Significant Bits Journal of Brisburg PC User Group Inc.

Val 9 No 11 October 1994 \$ 4.00

Next Meeting

Sunday, 16th October

MIDNEBURGE PROPERTY

Grand Prize Draw - 1:25 pm

Main Event

Borland - Paradex 5 for Windows 30 pm

Midday

Lotus - CCMail and Lotus Forms /2 110011

In this issue

Bruce Gow's Men's Toys - Building Scale Model Trains

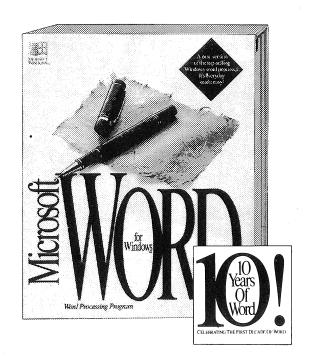
Mie Collis' My Animation of Norton Backup

Geoff Harrod's Introduction to 3D Cad





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Significant Bits

Journal of Brisbug PC User Group Inc.

Volume 9 No 11 October 1994

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Brisbug recognises the generosity of our regular supporters:

Microsoft Corp Electroboard Computer HH Ron Lewis Computers **Avcom Services** Compaq Borland International Cunningware Data Cabling and the sterling job done by

Marlin Printers of Caloundra.





BRISBUG PC USER GROUP INC.

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HELP LINES

Brisbug operates a system of help lines for members only. The telephone numbers for each topic are listed at the back of this magazine

FROM THE

ENGINE ROOM

Lloyd Smith

What price Success

The successfulness of any organisation such as Brisbug can be directly attributable to the dedication of its volunteer workforce. Whether the individual is motivated by a sense of duty or by personal satisfaction is not the point. Volunteer organisations exist only because of the dedication of a few.

The recent stand at the Computer Expo was a tremendous success, due entirely to the willingness of members to give of their time and services to promote the benefits of our club.

There are always the knockers people, who because of their own selfish attitudes, cannot see the benefits of encouraging others, who are in need of the assistance that we give, to join our group. Also, this minority feel that promotions, such as the Membership Drive, are beneath their contempt, and question the motives of the promotion and the promoters. Unfortunately for them, their outlook on life has become so narrow that their usefulness in our society is in grave doubt.

Computer Show

Judging by the activity at our stand on Thursday, there were a great number of very interested visitors, curious to know what Brisbug was all about. We would have handed out many thousands of application forms over the four days, and I am pleased to report that 76 people decided to join Brisbug at the show.

The competition by the volunteers was fierce, possibly because the membership drive will conclude at the next meeting, and the chance of winning the major prizes is still possible. But comparing this years stand with previous years efforts, proved to me that our volunteers are enthusiastic because they know what Brisbug has done to help them and they can personally impart this information to others.

Membership Drive

At our next meeting, the final draw for winners in our membership drive will take place. One lucky member will win the Compaq 486 VGA colour Laptop computer, and also the major prizes donated by Microsoft will be drawn. The following meeting in November will see a lucky new member win the BytePro 486 Desktop computer together with the CD ROM and sound system.

Although, in terms of numbers, the membership drive has not been a huge success, nevertheless it has been a great promotion in terms of encouraging members to get behind their clubs activities. Analysists would probably argue that there are a number of contributing factors for the lower than anticipated numbers of new members money is very tight, we don't cater for all the requirements that computer users search for, meeting venue, date and times do not suit and much more.

The membership drive **HAS** been successful, and to those who have introduced new members to join the club I say

"Thankyou for your efforts".

FROM THE

Assistant Stoker

Graeme Darroch

COMPUTER EXPO

Brisbug's stand at PC Expo, this year proved to be a great success. Stand preparations went well and the "on-stand" displays encouraged many people into our area. Our volunteers worked very hard and our area proved to be very popular with show visitors. My thanks to all the people who volunteered to help on the stand.

DOUBLE SIZE

Having a double size stand made life easier for the people working at the show. It is always a problem to try and keep our volunteers working within the bounds of our area. Exhibitors who pay big money for the adjoining stands get upset if show visitors cannot see their display for a sea of yellow shirts. Having a 6m frontage instead of the usual 3m made this just a little easier.

ACKNOWLEDGEMENTS

This year, once again, we were fortunate to have the use of two loan computers from NEC. Our thanks to Kevin Beasley of NEC for supplying these machines.

We were also sponsored on our stand by OZ-EMail who provided a telephone line. This gave us the opportunity to use OZ-EMail to demonstrate the INTERNET to all those interested. In addition, we used the set-up to communicate around the world using FTP and TELNET. I hope you took the effort to call in and have a look.

The possibilities are wonderful and now that the club has access to Internet it gave us a good demo, of what can be achieved through this service.

NEXT YEAR

From next year, the Computer show will be located at the new Southbank Exhibition and Convention Centre, and will combine the Queensland Office Technology Expo, the Business Computer Show and PC Expo into one enormous event. All together in a brand new air-conditioned, disabled accessible venue!

UNINSTALLER

Included in this months Magazine is a brochure for Uninstaller, a new version of a program from Microhelp. This will be the subject of a future presentation and a review of the program will be published in the near future.

I think this could be the answer to a lot of problems people have with Windows and the DLL's etc that get left behind when a program is deleted, not to mention the entries that are left in your INI files, I have not used the program yet, but if the notes on the box are anything to go by, Uninstaller gets rid of all traces of a program from your computer. Good news indeed for all users.

NEXT MEETING

At next month's meeting we will have Borland along to show us Paradox for Windows, Version 5. Lotus will return again to show us more on their software and Windows Sources have said they would like to come along to talk to the membership. As I write I have not had a chance to check whether Windows Sources will in fact be able to attend, but will check that next week.

Graeme

MAGAZINE

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ADVERTISING

The rates, sizes and other information needed by advertisers is set out below. Significant Bits will take color or black and white ads. Position may be requested. Advertiser printed inserts can also be arranged.

DEADLINES

Normal deadlines are the third Friday of the month preceding publication. Space reservation deadline: 3rd Friday of month preceding publication.

Replacement artwork deadline the last Friday of that month. Artwork must accompany space booking. If booked by phone or FAX, booking becomes effective only when artwork is received.

The magazine is usally printed the first week of the month of publication, so that changes to copy must be in the preceding week.

TERMS

Payment must accompany bookings unless an account has been established. Discounts are offered for multiple insertions when advance payment is made.

Members may advertise at half rates for full, ½, ¼ page and single column, but member payment must accompany ads (Classified ads not exceeding three lines are run free of charge. More than three lines attract attract a minimum charge of \$5.)

FORMAT

The magazine is A4 size, offset printed and saddle stitched. More than 2500 copies are printed of each issue and distributed throughout Australia and overseas. Artwork should be full size, paper bromide, film (right-reading emulsion down) or laser print. Postscript print or EPS files can be accepted by arrangement via modem. Brisbug does not typeset ads other than classifieds.

Text only ads 1/6 or 1/12 page can be FAXED. The layout for these must be at the editor's discretion and are accepted without proofs.

All sizes are given as height *x* width in mm. Artwork must not exceed stated sizes.

Editorial

Lloyd Smith

Magazine Articles

Once again this month I have received quite a good selection of articles for the magazine. Several new contributors have provided me with their literary endeavours, some of which are included in this issue. Those who have submitted articles, not yet published, can be assured that their works will appear in future issues of the magazine, and have not been forgotten.

When you decide to submit your article for publication in the magazine there are a few important points to consider. We use PageMaker 5 to lay out the article for printing. PageMaker can accept and import almost all types of formats produced by modern wordprocessors. But it does have some problems with special imbedded codes inserted by some wordprocessors.

Graphics

If you use one of the more sophisticated programmes which allow you to embed graphics or pictures in your article -DON'T - especially in the final version that you send to me. Removing and re-inserting graphics or pictures in PageMaker can be a terrible job. PageMaker just comes back and says "I don't know how to handle this object!" which means that I have to find some other way to insert your picture in the typeset article. Please supply all graphics or pictures as separate files so that I can insert these in the appropriate positions.

PageMaker will accept TIFF, PCX, GIF, etc., and if you supply your graphics in these formats there is always the chance that I can adjust their quality to produce better quality images before the pages are printed. Surprisingly, images that look quite satisfactory on the screen, often print terribly dark, almost to the

point that features are indistinguishable when printed. The pages of the magazine can always be darkened by the printer when being printed, but cannot be lightened, as text etc. will be lost

Text Files

Most wordprocessors give you the option of saving the file as an ASCII text file (.TXT). This is the most convenient file to be placed in PageMaker, as carriage returns, blank spaces, etc. can be stripped before being placed on the page. If you are unsure, send both files so that I can make the decision.

How to send articles

The most convenient way of including your article in the magazine is to send me a disk with your article on it. If you send a hard copy -printed page, the text must be re-typed on the computer before the file can be placed on the page.

You can post your article, on disk, to me at 95 Station Road BOOVAL Qld 4304, or if you have a modem you can upload the file(s) to the Management BBS -209 4980 and upload your file to Area 1, the Magazine Area. Don't forget to tell me who you are - include a README file with your submission. If you intend to supply graphics as well as text with your submission, archive (compress) your files using PKzip or one of the other archiving programs before uploading to the BBS.

Closing Dates

The closing dates for articles are printed in the magazine. The closing date for next months issue is October 23 - usually 1 week before the end of the month.

Letters to the Editor

Dear Sir.

There have been times where I have wanted to contribute an article to our excellent newsletter, but have not done so for one reason or another. However, this time I decided to go ahead anyway. If I may, I would firstly like to make the following comments:

1 Why not have a LETTERS TO THE EDITOR section? (Ed. Depends if anyone writes a letter) This may at times prompt other members to respond to a certain article, thus providing more material for the newsletter.

2 What about a section called something like: HOW DO I ... This way, members could write in to obtain help on certain topics without having to attend a meeting to ask, or perhaps the member attends meetings and may be too shy to ask in front of so many others.

3 Perhaps in one of your sidebars on page 3, you could include how to send contributions by bulletin board. Although I know I can mail articles in, as clearly shown on page 3, it does not make it very clear how to use our bulletin board to do the same. Obviously current contributors already know how to submit articles, but members who have never submitted an article before (like myself) may not be clear exactly what to do.

In my case, I have belonged to a Melbourne based user group for 15 years now (I founded it and was President for several years and often contributed articles, but being on the committee, I knew how). For example, items a new contributor may like to know would include which BBS to ring (presumably the management BBS on 209 4980); which area to get into; what to call the file, as you don't want any duplicates presumably; times to access that board; how to separate more than one article within an ASCII file, and so on. In my case, I will call the file the first 8 characters of my surname (which should be ok, as my name is not Brown or Smith), followed by the month and year, as in SCHUFFEL.994. I believe this information should be clearly shown in

each newsletter, so that contributors should not have to be directed to issue so and so.

Frank Schuffelen

Dear Sir,

Paul Marwick's article in the August SigBits on the "Care, and Feeding of High Speed Modems" (in the index it said very nicely "huge Speed Modems"!) (Ed. -Sorry David - typo error at 2.am in the morning) was very informative and helpful - the more of this type of article the better. But I wonder if he can help a little further.

I have a QuickComm Spirit II (V32bis & fax) which I use with a fairly standard 486-SX 33, Dos 6.2 and Telix 3.22. However, I have a problem when I leave the default setting with full error correction and compression enabled when connected to a BBS or remote system. When using the keyboard to type in responses to prompts from the remote computer it is slow and jerky, and data appearing on the screen from the remote computer is also slow and jerky and likely to contain many erroneous characters. In fact, this situation is too bad to be usable (no matter what link speed I use), so I always disable error correction and compression (the command is *EO). Also, when doing a file transfer, I find that I get frequent delays in transmission due to short blocks, bad CRCs etc on ZMODEM and YMODEM protocols and I can never get beyond about 1000 cps transfer rate even when connected at 14400bps. (YMODEM is about the best compromise.)

So I am wondering what is the point of having advanced error correction and compression support if I have to disable it? What are the recommended settings to overcome these problems?

Yours faithfully, David Parker

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1/12 page	

Special positions:

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INSERTS

Inserts are subject to prior arrangement.

The charge is 1.5 time the full page rate. The inserts may be color and double-sided and may be in foldout or booklet form, but may not exceed A4 size.

To meet Post Office requirements, they must have been printed in Australia or New Zealand.

The required quantity of printed inserts are to be delivered to Significant Bits.

Quantity, delivery and other details will be advised on request.

Advertisers may contact Lloyd Smith (07) 281-6503

We welcome your decision to support your club by advertising in the magazine.

SIG NEWS

Dulcie Haydon

SouthSide SIG

The last meeting on 27th September was an indepth setting-up procedure of a DX2 66 new computer. The member was given assistance by all to explore, but the elusive control panel did not want to be found! End of the hands-on workshop was 1am.

Next meeting Tuesday,25th October, as usual on the 4th Tuesday of the month. At Rex Ramsey's home, 114 Forestdale Dr,Forestdale 7.30pm. Demonstration of MS Money and hand held scanners. All welcome.

Visual Basic SIG

Last month we went over some of the Programs people put together to access our project, which is a small name and address type database. One thing that this showed up was the difficulty in moving your application to another machine. I think that this needs looking at and perhaps this could be the topic of dicussion at the next meeting.

We welcomed several new members to the SIG and hope they continue to attend, please remeber though that this is not an instruction class, just a meeting of people who all have an interest in VB.

Windows SIG

Thank you to Jodie Taplitsky from Microsoft for the demonstration of some of the latest Microsoft Home range of software at the September meeting. Apart from a few minor technical hitches with the overhead video projector, the presentation was very interesting.

For the October meeting, Wendy Bell from Wordperfect/ Novell will be showing some of the interesting new products in the Wordperfect Main Street range, particularly, Info Central, Express Fax and the Clipart Library.

November will probably be another training session in Windows basics, particularly how to use File Manager effectively and other hints and tips, and we will also have a Q & A session to round out the year, remember there are NO SIG meetings in December.

In January I will have been Windows SIG co-ordinator for two years, and I intend to step down to make way for other

persons to have a go at running a SIG. We need fresh blood from time to time to inject new ideas into the SIG. I would like each regular SIG member to have a think about who you would like to be your SIG Co-ordinator next year. Remember it is solely a voluntary position and is not elected by the members or nominated by the management committee, but simply someone who wants to put something back into Brisbug. Call me on 349-4696 with the names of any prospective SIG co-ordinators and I will find out if they are interested. If all else fails I am prepared to continue on for a while further, until a replacement is forth coming.

See you at the next Windows SIG meeting, Brian Bere-Streeter.

Genealogy SIG (Family History)

Well it seems that I missed the September cemetery run something to do with a computer show.

P.A.F. 3.? is due for release in December 1994 I am informed and those who sent in their 2.3 registration forms will receive a letter informing them of the release but as of end September I cannot find out if we are to receive a free copy of the new version to replace the 2.3 with so many interesting twists in the program.

Mt Cootha visit, yes we will make a visit on Sunday 23rd October starting with a picnic lunch at the botanical gardens opposite just below the Kiosk near the carpark at 1 pm to 2pm then to the cemetery across the road to find the information required I will attempt to borrow the indexes that show the locations and if you are lucky I may even wear a Brisbug shirt so you can find me. I do hope that it does not choose that day to rain.

Many people have asked me where do I start to trace my family history? The answer is simple start with the person You know most about, Usually that is either yourself or your oldest child if you have a family of your own. Assuming that you have a family the next person to add after your oldest child is the mother then give her a spouse her husband, by doing it in this order in some programs there are shortcuts for adding more children to that family.

One good source for getting information is your relatives they particularly love to see their names in print, so if

you send them a printout of the family tree and ask for their help, if you have made any errors or left any one out etc or if they know of any stories to go with any one, this can be a good starting point but be ware some of your "rellies" will lead you up the old garden path just to test you out but most of the info will be spot on.

After receiving all of this info put it into your data base along with where the info came from and start to check it out at either the Mormon Church family History centers, or one of the Genealogical societies. With the Societies you will have to be a member and you will have to pay a fee for services, another good place is the local library researching thru the local papers of the time or local maps of the period if you are searching for a town that no longer exists, get the latitude and longitude off the map and then get a modern map for comparison to find the new name.

Perhaps a look at parish records or bishops records, court records and many of the guild records or poor house records will reveal some details of the person you are looking for.

The book of ships logs will reveal where you can find the ships log for your "rellies" who came out here and if you can get the log for that ship or the surgeons log you will start to get a feel for the conditions they endured and a few more details.

If we do not record this information of our past family and how we fit into it who will do it for us when we are past?

My favorite program is Personal Ancestral File and many of the additional software programs that are available to be run with it but others like Brothers Keeper or Relatively Yours and a New one on the market Reunion, but what ever your choice get the information into your data base and start circulating it to your "rellies" some of our members who have done this are finding that they have a lot of worn fingers from the continuous information flowing in and much in need of sleep because of the long hours of entry and in some cases have found more relations than they first knew it was possible to have skeletons and all.

Let's set up November's outing now it will be the The Mormon Church Family History Centre at Enoggera located at 75 Gaythorne Rd Enoggera Phone Number 855-2698 Saturday 26th November times 10 to 4pm if you want to go you will have to ring them and make an appointment to get an hour on the computer of microfiche you decide what you want, but if we all do this then we can share the time with one another and help each other to learn and search and find another place we can do more research on our own. the times to ring are as follows Tue 7 - 9 PM Thurs 10am - 3 pm Fri 10am - 3pm 7 - 9 pm and Sat 10am

- 4 pm. do not forget to book for sat 28 Nov and if you cannot get a time slot come anyway some one else will share some time with you I am sure.

I notice one of our members Rita is Very sick and I wish her well and a safe recovery and thank her for all the times she has filled in for me at short notice.

Since I do not want to take over the sig page I will sign off for now and as always if you have a genealogical problem and I can help call me on 07-355-4982 or 018-077636

Rob Gurney

Magazine SIG

Last month we missed our meeting. Members were otherwise involved in alternate SIG meetings, so the meeting was cancelled.

Magazine articles continue to come in from budding authors, so the editorial content of our publication is no longer a problem. (In fact, I am having quite a problem in deciding what will be included each month.)

The major stumbling block with the magazine is the lack of advertising. There are a few continual supporters, who advertise regularly, and there are the occasional new advertisements.

A target of 25% advertising content is not unrealistic. On the surface this seems a lot, but when you consider that each page costs approximately \$80 to print, a \$20 ad. on each page would not be too much to expect. In order to get more advertising for the magazine it will be necessary put together a team of sales volunteers to sell advertising space in our journal.

At the next meeting, we will be concentrating on advertising and if there are any budding salespersons who would like to be involved, they will be welcome to attend.

The Magazine SIG meets at 3.30pm in the room used for the Software Shop at QUT.





EDUCACHEON



Mark Mullins — Education Director

CLASSES_

Note the CLASSES starting times

By the time I finish this article I will be ready for bed and will have seen this year's Computer Expo or whatever it's called. Well meaning people have telephoned me before about such errors and using phrases like "whatever its called" and "thingy". If you know me a little you would understand that I am one of those who skims the waters of knowledge rather than drinking deeply. This is because my rodent like brain refuses to allow in too much and it seems that every time I see or read something new my head makes noises like a submerging submarine.

What does this have to do with anything you ask? Are you thinking that the first paragraph confirms that I need a rest in confined surroundings? The answer to the second question is yes. The answer to the first is lodged somewhat deeper in my cranium.

As I whizzed (whizzled?) around the computer show this year I was aware that something was not quite right yet I was unable to pin down exactly what. It wasn't until the next day that someone mentioned to me that there was really nothing new this year. Yes, that's what it was! Usually there is a drawcard such as multi-media or the Pentium as has been the case in previous years. This time it seemed to me to be simply a shoving together of computer vendors into the one confined space. The only difference was that you paid to see them. Of course in some cases you pay to see some dealers a little further down the track, especially if you buy simply on price with no heed for quality or contemporary technology.

I was a little disappointed because I long for something that will make me at least lift my eyebrows a little with amazement. Society generally now seems to take technological progress, be it information technology or whatever, almost with a collective sigh of resignation rather than the excitement it often deserves.

A gentleman came up to me at the Brisbug stand and began to tell me how he takes video film of his grandchildren, loads it into his PC and retouches segments of the film, adds animated characters and reloads it back on to video tape to be replayed on his television. I tendered the comment that this was jolly good and would he like to join the Club. He took the proffered yellow and black form and without a word toddled off into the distance.

I felt a little bit guilty. Perhaps I hadn't shown enough interest in what he was saying. The fact is that these days there is "nothing new under the sun" and given enough time to do what you want and money to pay for the technology, we can all do these incredible things. I think that a lot of people these days really just need someone to listen to them.In this instance I was guilty of that. I doubt that he was trying to impress me but rather find someone who could or would discuss a subject that he was heavily involved in that perhaps no other person in his circle of friends and relatives could discuss for lack of knowledge or even lack of interest.

I hope he joins Brisbug because that it what it is all about... talking to people with mutual interests and helping others to learn by our collective experiences. Joining the Club I believe is a good thing because it gives each of us a chance to contribute to the development of people and is a vehicle that enables us to contribute towards making people an active and productive part of what is already commonly referred to as the technological revolution. In the same way as the industrial revolution changed the fabric of society so too is technology today. The growing gulf between the 'haves' and 'have nots' which grows bigger each day exactly as it did around a century and a half ago is but one example of the recycling of history. We can help each other to gain

the knowledge to be an active participant in what is happening.

One last comment. Towards the end of my day on the stand and as delirium set in another gentleman asked if we had anybody into UNIX at the club. (UNIX is a computer operating system.) My quick response was "No Sir, I haven't even heard of eunuchs (pronounced UNIX...look it up !) being popular since the middle ages." He told me where to go and stormed off. Absolutely bleeding bereft of humour!!

JUNIOR GROUP

The Junior Group continues its popularity and hence demand on those central to the action. I am and have been very aware of the pressure on these good people who put in what I assure you is a very full day. As I said in the theatre at the general meeting anyone who feels that they can give a half hour talk or demonstration please do give me a call on 841 4623 and I will direct you to the person who is organising the junior Groups daily schedule.

I will be making a regular afternoon appearance there from now on to give one of my usually well prepared presentations. If I can so can you. At least half of our good members have a little knowledge in one area or another and you only need speak once. It doesn't have to be a regular commitment and I can assure you your presentation or demo will receive the attention it deserves. Please try to make an effort and if you are unsure, approaching me does not automatically imply commitment. No doubt there will be something in the Junior Group column on this subject.

A reminder that Rex Ramsey is available for advice to those who aren't keen on making Telecom or Optus richer. He can be contacted for advice on any subject by posting a letter to him c\- P.O. Box 100, Rochedale South Qld. 4123. Rex is also the presenter of the New Users Orientation at 12.15 pm on meeting Sundays. This is a must see for new members!!

This month Graeme Darroch will be doing the second part of his Introductory Communications which last month featured a live hookup to the Brisbug electronic bulletin board (BBS). This commences at 9.00 am and like all of our lectures is good value...well actually it's free!! I'm doing a multi-media something or other at 10.30. All other classes are as per usual thanks to a very dependable group of presenters/lecturers. Hmm... I must find out what multi-media is before the meeting.

Mark



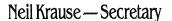
Multi-Media Presenter - Mulched!

CLASS TIMES

9.00am	Introductory Communications Junior Group	Graeme Darroch Les Cathcart	Theatre B301
10.00am	BASIC Languages	Rex Ramsey	B309
10.30am	Introduction to DOS	John Tacey	B315
	OS/2	Paul Marwick	B310
	dBase	Leon Percy	B312
	Multi-Media Mulch	Mark Mullins	Theatre
12.15pm	New members Orientation	Rex Ramsey	B309
3.00pm	New Users Technical Chat	Clarence Stock	B309

CLASS TIMES HAVE CHANGED - PLEASE NOTE

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Meeting on 18th September 1994

President Lloyd Smith opened the meeting at 1.05 pm

Get Well Wishes

The President reported that one of Brisbug's staunchest supporters, Ron Kelly, had been taken ill and was to-day admitted to St. Andrew's Hospital for a multiple bypass operation the next day. The President offered the Club's best wishes to Ron for a successful operation and speedy recovery.

PC Expo

The President reminded members that Brisbug would be conducting a stand at the forthcoming PCExpo. He said a lot of members had volunteered to work on the stand answering enquiries and handing out membership applications. Lloyd invited everyone visiting the Expo to drop in and say hello to the volunteers.

Membership Drive

The President said that after this month there would be only one more month in which to introduce new members. He reminded members that the 486 laptop computer and Microsoft software will be drawn next month and the new member's prize of the multimedia computer will be drawn the following month. He said that this month 73 new members joined the club. He confirmed that Brisbug had finally acquired a new prize barrel. The President thanked the Ipswich Thistle Pipe Band who had generously lent us the previous barrel.

Prize Drawing

The September prize drawing was then conducted. Prizes included three packages of DOS and Windows versions of Paradox and Lotus Organiser.

REPORTS

Vice President

Graeme reminded members present that the PcShow will be held on 28th, 29th and 30th September and 1st October. He reported that the Management Information Board was operating well.

Treasurer

Max reported that the opening balance was \$8,437; income was \$14,010 and expenditure \$12,407 leaving a closing balance of \$10,040.

Development

The President said Carl was working hard on a mailout to schools with the purpose of encouraging them to join brisbug.

BBS

Paul Marwick said that Internet access was being finalised. He reminded members that there will be an OS2 SIG meeting on Wednesday evening.

Magazine

The President reported that the magazine SIG would meet as usual at 3.30 pm later in the day. He encouraged members to submit articles for the magazine and also encouraged members to volunteer assistance with the software library and in filling library orders..

Education

Eduction Officer Mark Mullins addressed the meeting and sought assistance from members willing to help with the Junior Group. He said help was needed in educating the children. He added that volunteers were not expected to be experts but simply willing to help.

The President thanked members for their attendance and closed the meeting at 1.35 pm.

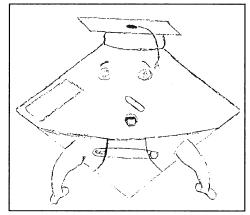
JUNIOR CLUB NEWS

Reported by Annette Bulmer

With the passing of another meeting, Christmas gets closer - only three more months to go. As usual the last couple of meetings should prove interesting and busy.

Junior Logo Competition

The Junior Logo competition has finally concluded. All the entries were passed over to the Committee for judging, but they were unable to finally decide. The President returned the drawings of the three finalists to the Juniors, and they were asked to make their own decision.



The Winning Entry submitted by Douglas Berry -Age 11

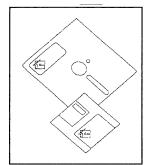
After votes were counted, the winning entry, submitted by Douglas Berry was chosen. Runners up were Glen Harwood and Katrina McGill. The President said that as the entries from the runners up were so good, they should also receive a prize for their efforts. Prizes will be presented at the next meeting.

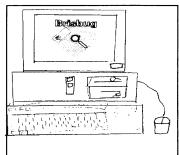
At the October meeting, Brad Ainge will again be talking to the Juniors, and a friend of Brad's will also give us a talk on children and computers and how they mix.

Helpers Wanted

We are in desperate need of help as the toll of teaching the children is affecting Les Cathcart's health. We would not like to lose Les as he does such a great job. All you need to do is to keep the Juniors occupied for 15 minutes or so. David Stoner is handling the Junior's time table on the day, and you can ring him on 354 1791 and he will gladly except your offer of help. Please come and help out the juniors. The juniors are your members of tomorrow.

Thank you to all the people that have helped out in the Juniors this year. Your help has been invaluable and very much appreciated. We have a number of parents who regularly bring in their computers and stay and help us out during the day. Without your help we would not have a Junior Club at all. Also thank you to Alec and Ted Harwood for giving up some of their time every meeting.





Runners-up - Glenn Harwood - 8 and Karina McGill - 7



Daddy and I went to a computer class in August and with us we had my little sister, Leanne and my mum.

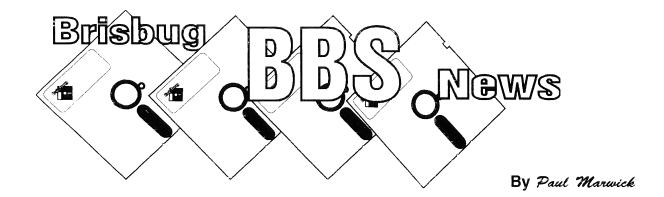
They each got a card that had Leanne Sowden and Sandra Sowden on them and I hope they enjoyed the day's computer class.

We really liked Wendy's lesson on how to make Christmas Cards and picking the object for the front cover.

Last of all we had a sing-a-long with Wendy's computer and that was the very best part.

Jenny Sowden (Junior Group)

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BBS MODEMS - Upgraded

As many will by now have noticed, we have new modems on lines 1 and 2. Thanks to a special offer made by Computer Hand Holding, the club has been able to upgrade both those lines to 28.8K capabilities.

The upgrade has had one slightly less than ideal outcome. The machine which runs Lines 1 and 2 is a fairly old 386DX40. Running two 28.8K modems on that machine is pushing its capabilities fairly hard, and when the system is under heavy load (such as someone packing QWK mail on the other line, or mail processing going on in the background), some slow downs may well be seen. Hopefully we will be able to look at replacing the CPU in the not too distant future, but, for the moment, callers may experience some loss of performance when the machine is working hard.

All major mail handling has now been moved to lines 3 and 4. Revised availability times can be obtained from Significant Bits and are also available online from any of the systems.

INTERNET

There have been a few last minute problems with Internet availability. One of these problems is that it appears that some of the QWK readers available will not allow sufficient space in a To: entry field to allow a full Internet username and address to be entered. There have also been a few problems with the control software that our Internet provider runs, which have made it difficult to add new Newsgroup areas, and even more difficult to turn off unwanted newsgroup areas.

I will have to see if I can locate some QWK readers which do not suffer the limitation mentioned above, but have not so far been able to go through the readers available to see which ones are limited in this way. For OS/2 users, KWQ at least is quite usable. I am not sure as to what DOS or Windows readers will also be usable.

Problems with the control software run by Brisnet have now been sorted out. An updated list of available newsgroup areas has been posted on Lines 3 and 4 in the BBS Information file area. Since the available newsgroup areas change rapidly, I will try and keep this file as current as possible.

An OS/2 peer-to-peer networking package has just been released. While details of cost and capabilities are not yet available, this may offer us the ability to network the two machines together, which should allow for easier use of the systems, since it will allow removal of a great deal of duplication that currently exists between the two machines, both in terms of files and in terms of message areas. It may also allow Internet access to be available from all lines.

NETWORKING

If the network does become available, there is one aspect of current BBS operations that will not be changing. That is that there will still be effectively two separate systems in terms of user records and availability. This has some disadvantages to callers, since they will still have to register twice (once on either line 1 or 2 and once on either line 2 or 4), but also offers callers the advantage that they can effectively have up to 90 minutes online in any 24 hour period.

This is dictated by two factors. One is performance - keeping the operating portion of the BBS systems local to the machine from which they run. The other is the fact that we have two separate sets of user records, both large (currently each machine has around 1650 - 1700 users) and no way of combining the two sets of user records.

Hopefully by next month I will have sufficient information to provide some idea of when the networking is likely to be taking place. If the costs are not too high, this should provide a considerable enhancement to current BBS operations, and also act to improve overall availability.



Following the review of the OS/2 Warp II beta last month, the release of the product is expected for the 11th of October. It may take a bit longer than that for copies to become available from retailers, but it might be a good idea to reserve your copy now.

BONUS PACK ADDITIONS

Some additional components for the Bonus Pack were also made available late last month. These were **Footprint Works** and **Hyperaccess Lite**.

Footprint Works is an integrated package containing a word processor, spreadsheet, database and report generator. In addition, the new version also provides PIM (Personal Information Management) functions by including the **Arcadia Workplace Companion** (which has previously been available as a separate product).

HYPERACCESS LITE

Hyperaccess Lite is an OS/2 communications program. Its a graphical application which offers the normal facilities of terminal emulation, file transfer and modem control. The copy provided as part of the Bonus Pack was less than fully functional and had a number of problems, some of them operational, some of them intrinsic in the way it was designed. However, it was an early beta version, so hopefully the final product will get rid of most of the problems I encountered with the version currently available.

These problems included very poor file transfer performance, a very limited list of available fonts (the ones which could be selected were only monospaced, which is probably a good idea, but the point sizes available were very limited as well). One other problem I found was that there seemed to be no ability to edit the supplied modem definitions. While these are extensive, they (naturally) do not include any Australian modems, so you are left trying to select something that is close enough to an existing model to use. Since you cannot build your own modem definition, you also have no control over the basic modem initialisation string sent to the modem on startup, which is unfortunate.

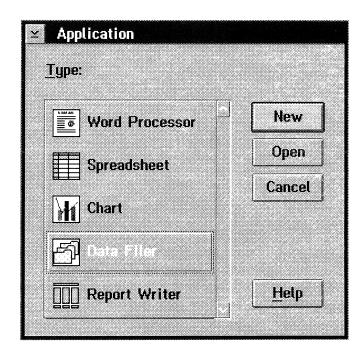
Judging by the traffic on the Internet OS/2 beta

newsgroup, a number of people have sent extensive bug reports on **Hyperaccess Lite**, so hopefully the release version will be much more functional than the beta version.

FOOTPRINT (IBM) WORKS

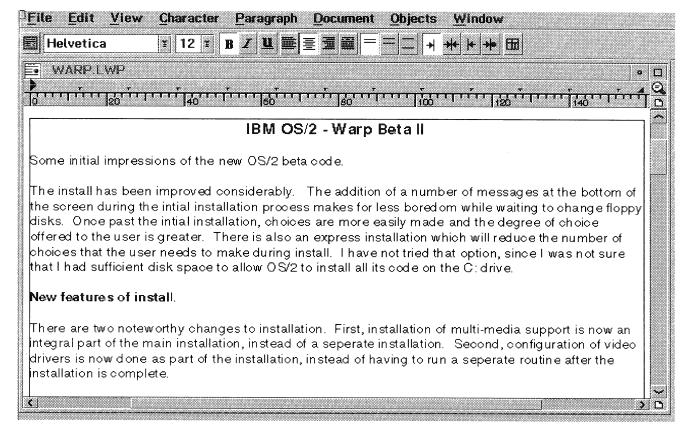
Works is not unlike many of the small integrated packages available for other platforms. The components included are fairly basic (the database manager is a flat file rather than a relational database manager, for instance). However, for many people, the facilities provided are probably more than adequate.

The word processor included in Works provides all the normal word processing facilities. Since its a PM application, it provides a fairly close correspondence between what is seen on screen and what will be printed. It allows easy access to formatting options (text characteristics such as bold, italic, etc) and also to page formatting options such as justification, centering, etc). It also includes a spell checker (in the beta, the dictionary provided is a US version, hopefully an English version will be available with the release in this country).



Initial selection menu for Works, allowing selection of word processing, spreadsheet, data file, chart or report functions

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The Works word processor, showing formatting controls and the working area

There is also a thesaurus selection, but it is greyed out in the beta copy supplied. Whether this will be an available option with the release version remains to be seen. In addition, quite extensive import and export facilities are available, so moving documents from one word processor to another should be fairly easy.

In operation, the word processor is fast and easy to use. It fully supports any installed fonts that the Work Place Shell knows about, and will make full use of the printer installed under OS/2. While it may be fairly basic as word processors go, it should provide quite sufficient facilities for many people.

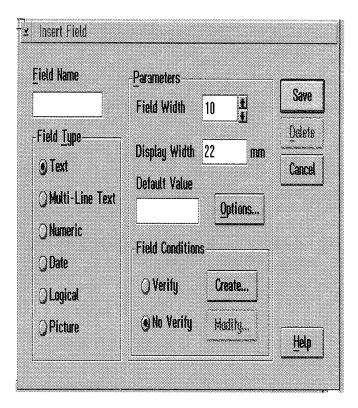
The spreadsheet and database products appear similar. They are somewhat basic, but function well and should provide very usable application software for many people.

The database manager and report generator are well integrated. Once a database structure has been designed, the various components can be arranged by dragging them to appropriate places on the report form. This makes report design very easy, and very easy to modify as well.

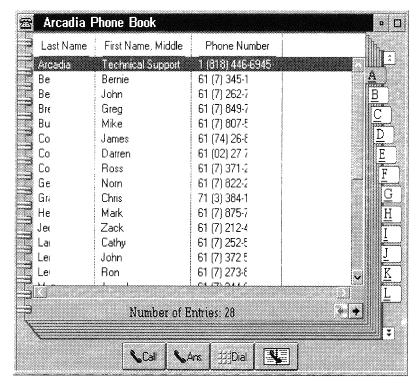
PIM FUNCTIONS

PIM functions included are extensive. You have access to alarms, an appointment diary, a to do list, a year planner, a year calendar, a phone book and a notebook. The phone book can be configured to use a modem to dial numbers (not much use to me, since I have FAX software running in the background all the time, but potentially useful to others).

It looks as though most of the original "productivity applets" in earlier versions of OS/2 will be replaced by considerably more powerful applications. So far, the only component that seems to be missing is a replacement for the calculator provided with earlier versions of OS/2. Hopefully the final release will include a calculator of some sort, since this seems to be the only thing currently missing.



Works database data entry designer



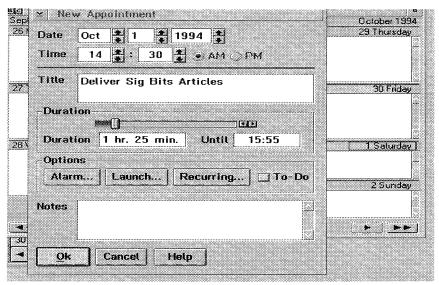
The PIM phone book

INTERNET ACCESS KIT

The other major component that will be included with the release is the Internet Access Kit. This has been in closed beta test for sometime, but so far, there is not a great deal of information as to what will be included in it. It will provide SLIP capability, and presumably some news reading facilities, but what other facilities will be provided will not be known until the release. It appears that it will provide a cut-down version of the separate IBM TCP/IP package.

NETWORK - NOT INCLUDED

One thing that will not be available when the new product is released is a peer-to-peer network capability. This is due for release at the beginning of next year (at least, if the current set of rumours are to be believed). I hope that this set

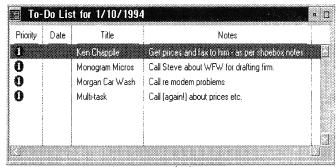


The PIM appointment book data entry section

of rumours are true - OS/2 is an ideal networking environment, and it is currently sadly lacking in terms of small networking capabilities.

A third party peer-to-peer network has just been released by a German firm. I hope to have details of that in the near future. It may at least provide an interim solution until the IBM peer-to-peer network is released.

An arrangement was made with IBM to make the beta available for download. This was a first for IBM - they have not, in the past, been willing to allow non-IBM distribution of this type. The popularity of the beta has been obvious. Even though the complete set of files is somewhat over 36 megabytes, the package has been downloaded over 50 times. Given the extra load that has been placed on Lines 3 and 4 due to the beta, I'll be rather pleased when the beta period finishes and I can remove the files...



The PIM to-do list

NEXT MONTH

I had hoped to complete the REXX timesetting project this month. However, I have hit a problem with it, and have not yet been able to work around that problem. Even though the routine I have been using works perfectly with the original PEP modems that were on the BBS, and also works fine with the

Microcom modems, it does not work with the new Maestro 28.8 modems on Lines 1 and 2 of the BBS. So far, I've not been able to work out what the problem is, so I'm going to hold of on completing the project until I can work out what I have done wrong. The symptoms are fairly strange - the modems seem to be initialised correctly, and when they should be dialing, they go off-hook. The trouble is, they never start to dial....

As a result of this problem, I'm going to have to rewrite the routine with extra error checking to get some reporting back from the modem. Hopefully the final results should be ready in time for next months column.

An Introduction to 3D CAD

Geoff Harrod

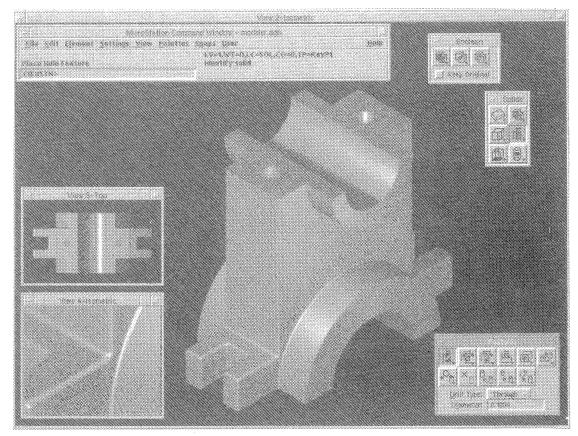
Last month I presented a brief history of CAD, an overview of some good medium priced 2D CAD systems and a few very brief comments on some others. This month I want outline what is involved in 3D CAD, and survey what is available.

In essence, the only difference between 2D and 3D CAD is the ability to store a third dimensional coordinate for each point. That is, we use x,y,z coordinates rather than x,y. In 2D working, some new users experience a bit of difficulty accepting the "virtual limitlessness" of the 2D plane upon which they draw in CAD, inside the computer's memory. Normal CAD practice is to draw "full-size" on that limitless virtual plane, and only scale down at plot time in order to fit the image onto paper sheets. The screen works like a monitor for a TV camera relaying a view of the virtual drawing. You can change the focal length of its zoom lens to get a wide view of the whole thing on the little screen, or a more detailed view of a small part, and pan it around.

In a 3D system, the same concept applies, except it is now a limitless virtual space rather than a plane surface. Just as with photographing real 3D objects, the screen's virtual camera must now be able to also move around the objects, beside, above, below and behind them (or even inside them) to show views from any angle. So there must be user commands to position the camera anywhere in space, and turn it to point towards any point in space, as well as changing its angle of view.

Working in 3D

A lot of complications arise to do with enabling the



MicroStation Modeler is a feature-based solids modeler, fully integrated with the MicroStation CAD environment

operator to work in 3-dimensional space using 2-dimensional tools; a screen surface and a mouse running on a flat surface. It is possible to create 3-dimensional line models (called "wireframe models") by typing x,y,z coordinates for every point, but that soon becomes tedious. The solution is usually to let the operator specify a 2D plane within the model upon which the mouse movements operate at any one time, and to frequently relocate and reorientate that construction-plane as needed. In various systems it is called the construction plane (CPL), active plane, working plane, local coordinate system, user coordinate system (UCS), etc.

Wireframe Models

Wireframe models are inherently transparent. To make them look solid we have to surface them. It's rather like stretching Glad-Wrap over the wires and then spay painting the Glad-Wrap! Some systems (notably AutoCAD) make the process of defining surfaces very complicated. The final model can be made to look quite realistic by applying colours and surface textures and patterns, reflectance, translucency or transparency, and simulating lighting effects and shadows. That is not for low cost systems though! The most outstanding value for that capability is Microstation V5, which costs around \$5,000.

An alternative approach to 3D modelling is to start with solid blocks rather than wireframes, and construct the objects by joining, carving, cutting and boring the blocks. This is simulated in the computer as "solid modelling". It requires extremely powerful hardware and software to be done at all well, and is mainly restricted to Unix workstation systems, at least for systems that do not have any significant limitations. The best systems for this are Catia, ComputerVision, Ideas, Pro/Engineer and Unigraphics, all in the \$25,000 range and needing a \$20,000 to \$40,000 Unix workstation. AutoCAD's AME solid modelling add-on is pretty poor but their new

Designer is much better. There is also a quite good one as an adjunct to CadKey Professional, and there is a solid modelling option coming for Microstation next year which looks good.

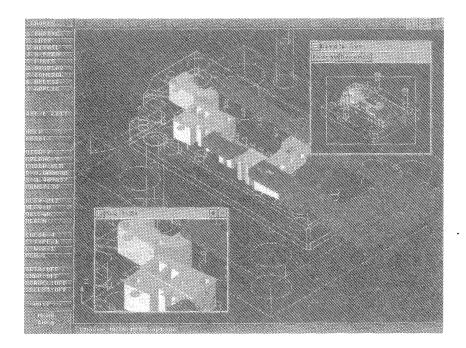
It is not too hard to design a CAD system to provide for 3D construction of objects built entirely of rectilinear plane surfaces, but very much more complicated to provide for 3-dimensional curved shapes. Generally the low cost systems have that limitation, or they approximate curved surfaces with segmented flat elements. That has always been AutoCAD's big 3D weakness, even up to the current R12. To provide accurate curved surface modelling, even for cylinders, needs considerably more calculation, computing power and memory.

Other Alternatives

To be able to model free-form surfaces without approximation as a mesh of flats, without any restrictions on supported shapes, and with the ability to blend surfaces or fillet between them, needs even more horsepower. Like solids, this is mostly limited to the Unix workstation realm, but there are some PC systems that can model such forms with not too many restrictions. They are Caddsman, CadKey, Microstation, and QikDraw. AutoCAD will join them when Release-13 ships .They are all in the \$5,000 range and require 8 to 16 Mb of memory. Caddsman and CadKey also have "light" versions at much lower cost.

Those versions lack many of the complex curved surfacing facilities of the full versions, but have all the wireframe facilities including curves. recently, CadKey has drastically cut its prices so that the full version is currently selling for only \$750. That must be the all-time top bargain in fully-featured 3D modelling software! I don't know how long that price will persist. CadKey has always been very strong in 3D modelling and very highly regarded in America. It was developed on Silicon Graphics workstations and ported to extended-DOS

Right: A progressive die design. Also shown is the new birds-eye and worms-eye viewing features and Motif-like interface of CadKey 7.



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when the 386 arrived. It uses a unique and very simple menu system that takes a bit of getting used to, but soon becomes very easy and fast to use. No doubt the low price is intended to get it a much wider exposure in Australia.

CadKey's Flexibility

CadKey is also unique, I think, in its ability to "infer" surfaces automatically. With most non-solid systems, you have to define wireframes and then define surfaces. Most systems provide reasonably powerful tools for defining odd shaped surfaces, curved surfaces, and surfaces with holes in them, but AutoCAD makes surface definition extremely tedious and frustrating. With CadKey, you don't generally need to define surfaces at all! It figures out where surfaces ought to be from the wireframe geometry, and so you can do shaded views or hidden line views directly.

With other systems there is nothing to shade or hide until surfaces have been defined. Sometimes CadKey can't figure it all out because of ambiguous geometry and asks for help. They provide detailed guidance on defining unambiguous wireframe geometry, which is very good advice anyway. One of the problems of wireframe 3D modelling, is

that you can define topologically impossible structures, whereas in solid modelling you cannot.

The CadKey company also make a system designed for Architectural use, called DataCAD. This is also a 3D system, and quite easy to use. Like CadKey itself, it has never achieved widespread sales in Australia, but in America CadKey products are widely used and highly respected. Because of this they have slashed their prices in Australia as mentioned before, and this applies to DataCAD also, which is now selling for around \$550 instead of its original \$4000-odd.

Other Packages

Another notable very low cost 3D system is Alias Upfront, produced by the makers of the famous Alias photo-realistic 3D modelling and animation system that gained fame when it was used for the effects in Terminator-II, such as the "molten metal morphable man". Alias runs only on top-end Silicon Graphics stations costing hundreds of thousands, but Alias Upfront costs a few hundred dollars and runs on ordinary old Windows! Obviously, it's not in the same league by far, but it is a remarkably good tool for learning 3D modelling and rendering, and can serve very well for quite serious presentation work.

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That leads to another 3D field — that of modelling for publication or video animation. Here, versatile and easy shape and surface definition is important but dimensional precision and geometrical accuracy is not a big issue. Hence it becomes possible to make programs that provide full shaping and surfacing at relatively low cost and able to run on generally affordable hardware. The most notable success in this field is undoubtedly Autodesk's 3D Studio, which runs on DOS and costs about \$3,000. It needs a 486 and 16Mb RAM to run well, preferably more, but that is still cheap compared to an SGI Iris.

Another contender now is Caligari TrueSpace for Windows. It is advertised as "\$4,000 worth of 3D capability for \$1,195" by its distributors, Melbourne Shipping Company. It has been praised overseas, and I look forward to seeing it.

That's a quick survey of 3D software and issues. I hope it has not done any injustice to any product through brevity or overlooking anyone, but is more intended as an overview of what is involved.



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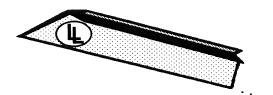
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Lindsay's Letter

Lindsay Bates

Practical Computing for Established and New Computer Users

Summer is creeping up on us fast, and at time of writing the big dry continues to badly affect our farmers and indirectly all of our wonderful country.

Meantime, the computer world continues to bombard us with a spate of new products across the board. We can expect to see Intel's Pentium P-100 at any time, and new software continues to hit the market. When Windows 95 arrives next year, so will a spate of new software to take advantage of the extra speed its 32-bit code provides. Some may have 16-bit AND 32-bit facilities, and arrive even before the new Windows.

As usual there's seldom a dull moment, with many of us constantly consulting our bank account to see if this or that new product or an upgrade is possible (ours seems to be permanently stuck on the NO Button)!

This month I've done a couple of pieces on Best Value in PCs and Computing on a Budget to help with this perennial problem. Hope there's something in LL for you again this month.

Cheers!



♦ So at last it's official that Windows 4/Chicago will be called Windows 95, and that it won't be released until next year (it will be interesting to see what they'll call it when they release two versions in the same year)!

I for one, applaud the fact that Microsoft are saying the new Windows won't be released until they've got it right.

I'm sure we all hope they truly stick to that.

♦ Meantime IBM are making the most of the major hold-ups with Windows 95s release-date with a forth-coming 'lite' version of OS/2 code-named Warp (programmed by a guy called Scotty, perhaps?)

It's supposed to be able to run on 4 meg machines and I'm sure they're hoping it will take some business away from Microsoft.

♦ IBM are also into the CPU business with their Blue Lightning 486-75, installed onto an IBM main-board. The 75 is apparently based on a 25Mhz chip, clock-tripled internally to 75Mhz.

Blue Lightning is said to be faster than Intel's 486DX2-66, which is an internally clock-doubled 33Mhz chip.

- ♦ Modem prices continue to be in something akin to free-fall which is great news for the end user. In fact you can now buy quality Fax-Modems running at 14,400 baud even below the \$300 mark.
- ♦ The market is slowly moving to 420Mb hard-drives as standard with your new system. You can still get 210s, but for the little extra you'll pay, go for the larger drive.
- ♦ You read a lot about more and more services becoming available via our phone-line. For example, they say that faxes are going to be one of the growth areas here.

What continues to surprise me, however, is how little has been done by hardware and software designers, to physically combine the phone with the computer.

To me it looks like an area just screaming out for someone with the vision and entrepreneurial spirit to make themselves a cool billion or two.

- ♦ I'd only just written the above when I read how one of the big name companies has combined portable phone with portable PC to give full phone, fax, AND modem capabilities in the field. Good one.
- ♦ On that question, there seems to be an unbelievable conservatism amongst virtually all PC manufacturers around the world.

Not only are all our desktop PCs the same shape, they're even the same colour!

Good heavens to mergatroid, why on earth can't I buy one in pale puce, if I want to?

The ladies may ask is the boring colour because it's largely males who make computer purchases? (or is it that boring colour because it's largely males who *design* them!)

Why doesn't someone show a bit of creativity, and design something that looks and feels different? Then market it effectively so it takes off.

Know why I reckon they don't? - mainly I think none of them are quite game to try!



BEST VALUE IN PC'S

We really are being spoilt with low prices for our computers these days.

Let's fact it, currently you can set yourself up with a nice system for under \$2,000. And that's gotta be good value!

THE 486SX-33

For this price you can get a decent quality 486SX-33 VESA Local Bus with 4Mb RAM, 210Mb HD, and an SVGA Non-interlaced Monitor with VESA Graphics Accelerator Card. And probably with DOS 6.2 and Windows 3.11 thrown in as well!

Now okay, I accept that a lot of purchasers are going to want to up-spec that a bit, with an increase to 8Mb RAM and to a 420Mb HD.

And that will put the price over 2 grand, adding perhaps some \$300 in total. But it's still pretty cheap motoring in my view!

HOW ABOUT A 486DX2-66?

All right. Let's step up the line a little and for about an extra \$400 you can have a 486DX2-66. Spec this one up to 8Mb RAM and 420Mb HD and you'll get a great quality system for way under 3 grand these days; in fact around \$2,700 should about do it.

Because the 2-66 is a nice speedy machine for running Windows, I consider still it to be excellent value.

Next step up is the one many people feel is up for grabs, but I don't really see it that way at all.

Suppose we considered moving to Intel's new 486DX4-75. What's the speed difference between 66Mhz and 75Mhz? Minimal. What's the price difference? Can be massive. Hundreds of dollars for hardly any more power.

What about a 486DX4-100 then? Well, here we are seeing a considerable speed difference over a 2-66, but you are going to pay something like 3-8, 3-9 total for the extra power.

ANYONE FOR A PENTIUM?

But here's the important bit to take into account here: a Pentium P5-60 is faster than the 486DX4-100 and it hardly costs any more!!

So if you're up to this sort of money, the Pentium 60 is going to be the best value - under 4 grand for a reasonably "specced" Pentium is unbelievable value in anybody's language!

In fact, I'm beginning to suspect that we could be looking at quite a bright future for the Pentium CPU.

With the advent of Windows 95 and it's programs running much faster than today's offerings, the Pentium is poised to take full advantage of the 32-bit code the new Windows will use.

So much so that many current purchasers could do well to seriously

consider the Pentium's advantages, to perhaps even manage to "get ahead of the market" for once.

Now there's a thought!

The ultimate would be a Pentium 90, of course. Add another \$700 or \$800 to the price of the 60 and there's no question you're still getting excellent bangs-for-bucks.

COMPUTING ON A BUDGET!

Need help with computing when the coffers are a little (or a lot!) on the low side? Here are some tips to help.

It can seem to cost an arm and a leg to get into computers as I'm sure some readers have discovered from dire experience!

This isn't to say that buying a computer system necessarily costs the earth. That's not the problem so much as the question of keeping up with the "blankedy" market.

By this I mean that it's so hard to keep up with all the changes that seem to start even before you take the thing out of the shop!

A PC CAN COST UP TO \$1,000 PA TO OWN

So what can you do when it's going to cost you something like an average of between \$800 and \$1,500 per year, every year, to keep up with updating your computer?

Put simply, a computer - like a car - costs you the amount of the new system LESS what you get for the old.

With that fixed firmly in mind, there are then two main ways of keeping costs down

Method One is for those still on a budget but one that is not quite so tight. The trick here is to sell your system or software or peripheral *before* it goes off the market.

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What do I mean by that? Well a 386DX-40 was always a great computer, but it's not easy to buy a new one any more. Basically it's now off the market.

As a direct consequence of this, the 2nd hand market starts to lose interest in it as well, and so prices drop. Who wants to buy dated equipment?

SELL EARLIER, NOT LATER

So don't get caught. Sell earlier rather than later, and you're likely to save yourself a heap. As an example, now's the time to sell your 486DX-33 or SX-33 and upgrade to a 486DX2-66 - or even better, to a Pentium 60.

Method Two is for those on a tight budget. Once again computers are like cars. Which cars lose the most money the quickest? - the expensive ones of course.

Which are the cheapest to buy? - the good ones that have been around a few years.

Method One involves *never* getting caught with dated equipment.

Method Two is almost the antithesis of this: here you aim to BUY equipment that's close to getting dated!

Long-time *LL* readers know of my \$1,500 rule: when a computer drops in price to \$1,500 it's life on the market is very limited indeed.

HERE YOU BUY LATER

So Method Two says to BUY the \$1,500 computer. You're still getting current technology, but you're paying half the price for it!

Look at it this way. Let's say you lash out and spend \$6,500 on a colour notebook. What's the *most* you can lose over the next few years? \$6,500 obviously.

In practice you are going to get at

least something for it when you sell, so your loss won't be the full \$6,500. But for the Method Two purchaser, what's can be his maximum loss? \$1,500! Sound better than 6 grand? Keep it for a few years and you can then actually afford to *scrap it*!

Better still, give it to your kids or grandkids. And ever better, to a young person who's shut-in, and to whom a computer could be the most wonderful thing to ever happen to them!

Recognise that the same thing applies to peripherals (like modems) and to software, as applies to computers. Either sell while it's still current, but soon won't be, or buy it exactly then!

Oh, and take a guess which of these budgeters is the most relaxed about the amount of money they've spent - the \$1,500 purchaser or the \$6,500?

One last word to Method Two purchasers. Please buy new, or if 2nd hand only from someone you know and trust, AND for a brand name you know is quality.

There's so much dreadful rubbish out there, that buying 2nd hand is considerably worse than Russian Roulette!

GETTING A GOOD DEAL

Clearly, if you know someone who's using Method One, teaming up with them is definitely Double Win!

They'll appreciate getting a decent price for their system, and a few dollars for their dated software - probably still fine for your purposes (do we really need that new version 6.0 or 7.0 or 8.0?)

In turn, you'll get a known computer at a hefty discount over new plus some very cheap software.

Now that's true Double Win - manage to do this and you're achieving a great budgetary saving for you both!



SO WHICH LOCAL BUS TO GET?

Some readers may be a little confused about the question of VESA or the newer PCI Local Bus when they come to buy a new system.

Local Bus has been around for years now, and in many ways, is still quite a strange animal. It promised - and promises - much that for the average user it has rather failed to deliver.

Yes, I read the "16 times faster" ads too, but let's be realistic, when a VESA card is actually working IN your machine many will barely see a difference.

LOCAL BUS IS NOT ALWAYS ALL THAT FAST

There's an easy explanation why this is so, and that is that the faster bus is hog-tied by all the other bits of the computer being still the same.

A system can only run as fast as its slowest component, and in 1994 - sadly - our PCs still contain far too many of the latter.

So in some ways I guess one answer could be: VESA or PCI, does it really matter?

VL-BUS

If you buy the average new 486 it's almost certain to be VESA these days. You may, or you may not, get a VESA monitor card to go with it, and the same applies to an I/O card to run your drives.

If you get neither, then the VESA part of your system does not do a darn thing (except just sit there)! But even if you do get two VESA cards, please don't expect to find everything working twice as fast - it just won't happen.

My advice would mostly be to put a VESA video and I/O card into the new 486 you buy, but on the proviso that this doesn't cost you more than \$100-\$150 extra.

Any more than that - put it towards the next computer up the line: that's at least *guaranteed* to give you extra power and some extra speed.

But what about 486s with PCI bus? Well, my feeling here is that PCI was developed for Pentiums - and that's about where it should be used.

I've heard of problems putting 486s with PCI, and that's enough to warn me off, at least for the time being. And you'll pay extra for PCI, most likely for no extra performance.

PCI BUS WITH PENTIUMS

In the reverse, if you're going the whole hog and buying a Pentium, then PCI is the only way to go. That way you have a good chance that the Pentium chip really IS on a main-board that was designed for it.

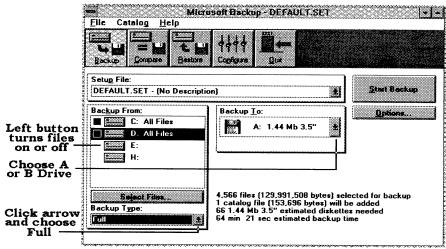


BACKUP JUST ONE IMPORTANT FILE? - SURE!

PART 2

You need to have done the first tutorial on backup from last time. We're now ready to do our backup proper. So let's get started.

First we need to learn the terms used for three kinds of backups.



Major settings are done on the main backup screen

STARTING WITH A "FULL" BACKUP

We'll start our session by doing a FULL backup. Now that *doesn't* mean backing up the whole HD, though you could if you wished to.

A Full Backup simply means the starting point for the whole she-bang, and you should consider it an essential.

With your Full Backup you can backup just one file, a group of files, a directory - in fact, as *much* or as *little* as you like.

So run MWBackup. It will read all your directories first and this may take awhile.

Once you get to the main screen, the first task is to ensure that the backup type at bottom left is set to Full.

Click on the downward facing arrow with the line under it, then on Full. You may like to notice the names of the other two backup types whilst there: Incremental and Differential.

USING THE RIGHT BUTTON!

Now move upwards to the Backup from field. Let's suppose you wish to backup ALL your files on C Drive. Take the mouse to where it says Drive C and click the right button once.

Yes, I know that's a bit of a shock!

The computer world ignored that button for a great many years, didn't it!

Click it again, so you can see what's happening - the black square and "All files" both say the same thing: you're about to back up the whole of Drive C.

If you have a Drive D, you may wish to click on it as well (and you may then have to wait for directories to be read).

If you use DoubleSpace don't ever backup Drive H (or whatever your uncompressed drive may be) - that would be like backing up the whole computer, but it's not the way I'd advise you to do it.

All right. Are you ready to decide what files you want backed up? Let's do it.

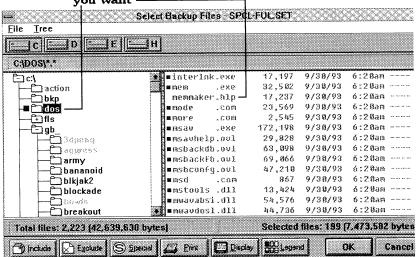
MORE OR LESS THAN HALF?

First, it's important to decide whether you wish to do more or less than 50% of your files. Suppose it's less. Click Drive C off (no black square or words), meaning we're starting with no files at all marked for backup.

If your answer is more that 50%, click Drive C on, meaning we're starting with all files marked for backup.

Move down to the Select Files field. Click it once. This will then show you visually what your directory tree looks like, and you can see the Directories (on

Click to highlight a directory or file you want



At the Directory Tree Screen, you can choose what to backup

the left) and the Files (on the right).

If you marked all files, then they'll ALL have a black square. If you said no files, they'll be no black squares.

Now the next bit is probably the most challenging bit to do, but once you have, you're going to feel really great about it!!

At bottom left, you can see Include and Exclude. We need to go and record what files to backup and/or which not. It's important to understand that all that we're about to do will then be permanently set.

I'll do the over 50% people first.

OVER 50% TO BACKUP

Click on Include. The dialog box may already have these entries (reading the fields from top to bottom): C:\

Include marked as On Include all Sub-directories On

The Include/Exclude List box probably has nothing in it. Click on Add and the entry:

Include [Sub] C:*.*

will appear there, meaning backup all files in Drive C, including all its Sub-directories. Once this is all done as above, click on OK.

Righteo, you're doin' great! Now are there any directories or files you *don't* want to backup?

Suppose I do not want to backup the whole of my DOS directory. No problem, we'll simply Exclude it.

Find the DOS directory in the directory tree on the left, and click once on it to highlight it. We want to Exclude it, so we click on Exclude at bottom.

Reading from the top again we have C:\DOS (that's our directory), *.* (means all the files in that directory), Exclude is already On, and the next line-well, do we want all of DOSs sub-directories to be included in the entry we're about to do (if they exist)?

I would say **No** for my computer, so I'd click the line once, to remove the X. Everything look okay? Right, click once on Add, and in goes the entry in the bottom field:

Exclude C:\DOS*.*

Click on OK again.

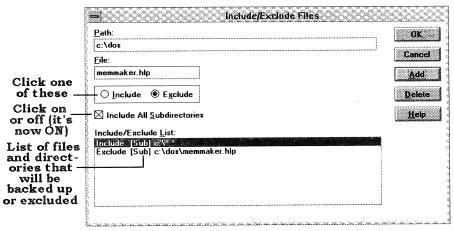
Now, you can come in an out of here any time you wish. If you want to knock an entry out of the bottom box, just highlight it and click on Delete. Make sure you *always* click OK to exit (not Cancel), if you've changed something in this dialog box.

All right, let's suppose that all you wish to *not* backup is MEMMAKER.HLP in the C:\DOS directory (rather than the whole directory, like we just did).

Up above, once you'd highlighted the C:\DOS directory in the directory tree, you'd then go across to the *right* side of the tree, and scroll down till you find the MEMMAKER file. Click it once to highlight it.

When you click on Exclude you'll find the MEMMAKER file already there for you, ready to click on Add.

In a similar manner, you could then continue on to Exclude whatever files or whole directories you wished, wherever they may be. When you're all done, click on OK at the bottom of the directory tree screen.



You must mark directories and files to backup or exclude from the backup

* *

LESS THAN 50% BACKUP

Now for the less than 50% people.

When you click on Select Files, C:\ should be highlighted at the top of the tree. Click on Exclude at bottom left.

Reading from top to bottom, you'll have:

C:\

.

Exclude marked as On Include all Sub-directories On

If there are no entries in the bottom box, click once on Add, and: Exclude [Sub] C:*.* will appear in the bottom box.

We've told the program to backup *nothing* on the whole of Drive C. Click OK.

So what directories or files do you want to backup? Suppose you want to backup all of your DOS directory.

Scroll down the directory tree at left of screen and click on DOS to highlight it. This time click on Include at bottom left.

The entries reading from the top will be C:\DOS (the directory you want to backup, *.* (all the files in this directory), and Include is On.

Now do you want to also include all DOS sub-directories (if any exist)? To say No, click once on the Include all Sub-directories to *remove* the X.

Everything okay? Click on Add, and the entry:

Include C:\DOS*.*

appears in the bottom box. This box now reads: don't backup ANY of Drive C, but DO override this instruction and backup the C:/DOS files. Click OK.

But let's suppose that all you wish to backup is MEMMAKER.HLP in the C:\DOS directory, rather than the whole directory.

Up above, once you'd highlighted

the C:\DOS directory in the directory tree, go across to the *right* side of the tree, and scroll down till you find the MEMMAKER file. Click it once to highlight it.

When you click on Include you'll find the MEMMAKER file already there for you, ready to click on Add.

Similarly, you could then continue on to Include whatever files or whole directories you wished, wherever they may be. When you're all done, click on OK at the bottom of the directory tree screen.

DRIVE D, TOO, AND E

If you need to work on Drive D while you're there, click on it at top right and go ahead. Similar for E.

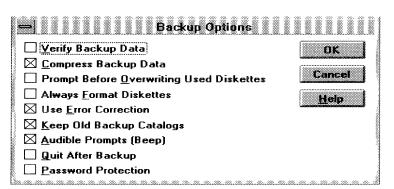
CHECKING THE OPTIONS

Now click on Options. All the fields have a crossed or open box which you change with a single mouse click.

You may like to ensure there's an X in boxes 2, 5, 6 and 7. My data is very important so I have 1 clicked as well (slows things up). If you put 8 on, the program exits automatically after backup. I don't advise this until much, much later on.

Click OK when you're satisfied. In the middle at the bottom is some good info. Bottom line and second bottom estimate how long the backup will take, and how many disks may be needed.

You may have to buy some disks. Make sure you get HD (high density) and don't pay a fortune for them. I refuse to



Choose backup options in this dialog box

When you're sure you've got everything correct, you can click OK. Back in the main menu, you may find that Drive C now has only a partial black square and the words "Some Files", dependent entirely on what you clicked in the previous dialog boxes.

I think it's time to save our work. At top click on File, and on Save Setup As. You could leave it as DEFAULT. SET - and type in a description in that field if you wish. Click OK.

Back in the main menu, choose a drive to backup to (centre of screen). Again click on the down arrow with the line under it, if you need to do so. Most folk will choose either Drive A or Drive B.

use pre-formatted disks, by the way. I will not trust my important data to bulk-formatting, ever.

Note that you don't have to format any new disks first - backup will do that for you.

DOING THE BACKUP!

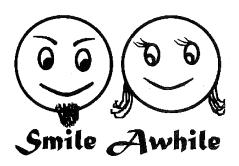
Well, hard and all as it is to believe, WE'RE READY TO DO THE BACKUP!! - if you've got to this point you really are well on the way to becoming a backup expert!!

Click on Start Backup, and you're away! It's all pretty automatic from there. Backup will prompt you for new disks. Follow the "take from the right then take

out, face down, to the left" procedure I mentioned last time. And once you've got used to this, don't forget to read your book or magazine during backup!!

Well, this has been one of the most difficult things I've ever had to write. So if I've messed up any steps I hope you'll forgive me, and be able to figure out what I really meant!

Meantime, this seems to have turned into a THREE-part series! Next time we'll conclude with automating and with the important info. re. the other two types of backups (to save time and/or disks).



LINDSAY'S COMPUTER DEFINITIONS

(Continued from last time)
33Mhz - hurt me 33 million times

66Mhz - hurt me twice as much

386 - after the 9 were shipwrecked the 3 strongest did this to the rest [Oh dear, I really am sorry for that one!...]

486 - what probably would have happened if 10 were shipwrecked

netware - sexy, see-through undergarments

network - takes a fair amount of effort to actually get netware on

serial card - collectible card from packets of "Cornies"

serial port - whole port full of collectibles from packets of "Cornies"

cache - Joe sells so much software that he has much more of this than me, and I want some caching controller - Joe's accountant

512K caching controller - money coming in so fast from sale of latest software that Joe had to hire an even speedier accountant!

VGA - Very Good Artichokes

EGA - Extra Good Artichokes

EGA Monitor - person who checks that they really are EGA

Expansion Memory - a big-headed person has this

CMOS - updated AMOS or BMOS

(Concluded next time)



ABORT, RETRY, FAIL

I'd love 5 bucks for every time I've seen that rotten DOS message! So you DOS buffs may be interested in this interesting tip that I read somewhere recently.

It's just another of those peculiar animals "the undocumented feature".

As an aside, I really do have to wonder about these. Someone programmed it into DOS so it would work - but they don't tell anyone about it! Strange, very strange.

To help you round the trouble with that message, try adding /F to your SHELL= line in CONFIG.SYS.

Next time Abort, Retry, Fail occurs you can expect to find it a whole lot easier to continue working. Try it for awhile, and see if it's for you.

STORMS AND PCs

Despite our long, long dry, some of us are still going to experience summer storms, with the consequent danger to our computers.

So firstly, what is the danger? Well, lightning strikes that get through to your computer are extremely dangerous. Fluctuating power, and low power are nearly as bad.

NO WARRANTY COVER

You can lose anything from peripherals to main-boards. And please remember that your *Warranty does NOT cover you for lightning strikes* - so you've been warned!

(Oh, and your household insurance cover won't be of any help either.)

Now a replacement main-board could cost you from a hundred or so (a 386) to a couple of thousand for a high-end PC, so it really does pay to take precautions.

WHAT TO DO

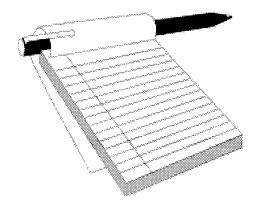
There are a couple of ways to go about protecting your delicate electronic equipment from the designs nature may have to turn it into a smoking heap of rubble.

The first is to always buy notebook computers! Unless they happen to be plugged in for recharging, a storm is of no danger to them!

But if you have a desktop, **TURN IT**OFF, and pull the power cord out of the power point, for the whole time an electric storm is around. And do this for your printer as well.

But do **NOT** forget about your modem. This beastie has a direct connection from the lightning strike to your computer, and it's a *double* connection: the power-lines AND the phone line!

Continued on Page 29



Consultant's Notepad

Geoff Harrod

TrueType, Postscript, ATM and Soft-fonts

hen Windows 3.1 was released, it introduced the TrueType scaleable outline font system as an integral part of Windows, and most users now take TrueType for granted. It has been a great success, and one of the biggest attractions of going to Windows from DOS is the great printing and font quality achievable.

Before ver 3.1, Windows provided a very restricted set of bitmap fonts, plus a few rather unattractive vector fonts. Generally, you could only print with whatever fonts were available within your printer and Windows used its nearest sized display fonts to approximate them in its displays.

Often that approximation was pretty rough! If you had a printer with downloadable font capability, you could load bitmap fonts onto the hard disk and install a font downloader, but there had to be a font file for each point size and italic, bold, etc., so they soon took up a lot of space.

The Apple Approach

In the rival camp, the original Macintosh system was tied to the Apple Imagewriter dot matrix printer, that was so-called because its dot pattern exactly corresponded to the dot pattern of the small Mac screen's image. That

achieved a perfect match between display and print, using fonts generated in the computer and printed as dot graphics. It was effective, but slow and fairly low quality.

The optional Apple Laserwriter (at great expense) was a Postscript 300dpi Laser, which gave high print quality but lost the intimate correspondence with the screen.

Apple then introduced the Postscript scaleable outline font system for the screen to match the printer, but the licence fees to Adobe for that were rather high.

Scaleable Fonts Developed

So Apple started developing their own scaleable outline font technology, with the intention of eventually avoiding the Adobe licence fees.

Meanwhile, Microsoft were thinking along similar lines for Windows, but had never implemented Postscript displays. As both lines of development dragged on, the two companies (who still had an on-going legal battle raging over alleged theft of the Mac interface for Windows) got together to pool their efforts, with the result being the speedy production of the TrueType system.

Adobe Type Manager

In the meantime, the existing font system on Windows left a lot to be desired, and Adobe produced a variation of their Postscript system, to provide both display fonts and printer fonts for Windows.

This was called Adobe Type Manager, or ATM. Aldus, among others, provided copies of ATM with their version 4 of PageMaker for Windows. That provided a satisfactory font system for page layout on Windows for first time, without needing an expensive Postscript printer.

Corel had already used their own unique scaleable font system for Corel Draw—the "WFM" fonts. There are also other scaleable font systems such as FaceLift from Bitstream and HP's Intellifont, but not used so much, and generally it is advisable not to use them together with TrueType. Only have one type-manager active at one time.

TrueType Fonts

TrueType brought a good standard font system to Windows in ver 3.1, and Aldus no longer shipped ATM with Pagemaker ver 5, no doubt saving them considerable licence fees to Adobe. Generally, everyone rapidly lost

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interest in ATM, partly because it came "free", and also because a wide range of TrueType fonts soon started to become available, at much lower prices than genuine Adobe Postscript fonts, which ATM used. The choice of fonts provided free with both ATM and TrueType was always very limited, so many users wanted extra ones.

Postscript fonts were too dear for any but serious typesetters. More recently, Adobe format fonts have been allowed to be produced by other than Adobe, and they have become much cheaper.

So you might ask... why would anyone bother with ATM now that TrueType is so well established?

Postscript Fonts

The answer is, that in the publishing business, Postscript is the standard system. All film and bromide image-setters require Postscript input. For people who are outputting to laser printers and have no need to interface with typesetting bureau, there is little point in using ATM. TrueType will do everything they need extremely well, possibly better, or at least faster, than Postscript or ATM. However, for those who send data files to typesetting bureau for 1200 or 2400 dpi bromide or film, it is a different story.

The Windows printer drivers for Postscript devices are supposed to be able to generate a valid Postscript output stream from documents using TrueType fonts. Postscript output is actually plain ASCII text in the form of a program that instructs the device how to build up the image. There is a lot of similarity between TrueType and Postscript font definitions, since they both define each character as a series of spline curves.

So the Windows Postscript drivers can construct Adobe-format font definitions for any TrueType fonts. However, usually, Postscript output assumes all font definitions will already be resident in the device's memory.

A further complication is that due

to copyright restrictions, font producers must use different names to their rivals for fonts that are in fact identical, or almost identical.

Hence we have Helvetica = Arial = Swiss = Switzerland; Times = Times New Roman = TimesRmn = Dutch, ITC Bookman = Bookman Old Style = Brooklyn, etc. There are now clever subprograms such as Panose for matching font names on the fly, as used by Aldus in Pagemaker-5.

However, despite all that, the fact is that output to a professional image-setter from a TrueType original very often fouls up, often quite disastrously.

So if being used to generate page layouts for high quality professional printing work, it is highly advisable to use ATM and Postscript fonts. You also have to check what fonts the bureau has, and stick with those or be sure to embed any of your own extra ones into the EPS output file.

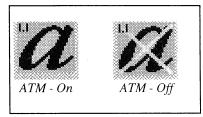
I have found ATM slows down screen operations quite noticeably compared to TrueType. It may vary with video boards, but for me, it seems to flash and redraw the whole line every time a character is typed. So I have two Windows configurations, one with ATM active and the other with TrueType.

I use the latter for general work with the attached laser printer. It is not advisable to have both ATM and TrueType active at the same time.

You turn TrueType off in the Printers dialog of Control Panel. ATM is turned on or off in its own control pop-up. However, even when ATM is off, you will see its icon appear at start-up. When turned off, it has a red X through it. It seems advisable to have it absent altogether when using TrueType, and it does seem to influence screen speed. I will describe how to remove ATM; it is not very self-evident!

One problem with having both ATM and TrueType present, is that you have two sets of font files, and they can add up to several Megabytes each. TrueType

fonts (files of type TTF and FOT) are normally required to be in the \windows\system directory, which is a bit annoying. There may be font files on



the disk that are not listed in the TrueType fonts list in system.ini, in which case they cannot get used.

You activate them from Control Panel. ATM Postscript font files are of type PFT and PFF, and are normally in their own directory called \psfonts. The more practical problem of having both systems but only one active at a time, is that of opening documents that were saved with the other system's fonts in use. They complain of missing fonts and do substitutions that often affect the page layout.

I keep two sets of system.ini files, called sys(atm).ini and sys(tt).ini, and copy one of them to system.ini before starting Windows. The procedure for disabling ATM, as detailed in the Microsoft Windows Resource Kit is as follows: Edit the system.ini file. Remove or comment-out (with an initial semi-colon) the following lines in the [boot] section (the quotes are just to delimit each line here): system.drv=atmsys.drv" and "atm.system.drv=system.drv".

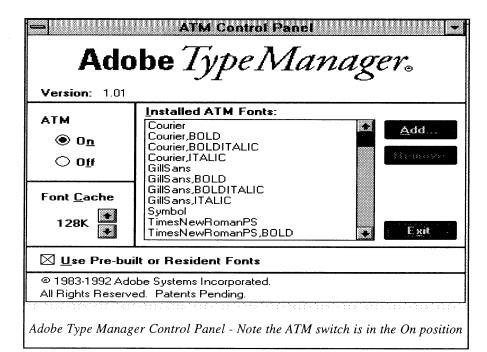
"system.drv=system.drv".

Also edit the win.ini file and delete any lines that begin with

"softfont=".

section:

Although you can comment-out the unwanted lines in each version of the INI file, I prefer to delete them, especially for the long lists of fonts in the "softfont=" sections. Similarly, in the ATM version, you can delete the lines in the [Truetype fonts] section.



Other Problems

I might mention another problem that can arise when TrueType is used on a machine that has been used with a bitmap soft-font downloader. This is likely to be the case when an HP Laserjet or equivalent was formerly set up to automatically download fonts before TrueType was available.

If the softfont downloader is allowed to remain active, it is quite likely that most (but not all!) Windows programs will refuse to recognise the existence of TrueType fonts. This is because the printer reserves memory for its downloader and reports that it has insufficient memory left to allow TrueType to download or even to send in graphics form.

The remedy is to un-install the softfont system, usually by setting soft-fonts to "none" in the printers setup dialog in Control Panel. It would also be advisable to delete all the bitmap soft-font files, and any "softfont=" lines in win.ini. After that, TrueType should work, but any existing documents that specify font names unique to the now absent soft-fonts will need a bit of editing. There are instructions for removing Bitstream Facelift (another scaleable font system) and HP Intellifont in the Windows Resource Kit.

Another trick with TrueType is the

"graphics mode" option. Some "HP-compatible" laser printers fail to properly support all the font downloading techniques. TrueType builds font bitmaps on the fly as needed and downloads them, and this can fail in certain situations or combinations of circumstances. It can also fail if the printer memory is limited and you use a lot of fonts, a lot of sizes or very big sizes, or together with large graphic images.

The remedy is usually to tick the "Print TrueType as Graphics" box in the printer driver options dialog. Then TrueType builds a complete raster image of the page and copies that to the printer's memory. That is slower but surer. It may also be needed when you want white-on-black elements, since the HP Laserjet-II cannot do white-on-black type. However it can if sent as graphics. This option can also rescue situations where the printer refuses to print type that is in a very large size due to memory restrictions for font downloading. I think ATM uses full-page graphics mode at all times.

Disappearing Fonts

Finally, a tip concerning disappearing TrueType fonts: If you start up Word or whatever one day and find the fonts pull-down list is empty or only shows non-TrueType fonts, it is most likely to be caused by the printer system having lost its default printer setting for

some odd reason. Most Windows programs need to know what fonts the printer can support before they can list the available fonts. If no particular printer is defined they show no fonts as available.

Remedy: go to Printer Setup, or Control Panel and select a default printer. =



Lindsay's Letter - Continued from Page 26

So it has to be physically disconnected from *both*. In the case of an internal modem, if it's struck via the phone line, it's inside your PC, in the main-board, ready to fry as much as possible there (an argument for external modems, perhaps?)

Finally you can opt for the protection of a somewhat expensive Uninterruptible Power Supply, where the right sort may protect from lightning strikes via power (but not via phone) lines.

But make sure you check out the degree of protection guaranteed.



"Logic: an organised way of going wrong with confidence."

"To err is human, to compute divine. Trust your computer but not its programmer." - Morris Kingston

[Personally speaking, my computer is *not* divine, and there's no way in the world I would ever totally trust it!!]

"I don't like money, actually, but it quiets my nerves." - Joe Louis

Bye for now. See you next time!

- Lindsay K. Bates Ph: 808 9441 after 10am

October 1994

Pictures from an Exhibition

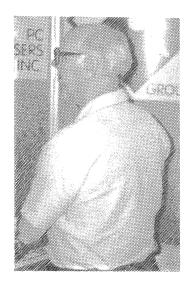
(Expo to you!)

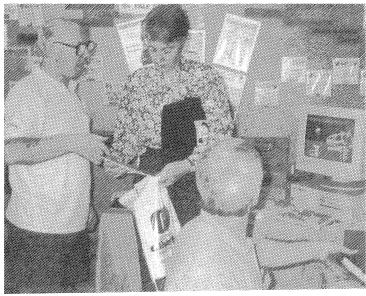
Right - Graeme checking the wall layout

Far right - Bill wants to know where to stick it

Below - Bill's hard sell to a prospective new member while Graeme reaches for the receipt book!









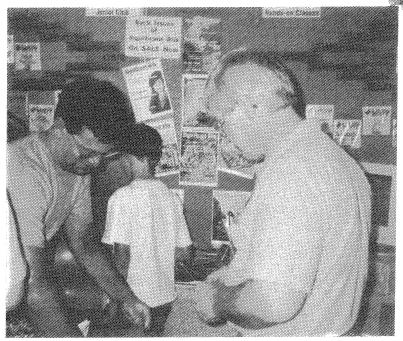


Above- Bevan Faulkner ready to talk to show visitors

Left - Busy time on the stand

Right - The Multimedia Display

Below - Graeme discussing Internet with a visitor







Meetings are held on the 3rd Sunday of every month at

QUT KELVIN GROVE CAMPUS Victoria Park Road, KELVIN GROVE. BRISBANE from 9.00 am to 5.00 pm.

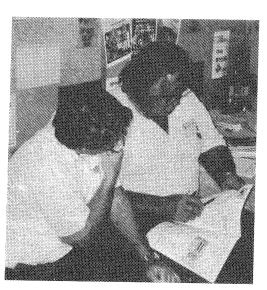
Brisbug occupies the Main Lecture theatre and several other lecture rooms in "B" Block. Please note that other groups may be using the Campus at the same time, and that off-street parking is permitted only in the designated areas.

Disabled access is available.

Food and refreshments are available from the Canteen from 11.00 am to 2.00 pm. Alcohol is not permitted on campus.

Food and drink may not be taken or consumed in the lecture theatre or classrooms. Smoking is PROHIBITED indoors.

Members and Visitors must wear an identity badge available from the Membership desk.



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Mike Mackenzie - Manager Phone/Fax: 277 5701

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- * Panasonic office equipment (fax, printer, phone, etc)
- * Phone/Fax/Modem line sharing technology by MultiComm(designed & made in Australia)
- * Affordable uninterruptable power supplies and power surge/lightning protection.
- Generous discounts for Brisbug members.

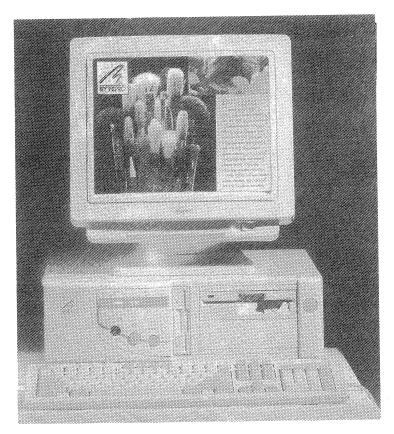
October 1994

Membership Drive Competition



All members of Brisbug are invited to participate in a Membership Drive promotion to be conducted over the 6 months from 17th April until 13th October 1994. Thousands of dollars worth of prizes can be yours for simply introducing a new member to Brisbug.

The Membership Drive Competition is finally drawing to a close. This month sees the drawing of the major prizes - the Compaq 486 Colour Laptop Computer valued at \$5050 and the Microsoft Software which includes Microsoft Office Professional valued at \$1210, Microsoft Office Standard valued at \$1095 and Microsoft Works valued at \$199.



Over the past five months many lucky members have won valuable software for introducing new members to join Brisbug. Some have worked very hard to promote Brisbug to everyone they met. Others have only managed to introduce only a few, but their efforts are still appreciated.

Last Months Winners

The winners of the intermediate draw for September were:

New Member

Kene Hammond - Paradox for Windows

Members

Edd Fabian - Paradox for Dos Brian Black - Lotus Organizer Robert Hodder - Paradox for Windows

Congratulations to all these members.

The Grand Finale...

At the General Meeting on the 16th October, all the names of members who have introduced new members will be placed in the draw for the Compaq 486 Laptop Computer, and the Microsoft software.

And Gand Finale 2

The following month at the General Meeting on the 20th November, the names of all the new members who have been introduced to and joined Brisbug will be placed in the draw for the BytePro 486 desktop computer.

There is no limit to the number of times you can enter - for each new member you introduce you receive an additional chance. So if you introduce 10 members, you get 10 chances, 30 members - 30 chances, and so on.

Prize Drawing

At the General meeting, a draw for lucky winners will take place for the entries submitted in

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VordPerfect

that month, for both existing and new members. If you can't get to the meeting, your prize will be forwarded to vou. The names of the winners will be published in the succeeding months edition of Significant Bits.

The closing dates are:

Main Competition -

13th October 1994.

The rules of the competition are:

You must be a financial member of Brisbug to be eligible to participate. (Associated Clubs, and Corporate Members are also eligible).

The introduced member must join Brisbug and must not have been a financial member of Brisbug for the previous 12 months.

You must use the special membership application form (or a good photocopy) to be eligible. (Additional forms are obtainable from the Membership Secretary or Librarian.)

The membership application must be in the hands of the Membership Secretary by 5pm on the closing date listed. Aplications received after the expiration of the contest (13th October

Working Together



1994) will not be considered.

The Judges' decision is final and no correspondence will be entered into.

The aim of the Competition is to expand our membership and by so doing, we can expand our services and benefits to all.

BRISBUG MEMBERSHIP DRIVE PROMOTION

CONDITIONS OF ENTRY

- 1. Information on how to enter and prizes form part of these conditions of entry
- 2. Employees of L. & L. Electronics, the Brisbug Software Librarian, the Brisbug Membership Secretary, the agencies or suppliers of prizes associated with this promotion and their immediate families are ineligible to enter.
- 3. Entries close 5pm 13th October, 1994

The draw for the 486 Laptop Computer valued at \$5050 and subsequent draws for Software including Microsoft Office Professional valued at \$1210; Microsoft Office Standard valued at \$1095; Microsoft Works valued at \$199 will take place during the Brisbug General Meeting to be held on Sunday 16th October 1994 at QUT Kelvin Grove Campus, Victoria Park Road Kelvin Grove.

The draw for the 486 Benchtop Computer with Multi-media equipment valued at \$5000 will take place during the Brisbug General Meeting to be held on Sunday 20th November 1994 at QUT Kelvin Grove Campus, Victoria Park Road Kelvin Grove. Winners in each draw will be notified by mail and their names published in the Brisbug monthly magazine Significant Bits in the month following each draw.

Judges' decision is final and no correspondence will be en-

4. Each month during the promotion, intermediate draws for

prizes will be conducted. The closing dates for each intermediate draw will be 5pm on the following dates:

12th May 1994, 16th June 1994, 14th July 1994, 18th August 1994 and 15th September 1994.

The draw for each intermediate prize will be held at the Brisbug General Meeting on the Sunday following the closing date for

Judges' decision is final and no correspondence will be entered

Intermediate win prizes and their values are as follows: 1 copy Lotus 1-2-3 valued at \$735; 1 copy AMI-Pro valued at \$735; 1 copy cc:Mail valued at \$375; 1 copy Freelance valued at \$737; 1 copy Organizer valued at \$195; 2 copies Q & A for Windows valued at \$399 each; 2 copies of Nortons Utilities Volume 7 valued at \$299 each; 1 copy Borland C++ with A/F valued at \$795; 12 copies of Paradox 4.0 for DOS valued at \$795 each; 16 copies of Paradox 1.0 for Windows valued at \$795 each; 2 copies of DR DOS valued at \$135 each; 1 copy WordPrerfect 6 for Windows valued at \$695. Total Value of intermediate win prizes \$28293. Intermediate win prizes are not transferable or exchangeable and cannot be taken as cash

- 5. During the period of the Membership Drive Promotion, all financial members of Brisbug with the exceptions as listed in condition 2, as above shall be eligible to enter the competition.
- 6. The following shall be the conditions of entry to the Membership Drive Promotion:
 - (a) During the continuance of this promotion, every financial

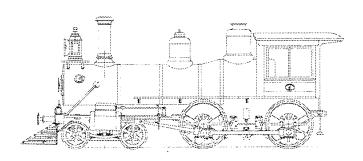
member of Brisbug who intro-duces a new member who joins Brisbug shall be eligible to participate in the monthly draw for intermediate win prizes for that month

- (b) The new members so introduced who join Brisbug shall also be eligible to participate in the monthly draw for intermediate win prizes for that month.
- (c) The new member must not have been a financial member of Brisbug during the 12 months previous to the commencement of this competition.
- (d) All entries shall be on the Membership Application Form available for the duration of this promotion.
- (e) At the conclusion of the Membership Promotion, the winners of the major prizes shall be selected from the names of all introducing members in the draw for the major prizes to be conducted on the 16th October 1994.
- (f) On the 20th November 1994 the winners of the major prizes for all the new members who have been introduced and have joined Brisbug shall be drawn
- (g) The prizes allocated for each intermediate win draw shall be decided by the Management Committee of Brisbug and such prizes cannot be exchanged for alternate prizes
- (h) The winners of each intermediate draw for prizes shall
- 7. The promoter is L. & L. Electronics of 95 Station Road, Booval, QLD 4304

Men's Toys

Building Scale Model Trains

By Bruce Gow



Starting a Hobby

Towards the end of the 80's I decided that I had to find a hobby that I could take into retirement and that which would give me the mental stimulus to keep me active and, more so, be challenging.

I was a professional engineer in the electrical industry and was mainly involved in the measurement and metering fields. In these areas I had under my control workshops and obviously the future activities should parallel these.

Having had a fill of electronics and measurements, the next choice was model engineering. This resulted in my setting up a workshop in my garage and displacing the car to a car port.

After making innumerable accessories for the machine tools, it was decided to start on a scale model diesel locomotive. Drawings were obtained of a full size unit and it was back to the drawing board to adapt it to one sixth scale size. Despite the fact that I had taught engineering drawing to aspiring engineers In the 60's, I was never a good draftsman, as a lecturer all you had to do was instruct and the students struggled to come up to your 'standards'. At work I had technical officers to do my drawings.

The diesel project was deferred when a design, with scale constructional drawings, was published in a modeling

magazine. This was for a steam locomotive and so construction commenced.

Following considerable effort and time, 10 years on and off, it was nearing completion and a new project was wanted. By now I was more venturesome and it was decided to base the new project on a locomotive that now only existed in records and publications.

The problem of getting detail drawings now raised its ugly head. No detail drawings were to be had and so it back to the drawing board and to design from scratch with the help of photographs, field sketches and publications and advice from fellow enthusiasts.

Getting into Computers

By now, I had enough of the drawing board and I decided to go for a computer and a CAD program. A computer was easy, go to the Computer Show and everybody wants to sell you "a you beaut machine." After some researching a 386 DX 40 with 4 Megs of Ram and a 130Mb hard-drive was obtained in late 1991.

The next problem was to get a CAD program and so I called in favours of my former professional contacts. I was not in Brisbug then but joined at the next Computer show in 1992. By then I had found and settled on a satisfactory program.

All my friends were into AutoCAD and of little help so I widened the field and mysterious programs of much suspect performances were offered. They must have been thrown off the back of the truck and then run over. At least this was a change from Solitaire and Tetris, my standbys in those early days of self teaching.

In overseas computer magazines an interest was now being shown in PC CAD programs and names were becoming familiar though unknown locally. Fortunately, by chance, I came upon a book called "Learn CAD Now" written by George Omura from Microsoft Press. This was not on the bookshelves of any book store I visited and it was only by

contacting the agents that I was able to obtain a copy. Plenty of books on AutoCAD and DesignCAD were displayed.

Until recently all CAD literature, both in books and the press, this includes magazines, has been towards the high powered professional programs. This has been somewhat overcome with the Multi-CAD(R) publication, though I have not seen my program featured to date.

The book contained disks with a CAD program based on EasyCAD produced by Evolution Computing in the USA. Some functions were removed but not enough to make it non functional and unsuitable for learning purposes.

Now being a legitimate and honest user, I put it to good use and gained considerable experience and familiarity with CAD operations. This program has been replaced with a fully functional and highly professional package from the same stable. This of course required the fitting of the co-processor to work.

The production of the detail drawings required the scaling of dimensions from photographs, sketches in publications, extracts from train magazines and many other

diverse sources. Most of these are very small and often at angles so making scaling difficult. One way out was to photocopy but this is inconvenient and so the scanner was added. This is a hand unit having full black and white features.

Now any suitable drawing is scanned and pasted into CorelDRAW. There it is manipulated, cleaned up and measured. By using the scaling facilities of this program ,a print, usually on A3 format,

is made from which the drawing information can be directly scaled and then entered into the CAD drawing in progress.

The drawing program will only accept files in vector format, either its own generic form or AutoCAD DXF form. The scanner output is in raster form which can be converted in CoreIDRAW but the results, with complex line drawings, leave much to be desired. I have used these file conversions as a template in a layer and built the detail drawing on separate layers and at the end erased the template. It works in a fashion.

There are programs that can convert from bit maps to vector format but enquiries overseas have been somewhat fruitless.

How does one design a locomotive?

The first action is to decide on the scale to which to which it is to be built. Following this an erection or elevation drawing has to be produced. This is a case of reverse engineering which is frowned upon in industry today but, as the prototypes are obsolete, the manufacturers in most cases are non existent and plans have long disappeared, there is no complaint. In most cases even the prototypes have long gone to the scrap merchant's torches.

From information such as wheel diameters, cylinder details and descriptions in books and magazines a fair idea of size is decided and a preliminary dimensioned sketch is made. Comparison against known features helps. Knowing a wheel diameter gives a good reference to scale other components.

The CAD program is then loaded and various parameters such as scale, line colours and file name entered. The first drawing made is the wheels as these, being

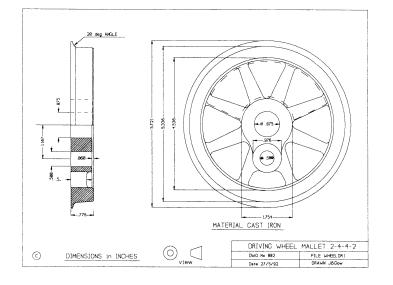
symmetrical and generally the dimensions known, are drawn to scale size. CAD programs, unlike drawing programs such a CoreIDRAW, are more precise and take full advantage of more specialised tools and precision measurement. Points are usually defined in vector form as X and Y co-ordinates and angles.

Having completed the individual drawings of known components, these are filed under separate file names for convenience

and it is now time to commence the erection drawing. A base line is drawn to represent the rail and all elevation references will be made to this. A line is drawn parallel using the centre height of the driving wheels. This is the reference for the frame.

Vertical construction lines are placed at wheel centres, these are known from research, and also are the front and rear faces of the frame, chassis if you only know automobiles.

Having set these reference points, the frame is constructed as far as the available data allows. It is at this time a line colour is selected to suit the printer/plotter requirements for line thickness. A problem with many CAD programs is the



line thickness is a constant and, by using different line colours, different line thickness are provided in plotters by pens with various diameters to match a colour. In printers the software interprets to give a line thickness required to match the defined colour.

It is now that the power of CAD programs comes to the fore. With the frame and reference lines drawn ,the components are retrieved from the detail part drawings and inserted in place. My method, it works well, is to 'insert' the component. This is an 'entity' and is given a temporary colour and is brought into the main drawing. It can be positioned and moved as one piece, independent of all other features, until it is ungrouped when it is then part of the whole. Then it is possible to use the break, trim and erase commands. Before this, its colour must be changed to plotting requirements.

Using macro commands, such as 'centre of circle', 'origin' and 'end of line', the parts are precisely placed in position. Should they be needed to be moved, it only necessary to redefine the exact XY coordinates. As each component is placed in position, views covered are cleaned up by use of the 'trim', 'break' and 'erase' commands. It is like using an eraser except one has 'undo' command to restore mistakes

Having completed the frames and added as many standard components as available, dimensions are determined of missing components and separate detail drawings are made of these.

When completed they are brought into the assembly drawing, fitted in place and cleaned up. Any changes found

are incorporated in the component detail drawing.

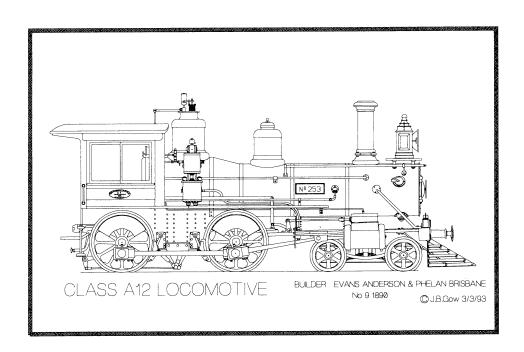
The next process is to design the boiler, add all components to it and bring it into the assembly drawing and, using positioning controls, set in place. Again with trim and break controls, in addition to erasing, a further clean-up is made.

The final stages are building the cab in place, adding all other auxiliaries and fittings, finally cleaning up and placing in a standard drawing layout with changing the temporary colours to suit the printing/plotting requirements. Finally give a file name and save to a disk.

A separate operation is to convert these files to HPGL format to suit a plotter/printer, especially if required for sending to a plotting bureau, or for use by other programs such as CorelDRAW or Word For Windows which have graphic filters to match. DXF format can be difficult to use and the files are very large.

The work of producing a new design drawing is very satisfying and is nearly as pleasant as making the real thing in the workshops, at least one does not get dirty and have to clean up.

The drawing below of a Queensland locomotive was done in FastCAD, converted to HP .plt format, entered into HiJaak Pro for further conversion and finally cut and pasted into Word for Windows.There it was sized and positioned to suit. Incidentally graphic files are quite large and difficult, at times, to handle under Windows conditions and some experimenting is required to develop a safe technique.



TECHNOLOGY

by Bill Latham.

Technology does not destroy Jobs so much as displace them -

I DISAGREE.

When world War Two was in progress, scientists were at work trying to find ways to help the War Effort and end the War as soon as possible, They were working on the development of Computers.

By 1980 computers had come into their own and businesses were starting to use them.

Once they became proficient with them they found they could make use of less office staff as one person was doing the work of two or three persons with the aid of the computer. In the Engineering Field, workshops were installing computers controlled automatic lathes, milling machines and boring mills.

Workers were made redundant, very little effort was made to re-train these workers into working with the advancing technology of the computer controlled machines.

In the manufacturing factories, technology in the form of robots which are controlled by computers were and are still taking over jobs which were performed by workers.

Some of the places which computers are used to take over jobs are in the Car Manufacturing Industry, Directing Traffic, Grocery Stores, Banks, Printing, Drafting, Hospital Records and if we look very closely we will find that every part of our life is governed by computers.

Here is one example of the Older Generation being treated as being unwanted because of the advancement of technology. A man who is a first class Machinist of many years standing applies for a job which was advertised in the daily paper. The Employer asked him if he could programme a N.C. Lathe. When he answered "No" the employer says "sorry that is what I need". It is the same in most big engineering shops.

A person applies for a position in a Grocery Store. The employer asks "Do you understand Bar-coding?" When the answer is "No" The employer says "Sorry"

The same thing happens in Accounting, Banking, Insurance, Hospital Records, Stores, The Police service and more. If you cannot use a word processor there is no job for you. The only people to get a foot in the door are those with some knowledge of word or data processing and these people are of the younger generation which leaves the older generation out in the cold.

The only sector of the work force to have gained from the computer industry as regards to workers are those people actually producing computers and software.

Computers are volatile, with the power off, the data and instruction are lost.

People are not volatile. Knowledge is something nobody can take away from you so they carry on with the task in hand with power off.

WATERFRONT.

To-day there is less than half the work-force across Australian Ports compared to twenty years ago with the handling of cargo in tonnage being more than five-fold. Containerisation and Mechanisation is the major contributing factor. Most of the paper work is done on Computers.

SHIP-BUILDING.

Major programmes have almost come to a halt. This is due to massive mechanisation and concentrated, computerised world ship-building by two or three companies in two or three overseas countries such as Japan, South Korea and Argentine. Automatic cutting of Steel-plate and Robot welding for several ships at the same time is done by computerised programming. This is replacing man a labour.

STEEL INDUSTRY

Drastic labour cuts by B.H.P. under the Steel Industry Programme as more advanced Mills and Furnaces are introduced. This trend has rapidly developed in the United

States and other countries under the tremendous pressure of the worlds most modern Steel Production mills.

In the Steel Mills of South Korea steel pours out almost like tooth paste out of a tube.

To use up the massive quantities of steel which is produced so cheaply extensive expressways are being constructed out of steel-plate.

AUTO INDUSTRY.

Massive concentrated highly technically advanced car production plants in the U.S.A. and particularly Japan are forcing Australian car manufacturers to rationalise their production in order for the industry to survive in this country.

Under the "Button Plan" by 1990 thousands less jobs will be available in the industry. This trend is carrying on to-day. There will be less models with more advanced technology being the order of the day. There will be more use of Robots in Welding, Spraying, Moulding, and machining of engine parts. This will replace man power.

THE AUSTRALIAN NEWSPRINT INDUSTRY

The modern computerised controlled news-print mills at Albury, N.S.W. produces 40% of the Newsprint paper for the newspaper industry by employing 186 workers. Compared to the less computerised mill of Tasmania which employs 1200 worker to produce the other 60%. Plans are in the pipe-line to introduce more computer control in the Tasmanian mill thus reducing the manual labour resulting in the loss of more jobs.

OIL INDUSTRY.

With the three-fold increase in Oil Production of 20 years ago, the major oil companies employees have been systematically diminishing through natural wastage, during the whole of this period.

All this being clearly demonstrated by the millions of unemployed in the U.S.A, Great Britain, Europe, etc. Australia has nearly 800,000 unemployed, with one in ten in Queensland being unemployed.

This is in the age of ADVANCED TECHNOLOGY.

Countries like Japan have increased school leaving age to 21 years to overcome the millions of young people being on the unemployed scrap heap as of now.

Governments have allowed this happen without a thought for the future of the workers. The welfare bill is too big and will worsen as time goes on and smaller factories are taken over and Centralised.

Centralisation is a bad thing for the workers and has come about by the advancement in technology in Industry. Profits have risen with technology, prices have risen, wages have not risen in comparison with profits and prices.

Technology was to help all people but it has missed out sadly through the greed of Company Owners.

So I come back to my original Statement. **TECHNOLOGY DOES DESTROY JOBS.**

FORD - THE EARLY APOSTLE OF MASS PRODUCTION.

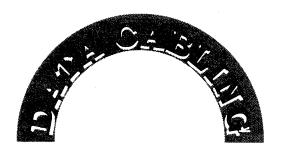
Quite a few years ago Henry Ford Junior took the President of the United States Auto Worker's Union for an inspection of Ford's latest Automated car plant.

As far as the eye could see the production line was producing car parts and assembling them. Not a person was to be seen. "Try and sell these Robots union tickets" said Henry Ford. "Try and sell them Motor cars" the President of the Auto Union quickly retorted.

This sample but true story surely demonstrates the dilemma of modern Technology.

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SNIPPETS CORNER..

Contributed by Robert Guerney

- * Are you an electrostatic charge? You could be in windy weather. Before handling floppy diskettes or turning on your computer, ground yourself to get rid of the built-up charge so you won't zap your data. (Wearing a combination of synthetic material and wool, or wearing synthetics and standing on a wool carpet, can also create a build-up of static electricity.) One way of grounding yourself is to touch one of the screws at the back of the computer - screw is metal, computer case is metal, when computer is plugged into the mains it should be grounded through the earth wire.)
- * Before backing up, totally reformat a floppy diskette. The surface area may have become corrupted or the heads on your drive may have moved a bit and be no longer able to read the old tracks properly.
- * Keep diskettes away from strong magnetic fields such as vacuum cleaners, refrigerators, TVs, telephones, etc. These magnetic fields are a sure way of destroying a diskette's contents.
- * Do not store diskettes in glove boxes or on dash boards of cars - unless you have a wavy cover to put them back into once they have been melted out of shape. They wouldn't fit too well into your floppy drive in that wavy condition either.

- * Do not smoke or leave cups of coffee etc near computers. Apart from the usual accidents, smoke tar makes sticky buildups inside your computer.
- * With DOS 6 and upwards and Connor drives, don't use MEMAKER or DOUBLESPACE - it causes severe(!) conflict.
- * The old adage is still good totally backup at frequent intervals. You don't want to do all that fine tuning of your programs again if anything goes wrong.
- * Make yourself an emergency boot disk containing your essential programs in case you lose your battery power and have to start from scratch again. I suggest the following are essential: IO.SYS, MSDOS, SYS, FORMAT.*, CONFIG.SYS, SYS.COM, FDISK.COM, CHKDSK.COM, CONFIG.SYS, AUTOEXEC.BAT, COMMAND.COM and, most important, CMOS.RAM. This latter can be obtained from the library.

Send your snippets in so others can benefit from your breakthroughs. The July 1994 Significant Bits "Snippets Corner" explains how to write for the magazine by saving your document as a DOS or TEXT file before sending it via modem or on disk through the mail to the editor.

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Learning Assembler using DEBUG

I'd hoped this month to discuss accessing the CMOS memory area. However I realised that last month's work with compiling and linking should be followed up in much more detail. So in this and next month's issue we'll look at how .EXE files are structured and how DOS loads and runs .COM and .EXE files. Besides DEBUG, some of the programs are written for TASM/MASM or QBASIC/QuickBASIC. If you don't have these don't worry. All programs mentioned this month will be available on the BBS in LASM1094.xxx. Line 5 (07-209-4980) is usually the easiest one to access for downloading programs mentioned in SigBits.

I'm worried that last month's article on integrating an asm routine into a HLL wasn't "hands-on" enough. Therefore, before we commence our work on executables, we'll discuss using just DEBUG to follow the working of the COMPSWAP routine inside the running QDIR.EXE.

Finding the Start of COMPSWAP

First off, a bug fix. When I finally came to QDIR3.EXE (the version that incorporates COMPSWAP.OBJ) I was working mainly with a 1,200 file group that was already sorted by Namethen-Extension (due to that way I created them). At that stage I was concentrating on Extension-then-Name sorting. I later found that COMPSWAP works fine with Ext-then-Name sorting but not the other way around. The reason for this is that I used the comparison starting-point as the start of the record swapping-point. This works with the Ext-first sort since the file extension is at the beginning of the record but fails with Namefirst sorting because the Name element is three bytes into the record. The solution is to feed the value of the element offset into the procedure and later use it to adjust the start of the swapping point. See Figure 1.

Since you've seen the source code for COMPSWAP it will not be too difficult to find a binary sequence from it within QDIR.EXE. To determine the binary sequence to search for, assemble the first three or so instructions in DEBUG and then unassemble them to see the binary values. Figure 2 shows the search itself in progress. You'll notice that I had no luck with the initial search sequence since MASM encoded the XOR instruction in a slightly different form (33h) from the one assembled with DEBUG (31h). By shortening the sequence you can overcome this.

If you are dealing with an executable then you might be able to locate important sections by looking for interrupts.

Dan Bridges

Part 7: Executable Files (1)

```
COMPSWAP.ASM - compares similar parts of 2 records in an
 array and swaps the records if the first string is greater than
 the second string. Returns 1 if a swap occurs.
 Since QuickBASIC uses the medium memory model data will be in
;the DS so only the File(1) offset need be specified.;Also, the NumBytes & RecSize values are hard-wired to suit QDIR.
 :OuickBASIC Usage:
 ;DECLARE Function CompSwap%(BYVAL Off1%, BYVAL Off2%, BYVAL ElOffset%)
 ;Result% = CompSwap%(Off1%, Off2%, ElOffset%)
 .MODEL Medium, Basic
 CODE
CompSwap PROC Uses DI SI, Off1:Word, Off2:Word, ElOffset:Word
Xor AX,AX ;Default result is "O".
      AX,AX
 Cld
                      Compare in the forward direction.
 Mov CX,000Bh
                     Keysize hard-wired to 11 bytes.
 Mov DI,0ff1
                     ;Load DI with the first offset.
 Mov SI,0ff2
                     Load SI with the second offset.
                     Repeatly compare [SI] - [DI]
 Repe Cmpsb
 Jae Exit
                     :Don't swap.
Swap_Them:
 Mov CX,001Ah
                     ;RecSize is hard-wired to 26 bytes.
                     Reload DI with first offset.
 Mov
      DI,Off1
 Sub
       DI, ElOffset; Adjust start-point to beginning of record.
                    ;Reload SI with second offset.
       SI,Off2
       SI,ElOffset ;Adjust start-point to beginning of record.
CX,1 ;Divide RecSize by 2 (for # of words to swap).
SwapWordElements ;If carry then RecSize was an odd num.
;The RecSize here will always be 26 bytes but I've
                   included a byte section to show you how it's done.

; Deal with the odd byte.

tr [DI] ;Load a byte at [DI] into AL.

tr [SI] ;Exchange this byte with the one at [SI].
SwapByteElement:
 Mov AL,Byte Ptr [DI]
Xchg AL,Byte Ptr [SI]
                               ;Store the current byte in AL at [DI].
                                STOSB also increments DI.
 Inc SI
                               ;Point to next byte.
SwapWordElements:
                               ;Do the same but use swaps words.
 Mov AX, Word Ptr
 Xchg AX,Word Ptr [SI]
 Stosw
 Inc SI
                               :Inc SI twice because we're dealing
                                with words.
 Loop SwapWordElements
                               Keep looping until CX reaches 0.
 Xor AX,AX
                        ;AX=1. This is more efficient than "MOV AX,1".
 Inc AX
Exit:
                        ; Return to BASIC
Ret
 CompSwap ENDP
```

Fig 1. The COMPSWAP routine with bug-fix for swapping records after a Name-then-Extension comparison.

```
C:\> DEBUG QDIRX.EXE
-S 0000:0 LO 31 CO FC B9 OB OO ; Search from 0:0 for 64Kb (LO).
0000:9507
              ;Found the sequence.
D 0:9507
              ;Dump the find.
0000:9500
                      D 0:9507.
0000:9510
             31 CO FC B9 OB O
0000:9520
              0....
;This isn't it. It's DEBUG prompt-line area. The last
 dump command overlaid the previous search command.
;Continue the search. Using F3-key editing makes this easy. -S 1000:0 L0 31 C0 FC B9 0B 00 -S 2000:0 L0 31 C0 FC B9 0B 00
-S 3000:0 LO 31 CO FC B9 0B 00
;No joy. Shorten the search string and try again.
-S 0000:0 LO FC B9 0B 00
0000:9507
0000:C169
-U 0:C169
             ;Check out the 2nd find.
0000:C169
             ĆLD
             MOV CX,000B
0000:C16A
             MOV DI,[BP+0A]
MOV SI,[BP+08]
0000:C16D
0000:C170
             REPZ
0000:C173
0000:C174
             CMPSR
 ;Bingo! You could use "G C16:9" to now execute to the
  CLD instruction.
```

Fig 2. How to search for a known code sequence within an executable file.

Searching for "CD 21" (Int 21h) will usually produce a big crop. Then examine the contents of the AH and AL registers just prior to the interrupt to find out which DOS routine was invoked.

Poleaxing Execution with INT 3

If you're having problems with an assembly language routine within a HLL program and you don't have CodeView or Turbo Debugger you can still easily locate the routine and watch what's going on if you can add an Int 03h instruction at or near the beginning of the asm routine. Int 03h is the same method that debuggers use to set a breakpoint. Int 03h is special in that its opcode is a single byte (CCh) whereas other interrupts require two bytes. When you set a breakpoint, the debugging program exchanges the opcode byte at the cursor with an Int 3 byte. When execution reaches this point, the address in the Interrupt Vector Table for the fourth entry (the first is Int 00h) is read and execution jumps to this address. Debuggers often substitute the address of their own Int 03h handler routine in the IVT. Part of the Int 03h handler's job is to put back the original byte that was there before you set a breakpoint. (After all, the original opcode is necessary for the proper execution of the program.) Only one byte can safely be replaced at a breakpoint which is why Int 03h is used for the job.

DEBUG uses the default Int 03h routine inside IO.SYS at segment 0070h. Issue "D 0:C L4" inside DEBUG. (The IVT table starts at 0000:0000h and each seg:offset address entry is 4 bytes in size so the fourth entry is at 0000:000Ch.) Then try "MEM /D" from the command line.

Figure 3 shows how COMPSWAP could be modified to incorporate an Int 03h instruction, while Figure 4 shows how you could create two test files and investigate their comparison by the routine. You could also follow how the Array recordswapping is done. Note that since our breakpoint is not being created by exchanging an original opcode, the Int 03h instruction remains in place as a barrier to further execution i.e. you can't just press "P" to proceed past it. This means that you have to manually increment the Instruction Point to advance. Make sure that you start out by using a floppy that was empty so that you only have two files to consider. And, if you use 4DOS, leave no space between "REM" and ">" i.e. "REM> A:TEST.BAT".

```
COMPSWPX.ASM - compares similar parts of 2 records in an
;array and swaps the records if the first string is greater than ;the second string. Returns 1 if a swap occurs.
The "X" version has an INT 3 instruction before the comparison:
section to halt execution within DEBUG.
;QuickBASIC Usage:
DECLARE Function CompSwpX%(BYVAL Off1%, BYVAL Off2%
                                                          BYVAL E10ffset%)
;Result% = CompSwpX%(Off1%, Off2%, ElOffset%)
.Model Medium, Basic
. Code
CompSwpX Proc Uses DI SI, Off1:Word, Off2:Word, ElOffset:Word
;Alternatively, you could place an INT 03h here.
Xor AX,AX ;Default result is "0".
 Xor AX,AX
                    Compare in the forward direction.
 Cld
 Mov CX,000Bh
                    Keysize hard-wired to 11 bytes.
       DI,Off1
SI,Off2
                    ;Load DI with the first offset.
;Load SI with the second offset.
 Mov
 Mov
 Int 03h
                    :Breakpoint.
 Repe Cmpsb
                    Repeatly compare [SI] - [DI]
.... as in COMPSWAP.ASM
```

Fig 3. How to create a software breakpoint for use with DEBUG.

The Program Segment Prefix

When DOS executes a COM or EXE file it first creates a 256-byte PSP. This is the reason why DEBUG loads a COM file at offset 100h. The PSP contains information that is used to start, run and terminate a program. Much of the PSP's contents are obsolete or little used and show DOS' CP/M heritage. Figure 5 lists the contents of the PSP while Figure 6 presents a MASM/TASM program that displays its own PSP.

Figure 7 is a screen dump from SHOW_PSP.COM with two parameters. Points to note:

- * The output is unformatted, so you should read addresses and values from right to left. The "End Of Block" value is the last memory block that the program is using. A000h paragraphs = A0000 = 655,360 bytes.
- * I'm running 4DOS which can load the resident portion of its command processor in a UMB. So the location of the Int 21h, 22h & 23h handlers are all in a UMB at segment B5EAh.

```
REM > A:TEST.BAT
        REM > A:TEST.BAK
        DEBUG ODIRX.EXE A:
      ;Start execution from the loading point.
;Initial screen output from QDIRX. Volume in drive C is HD 1 Directory of C:\*.*
 CS=0C15 IP=0013
                        ;Stops at the required point.
OC15:0013 INT 3
 -U7 ;An optional unassemble to get our bearings. We're 13h bytes
  ;into this segment but start unassembling from a little earlier
               XOŘ AX,AX
0C15:0007
0C15:0009
               CLD
OC15:000A
               MOV CX,000B
               MOV DI,[BP+OA]
OC15:000D
               MOV SI,[BP+08]
INT 3
OC15:0010
OC15:0013
               RFP7
0C15:0014
OC15:0015
               CMPSB
OC15:0016
               JNB 003D

    -RIP ;Prepare to bypass the breakpoint. Show IP.
    IP 0013 ;The instruction Pointer is stopped here.
    :14 ;Manually move it passed the breakpoint instruction.

           : Proceed.
OC15:0016 JNB 003D ;This jump will only if there is no carry ; (NC) but the carry flag is set (CY) so execution will fall
  through to the Swap_Them section.
-P5 ;Perform another 5 Proceeds. Only final registers shown.
SI=00A4 DI=008A DS=126D
OC16:0027 SHR CX,1
-D DS:8A
                 ;Dump from the start of the first record.
126D:0080
                              BATTES
                                            ;aa = Attributes
                        BATaaddtttt
126D:0090
                                            ;dd = Date
126D:00A0
                 ssssBAKTEST
                                           ;tttt = Time
                                    R
```

Fig 4. How to create two out-of-order filenames on a blank floppy and then use DEBUG to start following COMPSWPX's workings.

:ssss = Size

AKaaddttttsss...

126D:00B0

	0ffset	Size	Туре
Int 20h terminate code	0	2	Code
Last paragraph used by prog	2	2 2 1 5 4	# of paras
Reserved 01	2 4	$\bar{1}$	эт рапае
DosFuncDispatcher (CP/M Style)	5	5	Code
Int 22h terminate handler	Ah		Far address
Int 23h Ctrl-C handler	Eh	4	Far address
Int 24h_critical_error handler	12h	4 4 2	Far address
Parent Process PSP segment	16ḥ		Near
File Handle Table indices	18h	20	20 1-byte offs.
(used for file redirection)		_	_
Program environment segment	2Ch	2	Segment
Saved SS:SP	2Eh	4	Seg:Offset
(used after an Int 21h call)	221		
Handle Table Size	32h	2	Number
Handle Table Address	34h	4	Far Address
SHARE's Prev PSP (if loaded) Reserved 02	38h	4 4 1 1 2	Far Address
APPEND's TrueName Flag	3Ch 3Dh	1	D
Reserved 03	3Eh	Ţ	Byte
Major, Minor DOS version	40h	2	2 numbers
(altered by SETVER)	4011	2	z numbers
Reserved 04	42h	14	
Int 21h far call code	50h	3	Code
(Unix-Style)	3011	,	Couc
Reserved	53h	2	
Extended FCBlock #1 area	55h	2 7	Data area
Default File Control Block #1	5Ch	16	Data area
Default File Control Block #2	6Ch	20	Data Area
Command Line Parameter Length	80h	1	Number
Command Line Parmaters	81h	127	Data area
Note: 80h-FFh is also used as the do	efault Di	isk Tran	sfer Area (DTA)

Fig 5. The layout of the PSP.

- * The Parent PSP, segment 035Dh, here points to the command processor's PSP.
- *The default file handles set up are STDIN, STDOUT, STDERR, STDAUX and STDPRN. Usually the first three go to the CON device (Screen & Keyboard). STDAUX goes to AUX (usually COM1) and STDPRN goes to PRN (usually LPT1). Note that, although STDERR goes to CON, you can't redirect its output from the command line with DOS. (You can do this with 4DOS and OS/2.) If you want to experiment with redirecting input with SHOW_PSP you can create a simple input file by placing just a ASCII 13 (CR) in a file and then issuing "SHOW_PSP < INPUT.FIL". (To produce a CR character in any good editor, hold down the Alt-key and type "013" on the numeric keypad.) To pause the screen scrolling try both the Pause key and piping the output through MORE. See Figure 8 for some results.
- * Notice how a program's environment usually comes a little before (segment 03AFh) the program itself (03D4h). If you experiment with "MEM /D" you will notice something else. MEM tells us that the MEM program is loaded one paragraph (16 bytes) lower i.e. 03D3h rather than 03D4h. The reason is that besides a copy of the environment, DOS creates a 16-byte Memory Control Block (MCB) just before it builds the program's PSP. (DOS also creates another MCB 16 bytes before the copy of the environment.) So MEM's value includes the MCB while SHOW_PSP doesn't. The topic of MCBs is a large one and we shall return to it in a later issue.
- * The standard file table size for any one program will be 14h (20 entries) regardless of what FILES value you have in the CONFIG.SYS and its standard location will be PSP_Seg:0018h.
- * If you're running DOS v5 or better you will see major and minor version values in the PSP. In the example shown in Figure 7, the major version number is "7" and the minor one is "47" (2Fh) i.e. DOS v7.47. This is because I'd previously issued "SETVER SHOW_PSP.COM 7.47" and then rebooted. Remember though that the file itself has not been altered. Rather it's DOS' loader routine that goes along with the deception by placing this value in the PSP.
- * You'll notice that I've supplied two parameters. The first is in lowercase while the second is in uppercase. Case is preserved in the command-line parameters section. Looking at this field we first see a space (20h) character which separates the first parameter from the program name. Then we have four characters, another space separator, seven more characters and then a CR (0Dh) ending the input. Ignore anything after the CR. The command line length value includes the separator.
- * Notice how the default FCB1 & FCB2 ares also receive the first two parameters, but only as uppercase. (File Control Blocks are an obsolete form of file control, circa DOS v1, that have largely been superseded by File Handles.) However they get nothing if a path is included (FCBs are quite primitive) and they'll only pass a maximum of 11 characters (with up to eight allowed before a full stop and three afterwards).

Mark Guyatt	∴ I've	ion of this program was written by added a number of extra sections	Show_09:	Lodsb
and modular .SSUME		eAndData, DS:CodeAndData		Call Show_Byte Loopnz Show_09 Call NL
odeAndData		T Byte Public 'COOE' O ;Following label is at offset 0000h.	Chart 10.	Mov DX, offset Text_Saved_SS_IP Call Show_Label Mov CX, 4
	ORG	0100h ;COM programs start at 100h.	Show_10:	Lodsb Call Show_Byte
lainProg	PROC CLD Mov Mov Call	NEAR SI, offset StartOfPSP; Start reading from Oh. DX, offset Text_Int2OTerm; The 1st title Off. Show_Label		Loopnz Show_10 Call NL Mov DX, offset Text_HandleTblSize Call Show_Label Mov CX, 2
how_01:	Mov Lodsb	CX, 2 ;2 bytes will be shown. For LOOPNZ. ;Load byte from DS:[SI] into AL.	Show_11:	Lodsb Call Show_Byte
	Call Mov Call	Show_Byte Show_01 ;Loop until both are shown. NL ;Start a new line on the screen. DX, offset Text_EndOfBlock Show_Label	Chave 12.	Loopnz Show_11 Call NL Mov DX, offset Text_HandleAddr Call Show_Label Mov CX, 4
how_02:	Mov Lodsb Call	CX, 2 Show_Byte	Show_12:	Lodsb Call Show_Byte Loopnz Show_12
		Show_02 NL Dx, offset Text_Reserved01 Show_Label		Call NL Mov DX, offset Text_SHARE_PrevPSP Call Show_Label Mov CX, 4
	Lodsb Call Call Mov	Show_Byte NL DX, offset Text_DosFnCall	Show_13:	Lodsb Call Show_Byte Loopnz Show_13
how_03:	Call Mov	Show_Label CX, 5		Call NL Mov DX, offset Text_Reserved02 Call Show_Label
	Lodsb Call Loopnz Call	Show_Byte Show_03 NL	Show_14:	Lodsb ;Only 1 byte. No need for CX,1 or Call Show_Byte ;a LOOPNZ structure.
	Mov Call Mov	DX, offset Text_Int22Handler Show_Label CX, 4	Show_15:	Mov DX, offset Text_TrueNameFlag Call Show_Label
Show_04:	Lodsb Call Loopnz	Show_Byte Show_04		Lodsb Call Show_Byte ;Only 1 byte to display. Call NL Mov Dx, offset Text_Reserved03
	Call Mov Call Mov	NL DX, offset Text_Int23Handler Show_Label CX, 4	Show_16:	Call Show_Label Mov CX, 2 Lodsb
how_05:	Lodsb Call	Show_Byte Show_05		Call Show_Byte Loopnz Show_16 Call NL
	Call Mov Call	NL DX, offset Text_Int24Handler Show_Label	Show_17:	Call Shów_Label Mov CX, 2
how_06:	Mov Lodsb Call			Lodsb Call Show_Byte Loopnz Show_17 Call NL
	Loopnz Call Mov	Show_06	Show_18:	Mov DX, offset Text_Reserved04 Call Show_Label Mov CX, 14
how_07:	Mov Lodsb	CX, 2	5,1011_101	Lodsb Call Show_Byte Loopnz Show_18
	Call Loopnz Call Mov	Show_Byte Show_07 NL DX, offset Text_FileHandles		Call NL Mov DX, offset Text_Int21FarCall Call Show_Label Mov CX, 3
now_08:		Show_Label CX, 20 ;TASM/MASM default to decimal notation.	Show_19:	Lodsb Call Show_Byte Loopnz Show_19
	Call Loopnz Call	Show_08 NL		Call NL Mov DX, offset Text_Reserved05 Call Show_Label
	Mov	DX, offset Text_ProgEnvSeg Show_Label CX, 2	Show_20:	Mov CX, 2 Lodsb

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```
Call
                       Show_Byte
                                                                                   Set_High_Char:
               Loopnz Show_20
                                                                                                          Byte Ptr [Hold_2Chars], AL
                                                                                                                                              Put char in the
                                                                                                                       the character display buffer.
               Call
               Mov
                       DX, offset Text_Ext_FCB1
                                                                                                 Pop
                                                                                                                       Restore AX for low nibble work
                                                                                                         AL, 0Fh ;Consider only the low nibble of AL. AL, 30h ;Make the character "0" or greater. AL, 3Ah ;Should it be "A" or greater? Set_Low_Char ;It's "0" to "9". AL, 07h ;It's "A" to "F".
               Call
                       Show_Label
                                                                                                 And
                                                                                                 Add
               Mov
Show_21:
                                                                                                 Cmb
              Lodsb
                                                                                                  Jb.
                       Show_Byte
               Call
                                                                                                 Add
               Loopnz
                       Show_21
                                                                                   Set_Low_Char:
               Call
                                                                                                 Mov
                                                                                                          Byte Ptr [Hold_2Chars + 1], AL ; Put in buffer.
               Mov
                       DX, offset Text_StartDefFCB1
                                                                                   Show_Them:
               Call
                                                                                                 Push
              Mov
                       CX, 16
                                                                                                 Moν
                                                                                                              09h
Show_22:
                                                                                                          DX, offset Hold_2Chars ;Show the 2 chars.
                                                                                                 Mov
               Lodsb
                                                                                                 Int
                                                                                                 Pop
               Call
                       Show_Byte
               Loopnz Show_22
                                                                                                 Ret
               Call
                                                                                   Show_Byte
                                                                                                  ENDP
                       DX, offset Text_StartDefFCB2
               Mov
               Call
                       Show_Label
                       CX, 20
                                                                                                 PROC
              Mov
                                                                                   NL
                                                                                                          NEAR
                                                                                                                     ;Sends a CR/LF to the screen.
                                                                                                          DX, offset NewLine
Show_23:
                                                                                                 Μον
              Lodsb
                                                                                                 Μον
                                                                                                          AH, 09h
              Call
                       Show_Byte
                                                                                                 Int
                                                                                                          21h
               Loopnz Show_23
                                                                                                 Ret
              Call
                       NL
                                                                                   NL
                                                                                                 ENDP
              Mov
                       DX, offset Text_CmdLineLen
              Call
                       Show_Label
                                                                                                 PROC
                                                                                   Show_Label
                                                                                                         NEAR
                                                                                                                     ;Used to display titles.
              Lodsb
                                                                                                 Mov
                                                                                                          AH, 09h
              Call
                       Show_Byte
                                                                                                 Int
                                                                                                         21h
              Call
                                                                                                 Ret
              Mov
                       DX, offset Text_CmdParms
                                                                                   Show_Label
                                                                                                    ENDP
              Call
                       Show_Label
                                                                                   Text_Int20Term
Text_End0fBlock
                                                                                                                           Int20Term: $
              Mov
                       CX. 127
Show_24:
                                                                                                            db
                                                                                                                          EndOfBlock:
              Lodsb
                                                                                   Text_Reserved01
                                                                                                            db
                                                                                                                          Reserved01:
                       Show_Byte
              Call
                                                                                   Text_DosFnCall
                                                                                                            db
                                                                                                                        CP/M FnCall:
              Loopnz Show_24
                                                                                   Text_Int22Handler
                                                                                                            db
                                                                                                                        Int22Handler:
              Call
                       NI
                                                                                   Text_Int23Handler
                                                                                                            db
                                                                                                                        Int23Handler:
              Call
                                                                                   Text_Int24Handler
                                                                                                           db
                                                                                                                        Int24Handler:
                       DX, offset Text_DTA_Addr
              Mov
                                                                                                           db
                                                                                   Text_ParentPSP
                                                                                                                           ParentPSP:
                       Show_Label
              Call
                                                                                   Text_FileHandles
                                                                                                           db
                                                                                                                        FileHandles:
                                                                                  Text_ProgEnvSeg
Text_Saved_SS_IP
              Mov
                       AH, 2Fh
                                   ;INT 21h Func 2Fh. Get DTA Address.
                                                                                                           db
                                                                                                                          ProgEnvSeg:
                       21h
                                   :Afterwards, ES:BX -> DTA
                                                                                                                         Saved SS:SP:
              Int
                                                                                                           db
              Mov
                       AL, BL
                                   ;Copy low byte of DTA offset to AL.
                                                                                   Text_HandleTblSize
                                                                                                                     "HandleTblSize:
                                                                                                           db
Show_PSP_Off:
                                                                                   Text_HandleAddr
                                                                                                                     "HandleTblAddr:
                                                                                                           db
              Call
                                                                                   Text SHARE PrevPSP
                                                                                                                     "SHARE_PrevPSP:
                       Show_Byte
                                                                                                           db
              Mov
                       AL, BH
                                   ;Copy high byte of DTA offset to AL.
                                                                                   Text_Reserved02
                                                                                                           dh
                                                                                                                          Reserved02:
              Call
                       Show_Byte
                                                                                   Text_TrueNameFlag
                                                                                                           db
                                                                                                                       TrueNameFlag:
              Mov
                       AX, ES
                                   ;Copy DTA segment to AX.
                                                                                   Text_Reserved03
                                                                                                           db
                                                                                                                          Reserved03:
Show_PSP_Seg
                                                                                   Text_DosVersion
                                                                                                           db
                                                                                                                          DosVersion:
              Call
                      Show_Byte ;Show low byte of segment address. AX, ES ;Reload. AL, AH ;This time, look at the high byte.
                                                                                   Text_Reserved04
                                                                                                           db
                                                                                                                          Reserved04:
              Mov
                                                                                   Text_Int21FarCall
                                                                                                           db
                                                                                                                       Int21FarCall:
              Mov
                                                                                   Text_Reserved05
                                                                                                           db
                                                                                                                          Reserved05:
              Call
                      Show_Byte
                                                                                   Text_StartDefFCB1
                                                                                                                       StartDefFCB1:
                                                                                                           db
                                                                                                                        Ext_DefFCB1:
              Call
                                                                                   Text_Ext_FCB1
              Call
                      NL
                                                                                   Text_StartDefFCB2
                                                                                                                       StartDefFCB2:
                                                                                                           db
Exit_Prog:
                                                                                   Text_CmdLineLen
                                                                                                           dh
                                                                                                                          CmdLineLen:
              Μον
                       AX, 4C00h ; Int 21h Func 4Ch. Terminate
                                                                                  Text_CmdParms
                                                                                                           db
                                                                                                                           CmdParams:
                                   ;program with errorlevel in AL.
                                                                                  Text_DTA_Addr
                                                                                                           db
                                                                                                                        DTA Address: $'
MainProg
              ENDP
                                                                                  WordWorkArea
                                                                                                                     00
                                                                                                           dw
                                                                                                                     ODh, OAh, "$"
O, O, "$"
                                                                                   Newl ine
                                                                                                           dh
                                                                                  Hold_2Chars
                                                                                                           db
Show_Byte
              PROC
                       NEAR
                                  ;Only AL is considered.
              Push
                      AX
                                                                                  CodeAndData ENDS
              Shr
                      AL, 1
                                   ;Consider only the high nibble of
              Shr
                      AL, 1
                                   ;AL by temporarily dividing it by
                                                                                                MainProg
              Shr
                      AL, 1
                                   ;16 i.e divide by 2^4.
                                                                                   The END directive also specifys the program entry point;
              Shr
                      AL, 1
                                                                                   i.e. after the MainProg label.
                      AL, 30h ;Make the character "0" or greater.
AL, 3Ah ;Should it be "A" or greater?
Set_High_Char ; It's "0" to "9".
AL, 07h ;It's "A" to "F" so add 7h since "A
              Add
              Cmp
              Jb
                                                                                       Fig 6. The SHOW_PSP.COM program displays its own PSP
              Add
                                                      so add 7h since "A"
                                  ; is 41h. 3Ah + 07h = 41h.
                                                                                           (256 bytes). Use either MASM or TASM to assemble.
```

COM File Structure

A COM file is a very simple beastie. It is the binary image of what the code and data look like when they are loaded into memory at offset 100h in the current segment. DOS loads COM files at this offset to allow space for the preceding PSP structure.

A COM file follows the "tiny" memory model i.e. Code, Data & the Stack all occupy the same segment. COM files have no inherent stack; DOS itself creates one at the top of the segment when it loads the file. Since the Stack only works with word-sized values, the Stack Pointer (SP) will be set to FFFEh and as values are pushed the Stack grows downwards towards

```
C:\> SHOW_PSP test TESTING > SCRNDUMP.FIL
  Int20 Term: CD 20
 End Of Block: 00 A0
 Reserved 01: 00
 CP/M FnCall: 9A FO FE 1D FO
           E2 03 EA B5
7C 05 EA B5
90 04 EA B5
Int22 Handler:
Int23 Handler:
Int24 Handler:
            5D 03
  Parent PSP:
 File Handles: 01 03 01 00 02 01 FF FF
FF FF FI
Prog Env Seg: AF 03
Saved SS:SP: E4 FF D5 03
HandleTblSize:
           14 00
           18 00 D5 03
HandleTblAddr:
SHARE PrevPSP:
            FF FF FF FF
 Reserved 02: 00
TrueName Flag:
 Reserved 03:
           00
            07
  Dos Version:
 CD 21 CB
Int21 FarCall:
 Reserves 05: 00 00
  Ext DefFCB1: 00 00 00 00 00 00 00
Start DefFCB1: 00 54 45 53 54 20 20 20 20 20 20 20 00 00 00 00 Start DefFCB2: 00 54 45 53 54 49 4E 47 20 20 20 20 00 00 00 00
                           4E 47 20 20 20 20 00 00 00 00 00
00 00 00
 Cmd Line Len: 0D
01 01 01 00 00 00 01 00 00 00 4C 59 64 E4 BF 80 58 59 01 09 DE 91
  DTA Address: 80 00 D5 03
```

Fig 7. Redirected output from running SHOW_PSP.COM with two command line parameters.

H and l e	Use	Normal	Output to a file	Input from a file	In/Out to/from files	Piped through MORE
0000h	STDIN	1	1	3	3	1
0001h	STDOUT	1	3	1	4 .	3
0002h	STDERR	1	1	1	1	1
0003h	STDAUX	0	0	0	0	0
0004h	STDPRN	2	2	2	2	2
0005h	new1	FF	1	1	1	FF
0006h	new2	FF	FF	FF	1	1

Where O=AUX 1=CON 2=PRN 3=File1 4=File2 FF=unassigned

Figure 8. The result of file handle experiments performed with SHOW_PSP.COM.

```
CodeAndData SECMENT WORD PUBLIC 'CODE'
ORG 100h ;Always needed for a COM file.
Starting_Point:
Mov DX, Offset String1 ;Copy the address of this var into DX
Mov AH, 09h ;Int 21h Func 09h. Print a $-terminated
Int 21h ;string whose address is in DX.
Mov AX, 4COOh ;Int 21h Func 4Ch. Terminate program
Int 21h ;and return as an errorlevel what's in AL.
String1 db "String 1",ODh,OAh,"$" ;"String 1" followed by CR/LF.
CodeAndData ENDS
END Starting_Point
```

Fig 9. TEST1.ASM produces a very simple COM file.

the Code and Data. Maximum filesize is just under 64KB (less 256 bytes for the PSP). A variation on a COM is a BIN file which is also a binary image but it loads at offset 0000h so it's not designed to run from the command-line. Rather, other programs will load it.

The creation of an assembly-language program to produce a COM file is a straightforward affair. Examine Figure 9. Points of interest:

* Note the Assembler Directives used with CodeAndData. The segment that contains this code is aligned in memory so that it starts on a word boundary. This is a more efficient memory alignment on an AT or better class machine then starting on an odd byte. Now, since a COM file must start at offset 0100h (note the presence of the "ORG 100" directive), this segment will always be word-aligned anyway, but with other memory models this may not be the case. The code within this segment is "Public" and the linker will combine any public segments together to form one, composite segment. (Of course the size of the combined segment must still be less than 64K). The segment is of class "Code". If there were any other code segments then, as they are of the same class they would be arranged one after the other in the final program, while "Data" and "Stack" class segments (again this will not apply to a COM file) will have their own groupings in another part of the program.

When it comes to Segment Directives, all we really need in a COM file would be "CodeAndData SEGMENT" and the later "CodeAndData ENDS".

- * Since we have code and data mixed together, it is the programmer's responsibility to ensure that no attempt is made to execute data. If the data (String1) came before the code but after the starting point, then you would have to jump around it. In the case of TEST1, the data is after the part of the code that terminates the program so that execution (CS:IP) never reaches it.
- * Every program must have an END directive. Optionally, it can also specify where execution should start from. With a COM file this will be at 0100h into the load segment (i.e. the same segment that all the other segment registers will be set to).
- * Look at the left hand part of Figure 10. It may appear that a COM file will only use a maximum of 64KB of RAM when it loads but this is not usually the case. DOS gives the COM file all the remaining low memory due to the lack of any file header to direct DOS about the program's actual memory requirements. The programmer has to specifically include extra code if this memory behavior is undesirable. (Int 21h Func 4Ah, Modify Memory Allocation, will fix this.)

You should load TEST1.COM in DEBUG and verify the SP, IP and segment register details mentioned in this section. With your knowledge of the PSP's layout you should have little trouble finding TEST1.COM's copy of the environment. See Figure 11 for a demonstration.

-							
				09CA:0100 SS:SP	Top of STACK		
				SS=09CA 09CA:0000	STACK	256	
	09B7:FFFE SS:SP	Top of Stack		DS=09C9 after MOV AX,@DATA 09C9:0000	DATA	16 (11)	
	IP=0100 09B7:0100	TEST1.COM	64K	IP=0000 09C7:0000	CODE	32 (17)	
	SS=09B7 ES=09B7 DS=09B7 CS=09B7			ES=09B7 DS=9B7 before MOV AX,@DATA			
	09B7:0000	Prog PSP	256	09B7:0000	Prog PSP	256	
	09B6:0000	Prog MCB	16	09B6:0000	Prog MCB	16	
	0910:0000	Prog Copy of Env	592	0910:0000	Prog Copy of Env	592	
	0900:0000	Env MCB	16	0900:0000	Env MCB	16	
	0000:0000	DOS & BIOS Stuff		0000:0000	DOS & BIOS Stuff		
		TEST1.COM 23 bytes in		55	TEST2.EXE i 55 bytes in		

Fig 10. The memory layout of COM and EXE (small memory model) files. Figures in brackets are the actual binary size of the EXE's components.

C:\> DEBUG TEST1.COM DS=09B7 ES=09B7 SS=09B7 CS=09B7 IP=0100 SP=FFFE 09B7:0100 MOV DX,010C -D 9B6:0 L10 ;A paragraph before the PSP you'll find ;TEST1.COM's MCB. A MCB will always begin with either ; "M" or "Z". The program's MCB will also contain the ;filename of the program it represents (no extension). 09B6:0000 Z.I.P.DTEST1... 09B6:0000 -D 2C L2 ;Offset 2Ch from the start of the PSP (offset 0000) ; contains the segment address of the program's env. 09B7:0020 ;Dump the start of TEST1.COM's copy of the env. $\ensuremath{\text{CMDLINE=DEBUG TE}}$ -D 992:0 0992:0000 0992:0010 ST1.COM.RAMDISK= g:.PATH=G:\;G:\X XXX;D:\ASMPROGS; 0992:0020 0992:0030 ;Show the MCB for the copy of the env, as well. M..\$..G...H...PP -D 991:0 0991:0000

Figure 11. Using DEBUG to inpect TEST1.COM's MCB, its copy of the environment and the environment's MCB.

Conclusion

You have seen that, using relatively simple tools, it's possible to learn a lot about how DOS works. We'll push the throttle fully forward next month when we use DEBUG and QBASIC/QuickBASIC to examine the header structure of an EXE file and see how its relocation mechanism functions.

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My Automation of Norton Backup

by Mic Collis

One of the great features of Norton Desktop for Windows (NDW) is Norton Backup for Windows. I and others have at times been critical of NDW. I have never been critical of Norton Backup. Microsoft Backup for Windows which comes with DOS 6.x is a cut down version of this great program.

A couple of weeks ago, my wife asked me to setup a backup system on her work computer for her. She wanted an automated system that would very simply take care of daily backups of her data files. I thought this would be a simple task. It wasn't! Firstly she doesn't have NDW nor Norton Backup, so I set to work on Microsoft Backup. It was at this point that I realised just how cut down this version is. There are no parameters to make it immediately commence backing up. You must click on the "Commence Backup" button to get things started. I could have used a windows batch program to get around this problem, unfortunately the only ones I know of are Winbatch (shareware) and NDWs Batch Builder and neither were available in these circumstances.

My wife is only backing up to floppies so the lack of tape backup support was not a problem. As for the rest of the problem, the best I could do for her was a set of floppies (one set for each day of the week) a setup file for Microsoft Backup and to stick the whole thing in the Startup group. This means that when she comes in each day the first thing that happens is she places the floppy for that day in the drive and clicks the button to start backing up.

All this got me to thinking about my own backups. I don't have a tape backup system, so I too am limited to backing up to floppies. But I decided I should develop a system that worked for me. I tried the scheduling program which came with NDW for a while, but I found it a bit limiting, and annoying. It would certainly schedule my backups but took no account of whether I wanted to back up at that time or not.

I decided to develop my own system using "Script Maker" (a program which allows development of "exe" files for performing tasks, not unlike Visual Basic). I tried for a week to develop a program but eventually gave up. The documentation in the NDW manual is just too sketchy to allow anything but the most basic of programming (No pun intended). I then decided to go back a version in NDW and try Batch Builder" which came with NDW version 2. The manual is far

more helpful and these files will still run under NDW version 3.

The program I came up with, is printed on the next two pages (48-49). It may not be exactly what you may want a backup program to be but if you have NDW it may help you develop one that suits your specific needs. Only one disclaimer, this program works, however some of the programming may be a bit rough. I'm sure a professional programmer would be able to condense a lot of it into sub routines and so on. They are welcome to do so, and I hope they publish it here, I'm always willing to learn.

In the program, a semi-colon (;) is equivalent to a "rem" in a DOS batch file, so everything following is a comment. I have placed the comments on the line before the relevant code. You will not need to include the comments if you intend to copy the program.

How do I use it?

Well I have an icon in my startup group (figure 1) titled "Daily Backup Batch" the filename is "backup.wbt". This "wbt" extension is the default for a Batch Builder file. NDW automatically sets up an association to "batchrun.exe" which is the file that runs the program.

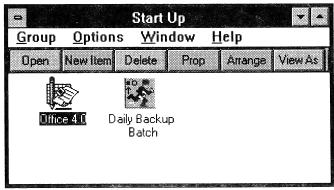


Fig. 1 - Backup Icon

When I start Windows "backup.wbt" runs and the first thing it does is ask me whether or not I want to backup at this time (figure 2). I am given the choice of answering "YES", "NO" or "CANCEL". If I click on "NO" the box disappears and waits 1 hour before reappearing to ask me the same question again.

Continued on Page 50

```
This is used for debugging the program and
                                                                        :WEDNESDAY
 is normally commented out
                                                                        longday="WEDNESDAY"
 ; debug (@on)
                                                                        ; Wednesday is a special case because the spelling is 9 characters long and DOS only allows 8
 ; Delay the start for 1 second - this was the only way I could get the thing to work from the \,
                                                                        characters in a file name
 Startup Group - must be a bug somewhere
                                                                       params="wednsday.set /a"
                                                                       goto TEXT
 ; Get date from "lastback.ini" to check for the last backup - I use a file called "lastback.ini"
                                                                        :THURSDAY
to store info about past backups - here we are checking the date "lastback.ini" was last saved and storing it in a variable called "lastdate"
                                                                        longday="THURSDAY"
                                                                        params="%longday%.set /a"
                                                                       goto TEXT
 lastdate=FileTimeGet("c:\win\lastback.ini")
                                                                        :FRIDAY
           We are breaking "lastdate" up into the date
                                                                       longday="FRIDAY"
 and time
                                                                       params="%longday%.set /a"
 ParseData("%lastdate%")
 ; We are reassigning variable "lastdate" to the actual date that "lastback.ini" was saved
                                                                                  We are setting the variable "text" to tell
                                                                        us which set of diskettes to get ready for the
 lastdate=param1
 ; Get today's date and assign it to variable "nowdate" for a later comparison
                                                                        text="Backup Set for %longday% is required"
nowdate=DateTime()
                                                                                  Ask the user if they want to backup now -
           Break up "nowdate" into day, date and time
                                                                       sometimes it is not convenient to backup at a
                                                                       particular time
ParseData("%nowdate%")
; Assign the day part of "nowdate" to parameter "day"
                                                                       response=AskYesNo("Daily Backup Routine","Would you
                                                                       like to begin backing up now?'
day=param1
                                                                       ; If the user did not want to backup the response will be "@no", if they canceled then the program automatically goes to "cancel"
           Reassign variable "nowdate" to today's
actual date
nowdate=param2
                                                                       If response==@no then goto NO
; If today's date and the last backup date from "lastback.ini" are the same then exit - this
                                                                       ; Check if Norton Backup is already running - we want it open a specific way for this program to
means that we have already backed up today
                                                                       work properly
if lastdate==nowdate then exit
                                                                       if WinExist("Norton Backup")<>@true then goto RUN
; Check the day of the week and select the backup set or exit - I don't want to be hassled by backups on the weekend
                                                                                  If Norton Backup was open then activate it
                                                                       WinActivate("Norton Backup")
                                                                                  Then close it
if day=="Sat" then exit
                                                                       WinClose("Norton Backup")
if day=="Sun" then exit
                                                                                  Send the "enter" command to the box at the
if day=="Mon" then goto MONDAY
                                                                       ćlose of Norton Backup
if day=='Tue" then goto TUESDAY
                                                                       SendKey('{ENTER}')
if day=='Wed'' then goto WEDNESDAY
if day=="Thu" then goto THURSDAY
                                                                                  Send a message to the user informing them of
if day=="Fri" then goto FRIDAY
                                                                       the backup set to use
: MONDAY
                                                                       Message("Daily Backup Routine", '%text%")
Because the variable "day" is only a 3 letter abbreviation of the day I want to assign the variable "longday" to the full name of the day
                                                                                  Run Norton Backup with the appropriate set
                                                                       for today
                                                                       RunZoom("c:\ndw\nbwin.exe",'%params%")
longday="MONDAY"
                                                                                  Wait till Norton Backup has closed - because
                                                                       windows multitasks this program would go on about
it's business at the same time Norton Backup was
          Here we are assigning the parameters that
Norton Backup will use for the backup set and also
that we wish it to start straight away "/a"
                                                                       performing the backup, but we want to make sure
                                                                       everything finished okay
params="%longday%.set /a"
                                                                       WinWaitClose("Norton Backup")
goto TEXT
                                                                                  Here is that Wednesday special case again
:TUESDAY
                                                                       if day<>'Wed' then goto NOTWED
longday="TUESDAY"
                                                                       checkdate=FileTimeGet("c:\ndw\wednsday.cat")
params="%longday%.set /a"
                                                                       goto CHECK_IT
goto TEXT
                                                                       : NOTWED
```

Check that the backup was successful - if it ParseData("%text3%") was Norton Backup will create a catalogue file checkday=param1 containing what was backed up - we can check the date this file was created the way we did with "lastback.ini" earlier if checkday<>longday then goto DAY3 checkset="found" checkdate=FileTimeGet("c:\ndw\%longday%.cat") goto DAY3 :CHECK_IT :WRITE4 ParseData("%checkdate%") IniWritePvt("BackUpSet","4thLastDay","%text3%","c:\win\lastback.ini") checkdate=param1 text2=IniReadPvt("BackUpSet","2ndLastDay","not
found","c:\win\lastback.ini") ; If the backup was not successful then exitthat is, if today's date is not the same as that of the catalogue file if checkset=="found" then goto WRITE3 If checkdate<>nowdate then exit ParseData("%text2%") Now we come to the bit where we want to checkday=param1 record that this backup was successful and what the day and date was - at the same time we want to only keep a record of the last five backups and only the if checkday<>longday then goto DAY2 checkset="found" ones for each individual day goto DAY2 checkset="not found" :WRITE3 ; Here we take a look at the data stored in "lastback.ini" at the "5thLastDay" point IniWritePvt("BackUpSet", "3rdLastDay", "%text2%", "c:\win\lastback.ini") :DAY2 text5=IniReadPvt("BackUpSet","5thLastDay","not
found","c:\win\lastback.ini") text1=IniReadPvt("BackUpSet","LastDay","not found", "c:\win\lastback.ini") We break the data up into its components if checkset=="found" then goto WRITE2 ParseData("%text5%") ParseData("%text1%") Assign the variable "checkday" to the day checkday=param1 information obtained if checkday<>longday then goto DAY1 checkday=param1 checkset="found" If the "checkday" information is not the same goto DAY1 as today e.g. MONDAY then skip down to the :WRTTF2 "next"LastDay IniWritePvt("BackUpSet", '2ndLastDay", '%text1%", "c:\win\lastback.ini") if checkday<>longday then goto DAY5 : DAY1 ; If the "checkday" information was the same then reassign variable "checkset" to "found" ; Today's successful backup is written into the "LastDay" spot - this comprises the day of the week along with the date checkset="found" IniWritePvt("BackUpSet","LastDay","%longday% %nowdate%","c:\win\lastback.ini") · DAY5 ; Here we take a look at the data stored in "lastback.ini" at the "4thLastDay" point Once all is complete we exit this program text4=IniReadPvt("BackUpSet","4thLastDay","not
found","c:\win\lastback.ini") exit If the user answered cancel when asked if they wanted to backup the program ends up here If the days of the week matched earlier then we want to move things down a day : CANCEL if checkset=="found" then goto WRITE5 You could exit the program at this point - I usually prefer not to so the exit command is If no match was found we repeat the procedure commented out until a match is found ParseData("%text4%") ;exit checkday=param1 If user answered no when asked about backing up the program comes to here if checkday<>longday then goto DAY4 checkset="found" : NO goto DAY4 If user is not ready to backup wait 1 hour and ask again - this is done by delaying the program :WRITE5 3600 seconds ; If a match was found then we write the information that was previously held in "4thLastDay" delay(3600) into "5thLastDay" and so on Ask the user again if they want to backup IniWritePvt("BackUpSet","5thLastDay","%text4%","c:\win\lastback.ini") goto CHECKUSER :DAY4 text3=IniReadPvt("BackUpSet","3rdLastDay","not found","c:\win\lastback.ini") Mic's Automated Backup program if checkset=="found" then goto WRITE4

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Fig. 3 Friday Backup

If I click on "CANCEL" this will have the same result as clicking "NO". By removing the ";" in front of "exit" below ":CANCEL" in the program you would simply exit the program an not be hassled in an hour. I prefer to be reminded to backup until it is complete.

If you click on "YES" then another box will appear telling you which set of disks to use for today's backup (figure 3). In this example, today is Friday so we are advised to get the FRIDAY SET ready. After clicking on "OK", Norton Backup is started with the parameters to use the Friday set and to commence backing up immediately (figures 4 & 5).

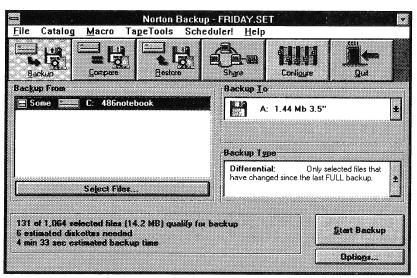


Fig.4 - Norton Backup Opening Screen

You can see from figure 4 that the Friday set is a differential backup. You will have to create a set for each of the five weekdays. My Monday set is a full backup of my data files which are all kept in subdirectories under the subdirectory "c:_data". Yours may be in other places. There is an underscore before the word "data", I was shown this trick by Bernard Speight. It means that the directory will be either the first or last found by directory utilities such as File Manager or Xtree. It is a very handy tip. My sets for Tuesday through to Friday are all differential backups of my data files as well as things like "ini" files, program groups etc. which may have changed.

I insert the correct disks for the days backup and change them when prompted. When the backup is complete, Norton Backup disappears and that appears to be the finish. In reality another file is written to. This is the "lastback ini" file.

"Lastback.ini" looks like this:
[BackUpSet]
LastDay=FRIDAY - 5/08/94
2ndLastDay=THURSDAY - 4/08/94
3rdLastDay=TUESDAY - 2/08/94
4thLastDay=MONDAY - 25/07/94
5thLastDay=WEDNESDAY - 13/07/94

It tells me what the 5 recoverable backups are. For example it shows today's backup as having been on Friday, 5 August. This would have written over the previous Friday backup on the disks so there is no point in my keeping that information. On the other hand I know that the last time I backed up on a Wednesday was on 13 July. All this information is helpful if I do need to recover files for some reason and after all isn't that the point of making backups.

The other thing I use "lastback.ini" for is to determine

whether a backup has already occurred. If I were to exit Windows and then restart it later, "backup.wbt" will first look at "lastback.ini" to see when it was last saved. If that date is the same as today's date the program simply exits. If today is a weekend then the program exits as well. This is because I don't wish to backup on weekends.

This program may run under Winbatch which is shareware. I have not tried it. It may need some simple modifications or it may need major ones. Of course you would need Norton Backup to make it run as it is, although I'm sure you would be able to easily reconfigure it to work with Microsoft Backup and Winbatch.

Good Luck.

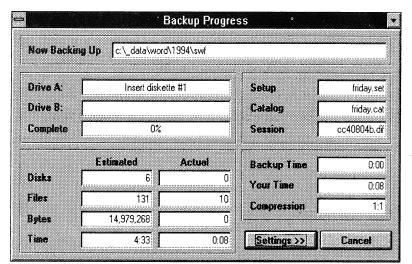


Fig. 5 - Backup Progress

TELEPHONE LINE SHARING

bu Ron Smith

Part 1

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However ten's of thousands of Fax/Modem users will tell you that there are some negatives too! Two common problem areas are:

- 1 How to AUTOMATICALLY and conveniently receive incoming Fax's, without trauma or compromise, where usage does not justify a separate telephone line. Remember once you begin sending Fax's, they WILL inevitably start coming BACK.
- 2 How to include material in your out-going Fax's which was not generated on your PC. You will often want to grab something from your files (filing cabinet), to accompany your WP document.

What is Telephone Line Sharing?

Now this leads me to the purpose of this article, the first in a series, discussing the newly emerging technology of TELEPHONE LINE SHARING, which provides the solutions to these problems and many other modern telecommunications problems.

- Q. So just what is TELEPHONE LINE SHARING?
- A. No it is not just a fancy new name for the old technology FaxSwitch. It is a totally new sophisticated micro-processor based technology, designed to allow a single telephone line to be utilised for more than one function (in fact at this time up to 3) without compromising the main use of the line to which it is attached.

The advance of Technology

We will all agree that technology is leaping ahead at an incredible pace. But did you know just how much has been done in the field of LINE SHARING. More and more devices are being attached to phone lines such as Fax's, Modems, Security Devices, EFT-POS, TTY (visual teletype system for the deaf and hearing impaired) and a whole gaggle of specialised voice equipment. In many cases usage is only occasional and a separate line would be cost prohibitive. Telephone LINE SHARING was developed to solve these problems and today we are building 'Fourth Generation' LINE SHARERS right here in Australia.

Looking specifically at the first problem listed above, by using a LINE SHARER, a Fax or Fax/Modem device or both can be fitted to any Voice Telephone Line and then incoming Fax's and/or Modem calls can be received on that line automatically. The normal Voice usage of that line will not be



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affected in any way. In fact, due to the LINE SHARER'S TRANSPARENT OPERATION, a voice caller, calling that line would never know that a Line Sharer, Fax, or Fax/Modem is connected to the line.

Furthermore with LINE SHARING, all of the existing equipment on the line will operate as normal. An Answering Machine can be used, cordless telephones, multiple telephone extensions etc. No special wiring is required, the LINE SHARER need only be connected to the socket to which the Fax and/or Fax/Modem device is connected (Unlike FaxSwitches and Fax Machines, a Line Sharer does not have to be wired directly into the incoming telephone line at the first socket).

Having said all this it must be remembered that most TELEPHONE LINE SHARING APPLICATIONS ARE EXTREMELY DIFFICULT TO DO WELL!

The LINE SHARER must be able to cope with the wide ranging line conditions we see here in Australia and to operate correctly with all equipment used, despite the significant differences in Manufacturers Equipment specifications. Make sure you select a reputable and proven product.

The second problem can be solved in several different ways:

* Purchase a Scanner * Drive over to your nearest dedicated FAX MACHINE and fax the required documents to

your Fax/Modem. * Use A LINE SHARER and a dedicated FAX MACHINE to SCAN in your documents.

For those of you with a Dedicated Fax Machine, the solution is easy. A LINE SHARER can be used to provide the Link between the scanning capabilities which already exist in the Fax Machine and the PC. We call this SCAN-LINK, available in a separate low cost LINE SHARER or incorporated into the more sophisticated LINE SHARERS which integrate the Fax Machine and the Fax/Modem into your Voice Line.

Operation is simple, just load the documents into your Fax, and press * on your Fax Machine or Fax Phone. SCAN-LINK will do the rest. Each of the pages will be transferred to your PC where they can be edited or stored as desired, ready to be included with out-going Fax correspondence now and in the future. By the way, these re-transmitted documents are still received with the same resolution and quality that would have occurred should you have used a Dedicated Fax Machine in the first place!

Of course the same results can be achieved by using another Fax Machine to Fax documents to you, however the inconvenience and call costs associated with this are obvious.

Next month this section will explain in detail exactly how LINE SHARING would work on your VOICE line. Future issues will discuss other interesting LINE SHARING applications applicable to the modern business.





Software Library News

Introducing an outstanding selection of Software CD ROMs...

The Platinum Shareware Series

GAMES

Experience non-stop action with hundreds of the best Windows shareware games available. This CD has something for everyone with titles ranging from strategy games like chess to arcade-style shoot-'em-ups.

EDUCATION

This new CD offers education and reference material for all ages and learning levels. It includes shareware tutors for everything from fractions and spelling to playing the guitar.

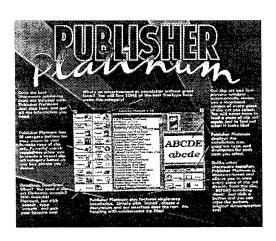
HOME and BUSINESS

This CD features the best in Windows shareware home and office applications. Discover new ways to boost your productivity with personal information managers and control your money with great finance utilities. There are also hundreds of useful home management tools to try.

MULTIMEDIA

Make the most of your system's multimedia capabilities with this huge collection of multimedia clips, utilities and programs for Windows. There's more than 680Mb of video files, bitmaps, sound files, animations and icons that you can use to build your own multimedia presentations.





WIN

This CD features 300 of the best Windows shareware titles. Expand your Windows capabilities with applications, utilities, games, desktop managers, sound programs and graphic utilities.

FONTS

Enhance your documents with a whole new range of fonts from this value-packed CD. Fonts Platinum has more than 1500 TrueType fonts for Windows users and includes special software that lets you preview each font before installing it on your system.

PUBLISHER

Add excitement to your desktop publishing with this CD full of clip art. There are more than 5000 images in PCX format that you can preview before installing to your hard disk. The CD also contains dozens of useful Windows-based publishing utilities and applications.

The Platinum Shareware Series is available to Brisbug members for the low-low price of only \$20.00 (Normally \$29.95). Take advantage of this offer while it lasts.

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RACECAR SERIES CD ROMS

Exciting shareware DOS CD collections packed with the latest programs.

LEARNING ADVENTURE

A full library of educational and entertaining software. Covers children's education from preschool to primary school levels. Offers many fun interactive learning programs for math, spelling, history, science and grammar. The hundreds of programs on this disk will be an enormous resource to your child's education.

BUSINESS ASSISTANT

A comprehensive disc designed for small businesses, entrepreneurs, and business executives.

Contains full accounting programs with general ledger, accounts payable/receivable, invoicing and statements, inventory, point-of-sale, legal forms and letters, credit repair, personal finance, mailing list management, stocks and bonds, mutual funds, business planning, sales helpers, and many industry specific business management programs.

1001 UTILITIES

Utilities for every imaginable application. Including virus protection, hard disk drive management, floppy formatters and duplicators, RAM/CPU speedup, optimisers, ports managers, spoolers, Windows utilities, zip/archive managers, keyboard utilities, monitor and graphics utilities, batch file aids,

functions that DOS forgot, lots of network accessories, file copiers, test and repair, assorted full-feature utility packs and more.

GAME ARENA

Includes classic games (chess, checkers,

A game lover's dream CD!

go, backgammon, dominoes) space adventure, action and arcade games, games of strategy and skill, puzzles, exciting sports games, games that challenge the intellect and sharpen the senses. Many games include high resolution arcade-level graphics; some offer mouse/joystick input.

JOKES and PRANKS

This CD will keep you laughing for years. It includes a comprehensive collection of humourous stories, limericks, puns, Murphy's laws, adult humour, graphic- and sound-based humour, jokes and insults, lawyer and lightbulb jokes, tongue-in-cheek glossaries, practical jokes, pranks, gags, and tons of other jokes.

Racecar Series CD's are available to Brisbug Members for \$15.00.



CD-CAD

This complete CAD package and library collection lets you design a house or anything else with seven decimal place precision! Designs can have up to 333 layers of detail and an infinite zoom function lets you home in on key areas. CD-CAD calculates circumferences, areas, perimeters, distances, lengths, heights, radii and angles. It will import plots in DXF and HPGL format and designs can be exported to formats read by WordPerfect, Ventura Publisher, Pagemaker, CorelDRAW and Microsoft Word. CD-CAD is also compatible with other leading CAD packages and comes with a 100-page user guide. Large symbol libraries are provided for electrical and mechanical design elements, furnishings, elevations, plumbing, landscaping and flow charts.

Brisbug price - \$50.00 (Normal price \$79.95)

ColorMAGIC CLIP ART

Give business documents and presentations extra "punch" and make school projects really stand out with this huge collection of graphic images. ColorMAGIC contains more than 600Mb of images in categories such as Animals, Autos, Comedy, Education, Fantasy, Flags, Flowers, Food, Holidays, Home, Leisure, Military, Music & Art, Nautical, News, People, Places, Religion, Transportation and Western. The 256-colour images range in size from 25mm to 100mm and will print well at 300dpi.

Brisbug price - \$65.00 (Normal price \$99.95)

PC GRAPHICS ANIMATION FESTIVAL

Professional multimedia animations from Hollywood's finest producers come together on this CD to give you the latest in virtual reality experiences. Watch laser beams blast across you computer screen and experience a pilot's seat view from a helicopter flying under a bridge - with full sound and 3D impact! Animation Festival features hundreds of animations and multi-level 3D virtual reality game. The animations will run directly from your CD ROM drive using either DOS or Windows interfaces. Stereo sound card support is included.

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Now you can have an excellent library resource without buying hundreds of books. Desktop Bookshop brings together hundreds of important literary works on the one CD. There are more than 4200 works including 407 books (from Wuthering Heights to the King James Bible). 129 fables and fairy tales, 114 plays and much more. The list of authors is long and distinguished. All texts are in ASCII and can be used on almost any system.

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GIF GALAXY

This CD ROM brings you thousands of high resolution computer graphic images in GIF format. Discover fascinating fractal images and GIF graphics of people, animals, technology, nature and more. 1000 ray traced images give you stunning illustrations for computer-based or printed presentations. GIF Galaxy comes with its own powerful menu program and a selection of shareware programs for working with GIF images.

Brisbug price - \$44.00 (Normal price \$69.95)

The MOTHER OF ALL CLIP ART

You've seen the rest, now get the best. This CD has more than 20,000 PCX images in all the popular categories, each professionally drawn and ready for use.

Brisbug price - \$40.00 (Normal price \$59.95)

PIXEL PERFECT GRAPHICS

The Pixel Perfect Graphics CD ROM give you thousands of pictures to include in your documents, memos, faxes, books, letters and advertisements. Disney World artist Kirk Gibson has prepared the illustrations in categories such as Animals, Business, Computers, Food, Frames, Holidays, Medical, Finance, Mythology, Calligraphy, Countries and more. Images are supplied at 300dpi resolution in PCX, BMP, TIFF, WPG and MAC formats.

Brisbug price - \$44.00 (Normal price \$59.95)

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PIXIE DUST

Pixie Dust is a wonderful software collection for home users. A range of different programs will excite and delight as users explore the world of literature, art, music, poetry, and pixies! Visit Jack as he climbs the beanstalk, view images of space, and travel to the mountains as you discover all this vast resource has to offer.

Brisbug Price - \$44.00 (Normal price \$69.95)

SOUNDWAY

This CD contains more than 600Mb of professionally recorded .WAV files ranging from the everyday to the exotic. Each sound on the disk is an original work recorded using state-of-the-art digital equipment in a live recording studio. You can use these great sound files to enhance multimedia productions, adding a whole new dimension to presentations.

Brisbug price - \$50.00 (Normal price \$79.95)

TOP 40 VGA GAMES

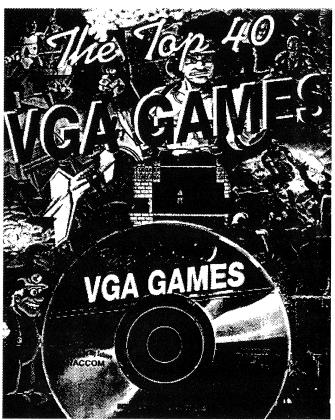
Now you can get the absolute best shareware games together in a single collection. This CD had 40 of the best shareware games ever released. As well as the world renowned Doom and Wolfenstein 3D, the Top 40 VGA Games CD includes both recent releases and shareware classics. This is the most comprehensive collection of leading shareware titles to date and features developers like id Software, Apogee and Epic MegaGames, as well as including all the Shareware Industry Award winners. Some of the games on the Cd are: Bio-Menace, Duke Nukem II, Major Stryker, Epic Pinball, Blake Stone, Monster Bash, Halloween Harry, Raptor and Zone 66. The CD features its own menu-driven interface for installing the games to the hard drive and removing them if required.

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WOMEN OF VENUS

Professional models and pageant winners parade the Venus Swimsuit Collection in 425 "high fashion" exotic beach photos in this multimedia CD-ROM. Super photos are displayed in 24-bit colour images with 640x480 resolution and 256 colours for compatibility with SVGA monitors. Presentations run directly from the CD ROM with interfaces for DOS, Windows and Macintosh.

Brisbug price - \$44.00 (Normal price \$79.95)



WIZ-PAK 6-PAK

The Wiz-PAK 6-PAK CD ROM has something for everyone with page designer programs for CGA through to VGA systems, a utility that lets you capture, edit and print VGA screens and 3D kaleidoscopes and fractal images with changing colour patterns. There are educational games for kindergarten through to high school ages and dozens of 256-colour arcade-style games.

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Unleash your Creativity with THINGS 4 KIDS.



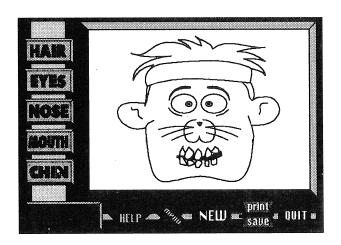
THINGS FOR KIDS is a collection of eight programs combined into one. Create and colour a myriad of wonderful drawings, go through the maze or just listen to or create the wonderful sounds, all while encouraging creativity, learning, exploration and computer skills.

THINGS 4 KIDS is loaded with surprise buttons and nifty abimations. It's hours of fun for children of all ages. (p.s it's also fun for the "young at heart" adults)

THINGS 4 KIDS contains:

2FACEIT

Create funny faces at the click of a button. Save your face or colour it or turn it into a jigsaw puzzle.



2FINDIT

An adventure into the world of words. This combines reading and vocabulary skills into an exciting game.

2JIGSAWIT

Take a picture you've created or simply use one of the many illustrations and turn it into an electronic jigsaw that has anywhere from 4 to 192 pieces.

2HIDEN

Can you find the hidden picture? Colour in the dots and see the picture appear. You can also decide if you want to go through the maze, and if you do, a big surprise is waiting for you at the end of the maze.

2PAINTIT

Make your drawings come alive with all the colours of the rainbow.

2DRAWIT

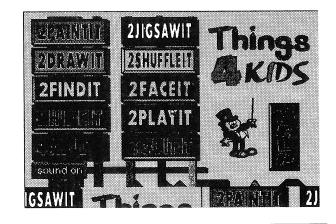
Choose from one of the many backgrounds or stamps and create an exciting masterpiece.

2SHUFFLEIT

Ideal for developing memory capacity, categorisation and recognition skills. All while having fun.

THINGS4KIDS is designed for ages 3 to 12, but don't let that stop you Available now for a special price of \$44.00
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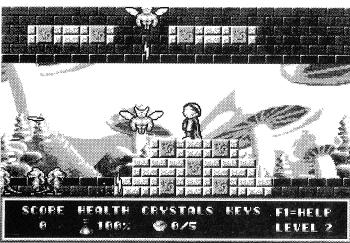
Available on 3 1/2" High Density disks only



HOCUS POCUS

US games publisher Apogee has released a new arcade game for the PC and everything about it is magic.

Hocus Pocus gives players the chance to prove themselves as wizards, both within the storyline and as masters of the latest in arcade challenges.



Players step into the shoes of Hocus, an apprentice enchanter who must zap his way through a magical maze to become a fully-fledged, card-carrying member of a most exclusive order of wizards. The maze spans 16 weird and wonderful realms each filled with its own unique dangers and enemies. There are more than 30 different creatures to battle, including dragons, demons, imps and ghosts, and a huge "boss" enemy at the end of each of the four episodes. Hocus Pocus is an action platform game with exciting puzzles built into each level's structure.

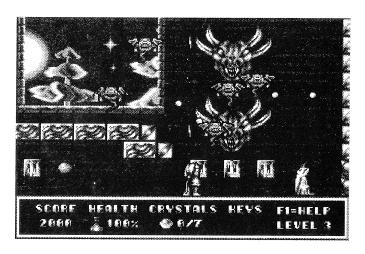
Hocus can run and jump in all the usual ways but can find magic potions that give him the ability to jump higher or even teleport from place to place.

SCORE HEALTH CRUSTALS MEVS FI=HELP
4258 100% 1/5 & LEVEL 7

He is armed with a standard magic spell (he's not yet a full Wizard, after all), but there are other potions lying around that grant temporary power boosts, enabling him to shoot rapidly or deliver a devastating energy blast.

Hocus Pocus features awesome 256-color VGA graphics and animation, and, after every two levels of play, the level graphics, background and enemies change completely, giving this game unparalleled variety. The playfield itself features parallax scrolling backgrounds and movement in all directions. Hocus Pocus also boasts a new Apogee sound engine and there are a dozen theme songs to hear during play. The sound effects are multi-channel and allow for up to eight different effects at the one time. There is also in-game volume control for both music and sound effects.

The new sound engine supports all the major sound cards including the Gravis Ultrasound, Sound Blaster Pro and Pro 16, Ad Lib, Sound Source, Roland Sound Canvas and General Midi.



Hocus Pocus has selectable skill levels, a save/restore game option and four cheat passwords.

The game can be controlled with the keyboard, joysticks and gamepads and requires only a 386SX or better system with 567K free RAM to run.

Hocus Pocus is available from Brisbug for the special price of \$45.00 (normally \$49.95).

Registered Software

All prices listed are for Brisbug members only.

APOGEE CLASSICS \$45.00* The five titles in the Apogee Classics series combine long-standing favourites from the world of PC arcade games. Each Classic pack has two complete registered games:

#1 has Duke Nukem and Major Stryker,

#2 Monster Bash and Secret Agent,

#3 the two Commander Keen adventures, Escape from the Vorticons and Goodbye Galaxy,

#4 Crystal Caves and Cosmo's Cosmic Adventure, and #5 has the educational best sellers Word Rescue and Math Rescue.

EPIC PINBALL 12-TABLE \$80.00 Four new tables plus the complete set of tables from the first Epic Pinball combine to bring you the latest in arcade entertainment. New tables include Pangaea, Cyborgirl, Space Journey and Toy Factory. Each one has its own unique ramp configuration and adds to the best collection of PC pinball simulations available. The collection also has a great new sound track specially improved for this release as well as digital sound effects for the most popular sound cards. The game also runs well under Microsoft Windows and is smoother and faster than ever. (386+, hard disk, VGA graphics.)

ADVENTURE MATH \$45.00 This wonderful educational game helps children learn a range of mathematical skills. Designed for ages 5 to 10, Adventure Math uses bright and colourful graphics to keep children fascinated for hours. (286+, hard disk, VGA graphics.)

BIO MENACE \$45.00 Large on-screen characters make this run-jump-and-shoot arcade game a visual blast. Defeat

the mutant creepies and save Metro City. Great sound effects for Sound Blaster or compatible sound cards. (286+, hard disk, EGA/VGA graphics.)

BLAKE STONE \$65.00 Step into the shoes of Agent Blake Stone on a mission to save earth in this outstanding action adventure. This 3D, first person-perspective game features new graphics, new gameplay features and some of the biggest enemies you've ever seen. (386+, hard disk, VGA graphics.)

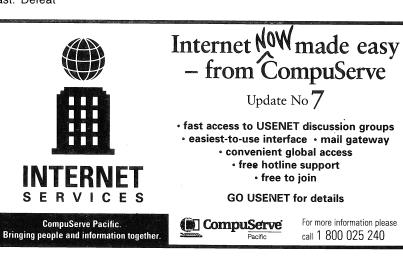
BRIX \$45.00 Brix combines brain-teasing puzzles and arcade style challenges in more than 200 game levels. Unite the matched blocks if you can as lasers, acid pools, teleporters, crumbling walls and flippers get in your way. (286+, hard disk, VGA graphics.)

CASTLE OF THE WINDS \$35.00 This outstanding fantasy adventure game runs under Microsoft Windows. Use your mouse to "point-and-click" your way through deadly dungeons as you build your character into a true hero. (286+, hard disk, VGA graphics, Windows 3.0 or later.)

DARE TO DREAM \$45.00 Dare to Dream is a graphical adventure game for Microsoft Windows. Detailed cinematic animated scenes, as well as plenty of challenging puzzles make this an exceptional adventure game. (286+, hard disk, VGA graphics, Windows 3.0.)

DOOM \$65.00 This brilliant game from the makers of Wolfenstein 3D takes you past the boundaries of what you thought possible in a PC game. You see the action through the eyes of a space marine: grab awesome weapons as you battle demons from another dimension; find the secret doors and recover armour and health boosts to stay alive. Fantastic graphics combine with heart-pounding action in this truly incredible adventure. (386+, hard disk, 4Mb RAM, VGA graphics.)

DUKE NUKEM II \$45.00 The Duke returns in this riotous sequel to the original arcade classic. Duke Nukem II features parallax-scrolling playfields, new moves and great new VGA graphics. The Duke must blast his way through huge levels defeating guards, mutants, robo-droids and traps along the way. There are also new special abilities and four great weapons. (286+, hard disk, VGA graphics.)



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MAGAZINE

DEADLINE FOR NOVEMBER ISSUE

Sunday October 23

BRISBUG BBS INTERNET APPLICATION **APPLICANT DETAILS**

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Name:				
Address:				
City/Suburb:				
Telephone: (Home)	(Business)		(Data)	
Existing e-mail address (if any): _				
Proposed Username:	2			
Type of access requested: Onlir	ne	_ Point		

NB: If point access is requested, you will need to organise both the necessary software and point details. If you require software, return the application with an SAE, including floppy disks (at least 2Mb required).

I hereby apply for Internet access and the provision of an account from the Brisbug PC User Group Incorporated. I agree to be bound by all terms and conditions set down by Brisbug for the account for which I am applying, and any modifications, additions or revisions to these terms and conditions that Brisbug may make during the term of my account. Terms and conditions in effect at the date of printing this form are attached.

> Applicants Signature: _ Date:

Terms and Conditions

The provision of this account is dependant on the applicant paying the fee applicable. The fee is payable on an annual basis. Currently, it is set at \$15 per year, payable in advance.

Changes to this fee structure may be made depending on traffic levels. The applicant agrees to ensure that all traffic generated by the applicant conforms to the currently prevailing AARNet Acceptable Use Policy and connect.com.au agreement.

Brisbug reserves the right to reject any application without giving any reason for that rejection.

Brisbug reserves the right to terminate any account without notice for any breech of this agreement.

In the event of an account being terminated, no fees paid are refundable.

Cheques should be made payable to Brisbug, and posted, with the application form, to:

Paul Marwick

P.O.Box 10033, Brisbane Adelaide Street, Brisbane 4000

QuikMenu III

Reviewed by Marc Young

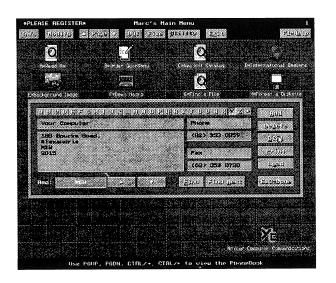
New, Improved, and washes whiter

If, like me, you find yourself using DOS as much as Windows, you'll probably find yourself often having to repeat the same sequence of commands just to run a particular application. For example, to run Telix on my machine, I would have to change to drive D:, CD to the directory \COMMS\TELIX then type TELIX. When I finish, I need to copy any downloaded mail, delete any uploaded mail, and start my Offline Mail reader. This can take several commands.

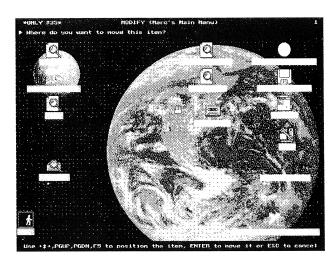
Early on in my DOS computing career I developed methods around this problem. One obvious one, which I still use, is to have a COMMANDS directory in my Path. This directory contains BATch files which run my programs. There is a TELIX.BAT which runs TELIX, a MAILIN.BAT which moves my downloaded mail, a MAILOUT.BAT which deletes my uploaded mail, and a OLX.BAT which runs my Offline Mail Reader.

So, my normal communications session comprises typing TELIX, MAILIN, MAILOUT and OLX. It all sounds so simple, and indeed would be, if it wasn't for the ever increasing number of programs and files on my machine! Simply remembering all the Batch File commands is difficult especially with the less often used commands.

I have tried using various menu systems in the past, but for one reason and another have never kept one on my computer for long. When QuikMenu arrived in my mailbox, then, I wasn't exactly overwhelmed with excitement. In fact it lay in my in-tray for a couple of days before I thought I really should take a look. I was glad I did.



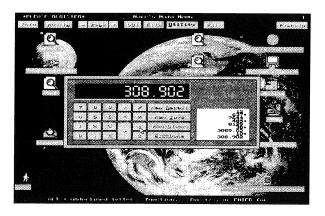
QuikMenu has improved greatly since the last time I looked at it, early last year. The major noticeable change is in it's appearance - with icons replacing the more familiar text of most menu systems. This is especially useful in today's computer world, where new users seem to be happier with a mouse than a keyboard. When you install QuikMenu, it takes a quick look at your disk and identifies certain programs, automatically adding them to the menu for you. Each menu can consist of up to 50 screens of icons, and you can have as many menus as you want, so there is no danger of running out of menu space!



Running a program from QuikMenu can then be as simple as pressing a single key, or clicking on the icon with the mouse. Unlike Windows, and other GUI environments, QuikMenu requires that you enter 'edit' mode to change the desktop appearance. This fooled me initially, as I am used to being able to move icons around the desktop by simply dragging with the mouse. Trying to do this in QuikMenu simply launches the program on whose icon you click! While initially annoying, I rather felt that this may be an improvement over Windows, OS/2 etc.

For those applications which demand parameters to be passed - for example DOS's editor can be passed the name of a file to edit - QuikMenu can be told to prompt you for some input every time that option is selected. This is achieved quite simply. In fact my command for the editor reads EDIT [File to edit? == *.TXT]which will present me with a list of all the files on my disk with the TXT extension. I then select one and it is loaded into the editor for me.

For those more dangerous commands, like FORMAT for instance, you can put up alert boxes to warn the user before going off to format a disk. You may also get options from the



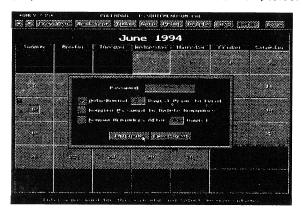
user, such as which drive to format, and pass that to the DOS FORMAT command. It is also possible to get QuikMenu to push keys into the keyboard buffer. While this may sound a little technical, what it means is that you can make QuikMenu type a short sequence of keys into a program for you. This is especially useful for those programs which insist on asking the same old questions every time you run them. Launching programs is not the only thing Quikmenu can be used for. It has built in a file manager utility, allowing copying, moving and displaying of files, a calculator, calender, phone book and even a log, which holds details of which options you use. The 'look and feel' of QuikMenu will be familiar to anyone who has used NeoPaint, by the same company. It is very intuitive, using Windows and icons, buttons and drop down menus just as you would expect. You can use a PCX format picture as the background to the menu (presumably using NeoPaint to draw the picture!).

Club Nama

A number of different icons are supplied, but if you've been hit by the artistic stick, you might like to design your own with the built in icon editor. Surprisingly enough, for the authors of NeoPaint, I found this to be the least well presented of all the mini-applications, although I would imagine it should also be the least used. If the artistic bent is not in your genes, the Icon Editor allows you to import icon files from many products. If even that seems too much trouble, NeoSoft also sell a disk containing 500 additional icons.

QuikMenu v3.1 is by NeoSoft and is distributed in Australia by Manaccom 07 368 2366. Version 3.1 replaces QuikMenu III, which was not previously shareware, and supersedes QuikMenu 1.7, the previous shareware product.

Upgrades from earlier versions 1.4 onward can upgrade for \$30, new users can obtain the full version for \$49.95.



ASSOCIATED CLUBS DIRECTORY

Club Name	Centered in	lelephone	Contact
Coffs Harbour Computer User Group	COFFS HARBOUR	066-538283	Janell Rose
Gold Coast SIG (of Brisbug)	GOLD COAST	075-710113	Joanne Ellis
Dalby PC Users Group	DALBY	076-621381	Peter Allan
Beaudesert Computer Club	BEAUDESERT	075-411050	Bernie Williams
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Bundaberg PC User Group	BUNDABERG	071-531449	Bob Wright
Gladstone QRI Computer Club	GLADSTONE	079-723083	Dave Franklin
Gladstone Computer Users Group	GLADSTONE	079-783941	Cec Wilmott
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Rockhampton QRI Computer Club	ROCKHAMPTON	079-277814	Gary Baker
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Burdekin Computer Club	AYR	077-834630	Rod McRae
Townsville Computer Users Group	TOWNSVILLE		
Johnstone PC User Group	INNISFAIL	070-671301	Lyndelle Coianiz
Cairns PC User Group	CAIRNS	070-577997	John Hampson

MYSTIC TOWERS

Games Review by The Ferret

Publisher.....Apogee

Price.....\$45 (Brisbug Members only)

Recommended......386, SVGA

Sound Card Support......SoundBlaster

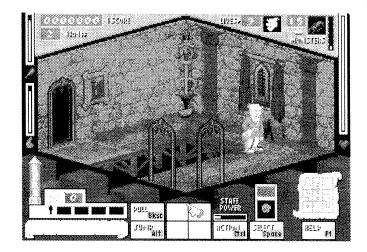
Classification......G8+

Release Date.....Out Now

Apogee releases yet another hit starring the one, the only **Baron Baldric**.

This time he's gone 3-D and let me tell you, it looks fantastic.

As the story goes... Your evil ancestor, Baron Lazarus built the Lazarine Towers and filled them with hordes of monsters. In each of these towers, you must seek and destroy the Wizard's monster generator and all of the monsters. You carry The Lazarine Staff. This enables you to fire both weapon spells and tactical spells.



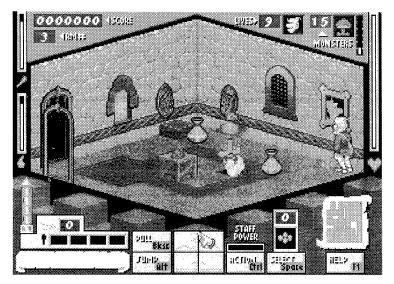
Watch your food, drink and life-force meters. There are ten spells, five of which are weapon spells. These are: Ice, Sulphur, Venom, Fire and Lightning. The five other spells are tactical (there to help you survive and get through the levels). These are: Reveal, Heal, Teleport, Levitate and Bomb.

The Shareware version is in the library and the number is 9201. It consists of 2 games, which are the Apprentice game and Wizard game.

The registered version is available in the Software Shop for \$45.

Although for the younger players, this still provides entertainment for the older generation. The intro music is great although the in-game music is a bit dull. Graphics are great and the gameplay takes a while to master but overall a fairly good title.

I give it an 84%



Each Lazarine Tower has an Apprentice and Wizard mode. Each with different floor plans and room layouts. Use the Apprentice mode to hone your skills on killing monsters and using various spells, without complicated puzzles or tasks. After you are able to kill most monsters, you should then go to the Wizard mode. It has tougher monsters, hidden doors, combination locks, seemingly impassable rooms, mazes and lots more.

After destroying the monster generator with a generator bomb in a level, a red key will appear in the corner. Go to the room you started in, pick up the key and go on to the next level.

BOOKS FOR SALE

Contact Frank Schuffelen after hours on (07) 264 5655

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PARADOX PROGRAMMING book, features version 3.5 \$10

PROGRAMMING IN BASIC FOR BUSINESS book \$10

VAX COBOL book \$10



Brisbug Help Lines

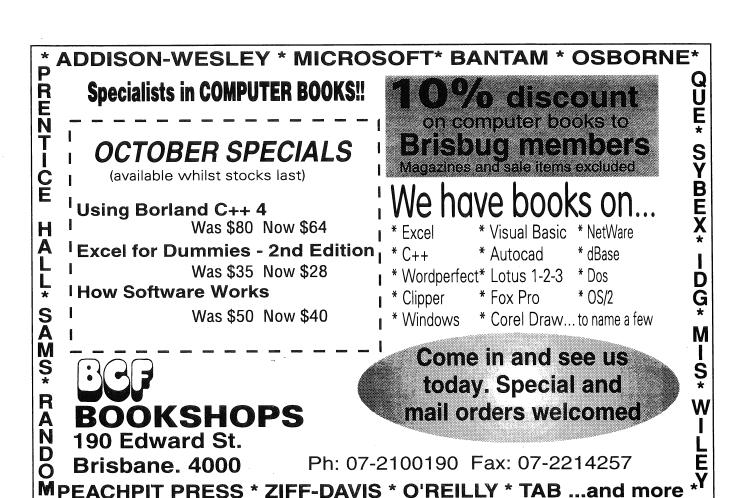
The following members have generously offered to give telephone assistance on the topics listed. Please be sure to observe the restrictions on times specified by each person. This service is not intended to serve as on-going training or a substitute for reading the manuals, or for not having manuals. It is for assistance with particular difficulties and for general advice such as when considering becoming involved in that topic.

New offers of help are always welcome, and there are some topics absent from the list. If you would like your name listed for a particular topic, please ring Lloyd Smith on 281 6503 (9am-1pm, 2-4pm Mon-Fri.)

This list incorporates the Gold Coast SIG helpers

Access	Sandy Downes	893 2166	7-10pm & Weekends
Accounting	lan Haly Fred Griffin	870 4698 (075) 38 4731	After 5.30pm & W/E
As-Easy-As	Dan Emerson	288 6070	Evenings
AutoCad	Geoff Harrod	378 8534	Evenings, Weekends
C	Geoff Baker lan Haly Danny Thomas	290 0974 870 4698 371 7938	6-90pm Weekdays After 5.30pm & W/E 6-9pm and Weekends
C++	Geoff Baker	290 0974	6-9pm Weekdays
Clarion	Ray Creighton	354 1107	Evenings & Weekends
Clipper	Don Anderson Dan Emerson Mike	881 2432 288 6070	Evenings Evenings
	Theocharous	824 1450	Anytime
CodeBase	Ian Haly	870 4698	After 5.30pm & W/E
Comms. (Modem)	Ron Lewis Graeme Darroch Len Krawczyk	273 8946 209 1999 (075) 91 2524	8am-5pm Weekdays 6-9pm & Weekends
Computer Help	p Chris Ossowski	2744144	9am-9pm All days
Dataflex	Tony Obermelt	287 5534	Mon - Fri A/H & W/E
dBase	Dan Emerson Mike Theocharous Bob Boon Sylvia Willie Neil McPherson	288 6070 824 1450 209 1931 393 3388 (075) 97 1240	Evenings Anytime 8am-5pm Weekdays Evenings After 6pm
DBXL	lan Haly	870 4698	After 5.30pm & W/E
Desktop Publishing	Joanne Ellis	(075)71 0113	Anytime
DOS	Ron Lewis	273 8946	8am-5pm Weekdays
Environment Sensing	Dan Emerson	288 6070	Evenings
Excel	Sandy Downes	893 2166	7-10pm & Weekends
Forth	Danny Thomas	371 7938	5-9pm Mon-Fri.
Fortran	Cec Chardon Rob Adamson	870 1812 266 8353	Evenings Evenings
Fox/FoxPro	Leon Percy	808 1570	Evenings
Genealogy	Rob Adamson Col Cunningham Bob Gurney John Bedford Martin Bond Ted Sansom Jemma Ussher	355 4982 (075) 72 2410 (075) 94 1315 (075) 36 8210	Evenings Evenings 8am-8pm Mon-Fri. Anytime
Hardware	Ron Lewis Chris Ossowski John Ellis Len Krawczyk Col McLaren	273 8946 274 4144 (075) 71 0113 (075) 91 2524 (075) 91 1768	8am-5pm Mon-Fri. 9am-9pm All days. 5-8pm Mon-Fri.

Help!	Dan Bridges	345 9298	7.30-10.30pm & W/E
Lantastic	Chris Ossowski	274 4144	9am-9pm All days
	Adrian Goldsworthy	345 5044	Eve. & W/E
MASM	Larry Skatterbol		Weekends
Meta5	David Shaw	870 3633	9am-9pm All days
Modems	Graeme Darroch		6-9pm & Weekends
Multi-user DOS		870 3633	9am-9pm All days
	Graeme Darroch	209 1999	6-9pm & Weekends
Novell Netware		288 6070	Evenings
Open Access 2		870 1812	Evenings
OS/2	Alan Gibson	207 2118	6.30-9.30pm
Paradox	Sandy Downes	893 2166	7-10pm & Weekends
Paradox 4 Win	Geoff Dancer	294 6976	Evenings
Pascal	Steve Cann	245 4453	Weekends
PostScript	Danny Thomas	371 7938	5-9pm Mon-Fri W/E
Project			
Management & Planning	Brian Doyle	355 1328	9am-9pm All days
Quick-Basic 4.5	· ·	288 5145	4-7pm Weekdays
Quicksilver	lan Haly	870 4698	After 5.30pm & W/E
R-Base	Tony Luck	818 4060	9am-5pm All days
Spreadsheets	•	393 3388	Evenings
SQL	Cec Chardon	870 1812	Evenings
SW Radio	Drake Drakeford	(075) 37 1993	
	Bill Harder	(075) 96 3562	Anytime
System	Frank Norris	(075) 35 5241	6-7.30pm All days
Manager	David Shaw	870 3633	9am-9pm All days
TSR's	Larry Skatterbol		Weekends
True Basic	Bob Gurney	355 4982	8am-8pm Mon-Fri.
Turbo Pascal	Bill Harder Neil McPherson	(075) 96 3562 (075) 97 1240	Anytime After 6pm
Utilities	Neil McPherson	(075) 97 1240	After 6pm
Viruses	Dan Bridges	345 9298	7.30-10.30pm & W/E
Windows	Bernard Speight Graeme Darroch		6-9pm 6-9pm & Weekends
WordPerfect	Margaret Burton	300 3987	Eve. except Thursday
Wordstar	Neil McPherson	(075) 97 1240	After 6pm
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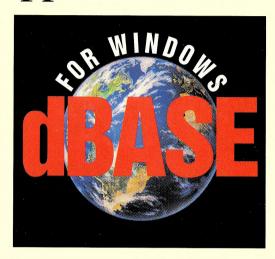
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Your investment in dBASE is important. And only dBASE for Windows lets you bring all of your existing knowledge, data, and applications written in dBASE for DOS forward into Windows and client/server.

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