# Significant Bits



The official magazine of the Brisbug PC User Group Inc

Registered by Australia Post - Publication No QBH4596

Volume 8 No 3 February 1993

Next Meeting - February 21st

**USING YOUR BULLETIN BOARD** on-line demo 12:00

- LANTASTIC 13:30

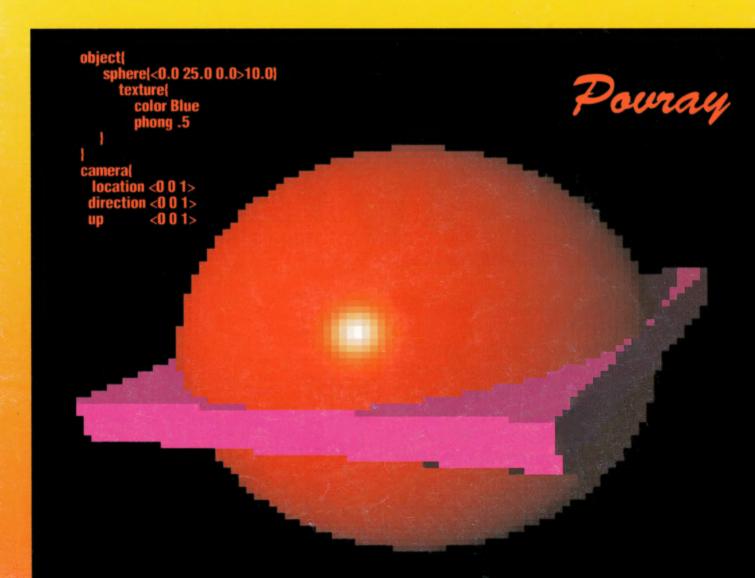
**Networking Demonstration** 

10:00 CLASSES \* 12:00 Orientation Talk \* 13:00 Club Meeting \* 15:15 SIGs

### Paside

- \* First Life Member
- **Learning QBASIC Part 9**
- **Comdex Report** 
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Contributions always welcome and needed! Preferably on disk (any sort), or modem upload to Brisbug BBS ("Stack Overflow" file area) Deliver disks, artwork or copy to: Chip Karmatz Tel / FAX (07) 847-2244

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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.)

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The magazine is A4 size, offset printed and saddle stiched. 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 sizes.

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Normal article text (3 col)	260x178
Page trim	
Max assured print area	280x190
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RATES	
Color covers \$600	Doublepage spreads \$500
Centrefold spread \$525	Full page\$250
2/3 page\$175	1/2 page\$160
1 column \$80	1/4 page\$65
1/6 page\$40	1/12 page\$25
Special positions:	,
Full page RH side, 1st 20 pages	\$275
Inside covers, B&W	\$350

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## Editorial

What would your reaction be if you received a Significant Bits floppy disk in the mail this month instead of your magazine?. The Ziff Davis published PC Magazine seriously investigated this option and rejected it, despite cost-cutting advantages. Its study showed that younger and older techically oriented readers alike prefer print to a video format for informa-

tional material. Readers cited practical reasons. The fore-most was that one can flip through the pages much quicker than at the computer terminal. One could mark or clip pages much more quickly manually than with a keyboard. And equally important to readers was that one could look at a double page layout in a

print magazine, but not see a full page of type of the same size on currently available monitors. Readers also cited recordkeeping as a factor.

PC Vision is an Australian magazine on a disk currently being sold through news agencies. It is an innovative, forward-looking attempt to interest PC users in new media. But in more than a year, there is no indication that it has gained wide acceptance. Moreover, unlike magazines, there are elements that are interactive, i.e., games and puzzles. I wish PC Vision well, but I couldn't get into its material, even with a good color layout. It did have an Index and one could call up various pages in an instant. But the shortcoming was that one can't see on a monitor what one can see on a printed page.

Encyclopaedias are a somewhat different matter, since one can scan the disks for key words or phrases through a host of topics. It is an excellent application for a database. However, it wouldn't be practical at the moment to include a database with a digital magazine, although PC Magazine has its BBS MAGNET. The publication looks at its BBS as a reader service, a supplement, a way of providing computer programs that readers liked in the magazine. Paraphrasing Editor Joel Dreyfuss, the print media is more user friendly than the monitor. No doubt print will always be around. One can think of it in the same

way as radio when television came along. The media prognosticators expected radio to be dead within a decade and sold off their holdings. Even though radio listenership slumped at certains times of the day and shares audiences with television, radio remains a healthy, wordwide medium.

The reliance on print, however, may

change with technology. For instance, the new, relatively in expensive Microsoft card that synthesizes speech for Access and spreadsheets, makes proofreading numbers and keywords a "user

friendly" activity, moreso than doing it manually with two people. Right now it only has a word base of 250 words, but you can bet by next year it will have an exponential number of words it can synthesize.

February 1993

Philips, NEC and Sony, using new technology, already have new types of large, high resolution monitors available from \$US3000 upward. But because of lack of standards, they have been widely marketed to PC users. It's possible these will provide the impetus for video to overcome the primacy of the printed page. Meanwhile, it is likely Significant Bits will be mailed to you in its present format for the foreseeable future, despite the economy of disks or electronic mail.

(Other viewpoints on this topic are welcome. Editorials as well as letters to the editor relating to Brisbug operations are welcome. They should be put on disk and mailed to the editor or downloaded on the BBS.)



## From the Engine Room

This is the first issue of the magazine under the new committee and the Magazine Manager, Chip Karmatz.

On the committee there are some new faces and some very familiar ones. Our aim is to combine continuity with some fresh ideas. And so too with the magazine. Geoff will maintain his close contact with SigBits, although his increased business commitments mean he will no longer be primarily responsible for producing it. I too will continue helping with it. We have had several volunteers want to join the production team, and there is room for more. You will no doubt notice the new features added in coming months.

Your committee has changed considerably, not only in its downsizing, but also in how it organises to provide member services. For instance, Education Services are now under the control of a professional manager, Ron Kelly. The team of presenters (lecturers) is now freed of the organisational load, and can get on with teaching. I know Ron intends to increase the range offered, and I expect at least one new course will be advertised elsewhere in this issue.

The appointment of a Development Coordinator recognises the fact that we need to make ourselves wider-known if we are to continue to grow, and that we need new ideas and new "attractions" to retain our current members.

One consequence of the smaller committee is that subcommittees will considerably increase in importance. They, rather than the full committee, will consider individual questions in detail and provide recommendations to committee. It is expected that this will increase

not only the quality of decisions, but also the speed with which they can be made. This procedure also provides an opportunity for "ordinary" members to have a much greater input to decision-making via their membership of sub-committees. Here's your chance to have a real say in where Brisbug is going.

Take it!

## **Technological Trends**

## Clock tripling on IBM's *Blue Lightning*

IBM has demoonstrated a model of Blue Lightning, its new clock tripling technology which increases processing speed to 99MHz. In flat-out processing speed clock frequency tripling allows a chip to operate at three times its clock-rated speed.

Intel has has the DX2 50 and the DX2 66 which use clock frequency doubling, but IBM has come up with the first tripler. An IBM source said "It is cheaper to work in clock multipliers than to create the full 99MHz chip and to most people it doesn't matter."

Blue Lightning features a 32-bit bus interface, 16 bytes of internal cache, which stores instructions and an internal cache controller. The controller improves performance by pulling data from the high speed cache memory rather than the system memory when possible.

On benchmark programs with the 486 SLC, the processing speed was 12 seconds and the Blue Lightning processing time was 3 seconds. *Source—Editrech Intl.* 

#### **Local Bus Performance**

Local bus impact on sluggish video performance can be misleading, says John Dickenson in the Dec. 92 Computer Shopper.

Video performance has been a barrier to development of graphical user interfaces for PCs that the industry has spent years and untold millions souping up IBM's original VGA standard to make it faster and to make it deliver higher resolution images.

The recent development of the local bus, a 32-bit bus whose primary job is to get video to run as fast as the processor, is being touted as enhancing Windows performance.

Ziff Davis Labs developed profiles on the use of windows and profiled Windows use of a PC's resources:

Processor	71.12%
Memory	12.89%
Disk	5.25%
Video	10.74%

Simply stated, pure processor functions account for 71% of a Windows Program's activities, memory accounts for 13%, video display for 11%, and disk activity 5%. Simply interpreted, you get the most Windows performance for your money by getting a PC faster processor and the least for your money be getting a faster disk drive or controller.

#### Windows NT

Windows NT, Microsoft's 32-bit version of Windows was promised for December of 1992. But the Beta testing didn't really start until then. With the usual six months of field testing, it is likely to be 10 months, the autumn of 1993 before the first units are shipped.

Microsoft doesn't mind because it has already issued 20,000 NT developer's kits, which means a lot of new applications will be ready when NT is.

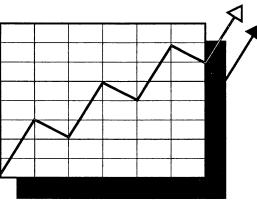
Source-Computer Shopper dec 91.

#### Worldwide PC Market

The worldwide PC computer market grew to \$US 46.5 billion last year from \$US 43.4 billion, increasing significantly in the last quarter.

IBM, despite its monstrous financial losses, remained the world PC market leader with \$5.8 revenue and a 12.4% market share, dropping from 16.3% the prior year. Apple again ranked second with \$US \$5.5 billion in sales and 11.9% of the market. Compaq was third with \$US3.3 bilion or 6.6% of the market. NEC was fourth with \$US 2.4 billion, declining to 5.1% from 6.4% the year before.

Intel jumped from third to first in the world semiconductor market with a 7.7% share. Its revenue increased a staggering 27% to \$US5.1 billion. NEC and Toshiba, which ranked first and second the previous year each dropped one place. Demand for Intel's 386SL and 486MPU products were the primary reasons, Intel doubling its market share in 5 years. Mainframes dropped to 21.6% of the industry from 24.9%, with personal computers now



making up 44.5% of the market in terms of revenues. Personal Computers in world regions projected for 1993:

40%—United States

32%—Western Europe

11%—Japan

4%---Canada

3%—Asia Pacific

10%-Rest of World

Source—Dataquest

#### **Best Buys**

The following "BEST BUYS" is excerpted from the December Computer Shopper to give readers an idea of US computer product prices.

To make a fair comparison to Australian prices, one must divide these prices by the current \$Aus against the \$US. (and add 20% Import Duty, and 20% Sales Tax on Hardware - Paul Bearer wants his bit - Ed)

Desktop and Notebook Systems:
Gateway Nomad 325SXL—\$US1995;

Windows Workstation:

Nomad 425DXL-\$US2995

Stand Computer Windows Workstation Plus (486-33 with 213Mb IDE hard disk)—\$US2895

Network Package:

Dell EasyStart—\$295

Monitor:

NEC 15 inch 4FG-\$US759

Mouse:

Logitech Mouseman—Serial \$US69.95; bus \$US74.95

Scanner:

Envisions 6000 (24-bit color flatbed scanner)—\$US1195

Hard Disk Drive:

Western Digital 210MB w/Stacker 420Mb IDE 12ms 3.5 inch—Bare Drive Kit \$US399; 16-bit Kit \$US419; Stacker +\$US95 (typical)

Tape Backup:

Colorado Memory Jumbo 250—\$US250

#### **Club Events**

## "First Lady" - Sylvia Willie

#### Brisbug elects its first Life Member

Brisbug unanimously elected its first Life Member at the January Annual General Meeting—Sylvia Willie, Brisbug's first president. Sylvia and her husband Roy are still active members, almost seven years since the start of the club.

Sylvia is a lecturer in Information Systems at QUT, where she has worked almost from the onset of the club. At that time she and Roy operated a private computer consultancy to help small businesses with their computer problems. And "There were a lot of basic ones, too," she said.

#### In the beginning ...

"Getting support for problems with IBM compatible computers was the reason we started Brisbug. We were all neophytes with PC's. About eight to ten of us responded to a BBS message to meet at an office in Stones Corner to discuss ways of exchanging information. At that time there was little local support for PCs, only one or two TAFE courses a year, but those of us who met were convinced of the value of a personal computer tool. We mainly used computers in the course of our work, although Brisbug has always had a family outlook with a family membership concept from the start.

"The meeting was attended by 27 people ...

Minute 4. The following officers were selected:

Chairperson: Sylvia Willie Secretary: Roy Willie

Treasurer: Lynn (sic) Browne Editor: Kieth Miller

Librarian: Chris Burke"

Source: Minutes of Brisbug's first ever meeting, 27th July, 1985

"We were really visionaries and not concerned with the economics of the business. Our outlook was one that said PCs offered individualism to users. We could see that the whole nature of computing was changing."

By 1986, the PC had been around for about five years in Australia and was becoming more than an elite business tool. Most of the first members came from other groups, such as those users who had Osborne or Tandy PCs.

#### The first meeting

The first meeting ended up with Sylvia as president, Keith Miller as vice president and newsletter editor, Roy Willie as secretary and Len Brown as treasurer. "We were a mutual support group, sharing hardware, software and operating problems. Between us, we could understand a lot of the reasons disk drives didn't do as they were supposed to, or how to spot crook components."

From the beginning, meetings were held monthly. Meetings



were about two hours long. About half the time was spent on a presentation such as a review of recent shareware, how single and double-sided disks worked (and crashed) or why 512K of RAM would be useful. The other half of the time was devoted to questions and answers. It was a very popular format. Members could come to the meeting and ask about something they couldn't solve on their own and there was nearly always another member who could help them solve the problem." The idea of the help lines evolved naturally from the mix. The two hour meetings just weren't long and often enough to deal with everyone's problems.

The newsletter was a monthly about 12 pages, half an A-4 sheet in size. It came out just before the meeting as it does now.

## "BUY SELL OR SWAP FOR SALE: GENUINE IBM PC

8087 coprocessor, 576Kb RAM, 2 Serial, 2 Parallell ports, real time clock, Colour and Mono adapters, Mono display. DOS 2.0, CP/M86, BASCOM, ...

Bargain at \$3000 ono. Tel 266 XXXX

#### FOR SALE: IBM AT-Compatibles

640Kb,1.2Mb floppy, 192W power supply, Hercules compatible mono graphics, 2 Serial, 1 parallel.. With 20Mb fixed disks **FROM \$5840**. Tel 371 XXXX"

Source: Brisbug Newsletter, V1 No5, January, 1986

In those days a PC only did three things—word processing, data bases and spreadsheets. And DOS was the basic operating system. "We grew because we could show how using a computer word processor was better than a typewriter, how a data base was

better than a file and how a spreadsheet was better than a calculator."

Sylvia served as president for two years. During her tenure, the club grew to nearly 100 people the first year (the Jan 1987 issue of SigBits published a list of all 165 member's names) and blossomed to 350 (about 90 of whom were unfinancial ... does nothing change?) by the end of the second. The familiar Brisbug logo, a floppy disk, was created during that period. There was a lot of volunteer work required for the club, but "...there was a synergy that kept us going. We also had the philosophy that the club shouldn't interfere with work or home life. That meant spreading the responsibility of operating the club to all of its members."

Brigbug meetings were held all over the place, from Villanova College in Coorparoo to Stone's Corner and finally, through member Bill Yarrow, to Toowong state high schools for quite a few years.

"... the meeting was held at Toowong High School at which over 80 people were in attendence"

Source: Brisbug Newsletter V1, No8, April 1986

"We finally outgrew even that and a search started for a large enough suitable location available on Sundays. There was no facility to hold everyone who showed up for a meeting, until Brisbug moved to Bardon. About 80% of the club was made up of new users and the rest were the veterans, many of whom were professionals in the field or came from the mainframes."

The library was created some time in the first year. "One weekend we all took our computers down to Dr Peter Elliott's After Hours Medical Service one evening and copied about 100 public domain software disks. Bill Boland (of subsequent Netcomm fame) had the originals. It gave us one of the largest collections of shareware at the time." Geoff Harrod became the first librarian and faithfully toted some 200 disks to each meeting after that.

"...Memberswill no doubt be pleased that we now have our library of public domain shareware well stocked" Geoff Harrod

Source: Brisbug newsletter V1 No5, Jan 1986

The club offered the shareware disks to members at \$5 each, which provided a healthy income for the club. The profit was ploughed back into purchases of additional disks for more



shareware. It irritated the Sydney and Melbourne clubs, which were selling their library disks for \$10 each. But Sylvia didn't see any reason to charge members more than necessary.

#### Sylvia's "reign" saw the establisment of:

- Brisbug newsletter
- Software shop
- Library
- First SIG (Word Processing)
- Guest Speakers
- Telephone HELP lines

Sylvia's first contact with computers was in the early sixties as an anthropology student. There were no computer science departments then. "Training consisted of a two day course in Fortran II on an IBM 1620 and later in the year another two day course on Fortran III." Her first project was the analysis of data on a large collection US Indian artefacts. It took a year to code the data and punch it into cards. At that time, no one had used statistical techniques with archeological data, much less a computer.

Professionally, she used her computer to analyse questionnaire data in the health field in 1963. The was followed by being named head of statistics with Blue Cross-Blue Shield in Utah, which essentially was head of its research activities.

She and Roy moved to Vancouver, British Columbia in 1969. Sylvia went to the University of British Columbia to do an MBA in 1971 and became involved in research. She used the available file techniques for a database to support her research, since no DBMS were available then. She remained as a researcher until 1979, when she and Roy sailed for Australia in their own yacht, first visiting Mexico, the Marquesas and the Tuamotos in their westerly traverse across the Pacific. It wasn't until 1981 that they reached Australia, which they decided was "just too big to sail around." They settled in Brisbane and with Sylvia settling down with a market research firm, convincing the head of the company to install a PC.

She continued on her own until joining QUT. She worked on audience analysis for TV stations, used her computational knowhow to help Telecom and the Queensland Tourist and Travel Corp. Most of all, she worked with small businesses to solve their management problems through better utilisation of computers.

From the beginning, Sylvia says that Brisbug was special, with a lot of people willing pouring their talents into it. "It has been an organisation that encourages new blood, people with new ideas and new things to do with computers. That's healthy."

She thinks Brisbug will continue "as long as we keep spreading responsibilities, getting more members. The club needs to ensure that no one burns out from handling too much. The 'rocky time' we experienced a few years ago was evidence of what happens when members let just a few people carry all the load. The club is wonderfully run by volunteers for all of us."

#### **Techniques**

## **QEdit and DTP**

Roger Fidler

Most occasioanal users of QEdit would not think to mention it in the same breath as Desk Top Publishing. However, in this article, Roger shows some of the hidden power of this best-ever text editor. - Ed

Anyone who has been to any of Dan Bridges's talks has been left in no doubt as to the value of QEdit but it is not a programme I have used since most of my ASCII editing is of data files which are rather too large to fit into memory. Instead, I usually use a long-superseded version of WordStar for this and consequently, for editing in general. However, I found QEdit's range of features particularly useful in an unexpected area.

#### The GSA awards ...

The Geological Society of Australia corresponds in some aspects of its functions with Brisbug and runs an annual geology competition in schools which was hoped would attract something in excess of 3,000 students in 1992 (although ultimately, the number was somewhat less). The Society awards, amongst other things, a certificate showing the nature of the achievement of every participant in the competition. However, the means by which these had been produced was no longer available and since, like Brisbug, it is a volunteer organization the number of options were limited to what was readily available.

The general layout of the certificate blank can be seen in Fig 1 to which had to be added the details to give a result something like Fig 2. The details were to come from columns of ASCII characters produced by an automated marking system and in general, all that was needed was to be able to print in a range of positions on an A4-sized sheet in point sizes from about 8 to 40 point.

"Initially I had intended to use the mail merge facilities of Wordstar"

Initially, I intended to use the mail merge facilities of WordStar and do the printing on a LaserJet III. In most regards this was perfectly straightforward but my version of WordStar presumably preceded laser printers so while I could change the size of the scalable letters I could not see an easy way to change the pitch and overprinting resulted. WordPerfect version 5.0 was also available and had the necessary sophistication to do all the printing but the merge file format was not easily constructed from the marking programme data.

#### **Enter Dan Emerson**

The most successful arrangement was that done with the assistance of Dan Emerson, using dBase III+. The system worked with the anticipated format (using embedded escape sequences) and was all

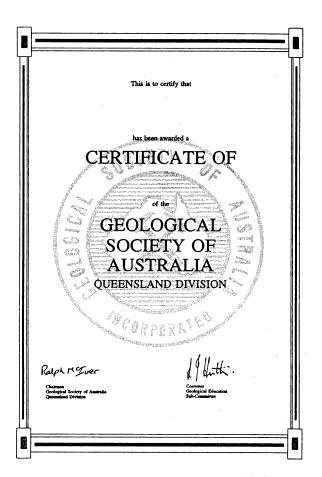


Fig 1. The Certificate blank as supplied to the author

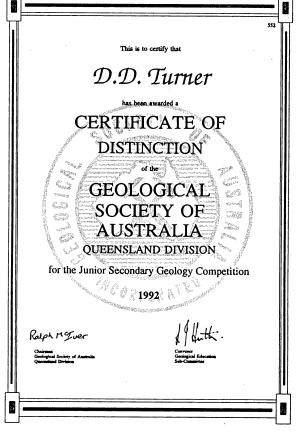


Fig 2. The completed certificate ready to present

set to be used. The only difficulty was with centering the proportional fonts. There were no problems with the "fixed" parts of the certificate but the large typefaces necessary for the names sometimes gave uneven positioning since non-proportional characters were "expected". (Amongst the large number of post-event suggestions has been that the data in a dBase file could have been readily fed in a mail merge fashion, to WordPerfect, directly.)

#### Try PostScript direct ...

While waiting for the results to arrive, however, I tried writing a PostScript routine to do the page layout. This allowed a greater freedom of choice in fonts and reasonably accurate centering was simple. General opinion of the various results was that this was the most pleasing, but at the time there seemed no simple way of using the result and the approach was discarded. The routine is Fig 3.

#### ... but complications emerge

But some complications emerged on the arrival of the results. The students had experienced some difficulties in dealing with the name entry part as quite a proportion of the names looked fairly unlikely and were quite probably incorrectly entered. Many of the schools had provided checklists of names so corrections were possible although it became a little more complex than might otherwise have been, as names were rendered in upper case, without punctuation marks, so that Mr Omara the Japanese was indistinguishable from Mr O'Mara the Irishman and if Ms O. Newton-John had taken part she would probably come out as John O. Newton although the number of letters allocated to the name field also proved to be insufficient for any the double-barrelled Anglo-Saxon names. The same was true of most of the Slavonic names and some of the Greek names. Fully automatic printing of the names was no longer a realistic option.

#### Out, out damned Wordstar ...

Irritation with the awkward way WordStar handles the control characters necessary for the printer caused me to dust off QEdit to write the PostScript routine in the first instance so, with it being handy, I now used it to tidy up the ASCII files. While playing with the PostScript, Danny Thomas

```
/font {findfont exch scalefont setfont} bind def
/centre{
     dup stringwidth pop
     2 div neg 0 rmoveto
}bind def
8/Times-Roman font
460 695 moveto
(555) show
40/ZapfChancery-MediumItalic font
285 608 moveto
     (N.D. Jones) centre show
25/Times-Roman font
286 505 moveto
(DISTINCTION) centre show
16/Times-Roman font
285 325 moveto
(for the Junior Secondary Geology Competition) centre
show
16/Times-Bold font
285 288 moveto
(1992) centre show
Showpage
```

Figure 3. Shows the PostScript routine for placing the "variable" information on the certificate

```
L 14
         C 3
                       504K
                                 *a:\pstscrpt\cert.ps
8/Times-Roman font
460 895 moveto
(555) show
40/ZapfChancery-MediumItalic font
285 608 moveto
     (N.D. Jones) centre show
25/Times-Roman font
286 505 moveto
(DISTINCTION) centre show
L11
                       504K
                                 *a:\pstscrpt\prshc.dat
                 A
     (J.L. Williams) centre show
     (P.J. Johnson) centre show
     (R. T. Jones) centre show
     (S.A BASHFORD) centre show
     (K.G. Chappell) centre show
     (P.A. Gilbert) centre show
     (B.C. Hildegard) centre show
     (M.A. Hopkins) centre show
     (K.H. Inglis) centre show
     (F. Kermit) centre show
     (N.J. McRae) centre show
```

Figure 4. QEdit split screen mode to the rescue

had suggested that one way to use the routine would be to pass it to a word-processing programme but it occurred to me that with QEdit's split the screen, I could have the names in the lower part, make any corrections, transfer them individually to the scratch buffer and move it into the PostScript routine in the other. Escape, enter, enter and it was printed. The screen looked like Fig 4.

A little tidying up and ...

Replacing each name individually, required a certain amount of manual tidying up which could be avoided with a little preparation. It turned out to be simpler to replace the complete line in the routine containing the name. The block copying facilities made it convenient to change the list of names into a series of lines which could be sequentially substituted in the PostScript routine. The macro recorder then converted the sequence of keystrokes required to move the line from the second screen into the PostScript routine and

print it, all to a single keystroke. An added bonus was that you could see when you were nearing the end of a run or stop when there was a printer malfunction.

> Few solutions were as simple, quick and effective as the QEdit approach

As already noted, number of people have offered alternative ways that the problems might have been overcome with each with particular advantages, but few are as simple, quick and as effective as the QEdit approach. While clearly no substitute for Pagemaker on serious work, I now frequently use QEdit for little, one-off jobs like doing facing pages for a set of appendices. For a three or four pages set, I can

finish printing before I could have had Windows loaded, let alone Pagemaker launched. The other great win with this is that the files are a tiny fraction of the size of those you would get if they were done in a full-blown DTP programme.

QEdit is available from the Brisbug library

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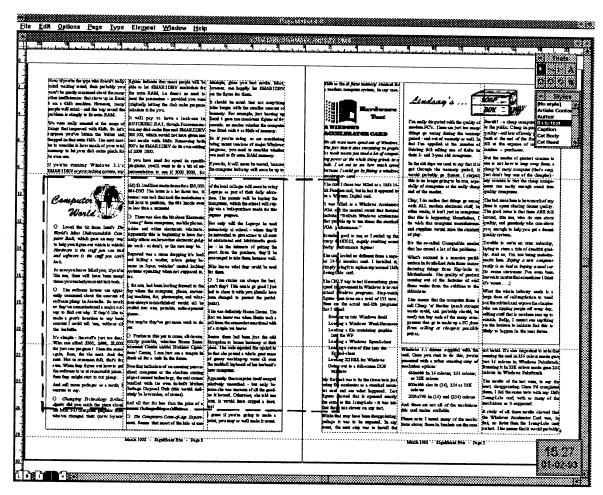
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# Affordable double A4 spread in Pagemaker with readable 10pt text!

#### Exploiting the capabilities of the ATI Graphics Ultra+ VGA accellerator board

The above Windows clipboard screen capture shows Pagemaker with 2 pages from this issue of *Significant Bits* on screen. Windows is configured for 1280x1024 256-colour super-VGA on the ATI Graphics Ultra+ board.

However, even at that resolution on a 19" or 21" monitor, the 10pt text is not really readable. Most people can't afford a 19" monitor anyway --they're enormously more expensive than a 14", like at least \$3,000! So how do I manage to get readable 10pt text? I can't afford a big monitor either. The ATI board has some very fancy driver software that exploits the board's graphic coprocessor instructions and high speed pixel moving.

The Windows driver allows me to set the screen mapping to 1024x768 or 1280x 1024 as a "virtual" screen, and to set the physical screen to something less. Since I find any high-res setup on a 14" monitor results in excessively small print, I have mine set for a 640x480 (standard VGA) physical screen and 1280x1024 virtual screen. The board driver and hardware then manage the movement of that 640x480 window over the whole virtual expanse. I can rapidly move the mouse to any part of the

big screen and the displayed area will instantly follow to keep the cursor in view. The movement is totally smooth and "monolithic". That is, there is no image break-up or redrawing of parts to wait for. It's just like sliding a card with an aperture in it over the big image. It follows text cursor movement also. I have added the screen display area to the above image as the heavy broken line rectangle.

I find it is almost as good as having a big screen to show it all at once, except that here, the virtual screen is as big as a 29" monitor! The only defect is that occasionally you wonder what's happening, when Windows pops up a message box that's just off the screen. It certainly makes publishing tasks easier, and I can afford it! The ATI board retails for about \$750, which is lots less than \$3000 for a big screen. No doubt there are alternative baords that will do this also.

Oh yes, and it gets around that annoying Pagemaker fault that chops off the full fonts list on the pull-downs when you have more than 25 or so.

Geoff Harrod

# Comdex Report

by Ash Vallawalla

Fall Comdex is the world's biggest personal computer trade show, although it is not limited to PCs. Manufacturers of peripherals, publishers and service providers are also represented. The Fall (autumn) event is usually in Las Vegas, Nevada but a smaller one, Spring Comdex, alternates between Atlanta and Chicago. Fall Comdex runs for five days but the Association of PC User Groups (APCUG) runs afull schedule of user-group related events during that week and the preceding weekend. Brisbug was represented at Comdex Fall 1992 by Chris and Penny Ossowski, and myself.

## Relevance of Comdex to Brisbug

Going to Comdex cannot be compared to going to PC 92 in Melbourne or Sydney; the user group officers get the most value from their personal contacts with vendors and with their counterparts from other user groups. Seeing the new products on the Comdex floor is a minor bonus. Those products will have been covered in the Australian trade press in November, so I am not going to elaborate on them here. Here is a list of the user group 'round tables' held during Nov 14-15:

Getting the Most out of Comdex **Business and Legal Issues** Creating Effective Meeting Pro grams Looking Good in Print Globalnet BBS Keeping Your Members Satisfied Why SIGs Are Special How Your APCUG Relationship Can Benefit Your User Group Birds of a Feather Sessions Accounting and Finance Members Helping Members **Publicity and Promotion** Building (and Keeping) an Effec tive Volunteer Base Helplines, Workshops and Train ing Sessions Product Review Policies and

Guidelines

Building a Successful Vendor Relations Program

During that weekend there were also vendor-run training labs for topics such as:

Introduction to OS/2
Using Online Services to Expand
Your Group's Horizons
Newsletter Design and Preparation
Using a Word Processor
Maintaining Proper Financial
Records

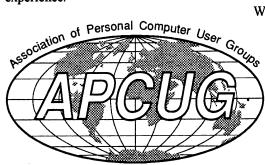
Budgets and Accounting Newsletter Design and Preparation Using Desktop Publishing; Designing a Membership Database

Design Techniques for Brochures, Flyers and Logos

Product Reviews: Tips from the Experts

Design and Content of Effective Press Releases

Comdex is nevertheless aimed at resellers and there were many Australians in the crowds. It is the place to sign up for distributor and reseller agreements. Many end users also go there to see the new products and collect the generous giveaways. A serious computer enthusiast would do well to go there at least once, for the experience.



#### **APCUG Daily Reports**

The following articles are edited extracts from the daily newsletters produced by fellow APCUG volunteers. Each night, until Wednesday, several of us burnt the midnight oil to assemble the newsletters using material supplied by our reporters.

This also gave us experience with the new Ventura Publisher 4.1. Although there was a bulky Comdex Daily produced by the Interface Group, it lacked the special touch of APCUG Daily Reports.

Editors: Judy Brown, Rob Wunderlich, Leslie Benson, Trent Eyler, Nancy Dunn, and Jeremy Dunn

#### **Registration Statistics**

371 user group officers from 139 groups pre-registered this year for APCUG events. This was up from 273 attendees from 98 groups last Fall.

As a group, the people registering for rooms try to be healthy. 83 of 92 registrants requested non-smoking.

It appeared that of the 371 APCUG registrants, over 30 husbands accompanied their wives to COMDEX.

High ranking members of the user groups predominated the registrants. 116 members were of the rank of Director or President. 53 editors were in attendance.

#### IBM and OS/2

by Virginia Green

Featured speaker Lee Reiswig, Assistant General Manager, Software Products, from

White Plains, New York, told the group about the development of the OS/2 product. Mr. Reiswig explained

that in the development process, too many programmers at too many sites developing a program that was too big and included too many errors were replaced with fewer program-

mers at fewer sites developing a program that was manageable with a target of not more than 14 errors per 1 million lines of code by 1994.

Mr. Reiswig stressed that beta site testers at 30,000 sites (with up to 10 copies per site) used the program and provided input to which IBM listened in finalizing the product. He also observed that it helped to

know the competition.

IBM provided about 30 PCs in the APCUG training lab and the Daily room that had OS/2 installed. User group members who wished to try that operating system had ample opportunity to do so.

OS/2 2.1 will be released at the end of 1992.

OS/2 2.1 will provide support for Windows 3.1 applications, for about 260 printers, and for laptops and notebooks. It will be shipped on CD-ROM as well as on disk.

Other future features for OS/2: remote management of networks, multimedia (to which IBM is strongly dedicated), object technology, security, listen and speak features, and pen computing.

Continued areas of DOS development: multitasking on 2 MB 386 machines, pen support, shell-like interface, scalable operating systems, ROMable, enhanced memory management, improved utilities, and improved networking.

#### **Sunday Workshops**

by Harvey G. Ottovich

CorelDRAW!'s North American Marketing Manager, Kim Dixon, led the 'Brochures, Flyers, Logos' session. Students learned to set defaults, do fills, create shadow figures, repeat and duplicate shapes, and more. In addition to the raffle, each attendee received a copy of Ventana Press's Looking Good with CorelDRAW!. The Gray Book: Designing in Black and White on Your Computer may be a forth-coming additional attendance benefit. Kim made designing in CorelDRAW! look easy and fun.

InfoWorld's Editor of Testing and Reviews, Kevin Strehlo, provided "Expert Tips for Product Reviews", explaining InfoWorld's testing philosophy and methodology. Product reviewers had an opportunity to benefit from Kevin's expertise. Writing reviews is both art and science: the author must focus the review for the reader and maintain objectivity. Kevin's talk included a call to user group writers with experience in computer software or hardware areas.

"Effective Press Releases", by Lotus's Elena Fernandez and Eliza Hibben, and Logitech's Betty Skov, was another opportunity to learn from the experts. One of Betty's headline examples, "Logitech launches 'see and feel the difference'

merchandising campaign" is a reason to visit the Logitech booth today.

The Sunday evening trade show previewed several new products. Knowledge Adventure Inc. will introduce Dinosaur Adventure, graphical-hypertext database, today. Logitech's color hand scanner is a new technology that may be just what you've been looking for your desktop publishing needs. Shapeware Corporation demonstrated their recently unveiled drawing product Visio. Visio allows the user to drag and drop shapes onto a gridded work surface. ZiffNet's Support-On-Site is an online information service feature directed at individuals, MIS and system administrators, and support personnel.

## PC World's Comdex Lookout Tips

by Claire Toynbee, Vancouver PC Users Society

Mike Hogan and Russell Glitman talked about what's cool and what's hot. Some of the products we should watch out for:

- \* The one-ounce 2.5" removable 85 MB drive by Avatar incorporated in a product
- \*The nicely-designed 3.9 lb. Z-lite 386SL subnotebook with 60 MB hard drive and a backlit VGA screen, almost full-size keyboard, detachable mouse panel and sidecar floppy
- \* Duracell battery recharging technology, promising 40% more battery life
- \* Motorola's PCMCIA Newscard, to be available at under \$400 in mid-93, a faxmodem with an extendible RJ11 phone jack
- \* Qmodem Pro, Mustang's DOS-based communications package with a built-in on-line reader that does CIS, MCI, sendfax, and has other BBS support
- \* The 2.2 lb. NCR with a cell phone and send/receive data/fax, called "the ultimate mobile personal computing device"
- \* Sharp's system incorporating touch pen input—they already have full handwriting recognition in Japanese, are expected to crack the problem in English
- \* Hardware using digital signal processing (DSP) chips, programmable multifunction chips, as in TI's booth
- \* Microsoft's booth showing the most interesting and exciting things—Windows for Workgroups, Schedule Plus, Mail 3.0,

Windows sound system

\* Canon's 4.4 lb. inkjet quality, almost 4 ppm portable printer with removable trays

## **Directions of Corporate Computing**

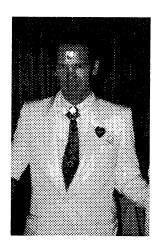
Software Publishing Corporation sponsored the lunch on Monday. The focus of the first speaker was to predict directions of corporate computing. Today, we use passive tools and focus on personal productivity. Tomorrow, we will use tools in an active way and the focus will shift to organizational productivity. There will be a change in the primary way we view data. Our current tabular way of viewing data will give way to seeing data in graphical form. Different levels of graphical analysis will be just a mouse click away.

As you might expect from an executive of a company that sells Harvard Graphics, the graphics in his presentation were impressive. If you're thinking of imitating this, remember the average full motion video window in your presentation will cost you around 10 megabytes per minute.

#### St \$ilicon

Jeffrey Armstrong, better known as 'Saint \$ilicon,' the founder of the Church of Heuristic

Information Processing a s k e d: What's the difference between the Berlin Wall and the 640 kB DOS barrier?



Answer: The Berlin Wall is gone.

#### Intel's Vision

by Bob Lay, Quad-Cities Computer Society

Intel V.P. David House sees the future of computing as defined by the intense business environment, shared visions (... of what might solve the problems of living in that intense environment) and

technological challenges and tasks to realize these visions.

He reported that Intel CEO Andy Grove posits that "In the 90s, a business will be either quick or dead." Change or die. Nothing much new in this, when you think about it. This is the same lesson the dinosaurs learned ... er', failed to learn.

sees computer Intel supported collaboration at all levels of corporate or business activity as the logical conclusion and solution. Solutions are on the horizon, but the software and hardware technology lags.

The tasks that must be met are networking, servers, mobility, the adventure for adults and children. Look at human interface, and performance.

Intel is meeting the need with many products, led by the introduction of the Pentium processor (P5—10 times the speed of an Intel 386/33) already in production, the P6 (tooled up, about 50 percent complete) online for introduction in perhaps twelve to eighteen months, and the P7 with the development team already at work.

David concluded with the advice that the biggest mistake a computer buyer can make is to buy a system for the applications being used today. Assuming the useful system/user life cycle of four years, one should buy for the applications they expect to be using in four years. Not an easy task, but one you have to shoot at.

#### **Other Interesting Products**

by Harvey G. Ottovich, PC Clubhouse Columnist

PC Computing Columnist and Contributing Editor, Stephen Manes, has completed his Doubleday, 544 page, Gates-How Microsoft's Mogul Reinvented an Industry and Made Himself the Richest Man in America for US\$25.00/\$30.00 in Canada, available in January 1993.

I spoke with Microsoft Senior Vice President, Jeff Raikes, Steve Ballmer, Marty Taucher, and Steve Manes about the Wiley Hard Drive-Bill Gates and the Making of the Microsoft Empire. Bill, Steve, and Jeff were not interviewed by the authors. Stephen Manes said that there are inaccu-



Mr Microsoft, Bill Gates, spotted at Comdex

paste term-paperlike result. Knowledge Adventure Inc. introduced Dinosaur Adventure at Comdex and previewed it at the Sunday feast and trade This show.

graphical-

hypertext data-

base is an exciting

knowledge

book.

Steve

agreed with my assessment that

the book appears

to be a drag and

drop, cut and

Sports Adventure, Knowledge Adventure, Isaac Asimov's Science Adventure, and Space Adventure.

Sunday, at the Press Room, a NewGen Systems Corporation source told me about using their printers to print a plastic plate that a printer may use to produce a 15,000 copy print run. Desktop publishers may find this a cost savings benefit.

In the multimedia arena Media Vision offers support for the November 10, 1992 release of Microsoft Video for Windows. WordPerfect Win 5.2 will act as a OLE client affording full motion video in a WordPerfect Win document.

MicroSpeed's new WinTRAC is a trackball and a trackwheel combination to improve point-and-shoot operations. Visit MicroSpeed and ask about preset "personalities." You may find the programmable "personality" feature an exciting benefit.

Even with DOS 6.0 scheduled for a firstto-second quarter 1993 release, PC-KWIK corporation's WinMaster and Power Pak utilities may surprise you with their exciting capabilities

WordPerfect's Win 5.2, Office 4.0, Presentations 2.0 (a DOS DrawPerfect with a graphical user interface that I take

racies in the a double take on because I think that I am in Windows. An oooh! aaah! look.), and the new InForms forms fill in competitor to ObjectVision and FormBase.

> Microsoft's new Access and FoxPro 2.5 may excite you databasers.

> Intel's new Indeo video technology and preview of systems based on the Pentium microprocessor, the next generation from Intel, excites me. I describe Indeo as PostScript (scalable) Video. Indeo software interrogates your system hardware resources and provides up to a full screen, full motion, video display with full 486 resources.

> Philips Enhanced Telephone is an ADA (American Disabilities Act) compliant, voice/data telecommunications application using Flash memory. A new Zenith notebook is another result of Flash technology. Visit Intel, Philips, and Zenith to see how Flash Solid State memory is already affecting our lives.

#### **Editors' Round Table**

by Jeremy Dunn, TPCUG of CT

After the corporate greeting from Dr Alan Ashton, the meeting got down to business, that is, 'editor stuff.' The first thing that was presented to us was an innovative method for creating a newsletter on electronic media. Mike Muller from North Orange County Computer Club showed us this unique electronic newsletter which was devised by John Krill of NOCCC. The articles are formatted in WordPerfect for Windows, and then compiled as a Windows Help file and viewed using the Windows 3.1 help viewer.

Next, Maralyn Henry and Richard Katz moderated the discussion, and we were soon under way. The first topic of discussion was product reviews. Some people were rather adamant in their belief that a negative review is not a bad review, while others maintained that a review can be negative, and still be useful to both readers and the manufacturer of the product.

The next topic was the newsletter exchange. The editor from one of the smaller groups pointed out that it costs groups a significant sum of money to exchange newsletters with every member group of the APCUG. She maintained that the newsletter extracts uploaded to the GLOBALNET BBS should suffice. (This is a valid point with which I disagree.)

Member's Notice

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Windows	\$180
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Geoff Harrod (07)378-8534 (home) (07)379-1747 (bus)

Several people pointed out that there is a difference between reading the articles on your computer, and holding the hard copy newsletter in your hand. Aside from the difficulty of sitting in bed with a 17-inch monitor in your lap, it is nice to be able to see the layout of the newsletter, and to read the local news from each club. It was pointed out that you need not send every issue to every group, but just send a couple issues a year; this seemed like a good compromise.

#### Symantec's Vision

by Jeremy Dunn, TPCUG of CT

Mr. Eubanks, the President/Chairman/CEO of Symantec Corp. opened his remarks with an apology for not being able to bring Peter Norton (an APCUG breakfast regular). It seems that Peter has gone to Cambodia, though no one knows exactly why. Mr. Eubanks then went on to

praise user groups in the most superlative terms.

He then spoke on the state of the computer industry, noting that Windows has taken over a large share of the PC marketplace. but also pointing out that every machine that runs Windows is also running DOS. He foresees a move towards the 32-bit operating systems over the course of the next year. This will push new graphics standards into the market. The current graphic standards are all plagued with the same problem, the necessity to use a 16 bit bus with a speed as low as 25% of the processor and memory speed. By using a 32 bit interface such as the VESA "Local Bus" standard this bottleneck can be avoided and application performance will skyrocket.

Ever the visionary, Gordon spoke of a concept that has evaded the software world for 20 years. The idea that once you write a chunk of code to do something in a



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particular environment, you do not need to write it again for every application that needs this feature or function. It sounds simple enough to someone like me, but then my last program printed "Hello World" and took several lines of code to do it. With Object Oriented technology, this seems like a workable concept now. Eubanks then spoke about the usability of software. Again it seems axiomatic that no matter how many features are in a program, they are worthless, if they are not easy to learn and use.

Finally the floor was opened to questions which ranged from mergers and acquisitions to piracy—though I am not sure there is much of a difference between those two. One person at every table won a piece of software, and then Symantec raffled off the big prize. The Pacific Northwest UG won an appearance at one of their meetings by corporate VP Rod Turner, and Landings Computer Society won a visit from Gordon Eubanks.

#### **Lotus Improvisations**

by Mary Ellen Wexler

John Landry, Sr. Vice President of Software Development and Chief Technology Officer of Lotus gave us the company's views of the future of computing. He maintains that computer systems are actually communications systems. He also promised more electronic access between Lotus and end user. John suggested that new software must be radically simple.

Jeff Anderholm then treated us to a presentation of Improv for Windows. Improv was developed to allow users to more easily display and use their spreadsheets. It allows them to easily change the layout of their information. By incorporating a "one stop shopping" info box, the program allows a user to click on an item and change multiple settings. Color, alignment, and more are only a few clicks away rather than going back and forth between dialogue boxes. I have always loved floating boxes—anything you can move out of your way certainly meets with my approval.

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This multidimensional spreadsheet will ship longer applause than any of the other in the first quarter of '93.

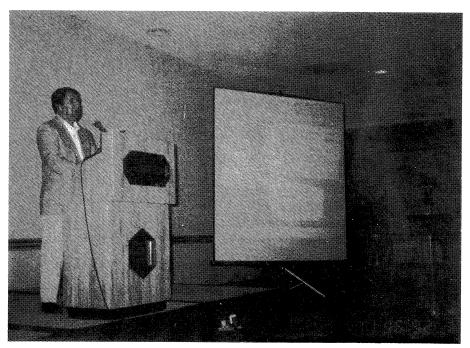
Dina McIntyre gave us a look at Lotus 1-2-3 2.0 for Windows. Lotus has made it a more graphical program with new "drag and drop" features. One of the enhancements most cheered was full alignment of information in cells. Rotating labels was another feature everyone applauded (though the food got more and

items). Other features included were "version manager index" and editing within

Both Dina and Jeff assured us that 1-2-3 and Improv are meant as separate programs and that Lotus will continue to support both.



Brisbug representatives, Penny and Chris Ossowski discussing computing with APCUG delegates



Mark Antonio of IBM presents OS/2 Ver2

#### **APCUG Summit Meeting**

by Richard Katz and Alan Jarrett

President Judy Brown opened the seventh annual user group summit. The scope of the event was broad. She announced that the BOD and BODA were in the process of setting up a planning session. It was good news to hear that the membership in the Association had grown from 212 last year to 321 with 4 member groups joining over this COMDEX event.

The GLOBALNET BBS has had over 175,000 messages, wow! Larry Shaw, our enigmatic Treasurer, reported that we will have approximately \$25K in our accounts by year end, some of which is earmarked for phone expenses related to our user group locator. It was also announced that Lou Gehrig's disease and lost the ability to on December 2, we will be switching over to CompuServe from Tymnet. Typing APCUG1 gets you to GLOBALNET, huzzah!

We had reports on regional conferences, all of which went well. Of considerable interest was the announcement that the Sun Coast Regional Conference had voted to form a permanent group: The Florida Association of PC User Groups, congratulations!

David Hoffman, flanked by Alan Ashton of WordPerfect and Gordon Eubanks of Symantec, announced the official commencement of the telephone user group locator.

This is really a very special moment in our history. Dial up the locator, touch in your area code or partial Zip code and you will get a voice response of groups meeting in your area! The finder is bound to be an enormous service to our member groups and the public. It will really bring in potential members for any region. Reach the system at (914) 876-6678. Try it, you'll like it!

We had a wonderful and touching presentation from a community service panel where, among other things, a videotape of Cincinnati UG project to help the handicapped was presented. A woman who had move and talk was again able to communicate with her husband and children. Great work, Di Booth and gang! They have installed 17 systems using primarily off-the-shelf technology, way to go!

Jerry Schneider and Ziff-Davis' Bill Machrone announced the Computer Industry REACH awards. The object of REACH is to promote PC user groups to help schools, charitable organizations and other organizations that improve the quality of life. Focusing attention on outstanding community service will encourage other user groups to get involved. There

will be 5 grants for \$15,000 each, to continue funding for these projects. Applications for REACH awards must be postmarked no later than February 1. 1993. Ask Jerry for a blue REACH packet for more information. Way to go, camp-

[Ed. The APCUG Daily Reports extracts endhere. There was no issue covering the Thursday events.—AN]

#### **Additional Ramblings**

by Ash Nallawalla

Adobe's presentation included a preview of Photoshop 2.5 for Windows, which will be released in early 1993. It will be fully compatible with its Macintosh counterpart and will be worth the wait. Its new SuperATM product will be appreciated by those who receive electronic documents created in fonts that they do not possess. The program substitutes a font that preserves line and page breaks.

Tuesday's Hewlett-Packard-sponsored dinner was a mystery, because the sponsors failed to show up. The food was great. and the bill will be sent to them. H-P lent several printers for use by APCUG during Comdex.

On Tuesday night I attended the legendary PC Week 'Spencer Katt' party. Entry is strictly by invitation and invitees include industry notables and the rest of us. Its location is secret and passed on by word-of-mouth only. Although I scored about two seconds of pleasantries with Philippe Kahn, the only notable I saw and spoke to at length was former Melb PC President, Ian Robinson, presently Borland's Marketing Manager. There was standing-room-only, and movement was almost impossible. Another highlight of that event happened while I queued up for a 'virtual reality' trip—the guy in front of me was from Ericsson and showed off his pocket-sized computer with its inbuilt cellular modem. He offered to dial his office computer and send me a message via the Internet. The device is called a Mobidem and when packaged with an H-P 95LX palmtop computer, becomes the Viking Express. A review in Network Computing suggests that it still has a few wrinkles.

At the Wednesday night APCUG Summit meeting, I reported on the Australasian User Groups Conference held in Sydney last March. Thanks to Borland's Belinda Hanna and Greg Joy, we were able to get seven Australasian user group presidents in one room for the first time. I am pleased to report that another vendor has offered to sponsor such an event, but so has Borland again, so we could manage two in 1993, our anniversary year. At the Microsoft event I won on behalf of Brisbug a ticket to the Spring Interop developers' conference in Orlando, Florida. If it weren't for a small matter of air fares etc... Ah, well. Brisbug got its moment of glory.

On Thursday morning, Borland International hosted its traditional Borland Breakfast at Caesar's Palace. Philippe Kahn's presentation was preceded by a superb juggling act. He spoke about the rediscovery of objects, with a reference to the knowledge of a round Earth by the Greeks but its later demise in the Middle Ages, when the flat Earth theory became popular. He mentioned some items he had covered in his Comdex Keynote Address, such as the need for Object Oriented Programming being necessary to keep up with the complexity of computers. (That keynote address made a lot of impact around Comdex, and a video tape will be made available to user groups at a later date.)

Lunch on Thursday was courtesy of Corel Corporation (the word 'Systems' has been dropped). We saw a humorous tribute to its founder Dr Michael Cowpland, including testimonials from his psychiatrist, physician, MPs, fitness trainer, and others. Corel has emerged as a success story, and Dr Cowpland recently won the award of (Canada's) Businessman of the Year. Corel will no longer be involved in its own hardware products but will work with others, choosing to concentrate on its software.

Dinner on Thursday was perhaps the first personal meal expense for most people. It was followed by a comedy show sponsored by Aldus, the makers of PageMaker. Aldus is having some difficulties and was absent from the Comdex floor for the first time. For the sake of the PageMaker fans, let us wish them well.

There was an APCUG-sponsored farewell breakfast on Friday, but no more vendor events. I spent a couple of hours with Ventura Software staff, and repeated the complaints that they had heard before. Australian customers should see improved service, one hopes.

I manned the Borland User Group booth on the Comdex floor for a couple of hours on Friday. It was an interesting experience. I managed to recruit one American user group for APCUG membership; a few people were encouraged to join their local groups; one person even decided to join Melb PC!

#### **Thanks to Sponsors**

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## WINDOWS 32-bit DISK ACCESS

#### **Geoff Harrod**

This is a (not very) technical note for users who may be having disk access problems in Windows, and also for the interest of others who like to try things out.

Many users probably never realise that Windows 3.1 has support for 32-bit direct disk control bypassing the BIOS disk control system. It only works in 386 enhanced mode, and only with some disk systems. Known as "FastDisk", it basically will only work with Western Digital type 1003 type controllers, or compatible ones. That is supposed to cover most controllers in fact, except for ESDI and SCSI types. Enabling FastDisk should speed up disk operations quite a bit, allow more non-Windows application to be run together, and speed up non-Windows applications running in the background.

To enable it, you need to run "Control Panel", then "386-Enhanced", then "Virtual Memory", then "Change". (No kidding!) You then tick the "32-bit disk access" box, pick OK, reboot and hope for the best.

I say "hope for the best" because my own experience with this has not been encouraging. Microsoft warn about the possible problems, particularly with laptops, but in fact I don't myself know anyone who has had complete success! I tried it on my previous RLL disk with some problems, but that elderly disk was occasionally playing up a bit anyway, so I wasn't sure what the situation was. I have been using FastDisk with my very fast new IDE disk, but I occasionally get the same disk timeout errors, with a Windows message suggesting FastDisk may be the problem. They seem to have become more frequent, so I've just killed it.

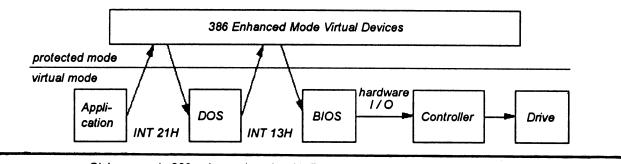
Virtual Memory OK Drive: Cancel 11,747 KB Size: nent (using 32-bit access) Type Change>> Help c c ± Permanent 65.565 KB 13,238 KB 11,747 KB laximum Size Recommended Size New Size: WXX KB ☑ Use 32-Bit Disk Access

If you have never deliberately enabled it you need not wonder whether you have it running, unless your supplier did it, which is not usual I think. You can check by the above sequence of actions, but if you pick *Cancel* instead of *OK* there's no need to reboot. If the check box is ticked it's in use. If there's no "32-bit disk access" check box in the Virtual memory dialog box "Change" display, then Windows has deduced that your controller cannot support it anyway.

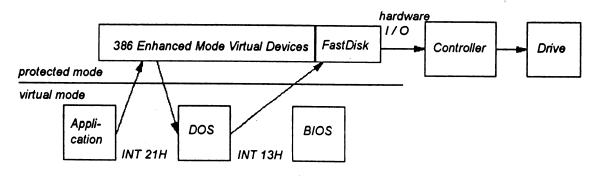
To disable it, you can do the same as before but un-tick the check box, but if the disk access is playing up too much to get that far, edit the \WINDOWS\SYTEM.INI file from DOS, and find the section headed [386enh], and then the line that says 32BitDiskAccess=on, and change it to 32BitDiskAccess=off. Next time you start Windows, it will use BIOS disk access. Another way is to start Windows with the command: WIN /d:f which will run that session with BIOS disk access. You could then run Control Panel, etc...

So I would suggest, on the strength of my own experience and user contacts, that you don't use it. However, you can try it without much risk if you want to. It doesn't actually seem to confer much tangible benefit as far as I can tell. This item is more than anything to help users who may be getting strange full screen text-mode messages about disk time-out errors, that comment on possible 32-bit disk access problems.

Disk access in 386 enhanced mode without FastDisk



Disk access in 386 enhanced mode with FastDisk



## Windows Shareware Utilities for

## the Windows Clipboard

The 'one shot' limitation of the clipboard can be extremely frustrating. It works well for a simple cut and paste operation. The Clipboard can accept text and graphic images and store the contents as a \*.clp file.

A utility that stores multiple items, retrieves, views, allows editing and moves a selected item to the clipboard is a necessity rather than an option. Stack managers work with the Clipboard to automatically store items in a temporary or permanent file. They are primarily designed to store text although some programs can handle graphic images. Their ability to 'float' above the word processing program providing ready access to the items is a bonus for those who cut'n paste.

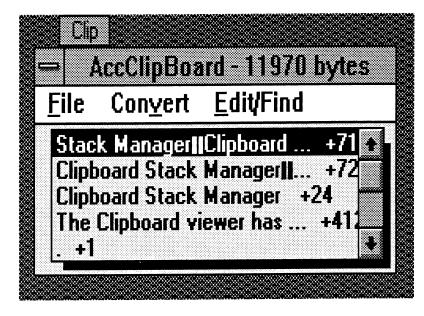
AccClip, Clipstac and ClipMate are three Shareware programs that extend the function of the Windows clipboard.

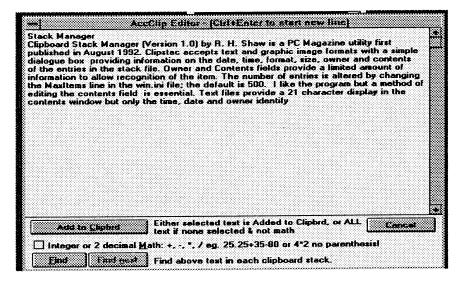
#### AccClip

AccClip (Version 3.1) by T.F. Wall is designed for text material and works beside the Windows clipboard. A permanent file accclip.dat created by the program can be automatically retrieved when the program is loaded. The 'stack' size is modified by changing the entries in the accesses.ini file. The ability to edit a clip item in the stack file is particularly useful since this allows meaningful titles as the first line in the clip item rather than the first 25 character string. A search facility is provided which finds case sensitive text strings as 'first finds' in each stack and find next continues the search to the next stack entry.

#### ClipStac

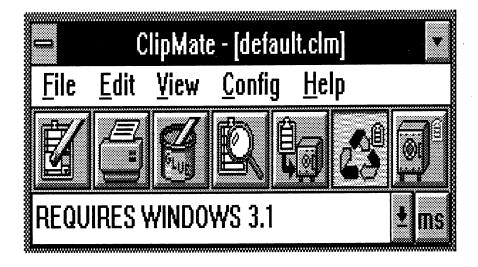
ClipStac, Clipboard Stack Manager (Version 1.0) by R. H. Shaw, is a PC Magazine utility that accepts text and graphic image formats. A simple dialogue box provides basic information about the item in the





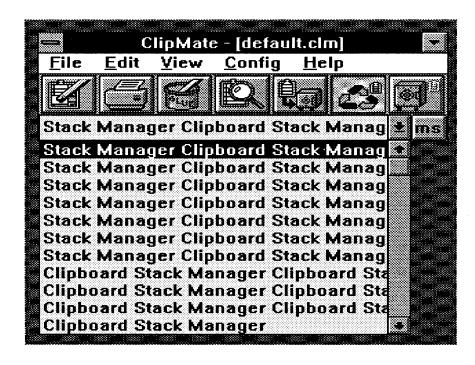
Above: Acclip management screens

Below: Clipmate in action



file. The first 21 characters are displayed in the contents field for text items. No information is displayed in the contents field for graphic items. The number of entries is altered by changing the MaxItems line in the WIN. INI file; the default is 500.

ClipMate ClipMate for Windows (Version 1.51) by John Thornton is one of the user friendly Windows programs that builds its own ini file and does not mess around with the WIN.INI. It is a text only program that automatically creates a title for the clip item from the first 50 characters. The Magnify window allows editing, designation of title and auto saves under a different title if required. A recycleable and safe list facility for the clip items is provided from the button bar.



#### Which Program?

extensions to the clipboard. Both programs popup box while ClipMate reduces to the were loaded above Word for Windows typical icon size. while writing this article.

AccClip and ClipMate offer valuable AccClip can be minimised to a small

ClipMate has a colourful toolbar but AccClip is less obtrusive over the word processing window.

John Massey

## Hunter

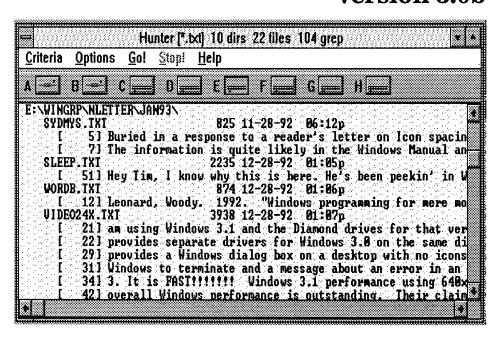
Peter Eddy- Author

Hunter is described by the author, Peter Eddy, as a Text and File search utility for Windows. This version is possibly dated (the exe file date is June 92). If a later version exists please let me know.

The program lacks a utility to save the search list as a separate file but double clicking on a file name in the search list launches the application that generated the file double clicking on note.txt launches the windows notepad.

Archiving into one of the standard formats like LZH or ZIP is a common practice to conserve space on the hard drive. The ability to search archive files in the same manner as - WRU Where are You The Windows File locater - would be a useful addition. Hunter is restricted to DOS files but provides a powerful text finder with search

#### Version 3.0b



parameters ported from the Unix grep system. The strength of the program lies in the text search tool with expressions ( ^ \$ . : A : d : n : )and logical operators (>, >=, =, <, <=).

WRU Where Are You is superb for finding all those files locked away in ZIP files but Hunter provides the punch to find all occurrences of a text string in a dos format series of files.

I could use a commercial program like ISYS (and pay a commercial price) but all I want to do is find a letter I wrote to Ralph sometime last month

# DoubleDisk Review by Geoff Harrod

Another disk capacity increasing utility that has some extra features.

As the programs we use tend to become significantly larger with every upgrade, and as we add more software tools to our working systems, it is inevitable that the time comes when the hard disk that used to be adequate proves no longer big enough.

The obvious remedies are to buy a larger drive, a second drive, or replace the computer with one that has a bigger disk.

Sometimes a replacement computer is the best answer, such as when the need is felt for greater speed, or of course, if the new upgrade will not run on the present type of processor.

Adding a second drive or replacing the present one with a larger one can be a quite difficult task, and for most users needs the services of a technical expert. Sometimes it is quite easy, but often not at all.

Recently, many users have adopted disk compression software that seems to miraculously double the disk capacity. Some of the early versions of these got a bad reputation for destroying data, but now the technique has matured, and currently a very large numbers of user rely on these systems for their vital storage.

They work by using data compression techniques that rely on the fact that in any data stream, byte values will repeat, and quite complex mathematical processes have been developed to generate a much shorter stream of bytes that stores all the information contained in the original longer stream, and to reconstitute it when needed.

These data compression techniques are familiar to many Brisbug members as the popular "archive" file types such as ZIP, PAC, LZH, ARC, ARJ, ZOO etc, commonly used on Bulletin Boards, and for the Brisbug catalog disks. Tape and disk backup systems almost all use these tech-

niques now, to reduce the size or number of media needed. Typically a 50% compression is achieved, but it depends on the type of data. Program code, as in EXE files, does not compress as much as most text and graphic data. Some data files, notably dBase databases and Pagemaker documents can compress 90%!

#### **DoubleDisk**

The most popular disk compression system is currently Stacker, and it has proved very reliable. There was a review of it by John Massey in Significant Bits in April 1992. Recently another system has been introduced that claims some advantages -- DoubleDisk.

I was introduced to it at a rather innovative product launch in Brisbane, at which I found myself being urged to be a resller of it, among other things. I have never been very keen on these disk compression systems as I have always considered the

The compressed drive can be enlarged repeatedly over an extended period of time, as the need becomes more urgent, without disturbing the data.

money spent on the compression software would be better spent on another hard drive, which must be faster and more secure. However, I realise there are many circumstances where this technique is the most appealing, so I thought I had better try it out. I didn't want to commit myself to selling it without being certain that it was trouble free. So I have been evaluating it on my home machine which has a 105Mb drive, and have found it very satisfactory and reliable.

DoubleDisk creates your compressed virtual disk as a single hidden file on your "real" disk. Unlike the others, it does not require any separate partition, does not rewrite the disk allocation table, and allows you to assign any free device letter you wish for the new "drive".

You can create a smallish drive initially using whatever free space you have, and then after copying files into it from the uncompressed drive, which will take up less space than originally, you can delete the original copies to free more drive space and enlarge the compressed drive

into that space. Hence you don't have to back everything up, repartition, reformat and restore from the backup. The compressed drive can be enlarged repeatedly over an extended period of time, as the need becomes more urgent, without disturbing the data.

The hidden file that is the new drive is a continuous packed stream like a backup file or a typical "archive" file, except that here it is always the size you specified when setting up the new drive, and it will have a lot of nulls in it if the drive has any free space.

DoubleDisk installs a DOS device driver which manages the hidden file, handles calls to the new drive, and makes it appear to DOS as a normal disk drive. You just have to remember not to try using CHKDSK on it, or a disk defragmenter. A special set of utilities is provided to do the work of those.

#### Backup considerations

It doesn't present any problems with backup. In fact you have two options. You can continue to backup your normal drive as before, and ensure that the hidden DUBLDISK file is also backed up. In the event of a restore, the whole DoubleDisk drive will also get restored. Then, provided its device driver and the CONFIG.SYS that

loads it are also restored, its data will become accessible as before. This method has the advantage when using a noncompressing backup system, as the data is in compressed form. The only problem is that you cannot restore selected files in the compressed drive from the backup set

The second method is to use your normal backup system to backup the compressed drive, as a separate operation from backing up the normal drive. This accesses the data via the DoubleDisk device driver, and sees it as a normal drive, and stores the data on the tape or disks the same as any other backup. So, if the backup system normally allows it, you could restore selected files. You could do both methods of course. The second method is the only one to use if you want to be able to restore the data to some other disk.

#### ORG, disk unfragmenter

The hidden file must be 100% unfragmented (just like a Windows per-

manent swap file), so you might find the NOW! disk cache system refuses to create the drive you specify, unless you run a defragmentation program first.

A very good one is provided with DoubleDisk, called ORG. If you extend its size later, you will most likely need to do that again. It can happen that you extend the drive's size, but on rebooting (which is needed) the system says it is too fragmented and all the data seems to have got lost! In fact, if you then shrink it back to its original size and reboot it all comes back as was. Phew! That's a bit of a shock!

This can even happen after you have run ORG and found it reported that no defragmentation was needed. That is because ORG considers the amount of file fragmentation that it found is not enough to adversely affect disk performance and it would be best to leave it until it gets worse, just to save the time it takes.

In this case we must have 100% contiguous free space immediately following the current DoubleDisk file, so the remedy is to force ORG to do it regardless. Then the drive can be extended successfully.

ORG seems to work well and reliably, and quite quickly for this type of operation. It provides similar options and a similar sort of graphic display of what's being done as the well known Norton Speed Disk, Mace or PC-Tools equivalents.

Also with DoubleDisk comes a very efficient disk cache program called NOW! This one uses a more complex probabalistic demand predicting system than most, as well as adjustable writeback. I have been using it instead of the latest improved Smartdrive-4 that comes with Windows, and I found it has produced a quite obvious improvement in drive access speed.

The only penalty is that it occupies somewhat more memory. In fact, far too much! I found it prevented my GOSCRIPT Postscript processor from working on even slightly complex print jobs. That in itself virtually gave Now its marching orders, as I still need that rather awkward software postscript processor for the WordPerfect files that I often nedd to

More seriously, I also found it seemed to have a problem working with Windows. I experienced several hang-ups while saving files in Windows, and some other malfunctions that all went away when I reverted to Smartdrive. So obviously I'm not going to persist with it.

The documentation says Now is compatible with Windows up to version 3.0 and it comes with some Windows utility programs to control its operation. It seems it needs updating for Windows 3.1 however. So I can't use it and can't recommend it.

Cache programs really have to be bullet

```
proof to be useable. Every one I've ever
tried, including Norton and PC-Tools,
has been unreliable, except DOS 5's
Smartdrive-3 and Windows 3.1's
Smartdrive-4, so I'll stick with those.
Everyone tells me Super PC-Quik is the
bee's knees of caches, but I've never tried
it, so I can't comment. Generally it seems
the ones that operate significantly more
effectively do it by taking risks that some-
times cause upsets. Microsoft's
Smartdrives may not be the most efficient
but they do seem very reliable, and 4.0 is
actually very efficient.
```

#### Support and waranty

DoubleDisk and its accessories come with an unusually wide ranging and long running guarantee, that gives the buyer an assurance of not being left with something unuseable in the event of problems in working with your particular system, and provides on-going support to keep it working optimally. DoubleDisk is becomming available through numerous resellers, and now having satisfied myself that it performs as claimed, I am one of those.

#### **Options**

In conclusion, I must comment that I would still recommend a new bigger drive as the best possible solution wherever possible. Another level of software processing between the stored data and its use cannot help but slow down access a little, and must introduce some more potential for interference, however little. I haven't noticed the access being slower, but it must be to some degree.

Also, if your present drive is say a 28ms 5.25" MFM type such as was considered good not long ago, you will see a quite dramatic speed improvement in the computer's operation if you replace it with one of the new, very compact, 12ms 3.5" IDE types with inbuilt hardware cacheing. I found I could dispense with a software cache altogether on my office machine when I got one of those! And that gave me an extra 2Mb RAM for programs to use.

But if you need to gain more storage space urgently, without pulling the machine apart, without having to backup & restore, without paying a technician and with almost no downtime, then a system such as DoubleDisk will do it very well.

```
ddinfo e:
DdInfo - DoubleDisk Information utility Ver. 2.6
Copyright (c) 1989-1992 by Vertisoft Systems, Inc.
Copyright (c) 1989-1992 by Mitan Software Int'l (1989) Ltd.
Drive E: (file C:\DUBLDISK.000) Maximum Capacity: 256M Volume is: DBLDSK
  22,000,000 Bytes Physical Extended-Disk size
     90,112 Bytes Reserved by DOS
     344,064 Bytes Reserved by DoubleDisk
  22,960,128 Bytes in 836 DOS files, compressed to 11,860,992 Bytes
  9,704,832 Bytes free on Extended-Disk
         48% Average compression ratio (1.9 : 1)
  18,786,302 Bytes Projected Free Space
E:\>
```

FIG 1: The display from the DoubleDisk utility DDINFO on my home system.

## Multimedia Beethoven

by Ash Nallawalla, Reviews Editor

In December we could not bring you a proper multimedia theme issue because some products didn't reach us in time. We are aiming for another later this year but here is a sample.

#### Requirements

A multimedia product such as the CD-ROM featured below requires a minimum of a 80286 processor; hard disk; 2 MB RAM; MS-DOS 3.1; Windows 3.0; VGA display; mouse or pointing device; CD-ROM drive and CD-ROM Extensions 2.2. If you want sound and animation then you need Windows 3.1 or Multimedia Extensions for 3.0; a sound card and speakers or headphones. For smooth animation you need a fast CD-ROM player that does a 'continuous read' such as the NEC CDR-74/84, Philips CM-205XRS or Toshiba TXM-3300. This is essential for MPC (Multimedia PC) compliance. Look for the best data transfer rate, not fastest access time. Most CD-ROM software does not come with extensive literature.

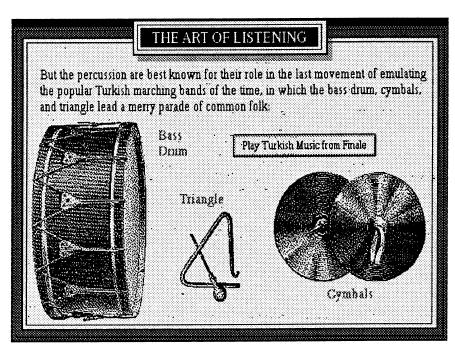
## Multimedia Beethoven: The Ninth Symphony

Multimedia Beethoven: The Ninth Symphony is a good example of multimedia although there isn't any animation worth mentioning. Even if you are a casual listener of classical music you should consider buying it. It is described as "an illustrated, interactive exploration of Beethoven's Ninth Symphony." [This CD-ROM] "examines not only the music in the symphony, but also the historical setting in which it was created, and the concepts behind the music." It is a fine example of a ToolBook application.

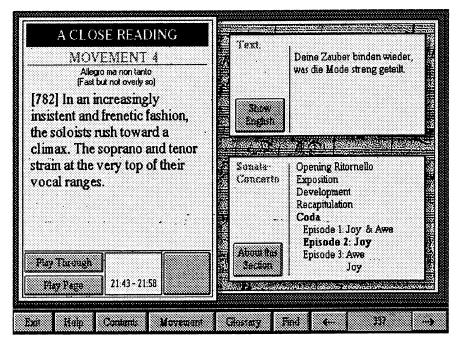
There are five major segments:

A Pocket Guide lists major sections in each of the four movements of the symphony. You click on a section name to play the music.

Beethoven's World describes the times in which Beethoven lived, and the influences that shaped his music.



This interactive animation explores not only the music, but also its historic setting



As you play the music, the text on the screen describes the section you are hearing

The Art of Listening explains basic musical concepts, using examples from the Ninth Symphony.

A Close Reading plays the entire symphony, allowing one to stop and start when you wish. As the music plays, the

text on the screen describes the section that you can hear. The vocal portions in the fourth movement are accompanied by the actual words in German or in English.

The Ninth Game is a question-and-answer game about Beethoven and the Ninth

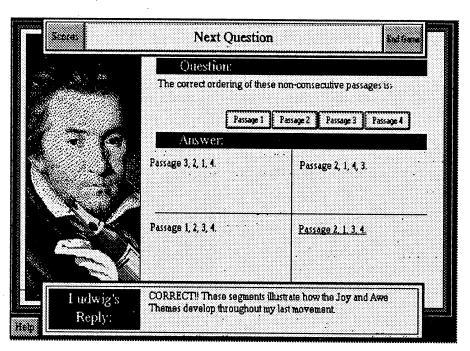
Symphony.

A student of music will get immense pleasure from this work, which features the contributions of The Viennese Philharmonic, The Viennese State Opera, Dame Joan Sutherland, Marilyn Horne, James King, and Martti Talvela.

The music was recorded at Sofiensaal, Vienna, in 1965. The CD-ROM implementation is attributed to Roger Winter and the Voyager Company. It enables one to learn this masterpiece at one's own pace and in any sequence.

My Disney Sound Source could not play the music but the CD-ROM player's headphone output rendered it quite well. That is one of the hazards of not investing in an MPC-compliant sound board. I hope to review such a sound board shortly. The software also left 4 MB worth of files on my hard disk.

I heartily recommend Multimedia Beethoven: The Ninth Symphony to you.



The Ninth Game is a question and answer game about Beethoven and the Ninth

## Norton AntiVirus 2.1—First Looks

by Ash Nallawalla

Significant Bits has featured a few antivirals in the past and Norton AntiVirus (NAV) from Symantec is one more. They all do the same basic task—to seek and destroy viruses. NAV is now at version 2.1. I practise 'safe hex,' namely, to scan all diskettes from other people, including

commercial 'shrink wrapped' diskettes. I have not yet been struck by a virus. I know that our members have been less lucky, for we have received magazine submissions on infected disks. Yes, some resellers apparently reseal returned stock, so commercial software should also be checked.

NAV 2.1 comes with both Windows and DOS executables. It works faster than the previous version (I am relieved to note) and recognises over 1400 viruses.

#### **Effectiveness**

It is difficult to verify all the claims of any antiviral program because few of us are likely to be struck by more than a couple of viruses. They can all detect the ones you are likely to find, but then you may be the first to discover a new variety! Someone has to do it. I went looking for the features that make NAV different to the other programs I have seen.

#### **Networks**

Networks are a blessing to both users and administrators (most of the time). Upgrading each user's antiviral software is easy with NAV. When a user logs on, new virus definitions can be installed on that user's disk automatically. Virus attacks are advertised on the network if so desired. NAV also scans the network server's drives.

A virus that can be difficult to detect is the 'Mutation Engine' set because each infection causes the virus code to change slightly. NAV apparently detected 100 percent of the 900,000 mutations created in its own lab.

#### Availability

NAV retails for \$219 and upgrades cost \$30. Check with our advertisers for availability. Symantec offers a quarterly update service for \$120 per annum or you can download the same files from CompuServe or from the Symantec BBS (02) 879-6322.

## FOR SALE

Norton's Desktop for Windows on 5-1/4" disks, c/w Manuals \$40

XTREE for Windows on 3-1/2" disks, c/w Manuals \$20

Telephone: Ralph DeVries (07) 300 3477

## Learning QBASIC - Part 9

Dan Bridges

Learning programing IS empowerment: as you learn more, you can do more, and the world of the PC appears less daunting.

#### **DOS Interrupts**

About six years ago I remember eavesdropping on a conversation between two persons while I was browsing in an electronic components store. One of them mentioned a CPU "setting flags" and the use of various interrupts. I didn't have a clue what they were on about. In latter times I read many articles where the terms "DOS Interrupt" and "DOS Interrupt xx, Function yy" occurred. Usually, as soon as these terms appeared, comprehension of the rest of the article's contents was "Out to Lunch" - I was intimidated by the unknown and could not develop any further understanding on such foundations. My problem, for so long, was that no one took the time to explain these things to me and they didn't seem to make much sense when I tried to learn about them by reading. Eventually I picked the knowledge up but it wasn't a very effective method of learning.

This series was initiated because MS-DOS v5 came with QBASIC: much better than it's predecessor GW-BASIC, but without any documentation. It is clear that QBASIC is an ideal medium for introducing programming. It has context-sensitive help, reasonable debugging facilities, and allowed the use of some modular programming techniques. Although crippled in comparison to its full-fledged sibling QuickBASIC, QBASIC can still provide plenty of insights (on the cheap) into what programming is about.

A prime directive of this series has been "learning through doing". That's why I direct your attention to running examples in the Immediate Window so often. Unless you understand a concept (and, in my experience, that means DOING it rather than just READING it) you can not use it as a stepping-stone to the next level of comprehension.

#### Getting to grips with your PC

As the user progresses through her/his understanding of PCs it usually follows that the level of interaction is something like:

- 1. Running standard programs.
- 2. Some understanding of the DOS commands so that operations could be performed that the standard programs are incapable of doing. Usually some knowledge is necessary at this level anyway ie. allowable filenames, directory structure, etc.

## Learning programming usually involves progressively conquering ...

- Standard programs
- DOS commands
- Batch files
- Highlevel languages
- BIOS calls
- Assembly language
- 3. Then a desire to do something easier or with more user-power leads to using batch files. These are a limited form of programming provided by the command processor COMMAND.COM (thankfully they're there, unlike some other operating systems).
- 4. The next two methods of transcending the limitations of batch files are to use batch file enhancement programs (such as BATCHMAN, RONSET, Norton's BE) orto dump COMMAND. COM completely in favour of the delightful 4DOS (a replacement command processor that makes the DOS command prompt a much more interesting and friendly place).

- 5. If the appetite for more user power has still not been satiated, the next logical progression is to investigate a full-fledged programming language. This is what we've been doing with the "near" full-fledged QBASIC (although sometimes the magical word "Compiling" has crept into the conversation).
- 6. When you hit upon a limitation of a programming language command set, the next step is to poke your dainty size 12 into the shimmering waters of DOS and BIOS functions calls. This is what DOS and the ROM BIOS use to accomplish their tasks clearing or scrolling the screen, print-screening it, etc.
- 7. The last step would place your clodhopper into the primordial soup of Assembly Language. Beneath this level of abstraction lies only the native CPU level of Machine Code and ultimately the ON/OFF level of Binary Code. These last two are definitely not suitable fare for human comprehension (although in the bad old days of computing they were used by those who had nothing better).

In the scheme of things, small programs may be written in a high-level language, in assembly language or in a mixture of both.

As the program gets bigger it's more likely to have a higher proportion of high-level language and less or no assembly language since asm takes a lot more time/effort and is not easily upgraded in later versions.

#### Ultimately it ends up as Machine Code

No matter what the language, it ultimately gets translated to machine code. We think of this in its human-comprehensible form: assembly language. Writing a program correctly in assembler will produce the smallest and fastest program. However life is too short to write much in this format. (A seemingly simple BASIC PRINT command involves many, many lines of assembler.)

Moving a little higher up the language abstraction ladder than QBASIC we encounter more advanced forms such as VisualBASIC for DOS which enables the programmer to create an attractive user-interface in only a few lines which would otherwise require a hundred or more lines of QBASIC/QuickBASIC code. The tradeoff is code bloat, slower operation and some loss in flexibility. In these days of the 486, 120M or larger HDs, and various methods of using more code than will fit into a standard 640K low memory these may be acceptable tradeoffs.

Returning to QBASIC, this month we'll look at using DOS and BIOS interrupts to enhance QBASIC. Although crippled in comparison to QuickBASIC when it comes to using interrupts, it is possible to work around this.

By understanding how to use DOS and BIOS interrupts you will have surmounted another conceptual barrier in your computing career.

#### Interrupts

How do you attract the CPU's attention? Say you press a key to stop some process. Does the CPU have to keep checking to see if a key has been pressed yet? To do so in the blindingly fast world of the PC would waste a lost of CPU resources checking for something that occurs, in CPU terms, once in a blue moon.

Instead the CPU responds to six different kinds of "interrupting" when they occur (how soon and in what order depends on their importance):

#### 1. Microprocessor interrupts.

Divide by 0 (INT 00H), Single Step (INT 01H), Breakpoint (INT 03H), Overflow (INT 04H) come from the CPU itself while the Non-Maskable Interrupt (INT 02) comes to the CPU directly from other hardware.

## 2. Hardware interrupts via the Programmable Interrupt Controller (PIC).

Interrupt Request Lines (IRQ) send signals to the PIC which prioritises these requests and passes these on to the CPU. The timer tick (IRQ0) is at the top of the pecking order of the PIC-intercepted interrupts (in the case of IRQ0 it is sent to the CPU as INT08H). There are 16 IRQs (IRQ 0 - 15) on an AT or later machine.

#### 3. BIOS interrupts.

Part of the programs stored in ROM in the ROM BIOS chips. (INT 10H - 1FH and 40H - 5FH).

#### 4. DOS interrupts.

Available once DOS is loaded. (INT 20H - 3FH). Since DOS is a Disk Operating System, a number of the DOS interrupt functions cover disk Input/Output (I/O).

#### 5. BASIC interrupts.

Available when BASIC is in use. (INT 80H - F0H).

#### 6. General-purpose interrupts.

Designated by any other program. (INT 60H - 66H).

In all, there are 256 interrupts (INT 00H - FFH) although an interrupt can be further divided into various functions. For example, INT 21H is for General DOS Services. Within it, Function 3BH can be used to change the current directory, Function 30H can get the DOS version number, Function 41H can delete a file, etc.

```
'VECTOR.BAS - Diplays the Interrupt Vector Table.
001
002
     DEFINT A-Z
     DECLARE SUB DisplayIntSegmentOffset (x%)
003
    DECLARE SUB Pause ()
004
005 DEF SEG = 0
                     'The first segment in low memory.
006 CLS
007
     ' x = the byte offset in the vector table.
800
    FOR x = 0 TO 1020 STEP 4
009
     CALL DisplayIntSegmentOffset(x)
010
     IF x MOD 80 = 0 AND x <> 0 THEN CALL Pause
011
     ' Do not pause if this is the very first interrupt,
012
     ' only after every 20 entries (80 bytes).
013
    NEXT x
014 DEF SEG
                ' Change segment back to original value.
100
     SUB DisplayIntSegmentOffset (x)
     IntNum$ = HEX$(x \setminus 4)
101
     PRINT "INT "; STRING$(2 - LEN(IntNum$), "0") +
102
                                          IntNum$,
103
     SegmentWord$ = HEX$(PEEK(x + 3) * 256£ +
                                          PEEK(x + 2))
     PRINT STRING$(4 - LEN(SegmentWord$), "0");
                                          SegmentWord$;
105
    PRINT ":";
106
     OffsetWord$ = HEX$(PEEK(x + 1) * 256& + PEEK(x))
     PRINT STRING$(4 - LEN(OffsetWord$), "0");
                                          OffsetWord$
108
    END SUB
200
     SUB Pause
201
    PRINT
202
    PRINT "Press any key to contine..."
203
204
     LOOP UNTIL LEN (INKEY$)
                              'Loop until LEN (INKEY$)
205
     'is true ie. when a key is pressed.
206
    CLS
207
    END SUB
```

Fig. 1 A simple program to inspect the 1K interrupt vector table at 0000:0000.

#### Interrupt handlers

The 256 interrupts can be used to invoke routines loaded into memory by a program, routines copied into memory when DOS is loaded, or routines in the ROM BIOS chip on the motherboard. These routines are called Interrupt Handlers. It is possible to replace the original interrupt handler with another. For example INT 24 invokes the Critical Error Handler. If you type

#### DIR A:

with no floppy disk in the drive you'll see

Not ready reading drive A:
Abort, Retry, Fail?

the message which comes from the DOS default INT 24H handler. However, if inside QBASIC in the Immediate Window you type the equivalent BASIC command

FILES "A:" you'll instead see a

Disk not ready. OK, Help

message because QBASIC has substituted its own INT 24H routine.

The current interrupt handler's memory location is indicated by the Interrupt Vector Table, containing 256 4-byte memory addresses (SegmentWord:OffsetWord) located at the very start of low memory (0000:0000). The first 4 bytes in the table are the address of the INT 00H handler, the next 4 bytes are the address of INT 01H's handler, and so on.

To see this list of addresses create the VECTOR.BAS program shown in Figure 1. If run from QBASIC then INT 00H (Divide by Zero), INT 04H (Overflow) and INT 24 (Critical Error) all point to QBASIC's memory location, while the rest of the table's entries point to their original locations (what is normal for your current software/hardware setup).

For completeness: besides pointing to routines that can be executed, some of the interrupt vectors merely point to the location of tables of data. So the address in the INT 1EH vector position points to a table containing the current FD hardware parameters.

So the CPU is effectively always being interrupted (for example, 18.2 times a second with timer ticks) with various pieces of hardware and software vying for its immediate attention.

#### Data Registers

AX (accumulator)

BX (base)

CX (count)

DX (data)

These registers are 1 word (2 bytes) wide but can be split into 2 single-byte registers, if required. When this is done with the AX register (for example) the two registers are known as AH and AL for the respective high and low bytes of the original AX word.

#### Segment Address Registers

CS (code seq)

OS (data seg)

SS (stack seg)

ES (extra seg)

These are 1 word wide and can not be subdivided further because a 0-64K number (16 bits) is required to express a segment address.

#### Offset Address Registers

IP (instruction pointer)

SP (stack pointer)

BP (base pointer)

SI (source index)
DI (destination index)

Again, these are 1 word wide to express the 0-64K offset position into a segment.

#### Flags Register

Status Flags	DEBUG	Terms:Set /	Clear
OF (overflow flag) - bit 11		ov	NV
SF (sign flag) - bit 7		ng	PL
ZF (zero flag) - bit 6		ZR	NZ
AF (aux carry flag) - bit 4		AC	NA
PF (parity flag) - bit 2		PE	PO
CF (carry flag) - bit 0		CY	NC
Control Flags			
DF (direction flag) - bit 10		DN	ŪΡ
IF (interrupt flag) - bit 9		EI	DI
TF (trap flag) - bit 8			

This 16-bit register is considered at bit-level with 9 of the 16 bits having significance on the 8086 chip. They indicate whether a condition has occured, is set/unset, is true/false.

Fig.2 The 8086 Registers and Flags.

#### **CPU Registers**

Using interrupts involves setting various values in the CPU registers (byte and word-width special memory sites built into the CPU chip to accept and return data), invoking an interrupt, and then if necessary, checking registers to see what values they now contain.

To use them it is not necessary to have a great insight into the CPU's workings. It is sufficient, at this stage, to just know their names and width. See Figure 2.

Two register names can be presented as a combination to express a Segment:Offset address. For example the address of the current instruction is CS:IP (Code Seg:Instruction Pointer Offset) and the address of data can be DS:DX (Data Seg:Data Scratch Register)

#### TYPE Data Structures

As a perquisite to discussing using interrupts we need to see how it possible to have a composite data type that holds either mixed data types (say Integers and Long Integers) or just related data of the same type (say a collection of related but separate integers).

The first example will be a very simple parts listing data type. See Figure 3.

The first thing to note is that variable-length strings are not allowed. Instead a fixed-length string of 30 chars width is used. If the string copied to it is less than 30 chars it will have trailing spaces. That's why RTRIM\$ is used later to remove these (try removing RTRIM\$ from line 17).

The DIM keyword in line 9 confuses some persons. While it is usually used to define an array it can also be used to define any integer (eg. "DIM Test AS STRING" and then use "Test" rather than "Test\$"). Here it defines Part1 as a composite variable of the PartRecordType structure.

Notice how the dot is used to separate the composite variable name from one of its internal components.

Now modify the code to that of Figure 4 which shows how a TYPE structure is used in an array. Note how a component, in an array with a TYPE variable, is accessed.

Before we tackle the QBASIC version, let's see how an interrupt would be invoked in QuickBASIC. (It's more difficult in QBASIC because of missing goodies).

```
01
   DEFINT A-Z
02
    'Step 1 - create a new data type.
03
  TYPE PartRecordType
    PartName AS STRING * 30
04
05
     Quantity AS INTEGER
06
    Price AS SINGLE
07 END TYPE
80
    'Step 2 - use it to define your variable's type.
09
    DIM Part1 AS PartRecordType
10
   'Step 3 - put something in it.
    Part1.PartName = "The Great Aussie Thingo"
11
   Part1.Quantity = 300
12
13 Part1.Price = 12.5
14
   'Step 4 - get something from it.
15
   CLS
16 PRINT "There are"; Part1.Quantity; "of ";
17 PRINT RTRIM$ (Part1.PartName); " priced at ";
18 PRINT USING "$##.## each"; Part1.Price;
```

Fig.3 An example of a mixed data-type structure (line numbers used only for reference purposes).

```
01 DEFINT A-Z
02
    'Step 1 - create a new data type.
03
   TYPE PartRecordType
     PartName AS STRING * 1
04
     Quantity AS INTEGER
05
     Price AS SINGLE
06
07 END TYPE
    'Step 2 - use it to define your variable's type.
08
   DIM Part1 (1 TO 3) AS PartRecordType
09
10
    'Step 3 - put something in it.
   FOR x = 1 TO 3
11
12
     Part1(x).PartName = CHR$(x + 64)
                          `The lettter "A" is 65.
13
     Part1(x).Quantity = INT((RND * 100))
                          'Integers 0-100.
14
     Part1(x).Price = RND * 100
                          'Single precision
                                               0-100.
15
   NEXT x
    'Step 4 - get something from it.
16
17
    CLS
18
    FOR x = 1 TO 3
     PRINT "There are"; Part1(x).Quantity; "of ";
19
20
     PRINT RTRIM$ (Part1(x).PartName); " priced at ";
21
     PRINT USING "$##.## each"; Part1(x).Price
22 NEXT x
```

Fig.4 An example of an array containing a mixed data-type structure.

```
0001 DEFINT A-Z
                     'CURDIR.BAS - QuickBASIC version.
0002 TYPE RegTypeX
          AS INTEGER
0003 AX
0004 BX
          AS INTEGER
0005 CX
          AS INTEGER
0006 DX
          AS INTEGER
0007 BP
          AS INTEGER
0008 SI
          AS INTEGER
0009 DI
         AS INTEGER
0010 Flags AS INTEGER
         AS INTEGER
0011 DS
          AS INTEGER
0012 ES
0013 END TYPE
    DECLARE SUB INTERRUPTX
0014
        (IntNum, InReq AS RegTypeX, OutReg AS RegTypeX)
0015 DECLARE FUNCTION CurrentDir$ (DriveNumber)
                                                            will suffice:
0016 CLS
0017 PRINT CurrentDir$(0)
0100 FUNCTION CurrentDir$ (DriveNumber)
0101
     'Returns current dir. 'Drive number is 0 for
          default (current drive), 1 for A:, etc.
     'Example: if current dir on D: is "\QB45\BAS"
          then "CurrentDir$(4)" returns "\QB45\BAS".
                               'Create Regs as a user-
0105 DIM Regs AS RegTypeX
                                    defined data type.
0106 Temp$ = SPACE$(64) 'An empty 64-byte buffer that
      will eventually contain the required dir name.
                          'Int 21H, func 47H gets the
0108 Regs.AX = &H4700
                                         current dir
0109 Regs.DX = DriveNumber
                    'The segment Temp$ resides in is
0110
    Regs.DS = -1
                                              DGROUP.
0111 Regs.SI = SADD (Temp$)
                             'The offset in DGROUP to
                                         this string.
0112 CALL INTERRUPTX (&H21, Regs, Regs)
                                         'Perform the
                                         interrupt.
                                                            a specific drive.
0113
      'Check the Flags register. If the Carry flag
          (bit 0) is set an error has occurred.
0115 IF Regs.Flags AND 1 THEN
0116
          CurrentDir$ = "Invalid Drive"
0117 ELSE
0118 'The string is an ASCIIZ string ie. ends with
          ASCII 0.
0119 'Note that no leading backslash is included.
0120
          CurrentDir$ =
          "\" + LEFT$ (Temp$, INSTR (Temp$, CHR$ (0)) - 1)
0121 END IF
0122 END FUNCTION
```

Fig.5 A QuickBASIC version demonstrating the CurrentDir\$ function.

#### The QuickBASIC Way

The CALL INTERRUPT and CALL INTERRUPTX keywords handle interrupt invocation. Their syntax is:

CALL INTERRUPT(X) (InterruptNum, SentToRegisters, ReturnedByRegisters)

The difference between the two commands is the registers used. CALL INTERRUPT can use AX, BX, CX, DX, BP, SI, DI and Flags. CALL INTERRUPTX, beside these, also adds DS and ES.

The two interrupt call commands are not part of the standard QuickBASIC IDE. To use them there, they must be made available by loading QB.QLB. Since this is the default quick library name the following will suffice:

#### QB FileName.Bas /L

Refer to Figure 5 for the Grand Unfurling.

Notice how the declare statement in line 14 is placed after the TYPEing of RegTypeX. Otherwise, InReg and OutReg would have invalid data types.

In most QuickBASIC programs you will not see the actual TYPEing of RegType. Instead this part will be included from another file with a metacommand to reduce clutter. So lines 2-14 would be replaced with something like

#### '\$INCLUDE: 'D:\QB45\INC\QB.BI'

This is not a remark but the correct syntax for a metacommand. QB.INI is an ASCII file containing RegType, RegTypeX and some other TYPEs and Declarations.

Line 17 prints out the current directory on the current drive. Use another number for a specific drive.

It is important to realise that due to the limited size of the CPU registers it would be impracticable to return a long directory name in them. Instead, this INT 21H function uses a 64 byte buffer that you have to create prior to invoking the interrupt. That's the reason for line 106.

Only certain of the registers are used. Books on programming indicate what each interrupt call requires and returns.

AH is always used in INT 21H calls to indicate which function to perform. In line 108, by loading AX with &H4700, AH ends up with 47H (the function to return the current directory) while AL is given 00H.

DL here is given the drive number. In line 109 with say the number 3 this would place 00H in DH and 03H (for C:) in DL.

DS:DI in this case is required to contain the Segment:Offset address of the 64-byte buffer. Notice how the CPU is not interested at all in the fact that in QuickBASIC the transfer buffer is known as the Temp\$ variable. Rather, the CPU wants an address where it will place the directory name supplied by the interrupt call.

As you should be aware, the maximum size of an offset in a segment is 64K. Many things in DOS are affected by this limitation. In QuickBASIC and QBASIC many variables and important internal data structures are stored in the current data segment (referred to as DGROUP). This 64K piece of memory real estate is a very precious commodity and a later article on memory usage will explore the subject in considerable depth.

All you need to understand, at this stage is that the "-1" in DS in line 110 tells the CPU to use the current data segment. The offset to the start of the Temp\$ string variable is determined by the SADD (String Address) command and is placed in DI in line 111. (String descriptors and dynamic string memory allocation/reallocation will be covered in a later article.)

If all goes well, Temp\$ ends up containing an ASCIIZ string (a string of ASCII characters whose end is indicated by the occurrence of a ASCII 0 character) without any leading backslash. Say the current directory was "TEST" on the drive under investigation. Temp\$ will start with the 4 characters "TEST", then comes ASCII 0 and finally there are 59 spaces following up the rear. We use INSTR to quickly work out the first occurrence of ASCII 0 and then extract whatever lies before it.

Say we enter a drive number of a non-existent drive such as 12. This function will set the CF (Carry Flag) bit in the Flags Register in this case. Also 0FH will be returned in AX which I've not bothered to use here since it only conveys the same info as the CF flag.

The segregation of the InRegs from the OutRegs, as is the MicroSoft way, is not normally needed - once you invoke an interrupt you're not usually interested in what you fed the register, just its current value. So I've used the same variable (Regs) for both. In the QBASIC version you will see that only one Regs is used.

```
0001 DEFINT A-Z
                     'CURDIR.BAS - QBASIC version.
0002 TYPE RegTypeX
0003 AX
          AS INTEGER
0004 BX
          AS INTEGER
0005 CX
          AS INTEGER
0006 DX
          AS INTEGER
0007 BP
          AS INTEGER
0008 SI
          AS INTEGER
0009 DI
          AS INTEGER
0010 Flags AS INTEGER
0011 DS
         AS INTEGER
0012 ES
          AS INTEGER
0013 END TYPE
0014 DECLARE SUB InterruptX (IntNum%, Regs AS RegTypeX)
0015 DECLARE FUNCTION LoadBin$ (BinFileName$)
0016 DECLARE FUNCTION CurrentDir$ (DriveNumber)
0017 CONST False = 0, True = NOT False
0018
     CLS
0019 PRINT CurrentDir$(0)
0100
      SUB InterruptX (IntNum, Regs AS RegTypeX) STATIC
0101
      ' Use CALL ABSOLUTE to run INTCODE.BIN to then run
          required interrupt. The Regs data type passes
          info both ways: Regs.AX usually indicates
          which interrupt sub-function to use when the
          interrupt is invoked, while other elements of
          Regs can indicate other parameters and
          preconditions. Regs is then used to return any
          data to the main program.
0107 'Loaded will be False the first time the
          InterruptX subprogram is invoked to load the
          routine. After loading, the position of
          &HCD21 (machine code for INT 21), in the fixed
          length string holding the routine in binary-
          image format, is determined.
0111 IF NOT Loaded THEN
0112 'Use a fixed-length string to fix its position in
          memory and so we don't mess up string pool
          before routine gets its pointers from caller.
0115 DIM IntCode AS STRING * 146
                                    'byte length of
                                         IntCode.Bin.
0116 IntCode = LoadBin("d:\qb45\bas\qbasic\IntCode.Bin")
0117 IntOffset = INSTR(IntCode, CHR$(&HCD) + CHR$(&H21))
0118 'IntOffset is where 21H is situated in the string.
          the position of the embedded INT 21H command
          is determined. This way you can overwrite 21H
          with another INT number, if so required.
          Note: INSTR's offset starts from 1 whereas
          POKE/PEEK is 0-based. So INSTR actually finds
          the start of "CD21"
          rather than "21" (the next byte). However,
          when this is used with the coming POKE, it
          writes at the "21" position in memory.
0126 PosOfIntNumInString = VARPTR(IntCode) + IntOffset
0127 Loaded = True
0128 END IF
0129 SELECT CASE IntNum
                          ' INT 25/26 are direct disk
                               Read/Write
0130 CASE &H25, &H26, IS > 255 ' ignore these interrupts
0131 CASE ELSE
0132 POKE PosOfIntNumInString, IntNum
                                         ' Change INT
                                              numeral.
0133 ' Now we pass control to a subroutine loaded into
          memory (IntCode$), passing it arguments in the
          Regs variable.
0135 CALL Absolute (Regs, VARPTR (IntCode$))
0136 END SELECT
0137 END SUB
```

```
0200
      FUNCTION LoadBin$ (BinFileName$)
0201
       ' Loads a binary image file into contiguous memory
           as a string.
0202 STATIC FileNum, Buffer$
0203 'FREEFILE gets the next free file number to be used
           in an OPEN operation. This way we can have
           multiple BINs (for different external
           subroutines) loaded in a session and not have to
           worry about loading hassles.
0207 FileNum = FREEFILE
0208 OPEN BinFileName$ FOR BINARY AS FileNum
0209 IF LOF(FileNum) = 0 THEN 'Action if file length is
                                                0 bytes.
0210 CLOSE FileNum
0211 KILL BinFileName$
                           ' If file is empty, delete it.
0212 CLS
0213 PRINT "Can't find "; BinFileName$; " - aborting."
0214 END
0215 END IF
0216 'GET will read from the file enough data to satisfy
           the variable it is feeding. By creating Buffer$
           filled with the same number of spaces as there
           are bytes in the .BIN, we load it cleanly in one
           GET operation.
0220 Buffer$ = SPACE$(LOF(FileNum))
0221 GET #FileNum, , Buffer$
0222 CLOSE #FileNum
0223 LoadBin$ = Buffer$
0224 END FUNCTION
0300 FUNCTION CurrentDir$ (DriveNumber)
0301
      ' Returns current dir. Drive number is 0 for
           default (current drive), 1 for A:, etc. Example:
           if current dir on D: is "\QB45\BAS" then
           "CurrentDir$(4)" returns "\QB45\BAS".
0304 DIM Regs AS RegTypeX
0305 \text{ Temp}\$ = SPACE\$(64)
                         ' An empty 64-byte buffer that
          will eventually contain the required dir name.
0307 \text{ Regs.AX} = & \text{H4700}
                           ' Int 21H, func 47H gets the
                                          current dir.
0308 Regs.DX = DriveNumber
0309 \text{ Regs.DS} = -1
                     ' The segment Temp$ resides in is
                                                     DGROUP.
                            ' The offset in DGROUP to this
0310 Regs.SI = SADD(Temp$)
                                                     string.
0311 CALL InterruptX(&H21, Regs)
0312 'Check the Flags register. If the Carry flag (bit 0)
          is set an error has occurred.
0314 IF Regs.Flags AND 1 THEN
0315 CurrentDir$ = "Invalid Drive"
0317 'The string is an ASCIIZ string; it ends with an
     ASCII 0. Note that no leading backslash is included.
0319 CurrentDir$ =
           "\" + LEFT$ (Temp$, .INSTR(Temp$, CHR$(0)) - 1)
0320 END IF
0321 END FUNCTION
```

Fig.6 An example of calling interrupts from QBASIC.

Conversion between one or two Regs parameters is very straightforward.

#### The QBASIC Way.

QBASIC does not have CALL INTER-RUPT or CALL INTERRUPTX, but it does have CALL ABSOLUTE (as does QuickBASIC in QB.LIB). This is a means of running a program at an absolute memory address. Thanks to the work of Brent Ashley it is possible for QBASIC users to load the binary image of an assembly language program that will invoke interrupts, into memory off disk, and then run that program.

There is the slight overhead of initially loading the binary-image file. (A binary image of a simple program has the same structure as a COM file, although it may not have been designed to run by itself (as in this case). However once this is loaded it is possible to keep reusing it without reloading it from the disk again.

This enables you to learn about DOS and BIOS interrupt programming on the cheap. Other things besides the interrupt invoking routine can be loaded. In a later article you will see an assembly language image file used to speed copying from one memory location to another (eg. for the swift restoration of the original screen after a pop-up window is exited).

Figure 6 presents another Grand Unfurling. As you can see the CurrentDir\$ function is remarkably similar to the same implementation in QuickBASIC except that only one Regs parameter is used. (If users of QuickBASIC want to experiment with INTCODE.BIN instead of using the in-built interrupt calling then be sure to rename all instances of "InterruptX" to something else.)

I've commented the LoadBin function and InterruptX subprogram fairly heavily so I'll only discuss one further point. The action sequence is:

InterruptX is called. It checks whether the Loaded variable is true (line 111). If not, line 116 invokes the LoadBin function to load INTCODE.BIN into memory. The IntCode fixed-length string variable that it is loaded into is one of the static variables in the InterruptX subprogram. Being static means that the contents of IntCode is not lost (once it's loaded) between calls to the InterruptX subprogram. Being a

fixed-length string means it will maintain the same offset position in DGROUP, whereas normal strings are dynamic (as regards their location within DGROUP) and will be rearranged automatically by QBASIC in DGROUP from time to time.

Figure 7 contains a DEBUG script for generating INTCODE.BIN. Create this in a text editor, ensuring that you press the Enter key after the "Q" at the end of the script so that DEBUG will Quit when it reaches the last character. To produce INTCODE, assuming you've called the script file INTCODE.SCR, use:

#### DEBUG < INTCODE.SCR

Normally DEBUG takes its input from STDIN (Standard Input ie. the keyboard) but the redirection sends it the characters from a file instead.

There is a commented assembly language listing of *INTCODE BIN* (along with an article on adding asm routines to QBASIC) in *QBNWS301.LZH* on our BBS, so discussion here will be limited. However, for curiosity's sake, you can easily unassemble it in DEBUG. See Figure 8.

You should clearly see "INT 21" at offset 14CH. The 4 characters: "CD21" in the machine language column shows that 2 bytes are required for this (since 1 byte can represent 2^8 = 256 values which requires 2 hexadecimal characters (16^2 = 256)). As mentioned before, the "21" can be overwritten, by poking another number at this location, to invoke an alternative interrupt.

It should be apparent that assembly language consists of many small commands. It is not that complex, but it is tedious ie. many commands are required to perform an action. Also noteworthy is the passing of parameters to and returning parameters from the routine to QBASIC. This requires a lot of PUSHing and POPing on the Stack. The simplified directives that appeared in MASM (Microsoft Assembler) v5.1 automate these entry/exit sequences somewhat.

You may be wondering why you only see gibberish if you issue, at the DOS prompt:

#### TYPE INTCODE.BIN

The answer is that you are seeing an ASCII code (0-255) representation of machine code. In ASCII, the hex characters "CD21" will appear as "=!". (Note

```
N INTCODE.BIN

E 0100 55 8B EC 83 EC 08 56 57 1E 55 8B 5E 06 8B 47 10

E 0110 3D FF FF 75 04 1E 8F 47 10 8B 47 12 3D FF FF 75

E 0120 04 1E 8F 47 12 8B 47 08 89 46 F8 8B 07 8B 4F 04

E 0130 8B 57 06 8B 77 0A 8B 7F 0C FF 77 12 07 FF 77 02

E 0140 1E 8F 46 FA FF 77 10 1F 8B 6E F8 5B CD 21 55 8B

E 0150 EC 8B 6E 02 89 5E FC 8B 5E 06 1E 8F 46 FE FF 76

E 0160 FA 1F 89 07 8B 46 FC 89 47 02 89 4F 04 89 57 06

E 0170 58 89 47 08 89 77 0A 89 7F 0C 9C 8F 47 0E 06 8F

E 0180 47 12 8B 46 FE 89 47 10 5A 1F 5F 5E 8B E5 5D CA

E 0190 02 00

RCX

0092

W

Q
```

Fig.7 A debug script of a binary image of Brent Ashley's interrupt routine for QBASIC.

```
C:\QBASIC>DEBUG INTCODE.BIN
-RCX ; Display the CX register. This will contain
    ; the size of the loaded file.
CX 0092
          ; DEBUG tells us that the length is 92H which
    ; is 146 decimal - the size of INTCODE.BIN.
     ;We don't want to alter the CX register so
     ;press Enter at the ":" prompt
-U100 L 92 ;Unassemble from offset 100H (the standard
     ;DEBUG starting point to miss the 100H
     ; (256 decimal) Program Segment Prefix (PSP)
     ; that DOS creates when it loads a file),
     ; for a length of 92H bytes.
     ; This disassembly will scroll off the screen
     ; so press Ctrl-P (echo screen to printer)
     ; before pressing Enter to transmit this command.
    ;Scrolling display here. Press Ctrl-P again
     ; when it stops to end printer echoing.
     ; Quit DEBUG.
```

Fig.8 A DEBUG session to unassemble INTCODE.BIN

Fig.9 An Alteration to CurrentDir\$ in Fig.6 to use drive letters.

that the "=" is the high-order graphics character used in double-line drawing, not the equals symbol.) To check this out, in the Immediate Window issue:

CLS: ? CHR\$(&HCD); CHR\$(&H21)

Now look for that sequence when you

TYPE the file to the screen.

If you want to use drive letters rather than numbers add the routine in Figure 9 to the program in Figure 6 before line 304.

Note that this will work with both "A" and "A:" since ASC returns the ASCII value of only the first character in a string.

#### The DEBUG Way

To ram home the concept that interrupts are available for all to use (as well as showing how handy it is to know how to use DEBUG) we'll now return the current directory using just DEBUG. This should give you a better insight into asm.

Figure 10 shows a DEBUG session to get the current directory for D:. Here we preload the registers, using DEBUG's register inspection/alteration facilities, and then perform the interrupt.

```
D:\QB45\BAS\JAN> DEBUG
-F100 L80 0
               ; Fill memory, starting from offset 100, for a
               ;length of 80H (128 bytes), with the 00H
                                                              When DEBUG starts it sets AX, BX,
               ; character.
                                                              CX, DX, BP and DI to 0000H, sets DS,
-RAX
               ; What's in the AX register?
                                                              ES, ES and CS (all the segment address
AX 0000
                                                              registers) to the "current" segment, sets
:4700
               ; Put 4700H in AX so AH contains 47H
                                                              the IP (the next instruction to run) to
                                                              0100H and SP (the stack pointer) to
-RDX
               ; What's in DX?
                                                              FFEEH (according to PC Mag's DOS
DX 0000
                                                              Power Tools, 1st Edition, p352, this is
               ;"4" is for D drive. Alter the recipe to suit.
: 4
                                                              FFFEH, but not on my system).
-RSI
               :What's in SI?
                                                              Note that executing "G=100" is a one-
SI 0000
                                                              shot affair. Running it again without
:110
               ; Where the result (the directory name) will
                                                              reloading it into memory will probably
               ; be dumped.
                                                              lock up the system.
               ; Time to invoke DEBUG's mini assembler.
                                                              Figure 10 goes a little further and fills the
0936:0100 INT21 ; DOS Services, please.
                                                              registers using asm. Note the way that
0936:0102
               ; Press Enter here to terminate assembling.
                                                              the operands are read from right to left.
               ; The routine itself is only 2 bytes long!
                                                              So in "MOV AH,47" the opcode MOV
                                                              moves the operand 47H to the destina-
               ; Check all registers and flags, just in case.
-P
                                                              tion AH.
AX=4700
        BX=0000 CX=0000 DX=0004 SP=FFEE BP=0000 SI=0110
DI=0000
        DS=0936 ES=0936 SS=0936 CS=0936 IP=0100
                                                              DEBUG also has the ability to single-
                                   NV UP EI PL NZ NA PO NC
                                                              step (analogous to QBASIC's F8) and to
0936:0100 CD21 INT
                                                              proceed rapidly through routines
                                                              (QBASIC'S F10). See a good book on
-G=100 102
               ; Go to 100H and execute the routine there.
                                                              using DEBUG such as PC Mag's DOS
               ;When you reach 102H, treat this as a
                                                              Powertools for more details.
               ; breakpoint and stop, displaying the
               ; registers, flags, etc.
AX=0100 BX=0000 CX=0000 DX=0004 SP=FFEE BP=0000
                                                    SI=0110
DI=0000 DS=0936 ES=0936 SS=0936
                                  CS=0936 IP=0102
                                   NV UP EI PL NZ NA PO NC
0936:0102 0000 ADD
                    [BX+SI], ALDS: 0110=51
-D100
               ; Display this part of memory.
0936:0100 CD 21 00 00 00 00 00-00 00 00 00 00 00 00
                                                            .!..............
0936:0110 51 42 34 35 5C 42 41 53-5C 4A 41 4E 00 00 00 00
                                                            QB45\BAS\JAN....
. . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . .
;Quit
```

Fig. 10 A DEBUG session to determine the current directory on a drive.

```
DEBUG
                ; This time use FFH to clearly see the ASCIIZ string terminator.
-F100 L80 FF
                ;Start assembling.
0936:0100 MOV AH, 47 ; With DEBUG we can address AH & AL instead of just AX.
0936:0102 MOV DL,0 ;"0" will use the current drive.
0936:0104 MOV SI,110; Directory string dump area starts at offset 110H.
0936:0107 INT 21 ; Perform the interrupt.
                ;Return from this routine.
0936:0109 RET
                ; Press <Enter> to stop assembling.
0936:010A
-U100 109
                ;Unassemble to check, stopping at 109H since the
0936:0100 B447 MOV
                AH, 47
                            ; next command will start at
0936:0102 B200 MOV
                DL,00
                            ;010AH, so the last command
                MOV SI,0110
0936:0104 BE1001
                            ; must finish the byte before.
0936:0107 CD21 INT
                21
                             ;Program bloat! The routine's now 10 bytes.
0936:0109 C3
            RET
                             ; Execute the routine.
-G=100
                            ; Message from DEBUG
Program terminated normally
-D100; Note the 00H terminating the string.
0936:0100 B4 47 B2 00 BE 10 01 CD-21 C3 FF FF FF FF FF FF
                                                 .G. . . . . ! . . . . . .
0936:0110 51 42 34 35 5C 42 41 53-5C 4A 41 4E 00 FF FF FF
                                                 QB45\BAS\JAN....
. . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . .
; Quit
-Q
```

Fig.11 A DEBUG session that assembles a routine to determine the current directory.

#### **BIOS Interrupts**

We will use the BIOS video display services interrupt, INT 10H, in the next example. Figure 12 shows a summary of the INT 10H services we'll be using.

#### Scrolling a Window

Figure 13 contains SCROLL.BAS. This starts by creating a 80 x 20 backdrop of "A" character and then requesting a keypress to continue.

A scrolling window is positioned from row 3, column 10 to row 18, column 70. The contents of the window scroll up one line (in a similar manner that a directory listing starts scrolling up when it reaches the bottom of the screen). The empty bottom line is then filled very quickly with a BIOS coloured string display function. The strings are full-width and consist of a 41-character set of numbers that vary from 0-9 while line colour attributes vary from Light Cyan on Brown (&H6B) to Red on White (&H74).

```
Scroll Window
               AH = 06H (up) or 07H (down)
 Up/Down
               AL = lines to scroll.
                BH = fill attribute
                CH = top row
                CL = left column
                DH = bottom row
                DL = right column
               AH = 13H
Write String
Don't move
               AL = 00H
 cursor
               BH = display page (normally use 0)
                BL = attribute
                CX = string length
                DH = starting row position
                DL = starting column position
            ES:BP = Seg:Offset address of start
                     of string.
```

Fig.12 BIOS INT 10H services used in SCROLL.BAS. These are the required register settings prior to performing the interrupt. No values are returned.

```
0001
     DEFINT A-Z
     ' INT10.BAS - Uses BIOS INT 10 to scroll/clear a
      window and to quickly write to an area of the screen.
0003 TYPE RegTypeX
0004 AX AS INTEGER
0005 BX AS INTEGER
0006 CX AS INTEGER
0007 DX AS INTEGER
0008 BP AS INTEGER
0009 SI AS INTEGER
0010 DI AS INTEGER
0011 Flags AS INTEGER
0012 DS AS INTEGER
0013 ES AS INTEGER
0014 END TYPE
0015 DECLARE SUB InterruptX (IntNum, Regs AS RegTypeX)
0016 DECLARE FUNCTION LoadBin$ (BinFileName$)
0017
     DECLARE SUB Scroll
     (TopRow, LeftCol, BottomRow, RightCol, Lines, Attrib)
0018 DECLARE SUB BiosStringPrint
                                 (Row, Col, Strin$, Attrib)
     CONST False = 0, True = NOT False
0019
0020
     CLS
      ' Fill the screen with "A"s.
0021
0022 FOR x = 1 TO 20
          PRINT STRING$ (80, "A")
0023
0024 NEXT x
0025
     PRINT
0026 PRINT "Press any key to start scrolling up. Press
                                         Escape to exit."
0027 DO: LOOP UNTIL LEN(INKEY$)
                                     ' Pause until any key
                                              is pressed.
0028
     x = 0
0029 DO
0030 CALL Scroll(3, 10, 18, 70, 1, 0)
0031 ' END
0032 CALL BiosStringPrint(18, 10, STRING$(61, 48 + x),
                                               & H6B + x)
0033 'ASCII 48 is "1". Attribute &H6B is White on Brown.
0034 IF x <= 8 THEN
0035
          x = x + 1 'x ranges from 0 to 9 because the
0036 ELSE
                'addition is performed after the IF test.
          x = 0
0037
0038 END IF
0039 LOOP UNTIL INKEY$ = CHR$(27)
0100
    SUB InterruptX (IntNum, Regs AS RegTypeX) STATIC
     same as in Fig. 6
0200 FUNCTION LoadBin$ (BinFileName$)
     same as in Fig.6
0300
     SUB Scroll (TopRow, LeftCol, BottomRow, RightCol,
          Lines, Attrib)
0301
      'BIOS window scrolling/screen clearing using INT 10,
          Service 06H and Service 07H.
                                      Continued over
```

The scrolling and filling goes like the clappers so you'll probably have to press the Pause key or, better still because it won'tcatch the scrolling in an incomplete state, press the Escape key to see the numbers.

To fill the window from the top and scroll down instead, change the fifth parameter in line 30 from 1 to -1 and change the string start row in line 32 from 18 to 3.

Next we'll convert the program into a fast, coloured partial-screen clearer. Alter the fifth (lines to scroll) parameter in line 30 to 15, change the sixth (attribute) parameter to &H40 (Black on Red) and unREM line 31.

## Enabling High-Intensity Background Colours

One dislike I have of *QBASIC* is that it has 32 foreground colours (although 15-31 are blinking and not used very often) but it only allows 8 background colours. Figure 14 presents the meaning of the 8 bits of the Attribute byte associated with each displayed character. (See Learning QBASIC, Oct 92, for more info.)

It is possible to use BIOS INT 10H, Service 10H, Subservice 03H to allow Bit 8 to set the intensity of the background colour. See the program in Figure 15.

One thing that needs explanation is the bit gymnastics in line 305. We must still use *BASIC's* COLOR command range of 0-31, 0-7 to set Foreground/Background colourcombinations. These can be thought of as 2^5, 2^3. The first parameter (5 bits range) consists of Bits 7,3,2,1,0, while the second parameter (3 bits) consists of Bits 6,5,4.

We are using a 16 \* 16 matrix, formed by two, nested 0-15 loops to cycle both the high and the low nibbles through all possible permutations. But to set the correct colours we need to convert 0-15, 0-15 to 0-31, 0-7.

Say after enabling high background colours, we want to set a Red foreground colour on a Bright Blue background. Here is the required byte considered as two nibbles:

Hig	gh l	Nibl	ole	Low	Ni	bbl	.e
	("3	Y")			("2	K")	
8	4	2	1	8	4	2	1
В3	<b>B2</b>	<b>B1</b>	во	В3	<b>B2</b>	<b>B1</b>	BO
1	0	0	1	0	1	0	0

To check if B3 is set in the high nibble we **AND** it with 8:

```
8 4 2 1
B3 B2 B1 B0
1 0 0 1
1 0 0 0
```

So when this B3 (HiBgCol) is set it increases the value of the high nibble by 8. However when it is tacked on to the front of the low nibble to extend its range to 5 bits it increases the low nibble's value by 16 when set:

```
16 8 4 2 1
B4 B3 B2 B1 B0
1 0 1 0 0
```

That's why we AND the high nibble with 8 and then multiply the result by 2 (to increase the bit's ON significance from a value of 8 to 16) before adding it to the low nibble.

To use the high nibble to perform the background colour selection (0-7) we only need its 3 lower bits so we strip off B3 by ANDing it with 7:

```
8 4 2 1
B3 B2 B1 B0
1 0 0 1
0 1 1 1
```

You should now be able to see that we can strip any bit's role out by **AND**ing a number with a value that has every bit set except the bit(s) to be stripped.

Actually, BASIC will ignore B3 and only consider the values of B2-B0 when you use background values greater than 0-7, but I've used **AND** anyway to show how to do it, if necessary.

#### Conclusion

Any bewilderment you may have had over what interrupts are should now have been replaced with a desire to find out what other Interrupts, Functions and Services are available for your use. Get a good programmer's book. I'm using The New Peter Norton Programmer's Guide to the IBM PC & PS/2, written by Peter Norton and Richard Wilton, Microsoft Press.

Next month, we'll look at QDIR - a QBASIC DIR program with different colours for specified extensions, various ways

```
0303 DIM Regs AS RegTypeX
0305 'AH = 06H (Scroll Up) or 07H (Scroll Down).
0306 'AL = Number of Lines to Scroll. "0" lines
          produces a very fast full or partial screen
          clear.
0308 IF Lines > 0 THEN
0309 Regs.AX = &H600 + Lines
0310 ELSE
0311 \text{ Regs.AX} = £H700 + (Lines) * -1
0312 END IF
0313
0314 Regs.BX = (Attrib * 256£) AND £HFF00
0315 'Set fill colour.
0316 'CH = upper row; CL = left column.
0317 Regs.CX = (TopRow - 1) * 256 + LeftCol - 1
0319 'DH = bottom row; DL = left column.
0320 Regs.DX = (BottomRow - 1) * 256 + RightCol - 1
0321 CALL InterruptX(&H10, Reg)
0322 END SUB
0400 SUB BiosStringPrint (Row, Col, Strin$, Attrib)
     ' Using the BIOS interrupt 10H, Service 13H,
0401
          Subservice 00H to
0402
     'write a string to a specified screen location
          without moving the cursor. Load the AX
          register with &H1301 if you want to have the
          cursor move to the end of the string.
0405 DIM Regs AS RegTypeX
                          ' Service 13H, Subservice 00H.
0406 Regs.AX = &H1300
0407 Regs.BX = Attrib
0408 Regs.CX = LEN(Strin$)
0409 ' Row ends up in DH; Col is in DL.
0410 \text{ Regs.DX} = (\text{Row} - 1) * 256 + (\text{Col} - 1)
0411 'ES:BP holds the Seg:Off address to the start of
          the string.
                    ' Use DGROUP's segment.
0412 \text{ Regs.ES} = -1
0413 Regs.BP = SADD(Strin$)
                             ' Offset to start of
                                  dynamic string.
0414 CALL InterruptX(&H10, Reg)
0415 END SUB
```

Fig.13 Fast partial-screen scrolling and filling using BIOS INT 10H.

```
в7
    Blinking of foreground colour (default)
 or Intensity component of background colour
B6
    Red component of background colour
    Green component of background colour
B5
B4
    Blue component of background colour
в3
    Intensity component of foreground colour
B2
    Red component of background colour
В1
    Green component of background colour
B0
    Blue component of background colour
```

Fig.14 The meaning of the 8 bits of an attribute byte.

```
0001
      DEFINT A-Z
                      ' HiBqCol.Bas - Uses BIOS INT 10 to
                                                                  of sorting the files (using the QuickSort
                      switch between a blinking background
                                                                  algorithm) while keeping the directories
                      and a high-intensity one.
                                                                  at the top, display of total filesize and
0003 TYPE RegTypeX
                                                                  diskspace used (with a "wastage"
0004 AX AS INTEGER
                                                                  percentage, due to cluster size, shown)
0005 BX AS INTEGER
                                                                  and determination of total diskspace. It
0006 CX AS INTEGER
                                                                  demonstrates the surprisingly difficult task
0007 DX AS INTEGER
                                                                  of parsing a filespec such as
0008 BP AS INTEGER
0009 SI AS INTEGER
                                                                    "..\TEST\*.BAS"
0010 DI AS INTEGER
                                                                  and makes extensive use of DOS interrupts
0011 Flags AS INTEGER
                                                                                              \circ
                                                                  to get its information.
0012 DS AS INTEGER
0013 ES AS INTEGER
0014 END TYPE
0015 DECLARE SUB InterruptX (IntNum, Regs AS RegTypeX)
0016 DECLARE FUNCTION LoadBin$ (BinFileName$)
0017 DECLARE SUB Scroll (TopRow, LeftCol, BottomRow, RightCol, Lines, Attrib)
0018 DECLARE SUB SwitchBit7 (HiBgColIfTrue)
0019 DECLARE SUB ShowAllColours ()
0020 CONST False = 0, True = NOT False
0021 CLS
0022 CALL SwitchBit7(False)
0023 CALL ShowAllColours
0024 COLOR 7, 0
0025 PRINT
0026 PRINT "Press any key to now enable high-intensity background..."
0027 DO: LOOP UNTIL LEN(INKEY$)
0028 CLS
0029 CALL SwitchBit7 (True)
0030 CALL ShowAllColours
0031 COLOR 7, 0
0100 SUB InterruptX (IntNum, Regs AS RegTypeX) STATIC
.... the same as in Fig.6
0200 FUNCTION LoadBin$ (BinFileName$)
.... the same as in Fig. 6
0300 SUB ShowAllColours
0301 'Displays all 256 colour combinations. x = low nibble (bits 0-3);
                                                y = high nibble (bits 4-7).
0303 FOR y = 0 TO 15' 0-15 = 2^4 = the range of a nibble.
0304 \text{ FOR } x = 0 \text{ TO } 15
0305 COLOR x + (y AND 8) * 2, y AND 7
0306 PRINT "&H"; HEX$(x); HEX$(y); " ";
0307 NEXT x
0308 PRINT
0309 NEXT y
0310 END SUB
0400 SUB SwitchBit7 (HiBgColIfTrue)
      ' Using the BIOS interrupt 10H, Service 10H, Subservice 03H .
0401
           to alter the effect of setting Bit 7 in the attribute byte.
0403 DIM Regs AS RegTypeX
0404 \text{ Regs.AX} = £H1003
                            'Service 10H, Subservice 03H.
0405 IF HiBgCollfTrue THEN
0406 Regs.BX = &HO 'Bit 7 sets background intensity.
0407 ELSE
0408 \text{ Regs.BX} = £H1
                     'Bit 7 sets blinking.
0409 END IF
0410 CALL InterruptX(£H10, Regs)
0411 END SUB
```

Fig. 15 HiBgCol.Bas changes the role of Bit 7 of the display attribute.

## What's a good price for a Computer?

A simple question, with a seemingly simple answer ... Depends!

On a simple item, like a can of beer, the lowest price obtainable is the best price, because ...

There is no need for product support ... it's here today, gone in five minutes (or less at the footy). There is no need for instructions in its use; rip (or bite) open the top, up-end, and swallow. All beers are frothy, brownish liquids (so is elephant urine), so quality is not an issue. All breweries have the same (high) level of health standards imposed on them, use the same high-quality ingredients, and of course we can assume that the brew-masters are competent. We can safely ignore the nuances of alcohol content, calories, temperature, presence of preservatives etc. Safety is not an issue. After-sales service is by Third-Party Agreement (and of no concern to the manufacturer), as your physician will attest. If it doesn't do the job it was designed for (whatever that was), you've destroyed the evidence and can't take it back ... so it doesn't matter if the brewery went broke and isn't there anymore. The manufacturer is entitled to assume you do not need help in selecting the appropriate peripherals, such as glasses and peanuts, to enhance the use of the product.

So why isn't Bert's Bootleggers the only liquor outlet in Brisbane? How do boutique beers possibly prosper (particularly the one with its packaging featuring one of the most hated characters of the Australian bush)?

Why would anyone buy a can of beer at Five-Star Hotel prices? Why would even a loyal Croweater drink Bottle-brewed beer? Why do brewers jealously guard their recipes and brand names?

Maybe the lowest price is *not* the best value after all.

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Info: Contact: Vito Ferarro

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## BRISBUG Forward Calendar

#### March 21st

Checkit LAN
Microsoft DOS 6

#### April 18th

Symantec - PC Anywhere OZiMail

#### May 16th

**Borland Special** 

#### October 17th

**Borland Special** 

## BRISBUG PC USER GROUP INC TRADING STATEMENT

#### FOR THE YEAR ENDED 31ST OCTOBER, 1992

#### SALES

Library Income		61395.68	
Less Costs of Goods Sold			
Accessories	4138.01		
Disks	17866.68	,	
Modems	320.00		
Registered Software	4353.29	26677.98	
TRADING PROFIT	•	34717.70	·
Less Direct Costs			
Freight	256.74		
Postage	1031.81	1288.55	
GROSS PROFIT			\$ 33429.15
			=======

#### BRISBUG PC USER GROUP INC

#### INCOME AND EXPENDITURE STATEMENT

#### FOR THE YEAR ENDED 31ST OCTOBER, 1992.

#### INCOME

GROSS PROFIT		33429.15	
Interest	924.57		
Magazine Advertising and Mail-Outs	13972.50		
Magazine Sales	371.40		
Membership Fees	75191.50		
Seminars and Courses	2042.00		
BBS Income	1260.00		
Sundry	241.10	94003.07	
-			\$ 127432.22
			=========
EXPENDITURE			
Accountancy/Audit Fees	550.00		
Advertising	1361.35		
Bank Charges	185.85		
BBS Files	691.00		
Copy Charges (Library)	140.00		
Credit Charges	889.10		
Courier - Freight	6.70		
External Operations Expenses	1368.56		
Hire BBS Equipment	2400.00		
Hire - Other Equipment	2280.00		

0		708.18	
Sundries		708.18	
Stationery		775.03	
Repairs		1703.00	
P.O. Box	100.00	10588.35	
Storage	1860.85	10500 05	
Other	100.00		
Computer Show	2227.50		
	6300.00		
Bardon PDC	6300 00		
Rents:	20.00	1430.13	
Office	29.85	1458:15	
General	29.85		
Covers	1402.30		
Printing:	a Tollet	213.00	•
Printer Ribbons and		219.00	
Mail-Outs	1258.78	1654.33	
General	395.55		
Postage:			Ÿ.
Other	49.64	146.44	
Lectures	96.80		
Photocopying:	· · · · · · · · · · · · · · · · · · ·	3 <del> 2</del>	
Packing Materials	(Library)	123.23	
Office Supplies		119.00	
Postage	1841.00	2296.90	
Printing	455.90		
Membership:		· · · · · · · ·	
Meeting and Semina	rs	2574.83	
Mail-Outs		20.00	
Sundries	193.10	63931.83	
Postage	11356.66		
Printing	50992.94		
Photographs	63.73		
Packing	1174.90		
Courier	150.50		
Magazine:			
Legal Expenses		81.00	
Labels		2312.45	
T 1 1 .		4704.80	
		4704.80	

#### INDEPENDENT AUDITOR'S REPORT

TO THE MEMBERS OF BRISBUG PC USER GROUP INC.

#### Scope

We have audited the Income and Expenditure Statement and Balance Sheet for the year ended 31st October 1992. The Group's management is responsible for the preparation and presentation of the accounts and then information they contain. We have performed an independent audit of these accounts in order to express an opinion on them to the members of the Group.

Our audit has been conducted in accordance to provide reasonable assurance as to whether the accounts are free of

#### **BRISBUG PC USER GROUP INC**

#### **BALANCE SHEET**

#### AS AT 31ST OCTOBER, 1992.

	_	_				
a	$\sim$	דדי	мтп	Γ. 7A.	mer	FUND
-	_					

ACCOMULATED FOND			
Opening Balance 1/11/92	52291.60		
ADD: Net Surplus	4157.30		
		56448.90	
ADD: Cheques Write Back	62.90		
			\$ 56511.80
			=======
Represented by:			
ASSETS Current Assets			
	300 00		
Petty Cash	300.00		
Library Account 91-203877	2497.79		
Operating Account 90-230877		00100 01	
Investment Account 71-230877	3180.31	22123.91	
Stocks			
Disks	1500.00		
Accessories	3700.00		
Registered Software	801.00	6001.0	28124.91
Non-Current Assets			
Software Library Equip @ Cost		19548.93	
Provision for Depreciation (	11090.00)	8458.93	
Office Equipment @ Cost		14848.96	
Provision for Depreciation (		6795.96	
Bulletin Board Equipment @ Cos		18303.00	
Provision for Depreciation (	7901.00)	10402.00	

material misstatement. Our procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the accounts, and evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion as to whether, in all material respects, the accounts are presented fairly and in accordance with statutory requirements so as to present a view of the Group which is consistent with our understanding of its financial position and the results of its operations.

6515.00

203.00

3988.00

6718.00

2730.00

28386.89

\$ 56511.80

The audit opinion expressed in this report has been formed on the above basis

#### **Audit Opinion**

Programs

- Library Disks

TOTAL ASSETS

- Bulletin Board

Provision for Deprec

In our opinion the accounts of the Group are properly drawn up:

- (a) so as to give a true and fair view of the state of affairs of the Group as at 31st October 1992 and of the surplus of the Group for the year ended on that date; and
- (b) in accordance with Associations Incorporation Act 1981.
- (c) except hat we are unable to verify the Sale figure for the year as whilst receipts are issued for sales, they are printed from a computerised system and no duplicate is made other than the computer records.

D.C. Neilsen & Co. Public Accountants

Partner: Russell Bachmann 4th February, 1993.

## President's Report for 1992 Year

In my eyes, 1992 was, despite the severe economic conditions, a year of consolidation for Brisbug.

Some services which were in their embryo stages at the start of the year are now established "items" on Brisbug Sundays.

#### Services established

- a) Junior Club. From its beginnings as an idea of Chip Karmatz, who did much of the "missionary" work with schools, this is now a thriving SIG with an expanding membership under Les Cathcart and friends guidance.
- b) "Lunchtime Specials". These started with Dan Bridges giving impromptu talks in late 1991. They are now second only to the "Main Event", and an accepted presentation "spot" to major suppliers, although we have deliberately tried to reserve them as a less formal venue for "homegrown" presenters.
- c) The BBS storage capacity has been trebled to increase the availability of files to members.
- d) New member orientation talks. Still run by Ron Kelly, who's idea they were, the NMOTs are a popular lunchtime activity for joining members.
- e) Foyer demonstrations. Now a regular feature, we have yet to exploit their revenue-raising potential.
- f) Lastly, but very importantly, "Significant Bits", under Geoff Harrod's editorship, has achieved a fine reputation for Brisbug. It is a great marketing aid in our efforts to obtain speakers of note and recognition by national suppliers.

#### New this year were ...

#### a) RAPCUG

The Regional conference of PC User Groups in Sydney in March, attended by Lloyd Smith and Ron Lewis. A regional chapter of APCUG was formed. Its first real achievement was to present a UNITED submission from PC User groups to the Australian Government enquiry on Software Pricing.

#### b) Country Clubs

Attempts to foster closer relations with

regional PC User Groups in country Queensland has resulted in a total of 17 such clubs now belonging to Brisbug. Regular personal visits to a number of these (Eg Gympie, Gladstone, Ayr, and Bundaberg) have been arranged.

#### c) User-Pays Classes

User-pays language classes were introduced. Despite some "teething problems", I think most participants were reasonably satisfied.

The appointment of an Education Services Manager on the new committee emphasises the importance your current committee places on these education projects.

#### In other areas:

#### Membership

Our membership increased by 200 to 2200, making us the second largest PCUG in Australia behind Melbourne, but being closely pressed by Sydney and Canberra. Although our retention rate of members, at 74%, was higher than previous years (69%), we still had 450 members not renew their membership.

An urgent challenge to the new committee is, in my opinion, to find out why, and, if we want to continue to grow, what we can do about it.

#### Library

The Library has continued to expand and innovate under Lloyd's stewardship. Two interesting revenue-raising ideas introduced during the year were the advertising flyers posted with orders, and the advertising by Magna on the order bags. The range of goods sold by the Shop continues to increase, and now includes a limited range of commercial software. We will continue NOT to sell significant hardware.

The Library provides much of our "discretionary" income and its continued success is vital to the provision of an ever-widening spectrum of services.

#### Treasury

We finished the year with a healthy surplus of funds. This represents a challenge to the incoming committee to spend this surplus promptly but to the maximum benefit of member services.

## Thanks to an army of volunteers

All of this has been achieved by a great number of members working, mainly unseen, for Brisbug. Those you see on this stage represent only the visible tip of the ice-berg.

When we did a head-count before Xmas for the "workers night out" (in keeping with Brisbug's voluntary creed, they had to pay their own way) we counted something approaching 100 people who had contributed towards Brisbug. This includes not only those who worked at the computer show, and in the library, but people like my team of Baggers who handle the Magazine packing and distribution, the stage crew (Mark and Bill) in this theatre, SIG leaders, class lecturers, the language class teachers and tutors, the authors in "Significant Bits". Despite not being paid a cent, I think you'll agree they did a very professional job .... I wish to formally thank them all on your behalf. Well done, ladies and gentlemen.

Before standing down this year's committee, I would like to single out several of them who, for reasons of business, are retiring this year, having made outstanding contributions over a number of years.

#### Geoff Harrod

Dan Bridges

Trevor Freiberg

Because of the smaller committee, a number of others - Terry Tuttle, Helga Galea, Bob Gurney, and Paul Walters will continue in their present functions, but as members of sub-committees.

It is gratifying to see the quality of NEW candidates putting themselves forward for committee.

1993 will no doubt be a challenging year. With the PC scene continuing to change at break-neck pace, Brisbug will face new situations which will test its imagination and skill to survive and prosper and to continue to provide the sort of club that you, the members, want.

Ron Lewis

## Minutes of Annual General Meeting - 17th January, 1993

The meeting was opened by the President, Ron Lewis, at 1-30 p.m.

#### **MINUTES OF LAST AGM**

After the Secretary advised that there were two apologies (Rosemary Kent travelling around the southern states and Bernard Speight, overseas), the question of the reading of the 1992 AGM minutes arose. The Secretary had trouble finding them (they are actually on page 71 of the Feb. 1992 edition of Significant Bits) and so it was moved by Ron Lewis and seconded by Ben Smith that a copy of the "lost" minutes appear in the next magazine. (The motion was carried)

#### **CHANGES TO CONSTITUTION**

A formal notice of motion was then dealt with. The motion proposed to make changes to the Brisbug Constitution which allow the awarding of Life Membership and Honorary Membership. The previously published notice (page 75 of December 1992 Significant Bits) was moved by Lloyd Smith and seconded by Chris Raisin. Lloyd spoke for the motion and nobody spoke against it.

An amendment was then moved (in absentia) by Bernard Speight (via a written notice of motion) that "not more than one Life Memberhip per year may be awarded". This amendment was seconded by Lloyd Smith himself and was carried by majority vote.

Another amendment to the amended motion was then received from the floor. It was moved by Robert Gurney and seconded by Peter Middleton that "not more than one Honorary Membership per year may be awarded".

This was soundly defeated.

The amended motion was then put and was carried by a sound majority. (It should be noted that the amendedments to the constitution are subject to Justice Department approval.......Secretary)

#### LIFE MEMBERSHIP AWARDED

Lloyd Smith then moved that the Annual General Meeting accept a recommendation from the outgoing Management Committee that the first award of Life Membership to Brisbug got to Sylvia Wyllie, the first President of our Group (Member No. 2). Frank Norris (Gold Coast SIG) seconded the motion. There was much discussion since several of the newer members were not aware of who Sylvia is nor of the high esteem the club holds for her (Sylvia was not present at this AGM).

Brian Doyle moved that "the question be put". *The motion was carried*.

The main motion (amended) was then voted upon and was carried unanimously. Ron Lewis stated that a special presentation to Sylvia would be arranged after the Justice Department advises us of the acceptability of the changes to the Constitution.

#### TREASURER'S REPORT

Max Kunzelmann presented a verbal Treasurer's Report, since the written report is still in the auditor's hands. This audited report will be put to the members for acceptance as soon as it is to hand.

#### PRESIDENT'S REPORT

Ron Lewis then gave his President's Report. He thanked many of the 100 or more people who are regular workers for Brisbug, and gave special thanks to following:

- \* Geoff Harrod a magnificent job in enhancing the quality of Brisbug's monthly magazine which has given our club greater prestige in the PC world
- \*Dan Bridges a tremendous contributor to Brisbug over the years, Dan was directly responsible for the introduction of the "lunchtime specials". Dan will still remain the club's "Virus Expert"
- \* Trevor Frieberg the outgoing Membership Secretary (and previous Software Shop Controller), Trevor has been an outstanding asset to the Management

Committee. We are sorry to see him not standing this year, but he needs time to recover!!

- \* John Massey a tireless worker for the committee early in its year, John was forced to resign because of workload with other commitments outside Brisbug. His familiar face will still be around at meetings and his involvement with the Brisbane Windows Users Group
- \* Les Cathcart a familiar friendly face with the Junior Group, Les has kept those eager minds busy all year while the parents have pursued their own interests without worrying about their offspring
- \* Mark Hayes the "hidden face" behind the lighting every meeting, Mark keeps those spotlights moving and deserves much thanks for his behind the scenes (and above the head) job (he gets a birds-eye view of everything, though!)

Ron considered 1992 to be a year of survival in tough economic conditions. He noted that although 650 people had joined Brisbug, our nett membership increase was only 200 as 450 members had not renewed. This was an urgent problem for the new Development Coordinator and the Membership team to look at in 1993.

Ron noted the healthy surplus in the Treasurer's report (about \$15000) and stated that spending this promptly, but to the best benenfit of the members was a challenge facing the in-coming committee.

Increasing contact with our fellow clubs in Queensland, and Australasia was an aim of his Presidency for 1992, and culminated in the formation of the Regional Association of PC User Groups (comprising all mainland capital PC User Groups plus New Zealand) in Sydney during the year

( A full copy of the President's report is to be printed in the Management Committee's report to members to be issued with the February 1993 issue of Significant Bits.)

Just before the elections were about to commence, Chris Ossowski (Vice-President) offered a vote of thanks from the

#### WORLD SCOOP !!!

#### Sneak information about MicroSoft's latest "musthave" program for Windows surfaces in Australia.

This was seen in the Zone 3 (Australasia) Tech conference between 5-10 Dec 92. Remember, you read about it first in Sig Bits!

From: Simeon Cran To: Tony Molina

Subj : Edlin for Windows

In a msg on <Nov 29 20:24>, Toy Molina of 3:635/526 writes:

TM> Admittedly it's a tad awkward to use but all that will be a thing of the past with Microsoft's new release, "Edlin For Windows".

This is great news! I've put off using Windows all this time because! don't believe that GUI's have anything to offer. But if Microsoft is prepared to support us old timers with a version of Edlin for Windows then I'd be seriously tempted to change.

I just hope that they don't change it too much from the original.

BTW, is the rumour true that Windows may become available without the GUI? I understand that OS/2 can be run in this mode, but seeing as I've heard nothing of Edlin for OS/2 that point is moot.

Gee I hope that E4W will run with my Hercules card (of course it should, but I've become wary of late).

Any Idea of the price? Will I have to buy Windows as well?

Simeon.

\* Origin: Simeon's Point. Home of MYZ80 and ZPM3. Z80 lives!!! (3:640/208.3)

From: Tony Molina
To: Simeon Cran

Subl: Edlin for Windows

SC> This is great news! I've put off using Windows all this time because I don't believe that GUI's have anything to offer. But if Microsoft is prepared to support us old timers with a version of Edlin for Windowsthen I'd be seriously tempted to change.

There are many others in your position Simon. I think Microsoft is on a winner here. Their market research indicates that potential purchasers of E4W are still using MS-DOS 2.10.

SC> I just hope that they don't change it too much from the original.

Rest assured. I've seen a Beta of it and unless you're told beforehand it's a Windows program, you'd never guess.

SC> BTW, is the rumour true that Windows may become available without the GUI? I understand that OS/2 can be run in this mode, but seeing as I've heard nothing of Edlin for OS/2 that point is moot.

Yes. A text based version of Windows is in the pipeline right now. I believe it will have the ability (If you wish) to display icons using ANSI characters as well.

SC> Gee I hope that E4W will run with my Hercules card (of course it should, but I've become wary of late).

Yep you're in luck again. E4W will work with your Hercules card as well as CGA and EGA. I believe they hope to add VGA support some time in the future if the demand for it is there.

SC> Any idea of the price? Will I have to buy Windows as well?

Quite cheap I believe. They expect around US\$175 RRP (street price approx. US\$130). No you won't have to buy Windows, E4W will also run quite nicely from the DOS prompt alone.

= Tony =

\* Origin: The OZ home for Intermail (3:635/526.0)

members to Ron Lewis himself for Ron's devotion to the club and to the demanding job of President of the biggest User Group in our state. There was resounding applause (loud too!)

#### ELECTION OF OFFICE BEARERS FOR THE NEXT 12 MONTHS

Ron then declared that all positions on the Brisbug's Management Committee were vacant and handed the chair over to Chris Raisin (outgoing Secretary) to call for nominations for President. There being only one nomination, Chris declared that Ron Lewis was re-elected President of Brisbug for 1993/94. In accordance with the Constitution, the new President resumed as chairman of the meeting.

All nominations received by the outgoing General Secretary in accordance with the Constitution and voted upon by the members present resulted in the following new "team" for 1993/94:

#### OFFICE BEARERS

#### PRESIDENT

Ron Lewis (Unopposed)

#### VICE-PRESIDENT

Lloyd Smith

#### **GENERAL SECRETARY**

Chris Raisin (Unopposed)

#### **TREASURER**

Max Kunzelmann (Unopposed)

#### MEMBERSHIP SECRETARY

Jan Ausburn (Unopposed)

#### S.LG. COORDINATOR

Bernard Trewinnard-Speight

#### MAGAZINE MANAGER

Franklin Karmatz (Unopposed)

## EDUCATION & TRAINING COORDINATOR:

Ron Kelly (Unopposed)

### DEVELOPMENT COORDINATOR

Chris Ossowski

The Annual General Meeting closed at 2-51 p.m.

## **Knowledge Adventure**

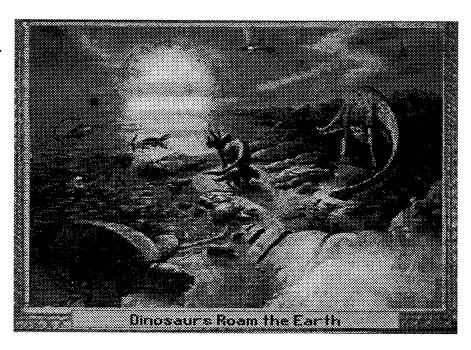
Ash Nallawalla, Reviews Editor

For those of you who don't have a CD-ROM drive or a decent sound card—or any sound device, there is a growing number of software titles that feature audio and animation. At Fall Comdex we saw some superb offerings from Knowledge Adventure (KA) Inc. The founder, Bill Gross, was inspired by his son's thirst for knowledge, and the rest is history. We are looking at just two of the KA packages here.

#### **Dinosaur Adventure**

Dinosaur Adventure has four modules:

\* Dinosaur history, an informative description of the dinosaurs. It closely follows the pattern of other KA titles. You just click with the mouse on any part of the screen and you are led to more information or related matter. The world map can be scaled and you can rotate it to pick the continent of interest. When you click on the text, you are taken to an index or more text. The buttons at the top take you to various categories, such as mammals, plant



Super graphics distinguish Dinosaur Adventure

eaters, carnivores, and the like. Where applicable, an animation or audio icon pops up so that you may repeat the animation or sound.

- \* A story-book that reads to you, highlights and pronounces words and describes pictures on the pages.
- \* Two games, Name-A-Saurus and Read-A-Saurus. In each of these games, you try to answer the question by clicking on the appropriate answer.
- \*ADinosaurTheatre. See a Tyrannosaurus and Stegosaurus do battle. It has other interesting animations too.

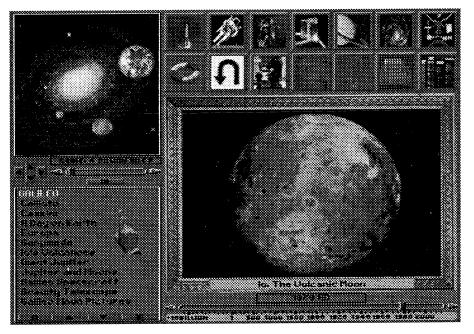


#### **Space Adventure**

Space Adventure is similar in operation to Dinosaur Adventure but it requires 8 MB free space on your hard disk. It features space missions, photographs of planets, the sounds of rockets, famous events, and more. The animation of planetary motion and digitised video of rocket launches are particularly notable.

#### **Observations**

KA has achieved what one imagined only possible on a CD-ROM—with some amazing compression. The products capitalise on the nemesis of hypertext—the 'lost in hyperspace' syndrome! You can jump from anywhere to the next point but you cannot backtrack more than one screen. There is no 'correct' way to navigate, so each ad-



An "encyclopedia" of information on the planets is there on CD-ROM

#### Hardware Requirements

- \*Memory—520kB of RAM
- Monitor—colour VGA only; 256 colours preferred
- \*Mouse—recomended
- \* Sound card—not essential but recommended
- \* Hard disk—about 5 MB free space
- \* Printer—optional, to print text only

venture is potentially unique. One can wonder if he or she covered all screens in a session. The manuals also help parents to use the software with their children, and provides some learning strategies to do so.

Of the two products reviewed, Dinosaur Adventure appealed to my five-year-old, and Science Adventure will appeal to an older child. The software has no age limits, so an adult might wish to read the text in detail and a youngster might be content to see and hear the images. The quality of graphics and motion is excellent and almost in the league of CD-ROM

performance—in fact some older CD-ROM readers would give choppier animation. I predict that this series will be popular, they have had good reviews in the commercial magazines too.

#### **Availability**

The KA packages are not yet available in Australia but that is likely to change.

Others not reviewed include:

Knowledge Adventure, which covers the world of art, science, literature, architecture, music, and nature;

Science Adventure, in which the late Isaac Asimov observes the most significant discoveries and inventions; and Sports Adventure, which covers the history of sports.

Contact Knowledge Adventure at 4502 Dyer St, La Crescenta, CA 91214, USA. Phone (818) 542-4200; fax (818) 542-4205. They can advise you the price and other details.

What kind of sound device do you	i ha	we? Press the appropr	tair	e letter below
A) Sound Blaster & Compatibles	H)	Tandy SL/TL/1000RLX	0)	Bigmouth
B) SoundBlaster Pro #	D	Tandy TX/EX/HX/SX	P)	Media Master
C) Disney Sound Source	J)	Covox Speech Thing	Q)	Echo I
D) Adlib	Ю	Covox SoundMasterI	R)	Lantastic Voic
E) Adlib Gold <b>II</b>	U	Covox VoiceMaster	S)	PC Speaker <b>#</b>
F) Pro Audio Spectrum 8	M	Thunderboard	T)	Other <b>=</b>
G) Pro Audio Spectrum Plus/16 🛎	H)	DigiSpeech DP201	U)	No Sound

Support for sound cards is extensive

#### Member's Advertisement

#### SOFTWARE FOR SALE

Easyworking Card	\$ 15
Easyworking Cache Manager	\$15
Personal Finance	<i>\$29</i>
Stealth Fighter	\$ 30
Economy Arcade Games	\$ 30
Life & Death	<i>\$32</i>
Terminator II	<i>\$ 58</i>
Double Dragon 1	\$21
Double Dragon II	\$ 22
Double Dragon III	<i>\$ 59</i>

**MICHAEL WARD** 

263 4062

## BRISBUG MEETING MINUTES 17/1/93

Ron Lewis opened the last of the General meetings for the Brisbug year at 1-01 p.m. and as always welcomed both new and continuing members to the a "not quite normal" Brisbug Sunday (the AGM is to follow shortly).

First up...the Treasurer's Report. Max Kunzelmann stated that this "may be his last report!" (have confidence, Max!). All the paper work is still with the auditor in preparation for submission to the Justice Department. In summary, our "Operating Account" contains \$15,800 after having received \$8,827 in income for the month and given out \$9,056 in expenses. Full details will be presented to members with the Annual Report.

Paul Marwick gave his usual informative BBS Manager's report: "Everything's alright....yes everything's fine" (shades of JC Superstar?) All drives are now replaced with all lines now running under OS2....magic! The speed of the system has improved out of sight!

Paul introduced Graeme Darroch (who really needs no introduction) for a "wee" word. Graeme informed the gathered throng that over the past 12 months he and his gang of approx 28 workers (formed a union yet?) have reviewed 486 1.4 mg floppy disks full of software (that's 680 MEG !!!). The shell-shocked audience gave a round of applause for a job well done. It seems Graeme is a glutton for punishment...he asked for more volunteers, especially those with tape cartridge units.

Ron Lewis then announced that Bernard Speight is delayed...somewhere between Singapore and Thailand the last time we heard! A truly legitimate trip we were informed (he has Mrs Bernard with him!) and we look forward to hearing of "Trewinnard's Travels" when he returns.

The main news from the SIG front is the new venue for the Gold Coast SIG. They've shifted to the North Coast! (Only kidding.....the Senior Citizens Centre near Jupiter's Casino will see a devoted group of computer enthusiasts every second Tuesday at 7.00 p.m. (The Casino will probably see the same group shortly thereafter!) [

Now I know where to retire!.....Secretary]

Chris Ossowski gave a very brief report on "External Operations" (so brief the Secretary did not have time to pick his pen up!) and then Ron Lewis introduced Geoff Harrod (the Magazine Editor).

Geoff thanked everybody who has contributed to the magazines over his years as editor. Even though Geoff is not standing for the new position of Magazine Manager and will therefor not be on the Management Committee for 1993, he will still be involved. (We cannot let that expertise slipaway!....Management] Geoff received a warm round of applause, confirming the popularity of the magazine (and Geoff, too, of course!)

Lloyd Smith (remember him?) then gave a rare report (rare, because he is usually flat out at the Software Shop keeping our members happy). AGM's are extremely popular, it seems, since the shop today is the quietest it has ever been! Lloyd stated that over the next two months "lots" of new HIGH QUALITY programs are being introduced to the software shop, thanks to the work of Graeme Darroch, his merry men (persons?) and Paul Marwick. (And you too Lloyd!!) A plea from our Chief Librarian then followed: HELP!! We need volunteers to review software obtained from the BBS.....to check it's quality, to see if it already exists in the library and to write comments for the BRISBUG catalogue.

A return to the often missed Question and Answer time followed. It was brief because everyone was chomping at the bit to start the AGM (huh??)

The meeting finished at 1-25 p.m.

### **BOOKS GALORE**

Thanks to the generosity of Microsoft Corporation, through Matthew Horne, User Group Liaison Officer, Brisbug now has some books in the library to complement our disk library.

#### Titles include:

Desktop Publishing By Design

PowerPoint Presentations by Design

Windows - Guide to Programming

dBase IV - Complete Reference for Programmers

Getting Started with Microsoft Excel for Windows

Word Processing Power with Microsoft Word (V5)

MS Windows MULTIMEDIA Authoring and Tools Guide

Microsoft Excel 3 Companion

Microsoft Windows MULTIMEDIA Programmers Workbook

Microsoft Excel - Business Sourcebook

MS-DOS QBasic - Programmer's Reference

Variations in C

Supercharging MS-DOS

Microsoft Word for Windows and OS/2

**Computer Dictionary** 

and many more. Check with the Librarian

## **BRISBUG EDUCATION NEWS**

This is my first report as your newly elected Education Services Co-Ordinator. For members interested in communicating with me between meetings, you may call me on (07) 399 5406 between 7 pm and 9 pm most evenings.

## NEW MEMBERS ORIENTATION GROUP

Prospective new members will meet between 12:15pm - 12:45pm on the steps to the foyer to have some of the mysteries of Brisbug explained to them. This meeting is very informative and will give you some indications as to what makes Brisbug 'tick'.

A separate meeting is also held from 3:15pm to 5:00pm at the rear of the library. Items such as how to extract your catalogs onto your hard disk, order software from the library etc. are demonstrated.

This month (February) John Tacey will address this group on how to install software on to your computer.

#### EDUCATIONAL PROGRAM FOR FEBRUARY MEETING 10:00am to 12:00pm

#### **NEW USER GROUP**

John Tacey - Room S5

This month lesson 4 - Redirection, Filters and Command Piping will be discused.

#### **NOT SO NEW USER GROUP**

Ron Lewis and Dan Bridges
Main Auditorium

This month Ron and Dan will discuss computer viruses and how to detect and eradicate this vermin.

#### **ADVANCED GROUP**

Rex Ramsey - Room S4

Title: Re-introduction to Basic Key Words.

This will be the first in a series which Rex intends to discuss during the next few months — Quick Basic, Visual Basic for

Dos and Visual Basic Windows are just a few of the topics which Rex will discuss.

C++ GROUP

Please refer to the Notice Board in the foyer for information on C + +.

As entries for "Significant Bits" must be with the Editor by the last day of the month preceding the current edition, time has not allowed me to confirm details of this subject 'C++' in this report of 'Brisbug Education News'.

--- sorry about that ----

Please refer to the notice board on meeting day for additional Brisbug Education Information

I think it is important that you be informed of details of future courses. This will help you to program Brisbug education within your family, social, or business arrangements. This should also help members who live outside the greater Brisbane area, but would consider it worthwhile to travel, if prior knowledge of courses was available.

#### **NEW CLASS**

Dan Emerson

Environment information monitoring and analysis using the microcomputer.

Sensors attached to the Games Port of your computer can monitor such diverse activitities as a rapid chemical reaction or slowly changing temperatures throughout your house. Dan's project is to collect and analyse these data.

Four lectures, commencing March. Time 3:15 - 5:00.

#### **FUTURE COURSES**

#### Next Month (March)

#### **NEW USER GROUP**

John Tacey - Lesson 5

Topics BATCH FILES - AUTOEXEC. BAT - CONFIG.SYS

#### NOT SO NEW USER GROUP

Operating systems

#### ADVANCED GROUP

Rex Ramsey

Quick Basic; Visual Basic for Dos; Visual Basic for Windows

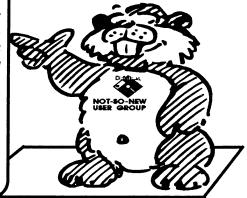
#### What do you Want?

It may be your wish that a particular course be included in the Brisbug Educational Program.

#### **Openings for lecturers**

If you have a depth of knowledge in a particular subject area and would be prepared to let us have 2 hours of your Sunday Club time to assist club members.

In either case I would be very pleased to hear from you — in person on club day, by phone or through the mail. Ron Kelly



# Lindsay's Letter

**Lindsay Bates** 

A big hello to all! When you get to read this, the new year will be in full swing, with all the challenges and pain and joys that each year brings to most of us.

There's no question 1993 will see many many changes to the computer world, affecting all of us as to how we use our PC. Brisbug will continue to work hard to help you get the most from your computer. May this year turn out to be your best ever!



#### AT OUR PLACE

As a lovely start to the year, the beautifully melodious call of the White-throated Warbler (Bush Canary) is gracing the bush after many month's absence.

There are Eucalypts in bloom and colourful Rainbow Lorikeets - definitely the Play-boys of the Avian world! - are noisily partying and periodically climbing aboard their sleek fighter planes, and jetting off to a new patch. These guys definitely know how to enjoy life!

Inside, we've just had to upgrade some bits on the 486SX-25 to cope with software changes. Used to manage with a 130Mb hard-drive but I got sick and tired of having to prune programs and files off it all the time to make room for something new.

In other words, the disk was full! After rather anxiously consulting the budget, reluctantly we moved to a 13ms 210Mb drive that's just a little faster than the 130 on test.

Ah, the luxury of all that SPACE . . .

More RAM had also gone in recently, upping the ante to a modest 8Mb total (modest by today's RAM-digesting programs, anyway). The nice thing is that for the moment at least - everything seems to be working fine with these upgrades.



EXCEL 4.0

The Microsoft Media Machine is touting the combination of Excel 4 and Word 2 (for Windows) as *THE* way to run your PC. To the extent of putting them together - along with MS Powerpoint - and marketing them as Microsoft Office.

We finally made the change to a Excel from our wonderful ole Lotus 123 v2.01. Yes, Version 2.01. You could fit the whole program (as we used it) onto one 360K floppy! Incredible, eh?

The replacement Excel package, as installed onto our disk, takes up an amazing 4.3Mb in rather basic format - and, of course, it needs the many megs of Windows files as well, in order to run it.

We actually started with Excel 3.0 for Windows, reading the 123 files into it, and having more than the odd glitch as we struggled with getting to use a new program.

Version 3 was good, and we enjoyed using it. So much so we decided to lash out and upgrade to Version 4, and that's where we ran into a spot of bother. What happened - and what we did about it - are in the next section.



# EXTRA MEMORY IN WINDOWS

3.1

How much RAM you're using to run your Windows programs can be quite crucial for speed and efficiency. Let's check how much we need to run some of the major commercial programs.

It's actually possible to run Windows with only 1Mb of RAM - provided you don't want to use any major programs within Windows, that is. If you do, then the 1Mb will soon need to be extended to 2Mb, and the 2 to 4Mb.

For a long time I've been saying that Windows 3.1 seems to be maximised for 4Mb of RAM. And a lot of major Windows programs also ran quite happily with just 4Mb.

In recent time we've run word-processsors like Ami Pro 2, spreadsheets like Excel 3, and all-in-one programs like MS Works 2.0 for Windows. All ran perfectly happily with 4Mb. Unfortunately for all our pockets, that's slowly changing.

We've just had to increase our RAM to 8Mb, and the specific culprit was the upgrade from Excel 3.0 to Version 4.0 mentioned. Oh, it'll still run with 4Mb right enough, but efficiency is down dramatically: quite clearly it is NOT maximised for that amount of RAM.

Where we noticed it first was when reading in a suite of spreadsheets bound together in what Excel calls a Workbook. We tried one such Workbook on a fast 486DX-50 running a 210Mb hard-drive, and it took an incredible 32 seconds to read in!

Increasing to 8Mb of RAM reduced that time to a much more respectable - and acceptable - 13 seconds. Incredible difference, eh!

Now, if you're the type who doesn't really mind waiting round, then probably you won't be greatly concerned about the many other inefficiencies that show up in Excel 4 on a 4Mb machine. However, many people will mind - and the way round the problem is simply to fit extra RAM.

We were really amazed at the range of things that improved with 8Mb. So let's suppose you've bitten the bullet and dropped in that extra 4Mb. The next matter to consider is how much of your total memory to let your disk cache pinch for its own use.

If you're running Windows 3.1's SMARTDRV as your caching system, my

figures indicate that most people will be able to let SMARTDRV recalculate for the extra RAM, i.e there's no need to reset the parameters - provided you were originally letting the disk cache program calculate it for you.

It will pay to have a look-see in AUTOEXEC.BAT, though. For some reason my disk cache line read SMARTDRV 500 500, which would not have given me best results with 8Mb. Removing both 500's let SMARTDRV do its own setting of 1000 1000.

If you have need for speed in specific programs, you'll want to do a bit of experimentation to see if 2000 2000, for

example, gives you best results. Most, however, can happily let SMARTDRV set the figure for them.

It should be noted that not everything takes longer with the smaller amount of memory. For example, just booting up Excel 4 gave me consistent figures of 8+ seconds, no matter whether the computer was fitted with 4 or 8Mb of memory.

So if you're using, or are considering using, recent versions of major Windows programs, you need to consider whether you need to fit extra RAM memory.

If you do, it will never be wasted, because the computer industry will soon be up to



O Loved the bit from Intel's The World's Most Understandable Computer Book, which gave an easy way to help you figure out which is which: Hardware is the stuff you can kick and software is the stuff you can't kick.

So now you know. Mind you, if you're like me, there will have been many times you wished you could kick both...

O The software houses are apparently concerned about the amount of software piracy in Australia. So much so they've commissioned a major survey to find out why. If they'd like to make a *gratis* donation to my bank account I could tell 'em, without all the kerfuffle.

It's simple - the stuff's just too dear. Who can afford \$500, \$600, \$1,000 for just one program? Then the same again, Sam, for the next. And the next. Not us common folk, that's for sure. When they figure out how to get the software to us at *reasonable* prices, then they might start to cut piracy.

And sell more packages as a result, I venture to say.

O Changing Technology Strikes Again: did you catch the piece about the local 3-D computer graphics firm who've changed their (now 5-years old) \$1.1 million main-frame for a \$30,000 486-DX? The latter is a lot faster too, it seems: one task that took the mainframe a full hour to perform, the 486 knocks over in less than a minute!

O There was also the bit about Electronic "smog" from computers, mobile phones, radios and other electronic whatnots. Apparently this is beginning to have dastardly effects on how other electronic gadgets work - or don't, as the case may be.

Reported was a crane dropping it's load and killing a worker, robots going bananas in Japan, vehicles' central locking systems operating when not supposed to, etc.

I, for one, had been looking forward to the day where the computer, phone, answering machine, fax, photocopier, and whatever-else-you-can-think-of would all be stuffed into one, portable, radio-operated gismo.

But maybe they've got more work to do yet.

O Further to this yet to come, all-in-one, strictly portable, wire-less Home Entertainment Centre and/or Business Operations' Centre, I can just see a tongue in cheek ad for a unit in the future.

Boasting inclusion of an amazing personalised computer at the absolute cutting edge of current technology, the unit comes bundled with its own in-built kitchen Garbage Disposal Unit (this would definitely be low noise, of course).

And all that for less than the price of a current Garbage Disposal Unit . . .

O The Computers-Come-of-Age Department. Seems that most of the kids at one

of the local collages will soon be using Laptops as part of their daily education. The parents will be buying the computers, which the school will supply via a bulk-purchase made for this express purpose.

Not only will the Laptops be used extensively at school - where they'll be networked to give access to all sorts of educational and Multimedia goodies - in the interests of getting the most from the purchase, they'll be encouraged to take them home as well.

Who knows what they could be used for there.

O True stories are always the best, aren't they? This one is go good I just had to share it with you (details have been changed to protect the participants).

This was definitely Home Drama. The first we knew was when Nettie took a call from the somewhat emotional wife of a couple we know.

Seems there had been just the odd disruption to home harmony at their place. The wife reported the upshot to be that she poured a whole great mess of greasy washing-up water all over the trackball keyboard of her husband's new computer.

Apparently the computer itself escaped relatively unscathed - but only because she was unaware of all the goodies it housed. Otherwise, she told me later, it would have copped a dose, too!

I guess if you're going to make a point, you may as well make it count.

8Mb as the de facto memory standard for a modern computer system, in any case.



#### Hardware Test

#### A WINDOWS ACCELERATOR CARD

We all want more speed out of Windows. The fact that it does everything in graphics mode means you need a lot of computing power or the whole thing grinds to a halt. I set out to see how much speed increase I could get by fitting a windows accelerator card.

The card I chose was billed as a 1Mb 16bit Paradise card, but in fact it appeared to be a Western Digital card.

It was billed as a Windows Accelerator VGA and the manual stated that features include: "Built-in Windows accelerators that provide up to ten times the standard VGA performance."

Sounded good to me, so I stoked up the trusty 486SX-25, eagerly awaiting some flashy performance figures!

The card looked no different from a regular 16-bit monitor card. I installed it, simply using it to replace my normal 1Mb Tseng-Labs card.

The ONLY way to test if something gives speed improvement in Windows is to run actual Windows programs. Stop-watch figures were done on a total of 133 tests. Here are the actual real-life programs that I timed:

Booting up into Windows itself Loading a Windows Word-Processor Loading a file containing graphics into the WP

Loading a Windows Spread-sheet Loading a suite of files into the Spread-sheet

Loading XTREE for Windows Going out to a full-screen DOS window

My first task was to do the above tests just using the accelerator as a standard monitor card and see what happened. Test figures showed that it operated exactly the same as the Tseng-Labs - it was neither faster nor slower on any test.

While that may have been disappointing, perhaps it was to be expected. In any event, the next step was to install the

## Lindsay's ...



modern PC's. There are just too many things go wrong during the warranty period - and out of warranty as well. In fact I'm appalled at the number of Brisbug folk telling me of faults in their 2- and 3-year old computers.

got through the warranty period, it would probably go forever. I suspect this is no longer going to be true, especially of computers at the really cheap end of the market.

Okay, I do realise that things go wrong with ALL modern electronic stuff; in other words, it isn't just in computers that this is happening. Nonetheless, I do wish that computer manufacturers and suppliers would raise the standard of play.

It's the so-called Compatible market that has caused a lot of the problems.

What's occurred is a massive proliferation in South-East Asia firms manufacturing things from Key-locks to Motherboards. The quality of product coming out of the factories of said firms varies from the sublime to the ridiculous.

This means that the computer firms I call Cheap 'n' Nasties (much stronger words could, and probably should, be used) can buy each of the many components that go to make up a PC from firms selling at cheapest possible prices.

I'm really disgusted with the quality of Result? - a cheap computer to supply to the public. Cheap in price; cheap in quality - and lots of lovely profit in the bank at the end of the financial year. All at the expense of unwary - or careless - purchasers.

But the matter of greatest concern to In the old days we used to say that if it me is not how to keep away from a cheap 'n' nasty computer (that's easy, just don't buy one of the cheapies) my concern is that the cheap components can easily enough sneak into quality computers.

> The bad news here is how much of my time is spent chasing decent quality. The good news is that there ARE folk around, like me, who do care about quality, and genuinely who care about you, enough to help you get a decent quality system.

> Trouble is we're an utter minority, trying to stem a tide of dreadful quality. And no, I'm not being melodramatic here. Buying a new computer really is as bad as buying a used car (to some customers I've even been known to mutter that sometimes I think it's worse . . .)

What the whole industry needs is a large dose of self-regulation to weed out the rubbish and expose the sharpies who are ripping people off every day, selling stuff that is nowhere near up to scratch. Sadly, I cannot see anything on the horizon to indicate that this is likely to happen in the near future.

Windows 3.1 drivers supplied with the card. Once you start to do this, you're presented with a rather amazing array of resolution options:

640x480 in 16 colours; 256 colours; or 32K colours

800x600 also in (16), 256 or 32K colours

1024x768 in (16) and (256) colours

And those are not all of the resolutions this card makes available.

Please note: I tested many of the resolutions above; those in brackets are the ones

not tested. It's also important to note that running the card in 256 colour mode gave just 16 colours in Windows Paintbrush. Running it in 32K colour mode gave 256 colours in Windows Paintbrush.

The results of the test were, to say the least, disappointing. Once I'd completed them, I did the same tests with my 1Mb Tseng-Labs card, with as many of the resolutions as it supported.

A study of all these results showed that the Windows Accelerator Card was, in fact, no faster than the Tseng-Labs card on test. This means that it would probably

either, because the Trident is almost identical to the Tseng as to speed.

#### A BIT OF PSYCHOLOGY

There's an interesting phenomenon to note when considering whether an Accelerator card actually does accelerate. It's the psychological effect that if you expect it to be faster, most likely it will appear to

This was tested with a group of people here in Brisbane who work full-time in the computer industry. They were unaware they were being tested. Interestingly, all agreed that "it certainly looks to run faster".

Sadly, it does not. This points up the importance of not necessarily believing the blurb. If you want to be sure, you or someone else need to check it in a reallife situation. My next test will be on a more expensive Accelerator card and I'll report on this soon. Let's hope it's positive this time.

So there it is. We desperately need Windows Accelerator Cards with an engine that's going to give considerable speed improvements over conventional cards.

ital card as tested gave no measurable speed increase.

#### THE NON-INTERLACED **MONITOR**



I said it had to come and it's just about here. From 1993 on, pretty-well all our monitors are going to be non-interlaced.

So what does this mean for the average user? Not a whole lot. Generally, interlacing is a 'cheating' way of writing to the screen in the hi-res mode of 1024 x 768 (all other resolutions were already non-interlaced).

The method of doing this could give screen flicker that reputedly bothered some users. Personally, I've never seen any flicker, but then I seldom look at a program in 1024 x 786. In any case, Windows flickers all over the place, and millions of people seem to use it quite happily.

We should note that most of us (both DOS and Windows users) normally use our

have been no faster than a Trident 1Mb Unfortunately, the Paradise/Western Dig-computers in 640 x 480 mode. This and 800 x 600 mode will be non-interlaced. This led to some of the unscrupulous cheap 'n' nasties catching the unwary by selling an interlaced monitor as noninterlaced.

> Well, it IS non-interlaced, isn't it? Yes, in the lower-res modes, it is - so be sure it would be rather hard to get them into court over having taken you down! (it does pay to always steer well clear of the cheapies).

> As most of us use 640 x 480 mode only, does it matter whether 1024 x 768 is interlaced or non-interlaced? Generally the answer is no. But increasingly you'll be supplied with a non-interlaced monitor with your new system, anyway, and at no extra cost.

But what if there IS an extra charge? Is it worth the money? Personally, I wouldn't want to pay too much for that privilege.

Well, that's it for another month. Hope you have a great one! See ya next time.

> -Lindsay K. Bates Ph: (07) 808 9441 after 11am.

Note: Accelerator Card performance is highly dependent on the speed of the computer - more on this next month-Ed

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## TRACKING GENERAL PROTECTION FAULTS - Part 1

F N Karmatz

#### That ole, familiar, lock-up

How many times has Windows locked up on you? If your monitor has ever displayed a message saying

General Protection Fault at 0003:0161 in the Ultrabig. DRV file, closing Windows, Reboot

when you were right in the middle of inserting something into your document, then you have experienced one of the major frustrations in dealing with Windows.

After I had my first one, they popped up regularly like a heat rash, until I decided I would have to reinstall Windows completely. The cause, which I later determined, was crossed-linked font files, due to using both TrueTypes (TT) and Adobe Type Master I (ATM) in Word for Windows 2.0. (I am not a Windows expert by any means and there may be better ways to deal with GPF's than the procedure I used.)

One has to realise that Windows is more sensitive to hardware and software than

DOS. In Standard or Enhanced mode, Windows runs the CPU in the protected mode, bypassing the BIOS and dealing directly with hardware devices.

#### What's a GPF

But first, let's see what GPFs are. They occur in the protected mode (the 386 Enhanced mode). The CPU tries to access a memory location where there is already data stored, in my case ROM. When this happens, the CPU tells Windows that a program just tried to enter an illegal memory address. Windows then responds with a GPF. Dr Watson creates a log and tells you where the error occurred and in what file or activity, as in the instance above (My log was so filled with GPF's Windows warned me that it was getting very large. Ater looking through the log (in ASCII), if the items are old or there aren't any apparent patterns, you can delete

If it is just in one program, it can be a bug in a program,a faulty driver or a corrupt file. But if it is not isolated, then the problem is more obscure. According to the Windows Resource Kit, faulty software is the primary cause of GPFs. But other common faults are BIOS

incompatibilities, an OEM version of DOS on another machine, such as the IBM version on a Compaq, or using an earlier HIMEM.SYS than DOS 5.0. I find the HIMEM.SYS provided with Windows 3.1 is superior to the one with DOS, and the same with the EMM386.EXE provided with Windows.

## A peculiar problem with EMM386

I find a peculiar problem with EMM386.EXE. It will take all the memory above 640Kb that is open when installed. If you are using an accelerator video card, or other TSRs, and try to load it high, it will clash with EMM386. I *REM* med

#### **Reinstalling Windows**

Have you ever had a problem reinstalling Windows from your original floppy disks? This can happen if you delete your old Windows completely. It may hang up your computer during the reinstallation process.

That's because when you install Windows, it first looks around to see whether there are any previous installations. If there are any vestiges, such as SMARTDRIVE in your AUTOEXEC.BAT, permanent virtual memory (386SPART.PAR) in an adjacent partition, or the term SETUP.INF in some other program, such as Quatro Pro 4, the installation may hang.

SETUP in the Windows disks looks for three types of files: SETUP.INF, Windows Drivers (\*.DRV) and other\*.INF files. It uses these to see what your previous configuration was. If it finds one of these anywhere on your hard disk and it isn't a windows file, it will likely freeze.

That would mean that you would have to go search every partition and file for these three types, copy them off onto a floppy, delete the files and the reboot and reinstall. The very least would be to change the names of the files, make careful note of the old and new names and their location.

But there is another way. Either copy from the installation disk or create a file called WIN.COM in the root directory. This is what SETUP.INF looks for first. If it finds it, setup will ask you how you wish to install Windows. Just pick *Custom* and install Windows on whatever drive you wish, with whatever configuration you want.



Hoot Mon, it's right there, a GPF

EMM386, picked an open space for my EEPROM, put in an exclude statement for that area of memory and then reactivated the EMM386.

Here how this line appears in my CONFIG.SYS:

DEVICEHIGE=D:\WINDOWS\EMM386.EXE NOEMS I=E000-EFFF X=DF00-DF80 FRAME=E000

Sometimes Windows fails to recognize regions populated by RAM and ROM in the Upper Memory Block (640-1024K), hence the EMS frame above. Windows, I am told, has a 24K wide translation buffer that passes data to and from the real mode in the UMB.

If you call Microsoft on its 008 808 532 line listed in Communique, which I did, the Techie will tell you to check for crosslinked files, which I had, with CHKDSK. Change them over with the /F switch. The Microsoft method for finding the causes of GPFs is to use a boot disk or *REM* everything out in your AUTOEXEC BAT AND CONFIG.SYS files, except COMMAND.COM, then reboot and run Windows, adding one line at a time in both

files. This system is bound to isolate the GPF problem.

The way to deal with address conflicts, PC Magazine suggests in its 27 October 1992 issue, is that if you can isolate the address where the conflict occurs, you can prevent Windows from using that address by adding an EMMExclude statement in the [386Enh] section of the SYSTEM.INI.

"You can easily test for these conditions in Windows 3.1 without editing the SYSTEM.INI file. Start Windows by typing

#### WIN/D: VSX

the equivalent of running with the

HDIrq=OSS,

SystemROMBreakPoint=FALSE and EMMExclude=A000-EFFF

in SYSTEM.INI If the GPFs disappear, you have narrowed the problem down to one of these three settings. Experiment individually with the /D switches to determine which one resolves the problem, then add the corresponding statement to the [386Enh] section of the SYSTEM.INI.

For example, if Windows runs fine when

started with the switch /D: V but generates GPF's without it, add the statement:

VirtualHDIrq=FALSE

to the SYSTEM INI.

IF /D:S does the trick, then add SystemROMBreakPoint=FALSE

PC Magazine Editor Jeff Prosise also says that you could more easily put in an exclude statement such as

#### EMMExclude=A000-EFFF

but warns against this because expanded memory won't be operable and the translation buffers will be put into conventional memory. This is why I excluded a very narrrow address area in my CONFIG.SYS statement.

With QEMM MFT or another Virtual86 Mode Memory Manager, you can experiment to see where the conflict region is, usually 32K or less. I started at the top and worked down from EFFF. PC Magazine gives the example of a RAM buffer in a 32K area from D800 to DFFF. This is solved with

EMMExclude=D800-DFFF."

0

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## 05/2 Column The

Paul Marwick

#### Minimalist OS/2

(or how to shrink OS/2's memory requirements, and disk requirements....)

I mentioned in an earlier column that it is possible to run OS/2 without the overhead imposed by the Work Place Shell. Since then, I've had cause to set OS/2 up in this manner, so I thought that I might go through the process (or at least, one way of accomplishing this purpose).

When the new drives were installed for BBS lines 1 & 2, I decided that, since the system would have to be off-line for a while to move the data and also to make all the changes necessary to account for different partition structures, I might as well make the conversion to OS/2 at the same time. That turned out to be a good decision, since configuring QEMM and DESQview to operate with the new busmastering SCSI host adaptor that runs the new drives has proved fairly difficult.

Since I wanted to make the move to OS/2, I had to apply some careful thought as to just how to do so. OS/2 (at least using the WPS) is something of a pain to use without a mouse. And the Line 1 & 2 machine doesn't have a mouse - both its serial ports are in use, meaning that if I got a

mouse for it, it would have to be a bus mouse (and bus mice are becoming fairly rare, as well as being more expensive than their serial relatives). In addition, I'd then have to find enough desk space near the machine to be able to use a mouse (difficult, to say the least...)

Unlike the machine that runs Line 3, the Line 1 & 2 machine is pretty much a dedicated BBS machine. Its also less powerful and has less memory than my machine. So, while installing OS/2, I wanted to maximise BBS performance, and leave the maximum resources available for running the two lines.

As mentioned earlier, one of the ways of running OS/2 without the WPS is to make a simple change to CONFIG.SYS. The configuration set up by OS/2 installation includes the line below:

SET RUNWORKPLACE= C:\OS2\PMSHELL.EXE

By simply substituting CMD.EXE for PMSHELL.EXE, it is possible to disable the WPS. So that is what I did...

With this change made, OS/2 boots to a blank desktop (none of the normal icons are displayed), and loads an OS/2 commandline window. From that window.

Using this process can reduce the hard disk requirement from 30 Mb to around 8 Mb

it is possible to launch new tasks, which can then be accessed using either ALT-ESC to toggle between active tasks, or CTRL-ESC to pop up the Task List, move the cursor to the desired task and press return to be make it the foreground task. If a mouse is installed, it is still active and can be used to move windowed task, change their size, etc. But, if a mouse is not installed, it is much less necessary than it is when the full WPS is loaded.

One curious feature of this method of

#### Paul discusses

- Shrinking OS/2
- Command line OS/2
- Mouseless OS/2
- Making a BOOT floppy
- Tips for Useability

window loads, OS/2 complains about not being able to access the command processor in the specified path. Curious, since its just loaded that command processor. I'll have to ask IBM about that one, but, for all the error message generated by this load method, it works.

While the normal startup folder that the WPS provides to automatically load de-

> sired programs every time OS/2 is started doesn't exist when running OS/2 this way, that really doesn't present any problem, since OS/2 offers another method of automatically starting programs, using a file called STARTUP.CMD. For BBS use, this method is more desirable any-

way, so I would have been using it whether I had to or not.\*

The effects of running OS/2 this way are quite visible. First, while all the icons which are normally used to access programs and files may be pretty, they consume memory and CPU power to display. Without them, OS/2 operation is noticeably snappier, and considerably less memory is used. OS/2 tends to be more memory intensive than CPU intensive (I'm not saying that having the fastest running OS/2 is that, when the command CPU you can afford isn't a good idea, but

<sup>\*</sup> By way of explanation for this, when the BBS tasks start, I cannot predict how they may have been shutdown. If a crash has occurred, or there has been a power failure, it may be necessary to do some cleanup work, but, if it has been a normal shutdown, that isn't necessary. Using a batch file to start the systems selectively allows me to distinguish between a "dirty" shutdown and a normal shutdown, and alter the processing accordingly. If I had the BBS tasks defined as objects and started from an icon, this flexibility would be largely lost).

in many instances, more benefit will be derived from increasing memory, rather than upgrading to a faster processor). Minus the WPS, more memory is available for operating programs, and there is less likelihood of the operating system using virtual memory and swapping to disk. As a result, performance minus the WPS is enhanced.

#### Command line OS/2

The obvious question is, how do you run things when you don't have icons to select. As already mentioned, its quite possible to start programs direct from the commandline presented by the OS/2 window which is loaded in place of the WPS. OS/2 has an internal "start" command which allows new tasks to be started. The start command has a number of possible parameters which can be used to control the way programs are started. A list (not necessarily complete) is shown in the box

this covers the main ones that I use.

I should mention that the fact that the WPS is not running does not prevent you from running Presentation Manager programs - they can be started just as easily as text mode programs are.

Naturally, if you have to use the start command, life is a little more complicated than it is if you simply point to an icon and double-click on it. You need to know where the program you want to start is (or at least know that it is in the path). You may also need to get to the correct directory if that is required (since the 'start' command will use the default directory from which the program was launched). Nothing terribly complicated, but it can be a bit tedious if you first have to change to the correct directory, then use something

start "User Editor" c:\somedir\utils\ueditp

Start accepts other parameters as well, but problem. The simplest is to write batch (.cmd) files to run things which are otherwise complicated or tedious to start, or that you are going to be using often. One of the first things I did after installing OS/ 2 without the WPS was to write a few simple batch files to start tasks that would commonly need to be used.

A few samples are below:

WIN.CMD (start a windowed OS/2 commandline session)

start "OS/2 Window" /win /max

FS.CMD (start a full-screen OS/2 commandline session)

start "OS/2 FS" /fs

DOSW.CMD (start a windowed DOS commandline session)

start "DOS Window" /win /dos /max

There are several possible ways round this DOSF. CMD (start a full-screen DOS commandline session

start "DOS FS" /fs /dos

These cover the simple things that I may use frequently, and save me a bit of typing. For more complex tasks (such as running an individual program, rather than simply opening a new commandline task), the batch files need to be a bit more complex as well.

For instance, to run the user editor for the BBS, you either need to be in the directory in which the user record file is located, or you need to provide command line switches to tell it where to find the user record file. In addition, it can read a configuration program to set certain defaults, and it accepts a commandline switch to disable mouse support (which is a good idea, since the version I'm running at the moment has rather odd mouse support, and is unusable unless the mouse support is disabled). Some programs are not as flexible as this, and require that they be run from a set directory.

## Using batch files

In this type of instance, there are two possible approaches.

First, you can make the batch file change to the correct drive and directory before the "start" command is issued. Or you can use two batch files, one of which starts the other.

#### "START" command switches

in minimised form

"title" the text is quotes is displayed in the window top bar and/or below the minimised icon when the task is minimised start the task in windowed mode /win the task is a Presentation Manager graphics based /pm program start the task as a full screen task /fs the task is a DOS task rather than an OS/2 task /dos /b start the task in background /f start the task in foreground used in conjunction with other parameters, to ensure /i that the started task inherits the environment set by CONFIG.SYS rather than that set by the session from which it is started) terminate the task when the program terminates /c /k keep the task active when the program terminates used in conjunction with /win to start a windowed task /max in maximised form) used in conjunction with /win to start a windowed task /min

While the second approach is a bit wasteful of disk space, it does have the advantage of being more flexible. So, to use the user editor as an example again, I've written two batch files to allow it to be quickly and easily started from the command line. As below:

UED.CMD

USR.CMD

cd\ & e: & cd\max ueditp -i

This "starts" a batch file which moves to the correct directory, and then starts the user editor with mouse support disabled. Using /c means that when I exit the user editor, the task will terminate. I've written several two part batch files of this sort. To make the process as transparent as possible, the "secondary" batch file in each instance is stored in a directory which is not in the search path, so I'm less likely to accidentally use the wrong start command.

#### DOS from a batch file

In a similar manner, I've created a batch file to run one DOS program that I use frequently (its now about the only one I use frequently, and will hopefully have an OS/ 2 version in the not too distant future):

*I.CMD* (start InspectA in the default directory)

In this instance, I'm using the full path, since the DOS utilities directory is not in the search path for OS/2 sessions. InspectA itself is smart enough to be able to find its own configuration file, so that is all I need to do to open a DOS task running InspectA.

#### Or use a menu...

Another alternative method of starting tasks is to use a menu system. A menu can be built using batch files with a few simple utilities to read and respond to user input, or it can be built using the OS/2 procedural language, REXX. A sample of the latter approach can be found in REXMENU2.LZH (available from Line 3 of the BBS). This uses the power of REXX to produce a very flexible menu system.

## Further slimming for a dedicated BBS system

Earlier, I mentioned reducing OS/2's disk requirements as well as reducing its memory requirements. Since the Line 1 & 2 machine is pretty much a dedicated BBS machine, there are a number of things that might be used on a more general purpose machine which can be dispensed with, saving disk space for use by the BBS and its files (not that disk space is a problem, yet, but it doesn't take long...).

When I installed OS/2 on that machine, I went through the selective installation process, and trimmed out everything that I didn't feel I was likely to need. OS/2 comes with a full set of utilities, as well as a number of small application programs ("applets", in IBMspeak). While many of these may be useful, few of them have any relation to running a BBS, so the majority of them could be dispensed with. In addition, I chose not to install the online documentation and help files, or the optional graphics and bit maps. I did install the utilities, since they include useful things like FORMAT and CHKDSK.

However, once the installation was complete, I went through the utilities and removed those that I don't have a use for.

Using this process, I was able to reduce the disk requirements from around 30 megabytes (for a full OS/2 installation) to around 8 megabytes. I suspect that, once I have a bit of time to go over the system in more detail, I'll be able to reduce that a bit further as well. I've no use for the OS/2 Windows support, so I didn't install it. I could reduce the requirements even further (as well as improving performance and reliability a bit further) by turning off DOS support, but, at least for the moment. I still need DOS support, so it had to stay. Maybe some time soon that will change there aren't all that many DOS programs that I don't have native OS/2 versions of

#### So, how does it all work?

Its a little confusing at first (I guess I've got used to using a mouse and pointing at things, and for a while I kept reaching for a mouse that isn't there...). However, once you adjust to it, its simple to use, and very

#### **STOP PRESS**

For imminent release ...



## **Novice BBS User Manual**

Graeme Darroch, with a bit of help from his friends, has prepared the ultimate "how to" manual for new BBS users.

A step-by-step guide with lots of screen dumps and help file listings takes the novice through the sometimes intimidating processes of logging on, registering, downloading files, reading and replying to messages, and logging off.

Appendices include how to unarchive the files you download, how to select and set up a modem for BBS use, and how to use an off-line mail reader.

Check the Notice Board at the February Meeting for more details of price and delivery.

effective. In a way, the lack of a mouse is more noticeable than the lack of the WPS. There are a few things which are difficult to to without a mouse - for instance, I've yet to find a way to change the default background gray that OS/2 installation leaves the desktop in. I can start the colour palette without problems, but I haven't a clue as to what keys (if any) can be used to drag a selected colour from the palette to the desktop. Oh well, I guess for the moment, I'm just going to have to live with the gray backdrop. I suspect that there are probably also a few PM applications which will be impossible to use fully without a mouse. That problem wouldn't necessarily exist on another machine set up this way, since the lack of a mouse is dictated more by available serial ports on the BBS machine than by anything else.

Since the main mechanism for changing tasks is now the task list, or toggling between tasks, it requires a bit of thought as to which of these alternatives to use. In some instances, toggling between tasks will be most effective, while in others (such as switching between full-screen sessions), using the task list is quicker.

#### **Useful Utilities**

which allow hot-keying from one task to another - when I get a bit of time, I'll probably try installing one of them to see how that works.

The other utility that I've found useful is something called TL. It can be called from any commandline session, and simply pops up the Task List. This can be very useful when working mainly from the commandline, and I find I'm using it a lot.

If I really need it, I can still start the full Work Place Shell. This means that I've got all the flexibility that I need, but without the overhead of the WPS on a fulltime basis.

So far, I rather like running OS/2 this way. In fact, I'm giving serious consideration to setting my own machine (the one which runs line 3) up the same way. It certainly helps to maximise available resources. For anyone considering running OS/2 on a memory-limited machine, this is well worth trying.

#### Floppy BOOT disk for OS/2

There are a couple of utilities around Having installed OS/2 on the Brisbug machine, one of the first things I considered needing was a boot disk. While it is pretty simple to produce a DOS boot disk, the process is somewhat more complex under OS/2. If nothing else, boot disks under OS/2 tend to be fairly specific to a single machine, since the configuration will be different for just about every machine. Things such as whether HPSF support is required, the type of hard drive installed, etc, will all tend to make boot disks customised for an individual machine, and not necessarily useable on another OS/2 machine. However, having a boot disk is just as (if not more) vital for an OS/2 machine as it is for a DOS machine.

> There is a way of booting from floppy which is available for any OS/2 user. Booting from the installation disk, then putting disk 1 of the installation set in place, and pressing the ESC key when it prompts for the installation will get you to an OS/2 command prompt. However, this is pretty slow (you've got to wait while the operating system loads, then go through

## **SIG Reports**

#### **PASCAL SIG**

The January meeting of the Pascal SIG was devoted to an informal discussion on various subjects, ranging from the release of the new Borland Pascal 7 with Objects to Sound Blaster files.

Also thoughts were given on Windows April 13 - Computetland and Turbo Vision concepts.

There were some questions about the use of the built in assembler (BASM) in Turbo Pascal 6, to which John Back has made extensive use of in a program that he and his co-author Darren Ceyden have just completed. The program is called ASMPAINT and John will be demonstrating at the next Sig meeting.

So if anyone is interested in seeing the result of fast driver routines written under the structure of Turbo Pascal, be at the February Pascal Sig.

#### Gold Coast SIG

#### Coming meeting dates:

March 9 - Computers and Accounting

March 23 - Word Processing

The GCC now has three specialised (sub) SIGs:

Genealogy

New Users

**General Topics** 

For information contact:

Neil McPherson (075) 740800

Secretary: (075) 710 113

Joanne Ellis

#### PC English??

Eye have a spelling chequer, It came with my PC, It plainly marques for my revue Mistakes eye cannot sea. I've run this poem threw it, Eye am sure your plea's too no Its letter perfect in it's weigh, My chequer tolled me sew.

Verse from DON WALTON, Hallet Cove, SA.

Source: The Australian, Letters to the Editor.

PageMaker reckons "Walton" is spelled incorrectly-Ed.

This space RESERVED for late reports

the loading of the installation setup before you can get to the command prompt). So, having a quicker way of booting from floppy is very desirable.

Donald Myer has produced a method of creating an OS/2 boot disk. This is available from line 3 as MAKEBOOT.LZH. It consists of a REXX procedure which will accept user input to assign defaults, and then create a custom boot disk for the machine on which it is run. While its not entirely bullet-proof (I've found that I have to make a few manual changes almost every time I've used it), it provides a simple method of creating a single boot disk. Very useful for emergency repair work...

There is one other limitation which

should be mentioned. OS/2 is a

fairly substantial operating system. In most instances, I'd recommend that people wishing to use it make sure that they have a 1.44 meg floppy drive as drive A:, but, even then, it is difficult to fit all that is needed to boot OS/2 on a single disk. For installations which don't include HPFS or SCSI support, its not too much of a problem, but for installations which do include these features, it is impossible to fit both the operating system and useful utilities onto a single disk.

When I first created an OS/2 boot disk, I ended up having a second disk, which had the necessary .DLL file for HPFS support, plus utilities such as CHKDSK and an editor (in my case, Qedit for OS/2, but replaceable by things such as TED or TINYEDIT if you don't own the OS/2 version of Qedit). Given these space requirements, things like the new 2.8 meg floppies become quite attractive.

However, the price of 2.8 meg media is very high, and I've yet to see many machines which have BIOS support for the new floppy disks.

#### Fitting it on one disk

There is another way round this problem, which is what I recently employed on my own machine, and have also now used to produce a boot disk for the Brisbug machine. It uses a DOS program, but, interestingly enough, it works better under OS/2 than it does under DOS.

What I did was use a copy of FDFORMAT (v1.8), and formatted a couple of 1.44 meg disks to 1.6 meg. While under DOS, I

found that I had to have the FDFORMAT TSR loaded to make use of these disks, OS/2 has no problems handling the higher density format. Having formatted the disk to 1.6 meg, I then ran MAKEBOOT on it and created a boot disk which not only included full SCSI and HPFS support, butalso had enough free space for me to include useful utilities such as CHKDSK

... the lack of a mouse is more noticeable than the absence of the Work Place Shell

and Qedit. Worked very well and provides me with a reasonably simple way of having a convenient single boot disk for the OS/2 machines.

#### Some more tips...

When I partition drives for OS/2 installation, my tendency is to make the boot partition fairly small (40 to 50 megabytes is ideal). This is sufficient for OS/2 itself, plus a few extra bits and pieces, but also leaves plenty of space for OS/2's swapper file. I then usually create a few directories for executable files, batch files and .dll files

I add the directory for .dll files to the OS/2 LIBPATH variable, so that they can be accessed, but are kept separate from the .dll's that come with OS/2. By doing so, backups are made simpler. In the past, I've not even tried to backup OS/2 itself. While reinstalling it may be a bit painful, its not a major problem to do so, and until better backup software arrives, its a lot safer to do this than it is to try and restore from a backup.

To get round the fact that the boot partition has files that will not be restored if I (hopefully not!) have to reinstall OS/2, I've written a batch file which uses the OS/2 port of LHA to create a backup. This uses the lm switch for lm, which tells it to only add changed files to the archive (and clear the archive bit on the files when its finished). It also uses the lm switch, so that

the directory structure is stored in the archive created.

The batch file creates archives from each of the non-OS/2 directories on the boot partition. It is then run every night as a part of general maintenance, and will only add new or changed files to the archives already created. The created archives are

placed on another partition, where normal tape backup can be used to make sure that there are backup copies of them.

Since the directory structure is stored in the archive, restoring them is a simple matter, should it be necessary. Customised things which live in the root directory (CONFIG.SYS, AUTOEXEC.BAT and STARTUP.CMD) are also added to an archive created the same way.

I use *LH* for this purpose, since it understands OS/2 extended file attributes, and can both save and restore them correctly. Like many of the other maintenance tasks which are not time critical, this batch file is run at idle priority in the middle of the night.

#### **Member's Advertisement**

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## Setting up for AutoCAD **Programming**

**Notes by Geoff Harrod** 

These notes do not explain either menu customising or Lisp programming, but only ways of setting up the system to make the job easier. It should be of interest to those who have already started customising or programming AutoCAD, and to those thinking of doing so. The material is included in courses I run on customising and Lisp. Some of the tricks described here are not widely known about.

The key to easier customising and Lisp programming in AutoCad is to be able to quickly alter & test things without a lot of repetitive typing and waiting. Programming always involves a process of repeated correction and refinement and you need to make the switching between programming and testing as fast as possible. An essential is a good text editor and the ability to use it from within AutoCad.

#### **Editor**

Some well known books on AutoCAD programming, such as those by George Head, advise using a word processor such as WordPerfect. That is most definitely very bad advice, believe me! You can get into all sorts of messes that way. You really MUST use a proper text editor. Other books assume the use of EDLIN, the text editor that comes with all versions of DOS. EDLIN certainly produces good results but is an awful beast to use and it is very easy to accidentally destroy your work with it. Using EDLIN is enough to put anyone off persisting with customising for ever! So I consider those books give the wrong advice also, but not so seriously.

A word processor is actually a very fancy text editor with all sorts of extra formatting features. A text editor, called as such, is one that produces standard plain ASCII text files that are understandable to all programming systems. ASCII files contain nothing except printable character codes. Those are: ASCII codes 32 (space) to 126 (~), 7 (TAB), 10 (Linefeed), 12 (Pagefeed) & 13 (Carriage return). Word processor files contain all sorts of special codes unique to each particular word processor, and are not understandable by any other program than that particular word processor. Most word processors can also write ASCII files if you remember to use special saving options, but it is generally

a problem as it is so easy to forget and get well! You really need the help of a bracket it saved in its native file format. The last thing you want when programming is avoidable impediments! There are enough already.

There are many good editors available, but some have features valuable for this application. I consider the best editor. even regardless of cost, is Q-EDIT from Semware. Even better, it is distributed as Shareware, which means you can legally get a copy for nothing. If you then find you take to customising you can pay to register it and get the latest version with proper printed manual. The full price of Q-EDIT is very low (about \$80) because of this low overhead distribution channel. Qld AutoCAD Users Group or Brisbug PC User Group can supply an almost free copy of an earlier version of Q-EDIT, and arrange for a registed new copy too. The latest version has some nice extra features like column blocks, but the older version will serve quite well for our pur-

The most important thing is that O-EDIT is one of the few editors that will find matching bracket pairs for you -- an extremely valuable feature when working in LISP. You put the cursor on a (or) character, and press CTL-F3. If there is a matching complementary bracket the cursor jumps to it. It may not be the one you expected, which means you have an error somewhere.

It is very easy to write beautiful Lisp code with nice indenting, but where the indenting does not in fact agree with the bracketting. However, the indenting means nothing to the interpreter -- only the number of brackets and their nesting matters. Someone once made the profound statement that LISP does not stand for "List Processor" in fact, but "Lost In Stupid Parentheses''! I know the feeling

matching editor, believe me.

With DOS-5 you at last get a decent editor (EDIT), but it lacks the bracket matching facility. NORTONEDITOR (for DOS) is good, small and low cost and does have bracket matching, but Q-EDIT has better block copy and file insertion facilities.

Another option is to use a "pop up" memory resident editor, that you can pop up over AutoCad with a hot key. The most common of these is Borland's SIDE-KICK. A similar alternative is in PC-TOOLS DESKTOP. Both these are comprehensive "Desktop" utility systems, and as such they tend to take up rather a lot of your scarce Base memory area. Q-EDIT-TSR is a pop up resident version of Q-EDIT, but it uses a "swapping" method that is a bit of a problem in itself. I do not advise using pop-up editors, particularly for menu files which are rather big. I know some avid programmers swear by them though.

I think the best method is to use a normal editor such as Q-EDIT, set up to run from AutoCad's DOS Shell. You can alter the ACAD.PGP file to make the editor command act as a new AutoCad command. The ACAD.PGP file that comes with AutoCad has an EDIT command that runs EDLIN. It is easy to alter it to run Q-EDIT instead. Or, since the command name of Q-EDIT is Q, and there is no Q command in AutoCad, you can add a O command to do it. If you have Q as an alias for QUIT you could use QE for the

This is all assuming the use of MS-DOS AutoCAD. The Windows AutoCAD is actually a very neat way of working as you can use the multi-tasking to have an edit window as well as the CAD window.

The same applies to the Unix versions on SUN SPARC, DECstation, etc. But these notes will relate to the DOS situation which is by far the most common.

## Integrating the editor into AutoCAD

Most editors work on the file entirely in memory, which means you must have enough free memory to be able to fit the file in its entirety. When being run within the shell environment, that means you must tell AutoCad to clear sufficient memory for it, by specifying an appropriate value in the ACAD.PGP file. The largest file you are likely to want to work on is the Autocad MNU file, which can be rather large. In fact in Release-11 the ACAD.MNU file is somewhat bloated and hard to accommodate. I will mention a way of reducing its size later. The Lisp files will usually be quite small. There are some "virtual memory" editors such as Multi-edit which will work on files bigger than the available memory, but they are not commonly available and cost more. The olde WordStar 3.3 (but not later versions) serves quite well in that respect if you happen to have it. Be sure to use "N" mode though. Generally I think it is better to stick with Q-Edit or similar and cut down the menu file if you have to.

The line you need in ACAD.PGP for using Q-EDIT is:

Q,Q,380000,,4

The "4" switches you back to the AutoCad graphic screen on exit from Q-EDIT. The 380000 is the memory reserve. You don't need a "prompt" as Q-EDIT does that for you, so there is nothing between the last two commas. Actually, with the DOS-386 versions of AutoCad the specified memory reserve size is ignored since AutoCad is running in extended memory and the bulk of the base memory area is already vacant. In fact in Rel-12 the sample PGP file uses zero sizes. It does no harm to specify a value however, and is essential on 286 versions.

Copy the editor files into a directory on the PATH. If in doubt copy to the same place as ACAD.EXE. You only need the file Q.EXE to use Q-edit, but copy QCONFIG.EXE also so you can alter its defaults and colours if you wish. The full instruction manual is in the big text file QEDIT.DOC which can be copied to the printer as a 150 page manual, by COPY QEDIT.DOC PRN. There is a single

screen help pop-up within Q-EDIT. You could refer to the big manual file by opening Q-edit's second window while still editing your file. You could also use Q-EDIT to hack a copy of the manual file down to a more more compact size with just the info you might often need.

#### **Quick Alter-Test Cycle**

When you are developing menus or Lisp, the usual thing is that you write something, try it out, find it crashes or malfunctions, alter the file, retest, etc... This usually needs to be repeated many times before you get it right, even for experienced programmers. The trick is to shorten the time between alter-test cycles. Having a quick loading editor is one thing. Avoiding having to exit AutoCad and then reenter is another. Editing in the shell does both. Then the most lost time is in repeatedly typing in the file name to the editor, and reloading the program or menu afterwards to re-test it.

A quick way of achieving that is to have two menu macros that run Q with a fixed filename and then automatically reload the menu or program. The menu editing will always be with ACAD.MNU anyway (or whatever your menu file is called). For Lisp the trick is to always call the file you are currently developing by the same name, such as NEW.LSP, then rename it after you have got it to work and want to work on another.

When starting to work on a new menumodification project it is a good idea to first copy your existing MNU file to another name as a fall-back in case you make an irretrievable mess.

To set up these two macros on a pull-down menu you need these lines in ACAD.MNU:

[Edit LSP]^c^cQLSP (load "new")
[Edit MNU]^c^cQMNU MENU ;

They can be added to the end of the existing Files pull down. Search for \*\*\*POP and then for [Files]. If you use a tablet (which you should if you are seeking maximum operational efficiency from customising) you could put those on tablet cells. Each of the above macros runs a command that we will define in ACAD.PGP, then after that immediately reloads the Lisp file or the menu file so you can test the changes. Note the space and semicolon after MENU.

You also need two lines in ACAD.PGP to define the programs called:

QLSP,Q NEW.LSP,150000,,4 QMNU,Q ACAD.MNU,380000,,4

The command names must match those written into the menu macros above. The memory reserve for QLSP can be smaller to help quick operation.

#### **Debugging Lisp**

AutoLisp has virtually no debugging support. The only service it provides is the (infamous) "traceback". That is the monolithic mass of jumbled up Lisp code that scolls through the AutoCad prompt area when a Lisp error occurs. Sometimes it seems endless, and rarely much use. You can disable it altogether by defining a replacement (\*error\*) function that only prints the error message, and that is often done for use with debugged systems. But the traceback is all we've got, and it does serve to show what line the error occurred on. The problem is, usually only the first line is of interest, and if the problem is nested deeply in a multiple calling stack the traceback can be so long that the first line scolls off even the full text screen. You can stop the scrolling by Ctl-S, but you can't flip to the full text screen until it has run its course, by which time the first line has been lost.

The usual answer to this is to have a printer on line and to toggle printer echo on with Qtl-Q before trying an unproven Lisp function. This assumes you have a printer, the patience to wait for the much slower traceback scrolling, enough paper for all the reams of junk you will get, and a tolerance for noise. You also need to remember to toggle echo off when not needed or you get even more unwanted rubbish slowly printed.

There is a way round this. There is a tiny, free program called PRN2FILE.COM available on many bulletin boards. PRN2FILE is a resident program or "TSR", and should be loaded from DOS before running AutoCad. It then redirects printer output to a text file, and keeps appending to the end of that file whenever more printer output occurs. This way you can use Qtl-Q printer echo without having a printer, not having the computer slowed to the printer's crawl, not wasting piles of paper and without all the noise. You can use the editor to look at the print file at any time without problems.

You could even alter the ACAD.PGP definition for QLSP to load both NEW.LSP and the printer file, thus (assuming you redirect print output to a file called PRT): QLSP,Q NEW.LSP PRT,150000,,4

Then in Q-EDIT, ESC-Window-Split will show both together. Having looked at the traceback and decided what to do, block mark the whole print file with Alt-L, Ctl-PgDn, Alt-L and delete it with Alt-G before exiting. That avoids the file continually getting bigger, and doesn't interfere with the continuing operation of PRN2FILE.

The DOS command to start PRN2FILE is as follows, assuming you've decided to call the print file PRT:

PRN2FILE PRT

However, it will probably be best to prefix the PRT with the path which will be current when you are working on your drawing. So if you work in C:\DRAWINGS the DOS command would be

PRN2FILE C:\DRAWINGS\PRT

This could be put in AUTOEXEC.BAT or your DOS menu.

From then on, any print output will go to a file called PRT, from whatever origin, not only from AutoCAD. To restore normal printer output, give the DOS command PRN2FILE with no filename. You can use any name for the print file, but don't be tempted to use PRN as that is the reserved name of the real printer port! When in AutoCad, the Ctl-Q printer echo key toggles on and off the echoing of command dialog to the file.

Remember to reset the print output to go to the real printer after finishing your programming, otherwise the next time you go to print something you'll think the printer has gone wrong, and maybe get such a long PRT file you run out of disk space! You restore normal printer operation by the DOS command:

PRN2FILE

You can alternate between normal printing and capturing it in a file as often as you wish. If you use the same print capture filename as last time when enabling it again, it adds new output to whatever was in the file from last time. So if you want to start with an empty print file you must delete the old one first.

#### **Use UNDO for re-tries**

When you run a Lisp function under development it will almost certainly crash a few times. You're a rare programming genius if it doesn't! But before it crashes

it will usually do some of its intended drawing work, or draw something unwanted, or mess up the drawing in some way. After you have altered the Lisp code, you will probably need to get back to where you were in the drawing before you re-try it. The best way to do that is to set an UNDO Mark before trying the function. Then if it goes wrong you can give the UNDO Back command to undo back to that point. So the command sequence to try a function would be:

Command: UNDO M

Command: AQ <Printer echo on> NEW {or whatever your function is called }
Command: AQ <Printer echo off> QLSP

{Fix up the code }
Command: UNDO B

#### Release-11 MNU file

In Rel-11, Autodesk embedded huge slabs of LISP code into the ACAD.MNU menufile. I can't see the point of this technique. It makes the menu file excessively big, and destroys the basic one line per item format. It also can result in a lot of code being echoed through the command prompt, confusing users into thinking something is wrong. It also makes editing the MNU file more difficult because of its size. That is compounded by the fact that several of the Lisp chunks are repeated in several places under different menu items.

It seems to me the LISP would be better in separate LSP files called from the menu by a (load''...'') command. You can greatly reduce the size of Rel-11's MNU file by extracting the big chunks of Lisp to separate files and substituting (load''..'') commaands. You need to be sure to avoid disturbing any chunks that have bits of MENU mixed up in them though, and take care to maintain the validity of the code, so some care and skill is needed. If in doubt, don't. I just put forward the idea for those who feel confident to tackle it.

Autodesk have given up the practice in Release-12's menu file.

If you don't own a tablet, you can greatly shorten the MNU file by deleting all the sections headed \*\*\*TABLET. Keep the full version under another name in case you later buy one though. If you do use a tablet and the file is too big for the editor, you could chop out the SREEN menus section while doing your programming and then paste it back in after you've got everything right. Q-EDIT will handle the full menu file happily when run directly from the DOS prompt. It is only when run

in the restricted memory environment of the AutoCAD SHELL that it is likely to have problems.

#### Lisp examples

In similar vien, the SETUP.LSP of Rel-10 was replaced by a new MSETUP.LSP in Rel-11, that is enormously bigger -- it prints out to over 30 pages! It is a very strange bit of lisp, and a large part of it at the end is actually comments that get read by the lisp code nearer the start as scriptlike data for drawing sheet outlines. A very odd technique indeed! The whole thing is very hard to understand, and I believe needs replacing altogether with something more sensible. They did just that in Rel-12.

I feel compelled to express my view that new learners of AutoLISP should not regard all the lisp sample programs provided with AutoCad as models of programming expertise. I think several of them represent very poor programming practice. So do quite a lot of the examples in the various books on the subject. The advice on programming technique given in the AutoCad Programmers Reference Manual is all good however, and so are the examples printed there.

I'm not sure how much interest there is in these rather specialised things in BRISBUG, which caters for a wide range of users. If I get enough expressions of interest I will write about the techniques of AutoCAD menu and Lisp programming, but these things are covered more fully (naturally) in the Qld AutoCAD Users Group. They meet on the last Wednesday of every odd-numbered month, usually at the University of Old. They also run one-day introductory training seminars on various AutoCAD topics from time to time. I am running one of those on Lisp on 20 Feb but that is probably too late for readers of this issue. You need to join the group to attend. That will be very much introductory, being only one day. I also run Lisp courses as part of my business and they are usually 3 or 4 day (all-day) events. If you want to know more about QAUG you can ring me on (07)379-1747.

## **Tech Notes:**

### **Application Execution Environments**

Doug Rickard

This issue will explore some of the issues about the environment in which an application program executes. Very few programs execute in total isolation. Usually they run within the context of an operating system, and usually within the constraints of a command language.

he command language may be used to initiate execution of the program, and pass various arguments to the program, e.g. name of a data file, etc.

Each command language of each operating system has its own language and syntax, and this is what users become accustomed to. The users of MS-DOS become accustomed to the MS-DOS method of launching an application, just as Unix (TM) users become used to the Unix method of launching an application. What the application programmer must ensure is that any program they write will operate within the idiom of the operating system and environment that it is run on. It is no use at all to require an MS-DOS user to provide a Unix like command string to launch an application just because the application programmer had a familiarity with Unix. Similarly the Unix user will not appreciate having to learn MS-DOS or VMS style command strings to launch an application just because that's where the programmer came from.

In these days of portable applications it behoves every programmer to understand the different kinds of environment under which their program may have to execute, and ensure that in that environment it operates within the common idiom of that system. If possible the program should be able to detect its run time environment, and adapt to it. Unfortunately very few operating systems provide sufficient application support for this to be easily achieved, so in many cases this adaption to the environment is achieved by conditional compilation of the source code.

The environment on a specific platform may even differ slightly between interactive and batch operation. Ideally many applications should be able to operate in either an interactive or batch mode. This however can create another environment problem. When an application is run in interactive mode, the user is very aware up front whether the application executed successfully or not, and so may select what operation must follow. In a batch environment this is not the case as there is no human operator to oversee operations. It is important then that applications should be capable of communicating back to their environment the success or failure of their operation. This is generally achieved by the use of 'status returns' from applications.

#### **Exit Status Handling**

In MS-DOS batch, the status return from programs becomes available in the 'errorlevel' parameter. In VMS it is the '\$STATUS' parameter, and in Unix it depends upon the particular command shell which is being used.

The point is that all programs will pass back a status return to the operating system. If the programmer does not ensure that it is a valid status return, then usually a totally garbage value will be returned. In MS-DOS it is usually the last contents

however can create another environment of the AX register. In VMS it is the last problem. When an application is run in contents of Register 0 (R0).

It is very important then that application programmers should ensure that their programs operate as "good neighbours" by returning appropriate status values to the execution environment.

Just to complicate matters more, the meanings of different status values is different with different operating systems. For example, in MS-DOS and Unix, a status return value of 0 usually signifies success, whereas under VMS it usually means a failure of some kind. Similarly VMS uses a value of 1 (or odd values, i.e. where bit 0 is set) to indicate success, but MS-DOS and Unix systems often use 1 to indicate a non-successful operation.

The 'C' programming language has attempted to overcome some of these problems by defining two special symbols 'EXIT\_SUCCESS' and 'EXIT\_FAILURE'. The definition of the symbols is designed to be altered for the different operating systems, so that no matter what operating system is used, if the programmer returns an 'EXIT\_SUCCESS' then that will be cor-

rectly received as a successful status by the operating system.

For a 'C' program to correctly return status codes to the operating system, the ANSII 'C' (and now ISO 'C') standard recommends that all 'C' 'main' routines should finish with a 'return' statement and a status value. This is very different to the practice of the past, however it must be remembered that in fact 'main' is actually called as a function of the 'C' initialization routines, and that to be grammatically correct should have always finished with a return. The new standards have now formalised this behaviour.

In addition, if 'main' is going to return an 'int' status value, then 'main' should be declared as a function of type 'int'. The 'C' code fragment in FIG 1 illustrates just one of the ways this might be done.

#### **Time and Date Formats**

Time and date is another area where great variations occur not just between operating systems, but between different languages on the same operating system. It is up to the application programmer to see if they can make some sense out of this complex mess.

Under VMS the user is very used to a single date/time format -"31-Oct-1992 14:26:32.56". This is a totally unambiguous format, and apart from the spelling of the month being different languages, it is well accepted all around the world. The VMS system manager can re-define the format system wide, as well as the language, by means of logical names. My extensions to VMS even allow each individual user to define their own date/time format, again via logical names.

Under MS-DOS the most common date/ time format seen is the very ambiguous "mm/dd/yy hh:mm:ss" form, such as "31/10/92 11:24p". This is a USA form only, and is not only disliked in many other countries, but can also create confusion because of the ordering of the month and the day. Under MS-DOS the form can be altered by the use of the 'country' utility, and the choice of an appropriate country code. For Australia, the inclusion of the string country=61,,c:\dos\country.sys

in the CONFIG.SYS startup file will cause MS-DOS in many cases to display in the correct format for Australia. See more about this in a previous "Tech Notes". Unfortunately most MS-DOS users are

not aware of this capability and still suffer time representation to be used at run time, with the USA format. and not at application development time.

Another area where customisation of MS-DOS can be done is by defining the TZ environment variable. This is used by many 'C' routines for calculating UTC and local times, and must be set if correct operation of 'C' programs which use these features is required. For Queensland the string -

set TZ=EST-10

in the AUTOEXEC.BAT startup file will cause these 'C' routines to behave correctly. If TZ is not defined, it defaults to a value which gives USA times!

Because the format of strings returned from system routines may well vary according to the locale, it is important that the programmer should not make assumptions about the exact format of date/time strings and attempt to break them up. If the name of the current day of the week is required, the 'C' programmer should not use the 'localtime' function and extract the first 3 characters, but should preferably use the 'strftime' function using the format designator of %a or %A to return exactly what is required, and which will not alter if the user has changed the default date/time format.

In many cases it is an advantage if the user can select the exact format of date/

time representation to be used at run time, and not at application development time. This can be very satisfactorily achieved in 'C' by the use of an external environment variable or logical name, together with the 'strftime' function. I have normally chosen the environment variable name "DATE\_FORMAT" for this, and by setting this variable according to the format rules of 'strftime', the user can define any date/time format they may desire. For example, under VMS the DCL string - \$ define date\_format %d-%b-%Y %H:%M:%S

will cause the output to be similar to the standard VMS format. Under MS-DOS, the DOS command -

C:> set date\_format=%m/%d/%y %H:%M:%S

will cause the output to be similar to the familiar MS-DOS format. In fact one can even use format statements such as - C:> set date\_format=This is the %d day of %B in the year of %Y

which will return the string -This is the 15 day of November in the year of 1992

A sample of code which works with MS-DOS V5, MS-C V6, and VMS V5.4, VAX C V3.1 is shown in FIG 2.

Doug Rickard Software Technologies Pty Ltd PO Box 127 COOPERS PLAINS QLD 4108

```
#include <stddef.h>
                        /* for size_t */
#include <stdio.h>
                        /* for printf */
                        /* for EXIT status */
#include <stdlib.h>
#define MAX_LEN 32
int main() {
    char string[MAX_LEN];
    int length=MAX_LEN;
                                 /* maximum length of returned string */
    int len;
                          /* return actual length of returned string */
    len = get_formatted_date_string(string, length);
    printf("Length of returned string is %d\n",len);
    printf("%s\n", string);
    return EXIT_SUCCESS;
#include <stdlib.h>
#include <time.h>
int get_formatted_date_string( char *string, int len) {
    time_t now;
    char *date_format;
    char *default_format="%a %b %d %H:%M:%S %Z %Y";
    int length;
    time(&now);
    date_format = getenv("DATE_FORMAT");
    if ((date_format = NULL) || (strlen(date_format) = 0))
            date_format = default_format;
    length = strftime(string, len, date_format, localtime(&now));
    return length;
                                                                      FIG 2.
}
```

## Consultant's Notepad

**Geoff Harrod** 

This is intended to be the first of a regular column of notes about various computing matters that come to my attention in the course of my work, that I think may be of use or interest to members. Often they will be things to watch out for or avoid, or solutions for problem situations.

#### Super-VGA boards

They're not by any means all the same, and choosing one is no trivial matter. As long as you only want to use 25 line 80 column text mode or 640x480 graphics they all work essentially the same, but that's not the "super" part. All modern software will have video driver options built-in for standard VGA.

The problem is in the "super" facilities. If you want to make use of those capabilities you must have the correct driver software for that particular board, for each program you use it with. Usually that means the driver software must be provided with the board by the board maker. This is what separates the reputable boards from the others.

There are many very cheap Super-VGA boards now from Taiwan, and usually they are fine pieces of hardware. However, they mostly fall down badly on drivers, often to the extent that their "super" facilities may as well not be there at all. The drivers they supply are often for outdated versions of the various programs, and sometimes just faulty. Since most Taiwanese boards carry no maker's name whatever you have nowhere to go for updates or other support, and the wholesaler usually cannot help, even if interested in trying. So check these things:

- (1) Does it have a maker's name and address and model number, so it can be identified?
- (2) Is there a support contact phone or modem download service, even if over-seas?
- (3) Does it come with driver software for all the programs you use, and are they upto-date?
- (4) Are the drivers supplied actually the ones for that board? (That is, do they work?) That's not a joke -- it happens too often, even when shrink wrapped in the box.
- (5) Is there an assurance of refund if it

fails to work satisfactorily with your software?

Often they say things like "Tseng Labs ET4000 chipset", implying it works with software written for that popular type of board. It should still have the drivers with it, otherwise you will have to steal copies from someone who has bought a "real" Tseng Labs board, and there's no guarantee it's completely compatible either.

Another thing to look for in drivers is support for the standards that are becomming established for high res VGA. As well as drivers for particular programs and for Windows, it is good to have support for VESA and the IBM 8514/A. More programs are now providing direct support for these standards, and in those cases, if the board can support them, there is no need for a special board driver for that program. This will be the trend.

Where you are looking at "graphics accelerator" VGA boards, check that they really do have a graphics co-processor chip, and not just some speed-up tricks in the driver software. The latter rarely do what they claim. The coprocessor graphics boards do wonders for Windows. It's like having a much faster computer. I think a VGA upgrade to one might be better value for Windows users than a motherboard upgrade provided you already have a 386 of some sort. Check out the drivers with the various accellerator boards though. They differ greatly in the features they implement, and will generally only work with the board they are supplied with.

I'm now using an ATI Graphics Ultra+board,. which uses ATI's "mach32" accellerator chip. It has 2Mb RAM, an on board mouse port, a 400 dpi mouse, and a high resolution display font system called Crystal Fonts that works in conjunction with TrueType. Since I don't like high res on a 14" screen (the print is too small) I'm using its driver facility for a "virtual desktop" in Windows. It runs Windows as a 1280x1024 screen but displays in 640x480 mode and allows me to rapidly slide the

image about to see all parts of the big desktop. I can see a double page spread in Pagemaker with print big enough to read, as though I had a 29" monitor. It's great! And that's only about 1.5x the price of the unbranded Taiwanese accellerator boards — about \$750. ATI are Canadian and have a BBS for support.

Drivers are usually supplied for the most commonly used high-res capable programs. Most often that includes Windows, WordPerfect, Microsoft Word, Ventura Publisher for DOS, AutoCAD, CadKey, Intergraph-MicroStation and VersaCAD. Sometimes Generic CADD and Design-CAD are included. Users of less popular programs have to rely on the support services provided by the proprietors of those programs, or on obtaining extra drivers from the board maker.

Usually whenever a program that needs a high-res driver gets upgraded, an upgraded driver is also needed, and that must usually be obtained from the board maker. Hence the need for maker support. That is particularly true for CAD. Many Taiwanese boards come with AutoCAD Release 9 or 10 drivers, which will not work, or not work with all features, on Rel-12 or even 11. CAD drivers also vary greatly in speed of operation. Some quite reputable board makes have been supplied with awfully slow drivers. Some are now being supplied with quite fancy CAD drivers such as the "display list" type that provide hardware zooming and inset "bird's eye view".

If you mainly run Windows programs it's not such a big problem as with DOS programs, since the one Windows driver will work with all Windows programs, and most makers will try to provide good Windows support.

However, many boards come with Windows 3.0 drivers that don't work completely reliably on 3.1. Often the proper 3.1 driver is very much faster too. When enquiring about drivers, check that it is for exactly the board model number you have. Differing models of the same make

often require quite different drivers.

Most boards now come with 1Mb of video memory. That usually allows for 256 colours at up to 1024x768, although some boards are restricted to 16 at high res. 2Mb will allow some millions of colours. 512k memory will only allow 16 colours even at low res. The millions are desirable for multimedia but for most things 256 is very adequate. In CAD, 16 colours is often enough except for rendering. You can often choose 16 colours with high res for line work and 256 colours at lower res for rendered 3D, depending on the CAD system. In Windows, 256 colours gives a much more pleasing environment than 16, and is highly desirable for programs like Corel-Draw, Aldus Freehand, MicroGraphix, PhotoStyler etc.

Of course you also need a compatible monitor. The bad old days when every high res video board required its own special monitor are gone thank goodness, but you still need to check that you have a multi-sync type that will run at the resolution you want to use. Some only go up to 800x600; most now go to 1024x768, but not always all that steadily. 800x600 is an odd format that is excessively square, so that it wastes space at the sides of the screen. Usually only very expensive large screen types will go to 1280x1024. You also need to know whether it will run non-interlaced at high-res when setting the board mode. Non-interlaced is very desirable if you will spend long periods at the screen, especially if doing fine work or on a light background.

What about when buying a new complete computer? Usually little is said about the video except such as "SuperVGA 1024x768 256 colours 1Mbyte". It is wise to ask exactly what it is, and verify the points listed earlier. If the supplier doesn't know and doesn't seem to care, maybe you should wonder how much they care about how the whole thing works, or keeps working?

#### Using Xtree for backups

Many users of Xtree version 2.5 don't seem to realise that you can use it to make floppy disk backups quite well. There doesn't seem to be anything about this in the manual however, at least not in the one I got. Later issues might have been expanded possibly.

Many users want to backup whole directory branches to keep a copy of a complex program system as installed. The BACKUP program supplied with DOS will do that of course but has the disadvantage that it doesn't compress the files, and so takes up about twice as many disks as those that do.

Xtree 2.5 has a very handy implementation of the PKZIP file archiving and compression built in. It is by far the easiest way to make or extract ZIP files.

Normally PKZIP will not do an archive onto a floppy drive when the size of the compressed archive file gets too big for the floppy disk. When it runs out of space the whole operation gets aborted. The latest PKZIP-2 has that capability I'm told, but also has bug problems at present. The only other archiving system I know that will do it is ARJ, and that is terribly slow.

I found by accident that XTree's ZIP facility will overflow to several floppy disks. When the floppy disk fills you get a message: Error: Disk full. Insert Next Disk. If you then insert another formatted disk it will continue. The only odd thing is that it uses the identical same filename on each disk! Maybe this facility was an accidental side effect? It's perfectly useable though. You just have to be sure to label the disks properly "1 of 3" etc. Actually it doesn't really matter if you get them mixed up when restoring, since each file has its full original path prefix, and all files are intact on the same disk. That means of course that it won't work when there are files too big (in compressed form) to fit the floppy disk.

The system can lead to wasted space on the disks, as it stops with "disk full" at the first file that won't fit, and doesn't put part of it on that disk. If that happens to be a biggie then it means there will be a fair bit of space on the floppy where possibly some of the succeeding small files might have fitted.

So the system is not without its limitations but I've found it very useful. If there are subdirectories in the branch being zipped, you should be sure to use the P option after starting the process (with Ctl-F5) to ensure that it is set for "Paths (Full)". Otherwise you may get them all in one humungous directory when you restore. The ZIP files that result are compatible with the normal PKZIP and PKUNZIP or SHEZ etc.

To make a backup, select the directory you want in Xtree. Press B to show all the files in that branch (the directory and all its subdirectories) as a continuous list. It will also show you the total size of the whole branch. Tag them all by Ctl-T. Press Ctl-F5 to archive them. The prompt says "To:" Insert the first blank floppy and type "A:" or "B:" as appropriate. Some options appear. Be sure that Path shows (full). Press P until it does. Then press enter to start it going. Insert new disks when told to.

To restore the backup, put the first floppy in the drive and log XTree to it by LA or LB as appropriate. Then you will see there is just the one ???.ZIP file. Press Alt-F5 and you will see the list of all files in that archive file. Tag them all by Ctl-T and extract them by Alt-E.

Take care not to use the Ctl-E extract command as that ignores the path prefixes and you get one directory of the lot. With Alt-E the paths are preserved and created where needed on the destination. When asked "to:" specify the root of the hard drive, eg "C:\". That is why you must be sure to have specified full paths when creating the archive.

Repeat for each disk in the set. You could easily tag just the files you want to extract of course.

I haven't checked whether this can be done in XTREE for Windows also, as I don't use it. I was very disappointed with Xtree for Windows, and prefer to keep using the Windows 3.1 File Manager, or run the DOS Xtree in a window.

I was surprised after all the waiting, that they had not found some way of continuing the DOS Xtree's unique and very fast command system into Windows while also conforming to the Windows conventions as well. It was Xtree's quick-fire commands that made its reputation, yet the Windows version uses only the same roundabout methods that File Manager and all the others do. Its only plus as I see it is its ZIP facility.

## **BBS News**

Paul Marwick

## Bigger Drives for Lines 1 & 2

#### Lines 1 and 2 back up

Finally. After a number of delays, Lines 1 & 2 now have their new drives installed and running.

It took a lot of work, but the major part of it is now done, and the systems have a bit of free disk space again (for the first time in a long time). Making that free disk space last could be a bit of a challenge, but at least it should be less difficult (and time consuming) than trying to create extra space every time new files arrive.

When I finally got sufficient time to do the conversion work, it went relatively pain-

lessly. I borrowed a machine from Lloyd Smith and mounted the new drives and controller in that machine, then used Laplink to move the files from the existing drives. After that, the hard work began...

The partition structure of the new drives is completely different to that on the old drives. As a result, all the BBS configuration files had to be changed to reflect the new paths. Many other changes had to be made at the same time. Inevitably, I missed a few, so some things weren't working quite as they should when the systems came back up. Hopefully I've now found all of those and corrected them.

#### System now on OS/2

As well as the physical changes, I moved the whole system over to OS/2. This is something that has been planned for a long time, but lack of disk space and lack of time have prevented it being done in the past. Now, all three lines are running under OS/2. So far, apart from a few glitches caused by brain fade on my part, the conversion seems to have been very successful. This will also hopefully open the way to networking the Brisbug machine with mine sometime in the coming year,

which will allow for space savings (since the message areas can then be combined) and also allow the full range of files to be available from any of the systems.

#### And then the problems...

There were a few problems in making the conversion, one of which I had anticipated, but which manifested itself in a rather different form to the one I had expected.

OS/2 is more than a little sensitive to video cards. The Brisbug machine has a Wangtek tape drive fitted (whichwas fit-

The computer hosting lines 1 & 2 now boasts a whopping 1024 Mb of storage space, but before we get carried away ...

ted before the machine upgrade last year). When the machine was upgraded, there was a conflict between the Trident VGA card fitted to the new machine and the tape controller card. Byte Power was unable to resolve that conflict, and ended up fitting an alternative VGA card to the machine (an Ahead card). While this got around the initial problem, it was less than ideal (for all the reviews I saw a few years ago saying that the Ahead was one of the most compatible VGA cards around, I've had a fair number of problems with Ahead cards). As a result, I was uncertain as to whether OS/2 would work with the Ahead card, and had pictures of having to get an alternative card on very short notice if problems appeared.

My fears were justified, but not in quite the manner I was expecting. The Ahead card does indeed have problems, but not primarily with OS/2. When the new hard drive controller was fitted to the Brisbug machine (a BusLogic bus-mastering SCSI host

adaptor), it produced some problems with the Ahead VGA card. I've found that a warm boot of the machine is often unsuccessful, resulting in the machine getting as far as displaying the AVA banner, then sitting until eventually it gets unhappy enough to start beeping. Oddly enough (and it is very odd - I have no real idea why it should appear this way), the problem is much worse under DOS than it is under OS/2. Frequently, a warm boot from DOS will require a hard reset to get the machine started again. However, so far, I've not had a single unsuccessful warm boot from OS/2. If anyone can offer an explanation

for that one, I'd be fascinated to hear it....

This problem isn't too severe, but something will need to be done about it reasonably quickly. If nothing else, if the system reboots while unattended (if a power

outage occurs, for instance), there is no guarantee that it will reboot cleanly.

In addition, the fact that the video card conflict is affecting warm boots from DOS

Lines 1 & 2 are on telephone numbers 871 0298 871 0304

The bigger drives mean:

- \* 250% more room for files and messages
- \* Shorter maintenance off-line time
- Easier Sysopping

is going to interfere with some aspects of the system's maintenance, which will make life a bit difficult.

When I installed OS/2 on the Brisbug machine, I installed it in a dual-boot configuration. While the system will spend most of its time in OS/2, there are some times when it will have to go back to DOS, at least for the moment. For instance, disk optimisation will need to be done under

DOS (Idon't currently know of any OS/2 FAT disk optimisers), and, since we don't yet have any OS/2 backup software, backups will also require the system to boot to DOS. This is easy enough to manage with a bit

done reliably, given the problems with the video card.

#### Then the benefits...

Some effects of the change will be very visible. First, the majority of the system maintenance can now be done without taking the systems off-line. This means that the downtime for maintenance should be considerably reduced. There will, however, still be a short period of maintenance at midnight each night - there are some things which require the lines to be inactive. Where maintenance was taking around 15 to 20 minutes, it should now be around the four minute mark. Other maintenance (such as disk optimisation and backups) will be rescheduled. When this is finalised, new availability times will be posted.

#### Flie sources switched to tape

New file availability should improve, though this may take a bit of time. A number of our file sources have now switched to tape, and I'm going to be getting a fair influx of new files in Colorado Jumbo format. I've (reluctantly) bought a suitable tape drive, but currently have the problem that there is no OS/2 software for the drive, and the DOS software does not work very well under OS/2. Possible ways around this problem are being explored at the moment. In the meantime, it involves my having enough time to manually take the system out of OS/2, restore the incoming tape, then sort the data out and make floppy disk copies of the software for the evaluation team.

All of which is going to be very time consuming.

Users should also not get the impression that all this new drive space will mean huge numbers of new files. While having a full gigabyte of storage space certainly means that file availability will increase, without careful management, that 1 gigabyte of space could disappear almost immediately, especially when we're

Files are currently arriving at a rate of 25Mb per week

of batch file work, but can't currently be looking at new files arriving at around 25 megabytes per week. And also when a fair amount of space will be needed for sorting incoming files before they can be made available. Still, it should be quite some time before we have to worry about running out of disk space again.

#### File Evaluators wanted

A small army of Brisbug members, under the "generalship" of Graeme Darroch work tirelessly to evaluate and sift out "dogs" from the flood of files.

If you'd like to help, and at the same time acquire the latest (and hopefully youbeauty) copies of your favourite utilities, and some new ones, please contact Graeme at a Sunday meeting, or phone him on (07) 209 1999. Country clubs can get in on this one ... and increase their libraries

## The PKZIP Saga

The new version of PKZIP has just (finally!) become available. This is the genuine article, unlike the many hacks and virus infected files that have purported to be PKZIP 2.0 in the last few months (I was getting to the stage of considering removing the next caller who uploaded something called PKZIP 2...). It adds a number of useful new features (including the ability to build multi-volume archives) and also provides better compression than earlier versions of Pkzip

However, there are a couple of problems associated with its use.

First, it is NOT backward compatible with the older versions.

Second, while there is a (in my opinion) better alternative in the form of the Info-Zip version available, which has both DOS and OS/2 versions, I've not so far been able to make the Info-Zip version work under the BBS software.

As a result, using the new version to pack QWK mail bundles to upload to the BBS may well result in the system rejecting the mail bundles.

Anyone using Zip for mail packing had better make sure that they continue to use Pkzip 1.10, at least for the moment.

## Brisbug hosts PC User "MagDisks"

By the time you read this, the BBS systems should have added a new service. We've reached an agreement with PC User magazine, which will result in the three Brisbug lines acting as nodes for PC User.

This will have several effects.

First, it will mean new callers looking for PC User related material (and a possible source of new members for Brisbug). Second, it will also mean the addition of a new file area and some new message areas, so that the PC User "MagDisks" become available.

The new users may not be entirely advantageous (at least, not until we add a fourth line, which is planned for sometime in the coming year), since they'll make the systems even harder to get access to. However, the new material should be of interest to a large number of members, and the new mail areas will hopefully also be of interest to club members.

### **SOFTWARE LIBRARY NEWS**

#### LARGE PROGRAMS

Quite a few of the new programs being received are quite large - some are over 1Mb and even in compressed form are too large to be downloaded from the BBS in your allocated time. When these programs are placed in the library, usually the programs are compressed into self-extracting .EXE files, which generally are simple to extract to either large floppies or to the hard disk.

## Coping with Self-Extracting

Many of our members, both new and notso-new have experienced difficulties in extracting these programs from floppy disks. Dealing with self-extracting files archived under PKZIP is relatively simple, all you have to do is to make a directory on your hard disk drive (e.g. COSMO) and from the floppy disk drive A: (or B:) enter "COSMO C:\COSMO" and the program will self extract from your floppy drive onto your hard disk. Alternatively, you could "COSMO.EXE" on to your hard disk to the sub-directory and then execute the program. After the self-extraction has completed you can then delete

"COSMO.EXE" from that sub-directory.

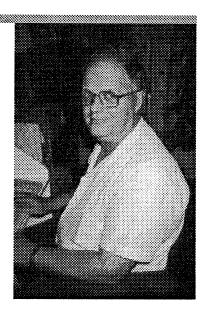
Simple, isn't it. But things get a little more complicated if I use LHARC to produce a self-extracting program. LHARC will not permit the re-direction of a program from a floppy disk to another disk - hard drive. To self-extract WOLFENSTEIN 3D from the two floppy disks containing the program, you must first create a sub-directory on your hard disk called WOLF3D. You can

then copy the 2 files WOLF3D-1.EXE and WOLF3D-2.EXE from the two disks and extract the program files by entering "WOLF3D-1" and "WOLF3D-2", and then delete these two files.

Alternatively by changing to the sub-directory "WOLF3D" you can call "A: WOLF3D-1" and the program will extract from A: drive to the WOLF3D subdirectory. And so on for the second disk.

A bit more complicated, isn't it. As I said before many members have problems in dealing with these self-extracting files: they sometimes get the first part of the program extracted to the hard disk, and then for one reason or another have a problem with the second or sucessive disks.

Learning about computers and issuing occasionally just plain "GO". commands from the DOS prompt was, and still is, a strange new experience to us all. To make life a little simpler, where possible I am now including an INSTALL program with larger or compressed selfextracting files. By executing INSTALL from the first disk of a multi-disk program, the installation program takes control and if you follow the directions on the screen, you will have no difficulty setting up the program on your hard disk. Sometimes the installation program is called "INSTALL", sometimes "SETUP" and



Lloyd Smith cataloging.

This "INSTALL" program occupies just over 50Kb of disk space and in some instances will not be able to be included with the program because of limited disk space. So a simple file will be included with the self-extracting file to guide you through installation of the program to your hard disk. The file looks something like Figure 1 (below)

If you follow these directions you will have no problem installing the files on to your hard disk.

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

WARNING: THIS PROGRAM CANNOT BE EXECUTED DIRECTLY FROM THIS FLOPPY DISK! The program is self-extracting and will expand itself onto the "active" drive and directory. In order for you to extract the files and programs contained in this self-extracting file you must follow the directions as set out below.

Make your hard disk drive the "active drive. Type "C:" press <Enter> Create a subdirectory to install the software. MD \XX press <Enter> Change to that subdirectory. CD\XXpress <Enter> Copy this file to that subdirectory. COPY A:XXXXX.EXE press <Enter>

If the above steps have not been followed, answer <N> to the question below. After completing the above directions, you should again run the installation program by entering XXXXX.EXE and when prompted, answer <Y> to continue.

CONTINUE WITH THE INSTALLATION ?

#### **RUNNING PROGRAMS**

Whilst I am endeavouring to make installation of programs onto your computer simpler, without considerable work on Library programs, the use and running of the program is still up to you. You must read the "READ.ME" files, read or print out the MANUAL and learn how to run the program yourself.

Whilst some of the programs will quite happily run from floppy disks, more and more operate only from the hard disk. Some of these will not properly operate from the hard disk if you have used "STACKER" or similar programs. Don't fool yourself by putting programs on floppy disks, even if they will fit on a 1.2MB or 1.4Mb disk. The program will take so long to run you will think you have reverted to an early 4.7Mhz XT computer and give up on what may be a great program.

Quite a number of members have asked "Why don't you supply the programs on high density disks (e.g. 1.2Mb or 1.4Mb)" The answer is twofold - Firstly, not everyone has floppy disk drives that will take high density disks (owners of older XT computers) and secondly multiple copies of high density disks takes considerably longer and would increase the overall costs of each diskette.

#### **MAIL & TELEPHONE ORDERS**

Orders for programs must be sent to:

BRISBUG SOFTWARE LIBRARY 95 STATION ROAD BOOVAL OLD 4304

and not to P.O. Box 985 TOOWONG.

All orders must be accompanied by payment, either Cheque, Money Order or Credit Card details.

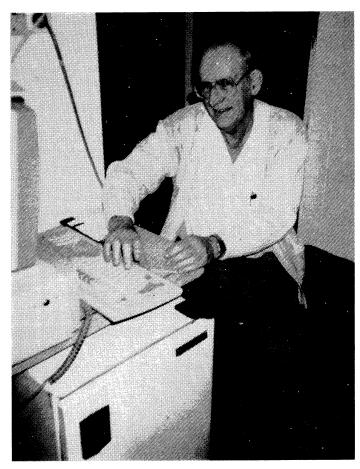
## THE MINIMUM CREDIT CARD PAYMENT IS \$25.00

and postage charges of \$3.00 for up to 8 disks,\$5.00 for orders over 8 disks. Brisbug Accessories, disks, disk boxes, etc. attract additional postage and packing charges (\$6.00 minimum).

#### PLEASE ALLOW AT LEAST 14 DAYS FOR PROCESSING OF ORDERS.

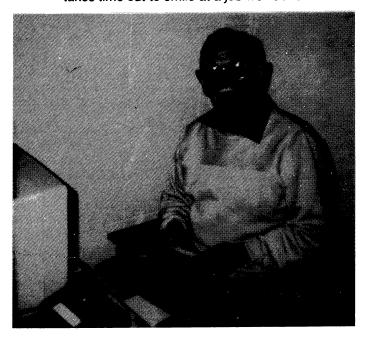
Orders for collection at meetings also require 14 days for processing, so please do not telephone me to order disks from the listings in this magazine to be collected on Sunday 21st.

### ASSOCIATED CLUBS



Above: Has someone stolen Jim McBride's desk? Or has he attached the ultimate cooling device to his 486-50? Actually, Jim was making best use of the bar fridge in Lloyd's room on a recent Brisbug visit to Gladstone to add to their disk library.

**Below:** 479 disks copied and only 21 to go! Cec Wilmott takes time out to smile at a job well done



## New Library Listings

### BBUG 2805 WACKY2 Version 10/90

CLASSIFICATION \* Desktop Publishing \* Floppy Disk

WACKY2 is a collection of five fun clip art 'headers' suitable for use with notices, as horizontal fillers, for notepads, etc. Pictures include Couples Dancing, Men in Lifeboat, Horses Dancing, Kangaroo Family, and Butterfly Act.

## BBUG 2806 THE DRAGON SWORD Version 2.71

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

And such is the world of the DRAGON SWORD. Magic, monsters, mayhem. But it wasn't always so.

Bralka was once a peaceful town with a prosperous future. Townsfolk once walked the streets without fear. Store owners once thrived on the wealth of trading Bralka received. The crops were good, the land at peace.

Then came the dragon. Your goal as adventurists, is to penetrate the web of defenses and secrecy surrounding the Dragon Sword and its whereabouts and retrieve the weapon for use against the mighty Oijngate. The citizenry of Bralka are depending on the return of the sword—they will pay dearly for its recovery. Those powerful and crafty enough to return it shall live forever in the minds of the people.

DRAGON SWORD is a fantasy role-playing game very much like the popular "Wizardry" series. You play the part of a party of adventurers prepared to take on all challenges to seek out and find the "Dragon Sword"—a weapon mighty enough to defeat the dragon Oijngate.

## BBUG 2807 DAYO MEMBERSHIP Version 3.82

CLASSSIFICATION \* Business \* Hard Disk \* Printer

DAYO MEMBERSHIP is an application designed to track membership for an asso-

ciation or organization. The ability to maintain records for donations, dues, payments, and/ or invoices

been incorporated into the package.

Use DAYOMEMBERSHIP to record member information and optionally maintain a simple accounting system for dues and/or donations. Many reports and reporting routines are included in this package, i.e.: Members List, Notes, Statements, Labels, Payments, Form Letters, and much more.



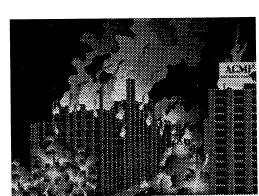
CLASSIFICATION \* Business \* Accounting \* Hard Disk \* Printer

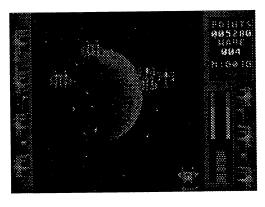
DAYOORDER ENTRY creates sales orders based on the DAYO Inventory, Customer, and other DAYO databases. Orders can be printed on a standard printer or a Hewlett Packard (tm) Laserjet compatible printer. The order can be printed on a pre-printed form, on the Laser printer in a special laser format, or as a standard/default form.

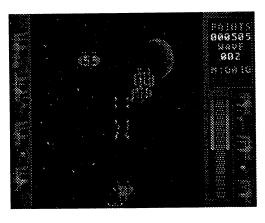
## BBUG 2809 DAYO - RENTAL POS Version 3.0

CLASSIFICATION \* Business \* Accounting \* Hard Disk \* Printer

DAYORENTAL POS (Point of Sale) is a billing and invoicing application for any business that rents items, equipment, or services, i.e.: Videos, Tapes, Furniture, Tools, Appliances, etc. This program requires the regular DAYOPOS module for its reports and configuration settings. It is by default a multiuser system, allowing almost unlimited numbers of users to







GALACTIX
BBug 8968 and 8969

have the ability to simultaneously invoice using this one program on a PC-based LAN/Network.

# ADDITIONS TO THE DAYO SUITE OF ACCOUNTING PROGRAMS

## BBUG 2810 DAYO -RETURNS AND REFUNDS Version 2.0

\* CLASSIFICATION \* Business/Accounting \* Hard Disk

DAYO RETURNS & REFUNDS is a modified version of DAYO POS, but contains only the capability of doing returns and/or refunds of invoices/items. The invoices default to type 'Ret' (returns of merchandise), and are posted as negative amounts (later to become Credit Memos). Requires DAYO POS (uses the same configuration settings). (BBUG 2402, 2403)

## BBUG 2811 DAYO -SIMPLE POINT OF SALE Version 3.0

CLASSIFICATION \* Business/Accounting \* Hard Disk

DAYO SIMPLE POS is a modified version of DAYO POS that was created to exclude the option of selecting a customer. This program is used on Cash accounts

only, for example in a grocery store-type environment where no customer name is required. Requires the same configurations found in DAYO POS.

## BBUG 2812 DAYO -RETURN MANAGEMENT SYSTEM Version 2.0

CLASSIFICATION \* Business/Accounting \* Hard Disk

DAYO RMS (RETURN MANAGMEENT SYSTEM) provides a means to record and track returns of your product. DAYORMS integrates to DAYO Inventory (BBUG2401) and its multiple warehouses to allow tracking of items being returned (i.e. breakages, warranties, return to vendors). Creates RMA numbers.

## BBUG 2813 MIRAMAR -JET FIGHTER SIMULATOR Version 2.0

CLASSIFICATION \* Games \* Floppy Disk \* CGA

Climb aboard an F-18 jet fighter and launch your aircraft from the deck of an aircraft carrier. You are in full control - all the speed and firepower is at you fingertips. Learn how to climb and dive - master the instrument panel - switch the radar to a combat fighting scope - destroy the enemy aircraft with your 20 mm cannon

or use the sidewinder missiles. Return and land on the carrier to refuel and rearm. MIRAMAR is an excellent combat jet simulator.

## BBUG 2820 OWL PERSONAL PORTFOLIO MANAGER Version. 3.0 (Disk 2 of 2, also 1639)

CLASSIFICATION \* Finance/Business \* Hard Disk \* Graphics Monitor

OWL PERSONAL PORTFOLIO MAN-AGER is a program that can manage and analyze investments and finances for individual investors. With this program you may keep a record of your security investment transactions and other assets and liabilities, and produce charts and reports to assist you with investment decisions, tax reporting, and loan applications.

From the data entered, the program can produce on-screen or printed reports on security transactions, dividend income, security performance rankings, portfolio status summaries, and net worth. You can even select which portfolios to include in a given report.

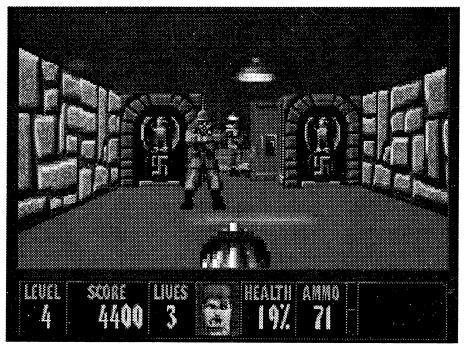
This program can display several charts and graphs on-screen for analysis. These include price/volume graphs with multiple moving averages, relative performance charts which show the price strength of a security relative to the overall market or other securities, and stock and index correlates. The correlation charts allow the user to see how much the price of a security is influenced by the larger market index and helps pinpoint abnormal price changes known as breakout points.

OWL PERSONAL PORTFOLIO MAN-AGER has documentation which either can be printed or read screen-by-screen on the monitor. Also included on this disk is sample data to allow you to become familiar with the program without having to enter your own information.

## BBUG 2821 MENUDIRECT GOLD Version 3.0 (Disk 2 of 2, also 0930)

CLASSIFICATION \* Menu \* Hard Disk \* Mouse

MENUDIRECT GOLD, formally called the POINT & SHOOT Hard Disk Manager was nominated for one of BYTE's best product awards at Spring COMDEX



Current favourite game of both small and big kids, Wolfenstein, is still available as Disks 8944 and 8945

1991. The program has an outstanding file/directory/program manager, with unlimited user menu entries with single keystroke execution of programs, split screen file list and directory tree.

You can copy, delete, edit, find, print, and view single or tagged files; delete, make, rename, hide, and print directories, undelete files and directories. Instant DOS access is provided, and it features user-defined program colors, floppy disk formatting, and mouse support.

Pull-down menus, hypertext help system, password protection, usage logging and a host of other features make this an excellent DOS Shell.

## BBUG 2822 MODEL-S Version 2.5 (Disk 1 of 3, also 2823, 2824)

CLASSIFICATION \* DBase \* Programming \* Hard Disk

MODEL-S is CASE (CUSTOMER Assisted Software Engineering) software to develop modifiable dBASE programs and data files, without having to write dBASE code. This quality product, which can rival anything in its class, is a powerful Application Development Tool.

MODEL-S utilizes the RAPID PROTOTYPING AND MODELING approaches for building process-oriented applications. Models designed with MODEL-Slook and behave as if they were actual working systems; they simulate the manner in which the fully developed system should function.

Benefits of modeling are numerous:

- \* Fast Implementation of Ideas
- \*More Complete Design of Application
- \* Quality Specification Documents
- \* Earlier Detection of Design Flaws
- \* Produced at a Fraction of Today's Development Costs

And, if costs for time and labor are high visibility issues, MODEL-S can help you to implements systems - On Schedule - Within Budget - With Complete Satisfaction

BBUG 2823 MODEL-S Version 2.5 (Disk 2 of 3, also 2822, 2824)

BBUG 2824 MODEL-S Version 2.5 (Disk 3 of 3, also 2822, 2823)

# BBUG 2825 CMTS Version 3.1 (Disk 3 of 3, also 2541, 2542)

CLASSIFICATION \* Church Database \*
Hard Disk \* Printer

Whether you're responsible for the entire administration of a large church or just need to keep track of members for a small one, the CHURCH MEMBERSHIP TRACKING SYSTEM (CMTS) is an exceptionally easy to use, full featured, Church Membership and Donation Tracking System.

The system consists of three separate modules:-

Membership, which allows for the processing of extensive membership information and provides the capabilty for tracking rosters of organisation within the church as well as special dates and skills.

Donation Tracking, provides for entering donations by user-definable fund categories with extensive reporting and on-line inquiry capabilities. Detailed transaction inquiries and reports are available by member or by fund providing a complete audit trail of all transactions.

Church Customization and Setup, allows your church to customize certain parameters and set up user-definable tables. Fund categories, special dates, skill categories and organization descriptions can all be defined in this module. There is also a control file where additional church and system specific information is stored.

## BBUG 2826 MR. BILL Version 3.41 (Disk 3 of 3, also 0469 and 0470)

CLASSIFICATION\*Business\*Accounting\*Floppy/Hard Disk\*Printer

Money in the bank — a lovely phrase. Money owed to your company could be money in YOUR bank — if you collect it. MR. BILL does almost everything needed for your small- to medium-sized firm to birddog bills and increase collections with a minimum of labor and losses.

Highly flexible, MR. BILL handles taxes and charges of every sort. It automatically updates and sends client bills out monthly, prints your letterhead, and up to a 30-line message. You can charge different customers different rates for the same thing. Each file can have 16,000 entries. Get the client's name, address, phone number,

and current balance from the operating system in less than four seconds.

Prepare itemized invoices/bills and generate a bevy of summary and in-depth reports including account aging and an excellent audit trail. The 28-page manual is adequate for experienced clerks.

## BBUG 2787 METROCATE Version 1.3

CLASSIFICATION \* General \* Floppy
Disk

METROCATE performs all common (and some uncommon) measurement unit conversions using a file of about 560 measurement units. Provision is made for the user to add or change any of the provided conversions to meet any special purpose.

There are over twenty unit types presently available:

- ~ Length ~ Pressure, stress ~ eg Radian /cm ~ Mass ~ Energy, work, quantity of heat
- ~ Angular velocity
- ~ Time ~ J/unit area, surface tension
- ~ Angular acceleration ~ Plane angle
- ~ Density, mass density
- ~ Power, radiant flux ~ Temperature
- ~ Moment of force, torque ~ Newton
- ~ Area
- ~ Speed, velocity
- ~ Luminance ~ Volume ~ Acceleration
- ~ Illuminance ~ Solid angle
- ~ Volume rate

Also included is currency conversion, based upon the US dollar.

METROCATE is a handy reference tool for just about everyone, especially students, teachers, researchers, scientists, and engineers.

## BBUG 2828 STOCK CHARTING SYSTEM Ver.3.11 (Disk 3 of 3,also 0246,1354)

CLASSIFICATION \* Stocks/Shares \* Hard/Floppy Disk \* Graphics Monitor

The STOCK CHARTING SYSTEM draws or prints "volume/high/low/close" charts for any stock, bond, commodity, or security that has a high/low/close price. Short-and long-term moving averages can be included on the chart and temporarily changed for "what-if" calculations. The STOCK CHARTING SYSTEM is menudriven and comes with a complete set of context-sensitive help screens.

#### DOG - DISK **BBUG 2830 ORGANIZER Version 3.11**

After using a hard disk for a while, accessing data and information can become slower because of two problems:- Fragmentation of files and deleted entries in the directories.

DOG - DISK ORGANIZER will solve these problems and make your disk run more efficiently. If the size of a directory decreases enough after removing the deleted entries, DISK ORGANIZER can also recover some disk space.

DISK ORGANIZER accomplishes this by performing extensive tests before it starts to move data, making sure that the File Allocation Table (FAT) and directories are in good repair, and verifies all data written to the disk. With eight different modes to move data (including hidden files), remove deleted entries from directories, restructure the order of files and subdirectories, and free disk space by truncating subdirectories, DISK ORGANIZER is considered to be an excellent disk defragmentor and is highly recommended.



#### **BBUG 2831** THE **ANIMATED ALPHABET** Version 4/90 (Disk 1 of 2, also 2832)

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

THE ANIMATED ALPHABET combines colorful graphics with appealing animation to teach children the letters of the alphabet. After choosing the correct letter for the graphic shown, for example a monkey, the monkey starts jumping around and the word "monkey" is written near the bottom of the screen. This is a fun program designed to hold the attention of children preschool to the first grade.

**BBUG 2832 THE ANIMATED** ALPHABET Version 4/90 (Disk 2 of 2, also 2831)

#### **BBUG 2833** DESKTOP PAINT 256 Version 1.4

CLASSIFICATION \* Utilities \* HardDisk CLASSIFICATION \* Desktop Publishing \* VGA/SVGA \* Hard Disk \* Mouse

> DESKTOP PAINT 256 is a powerful super-VGA paint program which will allow you to create and edit full colour pictures. It can load and save to PCX, GIF, TIFF (Colour and grey scale), and IFF/ LBM graphics file formats. EMS support makes DESKTOP PAINT 256 capable of working with very large pictures.

> DESKTOP PAINT 256 has a full range of drawing tools. It will perform basic drawing functions such as adding lines, rectangles, ellipses and so on to a picture. You can zoom in and edit details and draw freehand with color brushes. You can also cut and paste image fragments, as well as importing and exporting them. There's also an undo function to deal with mistakes.

> A variety of special effects are also available under DESKTOP PAINT 256. You can rotate, flip and invert areas of a picture. You can also stain, smudge, posterize and soften parts of a picture... the latter effect is particularly effective at reducing the effects of moire scanning aberrations.

> **DESKTOP PAINT 256 makes provision** for the addition of text to a picture. It comes with a selection of three fonts, and you can add more to it if you like. The optional font toolkit provides additional fonts and a selection of utilities to convert fonts from Macintosh FONT resources, GEM/VDI font files and Windows FNT files.

#### **BBUG 2834** DREAM Version 2.5 (Disk 3 of 3, also 0599 and 0600)

CLASSIFICATION \* Database \* Hard Disk

DREAM (Data Retrieval/Entry and Management) is a relational database program with extreme power and flexiblity. Much like dBASE, it can custom design database applications, which include reports, sorting abilities, query abilities, and data entry and retrieval abilities without writing code.

DREAM comes complete with over 200K worth of on-line and manual documentation which lead the user step by step through the program. DREAM can handle over 32,000 records per data file with over 1,500 characters per fixed record length.

Features include: Two modes of operation: technical and end user. Three levels of data protection. Multiple views of data. Multiple record updates (batch processing). Edit, format, and range tests on input. Computations on input/output, including computations with dates. Autogeneration and duplication of data fields and records. Single data file reports - post or concurrent with data entry. Relational operations for multiple files. Data restructuring. Copying/moving data from one file to another. Screen painting for data entry and reports. Windowing technique for multiple data files. Unique report layout features. Four character sizes for reports and labels. Multiple look-up and data transfer from outside files. On-line help and tutorial. Interrupt routines using function keys. Color selection. ASCII file format and portability of data. Five levels of user expertise. Electronic note pad.

#### **FINANCIER BBUG 2835 PLUS** Version 2.1

CLASSIFICATION \* Accounting/Finance \* Windows \* Hard Disk

When you need to check up on financial arrangements, calculate amortization schedules or just need to organize your finances, think of FINANCIER PLUS.

Schedules and other calculations are shown in a text editor, which you can manipulate to suit your own needs. Add-in and Balloon payments can be included with schedules, and the program allows questions such as term determination, present value determination and interest iteration.

Need to know accrued or compound interest on a sum of money? FINANCIER PLUS can determine these along with bond present value, annuities, sinking fund, discount yield, and future value. The trend analysis section makes predictions based on W/Y data.

FINANCIER PLUS includes a budget section, calculator, calendar, titler, and text editor. The text editor includes cut/paste/ copy/search and many other editing commands. If you need to know the number of days between two dates or what day of the week corresponds to a calendar date FIN-ANCIER PLUS can find the answer.

## BBUG 2837 MARKET CHARTIST Version 1.2

CLASSIFICATION \* Business \* 2 Floppy/ Hard Disk \* Printer

THE MARKET CHARTIST - An Introduction to Technical Market Analysis, is an interactive computer-based tutorial, and was created to help you to become more informed and self-reliant in your investment decision making. A basic understanding of technical market analysis is an important part of a well-rounded investor's knowledge regardless of investment strategy. The tutorial introduces you to the construction and interpretation of several market charts used by technical market analysts to guide their investment decisions including moving averages, momentum, advance-decline lines, trading volume, and trendlines.

The Computer-based instruction provides a high-interest learning medium. The tutorial stimulates student involvement by providing an interactive educational environment. Questions embedded in the self-paced instruction reinforce course content and provide students with individualized feedback concerning their progress. THE MARKET CHARTIST features a 40-page Course Notebook of illustrations and worksheets, which can be printed from within the program.

## **EDUCATIONAL**

## BBUG 2838 ABC-TALK Version 2.0

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

ABC-TALK is an educational program that features real human voice. The object of ABC-TALK is to talk to your child, to help them learn how to talk, read, learn the alphabet, spell and interact with a computer. For children ages 1-3 ABC-TALK will teach your child to say the EARLY WORDS (HI, BYE, MAMA, DADA, PLEASE, THANK YOU DRINK, etc.) and how to interact with a computer. For children ages 3-5 ABC-TALK will teach them to say and understand the alphabet, how to recognize letters in words and how to use the keyboard. For children age 5-7 ABC-TALK will teach them how to spell basic words.

Also included in this package is the ABC SONG and EASY DRAW for your child's

CREATIVITY. Your child will love the stunning graphics in this package.

ABC-TALK was designed to be an IN-TERACTIVE and CREATIVE. This is not a standard type of educational program. This program was created with the concept of having the computer TALK TO YOUR CHILD to teach him/her the basics of talking, learn the alphbet, spelling and how to use a computer.

## BBUG 2841 SHOW PARTNER LITE Version 3.7 (Disk 1 of 2, also 2842)

CLASSIFICATION \* Screen Animation \* Hard Disk \* EGA/VGA

SHOW PARTNER LITE is the venerable classic which introduced the development of lively, animated screen shows and demonstrations to the general computing public. First released in 1985 and subsequently bundled with the Microsoft Mouse for several years, this program has over 750,000 users.

SHOW PARTNER LITE now incorporates several new screen effects and smoother animation and palette manipulation. Modules include a full featured script editor, a simple slide show editor, a graphics screen editor, screen capture programs for both DOS and Windows 3, and a royalty-free runtime module.

## BBUG 2842 SHOW PARTNER LITE Version 3.7 (Disk 2 of 2, also 2841)

## BBUG 2844 3 BALL JUGGLER Version 1.12

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

Here's a program for those wouldbe jugglers who've kept putting off breaking those eggs or tossing those balls. But now there's no excuse. Learn how to juggle with your computer. You say, "MY Computer?" That's right.

3 BALL JUGGLER, a rather unique program, uses animation to teach you the basics of three-ball juggling, common

mistakes made by beginners, and some techniques of advanced juggling.

A challenging arcade game is thrown in for more fun.

## BBUG 2845 BCS MENU PROGRAM Version 2.00

CLASSIFICATION \* Menu \* Hard Disk \* Mouse (optional)

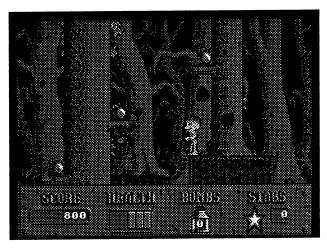
BRISTOL COMPUTING PROFES-SIONAL MENU SYSTEM is a DOS menuing system engineered for ease of use and increased productivity. It's screen displays were designed to provide an intuitive interface as well as a professional appearance. Productivity increase is realized by reducing the keystrokes required to start application programs and repetitive tasks while eliminating the need for memorization of complex commands. This makes it ideal in an office environment as well as in the home. BCS MENU PROGRAM makes all the programs on your computer easily accessible.

Enhanced menu editing capabilities include a Command Helper mode which allows you to browse your disk(s) for executable files or for menu files. Also, you can set the state of NUM LOCK, CAPS LOCK and SCROLL LOCK in each menu file. Improved support for monochrome adapter has been added.

BCS MENUPROGRAM allows up to 100 entries per menu. The possible number of menu files is virtually unlimited (limited only by DOS file naming conventions). Each menu item may contain up to six lines of descriptive information. BCS MENU PROGRAM is completely self contained. It features on-line, interactive menu editing.



3-Ball Juggler



Did you miss COSMO (BBUG 8910 and 8911) the first time around? It's still available for the arcade enthusiasts

Complete Microsoft compatible mouse support is provided. Support for MDA, CGA, EGA, MCGA, VGA & 8514/A video adapters. Palette control on EGA/VGA allows selection from 64 colors in standard text mode. BCS MENU PROGRAM features an advanced, intuitive color editing screen that allows easy color customization. Colors are saved in the menu file, not in the program (allowing different color selections for each menu). Optional automatic screen blanking is user modifiable in time increments from 1 to 99 minutes.

Each menu item may be password protected; exit to DOS may also be password protected. Support for up to 20 user input variables per menu item; the user is prompted for input prior to command execution. (A user input variable allows the user to entertext that is substituted into the command sequence.)

BCS MENU PROGRAM is not a TSR (Terminate and Stay Resident) program. It doesn't use batch files to execute commands. All commands are executed directly from memory, yet, BCS MENU PROGRAM uses only 2.5K RAM during command execution.

## BBUG 2846 SELECT-A-STORY Version 08/91

CLASSIFICATION \* Educational \* Hard Disk

SELECT-A-STORY - GREAT EXPLOR-ERS COLLECTION - is an educational text adventure game designed as a way to encourage children, ages 10 to 14, to learn about history in a way that they could also have fun. Using the combined package of the fascination of the computer, the tried and true method of repetition, and age old history, the stories of Columbus and Marco Polo are learned by allowing the reader to make choices that determine the fate of the explorer.

Registration of SELECT-A-STORY: GREAT EXPLORERS COLLECTION brings the stories of three more historical figures to the fingertips of your child. These include Robert E. Peary, Capt. James Cook, and Sir Francis Drake.

## BBUG 2849 THE BABYSITTER Version 3.0

CLASSIFICATION \* Home/Health \*
Floppy Disk \* Modem

THE BABYSITTER is intended for ALL parents for whenever you have to leave a baby sitter in charge of your children.

Using a modem, the program will call you, friends, doctor, police, or any emergency number. Includes alarms for events throughout the day, activity log, misc. information, & password protection. THE BABYSITTER will inform the sitter of activities, address & number of where you will be & what time you will be home, work & school numbers, plus lots more! And one key dialing!

THE BABYSITTER has, for the parents, included a menu where a list of babysitters' names can be kept, plus information such as respective addresses, telephone numbers, and availability. To guard against tampering with the computer while the parent is gone and possibly losing the program, the sitter cannot drop to DOS, even if the power is shut off. When it comes back on, the computer will go directly to the sitter screen.

Furthermore, an activity log, accessed only by password, shows the parents what keys

the sitter pressed and at what time. And for the sitter, there is a help screen that will explain the program if the parent is not there to do so.

## BBUG 2850 EARLY BIRD Version 1.0F

CLASSIFICATION \* Reminders \* Hard Disk \* Mouse

EARLY BIRD is the one of the best user-friendly, full-featured reminder program available. It features simple or complex reminders (e.g., 3rd from last Thursday of every 9th month), desktop calendar & scan (AUTOEXEC) modes, color pull-down & pop-up menus, context sensitive on-line help, alarm, DOS shell, mouse support, file commands, & selectable group printing.

EARLY BIRD also offers user definable classes, notice, print, color and display options and many special sound and visual effects and reminder creation defaults.

The original shareware word-processor in updated form

## BBUG 2851 PC-WRITE STANDARD Ver.2.0 (Disk 1 of 4,also 2852,2853,2854)

CLASSIFICATION \* Word Processor \*
Hard/Floppy Disk \* Printer

PC-WRITE STANDARD LEVEL is the adaptable word processor from Quicksoft. Context-sensitive help, on-line tutorial, pull-down menus, mouse support, and auto-repage make it easy to use. The Adapt feature lets you add or remove feature sets depending on your needs; start with core features, then add more as needed. The pull-down menus changes as you adjust feature sets. Even read about features in Help and instantly adopt them.

New features include Roget's Thesaurus, easier margin setting, up to 10 windows, and import/export from WordPerfect, DCA-RFT, and ASCII. Supports microspace justify, auto-reformat, auto-0number, mail merge, spell check, and more. Great for both formatted documents and ASCII files. Supports over 900 printers; tops for LaserJets.

Set over 200 customization options with the Adapt feature and Customizer menus, in areas such as editing, keyboard use, screen display, and file handling. Easily tailor PC-Write to your preferences.

BBUG 2852 PC-WRITE STANDARD Ver.2.0 (Disk 2 of 4,also 2851,2853,2854)

BBUG 2853 PC-WRITE STANDARD Ver.2.0 (Disk 3 of 4,also 2851,2852,2854)

BBUG 2854 PC-WRITE STANDARD Ver.2.0 (Disk 4 of 4,also 2851,2852,2853)

## BBUG 2855 REXL -LAZARILLO DE TORMES Version 24

CLASSIFICATION \* Educational \* Floppy/Hard Disk

REXL - LAZARILLO DE TORMES is a great study aid for both the Spanish literature student and for anyone who wants to brush up on their Spanish reading skills, with the added benefit of becoming familiar with one of the great Spanish classics.

LAZARILLO DE TORMES is provided as a complete book in text form, including the translation of individual words and/or idiomatic expressions which will lend an understanding to the writing of the anonymous pre-1600 novelist.

The book is automatically or manually translated for you, and exercises are included for reading improvement training. One method enlists, at your request and at the speed you designate, words covered up to push the reader to read at a rate higher than he or she would normally achieve. Also available is a tachistoscope option, an exercise intended to increase the reader's visual span (the number of characters he or she can read in a single fixation of the eyes).

## BBUG 2863 U-NET Version 1.1

CLASSIFICATION\*Network\*HardDisk

U-NET is the first complete network available via shareware, and also the first network that can be installed by a computer novice. U-NET allows small businesses to install the network and see the advan-

tages of sharing software, data files, and printer between any two IBM or compatible computers, without a major investment.

The biggest benefit to users is ease of use. Installation takes less than 5 minutes by running a simple Install program on each computer that automatically configures the software for the computer ports being used. The cable simply connects between the parallel ports of the two computers. If there is more than one parallel port then U-NET uses LPT2.

No learning is required as U-NET uses standard DOS commands. The only additional commands are S-Print and W-Print for directing printing. The hard disk drive(s) on the main computer are accessed as if they were physically in the other computer becoming additional virtual drives and being automatically assigned the next logical letter.

U-NET is very applicable to Laptop, Notebook, or IBM PS/1 computers with no free slots available for networking adapter cards. Also it can be used for the transfer of data between computers with incompatible diskette sizes or simply to share a high cost laser printer between two computers. Small businesses or professional people such as doctors, attorneys, and traveling salesmen who do not need to be constantly using a network will find U-NET extremely useful in being able to link a second computer into the office's main computer and access information from time to time as required.

## BBUG 8968 GALACTIX Version 1.2 (Disk 1 of 2, also 8969)

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

#### ATTENTION TERRANS!

The XIDUS have come to conquer your world and enslave its people. Nothing can withstand the power of the XIDUS. Prepare now, your DOOM is at hand.

GLACTIX is a space orientated arcade game, containing rapid fire, missiles, megabombs and more. GALACTIX presents animation that rivals most commercial games and first rate graphics never before seen in shareware.

Your Mission: To stop the tyrannical overlord and relentless XIDUS armada - Fighters, Command Ship and finally the evil overlords Flagship - while avoiding being dispersed into your component atoms. To keep yourself alive you are given a High-Tech Defense Fighter - and Epsilon-Class Stellar Interceptor - armed with: Molecular Displacement Shielding, Hyper Ion Drive, a Manipular Hydraulic Arm (with claw), Particle Accelerator Cannons, Optical guided Mark 11 Thermal Burst Missiles, High yield, area affect Tactical Nuke Smart Bomb, Comfortable Reclining Leather Bucket Seats and an Acme Toothpick Dispenser.

BBUG 8969 GALACTIX Version 1.2 (Disk 2 of 2, also 8969)

BBUG 8970 ST-BUDGET Version 1.7 (Disk 1 of 2, also 8971)

CLASSIFICATION \* Accounting \* Hard Disk \* Printer

ST-BUDGET [Budget Tracking System] is one of the most powerful tool for budgeting and tracking. It is designed for CORPORATE, EDUCATION INSTITUTE, SMALL BUSINESS and PROFESSIONAL use.

Key features include User-Defined Entities (i.e. Department, Project, Cost Centre), Support Multi-level Chart of Accounts, Numerous Budgeting Methods, Tracking Actuals, Online budget summaries, Numerous Reports, Export Budget Data to DBF file or ascii delimited file, Utility to create budget spreadsheet (wk1) file.

The ST-BUDGET system comes with a set of sample data so that you can immediately try it out without setting up anything. Once you familiar the system, you can intialize a new empty set of data files using the "Initialize Database" option on the Utilities menu item, and then start entering your budget data.

The ST-BUDGET system uses many userfriendly interfaces such as menu bar, pulldown menu, help screen, browse screen to make it very easy to understand and operate. We will discuss these features briefly.

A SIDEWAYS printing program (BBUG 1184) will be necessary to print spreadsheet if you only have an 80 collumn printer.

BBUG 8971 ST-BUDGET Version 1.7 (Disk 2 of 2, also 8970)

## BBUG 8972 SIMTREK Version 2.1

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

SIMTREK simulates a tour of duty as the Captain of a STAR TREK type starship. The objective is to become one of Starfleets finest by successfully completing as many missions as possible before your tour of duty is over.

You are seated in the Captain's Command Chair on the bridge, and the screen shows the bridge of your starship. A viewing screen occupies the upper center of your monitor. Helm, Navigation, Sensor, Tactical, Communications, Engineering functions etc. are strategically placed around the screen.

Starfleet Command will give you your orders, both written and verbal, and from there on the mission is in your hands.

Good Luck - Captain!

### **GAME of the MONTH**

BBUG 8973 KILOBLASTER Version 1.0 (Disk 1 of 2, also 8974)

CLASSIFICATION \* Games \* Hard Disk \* EGA/VGA \* 286 or better \* Sound Blaster optional \* Joystick optional

KILOBLASTER - New from EPIC MEGAGAMES - is a fast-action animated arcade game reminiscent of Galaxian with lots of innovative, high-tech features! This game features digitized and ray-traced backgrounds in 256-color VGA which are truly out of this world! If you have an EGA you can still play the game, but you're missing a heck of a show!

In Kiloblaster, you'll also find an Megacool musical sound track and digitized sound effects if you have a Sound Blaster card. Kiloblaster also features some wild sound effects through the tiny speaker in your PC.

Fasten your seatbelt and prepare to be warped into another dimension of game playing!

The makers of JILL OF THE JUNGLE have returned to bring you even more \*excellent\* entertainment. Yes, those Epic folks are back again, and this new game is COOL... No, wait... It's HOT...

BBUG 8974 KILOBLASTER Version 1.0 (Disk 2 of 2, also 8973)

## Windows Shareware

## Windows Mekanix

Version

1.0

Author File name David R. Green mknx10.lzh

A collection of stand alone utilities for Windows 3.x. Please note that Vbrun100.dll is required for these programs. The author recommends copying the group-s.dat file and PIFs to your Windows sub directory.

#### Metricalc

A neat and tidy metric conversion calculator.

#### **Sprint**

A print utility for text files, designed to dump files to the printer. It does not manage Write, Word for Windows, binary or other formatted documents. The program links to the Windows Control panel to provide selection of the default printer.

#### Mekbase

The author states that this is a database with 11 fields capable of holding 4 Billion records. I haven't bothered to attempt to

put in that many to check out his claim. Fields' 1-10 are alpha numerical and will hold a maximum of 40 characters. Field 11 is alpha numerical and capable of holding 80 characters, primarily for use as a memo field. A proprietary format (bds) is used for the database structure. The program gets rather upset if you attempt to read \*dbf files. Quite a nice little database, make it dbf compatible and I'll be interested. Now where do I find 4 Billion records?

#### Mekclock

Another clock complete with date and alarm. It joins the collection of clocks and trash cans. The program works quite well but I don't need another clock.

#### Mekfiler

A quick and simple file manager that provides the basic functions for files and directories. It deletes, copies, runs, moves , renames and provides basic information on files makes and removes directories.

#### Mekzipr

Possibly the pick of the bunch in this collection of utilities, Mekzipr is an archive manager for the PKZIP and LHA utilities. It has a nice interface with clearly defined source and destination boxes. You can Zip, Unzip, Add or extract from a lzh file, Copy, Move, Delete, Rename, remove or make a directory, Test a Zip file and view zip or lzh file formats.

#### Comments

I'm impressed by the neat and tidy appearance of the utilities. Simple and straight forwarded in appearance. The Help screens are particular nice and to the point without piles of rambling. The database and archive manager are impressive. Convert the database format to dbf and I'll be even more interested. The author offers a Bonus disk of goodies to registered users.

John Massey

Windows Shareware Files provided by Brisbug PC Users Group Bulletin Board System (07) 8710298, 8710304

## BRISHUCHIDIUR LANDS

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.

 		<u>-</u>	
Subject	Name	Phone	Days & times
4DOS	Chris RaisIn		Any time
	Dan Bridges	345-9298	Anytime
Accounting	lan Haly		After 5:30 & W/Ends
As-Easy-As	Dan Bridges	345-9298	Anytime
-			
Assembly	Paul Gear		After-hours
	Scott Hendry		After-hours
AutoCad	Geoff Harrod	378-8534	Evenings,W/E
C language	Paul Gear		After-hours
	Danny Thomas		Mon-Frl 6pm-9 & W/E
	lan Haly		After 5:30 & W/E
Clarion	Ray Creighton	. 354-1107	eve & W/E
Clipper	Chris Raisin		Evenings
	Don Andersen		after 7pm & W/E
	Dan Emmerson		
	Mike Theocharous	. 824-1450	Anytime
CodeBase	lan Haly		After 5:30 & W/E
Communications	Ron Lewis		9am-9pm
Corel Draw	Scott Hendry		After-hours
Dataflex	Tony Obermeit	2875534	Mon-Sat A/Hrs & Sun
		070 4400	A#+-:: 5:00 0 \A!/5
dBase	lan Haly		After 5:30 & W/E
	Mike Theocharous		Anytime
	Sylvla willie		Evenings
	Bob Boon	•	M-F 8am-5pm
	Chrls Raisin	. 379-1415	Any time
		070 4400	Affan 5:00 9 \A//5
DBXL	lan Haly		After 5:30 & W/E
DisplayWrite 4	Mike Lester		(343-5703 a/hrs)
DOS	Dan Bridges		Anytime
Excel	Peter Akers	. 265-4411	Mon-Wed 6-9pm
<b>-</b>	Dames Thamas	074 7000	M-F 5-9, W/E
Forth	Danny Thomas Cec Chardon		Evenings
Fortran			
	Rob Andamson	200-8333	Evenings
Fox/Fox-Pro	Geoff Tolputt 0		M-F 9-6
Genealogy	Rob Adamson		EvenIngs
	Colin Cunningham		9-9 all days
	Bob Gurney	355-4982	Mon-Sat 8-8
Hardware	Chris Ossowski		9-9 all days
Help!	Dan Bridges		Anytime
	Scott Hendry		After-hrs
Meta 5	David Shaw	870-3633	9-9 all days

MS Word	Chris Raisin 379-1415 Ron Lewis 273-8946	Any time 9-9 all days
Multimate Multi-user DOS Open Access 2 OS/2 PostScript PowerBase Project Manage- ment & planning	Frank Mehr       397-3984         David Shaw       870-3633         Cec Chardon       870-1812         Alan Gibson       207-2118         Danny Thomas       371-7938         Mike Lester       275-1742         Brian Doyle       355-1328	Anytime 9am-9pm Evenings 6:30-9:30pm M-F 5-9 & W/E (343-5703 A/hrs) 9am - 9pm all days
Quick-BASIC 4.5 Q&A Q-Edit Quicksilver	Harry Strybos	4pm-7pm Weekdays Anytime Anytime M-F after 5:30 & W/E
R-Base Reflex	Tony Luck	9-9 all days 9-9 all days
Spreadsheets SQL System Manager True-Basic Unix Virus problems Windows	Sylvia Willie       393-3388         Cec Chardon       870-1812         David Shaw       870-3633         Bob Gurney       355-4982         Paul Watts       892-2226         Dan Bridges       345-9298         Peter Akers       265-4411         Bernard Speight       349-6677	Evenings Evenings 9-9 all days Mon-Sat 8-8  Mon-Sat a/hrs & Sun Any time Mon-Wed 6pm-9pm 6pm-9pm
Word for Windows WordPerfect Wordstar (all ver) Wordstar-2000/4 Xenix	Peter Akers	Mon-Wed 6-9pm Mon-Fri 9-6 A/hrs Mon-Fri 8-5 Mon-Sat a/hrs, Sun (343-5703 a/hrs)

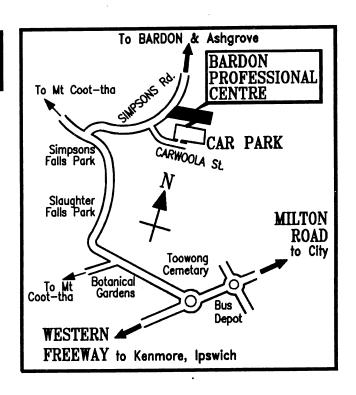
## **MEETINGS**

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

BARDON PROFESSIONAL CENTRE Simpsons Road, Bardon, Brisbane 10am to 5pm.

Brisbug occupies the main theatre and several other rooms. Please note that other groups are usually using the centre at the same time, and that parking is totally prohibited around the buildings and driveways, and the upper level car park is strictly reserved for staff and for exhibitors with specific prior permission.

There is a large car park off Carwoola Street with a footbridge over the creek and a pathway to the centre.



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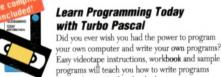
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