SE 2/20, 18 months old, one careful lady owner! .....**£1,150 + VAT**

'Phone Karen .....

URGENTLY WANTED

Tabs Software Security Interface Card

'Phone Trevor Francis (office hrs) ..

FOR SALE

More memory! I have 4 Apple 80 Nsec 256k SIMMS (1 Mbyte) for sale .....**£40 the lot**

'Phone Alison .....

FOR SALE

for Apple //e or IIGS:

1 PACE Colour Palette Teletext card (for high-res viewdata graphics) **£75**
2 Citizen (model: MSP-15) 120 Column Parallel/ serial Dot-Matrix Printer.....**£85**
3 MicroStar (model ND-15) 120 column Parallel/ serial Dot-Matrix Printer.....**£95**
4 Omnis 2 Program (database - 5.25" disks)..**£50**
5 Inmac //e work station (in beige steel) (especially design to sit on top of //e to hold disk drives, modem etc., and monitor on the top.....**£15**
6 Teak Acoustic Cover for printer (with built-in electric fan).....**£20 o.n.o.**
7 WordStar word processing program with manual for //e and IIGS **£50**
8 Electric fan / power supply switch for //e .**£15**

N.B: (a) Will consider reasonable offers for all the above bought together.

(b) Will seriously consider exchange for commensurate value of any items above, i.e. "Thunderscan"; Copy II Plus v.9; 3.5" disk drive; Macintosh to IIGS files conversion program; graphic tablets programs.

'Phone Gordon (after 6.30pm Mon-Fri)

FOR SALE

Apple //e system, including:
Microline 82A printer;
green screen Apple Monitor II;
2 Apple disk drives;
with software:-
Visicalc; Microsoft Softcard; Copy II Plus; Apple Diskware (i.e. DOS 3.3, Sample Programs, System Master, and Apple Presents...); plus supporting manuals .....**£500 o.n.o.**

'Phone Dennis .....

FOR SALE

1. Apple 2e System. Monitor and two 5.25" disk drives **£275ono**
2. ITT 2020 Clone.(cpu only).....**£25ono**
3. Tiger Printer with Manuel and int.card **£25ono**
4. IIgs Apple 1Meg Memory Expansion Card (popltd to 256k) **£95**
5. Sunshine Apple II Eprom Tester/Writer**£25ono**
6. Dark Star Snapshot Card + all programs + manuals.....**£45**
7. Titan 2e Accelerator + Manual in box ..**£45ono**
8. Titan 128k Ram Card + Manual **£45ono**
9. Rana 4 disk drive Interface in original packing. .....**£35 ono**
10. Various Software and games in original packing ....**Tel for details**

'Phone ALAN (anytime) .....

URGENTLY WANTED TO BORROW OR BUY

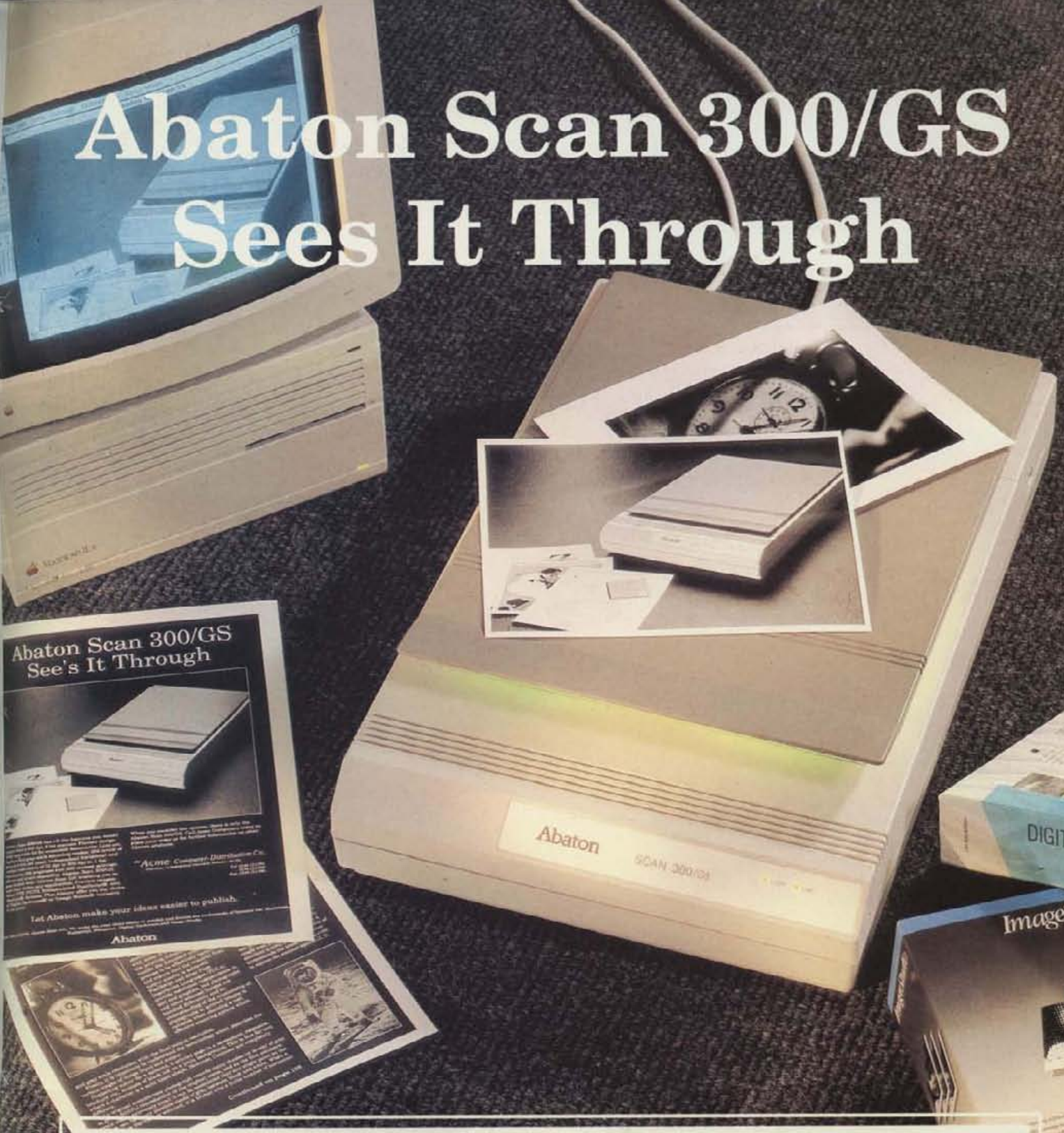
1. S-C Macro Assembler by Bob Sander Cederlof
2. Any Issue or Issues of Apple Assembly Lines
3. The Sorcere's Apprentice
4. Disassembley Lines by Sandy Mossberg - any vol.
5. A good Assembley line Tracer Debugger (I have Bugbyter)

'Phone ALAN (anytime) .....

Advertisers' Index

ACME Computer-Distribution Co.	IBC	Computer Images	49
A2 Central	7	Comtec	19
Bidmuthin Technologies Ltd.	17,OBC	Cosy Hob	53
Celtip Computers	59	Holdens Computer Services	31
Chameleon Software	53	MacLine	40,41
Cirtech (UK) Ltd.	13	MGA SoftCat	5,21,29,39
ClockTower	23,49	Roger D'Arcy Computers	53
Compuserve Forum	IFC	Supreme Mac Software Ltd.	74

Abaton Scan 300/GS Sees It Through



Abaton **Scan 300/GS** has all the features you would expect from a 300 dpi, 8 bit scanner: Flatbed design with removable lid for oversized documents; Line art, halftone and grey-scale scanning modes; 256 levels of grey at 8 bits per pixel; Independent horizontal and vertical resolutions of 75 dpi to 300 dpi in 1 dpi increments; 255 brightness and 255 contrast settings; Mirror and invert capability. Abaton **Scan 300/GS** goes further with 'Abaton Scan DA' enabling you to: Scan from within any application; Preview images; Select TIFF, PICT2, Encapsulated PostScript® and MacPaint® formats. Plus Abaton offer you the choice of *'Digital Darkroom®'* or *'Image Studio®'* inclusive in the price!

£1675

When you consider the options, there is only the Abaton **Scan 300/GS**. Call Acme Computers today to place your order or for further information on other Abaton products.

Abaton

We Make Your Ideas Easier to Publish™

the Acme Computer-Distribution Co.

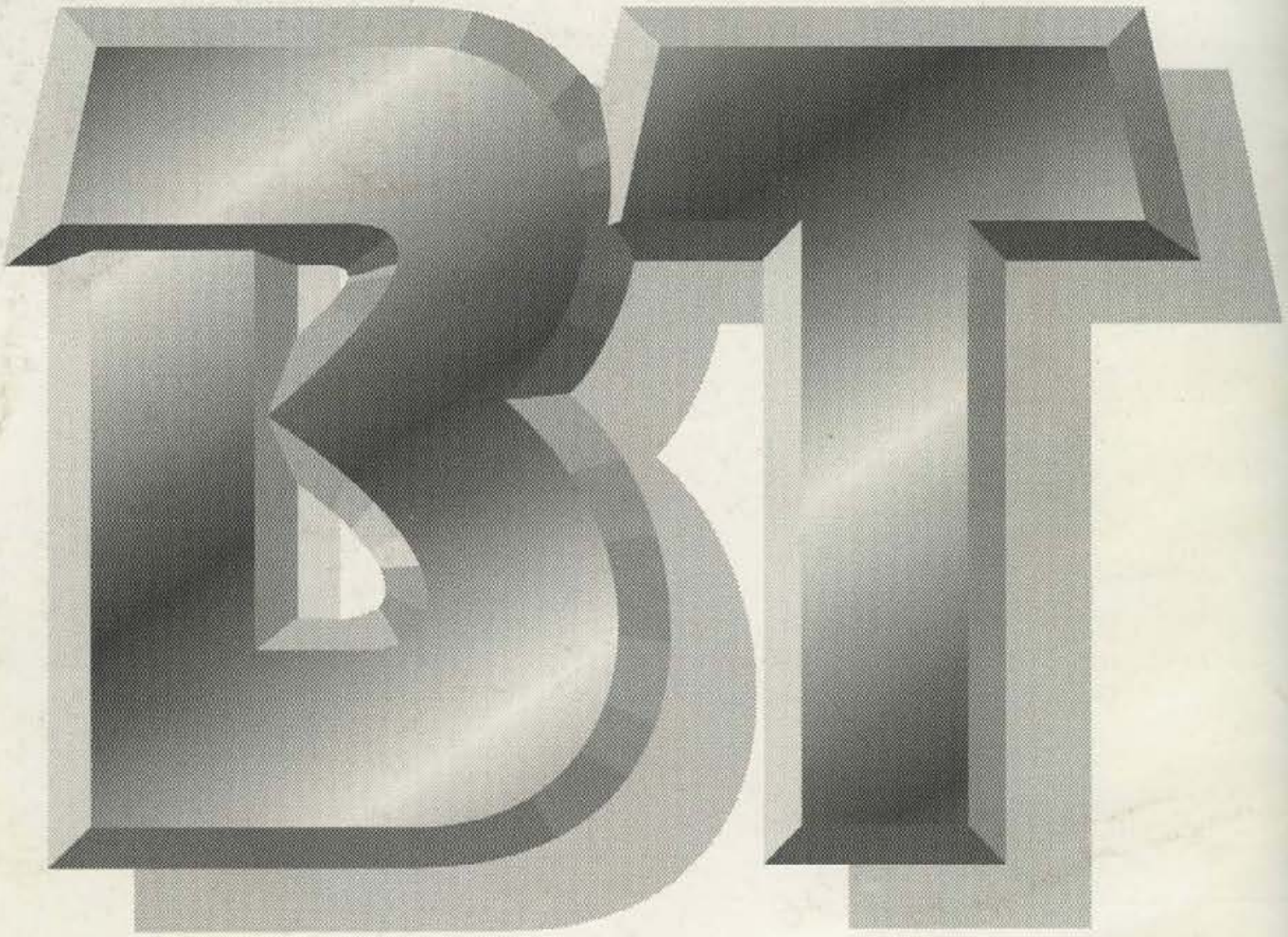
Acme House 2A Sheffield Road Chesterfield Derbyshire S41 7LL

Tel. 0246 221394
0246 221396
Fax. 0246 221386

Abaton, Scan 300/GS, Abaton Scan DA, We make your ideas easier to publish and Everex are trademarks of Systems Inc. Macintosh, PostScript, MacPaint, Digital Darkroom and Image Studio are trademarks or registered trademarks of other respective owners. Pricing and specifications are subject to change.
© 1989 Acme Computers. All rights reserved.

BIDMUTHIN TECHNOLOGIES

Apple II/Mac Specialists



CORPORATE POWER FOR SMALL BUSINESSES

Bidmuthin Technologies Ltd. is one of the best Level 1 Apple Service Centres in the country. Our fast, friendly and efficient service department is growing rapidly and **all our service staff are trained by Apple (UK) Ltd.**
We can offer you complete Macintosh systems at competitive prices, as well as a first class after sales and repair service ...from reviving a dead mouse - to rectifying a complete systems failure. Enquiries on **01-907 8516.**

• AUTHORISED APPLE DEALER • AUTHORISED APPLE II DEALER • AUTHORISED EDUCATIONAL DEALER • MACINTOSH SYSTEMS TO SUIT ALL REQUIREMENTS • NETWORKS - SET UP AND TROUBLE-SHOOTING • DATA TRANSLATION • MAINTENANCE CONTRACTS • UPGRADES • FULLY TRAINED ENGINEERS • MAC WORKSHOPS

Bidmuthin Technologies Ltd. Brent House, 214 Kenton Road, Harrow, Middlesex HA3 8BT. Tel: 01-907 8516 Fax: 01-907 4398