# al of Brisbug PC User Group Inc

Vol 8 No12

Next Meeting

Sunday, 21st November

Super Sunday

### Major presentations

CorelDRAW 4 - Corel Corp, Canada
Win a copy of CorelDraw 4 10:00

**Morphing - Hi Lee** 11:30

MultiMedia - Total Peripherals 12:00

AutoCAD - Autodesk 1:30

Graphics Works - Micrografx 3:00

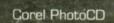
Classes 10 to 12

Junior Club 10 to 3

SIGs 3 to 5

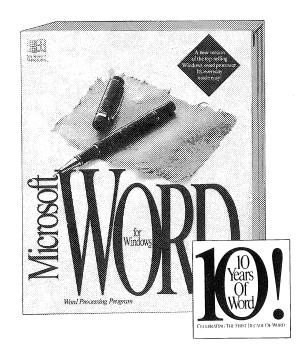
# Inside

High-Speed modem Comms - a review Towards faster backups Learning Assembler - Pt 3 News, reviews and more



Stonehenge - a very early model digital computer

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Produced entirely using CorelDRAW4\*, the background photograph is from the collection on the new Corel Photo-CD-ROM\* of colour photographs.

Colour separation by Queensland Business Magazines.

Printed by Marlin Printers, Unit 1, Bronwyn St, Caloundra.

Design by Ron Lewis.

\*donated to Brisbug by Corel Corp

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### **Stop Press Events for 21st Nov**

10am Theatre - CorelDRAW V4 Michelle Paradis, Corel Corp, CANADA

All Day Registration area - BCF Bookshop

### BRISBUG PC USER GROUP INC.

The Brisbane group for users of PC-type computers.
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Info line 2015005

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Tel: 2015005

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### SOFTWARE LIBRARY SERVICE AND SHOP

Post Prepaid requests to: Brisbug Software Library, 95 South Station Road, Booval 4304 or phone: (07)281-6503 MONDAY-FRIDAY, 9am to 1 and 2 to 4pm ONLY!!

### 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

### Rewards

There is a small loyal band of Brisbug members who, unselfishly, each month attend our meetings and spend their day working for Brisbug by assisting, serving and teaching members. Also there are others who work each month bagging the magazine. These members give of their service on a purely voluntary basis, with no rewards other than their personal satisfaction.

Well, their efforts are about to be recognised. After lengthy deliberation, the Management Committee have decided to implement a "Rewards" system for workers who, in the opinion of the Committe, deserve something in recognition of their services.

For the past few months, I have been 'squirreling" away various pieces of commercial software etc. which have been generously donated to Brisbug by meeting presenters. Some of these programs are quite valuable in themselves, and I feel that presenting a much sortafter program to someone who not only wants it but justifiably deserves it, is one way of saying "thank-you" for their past efforts.

If you know of someone who "works" for Brisbug, and you feel they should be rewarded for their services to the club, drop me a line or put a note in the Suggestion Box at the meeting giving their name, and the reasons why you feel they should be eligible for a reward. These nominations will be investigated by the Management Committee each month, and the nominee, if successful, will be given a choice of the software available.

### **Elections**

The Annual General Meeting of Brisbug will be held on Sunday 17th January 1994 and following the AGM the election of the Management Committee for the next year. A nomination form will be published in the next issue of Significant Bits and if you intend to nominate for a position on the committee, your nomination must be in the hands of the Secretary at least two weeks prior to the AGM.

The Management Committee will continue with 9 members - President, Secretary, Treasurer, Vice President and 5 other positions.

Also a proxy vote form will be published in the magazine for members who are unable to attend the meeting and wish to vote.

### **Computer Expo**

The Brisbug stand at this year's Computer Expo proved to be quite a success for our club. A considerable number of new members joined Brisbug as a result, and there are expectations that quite a number will still join our group.

My personal thanks to the members who staffed the stand over the four days of the show and a special thankyou to Graeme Darroch for all his organisation in setting up the stand, acquiring the equipment, preparing an excellent "Powerpoint" demonstration, and for making himself available to supervise the whole operation for the duration of the show.

Continued on Page 7

# From the Assistant Stoker

### Ron Kelly

Special Interest Groups have attracted and retained a substantial degree of success...

Members in attendance have a special interest in a particular software program, or are district orientated.... An obvious statement...

I have no hang-ups with this.. Great idea.. Members with common interest in computerism can remove themselves from all that sometimes unnecessary generalisation, identify and concentrate on what they particularly wish to do or discuss. As I said — I think this is a great idea...

But SOFTWARE PROGRAMS and DISTRICT ORIENTATED...Why only these 2 areas??

I have been retired almost seven (7) years and after the honeymoon of becoming 'Retired' was over I questioned myself on 'What I really wanted to get out of my retirement'. Now I have no intention of boring you with 'MY' likes and dislikes, but what I did, was to make up a list of all possibilities.

Over a period of about 7 or 8 days I wrote down anything that came to mind. I had writen down some 200 ideas. Some were 'B-xyz' ridiculous, these were the first to be crossed off. It turned out to be time well spent. It allowed me to identify the 'things' I really wanted to do and virtually put on hold some of the more traditional 'things' which were of much less interest to me.

Why are our Spec.Int.Groups only Program and District orientated ??

Maybe we are traditionally following what has always been. I am sure it's not a club decision. If it was, I

would take some convincing why we should be restricted to programs and districts.

Special Interest Groups are just what the title line states... a group of members with a special interest.

A Brisbug member or a member of a Brisbug family, for example - studying Computer Science at Garden Point Qld.Uni.of Tech., could wish to join with club members studying similar courses at QUT Kelvin Grove, Kedron, Carseldine or St Lucia and Griffith Universities, or perhaps a TAFE College.

With few exceptions, we use computers for business or for pleasure... Business could include studies and anything of a repetitive type nature. Pleasure could include hobbies, games and the varying types of experimenting we like to do. There must be many areas of special interest, in which Brisbug members would find common ground.

If this article has whet your appetite, please contact me, or if you prefer a phone call direct to Brisbug's Special Interest Group (SIG) Co-odinator is all that is necessary to start the ball rolling. Have a talk to Bernard about what you have in mind. He will put procedures in train to establish the Group..

I had originally prepared this article for the October issue, but somehow the lines of communication between the editor and myself got horribly fouled up. The result being my September article also appeared in October issue. Sorry about that...

My thanks to those many members who conveyed their best wishes to me during my recent hospital/recovery period — very much appreciated...

### MAGAZINE

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Associate Editor

Geoff Harrod 378-8534

Reviews Editor Ash Nallawalla

Layout Design Belinda Gorrie

Contributions always welcomel Disks, artwork or copy to: Ron Lewis, 12 Firelight St, SUNNYBANK HILLS 4109

**Artwork Separations**: Queensland Business Magazines

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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 must 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 second 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 rate, 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 2300 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

# **Editorial**

### Another year... another magazine

This month marks the start of our ninth year of publication of "Significant Bits". We've outlasted a number of computer publications, and are are good deal older than some of those currently in the newsagencies.

Like any other properly managed enterprise, we regularly take stock of what we're doing. Perhaps once a year we take a *big* step back to look at our goals and methods, to see if we're fulfilling our charter. This latest bout of introspection was prompted by not only our 8th birthday, but also the comment of one member at last meeting that the mag was lacking "guts" i.e. full of short articles, some gleaned from other User Group magazines, and those of lowgrade technical content.

This raises three questions:

What are we doing?
What should we be doing?

How should we be doing it?

I believe, and I think the committee agree with me, that "SigBits" has a dual internal role, and a different external role.

Internally it is primarily our function to provide a vehicle for communication between members and to keep the general members informed of what their representatives on the management committee are doing. Secondly we have to entertain and inform our readership ... no matter what their skill level.

And there's the rub! (to borrow from a far more skilled writer than me). There will be no communication without entertainment... members will just not read 60 pages of boring old notes... or even brilliant technical articles which are way beyond their skill level and incapable of exciting their curiosity. In catering to different skill levels, some introductory articles may be ignored by the Power

Users in the club. This is a pity... ask anyone who instructs for a living, and they will tell you it is much more of a challenge to do introductory (and concept) teaching than to extend an existing quality knowledge base. The "overview" article on modems by Dan Bridges in this issue is a case in point. No-one would dispute Dan's in-depth knowledge of computers, but I know how long it took to produce this article, and how many other experts he consulted to make sure he had got it right.

We unashamadely borrow articles from our fellow publications. Melbourne, for instance, have many more specialists in the club than we do. If their article is relevant to our members, and interesting, why not use it?

Commercial producers of software, such as Microsoft, very generously allow us to use their published papers. If you want an expert article on "Windows" where else to start but the authors?

Of our 2300 members, no more than one-third would attend any given meeting... some have *never* been to a meeting, for reasons of geography, mobility or whatever! But they are still interested in what goes on in their club, so when you see a photograph of an event at a meeting, perhaps you should enjoy sharing the moment with members

### **ERRATA**

Last month, due to a communication error with our valued customer, Borland International, we published the wrong advertisement on the back cover.

We apologise for this error and any embarassment or inconvenience it caused.

This month we've got it right



Deadlines are an editor's worst nightmare

who didn't see it first hand, rather than crying "old hat".

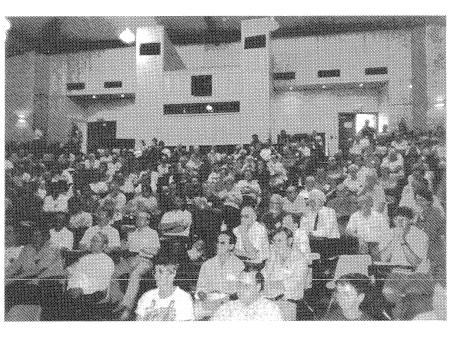
It is our aim to provide a bit for all members, rather than all for a few members. If you don't agree with something in the magazine, don't get mad, get even. Write your own article or Letter to the Editor, and set your own views up to be argued with.

The "how" question can also be debated. "SigBits" has grown from a two-page roneo-ed sheet to a multi-coloured 64 page magazine. Our editorial content is the equivalent of a 110-page commercial magazine carrying 40% advertising, but it is focussed squarely at our members. Many talented, qualified and experienced people have input to the design and content. Much debate (not to mention some XXXX) has gone into its contents and philosophic direction.

Externally, "SigBits" is often the first introduction to Brisbug for

advertisers, potential presenters, and prospective new members. We have tried to project a professional attitude to our hobby via our magazine. This has been at least partly responsible for the sort of delightful dilemma which faces us this coming meeting... no fewer than five professional presenters occupying the theatre continuously from 10 am to 5 pm, with a simultaneously occuring demo in another classroom, classes, SIGs, and the Junior Club (with guest presenter) to choose from.

Our weakness is our nett cost. We desperately need more paid advertisers to allay the misgivings of those who see "SigBits" as consuming a disproportionate share of Brisbug's limited resources and who would greatly change its character to free up funds.



Some of our readers enjoying last month's presentation of Quattro Pro V5 for Windows by Borland in the main theatre

### ADVERTISING DETAILS (cont'd)

#### **FULL PAGE SIZE DETAILS**

Normal article text (3 col) 260x178 Page trim 295x208 Max assured print area 280x190 Optional bleed extent 300x215

#### **RATES**

Color covers	\$600
Doublepage spreads	\$500
Colour page	
Colour 1/2 page	
Colour 1 column	
Colour 1/12 page	\$50
Centrefold spread	
Full page	
2/3 page	\$175
1/2 page	\$160
1 column	\$110
1/4 page	
1/6 page	
1/12 page	
. •	

#### Special positions:

Full page RH side,	
1st 20 pages	\$285
Inside covers,	
B&W	\$350

### 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.

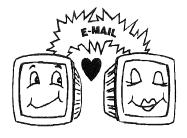
To meet Post Office requirements, they must have been printed in Australia or New Zealand.

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 Ron Lewis (07)273-8946, FAX (07)273-8954.

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



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which Paul is

# **BBS News**

### November 1993

The Brisbug machine (which runs lines 1 and 2) has just acquired a mouse (well, a trackball, really, since there is very little likelihood of my ever having sufficient space near that machine to actually \*move\* a mouse...). Apart from making it a good deal easier to operate the machine it allows me to use Program Commander/2 as a menu for the machine, allowing both easier use and also a reduction in the number of tasks which are open at all times (since I now have a much easier way of opening new tasks when needed).

There is also another advantage to running PC2 as a front-end for the system. There are a few things which can only be changed through the Work Place Shell, which in the past has meant modifying the CONFIG.SYS to activate the WPS, rebooting the machine, making the necessary changes, then going through the whole process in reverse. PC2 allows the WPS to be started as a menu item, which means that in future, any such changes will be much easier to make. Now all I have to do is build a suitable set of menus for the machine...

I was able to install the mouse thanks to the serial card fitted a short while ago, which is a 16-bit card, fitted with 4 serial ports. This still leaves a spare serial port, which I hope to be able to make use of for a full-time link between the Brisbug machine and my machine. Once this is achieved, movement of files and mail between the machines should be a lot easier and a lot faster (not to mention cheaper as well). At the moment, the only link between the machines is by modem and phone line. Given the usage

level of the machines, this means that it can often be time consuming getting mail or files between the two machines (even though they're physically only a metre or so apart).

I hope shortly to set up a dummy mailer on each machine, connected by a null-modem cable to the other machine. This, combined with a utility developed by David Nugent, should allow mail and files to move between the two machines as soon as they appear in the outbound directories for the dummy mailers, which should ensure not only somewhat more free time for the active lines, but also significantly faster movement of data between the systems.

### Lines 3 and 4 on beta Maximus V3.00

The Maximus 3.00 beta that is running on Lines 3 and 4 has proved to be generally stable. It will be installed on lines 1 and 2 as soon as I have sufficient free time to organise the conversion work and put it in place. The beta mail processing software that arrived at the same time as the BBS software is already running on all the lines.

### A "hot" machine

The Brisbug machine had to be taken offline in a great hurry a few days ago.

Even though I got a replacement for its power supply fan sometime ago, the problems of getting both lines free at the same time, at a time when I had enough spare time to pull the machine to bits to change the fan meant that the new fan was still sitting next to the keyboard and I was still putting up with the horrible noises generated by the old fan. The other night, the fan died completely (and it didn't take long for the top of the case to start getting warm to the touch).

As a result, I dropped carrier on the people who were using the system and dismantled it long enough to get the new fan fitted. Sorry about that.

Nice and quiet now.... and cooler.

Paul Marwick



Definitelty NO lightning damage... I unplugged the modem when I heard the thunder!

Special mention must be made for the part NEC played in providing the computers and monitors which made our stand a great success.

### **Meeting Dates**

The December meeting will be held on the SEC-OND SUNDAY (12th) in DECEMBER and not on the usual third Sunday. The January meeting and AGM will be held on Sunday 17th January 1994. Please note your diaries/calendars for these two dates.

Once again this year there will be a combined magazine for December and January which will be posted prior to the December meeting. THERE WILL BE NO SEPARATE MAGAZINE FOR JANUARY, so members who rely on receiving their magazine as a reminder of the meeting should leave themselves a large reminder.

Lloyd Smith.

### Honour Roll of Computer Expo Helpers

Graeme Darroch	Raymond Skillbeck
Brenda Babber	Mike MacKenzie
Nan Olfield	Clarry Stock
Geoff Cobham	Ted Wrathmall
Jack Worrel	John Bowskill
Len Krawczyk	Pat Bridge
Duncan McDonald	Col Hansen
Bevan Faulkner	Lola Venning
Paul Solly	Michelle Cotterill
Judy Grey	Richard Sobczak
Brian Matthews	Les Skelton
Mark Mullins	John Tacey
Jeremy Gough	Terry Tuttle
Robin Burns	Phyllis O'Fearna
John Hagan	Lynn Nielsen
Dave Badke	Robert Mill
Nick Delaney	Adrian Mill
Bill Latham	Mick Collins
Rita Copeland	Pamela Kirk
Peter Hunt	Alan Bridges
and a number of commit	tee members who jus

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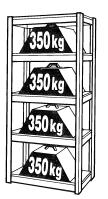
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# SIG News

### Windows SIG

The November meeting will be a BLOCKBUSTER. Micrografx, the leading graphics software company, will be coming up from Sydney, to the Windows SIG meeting (not the main meeting) to present their latest wares.

The main emphasis will be on showing the Graphics Works package. This contains drawing, photo editing, charting, graphing, slide show and organisation charting modules, complete with a CD-ROM packed with clip-art and photo images, all for the sensational price of \$245 RRP. This package is a more than worthy competitor to Corel Draw 3 at \$399 RRP, but come along and see for yourself.

To round off the day, Micrografx will show the top-line illustration package, Designer 4, and the top-line photoediting package, Picture Publisher 4. Both of these are literally the "best of breed" and have features that no other package has.

As well as presenting their new wares, Micrografx will have some "giveaways", even I don't know what they are, but come along and be surprised. In fact, talk all your friends and clubmembers into coming along and see if we can pack the Auditorium for MIcrografx and show them that we do things bigger and better in Brisbane, give them a real Brisbane welcome.

Brian Bere-Streeter

### Southside SIG

Next meeting is on the 6th December at Rex Ramsey's home at 114 Forestdale Road, Forestdale (Tel 8004827. Starting time 7:30 pm

Topic: Lantastic Z.

All welcome

### Gold Coast SIG

December 7th is our Xmas Party. All are welcome at the Lone Star Tavern, Mermaid Beach at 6:30pm.

Come and bring the Family

Normal meeting is the first Tuesday of the month at Merrimac High School, Block B Dunlop Crt, Mermaid Waters, QLD, 4128.

Contact: Jo-anne Ellis (075) 710113

### Weekday SIG

This SIG needs more participants, and Co-ordinator, Dulcie Haydon is asking whether a day other than Wednesday would suit more people. Give her a call on 273 7393 if you'd like to come on a different day.

Next meeting: Wednesday, 24th November, 1:00pm at

10 Lamand Close Calamvale.

### **Contact Numbers for** other SIGs

### Pascal

Steve Cann (07) 245 4453

#### **OS/2**

Ryck Anderson (07) 268 1441

### Genealogy

Rob Gurney (07) 355 4982

### SIG Co-Ordinator

Bernard Speight (07) 349 6677 6:00 pm to 9:00 pm

### SPECIAL EVENT !!!

Windows SIG presents Micrografx 3:00 pm in the main theatre

### **New SIG**

Wanted. Members to reform the Accountancy SIG. Contact Graeme Gardiner Telephone

(07) 8915644 (w)

(07) 3543237 (H)

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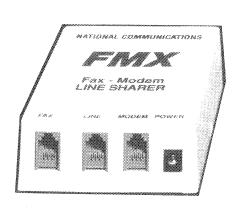
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# Minutes - Brisbug General Meeting

by Chris Raisin (Secretary)

1-02 p.m. (plus a wee bit) saw the opening of yet another Brisbug General Meeting - not really *just* another meeting - more like a SPECIAL meeting, because our first president (member no. 2 - Sylvia "get the spelling right") Willie was "crowned" our first Life Member. (Yes, it's official folks!)



Brisbug's first Life Member, Sylvia Willie accepts her Certificate from Past President, Ron Lewis

First things first, Lloyd Smith opened the meeting and passed on a couple of apologies: Ron Kelly (Vice-President) was absent because he was in Sydney and Bernard Speight (SIG Coordinator) recovering from an operation. (Get well Bernard....that's an order!)

### Who forgot?

Apparently not everyone reads their magazine! Over 60 (yes....SIXTY) members came to our usual monthly haunting place for a meeting on 17/10/93. Many advices had been issued that it would not be the third Sunday that month, but some people love coming to Brisbug so much they obviously didn't want to chance missing a meet.....this faux pas could explain why numbers were down a tad at THIS (the real) meeting. Probably those who don't read the mag will not be reading this either!

Please note! There will be **NO** January 1994 issue of Significant Bits! A bumper holidays ("join the

dots") issue will wend its way to your hands in December. Yes, it's almost that time of the year again when diets go on hold (usually for 7 months)...Christmas is almost here, and at the December meeting we will be having an Xmas party atmosphere with a special afternoon presentation. No SIGS or afternoon classes that month and plenty of good cheer!!

### **Advance Notice of AGM**

Brisbug's financial year has ended already (books closed 31/10/93) and the AGM will be held on 17/1/94 unless advised to the contrary. All positions on the Management Committee are up for grabs (get ready for the rush!) and there will be nine (9) positions available again [President, Vice-President, Secretary, and Treasurer as required by the Constitution plus 5 others yet to be announced]. Keep your eyes peeled for those nomination forms coming out with the December issue of "SigBits".

If anyone wishes to nominate and wants their "profile" published in our magazine, Ron Lewis would be pleased to receive your life's story (in half an A4 page or less) by the second last week of November for publication in the December-January "SigBits" (Hurry!)

Lloyd was "on a roll" with all this Brisbug news! The next item was a sad one - Chris Ossowski has resigned as Development Coordinator due to various pressures; on behalf of the club as a whole, Lloyd passed on a vote of thanks to Chris and his wife Penny for all the work they have done for Brisbug over the years. There was warm applause from a grateful audience.

The immediate past President (Ron Lewis) then "did the honours" of making that special presentation of Life Membership to our "loved one" Sylvia Willie. An excellent speech from Ron, outlining briefly the history of Brisbug and the many initiatives Sylvia introduced to the club. The membership growth in Sylvia's first year of office was of such a steep scale that we would need to sign up 27,000 members this year to match it! (one can but hope)

After Sylvia resumed her seat amid tumultuous applause, Lloyd briefly mentioned that there were

## Sunday 24/10/93

several members from the management team going to visit our fellow members at Bundaberg and at Gympie during October and November. Want to come? Please contact Lloyd.

### Treasurer's Report

Max Kunzelmann then took the floor, stating that it was time for more boring stuff (his Treasurer's report):

Opening balance 1/9/93 \$6,510-00 \$9.077-00 Receipts Expenses \$9,610-00 Closing balance 30/9/93 \$5,976-00 (Where's the extra dollar, Max?)

There was no BBS report, Paul just a passed on message "it's there and it's going!".

Also no report from the SIGS, however the November meeting will see a demonstration of "Blockbuster" by Micrographics and the Windows SIG.

Ron Lewis sauntered back on stage to give a magazine editor's report -apparently someone was heard to say ("rather unkindly" he thought) that the magazine is starting to have "no guts" and is reprinting too many articles from other mags. Well!!! Articles from members is what we need, and if they are not forthcoming what can we do? Either make the mag smaller ("no! no!") or scrounge around for informative tit-bits from fellow user-groups.

Lloyd Smith then mentioned to members that many presenters at Brisbug meetings kindly donate software to the club. Rather than giving all this software away with "lucky" draws etc, the club has formed a "rewards" committee which will oversee the awarding of various items to those hard workers who give up so much of their time for the club. This committee is looking for nominations for recipients - please send them via mail (or phone) to Lloyd Smith. (Lloyd's own opinion was then expressed when he said he felt that members of the Management Committee are not to be included in the awards for doing their normal committee duties).

"Changing hats" Lloyd then gave a Software Library report. Brisbug and Mannacom are

once again friends! Registered copies Shareware previously available Mannacom may now be

them from Mannacom) at a discount. Further advices will follow in the magazine and lists of such software are available from the Software Shop itself.

Notice for intending Nominees for Office for 1994

If you are a candidate, "SigBits" can publish your profile in our December/

Jauary issue, provided it is

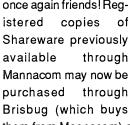
received by our publishing

deadline, 26th November...

on disk, please!

The meeting Coordinator (Graeme "haggis" Darroch) gave a report on the Computer Expo 1993 in which Brisbug again participated. A total of 55 new members were gained from the show, and so the effort more than paid for itself. Graeme thanked all the people who put time into "personning" the stand.

Suddenly it was finished! A glance at the watch showed it was 1.30 p.m. and after a short "Question and answer" time (very short ..... One question and two answers!) Jody Taplitski and Richard Morris from Borland gave an excellent demonstration of the new "Quattro Pro v. 5.00 for Windows". (Funny that! The previous version was version 1.00!! Anyway, the Secretary was so impressed he went out and bought it!)





The only time the Brisbug stand at the Computer Expo looked like this was before the doors opened.

# Software Library News

### Lloyd Smith

### Registered Shareware Now Available

In conjunction with MANACCOM, Brisbug can now offer members access to a large range of Registered Shareare. Elsewhere in this magazine are details of the programs available and the reduced costs to Brisbug Members.

With Christmas fast approaching, members can take advantage of the wonderful selection of games and educational programs available. Many of these registered programs will be available at the meeting and for those who use the mail/telephone order service, we will be able to provide this service to country (and local) members. Packing and postage charges will add \$5.00 to each package.

Other registered shareware contained in the listing will not be kept in stock, but should be available with a minimum of delay.

Surprise you children with a registered version of HALLOWEEN HARRY, or COMMANDER KEENS ADVENTURES or COSMOS COSMICADVENTURES or any of the other titles available this Christmas and save yourself \$\$'s.

### **Self Extracting Programs**

Many new (and some older members who should know better) still do not understand how to extract the programs from a floppy disk to their hard disk.

If the programs are too large to comfortably fit on a floppy disk, the programs are archived and converted to a self-extracting program using Yoshi's *LHA* program. By setting switches when the programs are compressed and converted to an *.EXE* file, the user can direct the program from the floppy disk to a hard disk by command line instructions.

A program, eg *TEMP1.EXE*, which has been compressed and converted to a self-extracting file can easily be extracted from the floppy disk by the following manner:

- (1) Place the floppy disk in the drive A: or B:;
- (2) Enter A: at the dos prompt to log on to the drive;
- (3) From the "A:\>" prompt type "DIR";

(4) Check the correct title of the self-extracting file from the directory listing of the drive A:

The directory listing of an average disk should look something like this:

-CAT\_NO9.678 BBUG9678.TXT GO.BAT CRC.EXE TEMP1.EXE WARNING.TXT

123,456 bytes in 6 file(s) 239,040 bytes free

There are three executable files on this disk: -GO.BAT, CRC.EXE and TEMP1.EXE. GO.BAT is a special batch file which tells you that the file "TEMP1.EXE" is a self-extracting file which can be extracted to the hard disk.

CRC.EXE is a check program which interrogates -CAT\_NO9.678 and reads the list of the files on the disk and their location and size and then checks the disk to ascertain if these files do exist on the disk and their location and size are the same as recorded. If any variation occurrs, the disk may be suspect or a virus may have been introduced. This program and the accompanying "-CAT\_NOX.XXX" file are supplied for your protection.

The last executable file "TEMP1.EXE" is the selfextracting file. To extract this file you should type:

TEMP1 C:\TEMP1 and press "ENTER" to commence extracting the files.

The designation letter is purely arbitrary. You may decide that the program should be placed on D:\, or E:\, or whatever, so the program is very flexible in that it will allow you to place the files on any drive you want. You can even place the extracted program on a RAM drive (if you have one), and run the program from the RAM drive. The program will run faster from a RAM drive, but will be lost when you switch off your computer.

The name of the directory is also purely arbitrary. You can call the sub-directory anything you choose (subject to DOS's limitations). You can even place the programs into sub-directories off other sub-directories - eg. "MINE\GAMES\NEW\TEMP1".

The self-extracting program has a Batch file

# New Apogee Game

## Virus Buster Clearance

### Registered Shareware Sharewayail

imbedded in it which looks something like Figure 1:

If you have not followed the command line: "TEMP1 C:\TEMP1" you must answer "N" to the question "CONTINUE WITH THE INSTALLATION" otherwise the program will try toextract to the floppy disk and will run out of room.

The "GO.BAT" looks like Figure 2. Only by reading the WARNING.TXT file and running GO.BAT on the disk will you begin to understand how and why the command line to extract and place the files should be entered by you. If the GO.BAT file were "hard wired" to extract the program to a preselected drive and directory, this would not suit everyone, so the choice is left to the user.

Where the program file have to be placed in special directories, an installation program is usually supplied and the user must follow the prompts and directions as set out in the INSTALL program (see Figure 3).

BRISBUG PC USER GROUP INC. SOFTWARE LIBRARY SELF-EXTRACTING PROGRAM

Figure 1

#### TEST

WARNING: THIS PROGRAM IS A SELF-EXTRACTING ARCHIVED PROGRAM The program is self-extracting and will expand itself from this floppy disk onto a drive and into a sub-directory as selected by the user. The program will create the sub-directory automatically, and extract all files without any further commands. To activate this feature you must follow the direction as set out below:

TEST1 C:\(or D:\)TEST1 <ENTER>

If the above step has not been followed, answer < N> to the question below. Run the installation again by following the above directions and when prompted answer < Y> to continue.

CONTINUE WITH THE INSTALLATION?

Figure 2

W A R N I N G !
SELF-EXTRACTING PROGRAMS

SOME OF THE FILES CONTAINED ON THIS DISK ARE SELF-EXTRACTING COMPRESSED PROGRAMS, AND CAN BE EASILY EXTRACTED AND INSTALLED ON YOUR HARD DISK BY FOLLOWING THE INSTRUCTIONS ON THE MONITOR.

SELF-EXTRACTION OF THESE FILES CAN BE RE-DIRECTED TO ANOTHER DISKETTE OR SUB-DIRECTORY OF A HARD DISK FROM THIS FLOPPY DISK BY ENTERING THE NAME OF THE PROGRAM FOLLOWED BY THE DRIVE, AND THE SUB-DIRECTORY WHERE YOU WANT THE EXTRACTED FILES PLACED. (EG. "PROGRAM NAME" C:\ (or D:\)SUB-DIRECTORY NAME - <ENTER>)

BRISBUG

## Brisbug SOFTWARE LIBRARY

The Program contained on this disk is a Self-Extracting Program and cannot be run from this Floppy Disk. It must be expanded on to your Hard Disk Drive before you will be able to run the program on your computer.

Because of the way the program has been prepared a Warning Notice will appear on your monitor if you just enter the program without telling your computer where you want to extract the program. You can only enter Y to continue or N to exit. You cannot enter the drive or sub-diectory at the end of the Warning Screen.

Your computer must be instructed where you want the program placed when it is extracted, and you must specify the drive and the name of the subdirectory.

Any drive and sub-directory can be selected by you. The program will create a new sub-directory, and extract all the files in this program to that sub-directory.

To commence extraction of the program contained on this disk to your Hard Disk, after you have read these screens, you should type:

TEMP1 C:\(or D:\)TEMP1 and then press ENTER

Figure 3

### **DISK PRICES**

Copies of disks supplied by the Software Library are as follows:

5.25" Disks -

\$4.00 each

3.5" Disks -

\$5.50 each

High Density Disks

(Special Programs only as advertised) \$8.00 each

Postage - Up to 8 disks \$3.00 Over 8 disks \$5.00

### Catalog Disk Exchange

Catalog Disk Exchange

\$2.00 at meetings or when accompanied with an order for other disks

\$5.00 if ordered separately.

There are 5 - 5.25" disks or 3 -3.5" disks in our catalogs. Don't forget to allow for these when calculating postage.

**CREDIT CARD MINIMUM - \$25.00** 

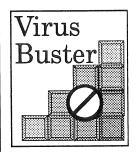
### **VIRUS BUSTER**

The Software Library can still supply Registered copies of VIRUS BUSTER for only \$120.00.

The special offer advertised in the August issue concludes at the end of this month. Members wishing to take advantage of an upgrade to the latest version for only \$50.00 must complete their arrangements with Leprechaun Software, direct, before the 30th.

### SCAN AND CLEAN

Registered versions of McAffe's *SCAN* are available from the Software Library for \$75.00. This grants the user a licence (and upgrades) for 12 months from the date of registration.



# Virus Buster

tom Leprechaun software

NOW AVAILABLE

\$120.00 (P & H - \$5.00)

### SPECIAL UPGRADE OFFER

Brisbug Members who own earlier Versions of Virus Buster can now upgrade to Version 4 at a special price of \$50.00plus P & H. (Normal price \$65.00)

Offer expires 30 November 1993

### \*\*\* STOP PRESS \*\*\*

### The latest Shareware Game from Apogee.....

### BBUG NO 9160 BIO MENACE Ver 1.0

CLASSIFICATION \* Games \* Hard Disk \* EGA\VGA \* Sound Card

You are Snake Logan, a top CIA operative who likes to do things his own way. Metro City has fallen under the attack of hideous mutants and your mis-

sion is to fly recon over the city and report back. While circling over the city you're shot down by hostile forces and forced to crash land on the streets of Metro. Grabbing what supplies you can find you are out to discover the source of these mutants and especially the guy who shot you down!

Intelligence reports indicate that a man calling himself Dr. Mangle is responsible for the mutants and the destruction of Metro. You will have to battle your way through many levels packed with evil mutants and robotic guards to finally infiltrate Mangle's fortress and

defeat him. You think to yourself that this will be your most dangerous mission of your life.

### ORDER YOUR COPY FROM THE SOFTWARE LIBRARY

ONLY \$8.00 (5.25" and 3.5" Disk sizes).





# OS/2 Column

### Paul Marwick

In BBSNEWS last month, I mentioned the difficulties I'd encountered trying to install OS/2 on a 1.3 gigabyte drive. I've now managed to get that done, but the process shows up what I consider to be a significant weakness in the OS/2 installation process.

The basic problem is the result of the fact that a drive of that size is not supported by current machine BIOS routines. And, unfortunately, OS/2 uses BIOS support drivers during at least the initial stages of installation.

While the problem was reasonably easy to fix, the fix needed is not something that the average end user is likely to find very easy, and it was both time consuming and complicated to do. There should be no reason why this sort of process needs be done on an operating system as advanced as OS/2.

What I ended up having to do was a multi-stage process. First, I produced a copy of Disk 1 from the install set. I then modified that disk, copying the BusLogic SCSI driver to it, and modifying the CONFIG.SYS which is located on that disk. This allowed me to run FDISK and select the first partition of the 1.3 gigabyte drive as the one I wanted to install to. OS/2 then went through the initial stages of the installation without problems.

Normally, at the end of the initial stage of the installation, the system is rebooted, booting from the hard drive to continue loading the operating system. This is also the stage at which the user selects the defaults that will apply to the installation (such as the country codes that should be used, what printer to install, and what features of OS/2 should be installed.

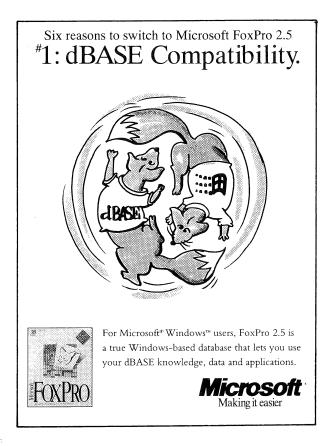
In this instance, before I could let the system reboot from the hard drive, I had to boot from a floppy disk, log onto the C: drive and go through the process of copying the BusLogic SCSI driver and modifying the CONFIG.SYS again. I was then able to let the system boot from the hard drive to complete the installation.

Once the full installation and configuration had completed, I had to go through the whole process yet again, since OS/2 knows nothing about the *BusLogic* driver and had not installed it for me. Someone using an *Adaptec* or *Future Domain* controller would not have had to go through this final stage, but anyone

using an aftermarket driver would have to do the same. Having to boot from floppy disk twice slows the installation down a fair bit, and does not strike me as desirable at all (booting an operating system like OS/2 from a floppy disk is something that should only normally need to be an emergency procedure).

While the process is probably more complicated to explain than it was to do, it is not going to be something which will be easy for the average enduser to do, even assuming that they understand what is needed. Maybe its not too serious a problem, since the majority of machines which are likely to have OS/2 installed on them will not have hardware of this sort, and will not present any such problems in the installation. However, there must be a number of machines which have hardware sufficiently unusual to require similar manipulation during the install, and I don't feel that such manipulation should be necessary for them.

Installing a
1.3 Gb drive
under OS/2
was not
easy, and
showed up
a weakness
in the OS/2
installation
process



### Installing a SoundBlaster CD-ROM

Another example of shortcomings in the OS/2 installation can be seen in the case of the Sound Blaster CD-ROM. While the SoundBlaster CD interface is not directly supported by OS/2, a driver is available from *Creative Labs* which will allow it to work under OS/2, and will allow OS/2 to be installed from CD-ROM. I'm told that the latest version of that driver will also work with the majority of AT-interface controller cards for CD-ROM's, but have not so far been able to test this theory.

Installing OS/2 from a SoundBlaster CD-ROM drive involves some of the same sort of work as I've just described for the 1.3 gigabyte drive. A modified copy of Disk 1 must be created, the SoundBlaster driver must be copied to it, and the CONFIG.SYS must be modified to load that driver. After that is done, OS/2 will happily install from the Sound Blaster drive. Having gone through this installation process for a customer a short while ago, I'm hoping I can afford a CD-ROM drive for myself soon. The ease of installation, plus the speed of installation were most impressive. The fact that a driver is available for the SoundBlaster makes this card and CD-ROM drive a good combination for use with OS/2 (at least if you want a sound card it does).

In this instance, another problem arises. Once the installation is complete, and the system is restarted, the CD-ROM drive is no longer available. Because OS/2 knows nothing about the SoundBlaster driver, when the initial configuration choices are made, no options for CD-ROM are offered. Since there are no CD-ROM options, none of the necessary support files are unpacked during the install (so the CD installable file system driver, plus the CD-ROM support driver are not physically on the drive when the installation is completed). I could see this being very confusing to most people - having just installed the operating system from the CD-ROM, that drive has suddenly become invisible once the installation is complete. To get access to the drive then involves copying the necessary support files from Disk 1, and modifying CONFIG.SYS so that the necessary drivers are loaded. Clumsy, to say the least.

While this sort of problem may be understandable when it comes to handling aftermarket drivers, it should not be allowed to continue. The growth in sales of OS/2 has prompted a number of companies to start producing drivers to support their products under OS/2, and this trend will almost certainly continue. Even when a device is directly supported under OS/2, there is currently no provision for configuring updated versions of a driver until after the installation has been completed.

I think that the OS/2 installation should make provision for both unusual hardware and after-market

drivers. It should not be complicated to add a system which allows such drivers to be designated and loaded, which would make life a good deal simpler. Using the response file system option that OS/2 provides would be one possible way of accomplishing this, but there must also be other possible ways of doing so.

I hope IBM is listening....

### **Backup Software**

A couple of months ago, I mentioned *Novaback* backup software in a general review of backup software available for OS/2. I've now had some direct experience with it which may be of interest.

I ended up purchasing a copy of *Novaback*, both for my own use, and also for evaluation, since I would like to have a good backup package to sell.

The package is not too expensive (\$200 at the moment). It comes on a single 3.5 inch disk, with a bound manual and a quick reference card. Installation is reasonably simple (though not entirely bug free from what I've seen).

When installation is started, the user is prompted for a destination directory, and is also prompted as to whether they want to install it for OS/2 2.xx or OS/2 1.xx. In some instances, installation for OS/2 1.xx may be necessary, even if you are running under OS/2 2.xx (this would occur if there is not a .ADD driver for the SCSI adaptor being used). Installation for OS/2 1.xx is less than desirable, since the earlier version of OS/2 limited the use of a tape unit to the first SCSI adaptor, and required it to be the only device in use on that adaptor.

During install, I encountered a couple of errors. The first one occurred just after I'd been prompted to confirm the existence of the standard directory for .DLL files. It seemed that *Novaback* attempted to copy or move a file to that directory, but failed.

The second error wasn't visible until after the system had been shut down and restarted. In a sense, it probably isn't really an error. But it was annoying, and it took a bit of tracking down...

When Novaback installs, it installs the driver necessary for the tape unit. To do so, it modifies CONFIG.SYS to load the driver. Unfortunately, what it appears to do is completely rewrite CONFIG.SYS. And in doing so, it uses all upper case. The first hint of a problem was when the first OS/2 windowed session opened. Instead of my normal, colourful, prompt, I had a grey combination which made no sense at all. It took a while for me to realise that Novaback had rewritten the prompt command in CONFIG.SYS in all upper case. And ANSI commands need to be lower case.... In addition, I have several other things in my CONFIG.SYS which are case

sensitive, and don't work if they're in upper case. So I ended up having to spend some time undoing the damage done by the installation.

Once installed, *Novaback* is easy to use. Its a text mode application rather than a PM application. It is also set so that it will only run in a full-screen session. I'm not sure if this is required, or whether it is simply because *Novastor* have not set the header bit in the executable which allows windowed operation. Either way, its a bit confusing when the first time its started in a window, it pops out to full screen.

Novaback offers both a menu driven front end, and a batch file interface. The menu is reasonably clear and simple to use (though I'm not overly impressed with its ergonomics), and covers all the normal operations required for both backup and restore of files. It also allows the creation of "procedures" which can be saved, allowing specific backup or restore operations to be carried out, either from the menu or from the batch file interface without having to redo specific settings and options.

As well as backup and restore options, *Novaback* offers the ability to examine existing backup sets, erase tapes, examine backup logs and indexes. It also offers a "format" option which applies only to DAT drives, and seems to consist of creating a partition to store QFA (Quick File Access) data on, allowing for fast retrieval of files from a DAT tape (otherwise a daunting prospect, considering that the average DAT tape can hold 2 gigabytes or more of data).

In use, *Novaback* is fast and does not load the system down too much (to my mind, the latter is the most important consideration under OS/2, since a low system load means that backups can be done transparently in background while other work continues). I did find a few places where *Novaback* seemed to be consuming more resources than it should (mainly while checking backup logs or indexes, for some reason), but in normal operation, its demands on CPU time are quite moderate.

I'm not all that fond of the "procedure" method of defining backup routines. While this is a convenient way of producing a customised backup routine, it results in hard-coding things such as directory structures into the backup routine. Which doesn't work very well the next time you add a new directory to the drive you're backing up. I'd much rather see some form of exclusion list being used, and the rest of the backup commands being available as command line switches when doing a batch backup or restore.

One of Novaback's greatest strengths is the sheer number of different backup devices that it supports. While the majority of them are SCSI, it supports just about every SCSI tape drive on the market, and also supports several QIC-02 devices. It

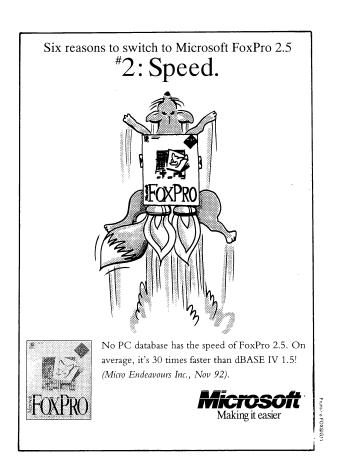
also has drivers for QIC-80 tape units such as the Colorado Jumbo series (though I've so far been unable to make it work with a Colorado).

Novaback also supplies a utility called Novaboot, which allows for the creation of a boot disk with the necessary drivers and software to restore an OS/2 system without having to reinstall it. The fact that Novaback is a text-mode application is a definite advantage in this area, since a PM application cannot be run from a floppy boot.

The manual is well put together and quite detailed. The only area I found difficult to follow is the description of how to manually produce procedure files. Maybe rereading it will help....

Overall, the software is reliable and works well. There are a number of things I'd like to see changed or improved, but it provides a workable backup package which supports a wide range of tape units at a very reasonable cost.

One of Novaback's greatest strengths is the sheer number of different backup devices that it supports



# High-Speed Modem

Reviewed by Dan Bridges

Recently I purchased a *Maestro* 144M V32*bis* modem. Although I've had previous experience with a 2400 BPS (bits per second) modem I found the new modem's manual heavy going. This degree of difficulty would be compounded for the first-time modem owner who, because of falling prices, is now more likely to purchase a fast (and thus complex) modem.

The manual has no glossary and uses a number of terms that are never defined. It has no index. The concepts are not organised by levels-of-complexity so the new user has to wade through portions that only apply to specialised commercial communications. And because the new user doesn't know what is and isn't relevant for normal Hometo-BBS (electronic Bulletin Board System) comms, they are faced with reading through many pages of esoteric options.

This article aims to introduce the topic of high-speed comms, presenting enough information to get the new user up and running. It directly applies to *Maestro* modems of the Data Optimiser (V42 bis) or higher level. The concepts will also be of interest to owners of other brands of V32 and V32bis modems.

Basics

A modem is so called because it enables data communications between two PCs that can be separated by thousands of kilometres, by **mo**dulating (impressing information on) and **dem**odulating (extracting information from) carrier frequencies (sounds) that are sent down the phone line.

Modulation/demodulation is used so that digital information can be transferred via an analogue medium. The carrier frequencies are carefully chosen to suit the narrow frequency range (bandwidth) available on public telephone lines. The frequency range is 300-3000 Hertz (cycles per second). The phone line is prone to crackles, distortions and other noises, so accurate high-speed data transmission requires a enormous degree of behind-the-scenes technical complexity.

The term "baud" is commonly misused for "BPS". Baud rate is the number of signal changes transmitted per second i.e. the modulation rate. 2400 baud is the maximum that is possible over the public phone system. (Special "leased lines" can have extended bandwidth.) If each of these signal changes carries 4 bits of information we have 9,600 BPS (the maximum rate for the V32 standard). If 6 bits can be conveyed in 1 signal change then 14,400 BPS is achieved (the maximum rate for V32bis).

Just to give you some idea of the difficulty of the task of high speed communications via the phone line, V32/ V32bis modems are capable of full duplex operation ie. two simultaneous full-bandwidth channels of communication are possible ("forward" and "backward"). Take the case of a V32/V32bis modem operating a top speed. Each channel is 2400 baud wide. Yet this must fit in a bandwidth of about 3000 Hertz. (Due to technical limitations the bandwidth used for comms is slightly narrower than this.) To have two 2400 baud channels fit in this space they must overlap. In fact they overlap each other by 90%! So, if effect, the modem is asked to maintain a highly reliable mode of communication, where one uncorrected mistake could ruin a file, over a medium of variable quality, while two different data steams fight it out in almost exactly the same frequency area. It's like trying to listen to one radio transmission with incredible accuracy while an interfering radio transmission of the same power is going on.

An experienced lowspeed modem user, the
author recently
purchased a very
popular brand of highspeed modem. His
experiences in trying
to interpret the
manual, have
prompted him to
present this overview

# Communications

The way that the modem can do this is through "echo suppression". This technology was originally developed to improve long-distance phone transmission.

A V32/V32 bis modem receives a mixture of its own signal and the remote modem's signal. The modem knows what it has sent. By delaying and inverting the sending data stream it can subtract this from the received data stream to recover the remote's data stream.

Now the preceding paragraph glosses over the difficulties involved. There can be echos introduced at various points in the modem-to-modem link. Noise, changes in overall signal strength, frequency shifting and variable frequency response complicate matters. A "training" time (2.5 secs in the V32 recommendation) is required when establishing a high-speed connection so that the modem's echo cancellers can transmit a known data sequence, learn the characteristics of impairment in the current connection and then correct for it.

The quality of the phone line may also vary during the period of the connection. A high-speed modem has to be able to automatically adjust for this. It does this by either fast speed changes namely "fallback" (dropping to a lower BPS speed if the line deteriorates) and "fallforward", (increasing the BPS from a fallback position if the line improves again) or more slowly by retraining (relearning the characteristics of the phone line if a significant change has occurred).

Echo suppression requires high-speed mathematical computation often implemented with DSP (Digital Signal Processing) chips. This is why a simple 2400 BPS modem (with a baud rate of 600 baud) can never be converted to a V32/V32bis. About the only things that might be similar would be the case and power supply.

Communicating at a rate of 14,400 BPS over a phone line is an incredible technological accomplishment. The forthcoming V.fast standard with its maximum rates of 24,400 BPS and 19,200 BPS (presumably achieved by somehow cramming 10 or 8 data bits into each signal change) is incomprehensible.

Unless you are communicating with an unusual system you will need to use the "N,8,1" data format. This means that there is no parity bit, 8 data bits and 1 stop bit. (8 data bits = 1 byte = 1 of the 256 characters in the extended ASCII set (American Standard Code for Information Interchange)). A start bit is also included even though it's not mentioned in descriptions. This means that a total of 10 bits is required to transmit one byte (one character) with N,8,1. So the theoretical maximum data transfer rate for a simple 14,400 BPS connection using N,8,1 without data compression is 1,440 CPS (characters per second).

Now I can hear many readers saying "Well I achieve 1600+ CPS transfers with my 14,400 BPS modem or 1040+ CPS with my 9,600 BPS modem so the previous paragraph is a load of rubbish". Well the reason that these transfer rates can occur is that 10



bits are not being used to transmit 1 character. To see how this can be, we need to look at the topic of asynchronous and synchronous communications.

### Asynchronous and Synchronous Communications

In asynchronous comms mode (original designed to accommodate relatively slow mechanical devices such as teletype terminals - the way telegrams used to be transmitted up to the mid 70's) a start bit is set signifying "expect data next", then the required number of data bits arrive, followed by a stop bit. The "framing" of each character with identification info (start/stop bits) means that bits do not have to arrive at a constant rate because the receiver uses the framing bits to know where character data occurs.

The trouble with framing bits is that they reduce the number of characters that can be transmitted for the same BPS rate. In synchronous comms mode, bits flow at a constant rate without interruption. During a synchronous connection, when there is no data currently being transferred by either party, null characters (ASCII 0) are sent to maintain the data flow. There are no framing bits. Characters are clumped together into large "data packets" proceeded by a header sequence. Error detection information is also included.

With synchronous comms 8 bits/character are required, rather than the 10 bits/character of asynchronous comms, resulting in a theoretical increase of 25% in the CPS speed. However, due to additional bits required to detect errors and maintain synchronous timing via the phone line, the actual increase varies from about 8%-20% (depending on the method used). This means a maximum of about 1,728 CPS at 14,400 BPS.

### The PC-to-Modem (DTE-DCE) Link

Two terms you will come across in comms documentation are DTE (Data Terminal Equipment) and DCE (Data Communications Equipment). These terms date from teletype days. With PCs, DTE is the computer and DCE is the modem. I'll use the equipment's name in this article to avoid confusion. In the PC-to-modem link (assuming an external modem) there is the Comms program which will may either be using a specialised device driver (such as a FOSSIL driver - Fido Opus SEAdog Standard Interface Layer) to control and interface with the serial port, or instead the coms program may control the serial port directly. The serial port is made up of a serial card, with a DB9 or DB25 socket on the back, with a UART (Universal Asynchronous Receiver Transmitter) chip on board. This chip converts the serial data stream from the modem into a parallel data stream for transmission over the PC's I/O bus.

The PC-to-modem link is almost always an asynchronous one (a synchronous link at this level requires special hardware and software) even though the high-speed modem-to-modem link will be synchronous for performance reasons (as explained earlier).

The serial port should be "locked" at a higher baud rate than the modem-to-modem BPS speed. Locking entails setting the serial port to a fixed rate. The port is usually locked at 57,600 or 38,400 baud. This is done for two reasons:

- 1. The modem-to-modem link is synchronous so that, if characters at a rate of 1,700 CPS at 14,400 BPS are being sent from the remote modem to your modem, after conversion from a synchronous to an asynchronous data stream in your modem, the data stream will have had start/stop bits added so it will be arriving at your serial port at a rate of 17,000 BPS.
- The possibility of hardware data compression by the modem. With MNP 5 (Microcom Networking Protocol) the maximum compression rate is about 2:1, while with V42bis it's 4:1. So a lot more BPS can arrive at the serial port than the modem-to-modem BPS rate would indicate.

The DOS *mode* command can't lock a serial port to a constant rate and won't operate higher than 9,600 baud anyway. The locking will either be performed by the comms program itself or by a special device driver.

Because the PC-to-Modem BPS rate is different from the Modem-to-Modem BPS rate the flow of data must be controlled so that the modem's input buffer (a small temporary data storage area) doesn't overflow. In high-speed home comms this is done by the comms program and the modem communicating their data status using the RTS/CTS (Ready To Send / Clear To Send) pair of wires in the PC-to-Modem cable. This is called hardware flow control. Both the modem and the comms software should be set for RTS/CTS flow control.

### The Modem-to-Modem (DCE-DCE) Link

As mentioned earlier, the link between highspeed modems will be operating synchronously with error-correction and optionally, with data compression. The modems will also be using a form of software flow control between themselves to ensure that they don't overflow each other's buffers. The mechanism of this flow control is of no concern to the user.

During the connection phase, as well as line training, the two modems will also be detecting and negotiating the BPS rate, modulation method and error-correction. There are various fallback positions

possible. Hopefully the two modems will eventually agree so that a link can be establish. This can take 30-45 seconds. If you know the speed and error-correction protocol of the remote modem you can set your modem to start from this position to speed up the connection process.

### Fallback Speeds

V32 starts at 9,600 BPS. If the speed is too high for the line conditions it falls back to 4,800 BPS.

The V32bis fallback sequence is 14,400 / 12,000 / 9,600 / 7,200 / 4800 BPS. V32bis is also quicker at switching speeds than v32 and allows fallforward (i.e. for the speed to be increased when line conditions improve).

### **Error Correction**

Error correction is necessary to ensure the integrity of the data being received. For home use, data integrity during file downloads from a BBS will be the most important consideration. However, error-correction applied at the modem-to-modem link level, also means that no line noise should ever appear on the screen as junk characters, since screen update data is just another form of data as far as the modem is concerned.

Currently, there are two popular error-correction methods for synchronous comms: MNP 4 and V42.

MNP 4 has Adaptive Packet Assembly. If the error-rate is low then the packet size become larger. More data bits per package means less packet header (used by the system to re-assemble the packets into a continuous data stream) and CRC (information used to check for transmission errors) overhead per Kbit so the data throughput increases. Conversely, smaller packets are used under arduous conditions to produce a better chance of the data getting through on the first try.

Another benefit of MNP 4 over its predecessor (MNP 3) is *Data Phase Optimisation*. When data is being transferred some of the packet control data is superfluous. Up to 8 data packets can be sent before an acknowledgement is required, reducing overhead. This bumps MNP 4's protocol efficiency (compared to asynchronous comms) from MNP 3's 108% to about 120%.

V42 is the error-correction standard of the CCITT (Consultative Committee of International Telephony and Telegraphy). CCITT standards such as V32/V32bis for speed and modulation methods, V42 for error-correction and V42bis for data compression are very popular with users because they increase the likelihood of one brand of modem being able to talk to another.

V42 is also known as *LAP-M* (Link Access Procedure for Modems). It is similar to MNP 4 (in fact V42 modems can fallback to MNP 4). The protocol efficiency of V42 is slightly less than MNP 4 but V42 appears to be more robust when the going gets tough.

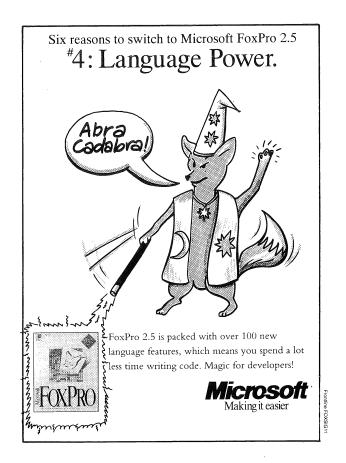
### **Data Compression**

The advantage of compression of data in the modem-to-modem link rather than only when transferring files (some file transfer protocols have a file compression option) is that screen update speed will also be significantly increased.

The two principal standards of modem-based data compression are MNP 5 and V42bis. Each standard requires the use of the MNP 4 or the use of the V42 error control protocol, respectively. The V42bis standard does not specify a fallback to MNP 5 but the vast majority of V42bis modems include MNP 5 as well.

MNP 5 produces a maximum compression of about 2:1 on compressible data. MNP 5 is rather "dumb" in that it will attempt to compress archive files that are already tightly compressed. This *decreases* the throughput by about 5-40%.

V42bis produces a maximum compression of 4:1. It analyses the data and wastes little time trying to compress archives. The degradation in archive throughput is less than 1%.



### File Transfer Protocols (FTPs)

FTPs are used to:

- \* Detect that an error has occurred during a file transfer and request that a part of the file be resent. This is referred to as "Error Correction" but is really "Error Detection + Resend". (Genuine error correction includes extra information in the data flow so that corrupted data can be replaced through mathematical means. The reduced data throughput due to more ancillary information being included in the data stream is not justified in a medium where a resend of part of a file can always be requested. However genuine error correction has to be included with a medium like CD-ROM.)
- \* Depending on the FTP, provide convenience features such as multiple file transfers in one session, maintenance of the original file's timestamp and size, automatic initiation of file reception, recovery from an aborted file transfer.

The new user is often confused by the list of FTPs to choose from. While, as a general rule-of-thumb, Zmodem should always be used if available or Ymodem if there's no Zmodem, it's useful to know why Zmodem is better than some other FTPs. As you will see, many of the techniques used to detect/reduce errors in the modem-to-modem link also reappear in the FTP-to-FTP link.

Note: the "modem" part of many FTP names does not mean that they modulate/demodulate. It simply means that they are for use with modems when transferring files.

#### Xmodem

Xmodem breaks a file up into blocks ("packets") of 128 bytes each. To each block is added extra info: a start of block character; a block number byte; a extra byte expressing the ones complement of the block number; a block checksum byte. When the block is received, the version of Xmodem on the reception side generates another checksum and compares it with the transmitted one. If they don't match a *NAK* (Negative Acknowledge) signal is returned to the transmitter requesting a resend. If the checksums match then an *ACK* (Acknowledge) signal is sent so the transmitter knows it can send another block.

Xmodem is rather primitive. It requires the user to supply the name of the file requested twice: first to the sender, then to the reception program. If you mistype the second name the received file will assume this new filename. XModem also doesn't preserve the correct file size. The program only knows how many packets to send. But the last packet can have up to

127 junk characters - usually ASCII 26 (Ctrl-Z) *End-Of-File* characters from the era of CP/M - added to the actual end of the file. While this is usually not a problem, it is an nuisance. The received file also takes on the current date.

Common variants of Xmodem include increasing the maximum block size to 1 Kbyte to decrease overheads (Xmodem-1K) and using a much superior 16-bit CRC (Cyclic Redundancy Check) rather then a checksum to better detect an error (Xmodem-CRC). A 16-bit CRC requires that each packet has 2 CRC bytes rather than 1 checksum byte.

While a small block size means much greater overheads, in a very noisy situation it's more likely that a 128 byte block will be transmitted correctly then a 1 Kbyte block.

### Ymodem

Some people think that Xmodem-1K with a 16-bit CRC is equivalent to Ymodem but this is not so. True Ymodem has batch capability (multiple filenames can be requested in one session) and it can preserve the correct file size and timestamp.

Other than the above, Ymodem is similar to Xmodem.

#### Ymodem-G

High-speed modems operate in hardware error-correction (detect & resend) modes. Assuming that the modem-to-modem link is the only source of errors (ie. that the modem-to-PC link is error-free) it is possible to dispense completely with the FTP's ARQ (automatic request to resend) mechanism. The only ACK sent is at the successful end of the file reception.

The packet structure of Ymodem-G is the same as Ymodem-1K/CRC so 2 CRC bytes are still included in each packet. If the receiver detects that an error has occurred in the FTP-to-FTP level of the link, the FTP aborts the reception, so Ymodem-G should only be used if the modem-to-PC link is indeed error-free. Multitasking environments are prone to errors at this level, although a buffered UART such as the 16550A chip can tolerate long interrupt delays that would produce errors if the standard 16450 UART chip was used. Indeed, in most cases, a 16550A chip (or its equivalent) is a prerequisite for successful high-speed comms.

Since no time is wasted waiting for an *ACK* to be returned before the next packet is sent, the FTP overhead (compared to just sending data bits) is reduced to the initial and final transaction sequences and to the overhead associated with using 1 Kbyte packets. On large files this can be less than 1%.

Ymodem-G is known as a "streaming" protocol because packets are sent in a continuous stream,

rather then: Send; Wait for ACK; Send the next one. Streaming is particularly advantageous if there is any significant delay in the send-receive turnaround cycle. Long distance phone lines can have relatively long turnaround delays so non-streaming protocols can have poor throughput under such conditions.

#### Zmodem

Zmodem is an advanced streaming protocol that offers good performance. The size of the packet, assuming no errors occur, will be the whole file. An acknowledgement in this case will be sent only at the end of the transfer.

Within this frame the data is clumped in "subpackets" that vary from 1K down to 32 bytes. (These limits depend on the version of Zmodem you are using. Some versions allow a maximum subpacket size of 8K). These subpackets produce little additional overhead (changing subpacket size from 1 Kbytes to 256 bytes only decreases efficiency by 2%).

Zmodem can use either a 16-bit CRC or, more usually, a high-accuracy 32-bit CRC. The latter requires an extra 2 bytes per subpacket compared to a 16-bit CRC but is about 5 orders of magnitude better at detecting an error. When an error occurs, Zmodem automatically cuts the size of the resent subpacket in half so it has a better chance of getting through in one piece on the next attempt. Subsequent errors occurring soon afterwards will continually halve the subpacket size from the default starting value of 1 Kbyte down to a minimum size of 32 bytes. If no further errors occur the reduced subpacket size will gradually-double until it eventually returns to 1 Kbyte.

Zmodem also has auto-download capability. This means that as soon as the remote system starts sending, the receiver's comms program can detect the start sequence and automatically begin a Zmodem download. With many BBSs the reverse also applies ie. auto-upload. Zmodem also allows multiple filename and wildcard file selection ("batch").

One very nice Zmodem feature is crash recovery. You are 90% of the way through receiving a large file and lose contact. If you enable the Zmodem crash recovery option in your comms program, call the remote system again and request the same file, you will only be sent the missing 10%. This can save a lot of aggravation.

Two excellent versions of Zmodem, available as shareware, are DSZ and GSZ (the latter is prettier). These programs include many customising options. One such option is MobyTurbo which reduces further the low overhead of standard Zmodem by not "escaping" (adding an extra character in front of another so the second character will be ignored by a program monitoring the data stream) certain control characters that will occur occasionally in any binary

file, such as a archive. The only reason these characters are escaped is to prevent possible interference with some networks. This is of no concern to the home user. MobyTurbo will have produce almost as high an efficiency as using Ymodem-g but with the extra convenience and crash recoverability of Zmodem.

### Line Level and Quality

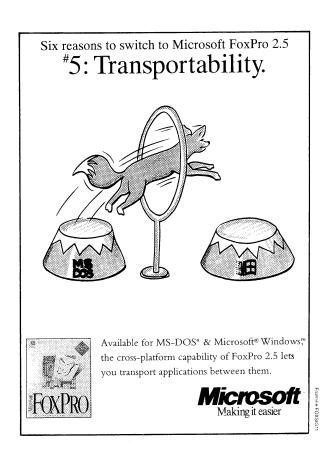
Since a high-speed modem has to continually assess line level and quality it is not surprising that the user may also be able to access this info. To do so obviously requires that you be connected to a remote system. The following applies directly to *Maestro* modems, and many others using the Rockwell high-speed chipset (such as a Netcomm M7) will have similar capabilities.

- 1. While connected to a BBS press the "+" key 3 times in quick succession. This will transfer from data mode to command mode without disconnecting you. You should see "OK" on the screen.
- 2. Most commands begin with the "AT" (Attention) prefix. Issue "AT %L %Q" and press *Enter*.

"%L" on a Maestro reports the current received signal level. The reported limits are a maximum of -9 dBm (this level or higher is reported as "009") and a minimum of -43 dBm (this level or lower is reported as "043"). I usually see a figure in the low 20's.

One very nice
Zmodem
feature is
crash
recovery.

recovery. You are 90% of the way through receiving a large file and lose contact. If you enable the Zmodem crash recovery option in your comms program, call the remote system again and request the same file, you will only be sent the missing 10%. This can save a lot of aggravation.



	le Goodbye Message Statistics UserList
SPACE>   I don't understand	
I don't understand '	mode) +'.
I don't understand '	+'.
ОК	(Modern tells me it's in command mode)
at%1%q	(Report line level and line quality)
024	(-24 dBm)
000	(Top quality)
ок	
a/	(repeat last command - don't press Enter after this)
024	
000	
ок	
ato	(Switch back to data mode)
PROTOCOL: LAP-M	(Connect strings produced by S95=47)
COMPRESSION: V.42BIS	•
CONNECT 9600/ARQ	
	le Goodbye Message Statistics UserList
SPACE>	re doodbye message statisties osereist
(Another BBS)	
at%1%q	
028 (-28dBr	n)
1	l quality line - 8 would cause a retrain if %E1 was set)
OK	·
a/ (Phone connect	ed in parallel with modem is unplugged at this stage)
	line quality)
ОК	
ato1 (Switch	back to data mode and initiate a retrain)
PROTOCOL: ALT (MNP 4	·
COMPRESSION: NONE	<b>,</b>
CONNECT 14400/ARQ	
Someof 14100/ANQ	
(I then returned to data m	node again to see the effect of the retrain)
at%1%q	
028	·
005 (back to passable	le quality)

Figure 1. Demonstration of Line Level and Line Quality Testing of a Connection.

"%Q" reports on the reported quality of the line giving an EQM (Eye Quality Monitor) value. It can range from 0-255 with a typical value of 0-2. If 8 or greater an automatic retrain will occur if you've enabled auto-retaining capability with "AT %E1". The default is to disable auto-retrain.

- 3. These figures can vary slightly. You can easily repeat a previous AT command with just "A/". Don't include an "AT" or a press of the *Enter* key.
- 4. You may also want to check your current register settings for this connect. Type "AT&V" and press *Enter* and look at the active profile. You should not stay too long without typing something in the BBS as the BBS program may think you've dropped out on it and so it will hang up. Three minutes should be OK.
- 5. Time to return to data mode. Enter "ATO" ("O" is the letter, not a zero). If you have a setting of "V1" (Verbose Result Codes the default) and you have a S95 register setting of "47", you will see which error-correction and data-compression protocols are active for this connect.
- Now you are back on the BBS, although you may not realise it until you press another key to force a reaction from the BBS.

Figure 1 shows a data-mode excursion on two BBSs. A straight line report was performed on the first one. On the second BBS connection, a serious line impairment (as far as the Automatic Line Equalisation and Echo Cancellers are concerned) was created by removing a phone that was plugged into the same line as the modem. (Note: this impairment can be enough to terminate the connection.) Then I recovered from the line alteration by forcing a manual retrain as I returned to the data mode by issuing "ATO1".

### Recommended Settings for High-Speed Modems.

These settings apply specifically the Maestro Executive series modems. They should also apply to other modems that use the Rockwell chipset. Check your manual to be sure.

- Set comms program and modem to use RTS/ CTS flow control. The default Maestro setting of "&K3" is correct.
- 2. The factory defaults for most modems of "&C0" and "&DO" are not correct for normal comms programs. Your modem should follow the Data Carrier Detected state (front panel light "DCD"/"CD"/"RLSD") of the remote modem so your comms program knows that the connection is terminated. If it's set to the default of "&D0" the DCD signal will stay on, fooling many comms program into thinking that they're connected.

The comms program uses the Data Terminal Ready signal (the front panel "DTR" light) to tell the modem to disconnect quickly. When the program drops DTR it tells the modem to disconnect.

The correct settings for general use are "&C1" and "&D2".

These commands need to be issued only once if you write the settings into NVRAM (Non-Volatile RAM - maintains contents when the modem is turned off).

Go into terminal mode (if you're in terminal mode typing "AT" will case the modem to respond with "OK") type "AT &C1 &D2 &W0 &W1". This permanently writes these setting into both stored profile 0 (the profile that is usually loaded automatically when you fire up the modem) and into profile 1. You can verify this with "AT &V".

Note: If you ever issue "AT &F" (reset to factory defaults), the original "&C0 &D0" will be read out of the modem's ROM chip and will be the active profile until you over-ride it or reinitialise the modem with "ATZ".

- 3. Lock the speed of the COM port to which your modem is connected to 19200, 38400 or 57600 baud. Consult your comms program documentation on how to do this.
- 4. Using MNP 5 or V42bis data compression. MNP 5 is bad news for any compressed file transfer, so it shouldn't be used for BBS connects. V42bis is suitable for BBS work and will significantly speed up the screen speed with very little impact on file transfer speed. Otherwise, if your main interest is file transfers, then disable file compression. "%C0" disables compression. The default is "%C1" -compression enabled. Also the setting of register S46 affects V42bis compression. "S46=136" disables compression. "S46=138" enables compression (default).
- 5. Using MNP 4 or V42 error-correction. If you're interesting primarily on getting the highest speed, and the line is good, use MNP 4. If the line's not the best, or if you're using V42bis, select V42. The default of "S48=7" enables negotiation, but you can force the modem to disable protocol detection and negotiation by using either "S48=0" (V42) or "S48=128" (MNP 4). The fallback action when "S48=128" is determined by the value in the S36 register. The default of "S36=7" will attempt an MNP 4 connection.
- 6. Other modem commands. "S95=47" in conjunction with the default "V1" setting will give a detailed summary of your connection type but your comms program may hide this from you. Use "+++", followed by 1 second's delay, then after the "OK" appears issue "ATO" to see the connection mode.

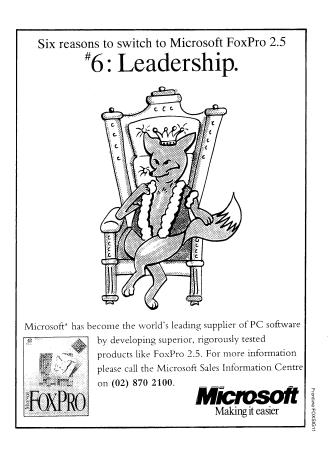
If you use tone dialling, trying dropping the duration of the dial tones from a default of "S11=95"

to the minimum of "S11=65" for faster dialling speed.

- 7. If you ever store some silly values in one of your NVRAM profiles you can reset it with (using profile 1 in this example) "AT &F &C1 &D2 &W1".
- 8. Auto-retraining is disabled by default. If you want to try it out over a period of time use "%E1".
- 9. As well as fallback to a lower speed there is also fallforward to move up again. "%E2" (undocumented in the Maestro Executive Series manual, revision 1.1) enables fallforward.
- 10. Some modems don't get on together. I've had trouble maintaining high file transfer speeds with the Spirit II modem of The OS/2 Cellar ph (07)808-8998 and had repeated lockups during connect negotiation with the Netcomm M7F faxmodem of Proteus II BBS ph (07)344-6012. I was able to solve the later problem by using "N0 S37=11" which disables the speed ranging during negotiation and comes straight in at 14,400 BPS.

### Conclusion

Club member Paul Dubois (Paul is member number 4 - he's been in Brisbug for a while - Ed) was recently lamenting to me that it was taking almost the



25

whole of his daily Brisbug BBS connect time to download large OS/2 modification files from Marwick's Madhouse BBS with his 2,400 BPS modem, at about 13 Kbyte/min.

With my modem I average about 60 Kbyte/min at 9,600 BPS and 95 Kbyte/min at 14,400 BPS connect speed using Zmodem. Recently with a 300 Kbyte file, using the Telemate V3.01 comms program, running in the background under OS/2, at a connect speed of 14,400 BPS I achieved 1,654 CPS (115% efficiency)-with Zmodem and 1,705 CPS with Ymodem-g (118%) using MNP 4. If you get a good phone line in a connect you should be able to achieve similar or better results.

High-speed comms is now within the financial reach of the average user. At the same time, the size and quantity of programs to download keeps increasing. Home High-speed comms has arrived in the nick of time. While necessarily more complex than 2,400 BPS comms, the results justify the extra effort.



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## Letter from a Remote Member

### Trevor Mitchie - Boroko, Papua New Guinea

Hi there everyone. Let me introduce myself:-

I am a member who cannot usually find the time to attend the Monthly meeting. When I say time maybe it is more cost oriented than time although it does take about three hours of flying time to attend a meeting. On top of that there is the driving to and from the airports at either end. The hiring of cars and the finding of accommodation also adds to the hassles.

I live in Port Moresby, the capital of Papua New Guinea, and I have done so since 1980. I am employed as a communications engineer with PNG's national airline - Air Niugini.

In my daily job I can be seen working on various equipment ranging from the only Fujitsu M1600 mainframe installed outside Japan to climbing across an airport in a provincial town dismantling a radio installation. I also help maintain Air Niugini's Computer Reservations System (CRS) which is based in Atlanta, USA. My job sees me visiting any one of the Air Niugini locations around the South East Asia / Australia region. You could say I do a little bit of travel both internally and externally. (I had to get a new passport in April of this year and I have already managed to fill seven pages with entry / exit stamps. I suppose you could say eight pages if you count the Entry Permit for Papua New Guinea.)

The Computer Reservations System is run on a mixture of terminals with local controllers to Novell and LANtastic LANS linking PC's back to the host computer in Georgia via the S.I.T.A worldwide telecommunications network. S.I.T.A. is supposedly one of the biggest private networks in the world. I would hazard a guess that this particular network could have 300,000 terminals attached to it.

Although my job is hardware based I also get sidetracked with PC software support and the occasional writing of PC programs and the installation of new software on PC's.

In my spare time I write / edit the local PC Club's Newsletter and run one of the two Bulletin Board Systems in Papua New Guinea.

"PNG One", the one I look after, has been continuously on line since 1986 although I can't remember when in 1986 it actually came on line. *PNG One* is the longest running BBS in Papua New Guinea.

If anyone is interested, the contact number for the BBS is International Access code 675 followed by 25 6984. The BBS, running Maximus, only supports speeds of up to 2400 with no plans of going to a higher speed. Two users from USA log in on a regular basis (twice to three times a year). If there are any BBS DXers out there then add this to your country list of BBS's. I am also an official monitor of Radio Australia broadcasts to the region.

The Bulletin board obviously has a fairly long history as far as BBS's go. It used to be a member of Fidonet known as 3:710/10 receiving a feed of mail from Sydney. It then went onto a feed from Perth (thanks Simon) and then for a short while was attempting a nightly pickup of mail from Alice Springs. These came to an end mainly due to the high cost of ISD calls every night and the fact that the sponsored telephone costs were no longer possible. PNG One is now back with a weekly feed from Cairns via a diskette transfer from 3:640/532 (thanks Laurie). This is not such a bad setup and keeps PNG in touch with some of the rest of the world.

I was able to attend the September meeting and it looks as if I should be able to attend the October one as well. Isn't it lucky that the date of the meeting was not the 17th? Sometimes things work for you rather than against you. Unfortunately during the DEC Alpha / NT Windows demonstration I was stuck next to some members who came in late and thought it was much better to have a private conversation often deriding the DEC Alpha personnel. Luckily, I was able to move when the lights came on for the club meeting. To put it mildly it is not good when you have travelled 1,300 miles to attend a meeting and then have someone disturb your thoughts / concentration.

Air Niugini has a few other members that I know of with one (Joe Rush) being based in Port Moresby

and the other (Paul Reid) Managing our Queensland operations from our Brisbane office. This is where I have my magazine delivered every month.

Trever Michie





PAPUA NEW GUINEA

# ARJing Your Backups

By Ted Webber

### Backing-up Your Hard Disk - an Essential Chore

Regular and frequent backing-up of your hard disk to other media is necessary housekeeping, but like vacuum cleaning the carpets, how often does it actually get done? Using floppy disks, it is just as boring and time consuming; and to do it properly you are supposed to keep three sets if a disk crash or virus is never going to catch you with your pants down. There are better ways, such as a tape streamer, where at least you do not have to sit by the machine for an hour or more, feeding disks in and out. But those ways tend to be too expensive for the amateur.

Assuming you are stuck with backing-up to floppies, you need to know and have the most efficient software for the job. To judge what is most efficient for your purposes, you first need to decide whether maximum speed or maximum compression, or some compromise between the two, is most important to you. Maximum speed is obtained with no compression of the backed-up files, but if you are using 1.44 Mb 3.5" diskettes you will need 69 of them to backup a 100 Mb hard disk. These diskettes must be best quality, around \$3.50 each, so a compression factor of 2, which is feasible, would save \$120 on each set of backup disks. If you are doing the backup in the evening at home, there may even be some advantage in slow backups: you could synchronise disk changes with TV advertisements!

### **Backup Software**

For my own purposes, I was able to compare three backup programs:

- 1. MS-DOS 5.0 BACKUP.EXE
- 2. Fastback Plus v2.10
- 3. ARJ v2.30 archiver

BACKUP is the standard DOS 5 program. Fastback is in a version of 1990: there is probably a more recent version available.

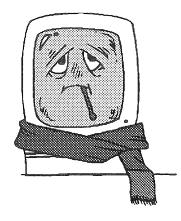
ARJ is a file compression utility in the tradition of ARC and PKZIP. I used version 2.30 dated January 1992, available as shareware. My copy came from Sydney PCUG's SHEZ disk, and it first came to my attention due to its use by a local BBS as their standard archiver. I have since converted all my other archives to ARJ format because of its ability to make smaller files than ZIP. ZOO. LZH, ARC, PAK etc, and its greater flexibility. Its special application to backups arises from its ability to make multiple volumes (floppy disks) with split files automatically filling nearly every last byte. A preliminary run with about 18 Mb to backup to 1.44 Mb diskettes using Fastback required 12 diskettes; with ARJ this was reduced to only 8.

One of the many features of *ARJ* is the ability to trade off compression against run time and memory use just by changing the command line parameter -m. When set at -m0, there is no compression, but file concatenation eliminates the slack at the end of each and automatic file splitting is still operative, so more files fit than could be achieved by direct use of *COPY*. Then there are five levels of compression, as indicated in the table below.

To reduce the time for multiple backup test runs, I loaded a RAMdisk with 2.35 Mb of files of a variety of sizes and types so that when compressed they would, in most cases, fit on one disk. The time to swap disks was thereby mostly eliminated. I used a 4DOS batch file including TIMER commands to inititiate each run. The computer is a 12 MHz 286. The ARJ runs included full CRC checking both of the temporary



And Which the Most Compression?



# -How Fast, How Small?

compressed file on the hard disk, and the copy on the backup diskette. The other programs did not offer this option, which takes up some of the extra time for the *ARJ* runs. Refer to Figure 1...

The compression gain for the higher compression parameters in *ARJ* is clearly small compared with the time increase required, though this may be less pronounced with a different mix of original files. I selected *ARJ* with -*m3* to give the best compromise, and the manual says that this should give compression similar to *PKZIP 1.10. Fastback* certainly lived up to its name for doing the fastest backup. Robert Jung, the author of *ARJ*, comments in the 54 page manual "*ARJ* can be used as a substitute for a backup program. However, it does not have the diskette critical error handling or data recovery facilities of a *Fastback*, etc. So you should be sure of the reliability of your diskettes."

ARJ has other good features, including the ability to automatically adapt its file size to the actual capacity of a diskette with bad sectors. Recovery of individual files is convenient because each volume is an individual archive except for split files at beginning and end - and you can opt out of split files if you want to. The index file option should be used in order to find the restart point if required (see below), and may be copied to the last diskette of the set so that the position of any particular file can be found at

a later date: very useful in case of an unintended deletion.

"For those who have enough free hard disk space, ... ARJ can be set to create multiple floppy-sized volumes on the hard disk for later copy to diskettes." This would eliminate most of the tedium of the task, because the compression phase can be unattended. It would be possible with, say, 20 Mb free on a 60 Mb hard disk.

As I do not use *Superstor* or similar general space saver, I keep all DOC files as *ARJ* archives. If I need to refer to, say, the *ARJ* manuals which are all kept in ARJDOC.ARJ, I use a 4DOS alias:

Then Z ARJDOC sends the manual to the screen with 4DOS LIST's search and scroll facility. Text files usually compress to one third of their original size. When ARJ is backing-up the hard disk, it does not attempt to compress files already ARJed, so there is a time saving as well as space economy.

Problems? I found the CRC check unforgiving on disk quality, and so it should be. All diskettes should be surface tested before use, using say Norton DT. If the final CRC test does find an error, ARJ stops. There is a facility to restart (after inserting a new diskette), but it nearly always reported inability to find the restart file point even though 4DOS found it

Test	Runs	on	2351	kb	of	Original	Files
------	------	----	------	----	----	----------	-------

Program	RAM Kb	Param.	Time Min:Sec	Compressed Size Kb	Disks Used	Compression Ratio
ARJ	300?	-jm	10:43.18	1145	1	2.053
ARJ	300	-m1	08:55.58	1146	1	2.051
ARJ	282	-m2	08:42.07	1148	1	2.048
ARJ	250	-m3	07:34.40	1172	1	2.004
ARJ	235	-m4	06:53.20	1268	1	1.854
ARJ		-m0	05:35.54	2338	2	1.006
BACKUP			03:45.85	2288	2	1.018
Fastback +			02:37.91	See note 1	2	?

**Note 1:** Fastback appears to make all backup files for a 1.44 Mb diskette the maximum size. Since the compression was not sufficient to fit on one disk, the apparent size was 2 X 1.44Mb, or 2922 Kb. The Fastback run screen indicated a speed of 1600 Kb/min. before the disk swap. Fastback also left 8Kb of control/history files on the backed-up HD.

Figure 1. Test results for different backup programs

Also supplied with ARJ is REARJ.EXE, which is designed to convert all other archive formats to ARJ format. Use this with caution: I lost half my directories before realising that there was something wrong. To be safe, use ZIP2ARJ.BTM (see listing).

One final point. A set of backup diskettes will not enable recovery from a disk crash unless you also have a boot diskette handy. While it is possible to use the original DOS diskette with which the system was first loaded, it is more convenient to prepare a special diskette which assumes the hard disk is already partitioned etc. In addition to the system files, this diskette should have a copy of of the CMOS data (as in CMOSGET, CMOSPUT, and CMOS.DAT), a copy of the software which will unscramble the backup set, and a number of DOS utilities such as FORMAT.

### **ARJ Batch Utilities**

Here are batch files which use some of the extended facilities of 4DOS to carry out necessary checks before actually running *ARJ*. They are fully commented and should be self explanatory.

```
@echo off
echo Usage: ARCIVE [directory] - makes an ARJ
compressed file of whole dir.
if %1x=x quit
iff not exist %1\*.* then^echo Dir %1 not
found^quit^endiff
sp/f
ARJ a -jm -a %1 %1\*.*
dir/km %1.arj
inkey Delete %1\*.* ? (Y/N) %%YN
if %YN==Y del %1
inkey Delete dir %1 ? (Y/N) %%YN
if %YN==Y rd %1
```

Figure 2. A 4DOS script to ARJ an intermediate sub-directory

Figure 3. A script to restore a set of diskette archives to the hard drive

```
@echo off
echo Usage: ARCXTK [archive]

    extracts contents of ARJ or ZIP file to

echo
sub-dir of same name.
      - searches for archive on current drive &
directory, then on A: drive.
if %1x==x quit
iff %@index[%1,.] != -1 .OR. %@index[%1,:] != -1
echo Please omit Drive & Extension from archive
             filename.
quit
endiff
set DRV=%_DISK
:rpt
iff exist %DRV:%1.arj then^set EXT=arj
elseiff exist %DRV:%1.zip then^set EXT=zip
elseiff exist a: %1.arj then set EXT=arj set DRV=a
elseiff exist a: %1.zip then^set EXT=zip^set DRV=a
else echo Archive file not found!^unset DRV^quit
endiff
md %1
sp/f
if %EXT==arj arj e %DRV:%1 %1\
if %EXT==zip pkunzip %DRV:%1 %1\
set YN=N
if %DRV != A inkey Delete %DRV:%1.%EXT ? %%YN
if %YN==Y del %DRV:%1.%EXT
unset EXT DRV
```

Figure 4. A 4DOS script to extract an ARJ to a subdirectory, same name

```
REM ARJ program to incrementally backup C: hard disk to A: drive

ARJ a A:backup C:\*.* -r -vvas -al -bl -il -js -jt -jiC:\backup.inx -wC:\ -m4
```

Figure 5. A script to incrementally back up a hard drive

```
@echo off
echo Usage: ZIP2ARJ [zip_file].ZIP unzips
zip_file to D:\temp then recompress with ARJ.
if %1.zipx==x quit
sp/f
md d:\temp
pkunzip %1 d:\temp\\
arj a -a -r -y -jt -jg -jm %1 d:\temp\*.*
dir/km %1.zip %1.arj
inkey OK to delete ZIP? (Y/N) %%YN
if %YN==Y del %1.zip
del/sxyz d:\temp
```

Figure 6. A script to convert a compressed file from ZIP to ARJ

```
@echo off
echo ARJ program to backup hard disk C:, D:, or E: to drive A: on 1.44 Mb diskettes.
echo _
iff %1x=x then^echo Usage: ARJBACK
        [hard_drive_letter]^cancel^endiff
rem Ensure 1 char only in %1, omitting colon.
set D=%@upper[%@substr[%1,0,1]]
iff %D LT C .OR. %D GT E then^echo Error - drive
        %D: not available.^quit^endiff
rem Prelim est. avg. compression 2600 kb per
diskette. (2900 if no LZEXEd files.)
set v1=%@eva1[%@diskused[%D:,k]/2600 + 1]
rem Extract integer as sub-string.
echo Estimated number of 1.44 Mb diskettes req. = %@substr[%vl,0,%@index[%vl,.]]
rem Compile backup filename from hard disk drive
        letter & date, as in FASTBACK.
set FN=%D%%@substr[%_date,0,2]%@substr
        [%_date,3,2]%@substr[%_date,6,2]%D
rem Reset the PCKWIK cache.
pause Please insert empty disk, with write
        protect off, in drive A: now.
rem If %4 exists, this run must be a restart.
iff %4x==x then
 ARJ a A:%FN -r -vva -a1 -b2 -i1 -js.arj -jt -
jiD:\%FN.inx -wC:\temp -m3 - %D:\*.*
  timer
rem For restart part way:
rem %2=volume at restart; 2 digits e.g. 03;
%3=Byte #; %4=Name of split file (no drive or \)
elseiff not exist %D:\%4 then
  echo Restart file %4 not found by 4DOS^quit
else
ARJ a A:%FN.a%2 -r -vva -a1 -b2 -i1 -js.arj -
jt -jiD:\%FN.inx -wC:\temp -m3 -jx%3 -jn%D:\%4 -
%D:\*.*
endiff
rem Test for error on exit from ARJ.
if %? GT 0 quit
rem The INX file contains info on what files can
        be found in each diskette.
echo Attempting to move archive index to last
        diskette.
iff %@filesize[d:\%FN.inx,k] LE
                %@diskfree[A:,k] then
 move d:\%FN.inx a:
rem Else too bad! Take remedial action.
else echo Insufficient space on A: diskette.
endiff
del c:\temp
```

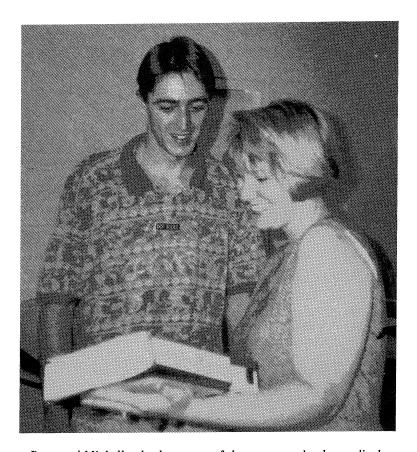
Figure 7. A script to backup a complete drive to diskettes

# BCF Bookshop comes to Brisbug

A new face, or more accurately, two new faces, appeared at the October meeting, in the area adjacent to the Registration Desk.

Michelle and Brett, of BCF Bookshops, mounted an impressive display of computer books, which were discounted on the day to members.

The service appeared popular, but fortunately this reporter was too busy on the day to spend all his pocket money on books.



Brett and Michelle check out one of the computer books on display

### **STOP PRESS**

BCF Bookshops have just received a major delivery of new books and will be at the November meeting so you can buy yourself that special present...

or one for the Love of Your Life

unset D vl fn

# Learning Assembler

### Carlo Hamalainen

This month

Using the mouse, in both text and graphics mode.

This month, I'll show how to use the mouse in both text and graphics screen modes.

After last month's dilemma to do with backup disks, you'd think that I'd have everything under control by now. Nope. I missed out two days of school due to what was supposed to be the start of an ulcer (fourteen and I already have too much stress, eh?). But no, modern medical science isn't that good, since it was only something to do with my liver. The pills I got didn't do much for the first day, so on the second day I went to a chiropracter. The result: after five minutes of the treatment I felt GREAT.

### **Mouse Basics**

Even though there are nearly 50 mouse functions, you can get away by only using four of them.

They are:
Reset/Initialize
Mouse
Get Mouse Status
Show Mouse Cursor
and
Hide Mouse Cursor.

The most important of these would be the *Reset/Initialize Mouse*, so I'll show how to use that one straight away.

Figure 1 shows the four basic mouse functions needed.

To access them, use INT 33h. The following code

shows how to initialize the mouse:

MOV AX,00h INT 33h

And that's all there is to it. One piece of info you might want to get out of this interrupt is the number of buttons, which is returned in BX. This would be fairly useless though, because practically all mouse drivers are Microsoft compatible - and Microsoft mice have only two buttons. This also renders the middle button of a fair number of 3-button mice (like mine) useless.

Next up, you'd want to show the mouse cursor. Just like initializing the mouse is simple, so's this:

MOV AX,01h INT 33h

Likewise, hiding the cursor is practically the same, just change the 01h to 02h and that's it. Next up though, comes that part where a bit of thinking is involved - getting the mouse coordinates.

The mouse is a simple piece of equipment. It's basically a rubber ball, held between three rollers - for the horizontal and vertical coordinates, and the other as a stabilizer. When the mouse is moved, it sends the info of how far it moved to the computer in mickeys (you can guess who that's named mouse is first iniafter). When the tialized, it has a mickey-to-pixel ratio of 1:1 for the horizontal coordinate, and 2:1 for the vertical one. This means that for the mouse to move 1 pixel to the left, the mouse must be moved enough so that it generates one mickey. For the vertical coordinate, the mouse must be moved two mickeys to move one pixel up or down the screen. It is possible to alter the acceleration curve, so that a short sharp movement will send the mouse flying across the screen, or so that you keep on running out of mouse pad trying to do a simple operation.

Getting the coordinates is sim-

Function 00	)h,			
Reset/Initial	ize Mouse			
Registers	On Entry	On Return		
AX	00h	Mouse Settings		
ВХ		Number of buttons		
Function 01	Ih,			
Show Mous	e Cursor			
Registers	On Entry	On Return		
AX	01h			
Function 02	2h,			
Hide Mouse	Cursor			
Registers	On Entry	On Return		
AX	02h			
Function 03	3h,			
Get Mouse	Status			
Registers	On Entry	On Return		
AX	03H			
AX BX	03Н	Button Status		
	03Н	Button Status Horizontal coordina		

Figure 1. Showing the four most common mouse functions

```
#include <stdio.h>
∦include <conio.h>
void InitMouse( void );
void ShowMouse( void );
void HideMouse( void );
void Status( void );
main()
       int OldX, OldY, OldB;
        InitMouse();
        d٥
        Status();
        if(( _CX != 01dX ) || (_DX != 01dY ) || (_BX != 01dB ))
        01dX = 
       OldY = _DX;
OldB = _BX;
printf( "%i, %i, Buttons: %i\n", _CX, _DX, _BX );
         while ( kbhit() == 0 );
        getch();
        asm {
               ah,00h
        mov
        mov
               al,02h
               10h
        int
        return(0);
}
```

Figure 2: C code for a mouse program

```
PUBLIC _InitMouse
       PUBLIC _Status
PUBLIC _ShowMouse
       PUBLIC _HideMouse
        .MODEL large, C
        .CODE
               PROC
_Status
                AX,3
                33h
        INT
       RET
               ENDP
_Status
                PROC
_InitMouse
                        :Initialize mouse
                AX.O
        INT
                33h
        RET
_InitMouse
                ENDP
                PROC
_HideMouse
        MOV
                AX,2
        INT
                33h
        RET
_HideMouse
                ENDP
                PROC
_ShowMouse
                AX,1
        INT
                33h
        RET
_ShowMouse
                ENDP
        END
```

Figure 3: Assembly code for mouse program

ply a matter of calling the mouse function 03h in a loop. Figures 2 and 3 show a simple text mode mouse implementation.

The program starts off by initializing the mouse. There's one problem with the code for this routine though, it's bullet-proof. If there's no mouse, the program will still try to read the mouse coordinates, probably resulting in some kind of error. Next up, a do..while loop gets the coordinates. The Status(); routine calls INT 33h, function 03h, which read the mouse's x and y coordinates, and button status. Because this would be a Microsoft mouse, a button status of 0 means no buttons are pressed, 1 for the left, 2 for the right, and 3 for both.

After Status(); has been called, it returns the x,y and buton status in CX,DX, and BX respectively. The program then checks if the coordinates are still the same. If any of them are different, it prints all of these values. Finally, the while keeps checking for a keypress, and if so, the loop ends. I've included a few more lines of code that aren't necessary for this program to work. If you copy out the source, and

run it, you'll notice that there's no mouse cursor on the screen. If you want the cursor to be on or off, just use the ShowMouse(); and HideMouse(); routines.

These examples work in text mode, and I suppose you'd be thinking that there's more work with the mouse in a graphics mode. Well, there isn't. You just have to make sure that the screen is in the desired video mode, and initialize the mouse. Getting the coordinates are exactly the same as well. One difference though is the cursor. In text modes, it's a block, but in the graphic modes it can be anything you like (as long as it only has two colours). If you want to known how to set the screen mode, here's the way:

MOV AH, OOh MOV AL, video mode INT 10h

Any good reference to the BIOS interrupts will have a list of all the 'normal' video modes. If you have a SVGA card, the manual that (should have) came with it should list the BIOS video mode numbers to access their extended modes. The only difference is that you might have to go about changing the screen mode slightly differently on some cards. For example, both my Trident

8900C and NT-200B (a Paradise clone with 512K) use basically the same method that BIOS uses. If you try the same thing on a VESA card, it means ploughing through heaps of seemingly useless code, after all, all you want to do is to get the card to change it's video mode, don't you?

If anyone saw the Windows NT presentation at Brisbug a few meetings ago, you would've probably noticed the use of the mouse cursor. When the current window was busy, the cursor would turn into a running horse. This can be easily done, in two ways. First, you could write your own sprite display routines, and instead of using the normal cursor, just whack your own there using the normal coordinates. The easier way is to use the mouse function 09h. Set Graphics Cursor Block. Figure 4 shows how this can be done (not the animating though). After initializing the graphics mode, and the mouse, it calls the 09h function, which looks at a list of bytes that will replace the current cursor. The easiest way is to organise them into lines of 16 bits, which can give some idea of what the cursor will look like later on

```
.MODEL large
        .STACK
       .DATA
HorizontalH DW 0
VerticalH
              DW 0
MyMask DW 001111111111100b
       DW 0001111111111000b
          0000111111110000Ь
          1000011111100011b
       DW 110000111000111b
       DW 111000010000111b
       DW
          111100000001111b
          11111100001111111b
          111110000111111b
       DW 111100000111111b
         111000010001111b
       DW
          110001110001111b
          110001111000111b
          1000111111100011Ь
       DW 0001111111111000b
       DW 001111111111100b
       DW 1000000000000011b
         1100000000000110b
       DW
          0110000000001100b
       DW
       DW
         0011000000011000Ь
          0001100000110000Ь
       DW 0000110001100000b
         0000001110000000b
       DW
       DW
          0000001110000000Ь
       DW 0000011011000000b
       DW 0000110001100000b
       DW 0001100000110000b
       DW 0011000000011000b
         0110000000001100b
       DW 1100000000000110b
       DW 1100000000000011b
       DW 1100000000000001b
       .CODE
       .186
              ah,00h
a],12h
       mo v
       mov
              10h
       int
       mov
              ax,00h
              33h
       int
              ax,09h
       mov
       pusha
              dx,OFFSET MyMask
       mov
       push
              @data
       pop
              33h
       ìnt
       popa
       mov
              ax,01h
       int
              33h
              ah.00h
       mov
       int
              16h
              ah,00h
       mov
       mov
              al,02h
       int
              10h
       .EXIT
       FND
```

Figure 4: How to make your own cursor

The only thing that might be a bit wrong with this example is that the X that it creates is a bit off-centered. Not that it makes much difference though. There's one other thing though - the cursor's 'hot spot' is still the upperlefthand corner. So, when you click on

```
.MODEL small
        .STACK ;Default 1Kb stack is OK
        .DATA
XPos
        DB
                'X Position: $'
                       Y Position: $'
$'
YPos
        DB
Blank 1 3 1
       DB
Msg
        DR
                Click on the controls to affect sensitivity',13,10
        DB
                'Click on the right mouse button to exit program$'
Controls
                                          +',13,10
        DB
                                      Vertical
        DB
                  Horizontal
                                                      |Double Speed |,13,10
                                         -|,13,10
,24
        DB
                                 25.
        DB
        DB
                        ,25,
                                  ,24,
                                                      1,13,10
                                            ,13,10
        DB
        DB
                '$
VidMode
               DB
               DW
                       0000
Horiz
               DW
                       0000
Vert
DSThresh
               DW
                       0000
               DW
                       0000
THoriz
TVert
               DW
                       0000
TDSThresh
               DW
                       0000
01dX
               DW
                       0000
               DW
                       0000
01dY
ClickX
               DB
                       00
ClickY
               DB
                       00
        .CODE
        STARTUP
Mouse4 PROC
       CALL
               ChkMouse
                                              :See if mouse is
                       there
       MOV
               AH, OFh
                                              :Get video mode
        INT
               10h
               VidMode, AL
       MOV
                                              :Store for later
                                              :BIOS set video mode
       MOV
               AH,0
       MOV
               AL, 10h
       INT
               10h
               Cls
                                              :Clear the screen
       CALL
       MOV
               DX,0
                                              ;Top left corner
       MOV
               BH,0
                                              :Assume page 0
               MOV
                       AH.2
                                              :Set cursor position
               INT
                       10h
                       DX, OFFSET Controls
                                              ;Want to display controls
               MOV
                                              Display a string using DOS
               MOV
                       AH, 9
               INT
                       21h
                                                                  Continued
```

Figure 5. Showing control of mouse sensitivity

something with this cursor, you won't be really clicking right on the cross. You can alter this when you call the 09h function, just supply the X and Y coordinates for the hot spot before the INT 33h. To animate the mouse cursor, you'd just have to keep changing what the mouse driver thinks the cursor should look like, and that's all there is to it.

To finish off this month's article, I decided to include a sample program from Advanced Assembly Language, 3rd Edition (ISBN #1-56529-037-2), which is shown in Figure 5. It takes advantage of the fact that the

mouse can be programmed to have different sensitivities. With this program, the mouse can behave so that you seem to have to drag it a few metres to move it a small distance, or it can fly across the screen at what seems like the speed of light. The only modification I had to do to it concerns the LeftButton procedure. This is supposed to be able to compile with no errors on MASM 6.0, but with TASM 3.0 there were two errors. They said that there was a jump of more than 128 bytes, so I included a little bit of code that called the error handling routine instead of JUMPing to it.

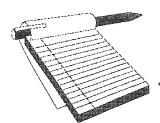
MOV THoriz, BX ; Store them again in work area  MOV TVert, CX MOV TDSThresh, DX  CALL DispParms ; Display initial values CALL ShowMouse ; Go show mouse cursor  Mloop: MOV AX,3 ; Read mouse status INT 33h  CMP BX,2 ; Was right button pressed? JE Exit ; Yes, so exit  CMP BX,1 ; Was the left button pressed? JNE M5 ; No, so do positioning CALL LeftButton ; Go handle left button press  M5: CMP CX,OldX ; Did X position change? JNE Change ; Yes, so handle CMP DX,OldY ; Did Y position change? JE Mloop ; No, so continue loop  MOV AX,0  The following routine displays the mouse  ShowMouse PROC USES AX MOV AX,1 INT 33h RET  ShowMouse PROC USES AX MOV AX,1 INT 33h RET  ShowMouse PROC USES AX MOV AX,1 INT 33h RET  ShowMouse PROC USES AX MOV AX,1 INT 33h RET  ShowMouse ENDP  ; The following routine handles what good the left mouse button is p	use cursor bes on when pressed.
MOV TVert,CX MOV TDSThresh,DX  CALL DispParms ;Display initial values CALL ShowMouse ;Go show mouse cursor  Mloop: MOV AX,3 ;Read mouse status INT 33h  CMP BX,2 ;Was right button pressed? JE Exit ;Yes, so exit  CMP BX,1 ;Was the left button pressed? JNE M5 ;No, so do positioning CALL LeftButton ;Go handle left button press  M5: CMP CX,OldX ;Did X position change? JNE Change ;Yes, so handle CMP DX,OldY ;Did Y position change?  The following routine hides the mouse  HideMouse PROC USES AX  MOV AX,2  INT 33h  RET  HideMouse ENDP  ; The following routine displays the mouse  ShowMouse PROC USES AX  MOV AX,1  INT 33h  RET  ShowMouse ENDP  ; The following routine handles what goes	use cursor bes on when pressed.
CALL Displarms ;Display initial values CALL ShowMouse ;Go show mouse cursor  Mloop: MOV AX,3 ;Read mouse status INT 33h RET  CMP BX,2 ;Was right button pressed? JE Exit ;Yes, so exit	use cursor bes on when pressed.
Mloop: MOV AX,3 Read mouse status INT 33h  CMP BX,2 Was right button pressed? JE Exit Yes, so exit  CMP BX,1 Was the left button pressed? JNE M5 NO, so do positioning CALL LeftButton Go handle left button press  M5: CMP CX,0ldX Did X position change? JNE Change Yes, so handle CMP DX,0ldY Did Y position change? The following routine displays the mount of	pes on when pressed.
CMP BX,2 JE Exit ;Yes, so do positioning the mount of the mou	pes on when pressed.
CMP BX,1 ;Was the left button pressed? JNE M5 ;No, so do positioning CALL LeftButton ;Go handle left button press  M5: CMP CX,OldX ;Did X position change? JNE Change ;Yes, so handle CMP DX,OldY ;Did Y position change?  The following routine handles what good	pes on when pressed.
M5: CMP CX,OldX ;Did X position change? RET  NE Change ;Yes, so handle  CMP DX,OldY ;Did Y position change? ;The following routine handles what goe	pressed.
CMP DX,OldY ;Did Y position change? : The following routine handles what go	pressed.
Change:MOV OldX,CX ;Store X position MOV OldY,DX ;Store Y position CALL Coords ;Display changes  All registers undisturbed LeftButton PROC USES AX BX CX DX	on return
JMP Mloop ;Do it all again PUSH CX ;Store X pos	sition division
Exit: MOV BX,Horiz ;Get sensitivity parameters   MOV CL,14   MOV CX,Vert   DIV CL ;AL now cont	
MOV AX,26 ;Set mouse sensitivity MOV ClickY,AL POP AX ;Get back X MOV CL,3 ;Divide by 8	position
MOV AX,O ;Reset mouse   SHR AX,CL ;AL contains	ns X char- acter position
MOV AH,O ;BIOS set video mode MOV ClickX,AL ;Store for a	a while
CALL CIS ;Clear the screen   je Yeahl	the right row? handle error
AllDone: EXIT	nanure error
Mouse4 ENDP   CMP ClickX,3 ;Horizontal   JNE LB1 ;No, contine   CMP THORIZ.100 :Aready at ]	nue
; The following routine checks to see if a mouse is jne Yeah2 installed. If one is not, then the appropriate call LBError; Yes, so ex	
message is displayed, and the carry flag is set on return. If one is, then the mouse is reset, and the carry flag is cleared  Yeah2: INC THORIZ JMP LBSet	
DATA  NoDriver DB 13,10,'Sorry, the mouse driver was not loaded\$'  LB1: CMP ClickX,11 ;Horizontal JNE LB2 ;No, contine CMP Thoriz,5 ;Already at	
NoMouse DB 13,10, A mouse is not attached to limithe system yes, so ex	it?
.CODE JMP LBSet ChkMouse PROC USES AX BX DX ES	
MOV AH.35h ;Get interrupt vector JNE LB3 ;No, contin MOV AL.33h ;Mouse interrupt CMP TVert,100 ;Aready at JE LBError ;Yes, so ex	nue limit?
OR AX,BX ;Was an address returned? JMP LBSet  JZ CM1 ;No, so give error  CMP BYTE PTR ES:[BX],OCFh ;Is it simply IRET at LB3. CMP ClickX 26 :Vertical D	Dour 2
address?  JNE CM2 ;No, so driver is installed CMP TVert,5 ;Already at CM1: MOV DX,OFFSET NoDriver ;Point to error message	
JMP CM3 ;Go print it JE LBError ;Yes, so ex CM2: MOV AX,O ;Initialize mouse JMP LBSet	
CMP AX.0 ;Zero returned if no mouse LB4: CMP ClickX,33 ;DS Up?	
JNE CM4 ; Mouse is there MOV DX,OFFSET NoMouse ; Point to error message CM3: MOV AH,9 ; Display a string using DOS INT 21h  MOV AH,9 ; Display a string using DOS INT 21h	:limit?

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```
INC
                IDSIhresh
                                                                                 CALL
        JMP
                LBSet
        CMP
LB5:
                ClickX,41
                                ;DS Down?
        JNE
                LBError
                                ;No, so must be an error
        CMP
                TDSThresh.5
                               ;Already at meaningful
                                       bottom limit?
        JΕ
                LBError
                                :Yes, so exit
        DEC
                TDSThresh
LBSet: MOV
                BX, THoriz
                               ;Get sensitivity parameters
               CX,TVert
DX,TDSThresh
        MOV
        MOV
        MOV
                AX,26
                               :Set mouse sensitivity
        INT
                33h
        CALL
                DispParms
                               ;Go display values
        JMP
                LBDone
LBError: MOV
                MOV
                       AH,02
                               ;Output a character
               DL, 07
                               ;Bell character
        INT
                21h
IBDone:
LeftButton ENDP
; The following routine clears the screen ; Uses the attribute of the character at the current
        cursor position as the attribute for the
        cleared screen
Cls
        PROC
               USES AX BX CX DX
        MOV
               8,HA
                               ;Read character and attribute
        MOV
               BH, 0
                               ;Assume page 0
        INT
               10h
        MOV
               BH.AH
                               ;Put attribute in right place
        MOV
               AH,6
                               ;Scroll window up
               AL,0
CX,0
DH,24
                               ;Scroll full screen
        MOV
        MOV
                               Upper left corner of screen
        MOV
                               ;Bottom right
        MOV
               DL,79
        INT
               10h
        RET
Cls
        ENDP
; The following routine updates the coordinate
                       information on the screen
; Pass X position in CX and Y position in DX \,
               USES AX BX CX DX
Coords PROC
        CALL
               HideMouse
                               ;Hide the mouse cursor
                                                                         PD1:
       PUSH
               DX
                               Store Y position
       PUSH
               CX
                               ;Store X position
       MOV
               DH, 21
                               :Row 21
       MOV
               DL.O
                               ;To the left
       MOV
               BH,0
                               ;Assume page 0
       MOV
                               ;Set cursor position
               AH,2
       INT
               10h
       MOV
               DX.OFFSET XPos
                                    ;Point to positioning
                                                      message
       MOV
               AH,9
                               ;Display a string using DOS
       INT
               21h
                                                                         PD2:
       POP
               ΑX
                               ;Get back X position
               BL,0
                               ;Print as-is
       MOV
               PadDec
                               :Go print it
       CALL
       MOV
               DX, OFFSET YPos
                                                                         PD3:
                                    ;Point to positioning
       MOV
               AH,9
                               Display a string using DOS
               21h
       INT
       POP
               AX
                               :Get back Y position
               BL,0
       MOV
                               ;Print as-is
       CALL
               PadDec
                               ;Go print it
                                                                         PD4:
       MOV
               DX, OFFSET Blank
                                      ;Blank string
       MOV
               AH,9
                              ;Display a string using DOS
       INT
               21h
```

```
RET
Coords ENDP
 ; The following routine displays the mouse parameters
                PROC
                        USES
                                AX BX DX
DispParms
        CALL
                HideMouse
                                ;Hide the mouse cursor
        MOV
                                ; Row 3
                DH,3
                DL,6
BH,0
                                ;Column 6
        MOV
        MOV
                                ;Assume page 0
        MOV
                AH, 2
                                :Set cursor position
        INT
                10h
        MOV
                AX,THoriz
                                ;Take 3 spaces
        MOV
                BL,3
                PadDec
                                ;Go print it
        CALL
        MOV
                                ;Row 3
                DH,3
        MOV
MOV
                                ;Column 21
                DL,21
                BH,0
                                ;Assume page 0
        MOV
                AH,2
                                ;Set cursor position
        INT
                10h
                AX,TVert
        MOV
        MOV
                BL,3
                                ;Take 3 spaces
                PadDec
                                Go print it
        CALL
        MOV
                DH,3
                                ; Row 3
        MOV
                DL,36
                                ;Column 36
        MOV
                BH,0
                                ;Assume page 0
        MOV
                AH,2
                                ;Set cursor position
        INT
                10h
                AX,TDSThresh
        MOV
                                ;Take 3 spaces
        MOV
                BL,3
        CALL
                PadDec
                                Go print it
        CALL
                ShowMouse
                                ;OK to redisplay mouse cursor
        RET
DispParms
                ENDP
; The following routine prints the value in AX as a decimal number. The number is right-justified in a field defined by the contents of BL. If BL
        is O,or is a value too small for the width of
        the number being printed, then the number is
        printed as-is.
PadDec PROC
                USES AX BX CX DX
        MOV
                BH,0
                                ;Counter for number of digits
                CX,OFFFFh
        MOV
                                ;Ending flag
        PUSH
                CX
                CX.10
        MOV
                DX,0
        MOV
        DIV
                CX
                                ;Divide by 10
                DL,30h
                                ;Convert to ASCII
        add
        PUSH
                DX
                                 Store remainder
        INC
                BH
                                ;One more digit
        CMP
                AX.0
                                ;Are we done?
        JNE
                PD1
                                ;No, so continue
                BL,BH ;BL now contains spaces to print
       CMP
JLE
                                ;No space or below zero?
               BL,0
                                ;Yes, so don't do spaces
                PD3
        MOV
                CH, 0
        MOV
                CL, BL
        MOV
                AH,02h
                                ;Output a character
        MOV
                DL,
        INT
                21h
               PD2
        L00P
        POP
                DX
                                ;Character is now in DL
        CMP
                DX,OFFFFh
                                ; Is it the ending flag?
        JΕ
                PD4
                                :Yes, so continue
               AH,02h
        MOV
                                ;Output a character
        INT
                21h
        JMP
                PD3
                                :Keep doing it
       RFT
PadDec ENDP
                                                      END
```

ShowMouse ;UK to redisplay mouse cursor



# Consultant's Notepad

Geoff Harrod

Further to my notes last month on Windows for Workgroups 3.11... nothing further. My upgrade still hasn't arrived. Maybe they're fixing up the last bugs before release. I've no quarrel with delays if so!

#### **GIS**

Do you know what a GIS is? You may know that MIS is Management Information Systems and DSS is Decision Support Systems, both mainly databases with often some statistical features in an MIS and some projection, scenario modelling etc in a DSS.

A GIS is a Geographic Information System, and in essence comprises a database system linked intimately with a graphics system. The graphic system stores and displays geographic or spatial features, usually in map form, and the more conventional database part stores mostly text and numeric data about features in the area mapped. Some are complete systems in themselves while there are also others that use a popular CAD system and database system and provide the linkage between them with some customizing of both to provide the desired interrogation and data editing features.

The topic is in my mind at present through having spent some time researching GIS options for a GIS focus in the November issue of Multi-CAD Magazine, of which you may know I am Technical Editor. I thought the more general readership of Significant Bits might be interested to hear about this category of software that is not so widely known.

#### Raster -v- Vector

You may already know about the distinction between raster and vector graphics, ut just in case, lets first go into that a bit.

A Raster is a grid of dots or cells evenly covering an area, or scanning an

area in a rows of lines that can store variations along their lengths, as in a TV picture or produce a grid of data points as in the output of a scanner. Each data point may be simply 2-state (black/white) or multi-level (grey-scale) or store 3 or 4 multi-level data items (RGB or CYMK colour). The most notable feature of a raster is that it provides a data point for every point in the area covered by it, regardless of whether they may be anything of interest at all points. Thus a raster image of a computer text display such as captured to a PCX file is always the same size (at least before any data compression) regardless of how much writing there is on the screen.

A Vector is normally defined at school as an element that has location, length and direction. In our field it usually means a picture element in the form of a line that is stored by specifying that is a thing of type "Line", starting at coordinate x,y and extending by x units at an angle of a relative to some datum. A vector graphic element could also be a circle or arc with its centre point, radius, start angle and end angle stored. This is how CAD systems store their drawing data and are hence called vector graphic systems.

When you watch a CAD system throw up its image on the screen it draws the various elements in some strange sequence, not methodically filling the screen from top to bottom. The display order is generally the order in which the operator defined those objects, and reveals the order in which they are listed in the drawing database. If you draw a very large sheet in CAD but leave it all blank except for a couple of circles in odd places, the drawing file will be quite small. But if you draw a small drawing with minute detail crammed all over the file will be rather big.

The stored data is effectively a list of instructions how to draw the picture. The data stream to a pen plotter is very

much the same. Go to x-y, put the pen down move to x-y, lift the pen, change color,... etc. Vector systems can usually allow groups of marks to be defined as representing some named object, and by the nature of its storage it knows where there are circles, lines, text, etc. Raster systems only know that certain dots are black and others white (or coloured) and cannot recognize what constitutes a circle etc.

The common "Paintbrush" type of drawing program is raster based, CAD systems are vector and the top-end artistic graphics systems like Corel, Micrographx, Aldus Freehand etc are vector based, also called "object-oriented" since they can handle whole objects as individual entities. The fills in Corel etc are strictly raster objects but are defined by their vector perimeters. The better CAD systems can now usually incorporate some raster elements also, overlying the vector drawing. Scanned photographs are always raster images, as are all PCX, TIFF, GIF etc files. Postscript is a vector system as it defines the curves that make up the letters and then how to fill them.

#### Raster or Vector GIS

All this leads up to the fact that any one GIS is usually either raster or vector based. Both types have their advantages. In a raster GIS the non-graphic information is tied to coordinates, or to each raster cell. Scanned aerial photographs are raster of course. So are satellite scans. Some raster geographic systems are quite coarse. The typical satellite imagery uses a 1km square raster cell. For land use and native vegetation surveys that is quite adequate, especially as the boundaries between zones are a bit arbitrary for such data. They really mark the centreline of transition zones.

A vector GIS attaches descriptive data to individual drawing objects and is Continued on Page 42

# ABC FlowCharter 2.0

#### by Ash Nallawalla

As part of my software release management duties at Unisys, I draw up the bill of materials of each product in pictorial form. I show this to the software development team to confirm that I have interpreted their intentions correctly. This information is used to program the manufacturing database, so accuracy is vital.

Although this could have been done in a textual format, I use an old product from Roykore called ABC FlowCharter, version 1.1. The bill of materials flow-chart is a picture of the deliverable. For instance, we can tell at a glance how many labels to generate and how many blank diskettes to order prior to the shipment of masters to the manufacturing plant. Incorrect "parenting" in the structure becomes obvious.

For some time now, ABC FlowCharter (ABCFC) has been marketed by Micrografx, which has now opened an Australian office. It is currently at version 2.0, which is the product described here.

#### What Is ABC FlowCharter?

ABCFC is a Windows-based application that enables you to create flow charts to describe processes, job flows, quality management programs and the like. It can also act as an OLE server, so it can be accessed from OLE client programs.

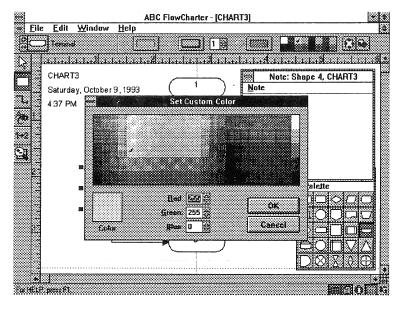


Figure 1. Colour can be added to increase the information "density"

Several shape libraries cover areas such as the following:

- \* Auditing
- \* Computer networks
- \* Data flow
- \* DIN 66001 Information Processing
- \* Extensions
- \* Networks: PC, mini, and mainframe
- \* Office Tasks
- \* Quality management: ISO 9000
- \* Quality management: Telephone company
- \* Schematics
- \* SDL (System Description Language)—CCITT
- \* Original ABCFC, simplified, and standard shapes

The above palettes can be customised by deleting shapes that you do not need or by adding shapes from other applications or third-party libraries.

#### Requirements

ABCFC requires the following:

- \* 80386 or better PC with a mouse, hard disk and floppy drive
- \* VGA graphics card or better
- \* MS-DOS 3.1 or higher
- \* Windows 3.1

#### In the Box

The 5.25-inch version comes on two 1.2 MB disks. A *Read Me First* card covers some basics, including installation instructions. The Quick Reference Card is well designed and covers the essentials. The Shape Palettes Guide is a printed catalogue of the shape clipart.

The User's Guide is detailed and excellent.

# - a review

#### In Use

Installation was simple. I did not really need the extra 24 TrueType fonts, although they include some condensed typefaces that suit flowcharts.

I do not relish learning a new program if the job can be done by one that I know. I can draw flowcharts with my favourite drawing package, so why did I bother to learn ABCFC?

A drawing package will enable you to draw flow diagram shapes and join them with a line. You can add text and centre it inside each shape. You can add colour. When you want to draw a moderately complex flowchart you will find it tedious to draw the lines, particularly when you want some to go around some shapes. If you move a shape, the connecting line remains where it was and you have to rejoin it separately. Centring text inside the shapes is tedious.

A special-purpose flowcharting program such as ABCFC makes this easy. A palette of shapes is at hand; and previously chosen attributes are retained if desired. Commonly used text attributes can be stored as styles—just a button click away. You can choose to have lines skirt around objects or follow the paths you specify, both straight and curved.

The new version has a totally redesigned user interface and over time I will discover where they have hidden old options and what to do with some of the new ones. Line drawing is much improved. Text can now be typed directly inside a shape, as opposed to typing inside a text-entry field at the top of the screen. You can add notes to each shape and launch programs from them if you wish. Flow charting can become a training tool too.

#### Recommendation

ABCFC has fared well in commercial reviews and is easy to use. You can expect to learn it within hours of installation. It does the job well and I recommend it.

#### **Availability**

For pricing and the name of your nearest reseller of ABC FlowCharter 2.0, contact Micrografx Australia P.O Box 5634 Chatswood West NSW 2057 (02) 413 6534 (02) 427 7244 Fax

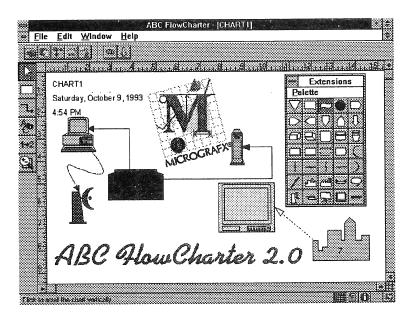


Figure 2. An extensive library of standard shapes is available



12 Firelight Street SUNNYBANK HILLS (07) 273 8946 018 -151747

November 1993

#### Compiler review

# Symantec C++ Professional Ver 6.0

#### Geoff Harrod

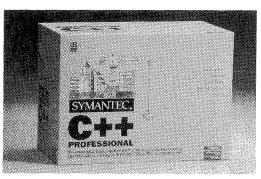
This is the biggest lump of software I've ever seen! It's not so soft either — you need to use proper posture when lifting it. It comes in a big bright yellow box 430 x 240 x 200mm weighing over 16 Kg. Inside, it is actually mostly books; hence the weight. There are 13 books totalling some 11000 pages, all with bright yellow covers. They certainly make an impressive line-up on a bookshelf. The actual software is on 18 compressed HD 3.5" disks and duplicated on a CD. If all options are installed it takes up 58 Mb of disk space!

How, you may ask, can any compiler be this big? The answer is, there's a lot of it because it does a lot. It's a very complete suite of software tools for doing quite a wide variety of software development tasks. This is the "Professional" edition. The core C++ compiler is also sold on its own for somewhat less bread with just a couple of books. In this package, this is what you get:

- C and C++ compilers to latest ANSI & AT&T with templates & nested classes, both in Windows IDE and DOS command-line forms.
- Microsoft's Foundation Class library ver
   2.0 for Windows C++ work.
- Resource toolkit for editing and compiling.
- Three types of debuggers: integrated, remote & run-time, supporting dual monitors, network & DLL debugging & graphical displays of complex data structures.
- Crash analyser system for post-mortem analysis of Windows & DOS crashes.
- DOSX, a 32-bit protected-mode royalty-free DOS-extender.
- OPTLINK 4.0 from SLR systems; the fastest linker for DOS and Windows.

- Library manager, compatible with Borland & Microsoft.
- Unix-like make utility.
- An unusually comprehensive set of libraries that includes all the standard K&R & ANSI set plus both the Microsoft & Borland/ Turbo PC extensions sets, and several very valuable extra toolkit libraries for file manipulation, memory management, linked lists, display and debugging support.
- Microsoft's WIN16 API for Windows, with complete printed manuals (something you don't get from Microsoft).
- Microsoft's WIN32S API for 32-bit Windows & Windows-NT, again with full printed manuals.
- Windows resource toolkit.
- VISUAL PROGRAMMER, an applications generator, or CASE tool, from Blue Sky Software. It operates similarly to Visual Basic to design screens, menus, dialog boxes, toolbars and other Windows elements by interactive drawing techniques. Program function can be defined in broad terms for each element. Then the system generates the C++ code using the Microsoft Foundation Classes and API. The basic system can be adapted to various target environments by buying alternative code generator modules. The supplied ANSI C module can generate 16/32-bit portable C, 16-bit Windows 3.1, 32-bit Win32s and 32-bit Windows-NT. Other available modules support OS/2 PM, Turbo Pascal-for Windows, X-Windows crossplatform & others. Add-ons are available for generating SQL Client-server systems & other tasks.

The actual compiler provides:



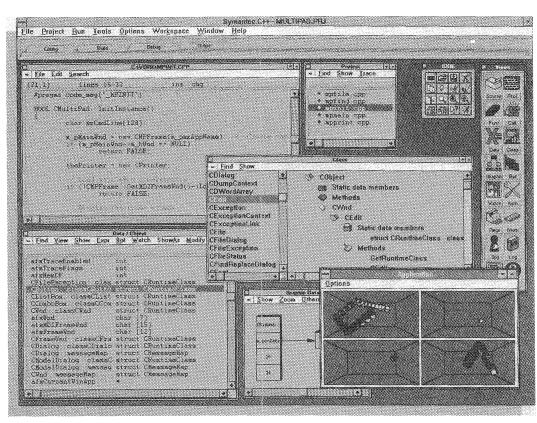
- Windows-hosted integrated development environment with tight integration between debugging & editing, multiple workspaces, and links to the optional extra PVCS source code version control system.
- DOS command line operation also. Unlike some C++ compilers, it compiles older C code without major alterations. Generally only some correction of syntax style to its stricter enforcement of precedences and typing etc is needed. Also, although this is basically a protected mode compiler that needs a DMPI memory manager (as under Windows), it will also run in a more restricted form as a 640k DOS system. It merely reports "No DMPI provider found." to warn you, and proceeds.
- Complete compatibility with both Microsoft and Borland C++ both in the C++ keywords and libraries. The Turbo C functions that differ from Microsoft are also supported. I tested it with code and add-on libraries designed for Turbo-C and for Microsoft C 5.1 & 6 with only minor code editing (mostly casts and extra parentheses) and no problems with the libraries.
- Inline assembler for 16 and 32-bit, including Pentium support.
- Support for Codeview and other party's debugging systems.

The compiler can be used for C or C++ techniques for tasks ranging from simple programming in DOS to very large 32-bit extended-DOS tasks with executable files in the megabytes range, to all types of Windows applications with the WIN16 API for 16-bit Windows 3.1, or the WIN32S API for 32-bit code for Windows-NT. Win32s code will also run on Windows 3.1 in partly 32-bit mode by the use of the supplied Win32s run-time module. It can also generate pure 32-bit NT-only code by using the WIN32 API that comes on the CD from Microsoft with NT, but the Win32s system is likely to be more generally useful and saleable.

The extended-DOS mode can also be used with the Phar Lap DOS/386 ex-

tender instead of the supplied DOSX. This makes it suitable for compiling \*.EXP files that are to link at run time with existing Phar Lap extended-DOS systems. From my viewpoint, this means the one compiler can be used for AutoCAD ADS programming for Extended-DOS AutoCAD and for Windows AutoCAD. Formerly MetaWare HighC/ 386 compiler (or Watcom C32) and Phar Lap linker/run-time had to be used for the ext-DOS AutoCAD (at a cost of over \$2000) and Microsoft C with Windows SDK for the Windows version. It will also serve for the AutoCAD NT version due soon, and has now been adopted as the preferred compiler by Autodesk I believe.

A multitude of ready made 3rd party libraries can be used for such things as high performance serial comms, indexed databases and for text-mode Windows-like DOS programs. I hope to try it with CODEBASE 5 dBASE toolkit soon. Choice of 3rd party libraries is wide as it will generally work with libraries designed for Turbo, Borland or Microsoft. However, Symantec described it as "broadly compatible" with both Borland & MS library object formats. They provide guidelines for using vari-



The IDE features drag-&-drop, multiple workspaces, and other exciting features for enhanced productivity.

ous option directives to emulate the other system's differing default alignments etc. but they suggest it is best if possible always to recompile the library source to avoid the possibility of getting any unreported minor annomolies that might manifest as bugs in rare run-time circumstances. Zortech was Symantec's progenitor and Zortec were the leaders in integrated C++ (as opposed to preprocessors) long before Borland or MS had any C++ support. Zortec C++ 3.1 used differing object formats and its objects or libraries need recompiling. Two chapters in the manual are devoted to converting code from Microsoft C++ 7.0 and from Borland C++ 3.1, and these spell out all the minutae.

Symantec generates much more "picky" errors and warnings than either MS or Borland but they can be selectively muted as desired. At the strongest they adhere to very strict typing and ultra-safe practices, like the very best of Lint. All through, the compiler strives for maximum bug prevention, which is always much better than bug finding. However they provide exceptional facilities for debugging all types of program, and a unique crash analyser also.

There are several levels of code optimisation including global optimising which is not all that common yet. At the highest levels it produces remarkably compact and/or fast code, as desired. Extensive global optimising is desirable for C++ as it tends inherently to produce rather excessive code otherwise.

There are numerous extra libraries included. There is an advanced numeric package which includes coprocessor useage, and packages for BIOS use; Ctl-C and critical DOS error handling; text-mode display; DOS system use; EMM expanded memory; interrupts; mouse use; virtual memory paging; sound; file & directory handling; popup/pull-down menus; TSR programs; linked lists; and memory allocation. The Ctl-C & error package is a neat system for coping with a common problem area. The linked list system is a proven robust framework for any sort of data storage and elliminates the common bugs often encountered when writing custom list manipulators for each application. The Files module has routines that use the List module to read a text file into memory as a linked list of lines and to write it back as a text file. With that, a text editor is already half written! The Files module includes ready made directory listing routines, date and time actions, and pathname validation, searching, expansion and disection routines. The Files and List modules are crossplatform portable including Unix, which solves a lot of Unix/DOS file differences problems.

The MEM package is a very worthwhile subsystem that provides much more robust and abuse-resistant memory allocation than when using standard malloc etc. It also acts like the bounds-checkers and pointer validation extras often used by large developers, and can do much to prevent pointer bugs occurring, which are always the hardest to find later. It even incorporates techniques to stimulate compiler error generation for subtle conditions that might only occasionally occur when released to the public. MEM obviously incurs considerable overheads and slows execution significantly. However its extreme bug checking can be turned off at the public release stage after sufficient testing, to restore full speed without changing the embedded code. Using MEM is basically a matter of calling mem init() and then prefixing all malloc(), free(), etc calls with "mem\_" as in mem\_malloc(). When well tested a global constant can be set to disable all the MEM overheads on the next make and elliminate the extra code they use.

Pointer errors have always been the weakest thing in C (alongside its freedom of pointer use being its most powerful feature) and the very strong surveilance of questionable practices in its compiler warnings, plus the fail-safe features of the MEM package and use of the List package and the other ready made toolkits, could well save much time in bug tracing and user dissatisfaction.

The compiler's command system can invoke Microsoft's MASM or Phar Lap's 386ASM to assemble any \*.ASM files included in the compile list. There is both C and C++ linkage and comprehensive documentation on this and the alternative in-line assembly. Although it will run MASM or 386ASM those assemblers are not included in the package.

The in-line assembler is a full 80x86 type for 16 and 32-bit modes. Both Borland and MS in-line asm directives are supported.

This is a very fine professional compiler system fully in tune with current trends and requirements, with extensive provision for bug avoidance and detection, lots of proven code modules and exceptional versatility over the whole gammut of Intel machine use. I have not had time to explore more than a tiny part of this monster's capabilities, and will no doubt continue to find things to say about it as long as I use it. Everything I did try it with worked without any problems (other than of my own making). It appears to be able to generate very fast programs but always keeps code reliability as the primary criterion. Of course, actual perceived user speed in major Windows productions is as much a matter of programming skill as compiler performance. For more modest jobs (but not all that modest) the Visual Programmer system produces very satisfactory results; certainly much snappier than from Visual Basic, and with little more effort.

I will report further at a later date after I have used it for more serious work. It is a very impressive package indeed, and at a very attractive price for all that. The "standard" edition; just the C/C++ compiler, its essential tools and two books; is a very powerful and economical package as an alternative to the likes of Quick-C and Turbo. Congratulations, Symantec.

Symantec C++ 6.0 Professional edition: . \$799
Cross-grade from MS or Borland: ....... \$349
Upgrade Zortech or Multiscope: ........ \$230
Symantec C++ 6.0 Standard edition: ...... \$219

#### Prerequisites:

DOS 3.3 or later. MS Windows 3.1 or later. 80386 or better, 100% compatible with IBM-PC. Maths copro if copro maths options enabled. 55 Mb free disk space for full Pro installation. 5 Mb for Standard edition or minimal Pro. 4 Mb of memory minimum. 8 Mb preferred. VGA video. High-res SVGA recommended for the Windows IDE.

better for cases where several data item may be needed for some objects. An example is cadastral data (legal property description maps), where the graphic data elements of interest are polygons representing the geographical location, shape and area of parcels of land, and the attached data describes the owners. It may include names and addresses, mortgagers, local authority, rates status, connected services, registered improvements, etc. Today. cadastral data is usually stored in a central GIS and the maps printed from there. or selected data supplied as required on floppy disks or CDs, or over networks.

Many organizations now use GIS for development planning or operations control. It has obvious advantage to a trucking company or a security guard company. The Qld Dept of Primary Industry uses GIS to record and monitor the state's underground water reserves and surface streams, and to provide the basis for their regulation of draw-off rates from registered wells and irrigation schemes. The mining industry uses GIS extensively for exploration recording and extraction planning.

For researchers and planners there is often a need for the abilities of both raster and vector systems. There are some large GISs that fully integrate both types but it is generally not so. It is however quite common for a vector system to be able to overlay a raster image correctly registered with the vector objects at known reference points. This is often done with aerial surveys, which then add visual data to the stored vector data. Usually however, such vector based systems cannot attach data to the raster elements. Conversely, raster systems can often overlay vector data from other map systems, such as for precisely showing roads or land parcels on a low resolution raster data system.

That's about as much as I can go into it here. If people are interested I could write a lot more on GIS.



# Windows Watch

#### An Occasional Column, compiled by Ralph De Vries

#### I told you so

It had to happen. While experimenting with a shareware program, I managed to lock my computer up solidly - the type of lockup when even the Control-Alt-Delete combination does absolutely nothing. A reboot resulted in a series of error messages, which tried to tell me in a totally unintelligible manner that DoubleSpace had given up the ghost. And this happened after only recently boasting that DoubleSpace had never caused me any problems. Oh, well....



It's less than two years ago when I upgraded my 40 Mbyte hard drive for a 127 Mbyte drive, which caused me to say at the time, like so many other Windows users, that I would now never run out of hard disk space again. How was I to know that Windows programs and their associated files were going to grow even faster than our annual inflation rate?

When I talked to my dealer about upgrading to a 250 Mb hard drive, he politely suggested that I may as well go for a 345 Mb hard drive, as there was only a difference of a mere hundred dollars. I now posses a 345 Mbyte Maxtor hard drive, and with a bit of luck this should last me at least until the release of Windows 4.0, --- or will it?

#### **Pet Hate**

'Floating Toolbars'. Oh, how I hate those wretched things. PageMaker is a typical example of a program

which employs floating toolbars, and forever more you find yourself moving those blasted toolbars, because they are always in the way. The latest version of CorelDraw has heaps more of those things; they call them 'roll-ups', but they are just floating toolbars under another name, and, like the ones in PageMaker, they are also always on that part of the screen where you don't want them. Ideally those floating toolbars should move out of the way when the cursor comes near them. Now there's a challenge for a clever programmer - intelligent moving toolbars...

The alternative is to fix the toolbars to one of the four sides of your monitor screen, but with all the rulers and icon bars we will soon have reached the situation where there is no room to do anything on the screen, unless you have a 21" monitor and a minimum resolution of  $1024 \times 768$ . No wonder older users sometimes pine for the simple screen layout of Wordstar etc.

#### **Fanfare**

When I bought a CD-Rom unit about a year ago, it was mainly to access the fonts and clipart of CorelDraw. Since that time I have upgraded to CorelDraw 4.0, and I now own two CorelDraw CD Rom disks. Add to this the CorelDraw Artshow disk and an '92 version of Microsoft's Bookshelf and there you have my grand total of CD Rom disks (I do have a few Audio CD Roms, but they don't count for the sake of this tale).

I made do with Microsoft's speaker driver, which can be found on most BBS systems, and this worked fine with my built in PC speaker, but on some PCs the results are pretty poor, to say the least. The PC speaker driver only plays .wav files, and this means that the many Midi sound files which can be found on my CD Rom collection remain silent. The new version of CorelDraw has a tutorial on the CD Rom but, as it employs mainly midi files, it's totally useless without a soundcard.

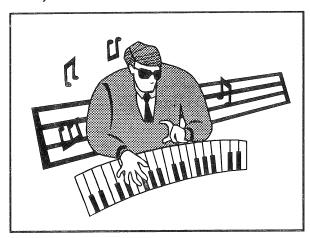
Some six months ago my dealer sold me a SoundBlaster 'clone', which worked fine in DOS, but refused to play Midi files in Windows - so much for SoundBlaster compatibility! It must have had something to do with the IRQ settings, but even after trying a second card (the first one appeared to be

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faulty), we never got it to play the Windows .Midi files. Reluctantly I returned the unit to my dealer, and I went back to the PC speaker driver.

At the recently held computer expo, I must have seen at least eight different brands of sound cards on display, but I was attracted by a \$95 price tag of the standard SoundBlaster card. After hesitating for a few moments, I decided to throw caution to the wind, and forked out the \$95 - after all, if this card wouldn't work for me, I couls always put it in my son's PC!

At this point I have to make a confession. I treat my PC like my car, which means that I normally never look under the 'bonnet'. In the case of my car I leave it to the man at my local garage, and my computer is only opened up by my dealer when he replaces a hard drive or mother board etc. I become absolutely paranoid when I see all these cables and connectors inside the case, and in particular I hate all those slots, which appear to be grinning at me in the most evil fashion. Much better to leave well alone, and let the experts do the dirty work.



All this changed when I brought home this sound card. I was not prepared to travel to my dealer, and spend even more money on this card, so there was only one thing for it - go to it, boy. Oh, why, oh why is there so little space between those slots, and why do all those bits of cable prevent me from inserting this wretched card? Unplug this cabel, and now unplug that cable, and just remember which goes where... To cut a long story short, I managed to install the card without too much swearing, and then I played the test program - and yes, hooray, it appeared to be working!

Now for a full installation of the software, and there was my SoundBlaster program group in Windows. Would it play both .WAV and .MID files? Fortunately the answer was in the affirmative, so now my PC is a MultiMedia PC. If you are like me, and not terribly interested in either stereo or making your own sound recordings, the standard SoundBlaster 2.0 card is a good buy at \$95,

which, I believe, is going to be the new base price. If you are not very interested in doing your own sound recording (all that midi-interfacing and sequencer stuff), this base model of the SoundBlaster is probably sufficient for almost all 'standard' applications which incorporate sound. In fact my son was so jealous that he went out and bought his own souncard and, yes(!) you guessed it, I installed that one as well, without falling over!

#### **Cheaper OCR?**

Scanner owners know that good Optical Character Recognition software is very expensive. Omnipage Professional costs about \$1500, which puts it out of reach to anyone who isn't working in big business or government circles. However there's light at the end of this tunnel as well. According to the US *Windows Magazine* (Sep '93 issue), Xerox in the USA has released an OCR package for Windows, called *TextBridge*, which has a (US) R.R.P. of \$99, which means the street price will be considerably less.

The review in Windows Magazine (based on a beta version) gives it high marks for 'normal' character recognition work, but felt that it did not perform so well with Fax character recognition.

I called the local Xerox office, but they had not heard about this program. Perhaps one of our readers may be able to get the low-down on this interesting software development.

#### ShareWare

I found the following list of 10 of the most popular Windows shareware packages in the Oct '93 issue of Windows Magazine:

Plug-In for Program Manager: This utility enhances Program Manager--without replacing it--by adding a variety of useful and powerful capabilities. Features include: complete group management, system resource displays and alarms, and a OuickRun menu for easy access to frequently used commands.

Windows Lite: Perfect for notebooks where you want to conserve every byte of RAM and storage, Win Lite is real Windows that fits on a diskette. It lets you easily take your Windows environment anywhere you go and install it on any DOS machine, complete with Cardfile, Notepad, Clock and more.

WINFILEX 1.19: Change file associations on the fly with this File Manager add-on. WINFILEX lets you choose a default application for any file extension that doesn't have an association, and lets you open any file--even executables--in the default application.

File Commander 2.0k: Customize and empower File Manager by adding dozens of menu items with this utility. File Commander ends the drudgery of day-to-day tasks like launching programs and opening documents by automating the selection of which directories to go to, which files you want to work on and so on.

INI Manager 2.0: INI Manager helps you edit Windows and Windows application .INI files safely and quickly. The utility displays all available .INI files and backs them up before you make any changes. After you finish making changes, INI Manager updates all applications that use the file you edited.

WinPost 3.2: Use this utility to create virtual yellow sticky notes instantly for automatically backed-up reminders. OLE server support allows you to embed WinPost notes into any OLEcompliant document; a hotkey provides access to WinPost from anywhere in Windows. You can edit, print and organize notes.

WinZip 4.1: This PKZIP Windows front end is a mustfor any Windows user who works with .ZIP, .LZH, .ARJ or .ARC files. With the point-and-click interface you can view, run, extract, add, delete and test files in archives. Optional virus scanning support is included.

PaintShop Pro 1 .02B: Now you can display, alter, print and convert images to and from .BMP, .DIB, .GIF, .IMG, .JAS, .MAC, .MSP, .PCX, .PIC, .RAS, .RLE, .TGA, .TIF and .WPG file formats. Altering includes resizing, trimming, applying filters, dithering and palette manipulation.

RAMGauge: Keep up-to-the-second tabs on available RAM and system resources with this small on-screen window. The information is updatsed automatically and constantly -- even while RAMGauge is minimized -- providing a great tool for troubleshooting problems with your system.

Searcher 3.0: This superpowerful utility searches your system for whatever files you specify. Search parameters include: disk (or disks), path (including all subdirectories), text contents, DOS file attributes (normal, archive, read only, system or hidden), file size and/orfile creation date.

Some of these are in the Brisbug PD and Shareware library (and there are a few updates out as well), but if you hassle Brian Bere-Streeter, the Windows SIG coordinator, long enough, I'm sure he will do his utmost to add the missing programs as well.

#### **New Stuff**

This month the Microsoft upgrade floodgates should open. As Geoff Harrod reported in last month's Significant Bits, there's a new version of Windows for Workgroups (3.11) on the way, which appears to be a genuine step forward in Windows development, and not necessarily for network users only. I have ordered my copy (Communiqué members who own Windows 3.1 pay \$89.00 for the upgrade – not \$50.00 as The Australian mistakenly reported), but it has not arrived at the time of writing. My own feelings are that Micrsoft's new single user version of Windows (Chicago or Version 4.0) is at least 12 months away, to go by their past history, but I am ready to be surprised.

The other new products of Microsoft include upgraded versions of *Excel*, *Word for Windows*, *Dos (6.2)*, as well as a new Office pack, so there's no reason why you should have any problems spending your Christmas savings.

In the US there's a new Windows Version of *Quicken* (3.0), the home and small business accounting package. This means that in due course we should see a new Anglicised (and Australianised) version as well. First reports speak very highly of this upgrade.

Also getting very close is the Windows version of WordPerfect 6.0.

Years ago computer freaks who stayed home during the Xmas holiday scene used to say that they would use the break to do some 'real programming'. At present we count ourselves lucky to spend the holiday season learning all about the new features of all these upgrades!

On a more serious note, I am now getting really concerned with the ongoing problem of information overload, and I'm sure that lots of my fellow members who have jumped on the Windows or OS/2 band wagon must share my concern.

During our October meeting we had two presentations of the latest versions of spread sheets (Lotus 1-2-3 and Quattro Pro). After trying to take it all in, I gave up. Not because they were bad presentations, but because it was too much of a good thing for this particular party.

The same goes for all the other major applications which are about to descend upon us. Perhaps the management committee will have to start planning a series of relaxation sessions for stressed out members!

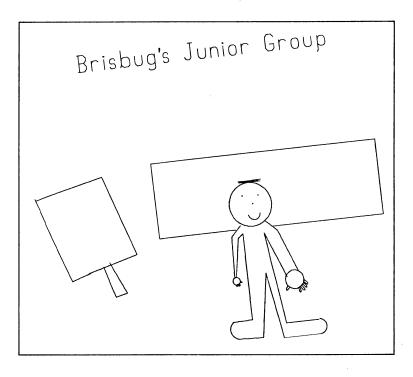
*GGGBBBB* 

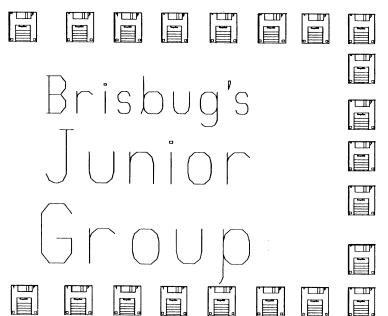
# Junior Club Capers

#### **Logo Competition**

Entries continue to pour in for the Junior Club Logo competition, and the first prizes (of \$25 gift vouchers for software at the Brisbug shop) have been awarded. President Lloyd praised the high standard of the entries, two of which are reproduced below.

Keep up the good work!





#### Name-the Club Competition

Another batch of suggestions for a distinctive name for the Junior club have been received from Christopher Kelly who submitted:

Little Brisbuggers Junior Brisbuggers Minor Brisbuggers View

#### Game Review

#### **Unlimited Adventures**

On the last day of the Computer Expo down at the RNA showgrounds, my father and I were at the Brisbug stand handing out pamphlets and talking to people about the User Group. Mr Ron Kelly came to the stand and talked to me about writing an article for the Junior Group. So here I am, and the game I'll be reviewing is the latest game designer from SSI (Strategic Strategies Inc.), Unlimited Adventures, which we bought at the Computer Expo.

The package is an advanced Dungeons and Dragons fantasy role-playing design system. When I arrived home, I put it on my computer and loaded it up, (it takes about 6Mb). It went through the usual "how-do-you-want-it" install program. I chose SoundBlaster, so the first thing I heard was the music. It asked for codes (don't they all!)), and so I did that. I had read the manual before, so I had a rough idea what to do.

The idea is to create a dungeon with different wall sets (16 of those), backdrops (19 of those) and stuff like that. You can make people talk, buy things, play music, go overland (four different scenes), and go through dungeons (36 dungeons to choose from!).

You can design fights, or just write some text message to the player. I just made a dungeon with lots of fights and tons of money, and gave my brother a turn. He said it was a cool dungeon.

I'd say anybody who likes role-playing games would enjoy this. I gave it four out of five stars.

\*\*\* Adrian Mill Member # 3341

Left. Two of the suggested logos for the Junior Club which won prizes for the designers.

#### The Winners

Sunshine Coast Multiline BBS

I found out about this new bulletin board in my highschool's newsletter. I phoned the Sysop and found that he lived only 3 blocks away! The reason why I like this BBS is because it has 2 CD-ROMs, a hard drive and a million other things.

I had a quick chat with the Sysop (Tom Nitzcher), and immediately decided to join up. I went down to his place and gave him my ID card to get the high school student's rate of \$15. We talked a while about the way he runs the BBS. He has two lines on the same number which allows members to play games on line at the same time.

His shareware CD-ROMs are Night Owl 7 and 9, and he will be getting five more soon.

Sysop:

Tom Nitzcher

Phone:

(07) 44 1477

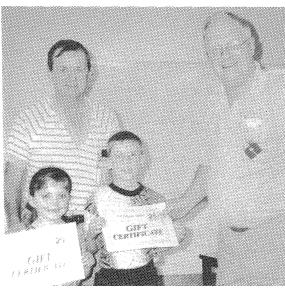
Baud rates: 2400, 14400

Adrian Mill

Proud Mum, Annette Bulmer with Matthew who has just accepted his prize of a \$25 gift voucher for the library from President Lloyd Smith

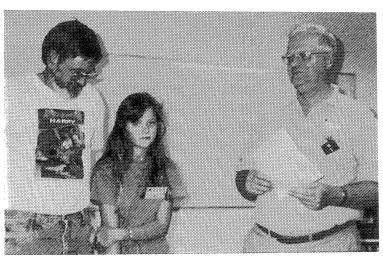
Ted Harwood with his two Juniors, Belinda and Glen, who won \$25 gift vouchers in the logo competition.

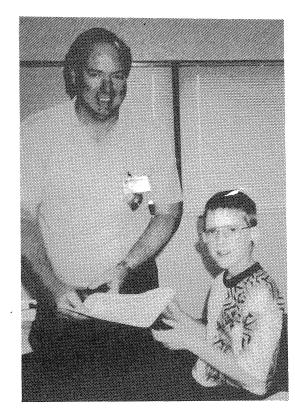




Right. Glen Harwood presents his entry (lower figure on previous page) to editor, Ron Lewis, for publication.

Cassandra Bulmer also won a gift voucher for magazine contributions. Here she and Dad, Gordon, are about to be presented by President Lloyd.





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# October's Sunday

#### Reported by Ron Lewis

Sundays at Brisbug are always a busy time, with lots of events occurring simultaneously. Our roving photographers, Lloyd Smith and Ron Lewis, captured some of the action at the October meeting

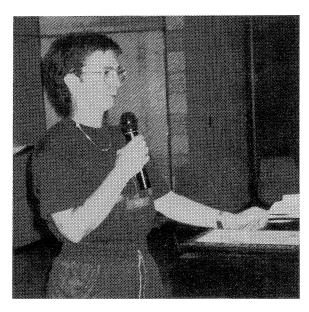
The Main Theatre is usually the centre of attention, being in continuous use from 10am (Ron Lewis' class), to 5pm (the Windows SIG). In between are two major presentations and a club meeting (at least).

#### The Presenters ...

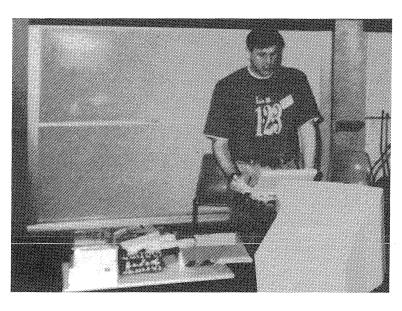


Jody Taplitsky, Borland International's Sales Manager for our area, listens to local Borland rep, Richard Norris, explain the technical aspects of Quattro Pro for Windows Ver5

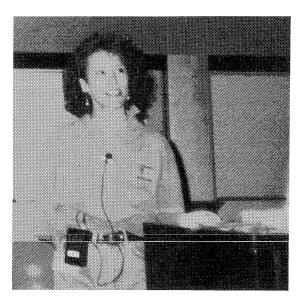
#### and the presented



Our first ever Life Member, Sylvia Willie, makes her acceptance speech to a packed theatre.



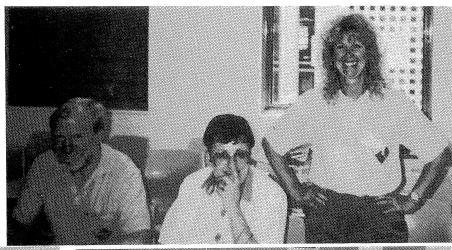
Mike Clark, of Lotus, demonstrates Lotus Smartsuite to a large audience at the Lunchtime Special

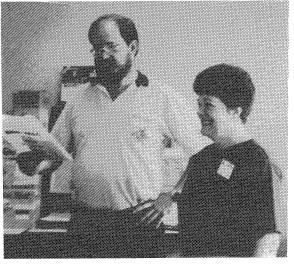


Jody Taplitsky leads off the Borland presentation at the Main Event

## ... and in the Back Room

Right. The Registration Desk, seen here manned by Max and Kate Kunzelmann, and Membership Secretary, Jan Ausburn, confidently await their first customers of the morning.





Above. Software Shop supervisor, Brian Sanbourne and his able assistant Margaret Burton (also of WordPerfect classes fame) check out a software order.

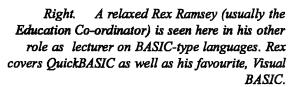
Above Right. The Software Library copiers are the team which ensures members get their shareware disk copies on time.

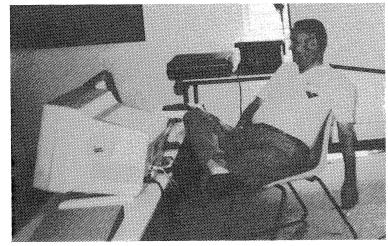




#### ... and Classes

Above Right. Dan Emerson's Introduction to dBase has helped first-time database users come to terms with dBase IV.







# New Library Listings

Compiled by Lloyd Smith

BBUG NO 3001 SFWARE FONT UTILITIES Ver. 1.0 (Disk 1 of 4, also 3002,3,4)

CLASSIFICATION \* Printer Utilities \* Hard Disk \* Laser Printer

SFWARE FONT UTILITIES gives you the tools to download, rotate, compress, expand, view, and perform special effects on the PCL softfonts used with your Hewlett-Packard laser printer. SFWARE is not a collection of fonts, but a set of font manipulation utilities. It can even be set up to access the utilities from an integrated menu system.

Softfonts are fonts stored in files on your computer and sent to the memory of your laser printer each time you turn it on. Downloading softfonts to a laser printer is something lots of programs do, but SFWARE does a lot more. It lets you take any existing font and use SFWARE's special effects to create some new, eye-catching fonts.

The special effects available through SFWARE include bold, fill, convert to fixed spacing, halftone, hollow, invert, mirror, outline, convert to proportional spacing, resize, reverse, shade, shadow, slant, stripe, 3-D, hollow-3-D, and filled-3-D effects. The effects can be tailored and combined in countless ways. For example, you could take an existing 18-point Times font and make it hollow, slant it, and put a 3-D shadow

behind it. Before you actually use these fonts you can view them on-screen, or print reference sheets.

Another added feature is the ability to use fonts on older HP laser printers. Older printers don't normally support compressed fonts, but SFWARE can expand them for easy use. In addition, for older HP printers that won't do this automatically, SFWARE can change a portrait font to landscape. This is a quick, easy way to create a big font collection from a small set of fonts.

BBUG NO 3002 SFWARE FONT UTILITIES
Ver. 1.0 (Disk 2 of 4, also 3001,3,4)

BBUG NO 3003 SFWARE FONT UTILITIES Ver. 1.0 (Disk 3 of 4, also 3001,2,4)

BBUG NO 3004 SFWARE FONT UTILITIES Ver. 1.0 (Disk 4 of 4, also 3001,2,3)

#### BBUG NO 3005 WYNDFIELDS FOR WINDOWS Version 1.1

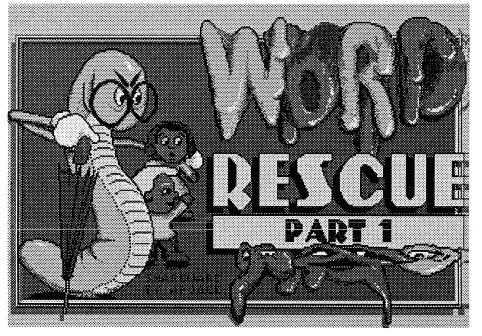
CLASSIFICATION \* Database \* Windows \* Hard disk

WYNDFIELDS is a relational database program for Windows, useful for keeping track of any type of structured information. Data may be added, changed, removed, found, displayed, analyzed, and printed

easily using the intuitive Windows interface. Creating and printing mailing labels or detailed reports can be accomplished painlessly from within the program. Multiple indexes (ways of ordering your data) are maintained automatically for you, and several methods are available for extracting exactly the information you need from your files.

For more advanced users, Wyndfields also offers extensive string and math functions for use in searches and calculated fields, and its date and time tracking abilities are unsurpassed. Several databases may be linked to each other so that you may pull together related information from each of them at the same time.

Don't miss the list of Registered Shareware now available from the library ... see over



#### BBUG NO 3006 DAILY WISDOM Version 1.0B

CLASSIFICATION \* Religion \* Windows \* Hard Disk

DAILY WISDOM is a Windows utility that brings the Bible to your computer screen, displaying an entire passage in a scrollable window. A clipboard facility allows copying and editing/usage of the passage. Passages are selected by date, and the system date can be changed to read a passage different from the one selected by the program.

This version contains passages from Proverbs of the KJV Bible.

A good program combining the Bible and Windows, DAILY WISDOM is easy to install and use and can be a great source of learning.

#### BBUG NO 3007 BIZWIZ FINANCIAL CALCULATOR Version 1.1

CLASSIFICATION \* Business \* Windows

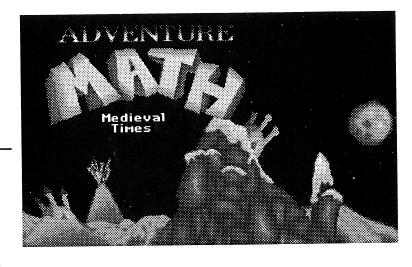
BIZWIZ FINANCIAL CALCU-LATOR is an inexpensive alternative to the physical financial calculator and given the multi-tasking nature of Windows, it is avail-

able even when your electronic desktop is cluttered with documents, spreadsheets, clocks, alarms and what not.

BIZWIZ FINANCIAL CALCULATOR emulates all the functions of the HP-12C calculator and also provides the following: Leasing Functions, Actuarial Functions, Markups, Modified internal rate of return, Depreciations.

Advanced users can also write their own programs or scripts to do repetitive steps with as many as 999 steps, a number 10 times that available with the HP's physical memory limit.

BIZWIZ FINANCIAL CALCULATOR is definitely one of the best financial calculators available under the *Windows* interface.



#### BBUG NO 3008 LASERTOME Ver 1.0

CLASSIFICATION \* Printing Utilities \* Windows \* Laser Printer

LASERTOME fills the oversight by Microsoft to provide a suitable tool to view and/or directly print a text file. LASERTOME takes plain-text files, signatures them in booklet form, and then prints them on an HP LaserJet IIP or compatible printer. It's ideal for the many "readme" files and manuals that come with programs.

LASERTOME will turn any plain-text file into a neatly formatted manual. A file viewer allows the viewing of a file prior to signaturing or printing. Options include adding file name, page numbers, and date headers, as well as descriptive names.

LASERTOME is THE program for you if you receive tons of documents in ASCII text format and have to view them using a word processor under Windows.

#### BBUG NO 3009 CHEMICAL Version 1.5

CLASSIFICATION \* Educational \* Windows \* 386/486 Computer

Using CHEMICAL for Windows, atoms are selected from a Periodic Table and electron orbital information retrieved. The Atoms are then bonded (using the B command). The chemical is displayed as it is being constructed.

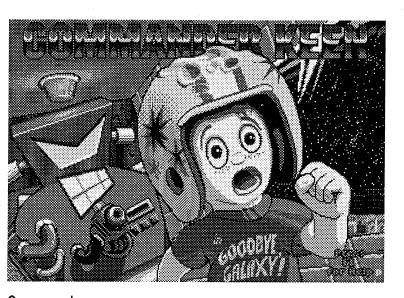
The chemical can be viewed from different directions by using the up and down cursor keys and the V command. If desired the Hybrid and lonize commands can be used to alter the orbitals before bonding.

#### BBUG NO 3010 ENGLISH RECALLL Version 1.00

CLASSIFICATION \* Educational \* Hard/Floppy Drive

ENGLISH RECALL is a well-designed English vocabulary program that includes over 1,300 words (more available with registration) geared for adults,

Just in time... for Xmas. Registered Shareware at a big Brisbug Discount!



Commander Keen's in trouble ... Again!!

college students, and high school students. It includes learn, drill, review, and test routines; and keeps track of your weaknesses for additional practice in those areas. It's easy-to-use menus almost makes learning new words fun!

#### BBUG NO 3011 WHOOP IT UP! Ver 3.1

CLASSIFICATION \* Utilities \* Windows \* Sound Card

Are you tired of the old sounds that come with Windows and you are looking for something different? WHOOP IT UP! provides a new aspect for your sound card. With WHOOP IT UP! FOR WINDOWS, you can add sound not only to many system events, but to individual applications as well (registered version only). WHOOP IT UP! supports any MIDI or WAV device supported by Windows 3.1. You can also add sound to Message Box icons, even in programs that don't support Windows 3.1 sound events.

#### BBUG NO 3012 CATALOG PRO Ver 3.03

CLASSIFICATION \* Business \* Hard/L/Floppy Disk

Make your own diskette sales catalog! You can save money by producing a personalized, full-featured diskette sales catalog! CATALOG PRO takes care of invoicing, sales tax, and shipping calculation. Add product categories, prices, newsletter about your business, and much more.

This is a simple yet effective catalog program for a variety of markets: software vendors, home-based mail order firms, entrepreneurs, any mail order catalog company, or software stores who want to keep their customers updated.

#### BBUG NO 3013 256 PAINT Version 2.0

CLASSIFICATION \* General \* VGA \* Hard Disk \* Mouse

256 PAINT is a 256 color VGA paint program and image editor. 256 PAINT uses images in 320x200

mode. Images stored in Borland's .BGI format but .PCX loading and saving are also included. Many of the normal routines you would expect in a paint program are included: text, lines, circles, rectangles, ellipses and polygons. In addition, many advanced features such as color phasing, sun-bursting, antialiasing, and polygon interpolation have been implemented as well.

Full-screen image editing and palette RGB editing make this program a must-have for artists and programmers alike.

#### BBUG NO 3014 JOKE TALK Version 1.3 (Disk 1 of 2, also 3015)

CLASSIFICATION \* General \* EGA/VGA \* Hard Disk

JOKE TALK, DOS Joke's big brother, performs computer shenanigans and talks through your PC's speaker as it does it. The joke telling portion displays a joke on the screen as it "speaks" it. The computer voice is easily understood and the jokes are nutty. For example, "My husband took me out for a royal evening; dinner at Burger King and dessert at Dairy Queen!"

You can also play "Name That Tune." Only a few songs are included and while the sound is not CD quality, it is recognizable. Other portions of the program include famous person impressions, animal sounds, human sounds (same as DOS Joke), and the Candid Camera Show. The Candid Camera Show is interesting because it works like a screen saver by drawing attractive graphics on your computer screen when you're away. Its humor content comes from the human sounds, jokes, or animal sounds that are periodically injected. This is great when you leave your cubical at work and want to keep your co-workers on their toes. JOKE TALK also lets you take its library of sounds and words (59 in all) and create your own combinations.

With 59 sounds and sentences, JOKE TALK is not the type of program you use to entertain yourself. However, it's a good demonstration of voice synthesis on the PC and has unlimited practical joke potential.

BBUG NO 3015 JOKE TALK Version 1.3 (Disk 2 of 2, also 3014)

#### BBUG NO 3016 DOS-JOKE Version 1.7

CLASSIFICATION \* General \* EGA/VGA \* Hard Disk

It sure looks like a usual computer with the DOS "C:" prompt on the screen, but it sounds as if it has flatulence! This is no normal computer; it's a computer with DOS-JOKE installed.

Once you run DOS-JOKE, it displays the standard DOS prompt, but it's ready for fun. As with other

DOS prompt practical joke programs, it displays smartaleck remarks when the user types something in. DOS-JOKE is unique because it uses your built-in speaker to also "speak" the jokes. It includes remarks, music, noises (a phone ringing), and noises of a deeply personal nature-but those are probably the things that practical jokers enjoy the most.

You can even set it to go off at regular intervals during your absence. It's a wacky program, but be warned that some people may be offended by some of its actions. You have to decide if that's good or bad.

#### BBUG NO 3017 ADISK Version 1.1

CLASSIFICATION \* Database \* General \* Hard/L/ Floppy Disk

ADISK is not just another disk cataloging program, it will, in time, become a full database of all the disks you have in your library. Entry of the disk details is simple, just follow the prompts on the screen, enter the details and you have commenced to record your disk collection. A memo field with a text editor is also provided.

Make it a normal task, (after checking the disks for any viruses) to enter the details on ADISK's database. On screen help is available by pressing "F1" Theprogram produces database file which may be viewed or modified using dBASE.

#### BBUG NO 3018 BLASTER MASTER Version 5.2

CLASSIFICATION \* Audio \* Hard Disk \* EGA/VGA \* Sound Card

BLASTER MASTER is a program designed for serious PC soundcard enthusiasts who are interested in getting the most from their PC audio cards when sampling sounds and then playing them back.

A tool kit for working with Sound Blaster type VOC, .WAV and .SND files, BLASTER MASTER offers many features that are available on Digital Audio Workstations which normally cost many thousands of dollars.

#### BBUG NO 3019 CATALOG-ON-A-DISK Version 2.0

CLASSIFICATION \* General \* Hard Disk

CATALOG-ON-A-DISK lets you distribute your product catalogs to your customers on floppy disks. It is so easy to find products and order them by browsing or searching that you won't even have to include instructions! You set up the opening screens, menu, and exit screens using an ascii text editor. Then use the CATALOG-ON-A-DISK COMPANION to compress

the files so they take less room on the disk, and can't be tampered with.

CATALOG-ON-A-DISK handles shipping and sales tax, and allows users to delete from or add to orders as they go along. The COMPANION lets you import and export in ascii delimited data base form, set the colors, define a help bar, and more.

#### BBUG NO 3020 CEDAR ISLAND LINK Version 2.55

CLASSIFICATION \* Communications \* Hard Disk \* Modem \* Mouse

CEDAR ISLAND LINK, or CILINK is an elegantly simple and easy-to-use mouse-based communications program which is especially suited for less experienced modem users. It has the power and flexibility, however, to please the most active BBS user. Although CILINK is mouse-based it works flawlessly even without a mouse.

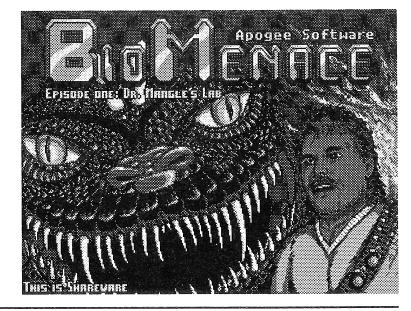
Features: Extensive mouse support, including our exclusive "Mouse Pass-through" which allows you to click on characters in the terminal window and have those characters automatically sent back to the BBS as though you had typed them in yourself. (Think about what this means if you are downloading files or running a BBS door.)

Support of all of the popular file transfer protocols including:

CompuServ B+,Xmodem,Xmodem 1K,Xmodem 1KG,Ymodem YmodemG, Zmodem,Zmodem resume,Kermit,Ascii,CompuServ B+, and 4 external protocols! Also AutoZmodem download.

XTREE-like utility which UnZips compressed files and a Split-screen editor. Easy installation and operation. Split-screen chat mode. Host Mode. Doorway Mode.

The new Thing from Outer Space is here to get you



November 1993 53

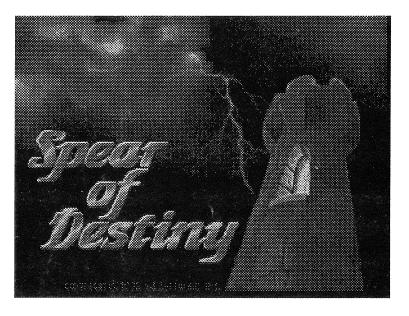
Communications using COM1 through COM4 Data rates from 300 baud to over 100 Kilobaud. Easy-to-use script language for automated logons. Keyboard macro record, play. Macro hotkeys. ANSI/BBS and VT100 terminal emulations are implemented. Support for ANSI Music. DeskView, TaskView, and OmniView and aware. Windows 3.x PIF/ICON. 200 entry phone list. SuperVGA GIF viewer which automatically displays GIF image on download. & MORE!

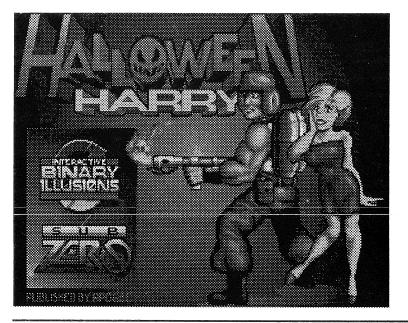
#### BBUG NO 3021 EYE-GARD Ver 2.00S

CLASSIFICATION \* Utilities \* CGA/EGA/VGA \* Hard Disk

Two famous adventures, there for the playing

EYE-GARD places a message and a picture on your PC screen, such as "I'm Out to Lunch". When someone walks up to the PC and presses a key, the picture and message change, and an alarm sounds. Different pictures, messages and alarms can be set to occur at 10 different times per day. EYE-GARD pictures can be taken from the pre-drawn library of





drawings included on the EYE-GARD disk, or created by using the popular "PC Paintbrush" drawing program. This is a great way of leaving messages for your co-workers while you are away from you desk.

EYE-GARD can also draw a large, half-closed eye on your screen that scans back and forth, "looking" for intruders. When keyed, the eye opens! (Try this in your office sometime. Invariably, someone will come up to your PC to look at the eye, press a key, and suddenly, it opens wide and starts looking at them!)

EYE-GARD also guards your PC against unauthorized use. You can give it a password, (which only you know), that will prevent anyone from using your PC.

Finally, EYE-GARD can run other programs or "BATCH" files when keyed. This is very useful. For example, a PC set up to do software demonstrations can wait for a customer to press a key, and then automatically run the program.

#### BBUG NO 3022 FAIRY GODMOTHER Version 4.0

CLASSIFICATION \* Games \* CGA/EGA/VGA \* Floppy Disk

As the FAIRY GODMOTHER you are on a mission to free fifty of your fellow fairy godmothers. Armed only with your wits and your magic wand of transformation, you must make your way across fifty levels while avoiding killer crabs and dangerous dimensional implosions. If you succeed, your fellow fairy godmothers will celebrate in your honor with music and dancing. If not, it's curtains for you.

#### BBUG NO 3023 FLASH CARD FISHING Version 1.0 (Disk 1 of 2, also 3024)

CLASSIFICATION \* Educational/Games \* EGA/VGA \* Hard Disk

FLASH CARD FISHING is an educational game for children which allows them to catch fish by answering basic addition questions.

Different user levels allow them to choose the difficulty level of the questions, and how quickly they must respond. They can get bonus points by avoiding bugs, sunburn, water skiers, and alligators, but watch out if they answer too slowly, or incorrectly! The program includes easy-to-use menus, including a "How to Use the Program" section.FLASH CARD FISHING is recommended for ages 6 through 12, and is also useful for remedial students.

BBUG NO 3024 FLASH CARD FISHING Version 1.0 (Disk 2 of 2, also 3023)

#### BBUG NO 3025 SAND STORM Ver 2.0

CLASSIFICATION \* Games \* Hard/L/Floppy Disk \* VGA \* Mouse

If you like shoot-em-up, high-octane graphics arcade games, then Sand Storm is for you! Fire up your mouse for non-stop action as you try to intercept Scud and jet attacks with your Patriot missles, then guide your Tomahawk missle through enemy AA fire while on a search and destroy mission. Can you successfully take out enemy chemical weapons plants and mobile Scud launchers? Includes 20 missions, digitized graphics, and a stunning Gulf War Map. This is the fully-functional shareware version of the popular commercial game.

#### **BBUG NO 3026 LET'S FACE-IT**

CLASSIFICATION \* Desktop Publishing \* Hard Disk \* Corel Draw

LET'S FACE-IT is a great new tool. For creating cartoons it's really a jewel.

With LET'S FACE-IT, you'll be able to create a cartoon character of your own design in a matter of minutes. Positioned around the outside perimeter of the screen are hundreds of individual cartoon features that have already been drawn for you.

Simply click the zoom-out button or reposition the scroll bars to view all the available cartoon features. Select the features you want your cartoon character to include and then one by one, use drag each cartoon feature onto the working page.

Once you have copied all the desired features onto the working page, you can then use the powerful editing tools of Corel Draw to size, rotate, position, color and modify your cartoon character. It's that simple!

(Normal price \$65.00)

#### BBUG NO 3027 MAGIC SCREEN SAVER Version 1.4

CLASSIFICATION \* Utilities \* Windows \* Hard Disk

MAGIC SCREEN SAVER is a screen saver for Window-based computers. Screen savers lengthen the life of your monitor by taking control of your computer when you're not using it and randomly displaying images. This prevents any one image from being permanently burned into your screen. MAGIC doesn't use flying toasters like a more famous screen saver, but it does use nifty, high-tech graphics.

It displays a colored bar flying across your screen continuously turning, bouncing, and changing colors. It also displays the bar's trail as it ricochets inside your monitor in a three dimensional motion; kind of a continuous, time-lapsed display that's stunning. MAGIC lets you control the size of the bar, the speed, the reflection pattern, and how fast the color changes. These simple controls result in a stunning array of randomly generated graphics. MAGIC SCREEN SAVER also includes a password feature that lets you restrict access to your computer.

#### BBUG NO 3028 MUSICIAN I and NOHISS Version 1.0

CLASSIFICATION \* Music \* EGA/VGA \* Hard Disk \* Sound Card \* Printer

MUSICIAN I is intended for anyone interested in creating their own music. There is no need to be familiar with computers or computer technology. With MUSICIAN I, you can write your music easily and, what best, hear it any time you wish, by using the Sound Blaster.

NOHISS: Digital Noise Reduction reduces or removes background "noise" that is almost always present when a recording is made on a Soundblaster card. Background noise is most apparent when using

Offer expires 30 November 1993



VirusBuster
is on
SPECIAL
from the
library this
month

55

# BRISBUG Registered Software Price List

#### **Business**

#### **Games**

Alite Ample Notice AsEasyAs Basil Business Graphics II Budget File Cheque It Out Construction Estimator Draft Choice EnVision Publisher ExpressCalc ExpressCheck ExpressGraph Ez-Forms Executive Ez-Forms Lite	45.00 55.00 105.00 450.00 25.00 90.00 115.00 35.00 105.00 90.00 90.00 55.00 190.00
Fastbucks File Express	75.00 140.00
Floorplan+ for Windows Form Fill	125.00 55.00
Form Gen II Graphtime II	85.00 45.00
PC-Fastype PC-File	35.00 150.00
PC-Key Draw PC-Write	150.00 150.00 90.00
Protocad 3D	90.00 90.00 55.00
P&S Home Manager Taking Care O' Business	280.00 140.00
3D Design Plus *WagezBook Wincheck	26.00 110.00
Winedit	90.00

#### **Computer Utilities**

Automenu	105.00
Command Post	85.00
Direct Maintenance	35.00
Disk Spool II	65.00
4Dos	105.00
Frac	17.00
Fractal Graphics	95.00
Galaxy Pro Lite	90.00
HDM IV	85.00
Hyperware Speed Kit	75.00
LQ Print	55.00
Neoshow	55.00
NeoPaint	70.00
Onside	35.00
Overkill	45.00
P&S Backup/Restore	55.00
Phantom Screen	35.00 27.00
Pivot! Powerbasic 3 Powermenu V6 Plus	200.00 160.00

Note: Prices subject to Change without notice

Items marked \* currently in stock - all others must be ordered.

35.00 45.00 45.00
80.00 60.00 16.00 65.00

#### **Educational**

*Adventure Maths	45.00
Book of Spells	65.00
Count and Add	65.00
Hooray for Henrietta	65.00
*Math Rescue	40.00
Spellbound	65.00
*Word Rescue	40.00

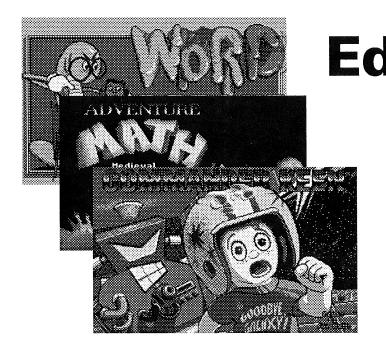
#### **Computer Utilities continued**

Procomm Plus	145.00
Procomm for Windows	230.00
*QEdit (TSR)	105.00
*QEdit (QS/2)	85.00
Quickmenu III	140.00
Quickmenu V1.07	55.00
Reachout	90.00
Save on Calls	27.00
Wildcat BBS	200.00
Winbatch	105.00



# BRISBUG Registered Software

Now Available from the Software Library

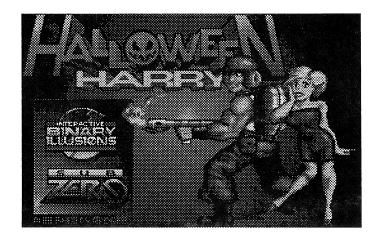


# Educational Business Games

#### Games

# Adventure Math \$45.00 Book of Spells \$65.00 Count & Add \$65.00 Hooray Henrietta \$65.00 Math Rescue \$40.00 Spellbound \$65.00 Word Rescue \$40.00

**Educational** 



Bio Menace	\$45.00
Commander Keen -	
Aliens Ate My	
Babysitter	\$65.00
Goodbye Galaxy	\$45.00
Invasion of Vorticons	\$45.00

Cosmo's Cosmic	
Adventure	\$40.00
Duke Nukem	\$45.00
Halloween Harry	\$40.00
Monster Bash '	\$45.00

#### **Business**

Scan/Clean	\$ 75.00
WagezBook	\$ 26.00
Virus Buster	\$120.00

Packing & Postage \$5.00 extra

**ORDER NOW!** 

a microphone, but is also present to some degree if you use a direct input connection.

NOHISS was designed to work on speech recordings. If you run NOHISS on a digitized music (ie: rock and roll song) file, there will probably be no improvement in quality. There is no fixed level of reduction that works for all speech samples but by adjusting the command line parameters you will generally end up with a better sounding sample. One of the side effects of NOHISS is that the output file will probably compress tighter than the original.

Certainly, removing hiss from sound files is probably not going to appeal to everyone... but there might be certain multimedia and presentation applications where this could prove useful.

#### BBUG NO 3029 NETMENU Version 1.23

CLASSIFICATION \* Menu \* Local Area Network \* Hard Disk

NETMENU is an easy to use network menu system that will work on all networks that support DOS workstations. Like most menu systems, it lists the available applications on the screen and lets the user select them.

NETMENU will encrypt menus for security, includes a screen blanker, has mouse support, allows for customized menu headings, and supports an unlimited number of menus, password protected menus and menu items. NETMENU has a minimal memory residue of 5K, which allows even the largest program to be loaded from NETMENU.

#### BBUG NO 3030 PSYCHIC PIANO Version S.02B

CLASSIFICATION \* Music \* Floppy Disk

PSYCHIC PIANO is a computerized version of Name That Tune and includes over 650 songs. You can play against the computer or with eight other players. Guess the music's title from a multiple-choice list as the computer plays the song on its speaker, or listen to the songs without playing the game. To do this, look up a song by its title or category (show tunes, Christmas, etc.), or just browse through the entire list. The songs have

One interesting feature is Psychic Piano's ability to let

know them.

a computerized beep-beep quality to them, but are

nicely done and very easy to identify - that is, if you

you add songs. Just type in the notes by their letter equivalent. Psychic Piano covers all the bases from "Bicycle Built for Two" to "Silent Night" to "Theme From Father Knows Best" to "Hotel California." A fun program for any music fan.

#### BBUG NO 3031 RESIZEABLE RAMDISK - LACE

CLASSIFICATION \* Utilities \* Hard Disk

RSDISK, the RESIZABLE RAMDISK is the chain letter of C programming. While it is a working RAM disk program, it was developed with the idea that other programmers would take the current version and improve it! It currently supports extended memory; 32-bit sector addressing (32MB RAM disks are possible); configurable sector and cluster size; multiple FATs and root directory entry counts; write protection; and predefined DOS disk-like formats. The author hopes that someone will add EMS support, bank-switch memory support, low memory support, and the ability to resize without memory loss. RSDISK comes with both assembly and C source code.

LACE is a multi-configuration utility which allows you to keep up to 14 different boot-up configurations within single CONFIG.SYS and AUTOEXEC.BAT files. LACE is very easy to set up and use. Supports MS-DOS and PC-DOS versions 3.3x through 5.0.

CREM: Config.Sys REMarker Program Version 1.0 is designed to help out those users who use LACE in conjunction with QEMM-386, 386^MAX, or BlueMAX. Because of the way these programs perform their "optimization" procedures, the LACE method of "selection blocks" won't work.

SET.SYS and ENVIRON.SYS are drivers included with LACE to allow you to set environment variables from inside your CONFIG.SYS file. The LACE\_SET program is used to retrieve these settings and then place them in your master environment (normally from your AUTOEXEC.BAT file).

#### BBUG NO 3032 SALETRAC Ver 2.5 (Disk 1 of 2, also 3033)

CLASSIFICATION \* Business \* Hard Disk \* Printer

SALETRAC is a program useful for keeping track of sales-person, sales lead, and customer information. It is specially intended for use by sales people.

SALETRAC supports some interesting features, such as a phone dialer, purchase history log, mini word processor, invoice printer, product database, etc. An "Activity Log" function is also provided which keeps a separate file for each customer which details the activities (Phone calls, Data edits, Letters written) as

well as a "To Do" list for each customer.

For the actual salespeople, an added feature COMMISSN is designed to allow them a handy way to keep track of commissions due them, and to print item-line reports for profits and commissions. It is a spreadsheet mode type of program, and is launched from within the saletrac program, by selecting the purchases option from the "options" submenu. This feature is optimized for use by automobile dealers, etc, but should be usable by any salesperson with the need to keep track of commissions.

BBUG NO 3033 SALETRAC Version 2.5 (Disk 2 of 2, also 3032)

#### BBUG NO 3034 TALKING ABC'S - DAY AT THE BEACH (Disk 1 of 2, also 3035)

CLASSIFICATION \* Educational/Games \* CGA/ EGA/VGA \* Hard Disk

TALKING ABCs teaches very young children the ABCs with arcade quality graphics and a digitized voice that actually talks over your computer's speaker. The program presents a picture of a beach and then a letter is displayed, "d" for example. The player presses the letter on the keyboard and a picture of an object that starts with that letter (dog) appears. The computer then speaks the word (dog). TALKING ABCs includes a couple of different variations to work on ABCs. This is a great educational game for preschoolers.

BBUG NO 3035 TALKING ABC'S - DAY AT THE BEACH (Disk 2 of 2, also 3034)

#### BBUG NO 3036 TILE MATCH Ver 1.0

CLASSIFICATION \* Games \* Hard Disk \* EGA/ VGA \* Mouse

TILE MATCH is a colorful game based on concentration solitaire or memory. It's played with colorful tiles and the object is to find pairs from the tiles placed face down on the playing board. Options include solitaire play, multi person play for 2 to 4 players and single player against the computer plus many scoring and difficulty level settings.

Use the playing card tiles or create your own with the included Tile Maker utility. Several other different tile sets are included and many more are available.

#### BBUG NO 3037 TOYBOX II Ver 2.02

CLASSIFICATION \* Menu \* Hard Disk \* EGA/VGA \* Mouse

Finally a graphical interface designed with kids in mind. TOYBOX II is a new graphical DOS menuing

system with the powerful features adults need, but so simple, even young children can use it to start their own programs without assistance.

TOYBOX II displays large 3-D buttons with colorful, Microsoft Windows-compatible icons to represent your DOS and Windows programs. So instead of trying to remember cryptic DOS commands, you or your child can press a single key or click a mouse button to start any program. To make things easier for small hands, all mouse buttons have the same effect and no double-clicks are required. You can also set options that prevent inquisitive young power users from leaving TOYBOX II or accessing any areas you don't want them to get into.

Behind the scenes, TOYBOX II's features are anything but childlike: multiple levels of nested menu pages that can hold several thousand programs; passwords for programs and pages; hotkeys; variable program parameters; file pick-lists for easily adding programs; and a built-in icon editor for designing your own icons. TOYBOX II can run any COM, EXE, or BAT file, or any DOS command, and it does not remain in memory while it is running your programs.

#### **BBUG NO 3038 ULTIMATE SPANISH**

CLASSIFICATION \* Educational \* Floppy Disk \*
Mouse

ULTIMATE SPANISH is one of the family of Ultimate Language Tutors designed to help you learn words from foreign languages.

You'll find ULTIMATESPANISH has a wide array of quizzing features and is very expandable through its library system.

Test your knowledge of Spanish from the selected libraries. These libraries are segmented by Nouns, Verbs, Phrases, Verb conjugations and miscellaneous. Once you have selected the library the program gives you the choice of English to Spanish or the reverse.

The program times your response and if you get it wrong you will be given the correct answer, but the mark goes against you. ULTIMATE SPANISH

allows the user to take the quiz individually or up to 9 can participate. Scores for each player can be viewed or a graph prepared.

This is the Ultimate way to learn Spanish.



**SPAIN** 

BBUG NO 3039 WINDOSIO Version 2.0

CLASSIFICATION \* Programming \* C \*
Windows \* Hard Disk

WINDOSIO is a powerful dynamic link library which allows structured programming, terminal IO and established graphics routines to work under Microsoft Windows. Yet the full Windows API is always available. Your programs can constitute any combination of the structured and event driven paradigms. Many DOS programs can be ported to Windows without changing a single line of code!

The easiest way to use WINDOSIO is to let WINDOSIO take care of all the Windows functions for you.

#### **BBUG NO 3040 HEARTS and YACHT**

CLASSIFICATION \* Games \* Windows \* Hard/Floppy Disk \* Mouse

HEARTS Version 1.2 for Windows is a four player card game in which the goal is to get as few points as possible. Cards of the heart suit are worth 1 point and the queen of spades is worth 13 points. You want to avoid these 14 cards. The highest card of the lead suit takes the four cards in the trick and the player that does this gets to lead for the next trick. You must play the lead suit if you have it, or else you can play any card. After 13 tricks are played, the points are added up and cards are dealt again. The game is over when a player gets 100 points (he is the loser).

YACHT Version 2.0 is the Windows version of Yahtzee. The object is to finish the game with the highest score.

If you play alone, your object is to beat your "personal best" score. The player rolls five dice in the attempt to gain the highest score in any one of the set categories. The player has three attempts to achieve this score.

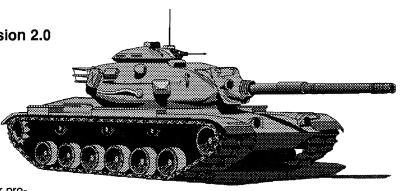
A game for both children and adults.

#### **BBUG NO 3041 MORAFF'S MATHER**

CLASSIFICATION \* Educational/Games \* Floppy Disk \* CGA/EGA/VGA

MORAFF'S MATHER is a different kind of game/ learning tool. This program allows the user to win all manner of wonderful and not-so-wonderful prizes by answering a few simple math problems! When the problems are answered correctly, the questions become tougher and the prizes become bigger.

MATHER is designed to challenge anyone with the will to achieve.



#### BBUG NO 3042 TANK WARS Ver 3.2

CLASSIFICATION \* Games \* VGA \* Hard/Floppy Disk \* Mouse

TANK WARS is a game for 1 to 10 players. Opponents attempt to destroy each others tanks by firing various weapons at them. There are also 7 computer intelligences available to compete against.

TANK WARS can be played in Windows or OS/2.

#### BBUG NO 3043 MULTIMEDIA 1 Version 1.1 (Disk 1 of 3, also 3044, 3045)

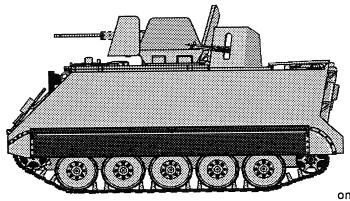
CLASSIFICATION \* Multimedia \* Hard Disk \* VGA \* Sound Card

MULTIMEDIA 1 (The Creator) will allow you to create your own custom presentations, advertising, demo's, tutorials, courseware authoring, reports, school projects and much more. With this package you can combine real human SPEECH, MUSIC and sound effects with high resolution IMAGES (up to SVGA).

This program can be used to create your own customAUDIO/VIDEO SHOWS on any subject, place, product or procedure you desire. This package includes:

\* OVER 1 MEG. of speech, music and sound effects. (Excellent sound quality that plays through the PC speaker). \* SOUND BLASTER support. (Create your own VOC files). \* Display GIF, PCX, PIC, TIFF and TARGA image files. (Supports CGA, EGA, VGA and SVGA). \* MOTION, SPECIAL EFFECTS and TEXT capability. \* Create an interactive USER MENU for your application. \* INTEGRATED DEVELOPMENT EDITOR with: \* Multiple overlapping windows \* Mouse support \* Pull down menu \* Copy and Paste features. \* IMAGE PROCESOR with: \* Scaling \* Clipping \* Printing \* Conversion and much more. \* Allows you to incorporate other popular packages. (Autodesk Animator, Grasp and your custom programs).

\* Very Easy to use - No programming experience needed.



BBUG NO 3044 MULTIMEDIA 1 Version 1.1 (Disk 2 of 3, also 3043, 3045)

BBUG NO 3045 MULTIMEDIA 1 Version 1.1 (Disk 3 of 3, also 3043, 3044)

#### BBUG NO 3046 MEDPAS Version 2/92 (Disk 1 of 3, also 3047, 3048)

CLASSIFICATION \* Medical \* CGA/EGA/VGA \* Hard/ 2 Floppy Disks

MEDPAS is an electronic medical reference manual designed for anyone without a medical background who wants to become a more informed patient. It covers a large part of the problems that are encountered by general practitioners in everyday work.

The program is logically organized and it's easy to find the information you want. Most information is displayed on the screen for you to read. There is also a database to keep track of your medical treatments.

MEDPAS is an impressive medical resource.

BBUG NO 3047 MEDPAS Version 2/92 (Disk 2 of 3, also 3046, 3048)

BBUG NO 3048 MEDPAS Version 2/92 (Disk 3 of 3, also 3046, 3047)

#### BBUG NO 3049 SOLMENU1 Ver 2.0

CLASSIFICATION \* Games \* CGA/EGA \* Floppy Disk

SOLMENU1 consists of five solitaire games: Canfield, Golf, Monte Carlo, Grand Duchess and Frog. The cards are graphically represented either in CGA or EGA resolution. Each game can be played from one menu.

#### BBUG NO 3050 ABC'S Version 2.00E

CLASSIFICATION \* Educational \* Floppy Disk

ABC'S is an educational program to help children in preschool or kindergarten learn the letters of the alphabet. Eight simple games are on this disk.

These include matching a letter to its lower or upper case form, typing in the letter that appears on the screen to familiarize children with the keyboard, and selecting a missing letter in a sequence of three letters.

Other games consist of typing in a letter and a picture related to that letter will appear, or matching a letter to a picture that appears on the screen. Simple music is included for entertainment.

In ABC'S Keyboard input has been made as simple as possible for young children.

#### BBUG NO 9157 SPEAR OF DESTINY Version 1.0

CLASSIFICATION \* Games \* EGA/VGA \* Hard Disk \* Sound Card HIGH DENSITY DISK

SPEAR OF DESTINY brings virtual reality to the PC, hurling you into an intense battle between good and evil in which only you can save the world! A breathtaking musical soundtrack sets the mood, while amazing "first person" visual perspective and spectacular digital stereo sound effects give an experience like no other game you've ever played!

It's World War II and you are B.J. Blazkowicz, the Allies' most durable agent. In the midst of the German Blitzkrieg, the Spear that pierced the side of Christ is taken from Versailles by the Nazis and secured in the impregnable Castle Wolfenstein! According to legend, no man can be defeated when he has the Spear. Hitler believes himself to be invincible with the power of the Spear as his army of destruction sweeps across Europe.

Your mission is to recapture the Spear from an already unbalanced Hitler, with the hope that the loss of his most coveted weapon will push him over the edge! You must infiltrate the heavily guarded Nazi stronghold and time is running out!

In your quest to recover the Spear, you will encounter the exciting and hazardous challenges, secret doorways to hidden passages, gruesome mutants, and powerful monster-like "bosses". All this in the midst of the massive fire-power of well trained enemy soldiers throughout the castle! See if you have the "right stuff" to accomplish the most dangerous mission of the war!

This is a complete two-level playable version of SPEAR OF DESTINY - a Wolfenstein 3D Graphic Adventure. Your mission is to make your way safely through each of the levels to find the elevator to the next floor. On the way, you'll have to fight your way past the guards - they'll kill you if you don't get them first!

Spear of Destiny is the sequel to the famous Wolfenstein... even more Nazis to conquer

Spear of Destiny is rated PG13 on Brisbug's own rating scale. Some parents may object to the violent theme of this game.

# Shareware Publish

# At Last!

#### BBUG NO 9158 ENVISION PUBLISHER Version 1.01 (Disk 1 of 2, also 9159)

CLASSIFICATION \* Desktop Publishing \* Hard Disk \* Printer \* Mouse

ENVISION PUBLISHER is a true WYSIWYG (What You See Is What You Get) full-feature desktop publishing program, which allows you to design letterheads, resumes, flyers, newsletters, greeting cards, brochures, books, and just about anything else meant to look good on paper!

Given ENVISION PUBLISHER's ease of use and its context-sensitive help, you will be able to envision and design your own desktop publishing masterpiece in no time at all.

ENVISION PUBLISHER is among the most powerful, and yet easiest to use desktop publishing (DTP) programs available either as shareware or commercially. Simply put, you will not find a better desktop publishing program!

Some of the highlights of ENVISION PUBLISHER:

ENVISION PUBLISHER's Graphical User Interface (GUI), resembles a familiar GUI look, with pull-down menus, dialog boxes, icons, push buttons, radio buttons, pick lists, check boxes, and scroll bars. Its unique 3-D look provides a true control panel appearance. ENVISION PUBLISHER provides detailed context-sensitive and indexed help. To get help, all you have to do is press F1, or click on the help icon.

**ENVISION PUBLISHER** has a state of the art scalable font technology capable of displaying and printing fonts in any size from a tiny 4 points (0.055 inch) to a huge 108 points (1.5 inches). Fonts can be rotated at 90, 180, and 270 degrees, and filled with any of ENVISION PUBLISHER's fill patterns. Because the fonts are scalable, each font family is encapsulated in a small file (between 20k and 30k), making the use of soft fonts totally obsolete. One such file contains all font sizes for that font family in all font

styles (normal, bold, italic, bold-italic). EnVision Publisher's fonts use an advanced hinting technology, which provides PostScript-like print quality on any printer (laser, dot-matrix, inkjet, PostScript).

ENVISION PUBLISHER provides WYSIWYG editing at four magnification levels (View all, 100%, 200%, 400%), all of which are fully editable. The fonts and graphics that you see on the screen look exactly like what you will get printed!

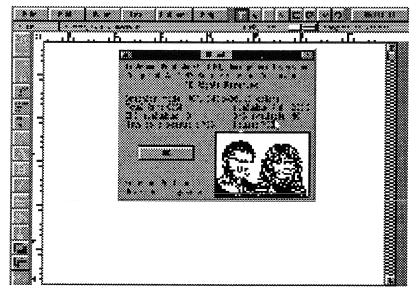
ENVISION PUBLISHER also provides extensive object drawing and importing capabilities. You can draw lines, rectangles, circles, ellipses, polygons, polylines, and Bezier Curves. The objects can use any of ENVISION PUBLISHER's fill and line styles in 16 colors or gray-scale levels.

ENVISION PUBLISHER also offers complete text, column and text block manipulation capabilities. Text blocks can be created anywhere on the screen. You have full control over the text that goes on the page right down to character level. Each character can have any font, style, color, fill, kerning, and rotation. Also text lines and paragraphs can be centered, left, right, or full justified, and you can choose the line leading of your choice.

ENVISION PUBLISHER will work on all displays, including VGA, EGA, CGA, Hercules, 8414, and SuperVGA. ENVISION PUBLISHER provides PostScript-like quality printout on any printer (laser, dot-matrix, ink-jet, or PostScript).

BBUG NO 9159 ENVISION PUBLISHER Version 1.01 (Disk 2 of 2, also 9158)

#### One not to miss!



#### 

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.

	Subject	Name	Phone	Days & times
	4DOS	Chris Raisin	379-1415	Any time
				•
	Accounting	lan Haly	870-1463	After 5:30 & W/Ends
	As-Easy-As	Dan Bridges Dan Emerson		Anytime
	AutoCad	Geoff Harrod	378-8534	Evenings,W/E
	Clanguage Clarion	Danny Thomaslan Haly	870-1463	Mon-Fri 6pm-9 & W/E After 5:30 & W/E eve & W/E
	Clipper	Chris Raisin		Evenings
		Don Andersen Dan Emerson	881-2432	after 7pm & W/E
		Mike Theocharous	824-1450	Anytime
	CodeBase	lan Haly		After 5:30 & W/E
	Communications	Ron Lewis	273-8946	8am-8pm
	Dataflex	Tony Obermeit	2875534	Mon-Sat A/Hrs & Sun
	dBase	lan Haly	824-1450 393-3388 209-1931 379-1415	After 5:30 & W/E Anytime Evenings M-F8am-5pm Any time Evenings
	DBXL DisplayWrite 4 DOS	lan Haly Mike Lester Ron Lewis	275-1742	After 5:30 & W/E (343-5703 a/hrs) 8am - 8pm
	Forth Fortran	Danny Thomas Cec Chardon Rob Andamson	870-1812	M-F 5-9, W/E Evenings Evenings
*	Fox/Fox-Pro Genealogy	Leon Percy Rob Adamson Colin Cunningham Bob Gurney	266-8353 263-3005	Evenings Evenings 9-9 all days Mon-Sat 8-8
	Hardware	Chris Ossowski Ron Lewis		9-9 all days 8-8 weekdays
	Help!	Dan Bridges		Anytime
	Lantastic	Adrian Goldsworthy	345-5004	M-F 7pm, and W/E

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Meta 5 MS Word	David Shaw	9-9 all days Any time
Multimate Multi-user DOS Novell Netware Open Access 2 OS/2 PostScript PowerBase Project Management & planning	Frank Mehr       397-3984         David Shaw       870-3633         Dan Emerson       288-6070         Cec Chardon       870-1812         Alan Gibson       207-2118         Danny Thomas       371-7938         Mike Lester       275-1742         Brian Doyle       355-1328	Anytime 9am-9pm Evenings Evenings 6:30-9:30pm M-F 5-9 & W/E (343-5703 A/hrs) 9am - 9pm all days
Quick-BASIC 4.5	Harry Strybos 288-5145	4pm-7pm Weekdays
Quicksilver	lan Haly 870-1463	M-F after 5:30 & W/E
R-Base	Tony Luck 279-3033	9-9 all days
Spreadsheets SQL System Manager True-Basic	Sylvia Willie       393-3388         Cec Chardon       870-1812         David Shaw       870-3633         Bob Gurney       355-4982	Evenings Evenings 9-9 all days Mon-Sat 8-8
Unix Windows	Paul Watts	Mon-Sat a/hrs & Sun 6pm-9pm
Wordstar (all ver) Wordstar-2000/4	Neil McPherson 075-971240 Bob Boon 209-1931	A/hrs Mon-Fri 8-5
Xenix	Paul Watts	Mon-Sat a/hrs, Sun (343-5703 a/hrs)

#### **MEETINGS**

Meetings are held on the 3rd Sunday of every month, except under unusual circumstances, at

QUT KELVIN GROVE CAMPUS Victoria Park Road Kelvin Grove, Brisbane 10am to 5pm.

Brisbug occupies the main lecture theatre and several other lecture rooms in "B" Block. Please note that other groups are usually using the campus at the same time, and that parking is permitted only in the designated areas. Disabled access is available

Food and refreshments are available 11:30-2:00. Alcohol is not permitted.

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

Program for Sunday, 21st November, 1993			
10:00am	CLASSES		
	Introduction to DOS	John Tacey	R315
	BASIC Languages	Rex Ramsey	R309
10:00	JUNIOR GROUP	Les Cathcart	R301
10:00	CorelDRAW	Corel Canada	Theatre
11:30	Morphing	Hi Lee	Theatre
12:00	MultiMedia Tota	al Peripherals	Theatre
12:15	NEW MEMBERS ORIE	R309	
1:00	CLUB MEETING		Theatre
1:30	Autodesk presents		Theatre
3:00	New Users Course	Chris Raisin	R309
	SIGs (Check noticeboard for locations)		
3:00	<b>Graphics Works</b>	Micrografx	Theatre
(in Windows SIG)			



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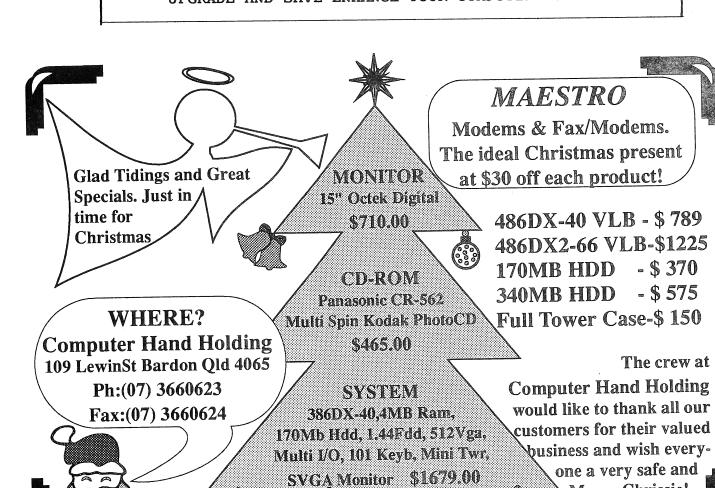
Merry Chrissie!

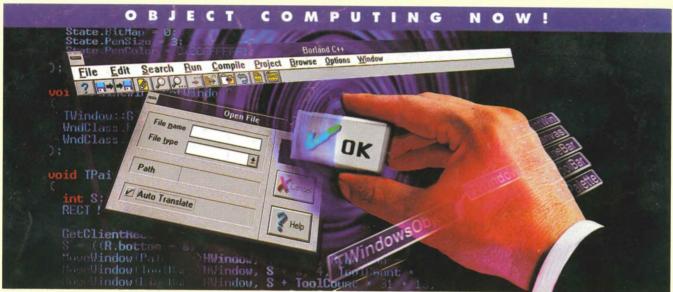
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