Significant Bits

Magazine of the Brisbug PC User Group Inc

Volume 8 No 7
June 1993

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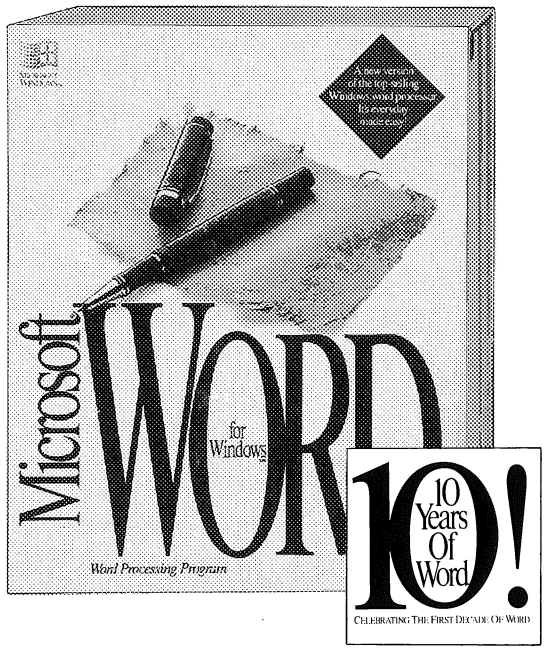

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Significant Bits June 1993 Volume 8 No. 7

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The Brisbane group for users of PC-type computers
PO Box 985 Toowong, Qld 4066 Tel:274-4108

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Post Prepaid requests to:
Brisbug Software Library,
95 South Station Road,
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Significant Bits Magazine

Acting Chief Editor: Ron Lewis
Associate Editor: Geoff Harrod
Reviews Editor: Ash Nallawalla
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:
Ron Lewis, 12 Firelight St, SUNNYBANK HILLS 4109

Artwork Separations: Queensland Business Magazines

Printer: MARLIN PRINTING
37 Caloundra Rd. Caloundra (074)915-833

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Advertising

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

DEADLINES

Normal deadlines are the third Friday of the month preceding publication. Space reservation deadline: 3rd Friday of month preceding publication. Replacement artwork deadline the last Friday of that month. Artwork must accompany space booking. If booked by phone or FAX, booking becomes effective only when artwork is received. The magazine is usally printed the second week of the month of publication, so that changes to copy must be in the preceding week.

TERMS

Payment must accompany bookings unless an account has been established. Discounts are offered for multiple insertions when advance payment is made. Members may advertise at half rate, but member payment must accompany ads (Classified ads not exceeding three lines are run free of charge. More than three lines attract attract a minimum charge of $5.)

FORMAT

The magazine is A4 size, offset printed and saddle 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.

FULL PAGE SIZE DETAILS

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

RATES

Color covers	$600	Doublepage spreads	$500
Colour page	$450	Colour 1/2 page	$250
Colour 1 column	$110	Colour 1/12 page	$50
Centrefold spread	$525	Full page	$275
2/3 page	$175	1/2 page	$160
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1/6 page	$50	1/12 page	$25

Special positions:

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

INSERTS

Inserts are subject to prior arrangement. The charge is 1.5 time the full page rate. The inserts may be color and double-sided and may be in foldout or booklet form, but may not exceed A4 size. The required quantity of printed inserts are to be delivered to Significant Bits. Quantity, delivery and other details will be advised on request. Advertisers may contact Ron Lewis (07)273-8946, FAX (07)273-8954.

From the Engine Room

Ch-ch-ch-Changes

Nothing ever stays the same, no matter how comforting that might be. Our state of homelessness was only very temporary. I would like to thank all those members who, in response to my report of our need for a new venue, took the trouble to investigate and supply detailed suggestions. We have at least three venues that would, in varying degrees, fit our requirements as regards to theatre size and facilities, parking, classrooms, and catering. I hope next issue we can tell you where we're going ... and probably soon. At least one is *better* than Bardon PDC.

The new classes introduced last month proved very popular, and this month we are advertising a weekend course in WordPerfect run by a professional trainer, Margaret Burton.

New rules for the Junior Club (see later in this issue) appear to have received approval from the parents of Junior members, when Lloyd Smith, who was responsible for drawing them up, discussed them with the Juniors last month.

I would be very interested in suggestions from country members, and those who can't get to meetings, on what new facilities might interest them.

Over to you ... .

ASSOCIATED CLUBS DIRECTORY

Club Name	Centred in	Telephone	Contact
Coffs Harbour Computer User Group	COFFS HARBOUR	066-538283	Janell Rose
Gold Coast SIG (of Brisbug)	BURLEIGH WATERS	075-930577	Carl Planting
Dalby PC Users Group	DALBY	076-621381	Peter Allen
Beaudesert Computer Club	BEAUDESERT	075-411050	Bernie Williams
Sunshine Coast Computer Users Group	MOOLOOLABA	074-442711	Daz Picton
Landsborough Computer Club	LANDSBOROUGH	074-923205	
Noosa Hinterland PC User Group	COOROY	074-852052	Colin Sheehan
Kenilworth Computer Users Group	KENILWORTH	074-460328	Peter Webb
Cooloola District Computer Club	GYMPIE	074-833881	Dorothy Ross
Fraser Coast Computer Club	HERVEY BAY	071-212394	Steve Bottom
Bundaberg PC User Goup	BUNDABERG	071-520326	David May
Gladstone QRI Computer Club	GLADSTONE	079- 723083	Dave Franklin
Gladstone Computer Users Group	GLADSTONE	079-783941	Cec Wilmott
Rockhampton Group	ROCKHAMPTON	079-312383	Nick Quigley
Mackay Computer Users Group	MACKAY	079-573998	Gabriel Barbare
Burdekin Computer Club	AYR	077-834630	Rod McRae
Johnstone PC User Group	INNISFAIL		Lyndelle Coianiz
Cairns PC User Group	CAIRNS	070-577997	John Hampson

Editorial

It's with almost a sense of deja-vu that I write this editorial.

The last time I sat in the editor's chair was in late 1990, as a result of the sudden resignation of the previous Editor. Sadly, Chip Karmatz has resigned suddenly following a disagreement with senior management (essentially Lloyd Smith and me) over our refusal to allow him absolute editorial freedom. It remains our firm belief that editorial freedom does not extend to the publishing of editorials that are clearly injurious to Brisbug's interests.

The improvements that Chip instigated during his short reign as Magazine Co-ordinator are clearly apparent to anyone who has belonged to the Club for more than six months. The introduction of limited colour is the most obvious, but probably more importantly, the subtler improvements in proof-reading and photograph reproduction, and current affairs, like the TechTalk column, have lifted our standard greatly.

Some problems remain... we still need a professional advertising agent to garner ads for us to defer the cost of production - our arrangement with TriMedia proved illusory. We are still lacking in the photography department; we'd like to use more photographs, but only if they're decent quality, which means experienced photographers using the right equipment ... any volunteers?? Design and layout are still being done by (enthusiastic) amateurs (Geoff and me). There is room on the "staff" for photographers, typesetters, and layout design professionals. Despite this, we are proud of the magazine we produce, and continue to resist cost-push efforts to hand over production (and with it, control) to the trade press.

It is interesting to compare our magazine with those produced by other clubs in Australia. Their approaches vary considerably: Melbourne and Canberra PC User Groups produce large mags like SigBits. Recently, Melbourne have, in a move stated to be aimed at reaching a break-even situation (costs=advertising revenue) changed their method of printing, gone to soft covers, and reduced the number of pages. At the risk of upsetting my friends in MelbPC, it reminds me more of "TV Week" than the *PCUpdate* that won the "Best User Group Magazine in the World" award mid-1992. Canberra produce a hard-cover journal like ours (but not as good, of course). In contrast, Sydney and Adelaide have small (around 16 pages) newsletters, which consume far less of the club's financial resources to produce. Perth distribute theirs on floppy disk .

We have always adopted the philosophy that "Significant Bits" is one of the most important "glues" that hold Brisbug together, particularly for the 80% of members who regularly *don't* attend meetings. The high standard of articles lends us technical credibility, an essential ingredient in obtaining high-quality speakers for our meetings, and the ability to speak for our members in the computer "community". Most of all, we hope *you enjoy* the results of the efforts of the team of writers, producers and baggers who contribute each month to its eventually turning up in your mailbox, and consider that the approximately $ 2.40 per issue it costs you is worthwhile.

Ron

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Hints, Tips and Tricks

Contribute a tip, hint or trick and receive a Brisbug prize.

Send to: The Editor, Significant Bits, PO Box 985, Toowong Q 4066. Contributions should be on a floppy disk in ASCII text and printed out. Screen dumps are all right as long as the format is identified. Floppies are returned with your prize. (Two winners last month neglected to put their names and return addresses on the disk. Please do—makes our work easier.)

When is a CPU not a CPU?

First it was just XT and AT, an 8086 and an 80286. You could easily tell from its name or number its megahertz rating. But that was in 1985. Now there are more CPU's now than members of a rugby team.

If you saw a rating of 16MHz for a 286 you could compare it with a 25MHz 386 chip. And yes, we all know what the designation 386 and 486 mean, but what about the newer foggy designations such as SX, DX,DX2, SXL and DRu2 and the host of megahertz ratings. New competitors to Intel like Cyrix and AMD claim their chips with the same megahertz as the Intel chips are faster than Intel's. Possible? and is an AMD 40MHz 386 chip faster than an Intel 16MHz 486SX chip. Or is there a difference between Intel's and IBM's speed-doubling technology? The editor of this column can't answer this definitively even looking at test results. But what can be done is to answer what the designations mean. Refer to the table below:

But where did the idea of a computer chip come from? It all started with Intel's 4004, promoted as the first "Computer on a Chip" back in 1969. It was the first microprocessor but was only used in desk-top calculators.

Designation & Intro			Clock Speed, Addr Memory, Virtual Memory, Transistors	Data Paths– Internal-External
8086	Intel [1]	1978	4.77,8,10 1Mb 29,000	16-bit Int & Ext
8088	Intel [2]	1979	4.77, 8 1Mb 29,000	16-bit Int, 8-bit Ext
80286	Intel	1982	8,10,12 16Mb 130,000 Virt mem 1 Gb	16-bit Int, 16-bit Ext
V20	NEC [3]	1984	8,10 1 Mb 63,000	16-bit Int, 8-bit Ext
V30	NEC	1984	8,10 1Mb 63,000	16-bit Int, 16-bit Ext
386DX	Intel [4]	1985	16,20,25,33 4Gb V.Mem 64Tb 275,000	32-bit Int, 32-bit Ext
386SX	Intel	1988	16,20,25,33 16Mb V. Mem 64Tb 275,000	32-bit Int, 16-bit Ext
486DX	Intel [5]	1989	25,33,50 4Gb V. Mem 64Tb 1,200,000 (8K cache)	32-bit Int, 32-bit Ext
386SL	Intel [6]	1990	20,25 4Gb V. Mem 64Tb 855,000 transistors	32-bit Int, 16-bit Ext
Am386DX	AMD[8]	1991	25,33,40 4Gb, 64Tb, 161,000	32-bit Int, 32-bit Ext
486SX	Intel	1991	16,20,25,33 4GB, 64Tb 900,000	32-bit Int, 32-bit Ext
AM386SX	AMD	1991	25,33,40 4Gb, 64Tb 161,000	32-bit Int, 16-bit Ext
F8680 PC	C & T[8]	1991	20 16Mb, 64Tb 150,000	16-bit Int, 16-bit Ext
IBM 386SLC	[9]	1991	20 16Mb, 64Tb 800,000	32-bit Int, 16-bit Ext
486DX2	Intel [10]	1992	25/50 33/66 4Gb,64Tb	32-bit Int, 16-bit Ext
CX486SLC	1992	Cyrix	20,25,33 16Mb, 64Tb 600,000	32-bit Int, 16Mb Ext
CX486DLC	1992	Cyrix	25,33,40 4Gb, 64Tb 600,000	32-bit Int, 32-bit Ext
IBM 486SLC2	1992	IBM	20/40, 25/50 16Mb, 64Tb 425K	32-bit Int, 16-bit Ext
CX486DRu[2]	1991	Cyrix	16/32, 20/40, 25/50 4Gb 64Tb 600,000	32-bit Int, 32-bit Ext
Pentium	1993	Intel	60,66Mhz (two-8K caches,) 3:1 million	64-bit Int, 32-bit Ext

NOTES:
1 Faster than the 8088 with 16-bit buses, it is still used for handheld gadgets
2 Could address 16Mb of memory and first chip to break 640K barrier in protected mode
3 Clone of 8088, still used in subnotebooks
4 Created the virtual mode that allows multitasking
5 First chip with built-in coprocessor and an 8K cache. Fifty times faster than an 8088
6 Expressly designed for portables and desktops
7 20% faster than the 33MHz chip and better than Intel's 16MHz 486SX chip
8 For subnotebooks and very inexpensive, about $60
9 Joint IBM-Intel venture to enhance 386 designs for IBM systems
10 First clock doubler that runs instructions twice as fast internally

Hangups

We use Microsoft Word versions of 5.0 and 5.5 and Lantastic. We also have various versions of the AMI BIOS and have experienced keyboard problems similar to those of Word Perfect—it is the usually the arrow keys which revert to the number equivalent.

Machines with a totally different AMI BIOS have reacted differently, some even "hanging" totally. Other programs also did some strange things when they expected an arrow and got a number.

The reasons for this have been explained to me (Kim Davies of Roden-ENC). It is something about the BIOS losing the first part of the message which decides whether the keystroke is an arrow or a number.

The solution is simple one. In the CONFIG.SYS, we have added the line:

```
INSTALL=C:\DOS\KEYB.COM US
```

This uses the US keyboard conventions.

From *Rosemary Kent*

Flowing Text

PageMaker allows you to make an irregular custom border to flow around irregular objects. It is the equivalent of a dropout photo when you do a pasteup. Each graphic is enclosed by two frames, which you see when you select a graphic with the pointer tool. Click on the dotted line that forms the outer frame and a diamond appears. That's a handle that lets you mouse-drag the boundary into a free-form shape. By placing and moving a series of these handles, you can create a new boundary that follows the edge of your image and allowing text to flow into the white space. Just specifiy the kind of flow you want using the Text Wrap dialog (under the Element menu) and make sure the image frame is behind the text frame by using the Element menu's "Send-to-Back" command.

Text Variations in a Document

Framemaker, a cross-platform product, lets you format several versions of a text within the same document. This is particularly helpful if you write manuls or documentation of any type. Using the conditional text feature allows you to define elements for multiple documents that share some text but also has text in its own different format.

The varying text is regulated by tags, but they're created by using the Conditional Text dialog under the Special menu. Assign a tag name from this menu and choose an on-screen colour or marking for each conditional tag. Any combination of the tags can be displayed, although logically you would likely want to edit one document at a time. Punctuation, symbols and spaces also count as conditional text.

DOS 6 & OLD_DOS

You can safely get rid of your C:\DOS 5 directory in DOS 6. The Beta version didn't include *MIRROR*, *RECOVER*, and the */PARTN* switch, for example. The commercial version does. Thus if you had SNOOPY and EXE2BIN files, they are still there in your new C:\DOS file. You can use the *DELOLDOS* command or remove the filed with *RD*, which now deletes subdirectories with files still in them.

If you don't have DOS in C:\DOS directory, it is a good idea to do it with DOS 6, since DOS automatically sets *PROMPT* equal to PG and *PATH=C:\DOS*, if you haven't set the *PROMPT* and *PATH* variables. Other subdirectories are not searched.

If you have a laptop, take advantage of POWER.EXE to save on battery power. This device driver can extend battery use by about 25%.

MEMMAKER is great because it scans the E00h memory segment for unused upper memory space. what it doesn't do is scan the region from C000h to C5ffh. Thus you can get 24K more of your upper memory block (UMB) if you add an *INCLUDE* statement after your EMM386.EXE statement *I=C00-CFF* in your CONFIG.SYS file. First check to see whether it is being used by RAM or ROM by using the *MSD* (diagnostics) utility in DOS. The memory button will tell you if this section is being used.

If you have locked up with any of your DOS configurations, you can now do a clean boot by using the F5 key.

You can now put in a *NUMLOCK=OFF* in your CONFIG.SYS, which will keep that switch off when you boot. The keyboard can be used to turn it back on.

If you have Windows, DOS 6 has added a hidden group: Microsoft Tools.

Click on Windows, then More Windows and you will see the Microsoft Tools group. Click on that and it will appear on your desktop. In it you will have Anti-Virus, Backup and Undelete programs. You can grab the Anti-Virus icon and move it to the Startup if you aren't already running it.

Stop Restarting Windows

Has Windows ever restarted when you exited from it? Windows does this when the AUTOEXEC.BAT file was altered during a Windows session. To keep Windows from restarting, remove WIN from the *PATH=* line. Then place WIN in a batch file and add it to your AUTOEXEC.BAT file

Exporting .CRD file to a Word Processor

Windows Cardfile can't normally export text to another application. You can do this by installing the Generic/Text Only printer driver. Double-click on the *Printers* Icon in the Windows Control Panel. Click on the *Add* button and select *Generic/Text Only* option from the list box and follow the Windows instructions to add the driver from Setup.

So as not to send data to your printer port, configure the driver by using the *Connect* item from the *Printer* dialog box.

Choose *file* from the list of ports.

Then *open* Cardfile to adjust it.

Open a file in it that you wish to export, choose the *Print Setup* command from the *File* menu and click on *Generic/Text Only.*

Reformat Cardfile under the *Page Setup* to fit your text.

No need to use the header and footer defaults. Just set their margins at 0.

Cobb Group Newsletter. ○

Minutes of the April meeting

by Chris Raisin.....Secretary

Thanking Peter Jefferies from Microsoft for his Lunchtime Special presentation on Windows NT (..hey, members!.....haven't computers some a long way since you joined this club???), Ron Lewis - the President of our happy (some would say delerious) group - opened the April meeting at 1-06 p.m. (and 30 seconds)

First things first (strange that!), the six lucky winners of DOS 6 (see page 14 of April issue of SigBits) the packages have arrived and are available from the Secretary.

That was some good news (for some) but now for the bad... yes, we will be homeless after September of this year (unless our Management Committee find a way out — and they will of course!). The Bardon Professional Development Centre will be unavailable to us from 30/9/93. We can't hang around, and so be prepared for a new meeting place, folks!

Ron thanked all those people who have rung up or sent FAXs with suggested names of new venues and their charges. A number of places are being investigated, but they must meet (at least) the high standard of facilities provided by Bardon (parking, refreshments, lighting, sound, large rooms etc.) Three places already meet our standards, and Ron stated that he hopes to be able to confirm a new venue by the July meeting at the latest. (A suggestion by one member that we meet two times per month was greeted by much "yuk!" - particularly by committee personnel).

On to the more formal part of the afternoon:

Treasurer's report

Max Kunzelmann (you remember him - the Treasurer who keeps saying he is NOT disappearing to Switzerland every now and again!....hmmmm) presented his report.

Opening balance	$10,241
deposits	$ 8,256
Expenses	$ 9,053
balance at end	$ 9,440

- all rounded of course so put away those calculators. The major part of our expenses for the month were the magazine production (a little over $6000), postage ($1136) and rent at Bardon for the Sunday meeting ($880 normally, but nearer to $1000 this month due to extra room hire).

QDIR in library

After Max resumed his seat, Dan Bridges then appeared on the scene. He announced that his rather short (huh!!) program listed on page 44 of the May 1993 issue of SIG Bits (the QBasic program QDIR) is now available on disk from the software library! (darn.....I have just finished typing up to the end of line 2412, Dan! I'll stop now and buy the disk!....Secretary)

Positions Vacant

Dan also gave a "positions vacant" message! His boss is looking for a keen person who loves computers (who doesn't in this mob??) and enjoys installing new systems, programming and teaching (a general "end-user helper"). The salary quoted is in the range of $24,000 to $25,000 p.a. - please ring Dan on (07) 345-9298 for further details.

SIGs

Bernard Speight then gave his very informative (but obsolete by publishing time) news re SIGS (Special Interest Groups). (The Secretary enjoyed not having to write with his still sore but healing hand during this time!)

Gold Coast SIG - Birthday party

After Bernard resumed his pew, Neil McPherson (President of the Gold Coast SIG) made an announcement that their group will be holding their birthday party on Tuesday 29/6/93. Neil pointed out that the presence of computers would be inappropriate (so sounds like some raging is afoot!) Please ring him on (075) 971240 to get details. (No drink driving afterwards of course, so make appropriate plans!)

BBS Manual

Since Paul Marwick had gone "walkabout", Ron Lewis gave a brief BBS report. Don't forget that we now have FOUR lines into our popular board. The "BBS Users Manual" is at the printers and should be ready for release to the "public" after 23/5/93, so please contact the software shop after that date.

OZ-E-Mail

Don't forget that Brisbug is becoming involved in the OZ-E-Mail system (see John Massey's excellent article on page 30 of the May, 1993 issue of Sig. Bits). Anyone interested in helping, please contact Graeme Darroch on (07)209-1999.

A member of the audience asked if anyone knew of a single publication which gives the listing of all the prime dealers (computers, not cars!) in Australia??? (The sound of crickets followed.....but if any reader knows, please advise the editor of SigBits so we can pass the info on).

Education

Ron Kelly came bounding down the stairs (enthusiastic chap, hey what?!) to give his Education Report. On the 17th and 24th July, 1993 a BYOC ("Bring your own ..." (you know what)) Wordperfect 5.1 course is being conducted at the Gap State High School in Brisbane at a cost of $70-00. This is quite cheap, since the course runs all day (both days) and is intensive....makes you a "perfect" Wordperfect user...great for those trying to enhance their job prospects or general efficiency with wordprocessors. Please contact Ron Kelly on (07)399-5406 to reserve your spot.

A quick reminder that Dan Emerson's class was meeting that day (bring your own soldering iron!) was followed by a rather short Question and Answer time.
("I sometimes wish we spent a bit longer on the old Q&A sessions.....maybe the Questions and Answers could then be transcribed into the magazine"

Everything done complete, Ron Lewis closed the meeting and warmly welcomed Richard Morris from Borland International (you remember him??....used to be sysop on CentreBoard BBS). Richard gave a high quality presentation on where Borland stands in the "Computer Language" area of its products and its plans for the future. ○

TECHNEWS & TRENDS

Ethernet costs

Ethernet is used is used for e-mail by almost every university around the world for very good reason—its low cost. The connect rate is low and the network adapter cards are dropping in price all the time. Now that LAN PC connections are expanding so quickly, adapter cards are also part of the purchase package. And the worldwide market for these cards is enormous. More to the point, what does a card cost and what will it cost in the future. In 1991, the card could be bought for about $300 anywhere in the world. Last year it dropped to an average about $240 worldwide. This year the price is just above $200.

It should drop to about $150 worldwide by 1996, according to IDC, a marketing research firm. That's a very reasonable price for the ability to hookup worldwide. What can make it attractive to Australians is access to direct marketers in Taiwan, the United States, Japan, and Europe. Right now overseas sales account for only 4 per cent of US direct channel markets. Companies like Dell, which produces a full line of computer systems and peripheral products, that have opened direct sales offices in Australia will be pricing their wares according to US prices. The Aussie office is primarily to assure tech service.

Electronic books

Australian publishers are finally drifting into the new market. Firmware Design, a leading multimedia distributor, will launch the first Australian electronic book at the Aussie Book Fare in June. Already in hard cover, the title, "Long Time, Olden Time" traces Aboriginal history in the Northern Territory. It incorporates aboriginal music and aural story-telling techniques. One would hope that the university presses would start coming out with dual versions, print and electronic books, if the commercial publishers are going to leave the market to overseas publishers. The Melbourne University Press is now contemplating "talking books."

Exotic screen-savers

New screen savers have been dubbed as expensive best sellers and office time wasters. They have gone from being functional to being the flavour of the month. This writer hasn't changed his mind about them, but is much impressed by some of the new ones that show vignettes. Depending on the intricacy of the graphics, they range in price from $25-75.

Matinee uses full motion video clips, 38 of them in 3-5 second grabs. All in the public domain, there are cartoons, sports humour, bikinis and Neil Armstrong on descending to the moon.

Star Trek: The screen Saver, featuring all your favourite characters from Spock, Scottie and the Tribbles. There's also a trivia quiz and audio clips from the series if you really want to hear Captain Kirk say "Beam me up, Scottie!"
Can only be run under Windows and needs to 2 Mb storage.

Johnny Castaway actually has a plot. Poor Johnny is stranded on an island and undergoes adventures with sharks, mermaids and lightening, all in efforts to get away. The whole adventure takes 120 days, with time out for Halloween and Christmas.
This screen saver also requires Windows and 1.5 Mb hard disk space.

Matinee uses full motion video clips, 38 of them in 3-5 second grabs. All in the public domain, there are cartoons, sports humour, bikinis and Neil Armstrong on descending to the moon.

OS/2 beta

OS/2 V 2.1 is in beta testing.
New features will include support for Windows in the enhanced mode, a 32 bits graphics engine advanced power management, multimedia extensions and driver support for 32-bit video adapters,
CD-ROM drives, pen, audio, SCSI and other devices. It will be able to run Windows, DOS or OS/2 programs from the shell, in Windows mode or from the OS/2 workplace.

PC graphics best-sellers

The top three sellers in PC graphics have been Harvard Graphics, PowerPoint and Freelance Plus, because they offer pie, bar and text charts along with presentation capabilities and drawing tools.

HG sales, however, have dropped 50% since 1991, although still the giant in the DOS world. It had 44% of the market in 1991, but only 22% at the start of 1993.

MS PowerPoint has jumped from 4% to 16%. Lotus freelance dropped from 20% to 15%, low-end software Broderbund Print Shop from 6% to 9%, and Corel Draw from 1% to 8%.

Computer Intelligence

CD-ROMs for hire

Video rental stores in the USA are now renting CD-ROMS for overnight use. It is a counter move to the inroads of cable TV. A few CD-ROM specialist shops in Sydney are doing the same on a trial basis.

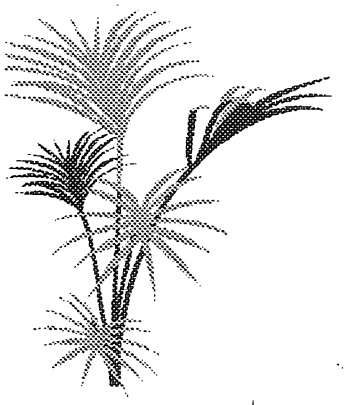
The nine CD-ROM best sellers at the moment:

1. Cinemania (MS Windows)
2. World Atlas (DOS/Mac)
3. Great Literature (DOS/Mac)
4. Bible Library (DOS)
5. Monarch NOTES (DOS/Mac)
6. Reference Library (DOS)
7. Where in the World is Carmen Sandiego? Deluxe Ed (DOS)
8. World View (Windows)
9. Sherlock Holmes, Consulting Detective (DOS/Mac/Windows)

Two new CD-ROMs, under the $100 mark worthy of note.

"The Complete House" Deep River Publishing, Inc (US FAX No. 207 871-1683). Puts home planning and design on disk. It combines CAD software with full colour layouts like the ones found in *Home* magazine. You can create and visualise floor plans. It contains lots of sample homes, with the CAD package including a library of designs and tools for developing floor plans. Its easy to use, because from the main menu you can select a particular section and then move from screen to screen as you would in turning pages in a book. Under Windows, its advantage is the icon interface.

The second is *"The Herbalist"*, Hopkins Technology, (US Tel 612 931-9376). This disk investigates the therapeutic use of herbs and their use in a holistic perspective. The table of contents has a classified listing of plants and their effects on humans, such as on digestive, nervous and reproductive systems. Sketches of the herbs are included, but in monocolour. Either DOS or Windows versions, one of the neat devices is to click on "Citations" and find extensive lists of references on any herb listed in the database. Could use some animated illustrations in herb prep, though.



Audio Without a Sound Board

Out of slots to add a sound board and you're dying to add sound to your text, spreadsheets, or presentation graphics, the you can use Logitech's AudioMan. It's external and plug into a parallel port. AudioMan can play back sound in any Windows .WAV file. It takes advantage of Windows Sound Recorder and OLE to embed sound objects. Use the *Insert Object* command from within a program, selecting sound as the Object type.

If you use Sound Recorder's Icon buttons, it works like a tape recorder with Word, Excel, Ami Pro, or WP for Windows. Doesn't work with MIDI files.

About the size and looks of an electric shaver and runs on double A batteries. About $200. ○

Some 1993 software UPGRADES

A selective list of upgrades for software for release in the first half of 1993

INTEGRATED

PFS:First Choice 4.0—WSIWYG word processor; new spreadsheet module; scalable fonts; enhanced database; presentation graphics module; chart making and communication module.

Windows NT— 32-bit version of Windows; multi-threading; multi-processor and RISC chips.

COMMUNICATION

eMail for Windows 2.01 Mail browser message window; spell checker; conversion threading; drag & drop.

WinFax Pro 3.0—annotations to mark FAXes with text; phone book and DBF file format; drawing tools; image processing; OCR; cover page designer.

WordPerfect Office 4.0 for Windows & DOS— Integrated E-mail, calendar and scheduler; custom interface; task management; audio and workflow integration; third party APIs; central admin.

DESKTOP PUBLISHING

Microsoft Publisher CD-ROM Edition—Full on-line documentation; Design Pack with fonts; clip art; templates; Microsoft Draw.

Pagemaker 5.0—Full colour support including colour control strips; multiple document interface (MDI); drag and drop; greater importing capabilities; floating control palette; auto quotes, drop caps, kerning and tracking; Panose font-substitution (closest font).

WORD PROCESSORS

Word Perfect for Windows 5.2—More accessories with Grammatik; mail enabled; supports Type 1 fonts; QuickFinder, QuickMenu ; Windows printer driver.

WordPerfect for Windows NT—Uses 32-bit performance multitasking and security features.

WordPerfect 6—New document management features; more import, export and DDE capabilities; improved graphics manipulation.

XyWrite 4 and XyQuest—Improved project organisation; new file and project management features; save & resume features for up to nine windows; integrated modules & Orbis and Ibid

SPREADSHEETS/CHARTS

Improv for Windows—Dynamic spreadsheet; multiple views; 100 worksheets linking to one file; 16 views per worksheet; Outlining Plus; SmartIcons and SmartFill; menu creation and chart rotation.

Lotus 1-2-3 for DOS 3.4—3D spreadsheet; SmartIcons; DataLens database; virtual, extended & expanded memory; 64Mb models.

UTILITIES

Keyfile 2.1— Full client and server support of OLE protocols including embedding.

On-Time for Windows & DOS—Upload and download commands for portables to networks; import-export capability.

PC Certify 4.2—Supports any memory driver; tests Ums, HMA, XMS, expanded and extended memory.

Win Master 1.5—Toolbox, KwikInfo, Power Disk and Kwik Vault improvements and modules; bundled with Super PCKwik RAM Disk.

ACCOUNTING

ACCPAC Plus DynaView 6.1—Links ACCPAC Plus data with CA-Supercalc or Lotus 1-2-3 spreadsheets; includes Dynaview DATA API & DLL for Windows.

Client Write-up 5.1 for Windows—Supports Windows 3.1 TrueType; WSIWYG; general ledgers; two year viewing.

PROGRAMMING

Macro Assembler 6.1—Instruction timings; high-level directives; improves MASM 5.1 compatibility; development for Windows NT; improved CodeView Debugger and Programmers' WorkBench.

Object Vision—for OS/2; for non-technical users; new user interfaces; new logic & links to databases; add-in Report Writer for Windows; SQL connections & cross platform.

C++, Application Frameworks 3.1, Borland C++ 3.1, Turbo C++ for Windows 3.1, and Turbo Pacsal 1.5— all upgraded as object-oriented compilers; include Object-Windows & Runtime Libraries; source code and Windows API reference manuals; OLE; drag & drop; TrueType fonts.

LAN

LAN Manager 2.2—Windows Network Administration & Application Starter; LAN Manager Print Station; remote dial-in to x.25 networks; TCP/IP & MS-DLC protocols.

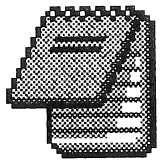
Network Maximizer for Windows 1.1—Record Locking; Maximizer Data Exchange for transferring data between Maximizer databases; group scheduling of Maximizer users; multiple sessions simultaneously only limited by the PC memory.

DATABASES

CA-Clipper 5.2 for DOS & Tools—Object-oriented programming advancement; dynamic link library support. 250 new CA-Clipper functions that access Novell's NetWare.

InfoPublisher Developer's Kit 1.3—API allows DBMS apps to drive InfoPublisher; transparent; supports SQLBASE and Paradox 4; use programming tools that load Windows DLL.

Paradox for Windows—Supports Windows 3.1; Inter-Base Local Engine; supports dBase files & Borland languages; OLE, DDE; various graphics.



Consultant's Notepad

EMM386 problems

Geoff Harrod

I have previously written about the WordPerfect ''Sticky Shift'' problem, maybe to excess, and in my last comment on that topic I mentioned the role of DOS's EMM386 device driver in worsening the problem. Well, it appears EMM386 upsets other things too. The problem seems to be mainly when its ''NOEMS'' option is used. I knew ''NOEMS'' caused a fatal conflict when you tried to run any protected mode program that used the Phar Lapp DOS Extender earlier than the latest version, such as in AutoCAD/386 Rel-10 or 11 or Lotus 3.0, but it seems to give rise to more minor disturbances fairly generally.

So it seems advisable to avoid using the NOEMS option. It is intended for use when you want to enable high-loading of resident programs and device drivers into the UMB area -- the 640k to 1 Meg region -- while not creating any EMS-managed extended memory at the same time. Windows users want to make as much of their extended memory as possible accessible to Windows, and that means keeping it as XMS, as provided by HIMEM.SYS.

The three basic forms of loading EMM386 are (1) with no options; (2) with the ''RAM'' option; or with the ''NOEMS'' option. In all cases there must be a line in the CONFIG.SYS to load HIMEM.SYS before the EMM386 line. All this refers to MS-DOS 5.0.

(1) `DEVICE=C:\DOS\EMM386` does one thing only; it creates a default amount of EMS-managed memory out of the XMS memory that has been provided by HIMEM.SYS. The default amount is 256k, but more can be specified by adding a figure (in kB) as a parameter. This does not enable Upper Memory Blocks, so requests for high loading will be ignored (other than DOS=HIGH,UMB, which involves the HMA area, not UMB).

(2) `DEVICE=C:\DOS\EMM386 RAM` does thee same as (1) but also enables the UMB area for high loading.

(3) `DEVICE=C:\DOS\EMM386 NOEMS` enables the UMB area but does not create any EMS memory.

I suggest you carefully consider whether you really need high loading in the UMB. Many DOS users habitually load an excessive number of resident utilities (TSR's).

If you are using Windows then the need for ''pop-up'' DOS-resident utilities should not exist, and only essential device drivers should need to be loaded. If all your DOS programs will run in, say, 540k of base memory then there is not a real need to free up more by high loading. Available base memory is likely to be a problem most often for network users and users of disk compression software like Stacker as both those require large resident drivers.

If you must have high loading, it may be advisable to accept 256k of EMS also, even if you don't need it, just to avoid the NOEMS problems. Unfortunately EMS uses up rather a lot of memory in its own managemment besides what is made available. You can see why there is still some demand for QEMM and 386MAX as they provide better memory management than the DOS utilities.

I haven't had a chance to explore the situation in MS-DOS 6 yet.

PKZIP 2.0

The long awaited version 2 of PKware's file compression tools is now available. As well as faster and even more effective compression the most significant extra to me is the ability to ZIP a swag of files or directories to multiple floppy disks. Formerly the operation aborted if the destination disk filled up.

Now you can enable multiple volumes, and effectively use PKZIP as a backup system. It is especially valuable for keeping a backup of a complex system as installed. It will not, however, split a file across disks, so cannot copy a file that is still too big for the floppy after compression. Also, the files are treated in strict sequence, and when one won't fit (after compression) a new disk is requested. That means, if that file was a biggie ther may be quite a bit of blank space left on that disk. It is a valuable feature though.

PKLITE

This is another tool from PKware. It compresses EXE and COM files only, but the difference from PKZIP is that you don't need PKUNZIP to use them afterwards. PKLITE compresses executable files in-situ, and they remain executable. It actually adds a very small uncompressor code to the start of the file, so that as DOS loads it into memory, it also gets uncompressed. So with PKLITE you can greatly reduce the space taken up on the disk by your program files without needing any disk compression system like Stacker, Superstor, DoubleDisk or DoubleSpace, and their attendant device drivers, partitions, drive letter swapping, etc.

There can be a few hitches. Occasionally you find a program that malfunctions when run from its compressed form. The remedy is PKLITE -X <filename> to expand it back to the way it was before.

The main failing is that it cannot be used on Windows executables. It detects them and reports ''Windows program; cannot compress''. That is sad, as it is the Windows programs that hog so much space! Oddly, PKLITE gave that message on several EXE programs that I had written myself, and I knew were nothing to do with Windows! I suppose it plays safe. Anyway, PKLITE is a valuable contribution to conserving disk space, especially for those like me who tend to have more program files than data files. If your space is taken up mostly by databases and graphic files then a disk compression system is the only way to squeeze more on.

The PKware programs can be found on Bulletin Boards as Shareware. The registered versions from Wisconsin cost US$47. The lisence info with PKLITE specifically covers Shareware distribution, but my PKZIP 2.0 seems to say quite definitely that no free distribution is permitted.

Geoff

Can GAME BOY & MULTIMEDIA fix Education?

By Garry Hargreaves.

The author is a Brisbane technical teacher with five years experience in PC based MultiMedia.

No longer can educational institutions use the "one size fits all approach" to educational delivery systems.

Exploring better ways to present information has tantalised human senses for thousands of years. In pre-modern society humans relied on paintings, gestures and dance to entertain and deliver important cultural information. Although the 20th century has brought exponential growth in the area of Information Technology (IT), education has failed to 'track' such growth. While educationalists probe better ways to utilise such technology, the definition of 'better' remains varied within the teaching ranks.

The trend towards world-wide fiscal conservatism has meant that information providers are struggling to gain 'edges' in today's competitive climate. This situation has highlighted the importance of effective presentation of information leading to customer (student/employer) satisfaction.

No longer can educational institutions use the "one size fits all approach" to educational delivery systems. Herein lies the focus of this text; not unlike the earlier revolutionary Whitlam era, today's catch cry is..."it's time, time for a change". Put simply, traditional information delivery methods have lost touch with the expectations of their clients, especially younger clients.

1993 and beyond promise new educational flexibility as all providers (government, semi-government and private) endeavour to react to changing customer needs. Arguably no one product has adapted to suit the changing needs of adolescent customers like 'Gameboy'. 'Gameboy' is a hand held video game which is produced by the computer giant Nintendo. Watch a user's facial expressions and you will notice two interesting points. Firstly the users' tongues are typically positioned out either corner of the mouth. Secondly the user displays intense concentration. Be assured, no matter what else is noticed, they are totally engrossed. If doubt still remains about the degree of focus these games and others produce, walk into any large fun parlour. Times have changed since the days of the lowly 20c mechanical pin ball games and it's not just the price. Modern pin ball games are micro-processor based and have video screen inserts along with full stereo sound. Perhaps the most significant change has been the swing to 'video rides'. The users sit in a movable booth which realistically emulates the movements of the item the user is driving or flying, on an embedded colour video screen.

So, if virtual reality is perceived as the technology of the future, think again. Close approximations are as close as the local video arcade. During your visit, take a long look at your current and future clientele. Notice what types of entertainment hold their interest. Then ask yourself, why are our students not interested in lecture format classes backed up by hand scribbled mono-coloured overheads? The fact is, for young students, education becomes boring when it is not tagged with entertainment. Still not convinced? Ask yourself what is the underlying advertising genre used in the current Coles 'Apples for Schools' campaign? The ad shows a young student, obviously restless and bored listening to an 'out-of-camera' teacher. The whole scenario is transformed by the arrival of an Apple computer. The student's face reflects the change from one

of tedium and apathy to wonderment and interest. Like most ads it's not particularly subtle, however the point is unmistakable.

More good than bad would result if teachers thought of their next lesson as having strong links to entertainment rather than mass information dissemination. The 'talking head' format has been losing ground to technology for some time, however the educational 'system' has failed to address this mismatch.

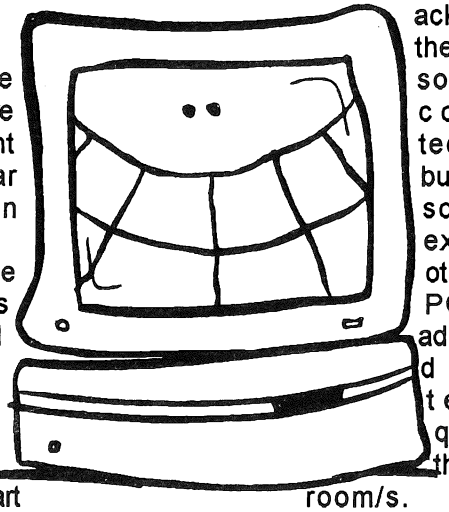
What's this got to do with Nintendo? It is totally conceivable that increasing numbers of students are turning off their entertaining interactive games to walk into a class where the most 'high-tech' piece of equipment may be an overhead projector. So is it a case of, if it is not `hi-tech' it is not good? Obviously not, there are many 'low-tech' delivery methods that are very effective. But let's look at who or what else is vying for our student's attention. Look at Coke ads worth six figure sums. We have computer graphic teams 'morphing' Michael Jackson into a black panther in video clips. Films like 'StarWars','Terminator 2' and 'Lawnmower Man' have raised audience expectations and extended all previous boundaries in visual entertainment. Who are the targets of such 'high-tech' visual presentations? The targets are people who have large percentages of their income as disposalable liquid capital, the same people who make up a large portion of the educational clientele the young.

All educational institutions have teachers (in the minority as they may be) who can fill up chalk boards without suffering the need to refer to any reference material - they simply know the content empirically. These are educators whose teaching strategies, like their teaching aids, have remained unchanged since the age of classroom slates and wet-rag erasers. Couple this with the ease with which some audiences become bored and we have engineered the perfect environment for 'non-learning'. Most people can visualise the classroom scenario- an immovable object (teacher) encounters a resistible force (student). When confronted by advocates of change, such teachers use a strangely similar justification speech; "But the fundamental information is still the same! The square root of nine is still three, Ohms Law is still Ohms law and car engines still have four strokes." So what's changed? Simply.....the recipient's expectations. Lesson deliveries which were acceptable in the past are now perceived as stale and boring. In the 1993 summer edition of "21C", Communications lecturer McKenzie Wark, of Macquarie University, takes a rather blunt approach to traditional educational emphasises. Commenting on the obsolescence of the three R's, he says, "Why schools and universities should persist with such quaint skills is quite beyond me." "Arithmetic is what calculators were meant for. Novels are for people too dumb to understand Twin Peaks. Mr Wark argues that in a postmodern society the *media* is a young person's single biggest influence. Whilst these comments are somewhat 'tongue in cheek' he labours the point that television, video and new technology - spurned by the conservative edu

"Price nose dives have meant MultiMedia is more accessible to the masses than ever before".

cators - will inevitably enter the classroom in a reputable guise".

Educationalists have got to 'get with the program!' There must be a concerted effort to 'tag' essential information with entertainment. Does this mean every lesson must be a Spielberg extravaganza? No, however, teachers should be given the chance to utilise available technology and education should be given the opportunity to compete for undivided student attention.



So what's the answer? While there are no over-night fixes nor a clear pathway to an educational utopia, a change must be made soon. This change must entail using resources which are already available. In short, educational institutions must start making serious investigations into the use of `MultiMedia' as an information delivery system for its clients.

Put simply, MultiMedia is the ability to interactively access a combination of text, photo-realistic graphics, animation, video and sound on the desktop computer. Price nose dives have meant MultiMedia is more accessible to the masses than ever before. No longer is MultiMedia the exclusive domain of the chronic technocrat with deep pockets. Sure, purchases of development or authoring machines still subscribe to the wrestler's cliche "the bigger the better". However, classroom delivery machines, according to the MultiMedia PC Marketing Council, need only be 16Mhz or faster with 4Mb of RAM, a VGA screen and hard disk. Current educational computer purchasing standards in most institutions already comply with the above, therefore the technology needed to implement MultiMedia is already in some classrooms. What is needed now is a minimal software purchase and more importantly, a mind-shift by educational administrators.

Such administrators have already acknowledged the benefits of some new computer technologies but have done so at the expense of others. While PC's clutter administrators' desks, teachers queue to book the computer room/s. So are computers being utilised in a 'direct' classroom situation? In general, it would be fair to say, the bulk of classroom computer usage is devoted to teaching business and accounting software (WordPerfect, Lotus, DBase and Attache). Surely this pursuit is a honourable and very profitable vocation. However, the fact remains we are using Lamborginies to do the speed limit. Most educational institutions continue to ignore this powerful application of their most available presentation tool - the opportunity to offer interactive, individualised education which is both informative and entertaining.

Think of educators making their own educational games. Imagine playing a game where you can't go

'Tell me and I'll forget, show me and I may remember, involve me and I'll learn'

10% of what we read
20% of what we hear
30% of what we see
50% of what we see and hear
80% of what we say
90% of what we say and do at the same time.

on to the next stage until you supply information from your text book or real life situations. 'Knowledge adventure games' could tap into the latent interest and zeal displayed by the 'Nintendo generation' and 'stealth learning' would be an inherent by-product. These educational games would be video arcade quality, and follow national curriculum objectives. Perhaps educationalists could see the `happy' situation where it would be necessary to turn off the computers and force students to have a lunch break.

No other text has embodied this sentiment like a recent US software advertisement. It depicts two teachers whispering in front of a group of students working on an interactive program. The caption read, "Shhh, don't tell them they're learning!"

Whilst becoming familiar with MultiMedia involves a steep learning curve - the curve is not without an eventual plateau. Books, video or live training are all valuable tools, however multimedia is the loom which ties all the above teaching strategies together. It allows the learner to respond and interact with the program without searching through masses of textual material, without hunting down the college video and without the supervision associated with live training methods. This technology can analyse student responses and can provide instant feedback or other types of affirmative action.

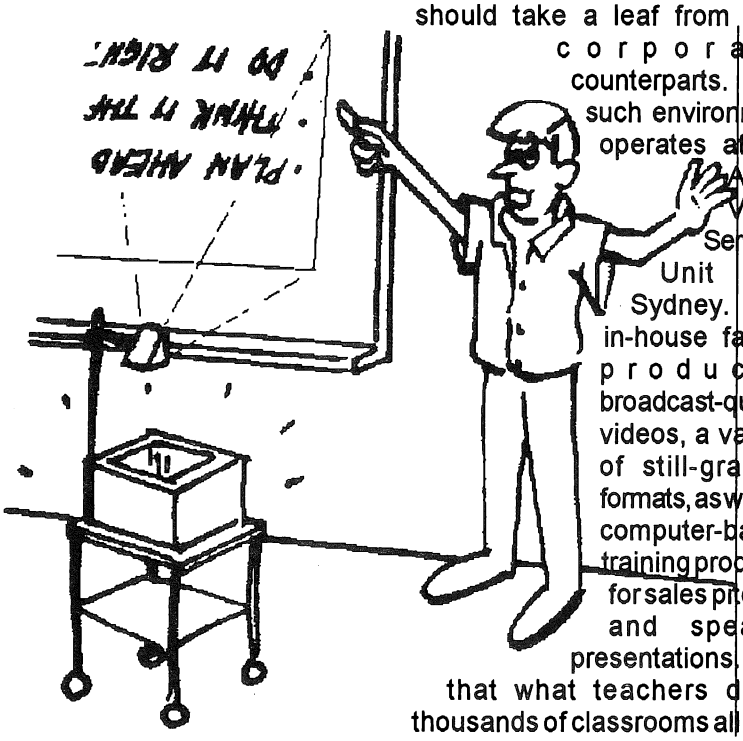
So what's good about using a computer to do what teachers can do? Is MultiMedia going to take over from teachers? No! However as marketing consultant Helen Mitchell points out, the benefits of "MultiMedia education is that it teaches us to learn the way we learn best - by using a combination of reading, hearing, seeing and doing". This is all within a framework of a system which is non-discriminatative, non-judgmental and does not even care how many times you ask the same question. It may be asked, "Can all teachers make the same claim?"

It's a widely accepted fact, `based on educational research, that humans remember best when saying and doing at the same time'. Research into memory retention rates showed the following statistics; we remember:

10% of what we read
20% of what we hear
30% of what we see
50% of what we see and hear
80% of what we say
90% of what we say and do at the same time.

Put simply - 'Tell me and I'll forget, show me and I may remember, involve me and I'll learn'. While similar cliches and similar statistics are often quoted in educational institutions - educationalists `still ***fail*** to design training courseware that fulfils these needs'. To maintain relevance, all educational providers must emulate the workplace, they must present life-like, dynamic and multi-sensory experiences.

Who should address the MultiMedia learning curve and produce these `hi-tech' teaching aids? The responsibility should **not** be borne by individual teachers, they simply do not have the time. Such 'high-tech' aids should be provided by a central bureau service, (not unlike how the school or college print shop



works). Educational institutions should take a leaf from their corporate counterparts. One such environment operates at the AMP Video Services Unit in Sydney. This in-house facility produces broadcast-quality videos, a variety of still-graphic formats, as well as computer-based training products for sales pitches and speaker presentations. Isn't that what teachers do in thousands of classrooms all over Australia, deliver presentations and sales pitches? Still in doubt? Ask yourself, who is going to present the information our students require? Face a mirror and look at the answer.

A recent edition of 'Scan' (Sony Australia) reports "as part of a statewide re-skilling and multi-skilling programme, another government body, Victoria's State Electricity Commission (SEC) has spent more than half a million dollars on developing an interactive MultiMedia training program. "Anne Talbot, a Senior Training Consultant, undertook an extensive evaluation process to determine the best training medium for its multi-skilling strategy. Employee acceptance trials and analysis of research papers showed that interactive multimedia training was at least 50% more effective than traditional classroom training. SEC's computer analysis concluded that the time and resources saved, in operating the courses in-house, represented a 93% saving in training expense".

Closer to home, the Queensland Electricity Commission (QEC) at SwanBank Power Station is also following a similar MultiMedia line with the purchase of 'Select Learning's' interactive videodisc station. Likewise, Queensland University of Technology (QUT) is making preliminary investigations into MultiMedia storage and access requirements. Perhaps the most impressive data to date emerges from the United States. In IBM MultiMedia Solutions, issue 6/4, `Big Blue' reports that "Dexter Fletcher, a 'DoD' research staff member and author of the survey, *Effectiveness and Cost of Interactive Videodisc Instruction in Defence Training and Education,* concluded that MultiMedia was more effective than conventional instruction. Forty-seven comparisons of MultiMedia instruction with conventional approaches were identified. Of all the instructional settings - military training, industrial training and higher education - and rankings in knowledge, performance and retention, MultiMedia increased achievement across the board". `Overall, students at the 50% achievement mark who were introduced to MultiMedia instruction, increased their achievement level by approximately 19%. In higher education training, the results were even better. In 14 comparisons of MultiMedia with conventional instruction in colleges and universities, 50 % level students using MultiMedia increased their achievement by as much as 25%.' Fletcher goes on to say, "in nearly every comparison of MultiMedia

with conventional instruction, achievement in the MultiMedia group was less variable than conventional instruction. Mr Fletcher suggests there was more equitable distribution of achievement using MultiMedia. The survey found that in addition to being more effective, MultiMedia substantially lowered training costs. There were lower costs in using MultiMedia in every measured instance. The average amount of time saved across the studies was 31%."

In the current economic climate, 'bean counters' are being empowered, by managers, to find ways to save money and increase productivity. Surely any strategy which has the above credentials warrants serious consideration. `As any educator knows, capturing student attention is only half the battle. The other half is trying to satisfy the demand for knowledge once interest is excited. Learning becomes a quest for knowledge and students become explorers in search of the images, sound and text that bring information to life'. MultiMedia can achieve these goals. Of course, there is no one complete answer. People learn in different ways, that's what makes us individuals. However Multimedia, given the chance, can serve as another important strategy especially with regards to Australia's future.....our youth.

The reasons for embracing such technology are compelling. Teachers should be investigating new ways to deliver important information. As educationalists we have a professional commitment to update our individual knowledge base. While educational institutions must be flexible enough to adapt to changing client needs. However, in general, 'the system' hasn't got the `joke' yet. Philip Shaddock in his Bible, "Multimedia Creations" delivers the perfect `punch line' "...the best way to reach audiences who grew up in front of television is through audiovisual media, rather than books or lectures."

There is a reason dinosaurs don't roam the earth, there is a reason model T Fords do not populate our roads - there is a ***better*** way. MultiMedia is not an educational revolution, it is an educational evolution. Accordingly, `Darwinism' can also be applied to whole educational systems - change or fail to survive. Take note from Gordon Gecko, in the film Wall Street, "....this is your wake up call." Take heed!

❑

THE ADVANTAGES OF MULTIMEDIA TRAINING

Helen Mitchell
Edited by Garry Hargreaves

Consistently Clear Messages

MultiMedia programs work for trainers and ensure all learners receive the same level of quality of information. Critical information can be presented the same way - every time. There is the added advantage that this type of courseware can be used in conjunction with existing Computer Managed Learning software (ie ELMS). In this way, testing facilities ensure everyone has mastered key concepts and competencies before progression onto the next logical step.

Motivating

MultiMedia systems bring together all of the best qualities courseware designers have to offer. MultiMedia offers non-judgmental, non-threatening dialogue with immediate feedback. The trainees can ask as many questions as they want. Interactive dialogue gives a highly effective means of reinforcing key concepts and information.

Brisbane, like most metropolitian cities, has at least one suburb which attracts more than its fair share of police attention. Current thinking in behaviourial philosophy links anti-social acts against schools with low student self-esteem. It is possible that the inherent motivating factors in-built into MultiMedia may serve as a boost for flagging self-worth and contribute to the reduction of school centered crime. After all, how many fun parlours are fire bombed? (Nil - *why destroy what you enjoy!*)

Students involved with MultiMedia like what they see, hear and do. The courses are clear, concise and consistent. The training is personalised and interactive, designed to be used when you want to learn a new skill, and at your own pace.

Personalised

Even small live training sessions inevitably result in one person holding back the session and ultimately dictating the pace at which the information is covered; "Lowest Common Denominator Syndrome".

With MultiMedia courses, you learn or obtain information at your own pace, and in a way that matches your own needs, abilities and learning modes. MultiMedia puts the trainee in control. It's easy to skip the parts you know, and ascertain the required information. The technology is also extremely flexible in its delivery modes. If a particular location has large ethnic groups, the authored program can be customised to suit different languages and dialects.

Superior Demonstration Facilities

As a trainer, the challenge to come up with "real life" simulations of the work environment can be costly or impossible in some cases. Interactive video and full 2 &3D animation are some of the tools which can be accessed by MultiMedia systems. Very successful "real life" and "not-so-real life" scenarios can be created for access by students.

Also valuable audio recognition can be used. It's a `rule of thumb' in the television industry that the sound track accounts for approximately 50% impact of any program. To illustrate how this relates, ask some simple questions, "How does a tradesperson know if the bearings are worn out in a pump? Simple, s/he uses one of the best diagnostic tools at their disposal - their ears. They learn, usually from experience, what variety of sounds are to be tolerated from that particular device. When a client takes his/her car to a motor mechanic for maintenance, how does that tradeperson know if the `lifters' need adjusting or the problem is with the `tappets'. Clearly, they have learn't to differentiate between sounds. In fact, usually the first words a mechanic utters to a client is "It sounds like..." followed by the mandatory "It will cost....." Until MultiMedia, educational providers have failed to design courseware which will adeqately tests these very important perceptions.

Safe

Most of us don't associate any danger with learning the latest desktop publishing package (apart from baldness as you tear your hair out), but in some situations MultiMedia is the perfect solution. Consider a pilot (avionics) learning the basics of flight, oil workers on a rig learning to handle hazardous situation.....interactive video to the rescue.

Equity

MultiMedia is in-line with Human Rights Commission objectives. MultiMedia courseware does not discriminate by gender, culture, disability (physical or intellectual) or location.It lends itself very well to the theoretical single person living alone in a lighthouse. Courseware is usually modularised and totally transferrable, overcoming locational isolation - a prerequisite given Australia's geography. MultiMedia can be as challenging as the author requires so that `gifted students' can progress at their own pace. It forms the basis of parallel classes between TAFE colleges and high schools. The Commonwealth Country Areas Program, National Element Project is currently looking at resources to achieve the above goals- MultiMedia is high on the list.

Cost Effective

As your time is money, the flexibility of being able to get up to speed with, say, Lotus 123 package in a CD-ROM environment is immense. Using CD-ROMs are expected to be very common place in the next 2 years. Some packages allow the user to literally "toggle" between the CD-ROM tutorial and the spreadsheet you are battling with.

As a rough estimate the cost of training say 10 employees/students in Lotus, can drop to as little as $100 per day per trainee. Overall, MultiMedia courseware of a high standard will give the trainee better retention in a shorter time frame, at a fraction of the cost of equivalent classroom training.

Current Courseware

MultiMedia courses can be updated as new versions are released. Once the initial hardware investment is made, you can either rent or purchase the courseware you need.

Private

Just been promoted to management level? Some prefer to learn the ropes in the privacy of their office, and most of all, at a time which suits their busy schedule. With MultiMedia courses, you need never leave the building. It's a "just-in-time" approach as compared with training "just-in-case".

Leaving Trainers to Do What They Do Best!

Over the next few years the role of the training professional will be redefined. MultiMedia will become a tool to be used to take over basic instruction. Trainers will do what they do best...facilitate, offer advice, guidance and counsel. Students can still benefit from the years of experience, however trainers will have more time to offer a better service.

Training on Demand

From top management to the shop floor worker, MultiMedia systems installed as a trainer or reference tool can be available on demand; 24 hours a day, addressing the needs of all shift workers, if need be. The added advantage of never having to leave the workplace adds up to dollars saved every time. Network the training, and it is possible to reach a much larger audience either local or distant. Many companies

with offices across Australia have already taken advantage of this feature and developed customised courseware to suit their individual needs.

Customised for Your Special Needs

Many large companies have become involved with solving their specialised training needs when "off-the-shelf" products do not satisfy their requirements. MultiMedia authoring packages can then be used to create the specific courseware required by the customer. Therefore promoting a positive public image whilst encouraging business support.

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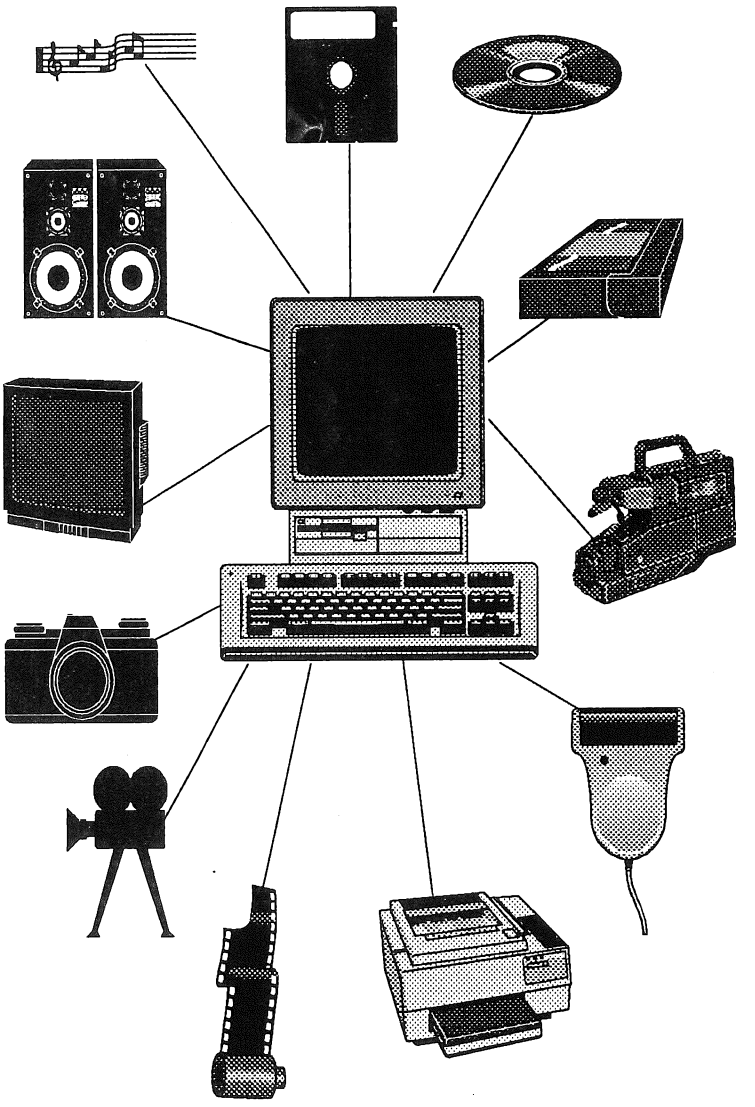


WordPerfect 5.2 for Windows - Have the problems gone away?

Sylvia Willie

Installation

The disks were packed with a small card (about 100x125 mm) with the basic installation instructions needed for installation. This certainly beats looking through the three manuals to try and find out how to get it onto your hard disk. Yes... I KNOW they write manuals and expect people to read them, but it's a fact of life that very few adults ever do. It is good to see at least one software house has accepted this and provided a quick installation guide packed in with the disks. There is also a handy little note at the bottom of the card which refers you to the part of the manual which tells you which files you don't really need.

The installation options are:

a. Standard Installation, the full WordPerfect package including Speller, Thesaurus, on-screen Tutorial, graphics, macros, etc. It says this one requires 12 Mb of disk space.

b. Custom Installation which allows you to decide what you want and where you want it.

c. Minimum Installation, which is only the files necessary to run WordPerfect -- no extra utilities such as the Speller.

d. Network Installation, which allows you to install either to the network server or the required group files for a workstation.

On-screen instructions

The on screen instructions give additional information and Help is available at all times. Like many of the newer installation programs, it adds up the amount of disk space your selected options will require and looks to see how much is available on the disk.

The documentation says a full installation will require 12 Mb of disk space. However, when you have a spare 4 Mb and are already using about 9 Mb for WPWin 5.1, it runs out of disk space. This means you have to have 12 Mb of *free* disk space before you begin installation of WordPerfect. If you have to delete your old copy to make space, be sure you keep your customised files such as the button bar and your preferences. Luckily I had backup copies.

Fonts and Grammar

The new version of WordPerfect comes bundled with Adobe Type Manager 2.5 (ATM) and Grammatik 5. If you want to install these you require an additional 1.2 Mb for ATM and another 2 Mb for Grammatik. The disk containing ATM was missing the write protect slider putting it into permanent protected mode. The ATM installation program insists on writing to the disk. One of the black write protect stickers for a 5¼ inch disk placed over the right hand hole solved the problem.

Adobe Type Manager provides another set of printer and windows fonts which are usable when you choose a Windows Printer (differentiated from a WordPerfect Printer). The Fonts portion of the Windows Control Panel does not display this additional set, but they are available for selection in any program which uses a Windows printer driver. I found I needed to go into Fonts and tell it to use more than just True-Type before I could access the ATM fonts.

ATM / TrueType Conflicts

The Upgrade Guide says '*For information on installing and using ATM fonts, please refer to the Adobe Type Manager user manual.*' An A5 sized card contains basic information for installing ATM, but not information about the True Type conflicts. A brief note in the Questions and Answers section of the WordPerfect Upgrade leaflet says that you will need MoreFonts or PrimeType to use ATM fonts with a WordPerfect printer driver.

My thanks for Ralph de Vries for 'second guessing' the source of the problem as the TrueType parameters.

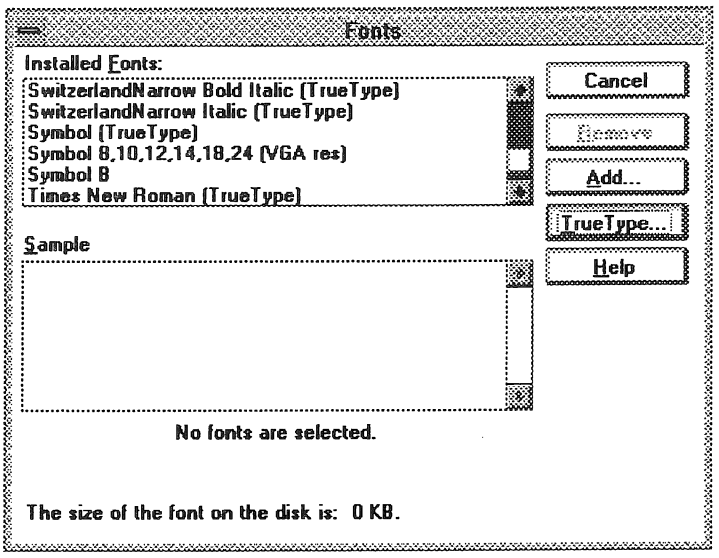


Figure 1. Showing the Fonts window ... check the TrueType status from here

Handling Figures -Problems Still

While editing a figure brought in from the clipboard appears to be easier, WordPerfect still has problems when you move the figures around. I don't know what internal file structure is used, but it must have some pointers which head off in all directions once you put multiple figures in a document, particularly when they have captions.

As I write this, the 'TrueType window' (*Figure 2 which unfortunately was "swallowed" by the conversion utility used to import Sylvia's text into Pagemaker, the program used to set SigBits - Ed)* which was previously showing its cheery little face just above this paragraph has become invisible. It is there in the *Reveal Codes* window (which users of WordPerfect have always required when the product goes on its merry headstrong way). No amount of persuasion would get it to show up again until I had typed an entire page when suddenly there it was in the middle of something completely unrelated. When I tried to adjust its size by enlarging it with the graphics edit menu, it simply got smaller and smaller. The other graphic was more cooperative.

Additionally, when I put the caption in for what is currently Figure 1, all was happy until I had the audacity to want it to appear prior to the now missing figure. The font in the caption translated itself to Greek characters (without bothering to translate the words) and I had the devil's own time getting it back into simple Arial.

Why did they decide in their wisdom that one would *not* want to be able to set options for footnote and caption text? I suppose one could whip up a macro, but if it even defaulted to a font 2 points smaller than the text it would look better. As it is, the font you choose in 'Preferences' determines the font (until you change something then it goes Greek!).

New Features and Enhancements

The list of features which are new since the original WPWin5.1 includes

·**Additional Windows printer driver support** (new paper sizes, and several paper sizes in one document.)

·**ATM fonts** (see above for how to get them to work. You get fairly good WYSIWYG when you use the fonts. ATM and TrueType can be mixed in the same document.)

·**Bitmap graphic rotation** in 90-degree increments.

·**Bullet macros** to make bulleted lists easy -- just select the paragraphs you want preceded by a bullet and run (Play) either the bullet or the bulletdf macro from the top menu. It works! Bulletdf allows you to choose a different default character for your bullet .. such as: ✡ ✪ ✢ ❋ ❑❑ ✣✎

·**Button bar enhancements** -- you just put the mouse pointer on the button bar and click the right button and a QuickMenu appears. This essentially gives you a very large set of alternative menus. I found it best to rename the one I wanted most often to default.wwb so it appeared at the beginning of the alphabetical QuickMenu list. The QuickMenu allows you to Create new Button bars, hide, and edit them as well as set the options as to where you would like them to appear -- I prefer them on the left hand edge of the screen.

Predefined Button Bars

There are eight additional predefined button bars --
Features (including some of the new goodies), Fonts, Generate (for indices, cross-references, tables of contents, etc.). Graphics (for creating and editing graphics, equation, table and text boxes), Layout (for justification, tabs, etc), Macros, Merge (to help define merge files), Page (for changing page format), and Tools (Grammatik, Spell check, file manager, and such).

You still can move the ones you use most onto your own button bar.

·**DDE and OLE** are now both supported. Information on operating the two links is included in the update manual.

·**Drag and drop text** -- This feature appeared in 5.1a but is now

documented. You select the text you want then when you put the mouse pointer on the text an icon with two squares appears at the tail of the pointer. You can then drag the text somewhere else in your document. If you hold the control key down, you get a copy of the text where you release the mouse button. Of course, you can still move the graphics around in a similar way.

- **Envelope macro** -- this tries to guess where the address is in a letter and puts it into an address window on an envelope graphic. One can correct any formatting, select a font, include a return address and even append the envelope to your document. I needed a label for a very large envelope the evening I discovered it, but it has distinct possibilities.

- **Find** files allows you to search for fairly complex word patterns in a variety of ways. These may be in the file name itself or within the document.

- **Grammatik** -- this is a grammar checker which has to be installed separately. It has it's own icon and can be used on any text file. It can be run with a document which is currently open in WPWin as well.

- **Keyboard layout** can be updated from WP5.1 to include some of the new WP5.2 features. If you have customised your WP5.1 keyboard, this will be handy. I switched to the CUA layout when it was first available.

- **More Macros** - at last there is online help for macros and you can use macros to develop advanced dialogue boxes. Twenty-two new commands have been added including commands to set up OLE objects, paper sizes and printer selections.

The ones I was happy to see were macros for bullets, envelopes and font attribute replacement. The bullets macro worked very well to set up the bullets in this section.

- **Macro command inserter** -- insert macros and programming commands into your WP macros.

- **Mail enable** - allows you to electronically mail your current document or selected text from it while in WPWin. Only one mail system can be used. WordPerfect mail is preferred, of course, but VIM and MAPI mail are also supported. I like the concept, but I don't know that any of these systems are in common use.

- **QuickFinder** - allows you to create, edit or update fully-textual, alphabetical lists of every unique word contained in files in specified directories, subdirectories or disks, including the information about the file in which the word is located. It does this, but it only shows the first occurrence of the word in the file. Where the word or words are in a text file, WordPerfect can be used to find the other occurrences. It does not have the functionality of most text retrieval systems, but it is a reasonable first step.

- **Text Colour** -- if you have a colour printer.

- **Speller** - you can now spell check one document with another open. You can also spell check text inside text boxes. Minimising the speller now allows you to move between Speller and the WP document without the horrendous delays of WPWin5.1.

- **Table maths** - now "recognises Sum, Average, Product, Subtract and Quotient functions" but there is no additional information past this oft repeated phrase. I tried all my best guesses, but I was unable to find out how to use these great new functions. The clues are neither in the books nor in the online Help.

- **Zoom** - This feature was also in WPWin5.1a (a free upgrade). It allows you to quickly change the scale of your WYSIWYG screen from as low as 50% (good for an approximation of page preview) to as high as 200% which allows you to see finer details. There is also a setting for Page Width which sets the screen to approximately the width of your paper. ○

More on WordPerfect keyboard problems

Dan Bridges & Geoff Harrod

Dan writes...

I read Geoff Harrod's October SigBits article on AMI BIOS and WordPerfect's "sticky Left Shift key" problems with interest, in particular because one of our client's machines was affected, but only after I installed our database program.

Since the client was in Caboolture and I was working in other areas, another one of our techs had tried to fix the problem. I briefed him beforehand on what I thought was a suitable fault-finding methodology. Since the machine had worked correctly before I installed our program, it must have been something I did in the client's CONFIG.SYS or AUTOEXEC.BAT that had caused the problem. (I usually optimise memory usage on MS-DOS 5 systems to give our program the maximum free low memory and to provide as much disk caching as practicable).

So I suggested that he rename the CONFIG.SYS and AUTOEXEC.BAT and then reboot the machine in "vanilla" mode to see if WordPerfect still played up. If it did then it was likely that the problem had been there before my visit and the client had not noticed it previously. On the other hand, if the problem was not apparent with a clean setup, then he could use a process of REMing out of lines in these two files to determine what was causing the problem.

Anyway, the tech could not solve the problem, so the boss decided to have me drop in on my next trip north. I was armed with the fixup files from Artisoft, the phone number to WP's hotline in Sydney and had my head primed thanks to a hasty re-read of Geoff's article.

When I got there I asked the client to demonstrate the WP 5.1 problem. He tried to get WP to misbehave but it wasn't being cooperative (apparently the fault was intermittent, and extremely annoying). This was a major set-back; how could I diagnose and fix a problem if I was not immediately sure that my changes were effective?

So the first thing I had to do was make the fault appear at will. I fiddled around for a few minutes, trying to "overload" INT 9. Although normal typing or held-down (auto-repeating) character keys did not cause the problem to appear, I managed to do this by pressing F7 to Save File and then, when requested for a file name, pressing the Up Arrow key for a few seconds. This generated a number of "Invalid Pathname" messages that repeated every few seconds until the excess keystrokes were cleared from the keyboard buffer.

When I aborted the Save File operation and went back to continue typing "e" characters they then appeared as "E". I found that I had to press the Left Shift key to toggle back to "e". Also, for example, pressing F7 while the keyboard was in "stuck Left Key" mode was now seen as a Shift F7 (Print File) keystroke.

Once I had the fault appearing whenever I wanted, the next step was to boot from an unadorned DOS boot FD and see if the problem reoccurred. It didn't, so I knew I had a good chance of fixing it.

What was highly significant was how quickly WP was recovering from the repeated Up Arrow keystrokes (as described above). It appeared that only one "Invalid Pathname" message was displayed before WP was ready for my next command. This was quite different behaviour from when I booted directly from the HD, with numerous "Invalid Pathname" messages that had repeated every few seconds until WP was ready to proceed.

Looking at the HD's CONFIG.SYS I decided to concentrate on the HIMEM.SYS and the EMM386.EXE lines since I had added these on my last visit. These two lines were:

```
DEVICE=DOS\HIMEM.SYS MACHINE:HPVECTRA
DEVICE=DOS\EMM386.EXE NOEMS I=E000-EFFF
```

You can see here that the machine (a HP Vectra 396/16) has a proprietary method of accessing the HMA, so the MACHINE parameter is needed with HIMEM.SYS. Perhaps this was the cause?

It was also possible that making the complete E000 segment available for UMBs (normally usable in most machines except when certain network cards are present or when dealing with IBM's PS/2 System BIOS) might have been overwriting something. This was unlikely as normally this would lock up the system and only WP seemed to be affected and in a relatively trivial (although annoying) way.

First I removed "I=E000-EFFF".

No joy. Then, reasoning that the extra overhead inherent in Virtual-86 Mode operation might have been the culprit, I REMed out the EMM386.EXE line.

Bingo!

Because there was now no UMB provider (one of EMM386.EXE's jobs), ANSI.SYS and SMARTDRV.SYS were loaded solely in low memory and this dropped free low memory from around 612K-615K (typical figures for systems only using what DOS 5 provides) to 588K. This was still sufficient in this particular case but things would have been a bit tight if the client was also running STACKER or SUPERSTOR.

Even if you do need to use EMM386.EXE, or if removing EMM386.EXE does not cure the problem, the method I used to trigger the fault may help when you need to see if a fix works.

Footnote fromGeoff...

I can confirm EMM386 being a problem with WordPerfect. I had not been using EMM386 as the base memory space was adequate for me without high loading drivers etc. Then I installed DoubleDisk, partly to test it out and partly because my 105 Meg disk at home was getting over full. That robbed the base memory too much too permit my software Postscript interpreter, GoScript, to run.

So I installed `EMM386 NOEMS`. My wife then started complaining much more than usual about how WordPerfect misbehaved on the home PC. (It used to run fine on the old 286 and she had never been too happy about my replacing it with the 386SX. Problem was I needed to be able to run AutoCad-12 and Windows.) I tried both the EMM386 supplied with Windows 3.1 and the earlier one from DOS-5. I wonder whether DOS-6's EMM386 overcomes this? The best remedy would be for WordPerfect to access the keyboard with correct programming technique.

It didn't dawn on me for some time that it had got worse after installing EMM386. So I commented it out and WP was then again only as bad as before (tolerable), but of course it wouldn't print decently as we depend on GoScript to get fonts from DOS.

I have now solved the problem by scrapping both WordPerfect and GoScript, and editing and printing WordPerfect files in Microsoft Word for Windows 2.0 with TrueType fonts. I reckon that's the best fix for WordPerfect by far!

Electronic Communications - Is *nothing* New ?

Rex Newsome looks at the origins of some of the very modern items of office communications equipment and finds that they are not so recent discoveries anyway

For many of us, the PC is no longer just a toy for game playing. Modems, internet links, and other net devices have changed the now unhumble PC into an instrument of communication. Communication by electrical means, however, has a much longer history than many people imagine. The following was written for those who might be interested in knowing how the various parts of our contemporary communication system developed.

Telegraph

The first suggestion that flow of electricity through wire could be used for purposes of communicating appears to have been made anonymously in a Scottish magazine in 1753.

Around the turn of that century Von Sommering of Munich demonstrated how a signal sent over 600 metres of wire could release bubbles of gas from terminating electrodes at the far end. He proposed the use of a 36-wire system for signalling. Ronalds started experimenting and constructed what is probably the first successful telegraphic system in 1816.

In 1823 he tried to convince the British Admiralty of the practical possibilities of his system. Then the Admiralty used the Napoleonic system semaphore towers on hilltops every ten miles or so to carry intelligence between Portsmith and London. The Admiralty, in its wisdom, advised that their system was sufficient and that a telegraph was wholly unnecessary. Rolands, somewhat discouraged, gave up telegraphy. A few years later, Cooke, a retired army officer ex-India, who had been impressed by Rolands early demonstrations, teamed up with Wheatstone in 1837 to develop a five-wire system using the Wheatstone galvanometer. With this system, letters were read by reference to the positions of pairs of needles on a diamond shaped scale. At that time railways were rapidly extending over many countries. The need and potential for a telegraph as an adjunct to the rail system was now manifest and many inventors were hot at work. An application by Cooke and Wheatstone for a patent, now seen as a lucrative prize, was opposed unsuccessfully by Edward Davy, a surgeon, who had demonstrated a successful system in 1837.

"the first suggestion that flow of electricity could be used for communication appeared anonymously in a Scottish magazine in 1753"

Miffed at losing out on the patent, Davy emigrated to Australia soon after.

He did, however, leave behind one significant invention, the 'electrical renewer' or relay. This enabled lines to be extended without resort to high transmitting voltages. (The insertion of relays into a line, incidentally, when used with the Morse-code system of signalling, made "reading the mail" by operators along the way listening to the chatter of these relays a time honoured activity.)

Samuel Morse, who was a professor of painting and sculpture at an American university, after experimenting with the electrical properties of wire of different lengths, devised a simple serial code for signalling. This was adopted by the American telegraph companies and soon became a universal signalling system. Morse's original code characters were different from the system the today bears his name and were read from ink marks on paper, or directly from the click of a heavy relay, or sounder. A modern "b" on a sounder would be something like "Click-clack, click-clack, click-clack, click, clack." The sounder system was widely used in railways for the next 100 years. Although the Morse-code system flourished, so did the Wheatstone system, or developments of it, continued also. When fed with prepunched message tapes, by 1900 the Wheatstone-Creed system was capable of handling up to 600 words per minute, not appreciably less that present-day computer/modem systems.

Telephone

From the outset of telegraphy the possibility of using wires for sound transmission appears to have been considered. Many experimenters had noted the acoustical

effects that could be produced with the aid of electromagnetism. In 1837 a "galvanic music" effect had been discovered by Page. Over the next thirty years or so many experimenters investigated the acoustical effects produced by magnetism.

A.G.Bell is credited with being the inventor of the telephone. His apparatus comprised two transducers each of single-pole electromagnets acting upon a membrane fitted with a circular metal centre. One of each of these was placed in different rooms, one being in the basement of n adjoining house.

Many accounts exist of how the telephone was first tried. A common story is that the first words were "Mr. Watson, come here, I want you" (This account is given in The People's Almanac by Wallechinsky and Wallace). However, the ultimate authority on the matter must be Bell himself. According to Bell's own 1876 paper, a friend was sent next door to note the effect that might be produced by articulated speech. Placing the membrane of the instrument close to his lips Bell asked "Do you understand What I say?" After a pause, the instrument in his hand articulated the words "Yes; I understand you perfectly."

Bell reports that a number of familiar quotations were tried, including "What hath God wrought . . . " (Indeed, one might have thought that what Bell had wrought in the form of the company that followed, AT&T, no man could ever dare put asunder. However, the U.S Justice Department did just that with its antitrust laws in 1983).

Bell applied for a patent on his device on the same day as an application was made for a similar device by Elisha Grey. At the date of patent application neither Bell nor Grey had an actual working system. Bell clearly won the race, foul against foul.

The Bell telephone, unlike many of its predecessor communication devices, did not sit around waiting for acceptance. By 1879 telephone exchanges were already in place in many cities.

First demonstration :

*	***1816***	***Telegraph***
*	***1837***	***Electrical relay***
*	***1862***	***Fax***
*	***1876***	***Telephone***
*	***1888***	***Radio***
*	***1936***	***Television***
*	***1940***	***Computer***

By 1881 Bell Telephone, and its rivals such as the Edison Telephone Company, had 100,000 subscribers in USA. There were approximately 2,500 telephones in Paris. The UK lagged considerably behind the USA with internecine battles between the various telephone companies and the British Post Office, which held a legislative whip over the whole business to protect their telegraphic trade.

Finally the mess in UK was solved by Nationalisation in 1911 and telephone took off.

By 1913 some 480 million telephone call were registered as having been made in the British Isles.

While the general population seems to have taken to the telephone, businesses were slower to fully accept its capabilities. Here the lag for public acceptance was considerable longer. Telephones were certainly available in most houses of business, but use of these was constrained and formal; used mainly for arranging appointments and confirmations which left important transactions to face-to-face situations. Perhaps the problem was that it took considerable time for the culture to evolve a way of talking without the need for the physical rituals we normally use in making business transactions. Traditionally, one scrutinises the seller's face before making an agreement. Trading without visual contact, and without formalised telephone protocols design to affirm trust, leaves either or both participants vulnerable.

Radio wave communication

The next step in communication was to do away with the necessity of stringing wires between the two participant stations.

During the American civil war telegraphic communication had become a vital component of the business of war. Large rivers, however, presented a problem as cabling and insulation was insufficient to allow cross-river connections. One trick was to run a cable along each bank for some distance and earth the far end. By using the cross-river conductance an electrical bridge could be established sufficient for communication.

It seems possible that the engineers found some direct inductive coupling effects between wires in these experiments. Preece, a British Post Office engineer discovered this effect in 1884. Inductive effects were found in wires 80ft up from buried cables underneath. Next year experiments were carried out with inductive loops. It was found possible to transmit signals over several hundred metres.

The possibility of electromagnetic-wave phenomenon at low frequencies had been predicted by Maxwell some years before. This possibility was confirmed by Hertz's experiments in 1888. Soon after his arrival in Cambridge in 1895 Rutherford, fresh from New Zealand, was able to send and detect signals up to 1 km.

Meanwhile Marconi had built apparatus for wireless telegraphy and was allowed to demonstrate this to Preece and the Post Office. Although at first Preece was not impressed, in later trials a good antenna system added to the apparatus enabled Marconi to convince Preece. Where Rutherford and others were scientists interested in the scientific aspects of radio waves, Marconi interests lay in promoting commercial advantage from them. It was clear to Marconi that England was the place to advance his wireless system, and it was there that he chose to conduct his later experiments, no doubt with a view to impress rather than advance knowledge particularly. However, officialdom, afraid that the wireless form of telegraphy would infringe the Post Office monopoly of the electrical communication medium, blocked some of Marconi's experiments.

One area which the Post Office clearly could not object to as infringing its monopoly was ship-to-ship and ship-to-shore communication. In naval communication the advantage of wireless was clear (almost too clear, as in America the US navy tried to have the entire radio-frequency spectrum reserved for defence purposes only, and the British Admiralty probably would not have abjured from that if they had got away with it).

However, several demonstrations of the public usefulness of wireless telegraphy had already created an awareness of the general usefulness of radio waves. In 1898 a wireless connection had only just been set up between the East Goodwin lightship and the shore at a distance of twelve miles when the lightship was struck by a steamer. Quick communication enabled all lives to be saved. In 1909, the world was alerted to the "Titanic " tragedy through wireless communication between the strickened ship and the Carpathea. The radio operator, David Sarnoff, on the latter stayed on the job for a straight 72 hours.

In 1862, Abbe Castelli ... was able to transmit a facsimile over a 400Km path

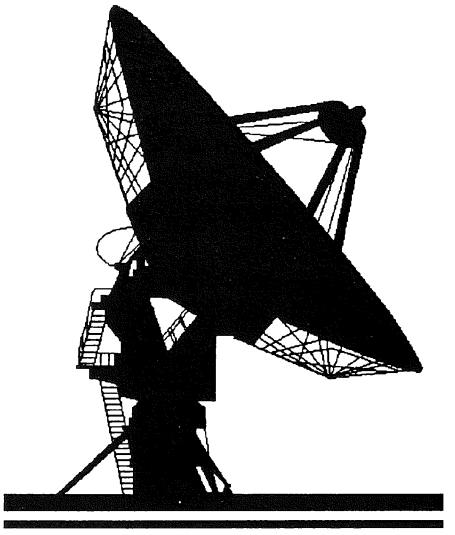
Sarnoff, incidentally, later moved on to become a founder of a small company which called itself the Radio Corporation of America.

Apart from growing commercial interests in the art of radio, and the demonstration by Fessenden in 1906 by the broadcast of music, that radio waves could carry more than just a Morse-code signal, there was a growing body of interested amateur experimenters. It was the existence and the voice of this myriad of amateurs that helped dissuaded the American Congress from acceding to navy demands for exclusive use of the radio bands, for amateurs were proliferating so rapidly that it would have been almost impossible to suppress them. The Amateur Radio Relay League also conducted some intensive lobbying.

Commercial interests, however, were also powerful in the persuading game. Legislation was soon passed to control who used the radio waves. Amateur experimenters, however, found that they had been dealt cards from the bottom of the pack. In a paper presented to the Institute of Radio Engineers in 1920 Alexanderson, then chief engineer for RCA, explained that, in order to span an ocean, a wave length must be used such that the distance did not exceed 500 times the length of the wave. Thus, to reach across the Atlantic, a wave length of 10,000 metres (or 30khz) must be used. Then, carrier wave signals were generated by mechanical alternators not unlike a generator found in a power station, only these were run at a very high speed to generate AC outputs of up to 30,000 Hz. To be effective at these wave lengths, antennas of up to several miles in length were required. Having the advice of engineers such as Alexanderson that wave lengths shorter that 100 metres were of no use to anyone, amateurs were regulated to the shorter wavelengths of 200 metres and below.

Officialdom, thus, was confident that the pesky amateurs would hardly be able to get out of their own back yards with a signal. Not daunted, amateurs started to develop compact equipment based on the new vacuum-tube amplifiers using the De Forest Amplion valve and its successors. In 1921 amateurs in America started transatlantic tests.

Was there any possibility that someone on the other side would hear them? Government and commercial wireless stations had already shown some success in the wavelength range suggested by Alexanderson. Transatlantic communication by wireless, thus, was no big



deal. But this was brute-force radio, not the kind a back-yard experimenter could construct. When amateur transmission began, reports started to pour in from the other side of the ocean. There was indeed some sort of communication path, but it was irregular. It went in and out with the position of the Sun. Shorter wavelengths were tried and results improved dramatically. Short-wave communication had been discovered.

Soon it was realised that a path depended on ionised particles high above the earth. Transmission over long distances depended on reflection between the earth and the ionosphere, the signal sometimes making multiple hops across the surface of the earth to drop down, conveniently, one hoped, in the vicinity of a receiving station.

Today, far from being restricted to backyards, amateurs achieve intercontinental communication sometimes with hand-held devices. Many of today's amateurs do this comfortably through one of the many amateur-sponsored satellite repeaters sitting in high orbits around the earth.

By the mid-1920s many radio broadcast stations were in operation. In 1926 the American radio industry had sales of over half a billion dollars.

Pictures by wire

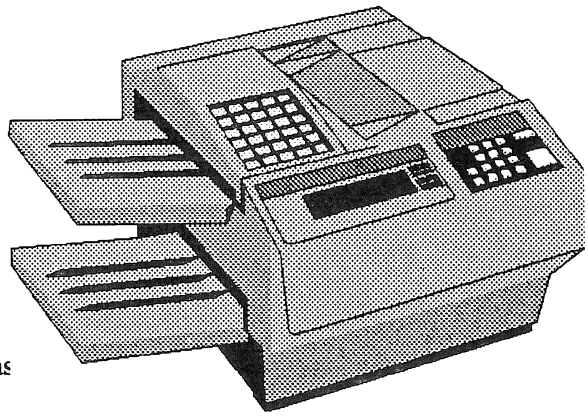
Television, like the telephone, had a long gestation. Ideas of transmitting moving pictures date back to the 1890's.

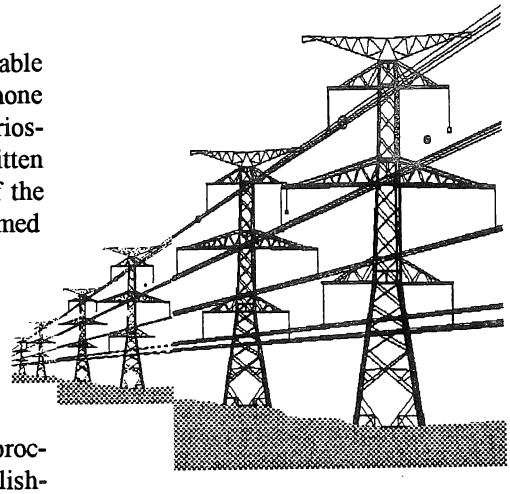
The idea of sending a picture composite down wire was as old as telegraphy. Around the same time as Cooke and Wheatstone were developing their telegraphic system, others were contemplating the means of sending a direct image off paper. Alexander Bain appears to have been first off the mark with a mechanical scanning device. A patent for this facsimile apparatus was taken out in 1843.

In 1862 Florence born Abbe' Caselli, using synchronising pendulums for both scanning and receiving devices, was able to transmit a reasonable facsimile over a 400 km path. His pantélégaphe is on show in the Musée des Techniques in Paris.

By the turn of the century reasonable pictures could be received from a telephone line. Facsimile, however, stayed a curiosity. It was not good enough for written copy, and the great pictorial age of the press had not yet come and there seemed little use for transmitting still pictures. Up to this time, efforts had been concentrated on sending a fixed image down a single line. For this, it was obvious that some type of scanning process had to be used. Bidwell, an Englishman, took a different tack. In 1908 Bidwell proposed that an array of 90,000 photoelectric cells would enable a picture of reasonable quality to be transmitted. This system would follow the principle of the eye in that every element [sic] would be permanently wired to its corresponding element at the receiving end. His notion was to use of a 90,000-wire cable to interconnect stations 100 miles apart. In penultimate sentence, with gasping audacity, he suggested the use of the three-colour principle to present the final image in natural colours. Campbell-Swinton an engineer well known to Preece and Marconi, poured some scorn on Bidwell's idea of a 90,000-wire link. He did, however, go on to conject that the way to go might be to use the recently invented Braun cathode-ray oscilloscope. He was, in a way, reverting to the scanning idea, but at electronic speeds, not mechanical ones.

In 1911 Campbell-Swinton took out a patent on this electronic system for television. Unfortunately for old C-S he died in 1933, several years before his patent was to bear fruition. The first broadcasts by the BBC in 1936 alternated between what was basically the Campbell-Swinton electronic system and Baird's mechanical system.





ULF antenna array ?

Meanwhile, in Australia, a citizen of Ballarat decided that it would be good to be able to watch the Melbourne cup from home. Apparatus was devised using selenium and Kerr cells and mechanical scanning. Although there is no record of any attempt to actually use it for its designed purpose, some apparatus was apparently displayed in London a few years later. From existing drawings, it is doubtful if it performed anything more than a crude demonstration of the possibilities.

No doubt there were experimenters at work in many other countries whose activities were not recorded or/and have been forgotten. The story of Logie-Baird and the subsequent development of Baird's television system is perhaps too well known to detail here. However, parallelism raises its head again.

Before the turn of the century Nipkow in Berlin had experimented with a spinning, perforated disk. In 1907 Rosing, at the Technological Institute in Petrograd, using the same idea as Campbell-Swinton, built a crude cathode-ray-tube receiver. One of Rosing's students was a Vladimir Zworykin. Later, Zworykin, developed the crude cathode-ray tube into the two major devices needed for modern television, the kinescope picture tube, and the iconoscope camera tube.

Although the BBC has been often credited as being the world's first television service in 1936, a network of five cities had been in operation several months earlier in time for the Berlin Olympics. Television was put in abeyance in Europe by war until peace had been established. The BBC resumed a 405-line electronic service which was maintained for the next twenty years.

Meanwhile America, after many internecine battles between rival systems, had settled on a 525-line NTSC standard and France had chosen an 800-line standard. Currently many countries have settled on a 615-line standard, but the name of the games is anything but settled. Currently Hi-Definition is being touted, but standards for such are wild. To obtain sufficient bandwidth for the greatly expanded picture current technology is being pushed to the limit, as ever it was with the introduction of each new standard. Current arguments about which should be adopted, which will be cast by satellite rather than ground based stations, rise or fall on the availability of specialised microchips. It remains to be seen which of the many proffered system win out.

Whichever, there will be one big winner, and many big losers.

Computational approaches

As with most other modern technologies, the computer had a particularly long gestation. Its beginning goes back to those two remarkable decades, the 1820s and 30s, from whence arose the telegraph, the facsimile machine, the steam train, and the steam road carriage. The history of computers has been told by many authors and is too well known to be repeated here. However, a few special details may help complete the story.

Like the fax, after an auspicious start with some promise under the eye of Babbage, the computer fell by the way until the 1940s. Without entering the debate about who had the first large-scale electronic computer in operation, it must be said that all of the early devices were piddling indeed when compared top this desk-top device being used to prepare this paper. By way of comparison, ENIAC, one of the first of these devices, took a full day for the team of engineers to prepare for a run at calculation a table of differential equations. The runtime was 15 hours and calculated about eight million values. Using this present desk-top device, it is possible to enter the differential equation, the necessary parameters, and wait for a few minutes, mainly while the results are written to a disk. Initially, computers were created to become number crunchers.

The word processing aspect of computers, for most part, was incidental to the purpose and function. As it happened, the ASCII code used to communicate between terminal and the central main unit allow alphabetic characters to be communicated and stored. This was convenient for messages to be sent down the system operators, notes to be made for reminders, and occasional messages to be passed to others, not always in seriousness. As the usual line editors were cumbersome, better editors, oriented towards words rather than number crunching tasks were introduced. Suddenly the smart system boys were using computing time to actually write papers and PhD theses. The rest we all know.

Yet, computers, until recently, were never intended as wordprocessors. Today computers have left the emergent phase, but the question as to how far these are in ultimate development is open. Some optimists would say "You aint seen nothing yet." Perhaps!

Letter to the Editor

Where are we going?

Question: *Just because there exists computer software, some of which have speadsheet and accounting facilities, does Brisbug have a SIG wherein the subject of Accountancy itself is being taught?*

This question arises out of my recent experience in attending a Gold Coast Brisbug meeting where the speaker for the evening, it was stated, was "Brisbug's expert on genealogy".

The audience ranged from those who knew nothing of the subject, through some who are actively engaged in research, to at least one who has made the subject an in-depth study for many years.

What I listened to that night had almost nothing to do with genealogy. Rather it was about "family legend". And, unfortunately, those who were interested enough to ask questions were answered with either flippancy or facetiousness.

Perhaps here I should resort to analogy.

Imagine yourself as a traveller. You have arrived at a wide expanse of water stretching almost to the horizon. Is it a gigantic river, a bay, or the open sea? You can just make out the distant shore, which is your destination. As I see it, you have three choices:

Option one: You are a strong swimmer, confident that you need no assistance. You plunge in and start swimming. The currents, eddies, whirlpools, sandbanks, you will cope with as encounter them.

Option Two: On the shore are some owners of dinghys who say they will be happy to row you across to that distant shore. Of course, if they need a rest, you can do a spot of rowing occasionally, but under their direction, naturally.

The *third option* is a variety of of vessels of various sizes,all with engines, the crews of which have all visited the distant shore. These crew also have charts and maps of the area, and knowledge of the best route for undertaking the journey. For a small fee, they will include you in their passengers.

The chances are that option one is likely to ensure that, unless you are a cross-channel swimmer in constant training and with enormous luck, you will either drown or end up on a sand-bank, watching those who were foolish enough to take option two, who are now rowing around in ever-decreasing circles getting nowhere or eventually stranding themselves on the sandbank with you. Some of these boat-rowers will even try to convince their passengers that the sandbank *is* the far-distant shore!

I think you will agree that the only ones likely to reach their goal are those who took option three. And, depending on their personalities, they might during the journey decide to pick up a few useful skills like map-reading, steering the vessel, or even how the engine works, all talents that just may come in handy sometime and could contribute to the certainty of reaching their ultimate goal.

Which options are you taking?

Jemma Usher

ENVIRONMENTAL MONITORING with a PC

Richard Vander Have

***A** couple of weeks ago Dan Emerson asked me to put together a few paragraphs on strain gauges after I opened my big mouth. Should have known better! Anyway, I had a quick look at Dan's notes in the May magazine - just to see what his style was like, and I have decided to do a bit about the variety of transducers that are available.*

TRANSDUCERS

It is constructive to take a quick look at a short list of the various types of sensors which are available for monitoring our surroundings. This list is just one that I have generated "on the spot". It is by no means exhaustive!

In short, there are as many types of transducers as there are variables to be measured. In many cases, there are several types of transducer to measure the one variable. Consider the means of measuring temperature. I have just remembered that the intensity of infra-red radiation can be used as a measure of temperature.

From our point of view, the range of outputs from transducers is not quite so varied. Most commonly, the output will be a voltage but it may be a current or a resistance - the three electrical phenomena! But then, the level of the output may not suit our measuring instrument. In this case we will need to provide the necessary interface between the transducer and the measuring instrument. Dan dropped a hint of this in his notes. Amplifiers and things like that. Just a small but important point - in many cases the interface needs to be fairly linear and very clean. You will see an example of this requirement in the next discussion.

TRANSDUCERS

(Bracketed words indicate the measured variable or field of interest.)

- Strain gauges *(stress)*,
- Accelerometers *(motion)*,
- Resistance *(electrical, biofeedback, lie detector ...)*
- Microphones *(noise, acoustics)*,
- Thermocouples, thermopiles, thermistors, bondable gauges *(temperature)*,
- pH meter *(acid concentration)*,
- Dissolved oxygen, DO *(in water)*,
- Turbidity *(How dirty is the water?)*,
- Pressure *(Vacuum to the breech of a 16 inch gun when fired)*,
- Proximity probes *(distance to object)*,
- Light dependent resistor *(illumination)*,
- Insolation *(INcoming SOLar radiATION)*,
- Load cells *(force)*,
- Various chemical sensors *(laboratories, hydroponic farming ...)*.

STRAIN GAUGES

A strain gauge is used to measure the amount of strain to which a member is subjected. Of itself, strain is not of much use but, by using Hooke's Law (stress is proportional to strain), the corresponding stress can be calculated. This is very useful. The level of stress can be used to determine whether or not a member is overloaded, or to determine just how much load is on the member. We will discuss an example of this later.

The principle behind strain gauges is that the electrical resistance of many conductors changes slightly when the material is subjected to mechanical stress - that is, when it is stretched or compressed. The most common materials used in the manufacture of strain gauges are copper alloys.

Because very small changes in resistance are involved, strain gauges are almost always connected in a bridge. The most common arrangement is the Wheatstone Bridge - it is most commonly used because it is the most readily understood. It is not necessarily the best arrangement. We immediately have a problem. The output from the bridge is a small voltage, typically about 0.1 to 0.5 millivolt per volt of excitation (input) to the bridge. We now have two problems. One, with a typical excitation level of three to five volts, we still have a very small voltage to resolve. The second problem is the very fact that the output from the bridge is a voltage while the games port of our computer requires a resistive input. Obviously, we will have to convert a small varying voltage to a larger varying resistance. Alternatively, we could use the parallel port but this will require the conversion of a voltage to digital form.

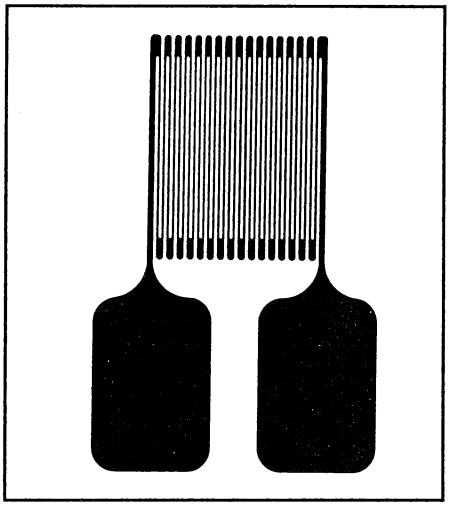


Fig.1 Enlarged view of typical strain gauge

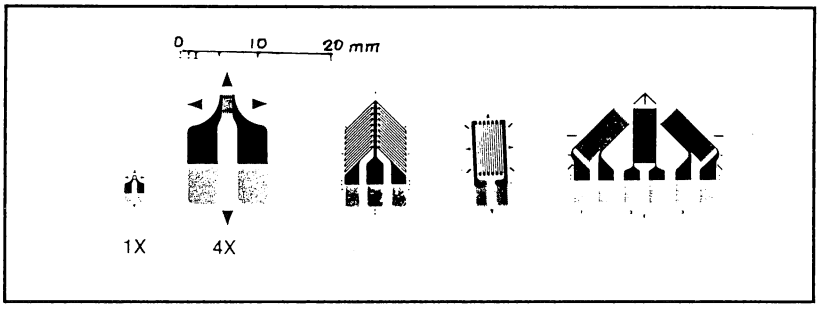


Fig.2 Typical strain gauges. One shown actual size and 4 times. Others actual size.

The first part of the solution is to provide an amplifier. It will have to have to be noise free - it does not take much noise to mess up a few microvolts. (This is what we are trying to differentiate at the input level.) It will also have to be fairly linear over reasonable range if it going to be useful. This is the example I alluded to earlier. Strain amplifiers are available commercially but they are not cheap!

(Come to think of it, neither are strain gauges unless you know somebody who knows some other body ...)

I suspect it is time to break up the monotony with a few pictures. *Figure 1* is an enlarged illustration of a typical strain gauge. The operational parts are the narrowest lines running north-south. These are the parts that change resistance when the gauge is strained. The large pads are for connecting lead wires.

Figure 2 shows a selection of strain gauges from a catalogue. The catalogue lists about 1000 different gauge but I doubt if more than about 30 would be readily available in Australia. These gauges are attached to the part being monitored with cyanoacrylate adhesive (not your common 'super glue' variety but special high quality super-duper stuff).

Table 1 shows various Wheatstone Bridge connections used with strain gauges. As noted, each arrangement has its particular uses, advantages and disadvantages. The first is most commonly used one. The third arrangement would be good for constructing a weighing machine based on the bending of a bar. It is has the advantage of being linear which is not the case with some of the other arrangements.

In this table, E is bridge supply voltage, usually about 6 volts; each arm of the bridge has the same nominal resistance, typically 120 Ohms but others are available; Eo is the output voltage; F is the gauge factor; usually between 2.05 and 2.15; and the funny one, ε (the Greek letter epsilon) is the usual symbol for strain.

Figure 3 shows a two ways of making the connection between the bridge and the monitoring unit (digital display or null meter). Our intention would be to use our computer in place of the latter.

From *Table 1*, if we take as 2000 (quite modest) we find that the output from the two arm bridge (3rd line) is some 1 millivolt per volt input to the bridge. The single arm bridge (1st line) give about one quarter of this. With 6 volts input to the bridge, the input to the amplifier will be 6mV.

As soon as we know what voltage output we want for the input to the circuit which will give us a resistive input to our games port, we can work out the gain we will need from the amplifier.

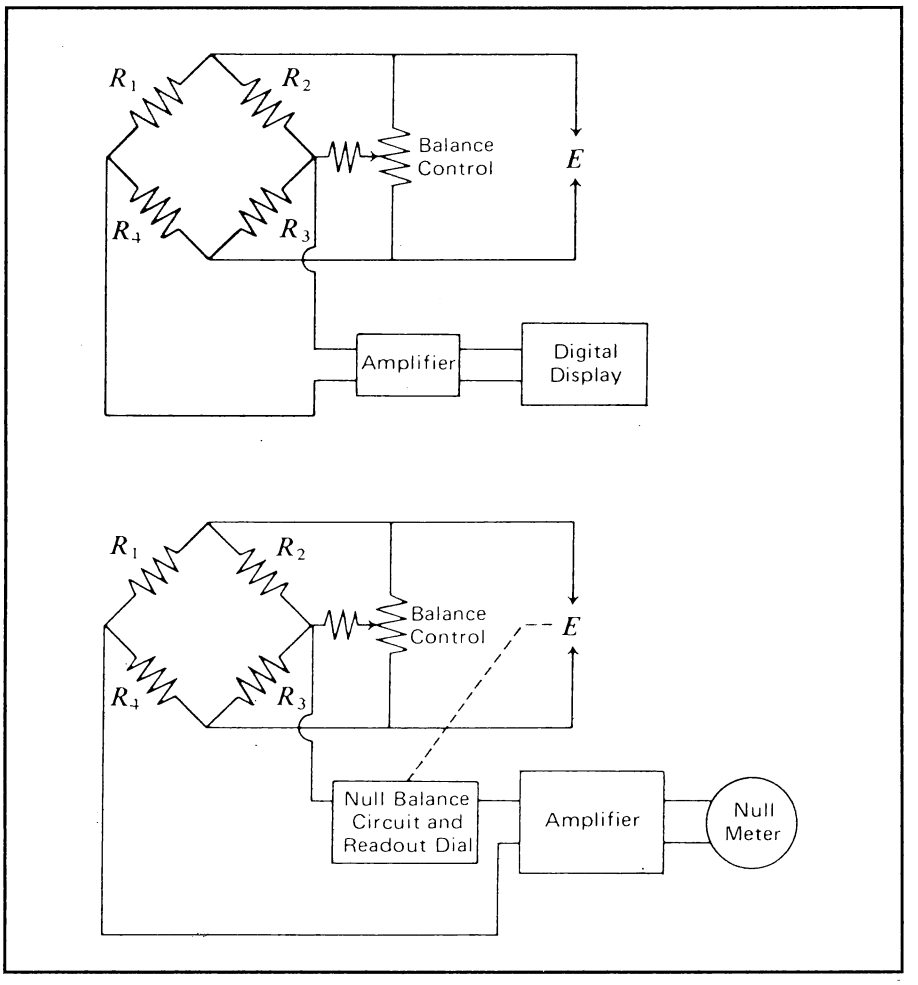
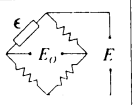
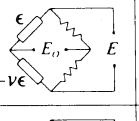
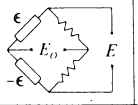
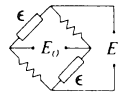
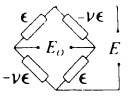
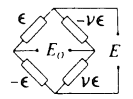
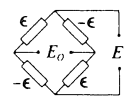
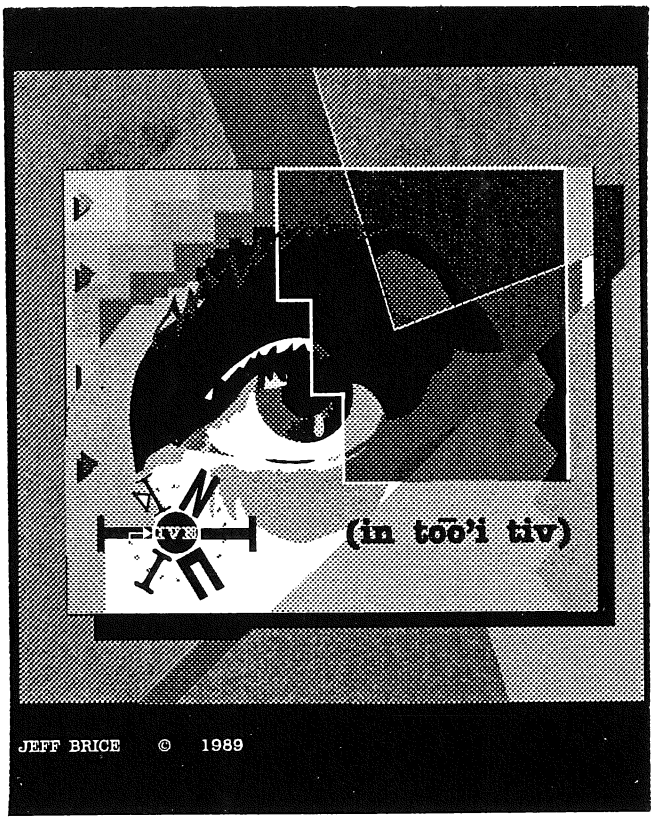


Fig.3 Typical block diagrams of strain gauge circuitry

Table 1

BRIDGE/STRAIN ARRANGEMENT *(Note 1)*	DESCRIPTION	OUTPUT EQUATION–E_o/E IN mV/V *(Notes 2, 3)*	$\frac{\text{ACTUAL STRAIN}}{\text{INDICATED STRAIN}} = \frac{\epsilon}{\hat{\epsilon}}$	COMMENTS
	Single active gage in uniaxial tension or compression.	$\frac{E_o}{E} = \frac{F\epsilon \times 10^{-3}}{4 + 2F\epsilon \times 10^{-6}}$	$\frac{\epsilon}{\hat{\epsilon}} = 1 + \frac{F\hat{\epsilon} \times 10^{-6}}{2 - F\hat{\epsilon} \times 10^{-6}}$	Nonlinear. Incremental correction can be read directly from Fig. 2.
	Two active gages in uniaxial stress field—one aligned with max. principal strain, one "Poisson" gage.	$\frac{E_o}{E} = \frac{F\epsilon(1+\nu) \times 10^{-3}}{4 + 2F\epsilon(1-\nu) \times 10^{-6}}$	$\frac{\epsilon}{\hat{\epsilon}} = 1 + \frac{F\hat{\epsilon}(1-\nu) \times 10^{-6}}{2 - F\hat{\epsilon}(1-\nu) \times 10^{-6}}$	Nonlinear. Apply incremental correction from Fig. 2, *using indicated strain equal to* $\hat{\epsilon}(1-\nu)$. (Note 4)
	Two active gages with equal & opposite strains—typical of bending-beam arrangement.	$\frac{E_o}{E} = \frac{F\epsilon}{2} \times 10^{-3}$	$\frac{\epsilon}{\hat{\epsilon}} = 1$	Linear.
	Two active gages with equal strains of same sign—used on opposite sides of column with low temperature gradient (bending cancellation, for instance).	$\frac{E_o}{E} = \frac{F\epsilon \times 10^{-3}}{2 + F\epsilon \times 10^{-6}}$	$\frac{\epsilon}{\hat{\epsilon}} = 1 + \frac{F\hat{\epsilon} \times 10^{-6}}{2 - F\hat{\epsilon} \times 10^{-6}}$	Nonlinear. Incremental correction can be read directly from Fig. 2.
	Four active gages in uniaxial stress field—two aligned with max. principal strain, two "Poisson" gages (column).	$\frac{E_o}{E} = \frac{F\epsilon(1+\nu) \times 10^{-3}}{2 + F\epsilon(1-\nu) \times 10^{-6}}$	$\frac{\epsilon}{\hat{\epsilon}} = 1 + \frac{F\hat{\epsilon}(1-\nu) \times 10^{-6}}{2 - F\hat{\epsilon}(1-\nu) \times 10^{-6}}$	Nonlinear. Apply incremental correction from Fig. 2, *using indicated strain equal to* $\hat{\epsilon}(1-\nu)$. (Note 5)
	Four active gages in uniaxial stress field—two aligned with max. principal strain, two "Poisson" gages (beam).	$\frac{E_o}{E} = \frac{F\epsilon(1+\nu) \times 10^{-3}}{2}$	$\frac{\epsilon}{\hat{\epsilon}} = 1$	Linear.
	Four active gages with pairs subjected to equal and opposite strains (beam in bending or shaft in torsion).	$\frac{E_o}{E} = F\epsilon \times 10^{-3}$	$\frac{\epsilon}{\hat{\epsilon}} = 1$	Linear.

NOTES:
1. ◇ $(R_1/R_4)_{nom} = 1$; $(R_2/R_3)_{nom} = 1$ when two or less active arms are used.
2. Constant-voltage power supply is assumed.
3. ϵ and $\hat{\epsilon}$(strains) are expressed in microstrain units (in/in × 10^6).
4. With the gage factor dial of the strain indicator set to the gage factor of the gages in use, the indicator will read the quantity: $\hat{\epsilon}(1+\nu)$. Multiply this by $(1-\nu)/(1+\nu)$ to obtain $\hat{\epsilon}(1-\nu)$. Enter Fig. 2 at $\hat{\epsilon}(1-\nu)$ on the abscissa and read the incremental correction from the appropriate curve. Add the correction (always a positive number) algebraically to $\hat{\epsilon}(1-\nu)$ and divide the result by $(1-\nu)$ to obtain the actual strain, ϵ.
5. With the gage factor dial of the strain indicator set to the gage factor of the gages in use, the indicator will read the quantity: $2\hat{\epsilon}(1+\nu)$. Multiply this by $(1-\nu)/2(1+\nu)$ to obtain $\hat{\epsilon}(1-\nu)$. Proceed as in Note 4 to complete the correction.



IDE drive setup

...and some other related matters

Geoff Harrod

This is an account of a recent system recovery job that highlights several matters that may be relevant to members.

THE machine in question was a Taiwanese 386DX-25 a few years old. It was in a fairly compact desktop case and had been upgraded by having a second hard disk installed to boost the capacity. The original drive was one of the earliest IDE types of 80 Mb, and was noted for running very hot.

The power supply had an unusually low rating for a 386; 120 watt. It also had a fan that seemed to generate a rather weak air flow. That was compounded by the tangle of ribbon cables in the congested case that obstructed any air flow. The result, with the hot-running drive, was that the whole machine became very hot inside. The machine had suffered from frequent unpredictable hang-ups. It was found that this could be largely prevented by leaving the lid off and directing a fan into it.

Overheating

So, *point number one:* If your machine suffers fairly frequent hang-ups without any other malfunction, check if it is getting too hot. Another symptom of overheated IC chips is memory disturbance—occasional garbage in text or wrong values in numbers. In this case, I think the hang-ups were more due to low voltage from the power supply getting both overheated and over-worked, as they were not accompanied by any memory upsets usually. A rating of 120W is not really good enough, especially when a second hard drive is installed.

Eventually it stopped and would never restart. The power supply had given up. Repairing the type of switch-mode power supplies used in PCs can sometimes be an easy proposition but often not, and few repairers will undertake it, as the cost of a replacement is usually less than the time charge for the repair.

The only problem is, PC power supplies come in many shapes and sizes and mounting arrangements, and it can be very hard to find a slip-in replacement unless the PC is a common and current make. Also, the price of "spare part" power supplies is usually more than the cost of a new Taiwanese complete empty case with power supply. In this case there was no real option to consider. The power supply had a slightly odd mounting, and the existing case was too cramped, so I obtained a new case, of the large tower type to provide plenty of space for further expansion and such things as CD-ROM. The new case had the now normal 220W power supply.

If your machine suffers fairly frequent hang-ups without any other malfunction, check if it is getting too hot.

CMOS memory

I transferred all the boards and drives over and it all came to life without any problems, except one; its CMOS memory had lost all record of the drive types. So at this stage we had a 2-floppy computer and 150Mb of inaccessible, urgently needed data.

I have written before about the need to keep a record of the CMOS setup data in case of battery failure, and have published a little program to copy the CMOS data to a floppy disk and restore it when needed. In this case there was no written or printed record of the hard drive characteristics, as is quite common.

My friend had used my CMOSGET program to keep a record on floppy, but had never verified its effectiveness. Since the machine was dead when I came to it I never had a chance to look at the CMOS on screen and note the values.

In any case, I had thought it would be retained since the CMOS battery was soldered on the motherboard and so would not get disconnected during the transfer. In fact, it kept the clock going perfectly so that we still had the correct date and time (and video type), even though it had lost the drives setup. Very odd, but such things happen with the CMOS chip.

We ran the CMOSPUT program from the floppy but for some reason all it did was set everything including floppy drives to "Not installed"! That was odd too, as I had never until then encountered any problem with that CMOSGET/PUT program that I wrote. However, I mentioned in the article about CMOSGET that some machines might implement the CMOS system a bit differently to normal and it should be tested the first time by using CMOSPUT after manually recording the correct setup values in case of problem. Whatever the reason, it didn't work.

The CMOS setup (in this case the commonly used AMI BIOS) provides quite a lot of pre defined hard drive types. However, more often than not with new drives there is no entry that matches. With older BIOSes that was a big problem, but the newer ones, like this one, have a "user-definable" type, usually type 47. The only catch is you have to know exactly what values apply to your drive.

Finding drive specifications

It's bad enough when you buy a new drive and get a maker's spec sheet; often the booklet covers a range of drives and it can be tricky figuring out which set of figures applies. Quite often you get no data and have to phone the distributor in Sydney. In the case of a repair situation, even if there had been a data sheet it is usually lost or the supplier never passed it on to the owner. Then the only course is usually to phone the distributor of that make of drive, dismantle the machine enough to read the maker's type number, and hope they still have the data. Without the

correct figures for number of cylinders, number of surfaces, number of sectors per track and number of bytes per sector, there is little chance of being able to access the drive. You can experiment starting with an educated guess but you have to careful to watch for the controller trying to step the drive's mechanism beyond its limits, and you can get what seems at first the right combination only to find that it gets confused as it operates further into the disk.

Point two: Apart from making a point of keeping a record of the CMOS setup on paper as well as maybe on floppy, there is a reliable solution to the problem of unknown drive characteristics where IDE type drives are concerned,easily available to Brisbug members.

Almost all PCs of recent vintage use IDE drives. IDE means "Integrated Drive Electronics", and signifies that all controller electronics is on the drive itself rather than a plug-in controller board. The plug-in board used is merely a connection interface to the PC's AT-type plug-in bus. Hence another name for IDE is "AT-embedded controller". You can recognise an IDE drive over the earlier types by their having a single wide ribbon cable. Earlier types used a wide control ribbon and a narrower data ribbon.

IDEINFO is a valuable utility, and I'm surprised how many dealers and support people don't know of its existence.

Since the control electronics is on the drive, all necessary data is held there and you just need a program to read it. Such a program is available on the Bulletin Board (either Brisbug or mine) and in the library too I imagine.

It is called IDEINFO, in the "Drive Utilities" file area of the Brisbug BBS. It comes with an explanatory text file in the archive file, but all you really need to know is just run it and it will report how many IDE drives there are (none, 1 or 2) and the details of them. Just write it down or PrintScreen, and enter the details in the BIOS setup when you reboot.

IDEINFO is a valuable utility, and I'm surprised how many dealers and support people don't know of its existence. So a prime purpose of writing this is to draw it to everyone's attention.

By the way, don't rush into adding a second IDE drive without checking thoroughly for compatibility with the existing one. Some combinations don't work. At least one type of very early Seagate IDE will only coexist with another identical type. It generally doesn't pay to buy mail order drives unless you have the technical expertise and experience or the assured help of a technical friend. Otherwise it may well be cheaper in the end to pay someone to obtain one and do it all. There are a lot of traps in installing drives.

That fixed up the machine in question with its two IDE drives, and all has been well since. The only other minor fix up was that Windows reported the permanent swap file was corrupted and guided us through the process of cleaning it up.

Hayes Smartcom for Windows

John Massey

Comparison of a new program against the writer's favourite (which is forgiven for all its faults) may not offer the reader a solid overview of the program's merit. When asked to evaluate this program for Windows, I found there were three separate issues:

the "Windows" aspect of the program

the basic function as a simple stand-alone system, and

the high end inter-networking capability of the program.

This review focus only on the "Windows" aspect and the basic communications side. I can drive a motor car... but not to the extent of the Peter Brock's of this world.

Hayes Smartcom is aimed at high speed Hayes modems with concessions made for Hayes-compatible modems. The strength of the program is in the high end communications world with high speed modems, ISDN and networks.

The program was installed on a 486DX/33 clone with an Interlink 2400 baud modem running under Windows for Workgroups in a single user system to connect to the Brisbug PC Users Group Inc. bulletin board system. As such, the full value of the program for high speed connectivity could not be evaluated.

Installation

Like all good Windows programs, the user is offered an express or custom setup. Custom allows the user to define file installation and location on the hard drive. The program requires just on 3 Mb of hard drive space. Included in the package is a Read Me first booklet. The booklet provides an excellent overview of the installation process and is the "first reader" in the series of manuals.

The manuals are well written and contain context sensitive graphics. Each of the five manuals serves as a primer for the next manual building up the user's knowledge of the program. An excellent glossary is provided in the manual and the Quick Reference Guide provides succinct information in a "How To" format.

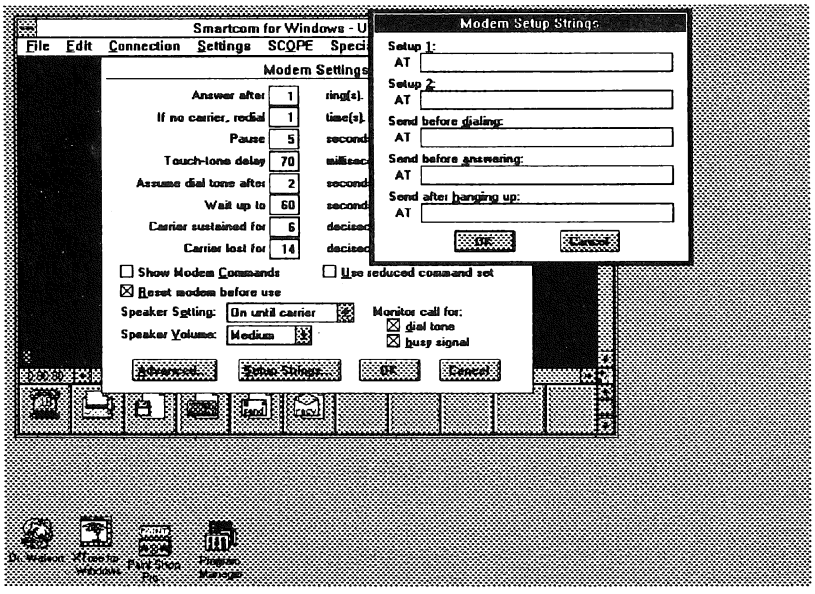


Figure 1. Showing the modem set-up screen. Although coded to identify Hayes modems, if your modem is Hayes-compatible, changing nothing will probably work

Mention is made of a Hayes Windows communication driver automatically on systems running on Windows 3.0 but is not required (and not copied during installation) for Windows 3.1. The program is optimised to take advantage of the 16550 communications chip.

Configuration

Each session opens with an open communications document that may be saved as a single session. Standard Windows drop down menus provide access to the usual configuration options: modem, port, file transfer protocol and terminal type.

String Settings

Apart from the dedicated communications expert, most computer users "freak out" when confronted by the Hayes command set. This program is specifically encoded to identify Hayes modems. An option exists to use a reduced command set string for Hayes compatible modems and a user defined string can be used in combination with the reduced command set.

In simple terms, if your modem is 100% Hayes compatible do nothing and it "should" work. If it doesn't, select the reduced command set to send an abbreviated string to the modem; this should work with most modems. If you have a particular command set string for your modem, you can use it to follow on after the reduced command set. The reduced command set initialises the modem and your string then re-initialises it to your requirements. In the short term available for evaluation, I could not see an easy way to bypass the reduced command set.

The Modules

The program has a Smartcom Editor, which is a full fledged text editor with a built in script compiler for their SCOPE format. It can be used to create text files for upload to e-mail message areas while online. A Smartcom Custom program

configures the environment, adds or removes files, changes communications driver, sets variables or language and provides a basic file size/CRC check function.

On Line

The Windows screen is fairly close to a blank page without umpteen dozen buttons and floating toolbars and doesn't show the full depth of the program's capability. Macros can be defined for repetitive actions and set as buttons on a command bar. The command line accepts arguments to load and automatically run a script.

Typical features of communications programs, scroll back buffer, screen colours, font sizes, transfer protocols and actions are present. The Phone Number selection produces a combo box that offers the barest form of a listing of telephone numbers. There is no feature to include details about the number, only the number. Only one number can be selected for dialling. I prefer a dialling directory where I can store the number, identity of the number, communications parameters and passwords linked to a session capture file and select multiple telephone numbers. Smartcom uses a single session document format. The telephone number, modem string, communications parameters and protocols can be saved in an individual scw file and loaded via an icon from the program group.

Dialling a telephone number produces a nice combo box complete with graphics that show the sequence of the call - Setting up the modem, Waiting for Dial Tone, Now Dialling, and Connected at. An animated green telephone watches the sequence and closes its eyes when a busy signal is received.

Automatic download with Z modem occurred without fuss with combo box providing information on the transmission. A report status bar provides information on the download, file size and transmission speed.

Summary

Smartcom for Windows is designed for the Hayes modem and worked without problem with my Hayes compatible modem. Users with high speed Hayes modems may benefit from gains unseen by this evaluation. The program worked quite well on my "Hayes" compatible modem.

The manuals are well written and users will benefit by reading them in sequence to gain an understanding of the Hayes command set and advanced features of the program. The program is targeted at high speed communications in complex networks and a separate evaluation of the functionality of the program for this purpose is required.

The program is supplied in an unbleached brown carton to avoid toxic dioxins and preserve the environment.

Part 2 of this review, a more in-depth look at the advanced and high-speed capabilities will be featured in next month's SigBits

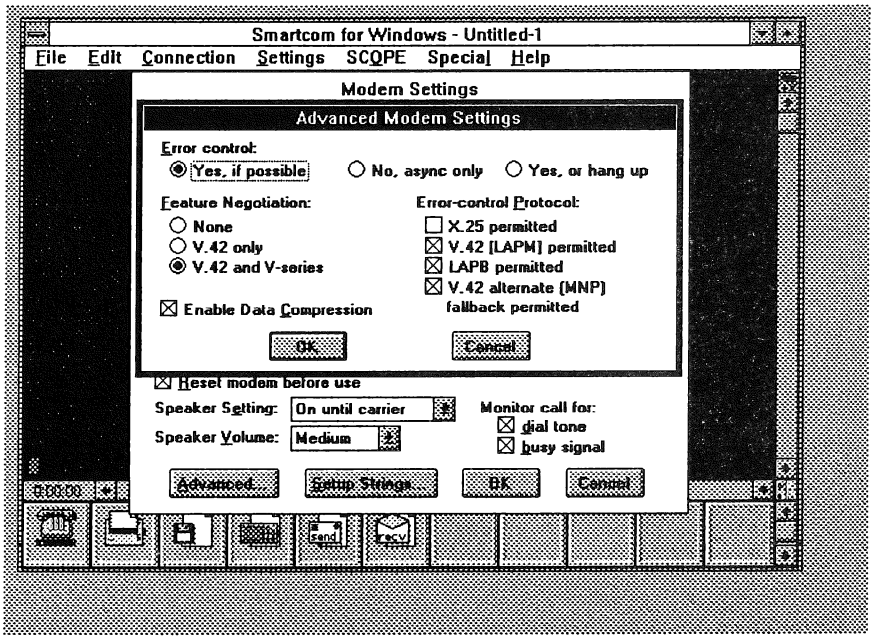


Figure 2. There are plenty of "Advanced Settings" for those with high-speed and high-capability modems

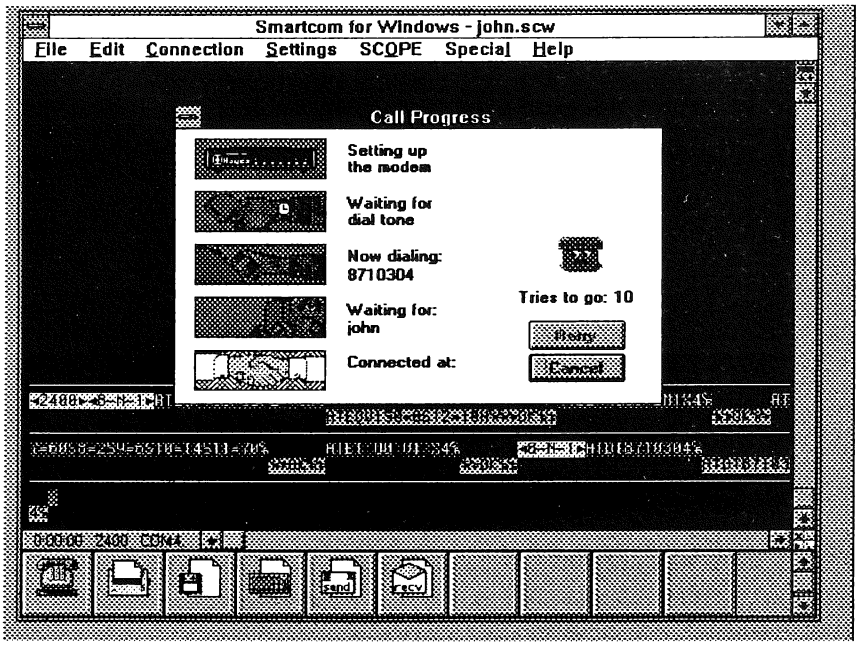


Figure 3. Call progress can be closely monitored.

Windows NT — nearly ready,

...and a new force to be reckoned with in computing, both within and beyond the PC arena.

Geoff Harrod

The long awaited release of NT is drawing nigh. Despite IBM's smear campaigns it is shaping up to be all that has been promised.

I attended Microsoft's all-day NT Technical Briefing recently (along with quite a few other Brisbuggers) and was very impressed by the system's capabilities and structure.

IN my area of main activity, CAD and Engineering, all the big players are sweating on the release of NT for new releases of their software systems. None are showing any interest in OS/2. The attractions of NT are its cross-platform capability, its modular and adaptable nature, its mainframe-style security and reliability, and its speed especially where multi-processor computers are involved. Several new hardware releases are also awaiting NT.

It is certainly not a system for the masses though. IBM created a lot of confusion with their OS/2 promotions, first positioning it as a rival for DOS and Windows, and later as a rival for NT. It can't be both. It seems to me that a lot of copies of OS/2 were bought by very new computer users in the belief that it was the new DOS — just as unwisely as those who were talked into buying a 1meg 286 as their first PC with Windows. DOS, with or without Windows, is still the best bet for "entry level" users. OS/2's strengths, it seems to me, lie in its file system, multi-tasking and network database engine potential. It is significant that many of the most successful and satisfied OS/2 users use it without its graphical interface, often as an enhanced replacement for their former use of Quarterdeck's DesqView on DOS. It brings a more mainframe style security and capability to big PCs.

Windows NT on the other hand has focussed much more on graphic performance, although in fact it does have the mainframe style file system, multi-tasking and sharing strengths also. It does more and is bigger. If you thought OS/2 took excessive disk space and memory, then NT is not for you. Although its "design goals" are stated as somewhat less, in practical terms, you need 100 Mb of disk space for the system (without programs) and at least 16 Mb of memory. That is more than PC Unix systems like SCO need.

In fact, NT is more like DEC's VMS operating system (as used on the VAX) than Unix, and has some of VMS's features that mark it as a more powerful and robust system than Unix. Possibly this is partly due to NT's using the same basic kernel design as VMS and to several of its programmers having worked on the development of VMS earlier.

It is probably not surprising that DEC have eagerly adopted NT for their new smaller machines in preference to Unix. They have offered Unix as an alternative to VMS on their bigger machines for some time because of demand, but have always maintained that VMS was the more robust and secure system. It is too, but more complex.

VMS is also less "user-hostile" than Unix, even though less widely known. Unix has acquired quite a cult following but mainly among dedicated computer professionals and programmers. It is essentially a programmers' operating system. VMS and the other mainframe systems are much easier for business people to use, and NT continues that characteristic.

Engineering people have accepted Unix on workstations because they needed the workstations and just had to learn Unix, but they would prefer something less obtuse. Hence the enthusiasm being shown for NT on workstations. Maybe we will see yet another Unix command shell in response to this; with a much less cryptic vocabulary.

As I see it, NT's most notable features are its ability to manage symmetric multi-processing and its adaptability to different processors and system architectures.

Multiple processors

Multiple processor computers have been around for a while, but have been mainly confined to systems where it was practical to afford special software written to take advantage of the parallel processing. The prime example has been Silicon Graphics, where their market has been clients who could pay for special software that did things otherwise impossible, like real-time fully rendered animation of solid models.

Compaq introduced a multi-CPU PC a while back in the System-Pro, but its potential has never been exploited. With NT the operating system can divide up the processing tasks into threads that can be parallel processed and fairly evenly distribute the work between them. Hence the term "symmetric multiprocessing".

With NT, the application software doesn't have to be written specially for the particular multi-processor architecture. It can be run on various NT machines with varying processors and various numbers of processors. It will just run a lot faster on the multi-processor ones.

Hardware systems

Already NT is running in its advanced beta test stage on the 486 PCs, the DEC Alpha, the multi-processor MIPS, and the Clipper. The DEC Alpha machine has been released running Unix but offers faster performance on NT. Intergraph have a new CAD workstation computer ready for release with NT.

CAD Applications

All the major CAD program companies have NT versions ready or at an advanced stage. They offer considerably enhanced performance and features over their present DOS-extender PC systems.

Some of the major CAD vendors have released Windows 3.1+DOS versions but they are generally lower performers than their DOS-extender or Unix versions, as are any Mac versions. Others are waiting for NT, to avoid sacrificing their performance standards. Most Windows 3.1 and Mac CAD systems are in the smaller league. However, some Mac-only CAD systems are quite powerful, although they tend to be focussed on the presentation quality and artistic rendering aspects more than the powerful engineering capabilities of the major DOS-extender and Unix systems.

Networks

NT is just as adaptable where networks and database server engines are concerned as it is to different processors. As well as Microsoft's own LAN Manager and IBM's OS/2 LAN Manager, the two major PC network players, Novell and Banyan, are producing NT support, and Windows for Workgroups subsystems can attach to an NT hosted network.

As well, there is full TCP/IP capability offering three ways to link with Unix hosts. Complete support is provided for the Unified Naming system. This allows a complex network to have several differing host servers; say a LAN Manager, a Netware and a Unix host; and allows users to access files by a common naming scheme without having to know the individual server characteristics.

Windows 3.1 emulation

Microsoft seem to have put a lot of work into providing good backward compatibility with Windows-3.1 and DOS programs. A feature of NT, as in mainframes, is the segregation of tasks so that they don't interfere with each other, even if one runs wild or crashes.

Windows-3.1 improved enormously on 3.0's reliability by trapping applications' errant memory and device access attempts. They had apparently left it out of 3.0 even though it had been written, to speed it up on 286's. However, Windows 3.1 still uses a common message queue for all tasks and is a weakness that allows one errant task to stop all others.

They tried to apply NT's separate task message queues to its Windows-3.1 emulation but found it caused incompatibilities with some existing Windows programs. So all active Windows-3.1 tasks in NT share a common message queue and if one crashes they all stop, as in Windows. However, because the task manager is in NT rather than in the Windows 3.1 subsystem, you still have control of it and can close the offending program. Then the other Windows programs that got frozen by the crash come alive again.

File system.

NT's own NTFS file system is very secure and robust, using mainframe style transaction logging, roll-back capability, and access permission control. It supports long filenames (256 character) but also automatically generates 8-character-plus-3 (DOS-style) names so that any DOS workstations on an NT network don't have problems.

NT also allows simultaneous use of DOS FAT and OS/2 HPFS file systems on other partitions. NTFS file systems also can be set up as "volumes" that span more than one physical drive as one large logical drive.

Trivia

NT has a few "trivial" features like *animated cursors* — the pointer arrow can have a wagging tail, and the waiting cursor can be a finger-twiddling hand, or various other novelties. I don't think they'll be the main motive for committing the needed resources though!

I believe NT will usher in a new phase in computing. It will completely heal over the recently narrowing gulf between PCs and Unix workstations, and I think, speed the trend to using top-end Intel PCs for formerly Unix graphic workstation tasks. It will also bring the Silicon Graphics style capabilities within the reach of a wider market.

But it is not for the home computer hobbyist, unless very committed and pretty well funded.

— *Geoff.*

Have You Heard...?

_ There was a report of a "novel" upgrade offer in Germany. Thousands of PC users received an unsolicited and free demo of a firm's latest software upgrade. I think the firm's name was CADsoft. Anyway, they eagerly ran the demo unaware that besides providing an interactive limited demonstration of their latest release, it also scanned the hard disks for evidence of any existing unliscenced copies of the firm's products.

The demo then offered to print a request form for further special offers, but of course, having got the users' details, they also received a summons from the firm's layers!

A bit of a dirty trick perhaps, but probably quite legal. If you had a pirate copy and had voluntarily returned the form you wouldn't have much legal standing. At least it didn't proceed to vandalise the users' system like a promotional demo some time back from a well-known (and recently bought-out) American software company.

_ There is a lot of talk at present among major software vendors about the end of free support. As retail prices get pushed down through competition and Government agency actions, the distributors are all concerned that they they can no longer fund any support service, particularly phone support.

This has been a considerable cost, often exacerbated admittedly by the release of insufficiently debugged upgrades.

In the case of Microsoft, they attempted to contain their overheads by introducing the Communique subscription service, whereby members got priority service and extra benefits. They still maintained service to non-subscribers, but often at the cost of long waits on STD. Their phone support service is in fact a huge operation run at substantial cost. The revenue from Communique is probably what has enabled them to maintain a service that is better than most. Now even that system is under review and I think the non-subscriber option is about to cease. The other major suppliers are all talking about requiring payment for support. I'm sure that will happen. *-- Geoff Harrod*

Psst! Heard About Cheap Transfers?

by Graeme Darroch

Saving on telephone calls

Have you ever been working on a project, and been in need of a little utility, you know your friend has? Have you been working with a friend, creating some software project, and started talking to each other on the phone to find both have been doing a similar piece of source code.

Wouldn't it be great if you could just crank up your modem let it take over the call, and transfer the subject of the discussion, then go back to having a chat, and discuss the piece of code? A Lot of people know how you can get two modems to talk to each other by calling each other, deciding what you are going to transfer, hanging up, calling back, your mate uses his modem to answer you, you transfer the files, hang up, then call back and talk about the transfer. All up, three calls. In this short article I will give an explanation on how to do this in one call.

My friend and I have for several years been developing software and databases as a hobby. When we work on a project together we keep each other up to date with our progress by transferring our latest code, by modem. When we are chatting if we have some code to transfer we go through a simple sequence of commands, hand over the line to our modems, transfer the files, then simply resume chatting.

There are a few things that you have to do to be able to do this, none complicated, a few wiring changes, and some commands to learn.

Let's get our lines sorted out

First, wiring changes, all quite legal now that Telecom regard your house wiring as yours as soon as it enters your house. These are not essential, but, will make things a lot better for you. Do not attempt these changes if you are not confident in what you are doing electrically. The bonus will be explained.

Your modem should be the first device on your telephone system. Most modems, you will need to check yours, have two connectors on them, one called "LINE", the other called "HANDSET" or "TELEPHONE" (see Figure 1). If your modem doesn't have two connectors, it may have a four wire connection to the plug that connects to the telephone system (see Figure 2). What these connections do is provide a pass-through connection to the circuits in your house, when the modem is not operating; but, isolate the rest of the house when the modem is operating.

Just to recap that, and make sure you have the idea, the telephone connection comes from telecom to your modem, then to the rest of the house.

The benefits

Several benefits come from having your house telephone wired in this manner. When the modem is on line and your son/daughter or wife/husband happens to lift a phone to make a call, they are met with nothing, no dial tone, no screeching tones, nothing. Previously when this happened, if you were using your modem, at the best you got some strange characters on your screen. At worst you were dropped off line immediately. If you were on the last 10k of a 400k download and it happened (Murphy's Law), you needed to log on again and do a Zmodem resume. What a pain! The rewiring cures this problem by totally ignoring the rest of the phones in the house, they are not connected when your modem is on line. One thing, it's worthwhile making a loop or dummy plug to connect the rest of the house system if you have to disconnect your computer, for a thunderstorm, or to take to a meeting.

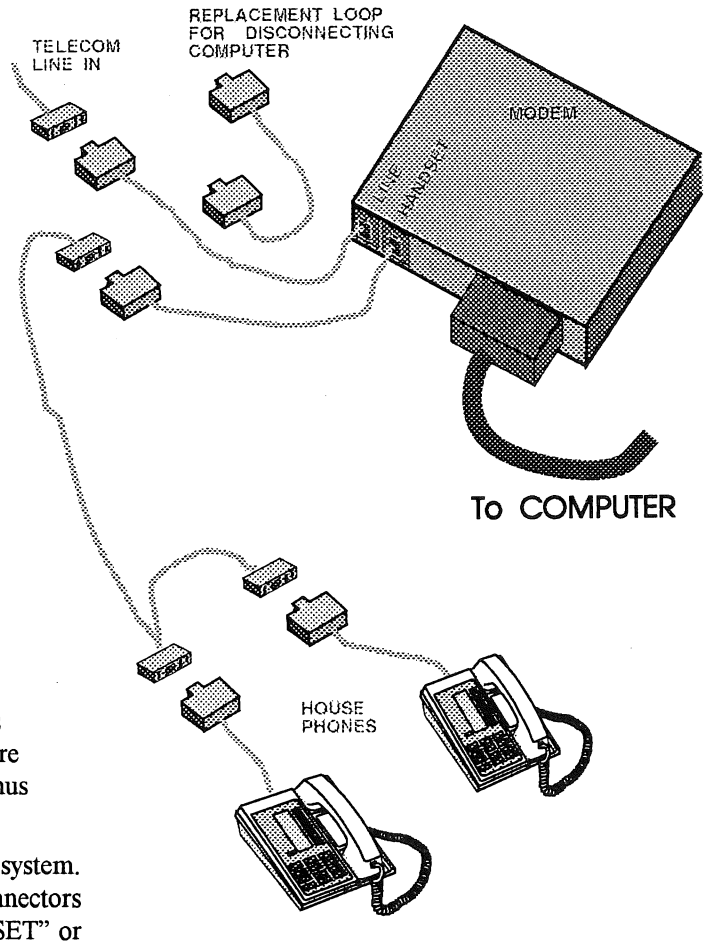


Figure 1. Showing Graeme's setup for switching between voice and mdem without interruption, thus saving on call costs.

Let's move those files!

The next thing I would like to share with you is how my colleague and I achieve the hand over of a line carrying a conversation to our modems, and subsequent resumption of our conversation.

When you have talked enough and decide its time to transfer your file, both people should start their tele-communication program, and have it sitting on a terminal screen. The easy way to check if you are on a terminal screen is, if you type in a recognised command you should get a response from your modem, probably an **OK**. Try **ATH0** and you will probably get a response of **OK**.

Now comes the hard part, one person has to type ATD and a few moments later the other person types ATA. As soon as the ATA is entered a normal series of tones should sound and if successful a **CONNECT 2400** will appear at both ends.

Now, if you have made the wiring changes I described earlier, you can lay your telephone to one side, it will be dead anyway, and get to your keyboard. Now just try typing and whatever you type will appear at the other end of the connection. You can get technical and use a chat screen if you like, but remember, if you really want to chat, you can do so by dropping back to voice. Now you have a connection all that needs to happen is a zmodem transfer from one end to the other of the files required. Zmodem, if in autodownload mode, will take care of the transfer at the receiving end. Once the file is transferred, and all is well you can go back to voice by using either an **ATH0** command or whatever command your communication program has, to hang the phone up. When your modem goes off-line your telephone will immediately come back to life, and you can go back to talking.

Instant success?

When we started this, I won't pretend that we had immediate success, but after several attempts we got things ironed out. One of the advantages of not having to worry about calling each other every time you want to try a connection is that it only costs one call fee. Depending what software you are using, and what speed of modem you have, and if you both have the same speed of modem, you will need to juggle with settings. You may need to lock one modem to a single speed, and let the other auto speed range. You should be able to get something going relatively easily,

Well, that's an insight into how I communicate with my mate and a few other people, I find it quite handy, and very easy to do, once you have things set up you wonder how you ever did without it. ○

CAUTION

If you are not familiar with telephone wiring ... employ someone who is competent

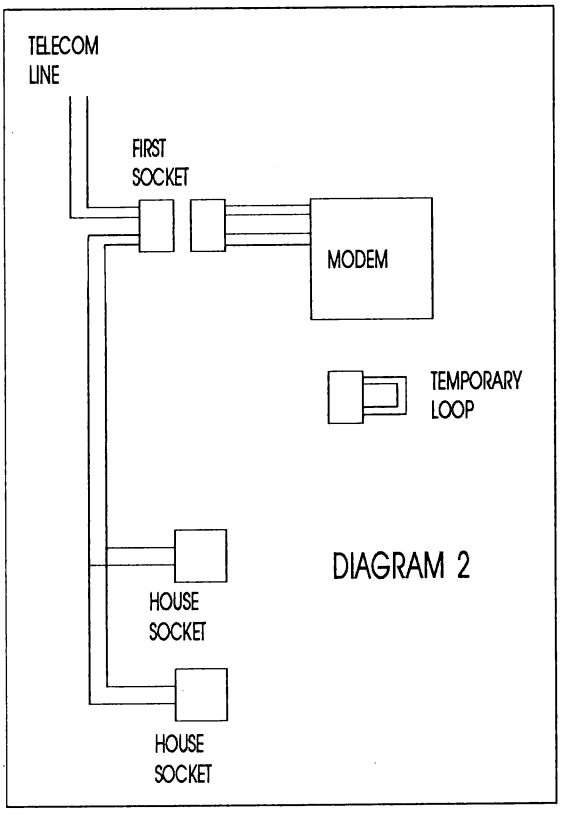


Figure 2. Showing the four-wire connection associated with some brands of modem.

Lindsay Bates

Lindsay's Letter

Practical Computing for Established and New Computer Users

How can it be June already? And is it another case of "How time flies when you're havin' fun?" Hope the year so far is really going great for you.

Clearly the Grey Fantails reckons it's officially winter, for they've just arrived down from higher ground, and their attractive call and wonderfully busy manner is entertaining us in the trees outback.

Back inside, DOS 6 is still motoring along on the 386. My reports on the new OS are below.

I've had a wag point out that I'm on record as stating I will NOT use stuff that's new in the computer world. But DOS 6 is new, isn't it, he asked me innocently?

Sprung - with a capital Sprung! I found myself mumbling that the DOS IS take-offable, so I decided to take the gamble, didn't I. He didn't let me off the hook (thanks a lot, Mark!), reckoning I just blew it. Ah, well, it seems you really can't win 'em all!

Did you rush out and buy a new Pentium computer when it was released? Me neither - thought I'd leave it till next week . . .

Thanks once again to those who called, and I am doin' a bit better, thanks. See you again next time round. Meantime, stay happy!

SIGNIFICANT BITS

May I add my special congratulations to the team for a great-looking mag. Like many of you, I've watched it go from strength to strength earlier on under Geoff's steady hand (always ably assisted by Ron).

Now we've gone coloured (there's no bias in Brisbug!), and the effect, well it's great, mate! The editors are to be commended for this initiative.

I'm proud of Brisbug. Proud of the leadership of Ron and all those who've worked with him in recent years, and of what has been achieved. I'm proud to be a member, and am always happy to recommend that other computer users join our band.

May the mag. - and Brisbug itself - continue to improve and grow and build to even greater heights (if things keep going, we'll all be looking for oxygen masks soon . . .)

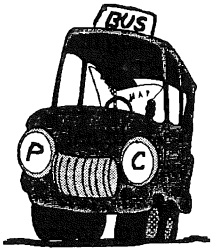
MULTI-CAD

While on the question of congratulations, these are also due to Geoff Harrod and his partners for a great new Magazine called *Multi-cad Magazine*. Geoff is technical editor and *Multi-cad* has been given a good write up in the press.

I found it an extremely professional presentation from front cover to back. Very impressive. And especially to be commended because it's a Queensland initiative. (*PresidentLand* rings a bit oddly?)

If you're into CAD, this monthly offering at $4.95 a time is well worth a look.

THE LOCAL BUS STOP



To get ON or OFF the Local Bus - which is right for you? That's certainly the question.

And why do we need LB anyway? Well, it's all the fault of the AT. When the 286 was introduced (about 100 years ago?) the 16-bit ISA main-board was born. Sadly, it's been the standard ever since.

"Ever since" includes the 386 CPU family and the 486 CPU family, all running at 32-bits - all still plugged into a slower 16-bit ISA main-board.

The just-released Pentium is a 64-bit CPU, and it won't surprise me to see even this chip sitting on some 16-bit ISA boards.

Okay. You don't have to be an Einstein to figure that the now-dated 16-bit ISA bus is slowing things down markedly every time the CPU sends a message out to any of the peripherals. Peripherals like the monitor, and the hard-drive. And it's just one of the reasons your fast, new 486DX2-66 is maybe NOT as speedy as you expected.

To redress this dreadful anomaly, someone got the idea of putting a 32-bit direct bus route on the main-board, to run the monitor or the hard-drive (or any peripheral, for that matter) much more speedily.

So, suppose I go bananas and buy myself a new Local Bus computer. How does it work?

The first thing you need is quite important: it's to ensure that the Local Bus conforms to the *VESA* standard.

Next is to check how many slots are VESA. The better boards seem to be supplying two 32-bit VESA slots, along with 5 or 6 regular (16-bit ISA) slots.

You can use the Local Bus computer totally normally (but realise that, in this case, everything will run *at the same speed as normal*) by using regular cards for the monitor and hard-drive (plugged into the regular ISA slots).

But if you have extra funds, you can specify that the hard-drive card (or it may be the whole I/O card) and/or the monitor card should be VESA Local Bus.

These will plug only into a VESA slot. Once there, the cards will talk back and forth to the CPU at 32-bits not 16. So - suddenly your hard-drive is faster!

To go Local Bus is not particularly cheap at this early stage. But it is a *whole* lot cheaper than other remedies like the 32-bit EISA bus (which, because of expensive peripherals, never really took off).

VESA's certainly the way the PC world is going, for the time being at least. Already you can do a LB computer complete with basic VESA monitor and I/O cards for just a couple of hundred extra.

Prices of the cards should reduce in time. When they do it's going to give many of us a new way to get that much-needed extra speed for Windows or other GUI's.

Computer World

- *The newly-introduced DOS 6 is raking in the doolie for Microsoft. Australians are buying it at a faster rate than DOS 5 or Windows when they were first introduced. So it's going to be interesting to see how MS respond to this ringing endorsement of the fact that PC users still do NOT believe DOS is dead.*
- *Seems like we may be the first country in the world to connect to our phone lines the phone, the television interactively and our computers.*

  It will be a real coup for Aussie know-how if this happens, and the things we'll be able to do with these technologies all put together are quite mind-boggling.

  Just thinking of TV receivers all connected to the phoneline is 1984 stuff. Add the PC, and soon Central Control will interrupt transmission to say he's shutting us down because we dared - DARED - to type something radical into a word-processor file!
- *Let's trust it never gets to the above. I just hope that once our PC's are connected into the world-wide phone grid, there will still be an OFF button so we can protect ourselves from unwarranted entry to all that's on our computer.*

  Because it's hard to believe security will ever be good enough: in the same paper that reported the above, was a further report of an Aussie - yes, good ole Aussie know-how again(?) - who shut down Nasa in 1990, from home, using his PC. Yes, the mind boggles here, too.

WINDOWS ACCELERATOR CARDS

I've now been able to test two different 1Mb Windows accelerator cards for regular ISA bus computers.

I can report that the second (dearer) card gave me exactly the same results as the first: Windows did not seem to run any faster than under my Tseng-Labs card (but please see below).

The worry is that these cards are usually advertised to "run your Windows applications 12 times faster" or the like. This is patently a load of nonsense and such claims should be debunked for the rubbish they are.

What they should say is that the card itself runs any Windows monitor activity 12 times (or whatever) faster than a comparable non-accelerated VGA card.

Even specifying that, it's hard to see exactly what they're comparing with - which is at least partly how they came to get away with such outrageous claims in the first place.

I have no problem with an accelerator card being 12 times faster in its internals - provided 12 times faster than WHAT is clearly specified. In any case, no way can this be seen as running your Windows applications 12 times faster (not unless the card somehow miraculously speeds up the CPU and hard-drive by 12 times as well).

Like you, I want to see Windows - *ALL OF WINDOWS* - running faster. And for this we will have to look to Local Bus cards and faster CPU's, not to Windows accelerator cards.

Meantime, it's been pointed out to me that an accelerator card will likely show as faster when you're doing things like scrolling down the screen in Windows.

It's up to you to decide if that improvement is what you want and what you're paying for.

As for me, I'll wait for the budget to extend to a Local Bus monitor card, and Local Bus controller card (preferably cached) - on a VESA main-board - to get W3.1 running faster overall.

And when I get Windows, as a whole, running even two times faster than at present, then I'll reckon it's Christmas.

(We should perhaps add that many members have been very pleased with the value they have derived from their investment in various accelerator cards. That includes the Sig Bits producers, who certainly wouldn't want to go back to Tseng Labs or whatever.

-- EDITORS)

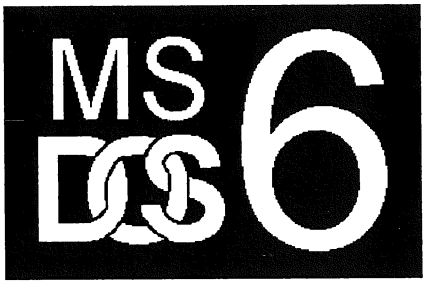
THE ADVERTISING DOLLAR

Maybe you caught this ad in the paper.

It was for a 286 Computer with a 3.5" floppy and 40Mb voice-coil hard drive. The illustration stated VGA monitor; the text had it as a VGM colour monitor giving "fantastic graphics". It had a "super fast 16Mhz microprocessor". With MS-DOS 5 installed the ad said you can be "up and running the moment you turn on" (running exactly where wasn't specified).

The cost was $998, and they stated that this saved $800 because "regular separate item price" was $1,798. But the bit I liked best was that it was a 286 Computer that "*puts the latest technology at your fingertips.*" Truly!

FOOTNOTE. In case you thought I picked up a 5 year old paper by mistake, the date was double-checked at 12-5-93.



Here's a quick rundown of what I found when I installed MS-DOS version 6 onto the computer.

Before starting, may I *strongly* suggest that serious DOS users read the README.TXT that's installed into the new DOS 6 directory. It really does contain some important info.

Okay; let's get started. I installed the Upgrade version of MS-DOS 6 (you must already have a DOS on your hard-drive to do this).

I chose to put Disk 1 in the floppy-drive, change to Drive A (it will install ONLY from A) and type SETUP. The other option was to choose to reboot with the 1st Install disk in Drive A.

You have to close down Windows and DOSSHELL, as you cannot install while these are running. You also need one or two diskettes ready (formatted or unformatted) for DOS 6 to write uninstall files to. This will enable you to revert to your original DOS if need be.

I really didn't have much by way of problems with installation, except for a glitch when the box below was on screen. To change an option here, you need to: highlight it and tap Enter; highlight the new option (e.g. MS-DOS or None) and tap Enter.

```
Backup:          Windows only
Undelete:        Windows only
Anti-virus:      Windows only

Install the listed programs.
```

I was rather amazed at the amount of space taken by this version. Including all Windows installations my disk showed the total amount of space used rose from 1.8Mb (DOS 5) to 6.2Mb, including 311K of files it left from DOS 5.

This amount reduces if you choose not to install utilities like Anti-virus, Backup or Undelete, and it will also reduce if you choose to install one or more of them to run only in DOS or only in Windows.

When Setup was completed and I rebooted, there was the new DOS all up and running.

Apart from the MEMMAKER glitch mentioned last time in *Woops!* it's given NO problems at all so far! (regular readers know how I *hate* running new software before it's been around long enough to get the bugs out).

THE MANUAL

When DOS 5 appeared I remember commenting that it included the first ever DOS Manual - it was actually of some use to the average user.

The DOS 6 manual is different again. To start with it's slimmer, at least in part because you can get so much more information at the command line.

So much so, in fact, that the manual saves space by not printing such information. You have to admit that's different!

In trimming the manual down, it seems to me that this time there's a deal of info that could have been, and should have been, in the manual.

That notwithstanding, the manual is quite readable (see *WOOPS!* last month) and the on-disk help is even better. It's pleasing to note that by version 6, someone at Microsoft had finally discovered that EXAMPLES are an essential to showing you how it's done.

For example, if you want to see how to use the SETVER command, you type HELP SETVER at the command line (like many other items, there's nothing in the manual for SETVER!)

If you don't know how to use DOS from the command prompt, this could be a bit of a difficulty.

But it's easily solved. Just go to XTREE or similar program and run the file HELP.COM which is in the DOS directory. When asked for options or parameters type in SETVER (or whatever you're after help on).

In the HELP screen (why did it have to be black and white!) use the mouse to read Examples, Notes, Syntax. You can click on Alt+B-Back to return to the previous screen, while Alt+F, X will exit the whole thing (or click on File, then Exit on the left of the Menu-bar up top).

Now to a couple of the new utilities bundled with DOS 6

MSBACKUP

Provided you installed both, you can run MSBACKUP from either DOS or Windows. If you lose files or data now by failure to do regular backups, you only have yourself to blame!

Because backing up via DOS or Windows is friendly enough for most people to use. Windows will probably be more intuitive for most new users to learn than the DOS version. However, the DOS version does give a 3-keystroke way to do the 1st backup. Check Help, Index to see how.

I could almost be enticed away from my old Fastback Plus favourite by the DOS offering - except for one major problem: so far I've found NO way to automate backup operation by running it from a batchfile! An oversight I find very hard to understand.

DOUBLESPACE

Provided it turns out NOT to have serious bugs, I predict that DoubleSpace will become the most popular feature of the new DOS. For if you need more disk space (who doesn't?), help is on the way. Just

go to the DOS prompt and type DBLSPACE.

BACKUPFIRST

But there are some important things to do first, not the least of which is ensuring you have an up-do-date backup of the drive you're compressing. If you don't already have a backup program, MSBACKUP (above) will do the job for you.

When you've finished compressing your HD you should be able to fit round about twice as much on it.

Realise that to achieve this major feat, DoubleSpace is going to pinch some of the extra memory DOS 6 has so generously provided. On my system DS took 22K of precious Conventional memory plus 43K of Upper Memory. It needs both to maintain and operate your compressed DoubleSpace drive/s.

Now, are you perhaps the cautious type, approaching new technology with just a little care? Then you'll want to be able to *try* DoubleSpace before you buy, as it were.

In order to give you more room on your HD, DoubleSpace is going to take some time (it will tell you how long the job will take) to compress all of your files into a smaller area: that's how all that extra space is available when this is completed.

The manual warns that once files are compressed they cannot be uncompressed. Now that's not much of a "try before you buy procedure", is it? - once it's done, it can't be undone?

Well, that's not quite the whole story. While compressed files cannot be uncompressed on your new compressed drive, they CAN be copied elsewhere to uncompressed space, e.g., a floppy, or to an uncompressed drive. Once there the file is back to normal.

However, the warning is valid, because you don't really want to have to copy 40Mb or more of files and directories elsewhere to uncompress it, do you?

Okay. The disk I did DoubleSpace on already had Drives C, D, E and F. Purely as a "getting to know you" exercise I chose to compress F, which had around 25Mb total space and contained only a few files. When completed, DS reported I had room for a possible 42Mb on F. All the other drives were as before.

(Because there's no way of telling how much new files will compress down to as you add them to the compressed drive, the 42Mb there is an estimation - but at least it gives you a bit of a guide.)

In the process of compressing Drive F, a new drive U was "created" (yours may be different). In actual fact, the uncompressed F Drive was renamed, and it then contained just one large DoubleSpace file, which was actually the new compressed drive F, including Drive F's original files. If you're feeling confused, don't be. For you don't really have to worry much about U.

Provided it turns out NOT to have serious bugs, I predict that DoubleSpace will become the most popular feature of the new DOS.

In fact, if I chose to ignore this new Drive U, then my Drive F was still there as before. It both looked and behaved at all times and in all situations like a regular drive. All that happened was that it simply had a lot more space!

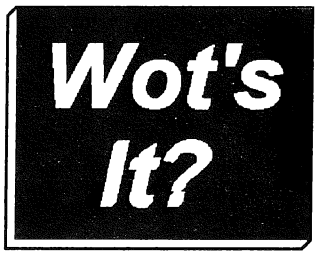
Now to the next step in this DoubleSpace exploration. I had only a few files on F fortunately, so I copied them to a floppy, and proceeded to see how to remove DoubleSpace. Horrors - the manual didn't tell me how!

After spending hours of trial and error, intuition, and guess-work, I finally did it - only to find later that if I'd checked the README.TXT file in the DOS directory, I could have read how it was done!

Well, except for one step, that is (just another DOS 6 woopsie)! And that is that you have to manually remove DBLSPACE.BIN and DBLSPACE.INI from the root directory, else all the memory it pinched will continue to get pinched - even though you're no longer running DoubleSpace.

Having done all the necessary steps, I had DS completely removed from my HD. The next task was to try creating a completely new, empty compressed drive. I did this successfully and found how easy it is to actually alter the size of your compressed drives. I like it!

This and more will have to leave till next time - including my recommendations of a good way to use DoubleSpace on your hard-drive. Stay tuned.



The second part of a short series to help with the sometimes difficult task of keeping up with terms used in the computer world. These are for PC's running DOS as the operating system.

PERIPHERALS

Monitor. The computer's display unit. Also called Computer Screen and VDU (Visual Display Unit). It connects to a monitor card in an internal computer slot.

Modem. An internal or external unit to connect a computer to the phone line. It enables the computer to communicate with another computer attached to a modem at the other end. It connects to a computer's serial port.

Fax-Modem. As above, with the added facility that it will fax documents created on computer to another computer fax, or to a stand-alone fax. It also receives incoming faxes.

Scanner. A hand-held or desktop unit to scan the printed page. It produces a graphic file which may then be displayed on the Monitor, printed, modified for other use, or faxed to another computer. It connects to a card in an internal computer slot.

CD-ROM. An internal or external unit to enable a computer to read the files on a data CD (may not read audio CD's). Currently its major advantage is the vast amount of data that can be stored on a CD. It connects to an internal card or sound card.

Tape-Backup Unit. An internal or external unit which can copy (backs up) all the data from hard disk to tape. This tape may then be stored separately from the

computer. It connects to a card inside the computer.

A COMPUTER'S INTERNALS

Floppy-drives. If only one floppy is fitted it will be called Drive A. Commonly today it may be a 3 1/2" (1.44Mb) drive or a 5 1/4" (1.2Mb) drive.

If two drives are fitted they will be Drive A and Drive B. Either a 3 1/2" or 5 1/4" drive may be installed as either drive.

Hard-drive. The hard-drive stores vast amounts of data and gives fast access to that data. It will be called Drive C (it may also be partitioned to Drives C and D, or C, D, E, etc). A second hard-drive may usually be installed also.

Ports. Commonly there are two kinds of ports: parallel and serial. Via the former you can connect to the computer a printer or a slotless network. Via the latter you can connect a printer (less common today), modem, mouse or slotless network.

Slots. Modern PC's tend to have 7 or 8 slots into which go the Cards that connect your computer with the monitor, the hard-drive and floppy-drives. Also a network, and other peripherals such as a tape-backup unit, internal scanner and CD-ROM. Similarly into a slot will go a sound-card and internal modem or fax-modem.

Cards. Cards - e.g., the monitor card - plug into the computer's internal slots as explained in Slots.

RAM. The computer's memory plugs directly into the main-board of the computer. Today it's usually SIM memory as either 256K, 1Mb, or 4Mb modules.

IN THE WORKSHOP

Bill's problem was a doosey, and it highlights some crucial matters I've raised before. All of a sudden he couldn't run Windows in Enhanced Mode; in Standard, yes, but not Enhanced.

The messages Windows was giving when it threw out a couple of seconds into bootup really weren't very clear or very helpful. They said a couple of device drivers couldn't be found - and that was the ball-game.

A quick look in the Windows \SYSTEM sub-directory showed why Windows couldn't find them: they weren't there. The problem we had was - where did they come from originally, and, more to the point, there the heck had they gone?

Bill was as much at a loss as I was. He couldn't even begin to imagine how some apparently important files had disappeared - he certainly hadn't been anywhere near C:\WINDOWS\SYSTEM doing any deleting, he assured me.

When we attempted to backtrack, he eventually remembered he'd started to install a backup program the day before. It turned out that part way into INSTALL he'd chosen to abort for some reason. And that's exactly where he came to grief.

The program he'd aborted was Central Point Backup, as it happened, but other programs could - would - have done the same thing.

There were two problems here. First, CPB aborted, leaving part of an installation still floating round the disk. I consider this ridiculous. If a program gives you an option to Quit, it ought, by rights, to clean up what it's already done. CPB didn't.

Instead, in SYSTEM.INI, it left the two new lines it had added, placed there in order to load two (new) system files. Trouble was, Bill aborted before these files were installed. Result? - Windows refused to run in Enhanced Mode when it was asked to load two drivers it couldn't find!

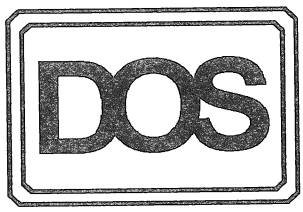
I think you'll agree this really was a beauty. And, no, we didn't solve it in 5 minutes! (And we're both still rather amazed how we got onto it, enough to be able to finally figure out what had happened.)

Had we not been as fortunate as we were, Bill was looking at totally reinstalling Windows, his WP, his Spreadsheet, and many other programs. It would have fixed the specific problem - but at what cost?

The second problem is the way driver lines are written into SYSTEM.INI: nothing whatever to indicate what program put the lines there; and nothing to indicate where they belong. The Windows writers should be severely taken to task for this slackness.

It highlights the incredible interactivity of all the programs we install under Windows, all adding to the mess of stuff on disk and in files in C:\WINDOWS and C:\WINDOWS\SYSTEM. Doesn't impress me. Not one bit.

At the end of the day, what's true is that we all still have to be able to abort an installation if need be. But after this not so little incident, I, for one, will think long and hard before doing so.



LIST.COM and CHD.COM

Norton's has a quick Change Directory program for when you're working out in DOS. But if you don't have it, CHD.COM on Brisbug 8601 from the Library will do quite nicely (extract it from UTILS*.EXE).

It's a great little program that enables you to change directories by typing just a couple of letters: typing CHD EXCEL, for example, will change to my directory C:\FLS\EXCEL. But we can do much better than that.

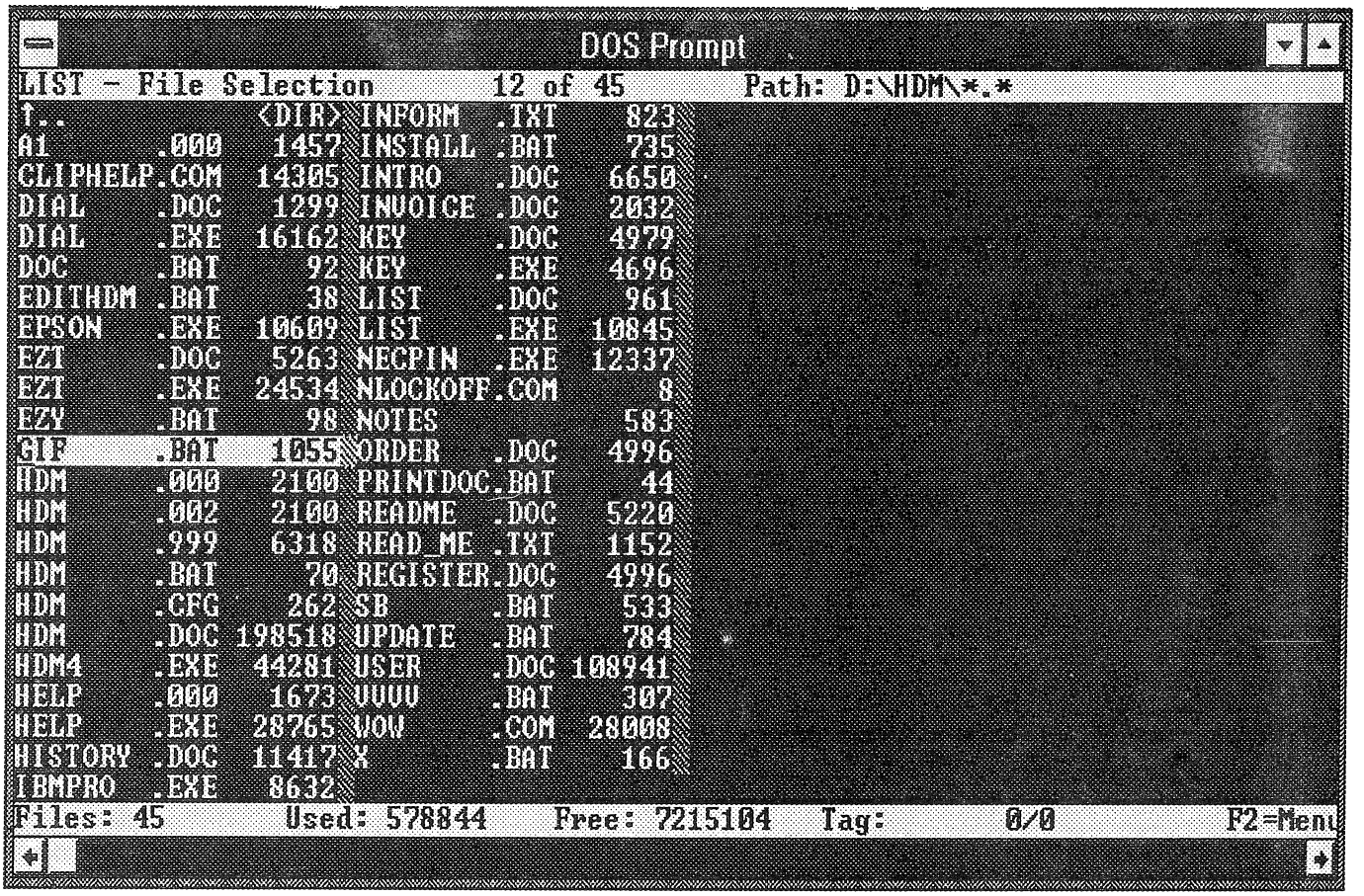
I use CHD via a couple of simple batch files (create them in any ASCII word-processor, and save them into a directory that's in your PATH statement). Here's C.BAT that I use to change directories on Drive C:

```
@echo off
c:
chd %1
```

That's it (ensure you don't have another C.BAT somewhere on your drive before creating this file). Now all I have to do to go (pretty-well) instantly to the directory C:\FLS\EXCEL on Drive C is to type C EXCEL.

In actual fact, I can be even lazier, and just type C EX if I wish. Isn't that great! In this instance, CHD.COM will change to the first directory it comes to that starts with EX - but if there's a conflict I could type C FLS\EX to ensure I arrive at the right one.

If I wish to go to the root of Drive C, I simply type C \ and I'm there in quick order. If I'm content to just change to the



LIST's file selection screen, running within Windows

default directory on Drive C, I need only type C.

There's one other enhancement you can use for even better speed - include in the last line the name of the directory you're putting CHD.COM into. If it's going into C:\UTL, the line would become:

```
c:\utl\chd %1
```

As I have Drives C, D, E and F, I've also created D.BAT for Drive D, and so on. The only change is to the 2nd line - put D: there for D.BAT, or E: for E.BAT, etc.

LIST.COM

The final enhancement is to do a directory listing when you arrive there. I use LIST.COM for this purpose (included in your Brisbug Catalog Disks). It gives a nice clear listing, and has some other great advantages.

To put LIST online, just add another line to the end of your batchfile/s, containing just the word LIST. With LIST, you can see the files in your directory in a number of formats: the illustration shows the default, but try pressing numbers 1 to 6 to see other listings.

And LIST has more. With GIF.BAT highlighted as in the illustration (which was taken from within Windows), I have three useful options. Firstly, if I press Enter I get to check out its contents.

In fact you can look inside any files, incl. executibles. It can be very handy to look in these to find what switches to use to run them. Press END, then PageUp a few times - if there's going to be any ASCII info. most likely that's where it will be.

If you want to see file contents in Hex, just press Alt+H, and Alt+H again to return to normal.

Secondly, if I press the letter I (then Enter) I get to run the file (I means Insert). Great to test batchfiles as you're writing them. Thirdly, if I need to modify the batchfile, I press E (for Edit). Provided you have DOS 5 or 6, you'll immediately be taken into EDIT where you can change the file.

Then back to LIST when finished (via Alt+F,X,Y), where you can run the file again. Don't tell me that's not fast and convenient!

Finally, here's the full listing of C.BAT as I use it. Remember, to go to the directory D:\WINDOWS\SYSTEM, all you need do is type D SYS. Using LIST.COM and CHD.COM is that easy.

```
@echo off
c:
c:\utl\chd %1 list
```

That's it for another month. Have a great one!

- Lindsay Bates

Ph: (07) 808 9441 after 11am.

Database Introductory Sessions

by Raman Vasram and Dan Emerson

The Introduction to dBase class is proving very popular. Here Dan reports the first lesson.

Last month we created some data tables using the *CREATE* command, added data using *APPEND*, modified data using *EDIT* command. *BROWSE* was used to interactively edit data directly into the table in list mode. *BROWSE* and *EDIT* commands were used to demonstrate selective field display when specifying a field list, e.g. *BROWSE* FIELDS CODE, GIVENNAME, SURNAME

Raman spoke about the ease of using the applications generator.

This month's topic will be indexing and sorting. An understanding of indexing is vital. Indexes are used to order data tables and also to find items in a table. Finding items in indexed fields is quick. To find the name 'SMITH' in a table with ten thousand names would take less than a second. This ability to find items quickly is used to set relationships between tables and indexing acts as the link between multi-table databases. An understanding of indexing is essential if you are to tap the power of databases (proponents of SQL won't agree).

Raman will present an develop an example of an input form for data entry and a query to extract a list of information.

Last month we did a demo of creating a dBase table and then importing the data into the spreadsheet AseasyAs, summarise the data and graph it. I think this one is worthwhile. Have a go at running it.

Exercise 1.

We want to run a survey to test the popularity of a TV program. There will be two questions; rate the program on an ascending scale of popularity of 1 to 5 and nominate age. The data will be stored in a dBase table.

Refer to Figure 1:

Suppose the data will be saved on to a floppy on drive A:

Do	Type
Run dBase	DBASE
Set dBase to look for data on drive A:	Set DEFAULT to A:
Create a table called SURVEY.DBF	CREATE SURVEY
create fields response and age	RESPONSE N 1,0
	AGE N 2,0
Save and exit the table specification	Control-End or Control-W
Add data now	N
Add a record	Append or F9
Add data response	4
age	40
	Control-End or Control-W
Add the data through the browse list	Browse
Add data for x samples (20 to 100 samples)	5 20
	4 10
	.
	.
	5 30
Save data and exit browse list	Control-End or Control-W
Exit dBase	Quit

Figure 1. Showing the dBase program used to enter the survey data for Exercise 1.

Next step is to import the data into AseasyAs spreadsheet (or Lotus). The menu access key is the forward slash /. Steps will be written in words but only type in the letter e.g. for / FILE DIRECTORY type */fd*. Upper or lower case is OK. Where the " is included in the command it indicates that it has been typed in a previous command and you don't have to do it this time because you are part way through the menu already. brackets (WORKSHEET) are commands from pre version 5 of Aseasy.

When the data is imported into the spreadsheet, the two columns will appear a stars. This is because the numbers are wider than the columns. You need to widen the columns to see the numbers. *(Refer Figure 2).*

Run Aseasy As	ASEASY
Set directory to data in drive A:	/ FILE.DIRECTORY A:/
Import file	" " IMPORT
	DBASEIII <FILENAME>
The data may be read into narrow columns and appear as stars. To see the numbers widen the columns	/ SHEET (WORKSHEET) COLUMNWIDTH
	SET 12

Figure 2. Importing the dBase file into AseasyAs and adjusting column width

The next task is to do a frequency distribution analysis of the figures. We want find the number of people who thought the program was good and indicated a 5. We want to know the number of 4's 3's and so on. To make a frequency distribution table you need to type in the responses (RESPONSE. BIN) and Aseasy will count the number of times the response occurs and place it (the frequency) beside the response. Aseasy refers to creating bins to place the count in. The *\Data Bin* command is used.

Refer to Figure 3.

go to D5 and type in the bins (range of responses).	
	1
	2
	3
	4
	5
Call up the *Bin* procedure	/ data bin
mark the range to be processed (hit full stop to begin range and use arrow keys to mark it).	A3..A23
Enter to complete command.	
Mark the bin range	D4..D8

Aseasy then sums the data range and draws both the frequency table and a decimal fraction of the situation.

The response in offset by a row. Use the move command to realign the response. /move d4..d8 d5 and tidy it up with some labels.

You should have your frequency displayed.

Figure 3. Using AseasyAs to display the frequency distribution

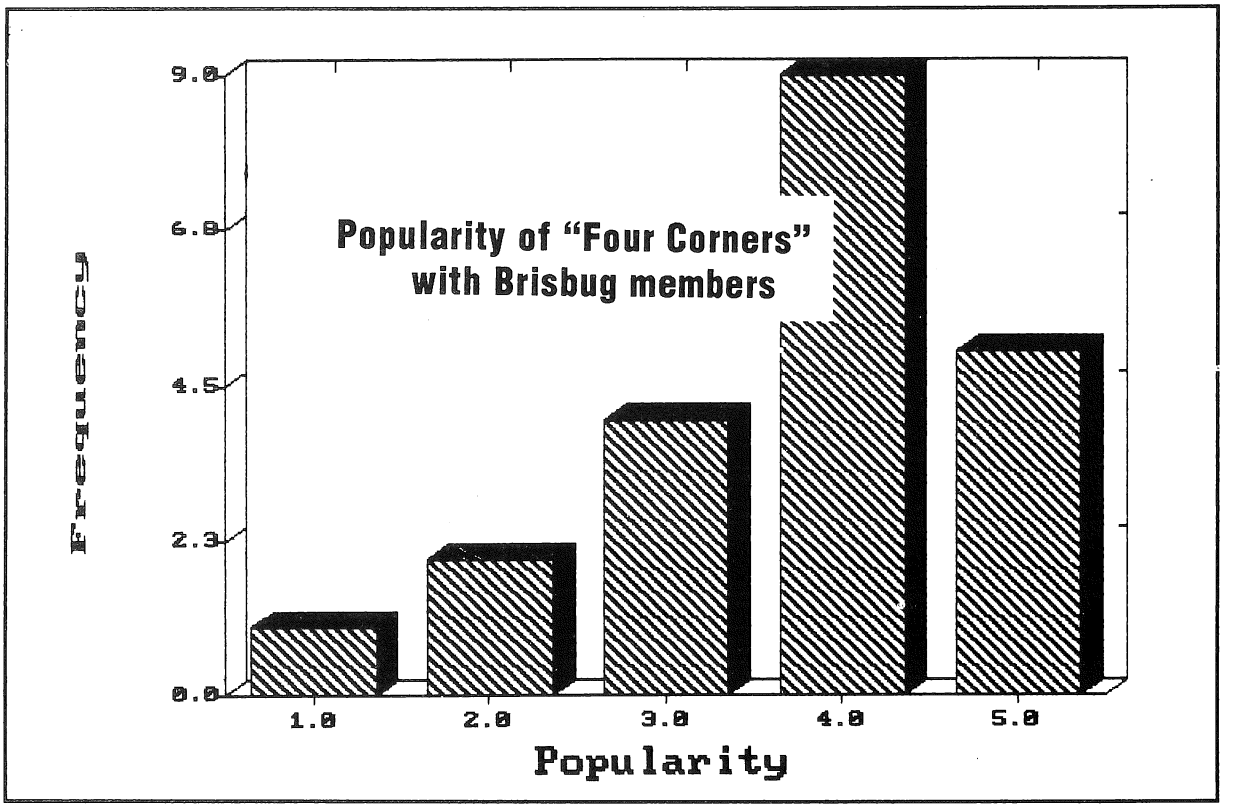
Next step is to graph the distribution table. The commands for this operation are shown in Figure 4.

set the graph type	\ graphics
select the range menu	" " range
	(not in pre v5)
set the independent x range	" " X D4..d8.
set the first data range a:	" " A E4..D8
quit the range	" " {Esc}
Draw the graph	" " View
The graph comes up but needs you to use options to name the parts and title it.	
Experiment with the graphics section to find how to do this.	
The graph can be printed	" " Plot
Escape the graphice section	Escape
End Aseasy As	\ Exit Yes

Figure 4. Graphing the distribution of responses

The final result is shown in Figure 5, below.

See you next meeting ... Dan



The OS/2 Column

Paul Marwick

Some useful programs

This month, I want to look at a few more useful programs for OS/2 users.

The first one is an update to an OS/2 program which has been around for a while, and which I reviewed briefly a few months ago - AlarmClock. This has been updated, with a new name, and a number of new features.

AlarmPro

The original AlarmClock provided a time and date display, combined with the ability to act as a task scheduler, starting specific tasks at preset times. The new version (now called AlarmPro) has the same abilities, but also adds a Personal Information Management (PIM) function. It provides a database of contacts, combined with a To-Do list function, which makes it a very useful tool indeed.

Features

* Clock
* ToDo list
* Contacts list
* Dialler
* Screen saver

The clock function provided by AlarmPro is quite flexible. You can select either an analog display, or a digital display (and when using the digital display format, you can chose between 24-hour format or 12-hour format). It has the ability to produce hourly chimes (which can be tuned for duration, frequency and number of times they will sound). The display can be customised in size and colours as well.

AlarmPro can either be run in its normal PM mode, or it can be minimised. If it is minimised to the Desktop rather than to the Minimised Icon Viewer, it will continue to display the time and date even in its minimised form.

As well as normal clock functions, AlarmPro can be set so that items in its ToDo list generate reminders. Not only can it generate reminders, it has something which is rather like the "sleep" function offered by many alarm clocks - if you put the reminder away, it will come back again after a user-definable interval to remind you all over again.

AlarmPro also provides a database for contact information. This is fairly similar to most Rolladex type programs, and provides fields for Names, Contacts, addresses, phone numbers, etc. A link is provided which allows a contact entry to be linked to a ToDo list item, which can be useful. Utilities provided allow the contact database to be packed and sorted, and it can be searched on any of its fields. In addition, a dialer function is provided which will allow you to use a modem to dial a phone number from the contacts database. All generally useful functions.

The ToDo list is quite extensive. It has the ability to accept both date and time inputs, and to assign priorities to items in the list. Overdue items will appear in a different colour so that they stand out. Completed items can be either deleted or archived for later use.

It is possible to sort the ToDo list on time, date or priority, and also to view items which have been archived. Also, the ToDo list is quite functional for multiple users, since entries (and reminders) can be flagged for "All" or for a specific name.

I'm not entirely fond of the way in which the To-Do List displays. There are a number of boxes on either side of the list, which is a single line per entry (its quite a long line, and can be scrolled). This makes it difficult to see long entries without moving along the line, and I'd prefer to have the paragraph style notes allowed by something like Scraps or MemoryMate, which I find easier to use.

AlarmPro's task launching facilities are quite comprehensive. When you define a task to be launched, a series of dialog boxes allow you to define the task as a one-time event, or set the frequency and separation of the times when the task is launched. You can set whether the program to be launched is a PM application, or should be run as an OS/2 window, OS/2 full-screen, DOS window or DOS full-screen.

As an added bonus, Alarmpro provides a similar screen blanking/security feature to that provided by OS/2's lockup function. The nice part about the AlarmPro version of lockup is that it allows the screen blanker to be used without having to assign a password to the function.

AlarmPro is shareware ($US45 for individual copy registration). The only limitation on the unregistered version is that when it is started, it will produce its "About" window and will wait until the OK button is pressed before removing the window. In addition, registration provides some useful extra programs, including a utility to convert databases from the OS/2 ToDo list to AlarmPro format, and one to convert DB3 databases to AlarmPro format. *On the BBS as ALRMPR13.ZIP*

Resource monitors

There are a number of different programs around to monitor OS/2's use of resources, ranging from things like the Pulse "applet" provided by OS/2 through to a commercial package which provides full resource monitoring for large LAN installations. One of the better resource monitors is Memsize. Memsize monitors a large number of different resources, including free disk space, CPU usage, swap file size, and the number of tasks active. It can also provide a time and date display.

Memsize V1.6

The most recent version is MEMSIZE

1.60. This allows for a good deal of customisation, so you can select the items that you wish to monitor, and turn off those that you don't want to see (if you don't, and you have a reasonable number of drives, Memsize can occupy quite a lot of screen real estate).

While Memsize's CPU monitor uses a numeric percentage readout (which I find somewhat more difficult to use than the graphical display provided by something like Pulse), it seems to be amongst the most consistent of such monitoring software.

Generally a useful bit of software. My only complaint about it is that in order to disable various parts of its display, you have to keep reselecting the "Display Items" menu box - it would be much easier if you could simply tick items that you wanted to display in a single pass before the menu selection disappears again.

Freeware, distributed complete with source code.

On the BBS as MEMSIZ160.ZIP

BBS News

As was mentioned briefly last month, a fourth BBS line is now available. The new phone number is 870-0653, and the line normally supports 1200, 2400, V32 and PEP modems (not at the moment though - see below).

This line is running from the same machine as runs line 3, and it shares the file areas, message areas and user records of Line 3.

Hopefully, it will serve to take at least a bit of the load off Line 3 (which is, at present, the busiest of the lines by a long way). At the moment, Line 4 is probably the easiest of the lines to get onto, though it is becoming busier fairly quickly.

As mentioned above, Line 4 normally runs a Netcomm TR250. However, that modem has developed a problem, so for the present, the system is running a Maestro 96M, which supports 1200, 2400 or V32. Hopefully, I should be able to get my TR250 repaired fairly soon and back online.

Alternatives to the OS/2 Work Place Shell

A few months ago, I offered an alternative to using the full graphical user interface provided by OS/2, using CMD.EXE as the replacement. While this is an effective way of running OS/2, useful on memory-limited systems, it is rather more complicated to run OS/2 this way than it is to run it with the WPS enabled. The next program I intend to review offers another alternative method of disabling the WPS, and may well be more suitable for general usage than the method of using *CMD.EXE* instead of *PMSHELL*.

Commander/2

Program Commander/2 can be used both as an extension to the WPS interface, or as a replacement for it. It is a program launcher which provides an alternative way of starting programs to that offered by WPS. It can also serve as a replacement for WPS (by changing the normal "SET RUNWORKPLACE=C:\OS2\PMSHELL.EXE" to " SET RUNWORKPLACE=<path>PC2.EXE").

When installed with the WPS, PC/2 creates a new icon on the desktop, and should be set to autostart when OS/2 boots (by creating a shadow of the PC/2 object in the Startup Folder).

Once started, PC/2 can be accessed by clicking on a blank portion of the desktop with the left mouse button. It can be configured either for a single click, or a double click (though I've not so far managed to get it to work with a single click when it is being used as an alternative to WPS). When it is accessed, it produces a double menu box, which offers several configuration options on the secondary menu, and a number of options on the main portion. Sub-menus are indicated by an arrow to the right of an option, and any menu can be made multi-level.

Visually, it is somewhat like the menu system commonly used in Unix X-Windows systems, though it doesn't work in quite the same way (the X-Windows menu systems typically require that you hold down the right mouse button while moving about in the menu, which takes a bit of getting used to, but is probably more effective once you have got used to it). The PC/2 menu is static, and will remain in place once you have called it up, until you click on a selection, which will either open a sub-menu (which is also static) or launch a program.

In many ways, it is faster to access a program through the PC/2 menu system than it is to access it by double-clicking on a folder icon on the desktop, then double-clicking on a program object within newly opened folder. In addition, programs launched from PC/2 appear to load more rapidly than they do when launched from a WPS icon.

It is very easy to set up new menu items, or to modify existing menu items. Taking the "Configure PC/2" item from the first menu provides a dialog box which allows you to select individual items, move up and down menu levels, and add or delete menu selections.

When you want to add a new program selection, you are presented with a dialog box which prompts for a name for the selection, the path and name of the executable file to run, and various parameters which can be used to customise the way in which the program runs. In many ways, a similar process of defining a program object from WPS. Batch files can also be started from PC/2, by using *CMD.EXE* as the program name, and specifying the batch file name in the parameter field.

For DOS programs, DOS settings can be defined for each selection, using the key words used in the normal WPS DOS settings dialog.

When I initially set PC2 up, I had a few problems with it. For some reason, any time I opened an OS/2 windowed session from it, I would be left with the cursor sitting at the left hand top of the window, but no prompt, and now visible output from any program that I attempted to run. I'm not at all sure what caused the problem, but I found that editing the configuration file and saving it (using the OS/2 version of Qedit, which removes trailing spaces when it saves a file, seemed to cure the problem, and I've not had any further

problems with it. While I'm not entirely happy with the way PC2 works, it does a good job, and provides a very useable alternative to the normal OS/2 Work Place Shell (or a useful enhancement to WPS if used in conjunction with WPS.

If you decide to use PC2 as a replacement for WPS, you still have the ability to start WPS from it, so if you find that you need something that can only be accessed through WPS (setting up printer defaults is one thing which springs to mind), you can still start WPS when you need to.

As well as its menu capability, PC2 provides a replacement for the WPS shutdown function. I'm not yet sure whether this function is as efficient as the one built into WPS, but it does seem to do the job as it should be done.

At the moment, PC2 is freeware (though donations are requested), and is distributed with full source code.

PC/2 appears to have a few bugs, but is generally easy and effective in use.

Naturally, having just finished writing this review, I've just managed to pick up an update to PC/2. I haven't yet had time to use this version a great deal, but it seems stable, and adds a few new features (such as support for drag and drop, and also support for opening WPS objects from its menu). The file listed below is the most recent version.

On the BBS as PC2_140.ZIP

InspectA V1.1 now available

Finally, not a review (since it will be reviewed in greater depth next month), but definitely my pick as OS/2 program of the month. The new version of David Nugent's InspectA file/archive manager is now available.

Version 1.10 of InspectA is available as a native OS/2 application (as well as a DOS application). For anyone tired of the endless releases of Shez (not to mention the numerous bugs in recent versions of Shez), it provides an excellent archive shell, along with all the file management functions you could ask for (INSP110P.ZIP for the OS/2 version, INSP110D.ZIP for the DOS version).

All of the programs mentioned are available from Lines 3 and 4 of the BBS, or from the Software Library.

SIG News

Windows SIG

The May meeting comprised a very informative session about Microsoft Publisher, and was very ably demonstrated by Mrs. Pat Bridge. Pat travels all the way from Toowoomba to attend our meetings, and she is heavily involved in using Publisher in her local High School and her local church. This was very apparent in the way she presented Publisher, not only showing the program, but more importantly how she is using the software to maximum advantage.
Also shown was a very interesting A4 desktop scanner, about the same size as a loaf of sliced bread. The pages sit in a 10 sheet feeder at the top and are ejected through a slot almost directly below at the bottom of the scanner. It seems far better than any hand scanner (with their limited width) and easier to use than a flat-bed scanner. Pat says that the included Graphics and OCR software is exceptionally good, and the whole unit is very good value.
Pat claims she has never done a public software demonstration before, but she was exceptionally good at it because of her sound knowledge of the product. Perhaps there are others of you out there who know a product very well and would like an opportunity to show your skills, please ring me or see me at the next meeting.
The SIG sub-committee meeting has discussed the basics for introduction of the Windows SIG software library, and we will have further details to report at the June meeting. Also on the agenda is a bigger Q and A session, and a demonstration of more of the latest shareware utilities from Peter Akers and Gary McMinn. July will see Bernard Speight showing Powerpoint, Microsoft's presentation graphics package, along with more shareware and another Q and A session.
Hope to see you at the next meeting,

Brian Bere-Streeter.

Weekday SIG

After a few hickups -- which day was the meeting on? -- we have settled for a Wednesday.

We have a group of four people and do encourage anyone else to join. Meetings are on the second and fourth wednesday, 1:00 to 3:00pm except school holidays. General discussions have been held so far on word-processing, spreadsheets, DOS, shareware etc.

Contact: Dulcie on 273 7393
Location: Calamvale

Genealogy SIG

Well it seems the gremlins did their job on my last report again. *(Sub-editors are very clever people, but not mind-readers - Sub)*

In May we had a visit to the Queensland Family History Society at their new home in the OLD Albion Fire Station in Marne Rd, unfortunately I had an accident that day which prevented me from attending.

Also I gave a talk on our favorite subject at the Gold Coast Sig and a Demonstration of how to install PAF along with some of the sundry programs. Thank you for inviting me.

During June I have arranged for the SIG to visit the Gold Coast in the form of going to the Church of Jesus Christ of Latter-Day Saints at the Isle of Capri on the 25th of June from 7 to 9 PM. Here we will be shown what extra items they have in their Library that others do not have and a demonstration of the new Family Search Program held in most Mormon Family History Centers.

At the next Club meeting I would like suggestions as to what the members would like us to do over the next few months as I am now starting to run out of Ideas after the next two or three visits.

For those country members who cannot get to the meetings or the outings we organise around Brisbane and would like to go to one of the Family History Centers, I suggest that you ring the local Mormon Church in your area and ask where the closest one is to you, They will not try to make you a member and the attendances are free to all. Most will have volunteer staff that will be only too pleased to help with any request that you may have.

If you have any queries, suggestions, problems, please ring me or leave a message on my answering machine, or write c/-the club and I will endeavor to answer you as soon as possible.

Rob Gurney (07)355-4982

Genealogy SIG (May report)

It would seem that I did not receive the correct information when I first viewed the demonstration of Family Search. I under stood that if we used PAF to create an ancestral file that we could then insert that disk into the computer at a Mormon Family History Centre and that all of the names would be checked automatically against names already entered, with possible matches being suggested. This is not the program that has now been distributed to the centres around Australia.

The current program requires you to enter a name you are looking for and it will then give all possible spellings of that name for you to select the one you want to research if it can find one in the data base. If found then you can get a pedigree chart for the family or the information of that individual along with the name and address of the person who submitted it.

All submitters are given the written promise that information so submitted will not be used from the Ancestral File By the Mormons for Their Church functions but only used by people like yourself to further their family trees. With this in mind it is your interest to submit your ansestral file to them on disk so that it can be added to the growing list on the CD ROM database which is distributed world wide, who knows you may get a letter from a long lost cousin.

The visit to Burpengarry was, by mistake, double-booked and I was in a position I that I could not attend myself, but for those who did go they would have seen the new program in action even if they could not use it at the time.

Next month that is 17th May we are to visit the Queensland Family History Society at Marne Rd Albion, it is in the old firehouse and there would seem to be parking at the side of it, it is just opposite the overhead railway bridge. We will not be permitted to do any research at this establishment unless we pay a membership fee on the night or we are already members.

On the 18th I am due to address the Gold Coast Sig on Genealogy, and probably get myself into hot water.

Hey cuz was lost when I had to do several reformats of my hard disk earlier this year, and some of my backup discs were not up to scratch, so if you want to start it again re-send me your information and this time your name will also be published along with those you are looking for, or you can create an ancestral file and send it to the Mormon Church on their cd rom set.

I have been informed that upgrades of PAF from 2.1 to 2.2 are no longer free and all those who wish to upgrade will have to buy the new set of discs.

Gold Coast SIG

First Birthday

Party

BB's Brasserie

BROADBEACH HOTEL

29 th June 6:30 pm

Bring a partner

RSVP not necessary

Education News

reported by Ron Kelly

C++ LANGUAGE COURSE

Members who have been attending the C language Course which is the forrunner to the C++ anguage Course,would be aware that Geoff Baker prepared and distributed a set of Course Notes and Worksheets.This booklet contained some ninety (90) pages.

Geoff is presently completing Course Notes and Worksheets for the extended C++ language. It is then his intention to review and test these before distribution. C++ will commence as soon as Geoff has completed this course manual in about three months.

To ensure all students of this course have a sound base from which to commence studying C++ language,the following are the proposed topics,which will be covered during the next threemonths

June ..... Structures

July ..... C Library functions

August .... Program Design and examples

Note: C++ language Course will be intensive.... Classes may be held weekly.

Brisbug's two-day WordPerfect course

WordPerfect 5.1 (intermediate level) will be taught over two Saturdays - July 17 and 24th.

This will be a very useful course for members who want to learn word prosessing; whether it be for business or private.
Our lecturer, Margaret Burton, can be contacted on (07) 300 3987...(7pm to 9pm...not Fridays)for further information about the course.

(Also see the advertisement on the next page).

The Enemy — The Jargon

Do you have a problem understanding how to use your computer?

Do you feel left out of a conversation when computer 'jargon' is discussed? When you look at your computer screen and because of certain 'happenings' or perhaps 'non-happenings', you just simply feel 'if only my computer would be a friend to me not the @#*&^ enemy....

Well Brisbug General Secretary Chris Raisin and John Tacey have some answers....

Both Chris and John will help you understand computer fundamentals at our club meetings..

If you are a late starter on a Sunday then I recommend you attend Chris Raisin's lecture, from 3.15pm to 5pm.

If you prefer a morning session then I suggest John Tacey's series of lectures from 10am to 12 noon.It would be a good time to commence as John presents the second in his series of six (6) lectures at our June Club Meeting

I recommend these courses to those who wish to know...and to those who have just forgotten.

If your want something more involved,then I suggest you choose from the following Educational Courses and 'Need to Know' Groups which will be available at our June Club Meeting.

Morning lectures

NEW USER: Getting to know your Computer and Introduction to dBase IV,Ver.1.1

NOT SO NEW USER: Always an interesting Computer Topic

ADVANCED: Q Basic, 'C'and'C++', xBase — (Catering for dBase, Fox-Pro, Clipper and other dBase systems).

Afternoon lectures

NEW USER: Getting to know your Computer

ADVANCED: Monitoring the Environmentl Using a PC. This involves some practical construction (soldering) projects

JUNE CLUB MEETING EDUCATIONAL PROGRAM

NEW USER GROUPS

Courses to choose from :

Getting to Know your Computer

John Tacey ..... Room S5 10.00am to 12.00pm Lesson 2 of 6. File Descriptor,Formating and Copying.

NUTS Course.

Chris Raisin.... Room S1 3.15pm to 5.00pm Lesson 2

Introduction to dBASE IV

Dan Emerson.... 10.00am to 12.00pm Lesson 2.

NOT SO NEW USER GROUP

Ron Lewis..... Room - Main Auditorium 10.00am to 12.00pm

Ron presents an overview of a hardware or software subject for an hour, followed by a "free-form" Q&A session.

ADVANCED GROUPS

Courses to choose from :

BASIC the Language

Rex Ramsey .... Room S4 10.00am to 12.00pm

BASIC and Visual Basic for 'Dos or Windows'

Rex has structured his lectures to allow for ample revision. This will ensure new members to this course will not be disadvantaged.

Education Co-ordinator, Ron Kelly, can be contacted on Telephone (07) 399 5406 between 7pm and 9pm most evenings

The C Language

Geoff Baker .... Room S8 10.00am to 12 00pm

Topic : Structures

Members interested in 'C++' please refer to the lead article of this edition of Educational News.

X/Base
(Catering for dBase, FoxPro, Clipper and other dBase systems).

Leon Percy ....Room S1 10.00am to 12.00pm .

Members interested in developing a knowledge of Data Base to a broad advanced stage.... should consider being part of Leon's group.

As this course only commenced in April, Leon has structured - to allow for ample revision for new course members.

Information Retrieval Using the PC

Dan Emerson ..... Room S17 3.15pm to 5.00pm

This was to be a four lecture course but enthusiasm demands it's continuance. This is a very practical course with some construction involved, for those who like to "get their hands dirty".

The Junior Educational Group

Les Cathcart..... Room S17 12.00pm to 3.00pm

A number of our experienced juniors attended 'Adult' courses at Brisbug's May monthly meeting, these courses included Q Basic and dBase.

Les will again invite a computer experenced senior member of the club, to talk to the junior group on a computer topic.

NEW MEMBERS ORIENTATION GROUP ..... 12.15pm to 12.45pm

Prospective new members will meet between 12.15pm - 12.45pm in the courtyard, or if the weather does not permit, we will meet in the foyer. This meeting is very informative and will give some indication as to what makes Brisbug tick.

A separate meeting will also be held after 3.15pm in Room S1. We will demonstrate, using a computer, how to extract and then operate your library catalogue from your hard disk. You will also be advised on how to order software, program Kits and associated equipment and materials from the library

WordPerfect 5.1 for DOS

TWO DAY COURSE

Lecturer..... Margaret Burton

Training..... Intermediate Level

Pre-requisite.... Students must have prior knowledge of WP51 to an introductory level, Eg. Saving, Retrieving, Printing, Setting Margins, Line Spacing, Justification etc. *(if unsure, please telephone Margaret on 300 3987... 7pm to 9pm, not Fridays)*
Students must bring their own computer, fully installed with WordPerfect 5.1 (Printer is optional)

Venue: The Gap State High School 1020 Waterworks Road, The Gap

When: **Saturday 17th July 1993**
Saturday 24th July 1993

Time: Commencing each day 9am. Finishing each day 4pm.

Cost of Course... $ 70 per student

(Tea...Coffee...Light Lunch...supplied and all inclusive)

Topics Covered

- ** WordPerfect's Setup Features
- ** Tabulation (Alignment types)
- ** Moving Blocks (Sentences,Paragraphs and Columns)
- ** Paragraph Styles
- ** Maths Feature
- ** Search and Replace
- ** File Management
- ** Sort and Select
- ** Headers and Footers
- ** Composed Characters
- ** Line Draw

Registration and Payment at the Software Library on June Club Day
(Ask for MARGARET BURTON)
(Facilities for Bankcard, Mastercard or Visa available)

Lecturer Margaret Burton has considerable experence both as a lecturer, and with this subject ,which she has taught for a number of years.

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

New Rules for the Junior Group

Recent events at the Junior Group have highlighted the need for some "rules" and "standing orders". The following have been discussed with, and generally welcomed by, parents at the April meeting.

THE BRISBUG PC USER GROUP JUNIOR GROUP IS NOT A "BABY-SITTING" OR "CHILD MINDING" SERVICE

Definitions:

"Brisbug" shall mean the Brisbug PC User Group Inc.

"Junior" shall be defined as any male or female under the age of 16 years.

"Parent" shall be defined as the parent(s) or guardian of a "Junior".

"Convenor" shall be defined as the duly authorised Brisbug member having control of the Junior Group.

Junior Group Rules

1. An attendance roll shall be kept of all Juniors attending all or any meetings of Brisbug. Such attendance roll shall contain:

(a) The full name of the Junior

(b) The name of the Junior's Parent and the current residential address and telephone number.

(c) The Brisbug membership number of the said Junior or their Parent. Such membership number must be verified by production of a current membership card.

(d) Details of the whereabouts of the Parent during the day whilst the Junior is left in the care of the Convenor of the Junior Group.

No junior must be left at a Brisbug meeting without the Parent being present at the venue.

2. Full written authority must be given to Brisbug, the Convenor and or any appointed assistants, to require the Junior to remain in the vicinity of the meeting room or rooms as shall be determined from time to time by Brisbug.

3. The Junior shall at all times wear a distinctive identification badge clearly displaying the name of the Junior, such badge shall be issued by the Convenor or assistant to the Junior and must be returned to the Convenor or assistant before the Junior leaves the meeting area. Badges not returned shall be paid for by the Parent at the next meeting the Junior attends.

4. The Junior shall not be at liberty to wander freely around the corridors, or classrooms or area occupied or controlled by Brisbug without authority from the Convenor.

5. No rude, antisocial or intolerant behaviour by any Junior shall be permitted and, if in the opinion of Brisbug, the Convenor of the Junior Group or any Lecturer that the behaviour of any Junior or Juniors is rude, antisocial or intolerant in any manner, the matter shall be immediately reported to the President or Vice President of Brisbug, who after being informed of the circumstances shall require the Parent of the Junior to be summoned to explain the actions of such Junior.

6. In the event of a dispute, the President or Vice President of Brisbug shall adjudicate in the matter of the dispute and shall have the authority to fully resolve the dispute. The President or Vice President shall have the further authority to:

(a) Suspend the Junior from attending meetings of Brisbug and in particular the Junior Group for such period as is deemed necessary.

(b) Recommend to the Committee that, if the circumstances so warrant it, that the membership of the Parent of the Junior be terminated and the full reasons for such termination be published in the Group's monthly magazine without delay.

7. Piracy of software or supplying copies of Commercial or Registered Programs for any reason is prohibited and any Junior found copying or supplying copies of any Commercial or Registered software shall be instantly suspended from the Junior Group and full details will be reported to the Brisbug Management Committee.

Membership Fees to Increase

With costs ever increasing, increases in membership fees is a foregone conclusion - that's the bad news. Now for the good news - *Ordinary (Individual/Family) Member fees will, for the time being, remain the same.*

At the April Committee meeting the following recommendation for increases in fees were accepted by the Committee.

"That the Management Committee recommends to the General Membership of Brisbug that Membership Fees for Ordinary (Corporate) Members be set at One hundred and ten dollars ($110.00) to join and One hundred dollars ($100.00) for renewal."

"That the Management Committee recommends to the General Membership of Brisbug that the Membership Fees for Ordinary (Associate Club) Members be set at One hundred and ten dollars ($110.00) to join and One hundred dallars ($100.00) for renewal."

"That the increases in fees be effective from the first day of July 1993, provided that wherein a member has pre-paid membership fees before that date, such increase in fees shall not become effective until the next payment of renewal fees is due."

Members attending the June General Meeting will be asked for their acceptance of these motions.

Club News

Prepare to be entertained !!

Games Kits

- Adventure
- Arcade
- Board
- Children's

$10

At last! The new release BRISBUG GAMES KITS are available!

After many months of searching for suitable programs for the NEW games kits, we have finally completed a number of new kits, as well as re-releasing a number of older kits in the new form.

Prices for Games Kits are $10.00 each and are available in either 5.25" or 3.5" formats.

ADVENTURE GAMES KIT NO. 1

Game 1 **CRUSHER GAME** Version 3.0
Requires EGA / AT class computer / min 512k / Hard Drive Recommended

Welcome to Crusher.... You are about to enter a cavern made up of 25 different rooms. The objective is to collect as many points as possible while avoiding roving monsters. You are given a quest to locate certain objects somewhere within the vast maze of rooms. Crusher is a combination of a strategy, arcade and an adventure game.

Game 2 **CAPTURE THE FLAG**
Requires VGA / AT / Mouse

Dash through verdant woodlands, jump over gushing streams, climb rail fences and race through farm fields as you search for the opposing team's flag in a desperate race to capture their flag before they capture yours. Analyze your defensive team's skills, develop their tactics, then deploy them in natural cover to intercept and capture the opposition raiders.

Choose between running, walking, crawling, or just a standing search as lookout. Enjoy the suspense and sounds (supports Adlib and Sound Blaster) of battle. All of this action takes place on a huge, beautifully detailed playing field in gorgeous HIGH resolution VGA (640 by 480 in 16 colors), with synchronized sound and great animation.

Extensive play testing has resulted in comprehensive help popups that make this new kind of strategy game remarkably quick to learn. Can play against the computer (strong artificial intelligence) or a friend.

Game 3 **VAMPYR**
Requires EGA / AT / Hard Disk

Welcome to VAMPYR: The Talisman of Invocation, an adventure game set in the world of Quilinor. Here, the monsters are very nasty, the merchants very stingy, and the citizens are just a bit crazy. You, as an adventurer, must travel throughout this world to save all these creatures from a certain destruction. It might appear to be a typical task on the surface, but be assured, it's not an easy one.

ADVENTURE GAMES KIT NO.2

Game 1 **ENGINEERING JONES AND THE TIME THIEVES OF DSPEA!**
Requires VGA / Hard Disk Drive

Engineering Jones needs your help! He's trying to save the technology of planet DSPea from being plundered by those scoundrels, the Time Thieves. Get ready for the challenges of the Time Thieves.

Game 2 **STELCON** 2469 Version 1.2
Requires VGA / Mouse / Hard Disk Drive

Welcome to Stellar Conquest (STELCON)! The ultimate space strategy/war game! Prepare to explore and conquer the unknown! Command unstoppable fleets of mass starships, carriers, and many more! Make surprise visits to a friend's home planet! Sure he/she might get pissed off, but hey, this game is not for wimps!

STELCON is just about the most complex and graphically detailed game around! This game lets you take charge of an entire galactic empire. This is no mere space risk game of yester-year! There are many facets of controlling an entire empire. Crucial decisions are made at every turn, thus one must be aware of his/her fleets, status, and especially ranking among the players.

Besides keeping your empire in order, you must also learn to defend yourself from forces who wish you dead! Poorly defended worlds invite attack, but trying to protect all your worlds at once may spread them too thin. Thus a balance must be achieved in order to remain dominant in the universe.

Remember as Darwin once said: "Only the strong survive"

Game 3 **TANK WARS** Version 3.0
Requires VGA / Hard Disk Recommended

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

ADVENTURE GAMES KIT NO. 3

Game 1 **ALICE IN WONDERLAND**
Requires EGA\VGA

This is an adventure game based on Lewis Carrol's novel, Alice's Adventures in Wonderland. There are 16 objects in Wonderland to interact with, 10 adventures to become involved with, and a lot of fun to be enjoyed.

Game 2 **CAVE QUEST**
Requires EGA/VGA / Hard Disk recommended

Loose yourself in another land and time in his fantasy role-playing game.

Game 3 **UNDER THE GULF**
Requires EGA/VGA

This is a game which simulates the actions of a United States attack submarine. You, the player, are in control of the nuclear powered vessel while the computer controls an opposing fleet of ships and submarines. The game takes place in a 500nm x 500nm area of the Black Sea. In the south west corner, two land masses merge to form a natural canal into the Mediterranean Sea.

YOUR MISSION is to keep all of the opposing ships from reaching the open waters of the Mediterranean. Your submarine has complete radar and sonar systems, short and long range torpedoes, defensive systems, mining systems, and extensive navigational capabilities.

ADVENTURE GAMES KIT NO. 4

THE BOLO ADVENTURES

Game 1 **BOLO ADVENTURES PART 1**
Requires EGA/VGA / Hard Disk and BRAIN POWER!

Welcome to Bolo Adventures. This game will test your problem solving abilities, as you try to solve 40 floors of puzzles.

On each floor, you have a man (BOLO) who tries to find his way to the stairs that will take him to the next level. The stairs are always protected by either monsters, lasers, snakes, blocks, balls, electric grills, water and other things that will block his path. Each floor has at least one solution, some floors have many. How many can you find?

Game 2 **BOLO ADVENTURES PART 2**
Requires EGA/VGA / Hard Disk and BRAIN POWER!

Part 2 of this fascinating adventure game requires even more brain power and concentration than Part 1.

A further 40 floors of puzzels awaits you in your quest to guide BOLO to the stairs which take him to the next level. As in Part 1, BOLO has many obstacles to circumvent to reach the stairs.

Game 3 **BOLO BALL**
Requires EGA/VGA / Hard Disk

The objective of Bolo Ball is quite simple. Starting from the top row you try to push your 29 balls down a maze so that they reach the bottom row. The farther down you can get them, the higher the score. You can either play against the computer or against a friend.

ARCADE GAMES

ARCADE GAME KIT NO 1

Game 1 **JUMPMAN LIVES**
Requires CGA/EGA/VGA Hard Disk Sound Card Supported

Jumpman Lives is an ingenious melding of arcade action and puzzling level designs. This is a completely updated version of a game that won "Game- of-the-Year" in several national magazines. This all-new version supports true 256-color VGA graphics, along with EGA graphics and CGA graphics! Everyone can play, since Jumpman Lives supports all graphics cards. Ad Lib music is also supported, with dozens of incredible Ad Lib sound effects, too. Of course, the PC speaker is used for sound effects if you don't have an Ad Lib card installed in your system. In Jumpman Lives, you'll fly your rocket ship to Saturn and enter the top secret Segan Institute of Technology, where terrorists have place deadly TechnoBombs on every level. If you don't deactivate each bomb then Saturn will explode into a billion bits! Every level of Jumpman Lives has a unique challenge, with unique animation and special obstacles. Each level is a whole new game!

Game 2 **ALDO'S ADVENTURE**
Requires EGA/VGA

Aldo's Adventure is a graphics game exploiting the capabilities of the IBM Enhanced Graphics Adapter. It is a game of ladders, ramps, hazards, and treasures, played on multiple boards sequentially.

Game 3 **MUNCHER** Version 2.0
Requires EGA/VGA

The object of the game is to guide the MUNCHER so he can eat as many musical notes as possible. Use the arrow keys to move the MUNCHER up, down, left and right. All you need to do to eat a note is run the MUNCHER over it. Take note - The MUNCHER grows every time he eats a note, and if you run him into his own tail, he'll try to eat himself. Also, if he tries to eat any of the walls or barriers, he'll suffer from terminal indigestion!

Game 4 **LAVA CAP GAME** Version 1.1
Requires EGA/VGA and a Mouse

The objective of Lava Cap is to create a series of sequential paths to contain the lava flowing from an erupting volcano. The longer you can keep the lava flowing freely without reaching a dead end, the higher your score. The rules are simple, yet it takes a lot of strategy and quick thinking to reach the higher levels.

Game 5 **OILCAP** Version 6.0
Requires EGA/VGA and a Mouse

The objective of Oil Cap is to create a consecutive series of links, as long as possible, through which the oil can flow without reaching a dead end.

ARCADE GAME KIT NO 2

Game 1 **NOTRUS**
Required EGA/VGA Hard Disk

NOTRUS is an intense arcade game invlvoing strategic placement of falling blocks. The goal of NOTRUS is to clear as many lines as possible, and of course, to obtain the highest score. The game ends when the blocks stack up to the top.

Game 2 **LADDER MAN** Version 1.0
Requires EGA/VGA Hard Disk recommended

LADDER MAN is another problem solving puzzle game from the Mindscape Series. The objective is to find a way to collect all the yellow diamonds located on each floor, then succeed in climbing to the top of the room. There are 30 floors of puzzles to solve in Ladder Man 1.

Game 3 **SAND STORM** Version 1.0
Requires EGA/VGA Hard Disk recommended Mouse

SAND STORM is a game of war battles. There are three basic scenarios you will face in the standard version of the SAND STORM game: SCUDS, JETS, and TOMAHAWKS. Before each mission you will be briefed on what to expect. Reading the briefs will help you adopt a strategy before each mission - making you more inclined towards success. After the briefing, you will see a introduction sequence reminding you of what type of scenario is to come, then the mission begins.

After completion of a scenario, you will be given information regarding your performance.

BOARD GAMES

BOARD GAMES KIT NO 1

GAME 1 **MONOPOLY** Version 6.2B
Requires CGA/EGA

Monopoly is designed to be played intuitively and really should not require any explanation or rules. Even if you are not familiar with the original board game, it will be simple to catch on from the program. The computer won't let you break any rules and will keep track of all your properties, houses, hotels, rents, and money. Two to four players may participate.

Game 2 **LASER CHESS**
Requires EGA/VGA

LASER CHESS is a high-tech variation of the ancient game of Chess. As in Chess, the object of the game is to eliminate the king of the opponent. The major difference in Laser Chess is implied by its title: It has a piece known as a laser. This laser can shoot at other pieces on the board and destroy them. Many of the pieces in play have mirrors or reflective properties which bounce the laser beams in different directions. In this way, complex shots may be lined up, using both friendly and hostile mirrors. A piece called a beam splitter gives you the ability to target more than one piece simultaneously.

Game 3 **COMBAT CHECKERS** Version 2.0
Requires EGA/VGA

Combat Checkers is played under the same rules as regular American checkers. However, Combat Checkers has a twist in that the checkers are armed and have special abilities and armor.

Combat Checkers has a few differences from normal checkers. The first difference is that each player's set of checkers is custom designed from 4 different types of checkers and can be armed with weapons and protected with armor.

The second difference is that when a checker jumps another checker, it shoots at the checker it jumps. If the checker being jumped loses all its life from the attack, it is removed from the board. A checker surviving an attack stays on the board. Each different type of checker has different amounts of life points, starting weapons and armors, and arming points.

For a real challenge, try playing the computer on Killer mode and take the Standard checker set for your pieces.

Game 4 **FAIRY GODMOTHER** Ver 4.0
Requires EGA/VGA

FAIRY GODMOTHER or F.Godmom is an arcade/puzzle game in which you play a fairy godmother on a mission to free fifty of your fellow fairy godmothers. Armed with a magic wand of transformation, you must solve the puzzles on fifty levels while avoiding killer crabs and dangerous dimensional implosions. If you succeed, you will see your fellow fairy godmothers freed and they will dance for joy in your honor. If not, it's curtains for you.

CARD GAMES

CARD GAMES KIT NO. 1

Game 1 **HI/LO POKER**

Welcome to a friendly little game of High/Low Poker. The Object of the game is like any other form of Poker, NOT TO LOSE ANY MONEY! This game is played with only 3 cards, no draw. The Dealer calls High or Low and deals the cards. If you have a hand you think can beat the others, put it in the middle,and the best hand wins. If one puts their cards out there, the dealer wins. If the game is High, a pair of Aces beats a pair of Jacks, and a King, Ten, Nine beats Queen, Ten, Nine. Three of a kind will beat any pair. If the game isl Low, a One, Two, Three is the best possible hand.A Six, Five, Three beats a Seven, Five, Three, and a Nine, Six, Ace beats a Nine, Six, Deuce. Watch out for some of the players, as they may try to bluff you.

Game 2 **CANASTA**

Canasta is a card game which was developed in South America. It was known originally as Argentine Rummy, and supplanted both Gin Rummy and Bridge as the most popular card game in the U.S. for some time after its introduction. Canasta is played with two standard decks of playing cards, including the Jokers, to comprise a 108 card playing pack. 13 cards each are delt to two players, 11 cards each if more are playing. Then the playing pack is placed face down in the middle of the table to form the stock and the top card faced next to it to form the discard pile. If a deuce, red trey or Joker is faced, it is turned 90 degrees to indicate its presence and the next top card from the stock is faced on the discard pile. As soon as the discard pile is ready, play can commence.

Game 3 **EGA GAMMON** Version 1.05
Requires EGA/VGA and a Mouse

EGA GAMMON is a computerised version of the game Backgammon and those players who have enjoyed the game before, should need no instructions. Players new to the game should pick up one of the many good Backgammon books available from bookstores. On screen help is available.

Game 4 **HEARTS** Version 6B
Requires CGA/EGA/VGA

HEARTS is a very easy card game to play and one that will give you many hours of enjoyment. The rules for this game are quite simple. After the cards are shuffled, they are dealt each player. There are four players in this game with each receiving 13 cards (a total of 52). A player must always match the SUIT of the first card in play. If a player does not have the LEAD suit then he or she can play any card in their hand. The cards are RANKED in descending value from the Ace (A) to the 2. The Ace being the HIGHEST rank. The player having the highest ranked card in the lead suit takes that TRICK and BEGINS play on the next trick. There are four cards in each trick and 13 tricks per hand.

Game 5 **CRIBBAGE**

Cribbage begins by cutting the cards to select a dealer. In Cribbage the low card wins. Six cards are dealt to each player. Each player discards two cards, face down, to "the Crib". The result of this is that there are now three hands of four cards each: the dealer's, the other player's and the Crib. The Crib belongs to the dealer and is set aside until after "THE PLAY". From now on the deal alternates between players as does possession of the Crib.

Game 6 **PC/VEGAS**

PC/VEGAS begins with a simple menu. Press F1 to obtain help or press F2 to assist you in understanding the ODDS and concepts involved in Las Vegas style gambling. Use the GAME SELECTION arrow keys to point to the game that you wish to play.

The underlying basis for all gambling games is an understanding of the statistical odds that some event will or will not occur. PC/VEGAS operates on these sets: A card deck - 52 unique things, A roulette wheel - 38 unique things, A keno board - 80 unique things, A slot machine - 21 unique things. These 'things' work in combination. The specifics of which are defined with each game.

Game 7 **POKER SOLITAIRE** Ver 2.0
Requires EGA/VGA and a mouse

Poker Solitaire, sometimes called Poker Squares, is a solitaire card game that rewards both lucky guessing and accurate calculation of odds.

Game 8 **BLACKJACK!** Version 2.10D
Requires EGA/VGA

The most popular casino game today, both for players and casino owners, is unquestionably Blackjack. For the player the attraction is the simplicity of the rules (just about everyone knows how to play "21") and the friendly atmosphere of the table. For the owners the popularity is due to the fact that the Blackjack tables have become the most profitable real estate in the casino. It is the purpose of BlackJack! to do something about the latter!

CGA GAMES KIT NO 1

Game 1 **VOLLEYBALL**

Volleyball is a great game for two players. Using Joysticks or keyboard, players can challenge each other to see who wins the greatest number of games.

Game 2 **BANYON WARS**
Requires CGA GRAPHICS

The object of the Banyon Wars, is to conquer all eight slands which make up the atoll called the Banyon Islands. You play the (blue) army called the Cronons. The computer will play the other two adversaries, the (Red) Tabors and (White) Hilites.

The game is quite simple to learn and offers different levels of play. The game rules are very similar to the classic game of Risk, however, there are many other elements which you will have to contend with, in order to conquer all 8 islands.

Game 3 **TURBO**

You are driving along a two-lane highway. To reach your destination, you must pass slow-moving traffic while avoiding oncoming vehicles. If you misjudge, a horrifying explosion will likely result. You receive points for driving (the faster, the more points you get!) and a 250-point passing bonus is awarded for each vehicle passed.

Game 4 **CHEKKERS**

Checkers is a game most people already have some knowledge of how to play.

Level 1 is for beginners and does not require you to use the Hoyle or Huff jump rules. However, the computer always uses the Hoyle rule during all Levels of play. Levels 2 and higher require you to choose between the Hoyle and Huff rules of play. Once selected, the game rule can not be changed, except at Level 1 which requires no jump rule.

HOYLE Rule. Each player MUST jump the opponent if presented with the opportunity. The player has the option if different jumps are possible. All possible checkers must be taken during1 any particular jump sequence.

HUFF Rule. If You choose NOT to jump the Computer when presented with the opportunity, you will forfeit thechecker with which you should have jumped.

Game 5 **PHARAOH'S TOMB**

Volume I - Raiders of the Lost Tomb

You are Nevada Smith, a research assistant to a professor of Archaeology at a major university. For years now you have studied in the hopes that the professor would include you in one of his famous treasure haunts.

Using a stolen, ancient map of the inside of a secret Pharaoh's tomb deep inside one of the great pyramids of Egypt, you catch the next plane to Egypt.

Discover, yourself, what secrets and dangers lie ahead.

Game 6 **TRON**
Requires CGA/EGA/VGA

Tron is a highly developed form of the Light Cycles game from the movie "TRON". In that game you had to ride your "Light Cycles", which leave a trail of light, trying to avoid and cut off your opponent before you hit one of the walls.

In this game, the idea has been taken further. Several new ways of winning have been included, all of which develop from buying items from the store. In this store you can spend your money, which you gain by winning games to buy everything from bombs to new light trails. There are powers which will help you if you are in trouble or powers to help you win. All of them are fun to test and explore.

CHILDREN'S GAMES

CHILDRENS GAMES KIT NO. 1

Due to the popularity of the original Childrens Games Kit No. 7, this kit has been re-released for those who missed out. Most games in this kit require CGA or better to operate.

Disk 1 **ALPHABET, ANIMALS, CLOCK, HANGMAN** and **MOSIAC**

Simple, but interesting games for all the younger computer enthusiasts.

Disk 2 **CONNECT4, HI-Q, QUIZZER** and **REFLEX**

Games of skill for younger users.

Disk 3 **MATH GAMES**

Test your child's ability to get their maths right.

CHILDRENS GAMES KIT NO. 2

Game 1 **APPLES AND ORANGES**
Requires EGA/VGA / Mouse

Apples & Oranges is an strategy board game that can be played by either 1 or 2 players.

Game 2 **DRESS ME UP**
Requires EGA/VGA / Mouse support

Dress Me Up is an imaginative paper doll game with a cute collection of animals to dress up. Select either a 'boy' or a 'girl' animal from the animals on the shelf to play with. There is a collection of clothing behind the cabinet doors to choose from.

On completion, a paint box appears to let you paint the clothes or animals. The paint box includes polka dots, stripes, and a wild plaid.

Game 3 **IAN'S GAME**
Requires CGA/EGA/VGA

Designed specifically for the very young, the game uses bright colors, sounds, and basic shapes which change in a semi-random order in response to any key press.

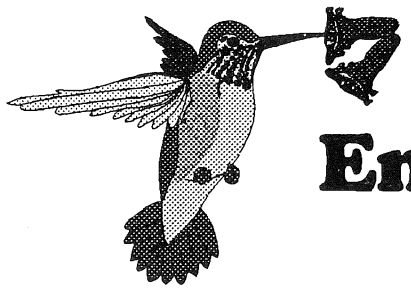
Game 4 **PAPER-SCISSORS-ROCK**

Most children know how to play this game, but it will present a challenge to 'Beat the computer'.

Game 5 **EATIT**
Requires CGA/EGA/VGA

I'm sure you've seen quite a lot of games that have the same idea as this one. The purpose is to eat as many candies as you can before the monsters get you (eventually, they will). There is also a super-candy in each of the corners which gives you a chance to eat the monsters for a while. The monsters turn white when you eat a super- candy. When the effect of super-candy is about to end, the monsters begin to blink. You may eat the monsters while they blink, but beware it may turn out that the monster eats you if the effect ends before you get it. When you have eaten all the candies and super-candies, you are taken to a new level and the speed of the game is increased a bit.

The monsters aren't too smart, so they may occasionally turn away from you just when they are about to get you. !



Dan Emerson's

Environmental Sensing

What have we done so far?

It started with an idea of being able to sense environmental conditions using inexpensive electronic devices and input the information into the computer via the games port. Simple temperature sensitive resistors can be placed directly across the games port pins to measure temperature *(refer to last month's Significant Bits for details).*

Programs have been authored by Brisbug members in Basic and Pascal to store the information, calibrate it, graph it, and output it in text file format. Sampling time can range from a hundred times a second to hours.

Rules of sampling

Last meeting we started to think about some of the rules of sampling. How often do you have to sample in a changing environment so as to avoid information loss? Dan Bridges gave an impromptu talk on sampling theory. If the environment is changing slowly there is no point in sampling too quickly and cluttering up your database with redundant information. There is no point is sampling much faster than your sensor can respond. Richard Vander Have spoke at some length on sensing in general and strain gauges. (They are not a device used to measure the state of the relationship with your loved one on the third Sunday of the month). *Read Richard's article - elsewhere in this issue - to find out more.*

Soldering irons came out and some members began to assemble a games port break-out board. I was impressed with one novice (soldering) man / wife team who got their act together and, through team effort made the fifty or so solder points in quick time on a space about the size of a match box. It challenged many of my prejudices. (Mary hasn't responded well to a suggestion that she polish up her soldering skills!!!).

Where were we now?

Max Kenny is forwarding profuse quantities of literature on amplifier circuits and transducers. I thought we could put a package together with the programs and information and make it available through the Uncle Lloyd and the software shop. (Did anyone know that Ron Lewis (Brisbug President) is a dapper hand with a stress gauge?) - *except they called them* ***Strain*** *gauges when I used them many moons ago - Ed.*

Where do we go from here?

The next meeting, June 20th, will be a bit of a tidy up meeting. All being well, my Pascal program (with working title of *Intro-Lab*) should be in a fit state for members to take away and play with. Richard Vander Have (all being well also) will have someBASIC routines to talk about. Bring in your project from last week and finish it.

Does anyone want to order a games port break-out kit to assemble on the day? (about $13) Phone me (288-6070) before Saturday June 19th.

The soldering irons will be out again. Bring your computer and extension leads and power boards and we will play with some different types of sensors.

There is a request from a member!!

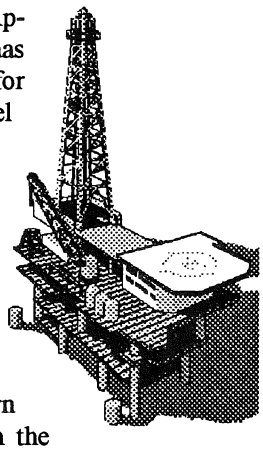
Does anyone have any idea how sensing of the position of a person in a room could be achieved?

Star attraction for July

A star attraction is billed for July 18th. Pat Andersen, QUT lecturer in electronics, has consented to design us an electronic interface to place between the sensor and the computer.

The interface will enable the output from the transducer to be scaled and zero points set. A typical transducer will change temperature into electrical resistance and can measure several hundred degrees. We may wish to measure a limited range, say body temperature. I know Brisbug members are hot stuff but Pat's device would amplify that section of the range (for normal mortals) that relates to body temperature. Pat has indicated a willingness (all being well) to attend on July 20th.

And more for August



Another star (Dr) Michael Swift of Applied GeothermEx has been pencilled in for August 15th. Michael makes his living doing this sort of thing. Among other activities, he lowers thermistors down bore holes and can gather all sorts of information about what is down there. He lives with the issues of electronic sensing and he has indicated a willingness to share a session with us on that date.

Wheatstone Fax?

Who has heard of a Wheatstone Bridge? Its inventor, Sir Charles Wheatstone (1802-1875) also pioneered a revolving mirror device to measure the speed of electricity in a conductor and his idea was later adapted to measure the speed of light.

He received a mention in the Communications section of the Australian, Monday 23rd May in an article about the invention

of the Fax back in those days (I thought the fax was a recent invention). Back to the Wheatstone bridge; if the idea is new to you find out about it (there could be prizes for Wheatstone bridge questions next meeting). The Wheatstone bridge is a vital item in the electronic sensing tool kit.

Strain Gauges

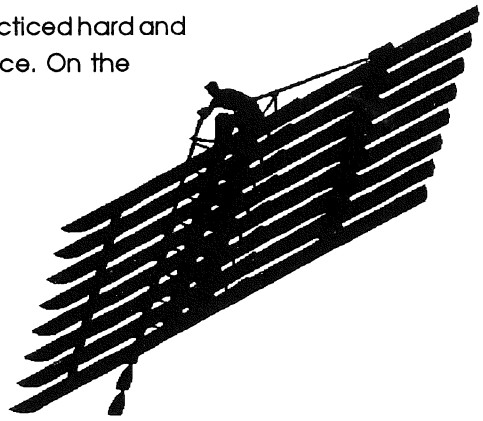
Richard Vander Have, our strain gauge guru, has written an article for the mag on strain gauges. He works for an engineering company WBM as a mechanical engineer's draughtsman. He has recently qualified as an engineer and has an interest in electronics through ham radio.

They do very destructive things at WBM (in a creative way). Newly designed and crafted equipment such as railway carriage bogies are fitted with fifty or more strain gauges and wired into a computer. Jacks are attached and force applied until the item is ripped apart. In the meanwhile, information recording the contortions of stressed metal has been stored. Later analysis of the data will reveal weakness in the structure. Richard will tell you that metal screams when under stress and microphones can be used to source that as data.

Dale Whitenall (the author of a BASIC routine in last month's magazine) phoned in to say he is year eleven, not nine. He is experimenting with a card reader and trying to run the information in through the games port. He said he will demo it if he can get it going.
Does anyone have any information on how the mouse works and how we could tap into it at a programming level? When you pull the mouse apart to clean it you can see the wheels that resolve the mouse ball motion run spoked wheels. The spoked wheels appear to interrupt a beam and create digital pulses. It sounds full of potential for interfacing.

The Great Japan vs Australia Race

Once upon a time, a very old and respected Australian company and a new and progressive Japanese company decided to have a boat race on the Brisbane River. Both teams practiced hard and long to reach their peak performance. On the big day, they were busting to go.



The Japanese won by a mile.

Afterwards the Australian team became discouraged by their loss and their morale sagged. Corporate management decided that the reason for the crushing defeat had to be found. A Continuous Measurable Improvement Team of executives was set up to investigate and recommend corrective action and a recovery program.

Their conclusion: The problem was that the Japanese had 8 people rowing and 1 person steering; the Australian team had 1 person rowing and 8 people steering. The Australian corporate steering committee immediately hired an American management consultant firm to study the management structure of the team.

After some time, and $10,000,000, the consulting firm concluded that "too many people were steering, and not enough rowing". To prevent losing to the Japanese team the next year, the team structure was changed to 4 Steering Managers, 3 Area Steering Managers and 1 Staff Steering manager, and a new performance reward system introduced for the person rowing the boat to provide more incentive to work harder and become an "excellent rated" performer. "We must give him empowerment and enrichment. That ought to do the trick"

The next year the Japanese won by two miles.

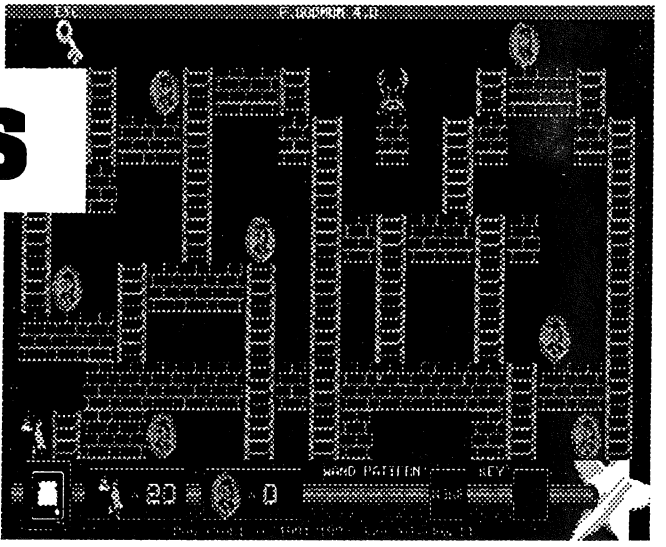
As a consequence, the Australian company retrenched the rower for poor performance, sold all the oars, cancelled all capital expenditure for new equipment, halted development of a new boat, awarded Special Recognition Awards to the consulting firm and distributed the money saved to the company senior executives.

Almost sounds familiar, doesn't it?

Courtesy of the unofficial communications network of an Australian Industrial icon

SOFTWARE LIBRARY

NEW LISTINGS



The Fairy Godmother prepares to battle the evil crabs (yet to be accessioned)

BBUG 2984 FIRST EXPEDITION Version 4

*CLASSIFICATION * Games * CGA/EGA/VGA * 2/Floppy/Hard Disk*

FIRST EXPEDITION is a real-time, first-person adventure which takes place on the fictitious ocean world of Yorland with you at the helm of an explorer craft navigating to known islands and searching out unknown islands.

Your task, as the Captain of the craft, is to locate and retrieve the three sun spheres which protect the planet from the destructive effect of a passing comet.

From the bridge of your craft, which is similar to the cockpit of an aircraft, your ship's instrumentation and horizon is displayed for you. Your ability to manage your finances, fuel, health and ships supplies is important if you are to succeed. You will battle with pirates, trade with islanders, and use celestial navigation to complete the mission.

FIRST EXPEDITION is an involved adventure and provides many interesting challenges for you to solve.

BBUG 2985 WORDCRUNCHER Version 4.50 (Disk 1 of 2, also 2986)

BBUG 2986 WORDCRUNCHER Version 4.50 (Disk 2 of 2, also 2985)

*CLASSIFICATION * Text Retrieval * Hard Disk*

WORDCRUNCHER is a full-featured, text retrieval program suitable for even the biggest jobs. If you have a large body of text, and you want to be able to browse, search, and even organize for computer access, consider WordCruncher for the job.

WORDCRUNCHER comes in two parts: Index and View. The WORDCRUNCHER Index portion takes a standard ASCII text file and indexes it on every word. Indexing on every word means it records where every single word in the text occurs. Once a text file is indexed, the View portion lets you specify a single word or combination of words to search for in the original text file, and jump directly to every place in the text file that the word appears. View also lets you browse through the text or locate other words with new searches.

WORDCRUNCHER was originally developed for academic study, but is suited to books or manuals whose use can benefit from random searching. Its most obvious use is for electronic versions of technical manuals. With a WORDCRUNCHER version of a manual, users could quickly search and locate any word and topic. Clear text presentation, highlighted search hits, and informational headers make text retrieval very manageable, without programming.

WORDCRUNCHER can handle the biggest jobs, and is routinely used on CD-ROM-based products. This is an industrial-strength program.

BBUG 2987 WELL CONNECTED SOFTWARE Version 2.3SD

*CLASSIFICATION * Business * Floppy Disk*

WELL CONNECTED SOFTWARE (WCR) is an interesting mix between a contact manager, a calendar program, and a personal information manager. It lets you schedule your appointments, record your contacts, make notes, and organize information in a hypertext-type environment.

An example of the hypertext feature would be an agenda linked to an appointment for a meeting. It also includes an event reminder, and task management and people tracking abilities. The shareware versions limit the amount of information the program can handle.

BBUG 2988 ADD-POWER POWERBASIC LIBRARY Version 2.7B

*CLASSIFICATION * Programming * PowerBasic * Hard Disk*

The ADD-POWER POWER BASIC LIBRARY contains many useful, tested PowerBASIC routines. Using the 4Menu program, you can write complete pulldown menu interfaces very simply by just modifying the demo program.

Also there are fancy entry routines for string or numeric data, phone numbers, dates, etc. which means that you will never use INPUT again! Routines include: Date arithmetic, get file dirs and diskspace, open a data-entry window, dialog box, let users customize colors, push and pop screens, and much more!

BBUG 2989 FUNNY FACE II Version 11/90

*CLASSIFICATION * Games * CGA/EGA/VGA * Hard Disk * Printer*

FUNNY FACE II is designed to provide kids with a creative form of amusement by creating funny faces from a collection of mouths, noses, eyes, ears etc. and then colour them in.

The program is simple to use for even the youngest computer enthusiast. Using the cursor, select any one of dozens of different noses from the collection, highlight the selected nose and it is immediately transferred to the picture. No artistic skills are needed, it's just a lot of fun.

Once the face is completed, the image can be saved o a .PCX file or printed to any printer.

FUNNY FACE II will provide hours of fun for all.

BBUG 2990 IMPROCES Version 3.1

*CLASSIFICATION * Desktop Publishing * VGA\SVGA * Hard Disk * Mouse*

IMPROCES is a VGA image processor. Load your favorite .GIF, .PCX, or .PRF images and process them in VGA or SVGA mode. To Process an image doesn't really mean edit (though editing is part of it), instead, IMPROCES has a number of features that let you improve the appearance of your images.

IMPROCES lets you modify images with tools common to paint or drawing programs. It provides line drawing, area fills, spray cans, paint brushes, and cut-and-paste features. It also includes fat-bit editing, which blows up an area and lets you edit the individual pixels. You can select a font (five included) and add text to an image. IMPROCES lets you control the colors and create custom color palettes.

One of the more interesting paint features is the ability to flip or rotate areas of the image, create mirror images, adding fractal graphics, and 3-D terrain fractals to your images. Color images can be converted to gray-scale images and halftones can be produced for any image a great tool to compliment your desktop publishing. TGA files can be imported and saved as GIF or PCX formats.

The image processing really comes to play on gray-scale images. IMPROCES uses histograms to display statistical properties of images. Histograms are bar graph displays that present information that can be used to enhance your images. Routines are included to enhance, contract, and sharpen images. It also has a number of special effects like color reverse, image melt, image replicate, and even an effect that turns your

BBUG 2991 GIANT SPACE SLUG & RINGWIELDER Versions A.2

*CLASSIFICATION * Games * Floppy Disk * Printer*

GIANT SPACE SLUG is excellent for building eye-hand coordination, especially among children. Similar to the game WORMS but with one exception - speed, which is able to be adjusted from rediculously easy to absolutely impossible and makes the game more fun to play.

Using either keyboard or joystick, you can utilize all four directions of the screen, rather than the typical two directional motion of most other arcade games.

A great game for parents who want something different for the children. It works on monochrome as well as color monitors.

RINGWIELDER is an incredible non-computer role-playing game that features the worlds of both fantasy and science fiction!

A "role-playing game" allows you to take on the characteristics of someone (or something) from the realm of fantasy or science fiction and play the game as if you are that character. While RINGWIELDER uses both the worlds of fantasy and science, occult and extreme violence is ommitted.

RINGWIELDER is easy to play and fast-moving. The rules are easy to understand, but interesting enough to hold the interest of even the most advanced gamer.

BBUG 2992 ELECTRIC POSI Version A.3

*CLASSIFICATION * Business * Hard/ Floppy Disks * Printer*

The POINT-OF-SALE/INVENTORY program is very easy to use. It works as either a stand-alone inventory program or as a front-counter ticket system. Standard functions include enter, update and delete inventory, print tickets, edit the client list (updated automatically from POS), and customize company information.

Reports include WTD/MTD/YTD sales, Catalog Printout, Full Inventory Listing, Client List, Company Information, Suggested Order. All reports are available in detailed and summary form.

An excellent program that is versatile enough to be used with your business.

BBUG 2994 MATH FOR PRIZES Version 2/92

*CLASSIFICATION * Educational * Floppy/Hard Disk * Printer*

MATH FOR PRIZES is the perfect tool to improve addition, subtraction, multiplication, and division for all ages. The program can show the problems with the answers, do random testing, and test for accuracy and speed. You can even play for prizes when additional incentives are at stake.

MATH FOR PRIZES is a simple yet effective way especially for children to increase math scores, but it can be for anyone who wants to do a quick brushup on their simple math.

BBUG 2996 LOTWON - OLYMPIC (Disk 1 of 2, also 2997) BBUG 2997 LOTWON - OLYMPIC (Disk 2 of 2, also 2996)

*CLASSIFICATION * Lotto Games * Hard Disk*

So you have been trying to win the Lotto, and you still haven't cracked the magical combination of numbers. Well, there may still be some hope left!

Welcome to LOTWON, the OLYMPIC edition! You might have thought that lottery is impossible to beat: the odds are deadly high. Or you might have tried some other lottery programs and they convinced you that such action is futile. You might have thought that luck and only luck can bring the big bucks!...

The LOTWON lotto programs work a great deal better when use a very large database (well in excess of 100 drawings). To overcome such trouble, you should attempt to procure the results for the last 100 drawings from the Lotto organisation in your state. For all LOTWON programs, the order of the drawings in data files is crucial; the most recent drawings are treated specially.

The LOTWON programs use a specific feature named WINNING STREAK, or WINNING PATTERN, or WINNING STRING. Basically, it is the combination of past drawings structures and winning days. Given a structure of past drawings, the programs have winning days according to a pattern.

Not too long ago, the users had to find the winning string themselves through trial-and-error. These two programs automatically calculate the winning pattern for any lottery game.

BBUG 2998 SUREFIRE Version 1.0 (Disk 1 of 2, also 2999) BBUG 2999 SUREFIRE Version 1.0 (Disk 2 of 2, also 2998)

*CLASSIFICATION * Business * Hard Disk * Printer*

SUREFIRE - THE SMART DOCUMENT PROCESSOR. Put live forms, spreadsheets and databases (DBase compatible) right in your "smart documents"! No more switching among word processor, spreadsheet and database programs! Build complete Smart Document applications!

Type in text like in a word processor and add fields to create a form or spreadsheet... right there on your page. Immediately fill out the form and calculate results. Now, add a record... a database is automatically created and your first record is stored. And, the pages on your screen are always like you'll see them on paper!

Anywhere within your document take advantage of over 70 spreadsheet functions, or use the powerful search capabilities on your database. You can even generate reports by injecting data from many records right into your document. And all this can be done in one program using only 7 simple pull down menus!

But that's not all! Add buttons to bring you to a page, get another document, do a calculation, or join to another database. Before you know it, you'll be building complete Smart Document applications.

BBUG 9014 DOSMAX and BEDIT

*CLASSIFICATION * Utilities * Hard Disk*

DOSMAX Version 1.7 is a device driver which will maximize the use of low memory by moving MS-DOS 3.1 and above system data to upper memory blocks provided by your upper memory manager. It is not necessary to use any other programs to create upper memory data types like FILES, BUFFERS, FCBS, or LASTDRIV from Quarterdeck's QEMM386.

In addition, if you are a DOS 5.0 user and are loading DOS high, then DOSMAX can prevent DOS from loading into the HMA and move the DOS kernel to an upper memory block. This improves performance and allows programs which use the HMA more efficiently to utilize the HMA instead. Such programs include Microsoft WINDOWS and Quarterdeck's DESQVIEW. DOSMAX can also move a portion of COMMAND.COM into an upper memory block instead of the HMA. This feature recovers space in low memory which is available when DOS is in the HMA.

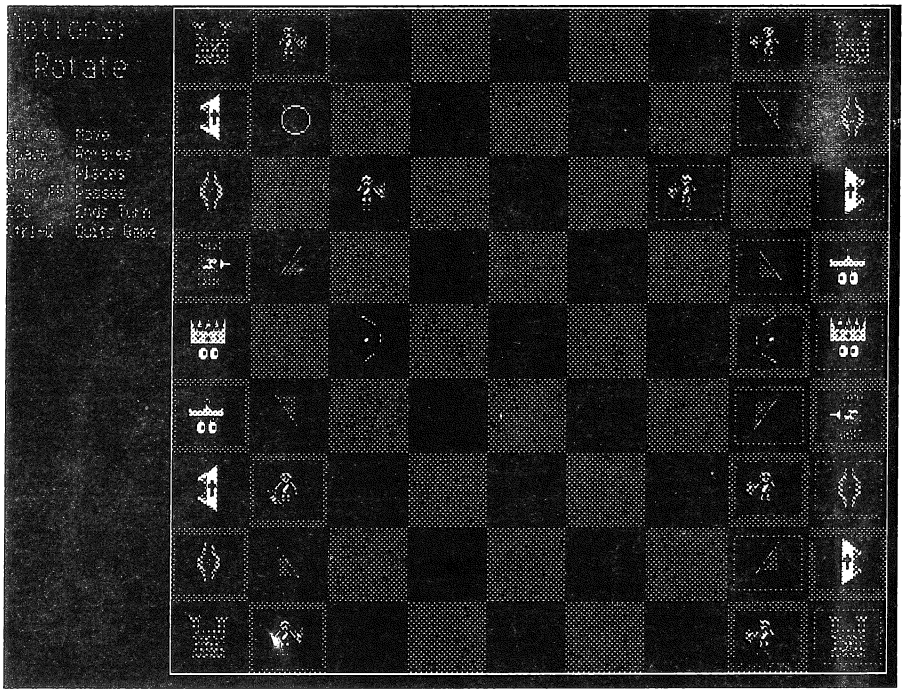
Support is automatically provided for Microsoft WINDOWS 3.0 so that all FILES in your CONFIG.SYS can be loaded high. Normally this would prevent WINDOWS from running, but the problem is circumvented.

Support is provided for:

* allowing DOS the HMA, but still moving the sub-segment data types * forcing DOS low, sub-segments still moveable * moving only the DOS SYSTEM code block into upper memory * providing only WINDOWS high file support * moving a portion of COMMAND.COM into high memory instead of the HMA * moving the primary COMMAND.COM's environment (master environment) * DOS Versions 3.1 - 3.31, DOS 4.x, and DOS 5.x (or better?)

DOSMAX automatically moves all the data that can be moved dependent only upon the availability of upper memory. It will automatically stop moving data when it determines that memory would be fragmented if the move was completed.

BEDIT is a very easy-to-use full screen editor for binary (or text) files. You simply type over the hex or ASCII data much as you would with any text editor. BEDIT ensures that you enter hex characters (0-9 and A-F) while you are in hex entry mode. You will be able to see the hex and ASCII representations at all times whether you are editing in hex or ASCII.



Laser chess is a very different implementation of the ultimate mind challenge

BBUG 9015 VGA FUN PAK (Disk 1 of 2, also 9016)

BBUG 9016 VGA FUN PAK (Disk 2 of 2, also 9015)

*CLASSIFICATION * Games * Hard Disk * VGA * Mouse*

VGA FUN PAK is a series of programs for computers that support VGA graphics.

Some of the Programs provided include:

ALARM/DIGITAL CLOCK which maintains a clock on the screen using high-resolution VGA graphics. Alarm setting is possible.

ART/CHRISTMAS TREE/FLYAWAY/POLAR FLOWER are graphics demonstrations that produce interesting images on the video display. These are just fun programs that are nice to leave running when not using the computer.

BULLS & COWS is a variation of Mastermind. The program options ask you to designate the length of the mystery number (3 or 4 digits), and the numbers that appear in the mystery number (1 thru 5, 6 , 7 ,8 or 9). The computer selects the mystery number based on the options selected. The number will be three or four digits long, contain only the numbers selected by the option, and NO NUMBER WILL BE REPEATED. After you select a guess, the computer will grade the guess. A BULL is a correct number in the current location. A COW is a correct number, but in the wrong location. Using the grades (BULLS/COWS), you make successive guesses until you have correctly guessed the mystery number, or after 10 tries, the computer will tell you the answer.

VICTORY AT SEA is modeled after a childhood game played on paper. The first step is to place your ships (2 battleships of 4 squares each, 2 cruisers of 3 squares, and 2 submarines of 2 squares). The ships may be placed horizontally, vertically, or diagonally, but must be in consecutive squares. The computer will not allow you to place too many squares for a given type and will prevent you entering the same square more than once; in either case you will get a beep. You will see a running chart of the squares used for each boat of each type (B1, B2, C1, C2, etc.) in the center of the screen.

BBUG 9017 APCAL Version 3.20

*CLASSIFICATION * Business * Floppy/Hard Disk * Printer*

The APCAL Appointment Calendar is extremely easy to use because the screens are set up in formats you are already familiar with. For example, it contains monthly calendars with day blocks in which you can type notes like a wall or desk calendar. Appointments are set up like most appointment books, simply type the appointment next to the time. The appointment times can be configured to match your schedule.

Appointment features include: move, copy, delete, search and more. The program contains a quick scan display which allows you to scan your appointments for the week or month. It also allows you to find an open time slot. APCAL can be run as a TSR and popped up at any time. Appointment reminders can also be set which will pop up even if you are in another program. You can also create printouts of your schedule. International time and date formats are supported.

BBUG 9018 DRIVE & CONTROLLER GUIDE - THEREF Version 4.3

*CLASSIFICATION * Technical Information * Hard Disk * Printer*

THEREF is a comprehensive Directory of Hard Drives, Floppy Drives, Optical Drives, and Drive Controllers & Host Adapters. It is designed to help the novice and pro alike with integration problems and system setups.

Information is provided in two handy formats; Portrait mode, for those who prefer a normal book-binding type print format, and(or) do not have a printer with Landscape capability. And Landscape mode, for those who pre-fer a computer-printout type format.

For printing, a Laserjet is preferred, but not necessary, and setup info is provided. For viewing, LIST by Vernon Buerg, will provide an excellent result, and allow text searches for finding specific models.

Companion program to BBUG #8815.

BBUG 9019 STARS 2000.0 Version 2.1

*CLASSIFICATION * Astronomy * Floppy/Hard Disk * EGA/VGA * Mouse*

Searching for the stars in the night sky can be a very pleasant and educational pursuit. STARS 2000.0 will give you a chance to select the location in both Northern and Southern Hemispheres and by choosing from/to declination from the list, you will see those stars within that range. By clicking the mouse on a star, the individual names will appear.

By selecting a constellation, the major stars that belong in that constellation will appear. The name of the star or a deep-sky object will appear if selected by the mouse pointer.

BBUG 9020 MONSTER BASH! Version 1.0

*CLASSIFICATION * Games * Hard Fisk * EGA/VGA * Sound Card Supported*

HIGH DENSITY DISK 1.2M OR 1.4M ONLY

JOHNNY DASH! A name of legendary proportions. A name that strikes fear into the hearts of monsters everywhere today.

Johnny's new Dalmation puppy, Tex, has been missing for two days, and on the night of a fearful storm of supernatural proportions, Johnny is visited by a pait of green eyes from the world beyond who tells Johnny that his pet and all the other cats and dogs of the normal world had been kidnapped by THE EVIL COUNT CHUCK.

Armed with only his trusty slingshot. Johnny ventures into the underworld to rescue Tex and free all the other captured animals. He encounters monsters, skeletons and other creatures and with your help frees the pets.

Over 2 Megs compressed graphics (Apogee's biggest game yet!). With a full Ad Lib soundtrack and nightmarish Sound Blaster digitized effects and two cinematic scenes.

This is absolutely the most animated game Apogee has created to date. Three skill levels. Joystick support, save/restore, hints, etc. Don't let the gruesome graphics give you nightmares—it's only a game!!!

BBUG 9021 MATHOMATIC ALGEBRAIC EQUATION PROCESSOR Version 3.0

*CLASSIFICATION * Educational * Floppy Disk*

If "A = B + C", then what does "B" equal? MATHOMATIC is a super-smart calculator program that can solve complicated symbolic math equations. Enter your equation or formula and solve it for any variable, and if you want to plug in values, simply type "calc" and MATHOMATIC will ask you for the values of all variables on the right-hand side of the equation and then display the answer(s).

MATHOMATIC is an artificially intelligent algebraic manipulator program which implements most of the rules of algebra for the mathematical operators +, -, *, /, and power (including roots). Any linear or quadratic equation can be automatically solved for any unknown. Many other types of equations can be solved and simplified, too. Unlike other symbolic math programs that provide partial support for a multitude of operators and functions, MATHOMATIC goes all the way with its basic mathematical operators and commands.

You can simplify (reduce) equations, factor most polynomials, differentiate equations, compare equations, replace variables with any expression, jiggle a variable about some value to see the sensitivity to that value, etc. In addition, simultaneous algebraic equations can be easily combined and solved for any variable. Complex number arithmetic and multivariable polynomial division are supported, too.

MATHOMATIC is a fascinating tool. By using MATHOMATIC, you will learn to convert word problems to algebraic equations and let MATHOMATIC do the rest. Math enthusiasts will love to watch MATHOMATIC manipulate complicated equations.

MATHOMATIC includes a tutorial program and a little surprise for anyone with a color computer: each level of parentheses can be a different color.

BBUG 9022 THE BETTER DIET ANALYZER Version 3.0

*CLASSIFICATION * Health * Hard Disk * Printer*

Dieters are an odd mix of determination, optimism and desperation. We're determined to forsake the very food we love, usually to make a dramatic change in our bodies. We wouldn't embark on this journey if we didn't expect to succeed. And we maintain our optimism even as we wade our way through the continual feast that never ends in our well-fed and prosperous culture.

Yet, for all our determination and optimism, we seem to be ready victims for brash promises and outright quackery. OK, maybe you're not the type who falls for gimmickry. But I'll bet if I promised you a diet that would guarantee you'd lose weight, reduce your serum cholesterol and give you more energy, you'd try it. You might even stick to every prescribed food for awhile, convinced that my recipes were somehow better suited to your goals.

See what I mean? People who loved food up until the day they went on a diet will suddenly start classifying every food as either medicine or poison. If it's on the prescribed list, they'll take it dutifully and daily. If it's on the avoid list, they'll avoid it like arsenic.

If you can see yourself thinking like that, you'll start to understand what you're up against. It's no wonder so many diets fail.

What you'll find here with THE BETTER DIET ANALYZER is a tool to help you leverage your determination and optimism. Use your strengths and you might increase your confidence and knowledge. That's what it will take if you're going to shrink that desperation down to a point where it won't sabotage your goals.

THE BETTER DIET ANALYZER won't put you on a Program. I am neither a physician nor a dietician, so I can't offer you advice on which foods to eat and which to avoid. I am, by training and inclination, a journalist, so I will provide you with impartial information gathered from the most credible and authoritative sources I can.

Eat what you want. Design your own program. Or don't design any program at all. Have fun. Enjoy your food. Use THE BETTER DIET ANALYZER to monitor what you eat, and you'll soon come to understand better what's in food, and what's in you. Think of the program as a biofeedback device — it mirrors your behavior and enables you to look at yourself in a new and different way.

BBUG 9023 WORD SEARCH PUZZLE MAKER

*CLASSIFICATION * Games * Hard Disk * Printer*

WORD SEARCH PUZZLE MAKER generates word search puzzles and prints them on your printer. WORD SEARCH PUZZLE MAKER can make at least 24 different variations of the popular word search puzzle.

WORD SEARCH PUZZLE MAKER comes with an editor so you can shape and customize your puzzles. It can also save puzzles in ASCII files so that you can import the puzzles you create into text editors and word processors. This means that you can work puzzles into newsletters and do many other exciting things with them.

BBUG 9024 TRANSFORMER TECHNOLOGY Version 3.10

*CLASSIFICATION * Educational * Hard Disk * Colour Monitor*

TRANSFORMER TECHNOLOGY is intended to give to the Transformer Enthusiast and Teaching Institutions the benefit of the authors 35 years of Research and Development in the field of Electrical Engineering.

The program is an excellent tool for teaching new transformer Designers all the basic fundamentals, as well as advance theory. It can be used by Technical Lecturers and students to show how the Researchers and Scientists assisted in laying the foundation for the developement of the transformer equations.

The Software has a unique Manufacturing Efficiency Factor (KM) This Factor gives the transformer Designer considerable amount of flexibility in matching the variables in the Manufacturing process to the Software. The KM Factor will have to be determined by the Trial and Error method. Once this is done, the Software will have added value.

BBUG 9025 POETRY STAR Version 1.1

*CLASSIFICATION * Educational * Floppy/Hard Disk * Printer*

You will find POETRY STAR unlike any software you have ever used. It is written in the Artificial Intelligence computer programming

language INRAC, which enables POETRY STAR to understand what you write—almost as if you were using your keyboard to write notes or instructions to another human being.

POETRY STAR is an ENTERTAINMENT disk, and much of the fun comes from the nuttiness and irreverence of the computer's responses to what you say.

While you are having fun with POETRY STAR you will also be learning something about poetry—but that educational aspect of the program is secondary to the simple fun of it all. If you wish to

POETRY STAR maintains a complete transcript of each of your sessions with the program. To read everything you have just done, at the end of your session you may read the transcript on your screen. The transcript file may also be picked up on your word processor as a text file; you may rename it and save it if you wish.

BBUG 9026 FILEFINDER Version 4.2

*CLASSIFICATION * Utilities * CGA/MDA/EGA/VGA/HERC * Hard Disk*

Pretty soon you are going to have a problem finding particular programs or files on your hard disk drive. Existing utilities have limitations and as many computer users are doubling the size of their hard disks with various utilities, more and more programs are being kept.

FILEFINDER finds files on normal and networked drives. It is one of the FASTEST most flexible file finding utilities. With the ability to also look inside most compressed files for particular files, FILEFINDER is just the utility to search your drives for that wanted program. It can also locate duplicate files.

Searches such as fuzzy searches which allow you to locate a particular file when you don't know the exact filename and searches with multiple filespecs over multiple drives are supported. You can even exclude file mask, or a date equal search with FILEFINDER and up to 10,000 files can be handled.

BBUG 9027 DESKTOP PAINT Version 2.5

*CLASSIFICATION * Desktop Publisher * Hard Disk * HERC/EGA/VGA * Mouse*

DESKTOP PAINT is a bitmapped paint program designed especially for use by people who run desktop publishing software such as Ventura Publisher, PageMaker, Publish It and so on. It will prove equally useful to users of high end word processors, such as WordPerfect.

DESKTOP PAINT will allow you to quickly create and modify bitmapped graphics, either for use as stand alone pictures or for inclusion in other documents. It features a wide variety of file formats, a powerful selection of drawing tools, an easy to operate user interface and lots of room for customization.

DESKTOP PAINT supports the following image file formats: MacPaint MAC (and PSF MAC files) Ventura IMG PC Paintbrush PCX TIFF WordPerfect WPG

DESKTOP PAINT will only create and work with monochrome files. Note also that it will only work with WPG files which contain bitmapped images. DESKTOP PAINT is a paint program, rather than a drawing program. It does not support GEM, Corel Draw, Designer, DXF or EPS files.

Unlike many other paint programs, DESKTOP PAINT features complete XMS and EMS support. It will handle enormous images... pictures which unpack into several megabytes... if you have sufficient extended or expanded memory in your system.

BBUG 9028 CORNCOB 3D Version 2.0

*CLASSIFICATION * Games * Hard Disk * 286/386/486 * VGA*

Welcome to CORNCOB, the shareware air combat flight simulator.

To fly a mission a pilot first chooses which theater of operations he wishes to fly in. A theater of operations is a terrain filled with airports and areas of enemy concentrations. A pilot selects his mission by taking off from an airbase, and flying to one of the enemy areas to engage in combat.

Most theaters of operation have 9 airbases from which the pilot can take off and land in. Each airbase has intelligence information about the enemy forces in the vicinity. Intelligence info can be gotten from entering the control tower on foot, or by using your radio when in the air. The information you receive will always be from the last airport you were in.

One of the most important things about theaters is that they have a history capability. This means that anything a pilot has destroyed will stay destroyed forever.

Planes are a precious resource which should not be wasted. Each time you crash a plane beyond repair, there is one less in your theater. Even a heavily damaged plane can be repaired simply by landing and strolling over to the control tower on foot.

If desired, some older model planes can be brought out of storage, but this should be used only when desperate. These planes have reduced performance specs, and are a brown color.

CORNCOB provides: Training Missions, Friendly Objects, Airplanes, Control Tower, Radar Unit, Runways, Rescue Van, Enemy Defenses, Force Fields, Barrage Balloons, Bee Swarms, AAA Batteries, KLA's Deathballs Spitballs, Generator Orbs, TRFRU (Tetrahedral Radio Frequency receiving units), Mortars, Mind Benders, Aliens, Ground Transports, Flying Saucers, Portals, infact everything that you will need to complete your missions.

BRISBUG HELP LINES

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

New offers of help are always welcome, and there are some topics absent from the list.

Subject	Name	Phone	Days & times
4DOS	Chris Raisin	379-1415	Any time
	Dan Bridges	345-9298	Anytime
Accounting	Ian Haly	870-1463	After 5:30 & W/Ends
	Victor Kydd	870-9516	
As-Easy-As	Dan Bridges	345-9298	Anytime
	Dan Emerson	288-6070	
Assembly	Scott Hendry	245-1330	After-hours
AutoCad	Geoff Harrod	378-8534	Evenings,W/E
C language	Danny Thomas	371-7938	Mon-Fri 6pm-9 & W/E
	Ian Haly	870-1463	After 5:30 & W/E
Clarion	Ray Creighton	354-1107	eve & W/E
Clipper	Chris Raisin	379-1415	Evenings
	Don Andersen	881-2432	after 7pm & W/E
	Dan Emerson	288-6070	
	Mike Theocharous	824-1450	Anytime
CodeBase	Ian Haly	870-1463	After 5:30 & W/E
Communications	Ron Lewis	273-8946	9am-9pm
Corel Draw	Scott Hendry	245-1330	After-hours
Dataflex	Tony Obermeit	2875534	Mon-Sat A/Hrs & Sun
dBase	Ian Haly	870-1463	After 5:30 & W/E
	Mike Theocharous	824-1450	Anytime
	Sylvia Willie	393-3388	Evenings
	Bob Boon	209-1931	M-F 8am-5pm
	Chris Raisin	379-1415	Any time
	Dan Emerson	288-6070	Evenings
DBXL	Ian Haly	870-1463	After 5:30 & W/E
DisplayWrite 4	Mike Lester	275-1742	(343-5703 a/hrs)
DOS	Dan Bridges	345-9298	Anytime
Forth	Danny Thomas	371-7938	M-F 5-9, W/E
Fortran	Cec Chardon	870-1812	Evenings
	Rob Andamson	266-8353	Evenings
Fox/Fox-Pro	Leon Percy	808-1570	Evenings
Genealogy	Rob Adamson	266-8353	Evenings
	Colin Cunningham	263-3005	9-9 all days
	Bob Gurney	355-4982	Mon-Sat 8-8
Hardware	Chris Ossowski	274-4144	9-9 all days
Help!	Dan Bridges	345-9298	Anytime
	Scott Hendry	245-1330	After-hrs
Meta 5	David Shaw	870-3633	9-9 all days
MS Word	Chris Raisin	379-1415	Any time

Multimate	Frank Mehr 397-3984	Anytime
Multi-user DOS	David Shaw 870-3633	9am-9pm
Novell Netware	Dan Emerson 288-6070	Evenings
Open Access 2	Cec Chardon 870-1812	Evenings
OS/2	Alan Gibson 207-2118	6:30-9:30pm
PostScript	Danny Thomas 371-7938	M-F 5-9 & W/E
PowerBase	Mike Lester 275-1742	(343-5703 A/hrs)
Project Management & planning	Brian Doyle 355-1328	9am - 9pm all days
Quick-BASIC 4.5	Harry Strybos 288-5145	4pm-7pm Weekdays
Q&A	Dan Bridges 345-9298	Anytime
Q-Edit	Dan Bridges 345-9298	Anytime
Quicksilver	Ian Haly 870-1463	M-F after 5:30 & W/E
R-Base	Tony Luck 279-3033	9-9 all days
Spreadsheets	Sylvia Willie 393-3388	Evenings
SQL	Cec Chardon 870-1812	Evenings
System Manager	David Shaw 870-3633	9-9 all days
True-Basic	Bob Gurney 355-4982	Mon-Sat 8-8
Unix	Paul Watts 892-2226	Mon-Sat a/hrs & Sun
Virus problems	Dan Bridges 345-9298	Any time
Windows	Bernard Speight 349-6677	6pm-9pm
Wordstar (all ver)	Neil McPherson 075-971240	A/hrs
Wordstar-2000/4	Bob Boon 209-1931	Mon-Fri 8-5
Xenix	Paul Watts 892-2226	Mon-Sat a/hrs, Sun
	Mike Lester 275-1742	(343-5703 a/hrs)

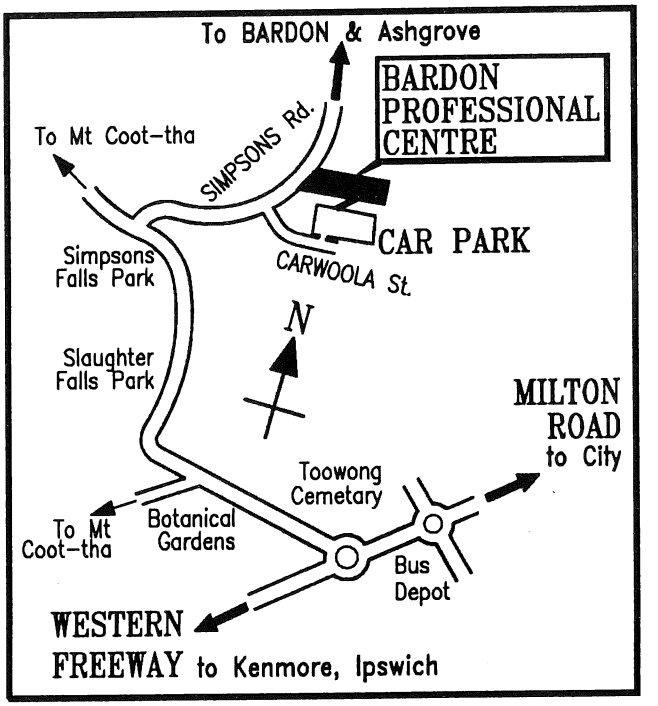
MEETINGS

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.



PORTAPRO

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New **PORTAPRO** *Notebook Computer*

Another BYTEPRO Product

For further information or the location of your nearest stockist
Telephone (07) 857-2088

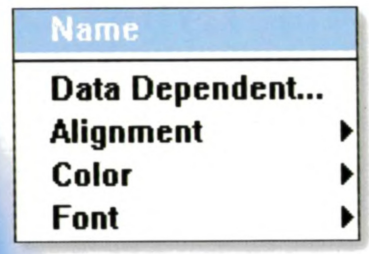
YOU DESERVE THE FUTURE...NOW!

Introducing Borland's Paradox for Windows

Experience the magic of database power made easy

New Paradox® for Windows is here! It's easy, powerful, and it puts you in control of your data like no other database. Best of all, it's so visual and intuitive that no matter what your database experience, you'll get up and running immediately.

Paradox for Windows lets you access, modify, and present your data faster than ever before. Borland's Object Inspector™ menus make it easy to use all the features and functions of your database without digging through layers of menus. You work only with the menu option relevant to the task at hand. And the new graphical form and report drawing tools make it incredibly easy to create dazzling forms and reports that can include crosstabs, tables, and graphic images.



▲ *Object Inspector menus allow you to change an object's properties.*

▲ *The SpeedBar™ icons provide convenient point-and-click access to the features you use most often.*

Full Paradox and dBASE data access

Paradox for Windows makes it so easy to work with data stored in different table formats. You make your request for data by simply checking off boxes with easy-to-use Query By Example. The Paradox for Windows query optimizer automatically determines the fastest way to deliver the answer. You can view, edit, query, and link to all your data.

Paradox for Windows lets you manage virtually unlimited data types, too. You can store any kind of information, including text, menus, graphics, OLE objects, sound, and even multimedia. You can even mix and match Paradox and dBASE® data in queries, forms, and reports.

Put the power of Paradox to work for you today. You'll be amazed at what you can do.

BORLAND

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