Next Meeting

QUT *campus, Kelvin Grove*

Sunday, 21st August

Lunchtime Special **PCAnywhere** *12 noon – Symantec Corp*

and **Norton's Administrator for Networks**

Morning Glory *11:30 – Ian Robinson (Editor)*

Introducing "Windows Sources" magazine

Main Event

dBase
for Windows

Ross Dembecki
1:30pm – Borland

Inside

High Speed Modems
Shareware PIMs
Chicago Report
Internet Humour
Games Reviews
Assembler
"FrontRunner"

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Program for Sunday, August 21st

Time	
9:00 am	CLASSES
9:30 am	Junior Club
10:30 am	CLASSES
12:00 pm	Symantec
12:15 pm	New Members Orientation
1:00 pm	Brisbug Club Meeting
1:30 pm	Borland - dBASE for Windows
3.15 pm	New Members' Tech Chat
3.15 pm	SIGS
3.30 pm	Magazine Meeting

FROM THE

ENGINE ROOM

Lloyd Smith

MEMBERSHIP DRIVE

With the membership drive now in the second half of the six months allocated for the drive, the actual figures for new members who have joined Brisbug look fairly reasonable. That is, until you compare the actual figures with the average figures of the number of members who join Brisbug each month.

Up until the end of July, only 142 Brisbug Members have introduced a total of 241 new members to the club.

For a club, with a membership the size of ours, **THAT IS A PRETTY DISMAL EFFORT!** Obviously a few members (e.g. Bill Latham and Judy Gray) have done quite a bit of work handing out membership applications to everyone they meet who is interested in computers, but from the figures, I conclude that most other members have bothered to do anything about promoting Brisbug to friends and acquaintances.

TOP PRIZES

Vice President Graeme Darroch put a tremendous amount of work into organising over $40,000 worth of prizes for this drive and it must be a disappointment to him to see his efforts disregarded by the majority. All of the software offered as intermediate prizes is very well worth winning, and if you are lucky to win a piece of software, the chances are rather remote that you would already own that software, and even if you did, I'm sure you would have no difficulty in making a "deal" with another member so that you could purchase alternative software that you wanted.

The major hardware prize of the Compaq 486 VGA Colour Laptop computer, which is valued at over $5000, is definitely worth the effort, and the major software prize of Microsoft's Office Professional makes a really attractive reason to have your name in the final draw.

ALTERNATIVES

The Management Committee had originally planned the Membership Drive with the possible target of 1000 new members over six months. Other clubs have done it, so why not Brisbug? The value of our prizes is as good as, if not better than, those offered by other clubs, but it is obvious to me that the majority of our members are too complacent about their club. They prefer to *warm their own seats on a comfortable chair* rather than get up and do something to help their club.

With 1000 new members in our club, the Committee has calculated that membership fees and other charges could be contained without any immediate increases, but if the drive does not produce the desired results, the 1995 Committee will have no other alternatives but to revise this decision on increases, or alternatively reduce the services offered to members in order to balance the budget.

Get off your comfortable seats and do something for YOUR CLUB. You still have time to make the Membership Drive a success. If each member introduced just one new member to Brisbug we would have really accomplished something of which to be proud.

FROM THE
ASSISTANT STOKER

Graeme Darroch

On the trail

Well this month sees us off on our travels again. By the time you read this it will be all over, and we will have returned from Bundaberg. I suppose the normal member may ask what good these visits do them, and I suppose that is a valid question.

One of the basic tenets of Brisbug PC User Group Inc is to spread knowledge about computing, and to this end, our associate clubs by joining Brisbug PC User Group Inc, have shown commitment to their members, and deserve as much support as possible. To this end we budget these trips and do as much as possible, with the use of volunteers to put on a show of major subjects which are of interest to the computer learner.

Our Program

This months visit will use the efforts of Lloyd, Dan Bridges, Mark Mullins, Rex Ramsey and myself to put on a show for the members of Bundaberg's computer club. I will be showing my comms lectures that I did for our members, Rex will be giving his presentation for new members as well as Basics, Dan will attempt to confuse them with viruses, while Mark will thoroughly confuse them with Windows, and Lloyd will give the attendees an overview of Brisbug and its activities.

Many people in Bundaberg are already members and we will be trying to interest more in joining. This is not poaching members from the local club, but adding another dimension to those who are interested in computers.

Well anyway that's what happens and why, and incidentally is why we try to spread the word about computing at all times including going out to the southwest of Queensland when the opportunity arises.

Last Months Meeting

We had a bumper turnout of people to catch a glimpse of what the new offering from Microsoft will look like, and very interesting it was to. I was very happy to see the system run on a low end machine, to prove that this will be possible if not desirable. Thanks a lot to Microsoft for answering at least some of the interest everyone has in this product. I hope they can continue the development and bring the launch in on time.

Borland's session, while interesting, was not quite what I thought it would be. Ray's talk I thought was going to be about the Borland Consulting Service but turned into a *Borland where are we and lets answer some of our criticisms in the press of late.* Anyway, as I say, interesting, still.

Next Month

Next month Borland will be back to launch dBASE for windows, and this should be interesting to say the least. Symantec will be back as well and as an added extra we will have the Chief Editor of the latest computer magazine to hit our newsagents Windows Sources along for a brief talk.

All adds up to another exiting weekend of Brisbug PC User Group Inc at Kelvin Grove.

See you at the meeting.

Graeme

LETTERS TO

Dear Sir,

I enjoyed last months main presentation. Seeing Chicago was certainly interesting, and Craig provided a very good demonstration.

However, I found what was NOT said considerably more interesting than what WAS said.

Craig spoke several times about Chicago's ability to preemptively multitask DOS and Win32 applications. And very carefully didn't speak about a similar ability to preemtively multitask Win16 applications. The diagram he showed of how various applications would function under Chicago showed Win16 applications in a common memory space, which would tend to indicate that it does not possess the ability to preemptively multitask Win16 applications. Which would indicate that it will not provide true multitasking for the vast majority of existing Windows applications. I guess for the benefits of preemptive multitasking, we're going to have to go out and buy new applications?

Plug and play would certainly seem to offer a number of benefits. Any final judgement on those benefits will obviously have to wait, not only until Chicago is available, but also until hardware supports it. Which means that the average user will only see those benefits when they spend more money on new hardware.

Craig spoke at some length about the benefits of long filename support. Which I certainly agree with. However, he failed to mention how existing applications would handle long filenames. I have no concrete information on the file system that Chicago will use, but I do know enough about file systems that support more than the standard 8.3 naming conventions of DOS to know that, while raw support for long filenames is generally not difficult

to produce in an application, many existing applications have a number of assumptions in their code which are tied to 8.3 naming conventions. So even if they can be persuaded to have some basic understanding of long filenames, their ability to handle such filenames is strictly constrained by these assumptions. Again, one can only presume that, to reap the benefits of long filenames, the consumer is going to have to go out and upgrade their applications.

There was also heavy emphasis put on the fact that Chicago supports asynchronous message queues. This is certainly a benefit. One problem with current versions of OS/2 is that they are still limited to a single message queue. While this doesn't often cause any problems, it can cause problems when an aberrant application blocks the queue so other applications cannot access system services using the queue. As a matter of history, the fact that OS/2 is limited to a single queue is due to a Microsoft design decision, made in the days when Mr. Gates was saying that OS/2 was the future for desktop computing. It is also a problem which is liable not to exist by the time the next OS/2 update ships.

I must admit that I found the Chicago desktop ugly. This may simply be due to the fact that it was running in comparatively low resolution, and the choice of backgrounds, but I cannot say that I found it visually attractive at all.

I was also left wondering about the method used to display running tasks. In OS/2, I have a number of choices when it comes to handling how a running application is presented when it is not the foreground application. I can minimise the task to the desktop (which will produce a vaguely similar display, with the icons for operational sessions spread across the bottom of the desktop), I can minimise them to a

THE EDITOR

specialised container object (which can either be left open on the desktop or accessed by double-clicking on its icon when I want to see what tasks I already have running), or I can hide them, making them accessible only through the window list. With Chicago, I was left wondering what would happen if I had more tasks running than would fit on the bottom screen row. Do I get a "more" prompt at the right hand end? Or does Chicago limit me to running the number of applications that it can fit on its status line display?

The menu produced by clicking on the "Start" button at the bottom of the screen was interesting as well. It bears a strong resemblance to the menu system common to X-Windows systems. However, the X-Window version is not "sticky", and depends on using the left mouse button to make a selection. This may well be a bit more difficult to master in the first place than the Chicago "sticky" version, but, having used both variations, learning to use the standard X-Windows version offers ample rewards in terms of speed once it is mastered. Maybe we could have the ability to toggle the Chicago menu into standard X-Windows operation for the so called "power user"?

It was nice to see that Chicago is finally implementing some of the object orientation that has been a feature of OS/2 since version 2.00 first shipped. That feature of OS/2 has made it easily the most usable of the current crop of GUIs, and if I have to use Windows, having some of that object orientation would certainly be welcome.

However, from what was said, it appears that much of this object orientation is dependant on OLE2. If this is indeed the case, it will be strictly limited in usability on small memory machines, given the memory demands made by OLE2. I notice that there was no attempt made to demonstrate OLE2 running on the 4Mb machine that Craig used to demonstrate that Chicago will run in a machine with little memory.

On the same subject, I was puzzled by the application that he used to demonstrate Chicago running on a 4Mb machine. Does that imply that a big application such as Word will simply not run on such a machine, or was it simply that he didn't want to demonstrate just how slow running such an application would be in a memory constrained system?

The network conectivity features that Chicago will have are useful. To me, anyway. However, I find it difficult to believe in a free lunch. The end user will pay for those features, whether they have a use for them or not. Personally, I think the customer would be better served to have the connectivity features of Chicago as an extra cost item, available if they need them, with a consequent reduction in the overall cost of the package without them.

Overall, I was left wondering why I should wait for Chicago at all, since I can already have almost all the benefits that it will offer using OS/2. Nothing in the demonstration showed any marked superiority to the features already offered by OS/2. And OS/2 has the advantage of being a relatively mature product, with consequent advantages in terms of stability. Not to mention a good base of native applications already on the market.

While I'm currently an OS/2 user, I'm by no means religious on the subject. When something better than OS/2 comes along, I'll almost certainly switch to it. The demonstration of Chicago did nothing to indicate any real advantages whatever, and did not make me eager to abandon OS/2 in favour of Chicago.

Leon Percey

SIG NEWS

Dulcie Haydon

Visual Basic SIG

Last month we had a good session of self help. We looked at work done by some of the participants, and were interested to see some of the efforts of our midst. There were handouts of some text of presentations from Microsoft TECHED 94 and this will continue. These text come to us from the TECHNET CD kindly supplied by Microsoft.

If you have an interest in VB please feel free to come along, bring your machine and let us help each other get a grip on this new exiting way of programming.

See you at the SIG

Graeme Darroch and Alan Bridges.

■ ■

Family History SIG (Genealogy)

Here I am back again after a stay in hospital, I was even too sick to notice the nurses and that is bad.

I have found out that PAF 2.3 has been withdrawn from sale (It had too many features - we don't call them bugs any more). The last word I had, is there are still some Version 2.2 on 5¼" discs but all of the 3½" have been sold out. So if you are waiting for your order to be filled, they are possibly waiting for version 3.1 to be released. This, I understand, is in alpha test mode and will possibly be in beta mode in August. The expected release will be October-November. (Without features this time, I hope.)

At the last meeting at the club I managed an attendance, even if I did get there late for the 1:30 meeting. We had a fair roll up mostly new members at the SIG meeting. Barry Alexander gave a talk on the recent Conference that was held at the University and a brief rundown of the international genealogists that attended. Considering the amount of notice I gave him that he would be giving the talk, I think he gave a fantastic talk to the gathered membership. (2 mins).

At the August meeting we will be having a new program demonstrated to us by Peter Kortge. It is

called "Reunion". You will require at least Windows 3.1 or OS/2 to run it, and you all know what I think of windows and mice. But I must admit that it does have some nice features, like adding photographs to your disk storage if you have the right equipment. It has a box layout similar to Brothers Keeper. I have uploaded it to file area 60 but this is only the demo version and will allow you to play with it to see if it is what you want.

There are no outings planed for August as I am still in recovery mode and will probably end up at the "Ekka", but I think that in September it will be warm enough to go to the Mt. Cootha dead centre and dig up the old rellos, and depending on the day, follow it up with a picnic in the park opposite

Well if you have any problems or query give me a call and if I can help I will, ph/fax 07-355-4982 or 018-077-636.

Rob Gurney

■ ■

Windows SIG

This month the Windows SIG will be having a look at two Desktop Publishing Programs.

The first program will be Microsoft PUBLISHER 2, and the second will be a brief look at PAGE PLUS which is very similar to Pagemaker.

Time permitting, we will continue with Windows training sessions.

Brian Bere-Streeter

■ ■

Magazine SIG

The Magazine SIG meeting will be held in the Software Library Room at 3.30pm.

Topic for discussion - Advertising in the Magazine

Lloyd Smith

SouthSide SIG

Meets on Tuesday, 23rd August at 7:30pm at Rex Ramsey's home, at 114 Forestdale Dr, Forestdale.

Topic: BYO New Programs to try out, and Questions

Contact: Rex Ramsey 8004827

Business & Finance SIG

meets at 3.15pm in registration room (B343A). Alan Weeks 8708183

LETTERS TO THE EDITOR

Continued from page 5

The Editor

It is time I wrote to show my appreciation of the efforts of Lloyd Smith for his efforts with supervision of the Library and for stepping in and shouldering the Editorial of the magazine. As a country member, my only contact with Brisbug is through the magazine, and during the few short years I have been a member, I can attest to it's value in keeping me abreast of events in the world of computing.

Regarding the latter, I am particularly indebted to Lindsay Bates to whose column I always turn when looking for update on the latest events in this ever-changing world. Thanks also to Ralph deVries for his helpful hints and tips on Windows; But I mustn't forget Dan Bridges... He has pointed me in the direction of a lot of short cuts and in-depth knowledge of DOS. (I now know enough to realise how little I know!)

Thanks to you all.....

John Brennan   INNISFAIL

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Dear Editor

I thought it might be appropriate to warn my fellow club members of a shonky product that I have come across.

I purchased a "SCAN ALIGN" from Milyn Imports of South Australia. The Advertisement promised to "turn your Hand Scanner into a Flat Bed"

The device is supposed to be used to keep hand scanners steady and therefore improve the effective-ness of the OCR software.I can say that the device does improve the results marginally and I am not unhappy with the product itself although its claim to "turn your Hand Scanner into a Flat Bed "is scandalously over exaggerated.

Milyn does not have a agent in Queensland so I could not look it over before purchase. On paying in advance, I received it within a few days. I was told by the company that I could get a refund if the device did not work. The only problem then is if I returned it, I would have nothing to complain about and I would not be able to warn my friends, associates and fellow PC enthusiasts about this shonk.

My gripe is that for two bits of plastic $65 dollars is way too much. That's right. Two bits of plastic with plastic hinges and an acetate sheet (.35c from the newsagents).

Fully imported from Texas USA of course.

If some enterprising Australian manufacturer could not duplicate this product for less than $20 and still make a profit, I would be very surprised.

BOO HISS to over priced Scan Align.

Yours Faithfully,

PETER ATHEY

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I would like to suggest some names for our JUNIOR GROUP. My dad has helped me but most of the ideas came out of my imagination.

Here they are:

1. "BRISBITS" (like BRISBUG but more like us)

2. "BRISBYTES" (a bit more technical)

3. "JIG" (Junior Interest Group)

4. "JIGBITS" (a bit more technical)

5. "MINORBITS"

6. "MINORBYTES"

7. "MINIBITS"

8. "MINIBYTES"

Thank you,

JENNY SOWDEN.
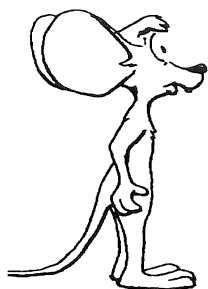
EDUCACHEON NEWS

Mark Mullins — Education Director

OF WINNIE THE POOH AND THE 8 MEG TOOTH

Some of you may note the heading for this article has changed. I initially called it "Educacheon" not because the misspelling is particularly funny, its not, but because I have been forced over the last couple of years to watch the same cartoon episodes of "Winnie the Pooh" over and over again.

This has arisen because my eldest daughter who is now five years old rather likes this particularly well animated character and the adventures that he experiences. The only drawback is that I have only managed to tape four or five of these episodes and she watches the same video tape for half an hour or so nearly every morning.

It is also at this time that I heave my gangly frame from my bed and sit down to load up on caffeine and other unhealthy substances. Being in a state of half sleeping, half waking my grey cells are susceptible to programming from any source and good old Pooh is nearly always on.

One morning I suddenly became aware of the delicate state that Pooh's psyche must be in. The poor fellow must suffer from terribly low self esteem. I come to this conclusion after considering several

Silly story, isn't it!

relevant factors. Firstly his master, Christopher Robin constantly refers to him as "Silly old bear". This is the sort of statement that others find themselves fronting up to the Equal Rights Commission for saying. Of course for poor Pooh no such body exists in the fantasy world of the 100 acre wood.

Secondly the story as it appears in the written form begins by saying that Pooh "lives under the name of Saunders. That is not to say that he uses that name but that the name Saunders hangs above his doorway." How sad ! Pooh lives under an assumed name and what is even worse is that he lives in a heritage listed tree which as we all know means that it will be very hard to sell when it comes time for him to move into a retirement village.

The other equally sad point I would make is that Pooh's only pursuit is where and when he will get his next pot of honey. His life has become unmanageable because of his addiction to honey. This in later years will lead to high blood pressure, heart disease and mature onset diabetes. But is he strong enough to admit his addiction ? No. He simply says "Oh bother !!". So what you say?. What is Mark Mullins smoking ? I wish I could have some !?. Well, it is the constant habit which Winnie the Pooh and his friends have of misspelling everything that resulted in my intentional misspelling of "education". I had originally intended to submit a graphic of Winnie reading a book but I realised too late that this would infringe copyright and anyway who would understand the significance of a stuffed bear in a computing magazine? I suppose it is yet another reason for Winnie to feel depressed.

What else is new ?

I have of late been seriously considering upgrading my PC from 8Mb to 16Mb. I have had enough of waiting for Corel 4 (a graphics program) to redraw every time I move a graphic around the screen. By the time I sell my 1Mb Simms I figured it would cost me another $ 800 or so. It was in fact whilst I was eating a few sandwiches a couple of weeks ago and considering how to best approach this problem when I sensed that I had a large foreign object circulating in my mouth along with other saliva ridden matter. On searching the inside of my oral orifice I discovered a disconcertingly large piece of tooth. Further frantic inspection in front of the mirror confirmed my worst fears. One half of one of my molars had decided to avalanche and was now in my hand not my mouth.

This was not the worst of it as I soon discovered when the phone rang and I began to speak. My tongue gave a yelp and worrying amounts of the claret of life (i.e. blood) began to drip down the front of my shirt. I realised that the fractured tooth had

become very jagged and was lacerating my tongue (that would be tongue in cheek !! ha..ha). I consulted a friend who is versed in matters dental who suggested that I get an emery board and file down the sharp edges until I could get to the dentist. Suspect advice at best I thought.

I none the less proceeded to the local pharmacy where I requested some emery boards. The pharmacist's assistant asked whether I needed nail polish as well. I took some offence at this attack on my masculinity and began to tell her that I required a heavy duty emery board, not for the purposes of manicuring but to grind away on one of my molars. As is my nature I could not help but make the tale sound more graphic than it was. This resulted in a sudden greening of the gill structures of the aforementioned pharmacist's assistant who then had to sit down for fear of fainting and/or vomiting.

The upshot of all this was that the filing away on

This won't hurt a byte!
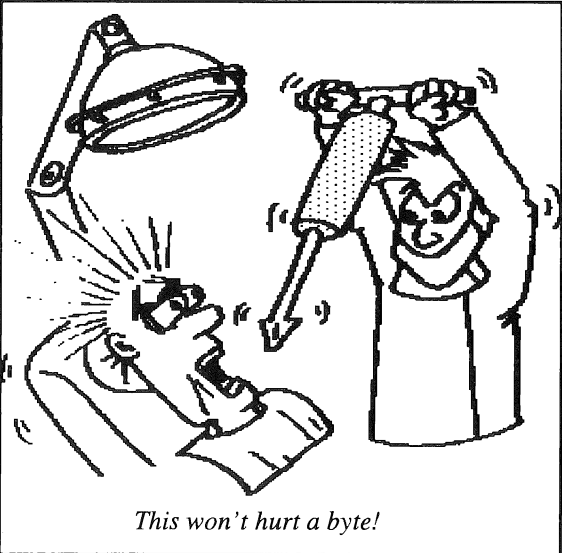
my molar worked even though it was a rather gruesome task which made me feel somewhat ill. When I eventually got to the fang technician I was told that I would need a crown made of the finest gold in the land. Upon querying the price of such repairs

I was told it would be $800. I then asked for instant removal of said molar. The fang tech,in a most professional manner told me that by doing so I would snap the tooth on the other side which was also showed signs of impending self destruction. It was with great sadness that I accepted the reality of the situation which was that the money for my extra 8Megs of RAM was to be used to supply me with a gold tooth thus making me "as cunning as a rat with a gold tooth". *C'est la vie.*

Oh...education.

At the meeting on August 21 we will once again be doing Introductory data bases with John McVeigh commencing at 9.00 am. I think that those who attended the last talk given by John would now understand the versatility of databases and how they can be used to make our life easier.

At 10.30 am I will continue my basic Windows session and will be handing over to Nev O'Brien for the latter half of that period who is going to tell us how to use Windows without a mouse.

Annette Bulmer, one of the mainstays of the Junior Group tells me that the ladies and/or gentlemen from Wordperfect will be speaking to their group at around 11.00 am apart from the usual interesting topics covered by the group. If you would like to see what new things Wordperfect Pacific have to offer anyone is welcome to have a look.

All the other classes will be conducted as per the listing which appears below this article. New members would be well advised to sit in on Rex Ramsey's New Members Orientation at 12.15 pm so that you may gain a fuller perspective on what Brisbug has to offer.

See you all there !!

CLASS TIMES HAVE CHANGED - PLEASE NOTE

CLASS TIMES

9.00am	Introductory Databases	John McVeigh	B310
	Junior Group	Les Cathcart	B301
10.30am	BASIC Languages	Rex Ramsey	B309
	Hardware	Ron Lewis	B310
	Introduction to DOS	John Tacey	B315
	dBase	Leon Percy	B312
	Introductory Windows	Nev O'Brien/Mark Mullins	Theatre
12.15pm	New members Orientation	Rex Ramsey	B309
3.00pm	New Users Technical Chat	Clarence Stock	B309

Minutes

Neil Krause — Secretary

Meeting on 17th July

Club President Lloyd Smith opened the meeting at 1.10 pm and reminded members that to-day was the first anniversary of the Club's move to this QUT campus. Incidentally it was also the first anniversary of Lloyd's appointment as President.

Magazine

The President reported that many north-side members had not received the magazine. Investigation revealed that Australia Post had not delivered these magazines notwithstanding that they had received them on the previous Tuesday. Lloyd said that on Friday they were found still stacked in the Northgate Mail Centre.

A show of hands indicated that about 60% of members present did not receive their magazines.

Lloyd said that the Magazine SIG will meet at 3.30 pm.

Raffle

The President advised members that a raffle was being held to-day of Microsoft Office Professional. He thanked Microsoft for generously making the program available and he urged those present to avail themselves of tickets. The raffle certainly represented great value.

Membership Drive

The President reported that 76 new members had joined the club this month. Lloyd reminded members that we were about half way through the drive and he urged everyone to get behind it and win some of the prizes on offer.

Membership Secretary, Jan Ausburn, then drew this month's prizes which comprised copies of the excellent Paradox program and WordPerfect 6.0.

Volunteer of the Month

This month's recipient Margaret Burton was nominated by Rita Copeland.

Margaret has displayed considerable expertise as a Teacher of WordPerfect for DOS. In addition, Margaret organised the training courses, venues, lunches, etc. and assists in the shop. The President congratulated Margaret and presented her with a selection of software.
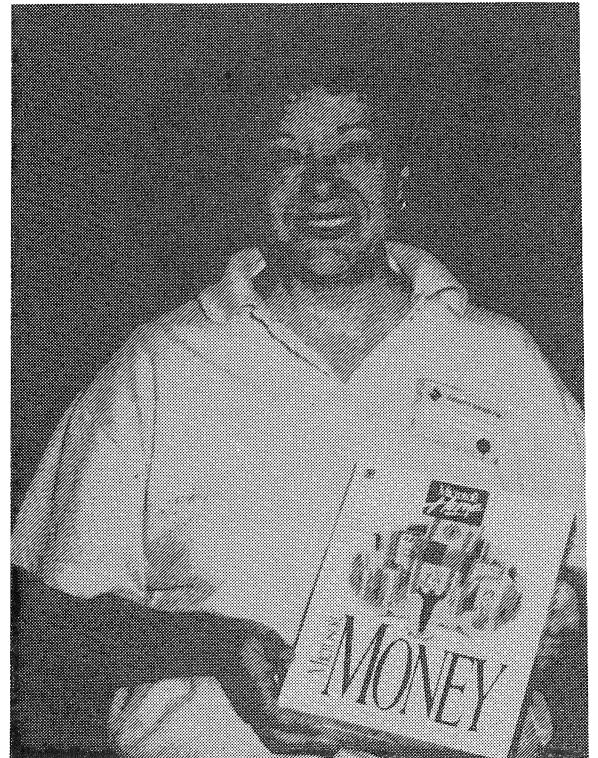
Brisbug Information Number

The President advised members that the Information Number has now been changed to 841 5511 and is set up at Education Officer Mark Mullins' home.

Reports

Vice-President Graeme Darroch said he was looking for volunteers for the forthcoming PC Expo which would be held on 29th and 30th September and 1st October. Any volunteers should contact Graeme on 2091999. PCExpo is the last major event before the end of the membership drive and volunteers sponsoring new members at the PCExpo are eligible for major prizes.

Graeme also advised members that next year the Expo will move to the Southbank Convention Centre.

Treasurer, Max Kunzlemann reported that the bank balance at the end of May was $7087, deposits for the month were approximately $21,000 and expenses $12,965, leaving a balance at the end of June of $15,200. Max said that during the month $10,000 was received for memberships and $4000 for advertising.

Education Officer Mark Mullins thanked John and Dave for their classes on Introduction to DataBase. Mark also thanked Brian Adams from Electroboard Pty. Ltd. for giving the club the use of boards free of charge.

Development Director, Carl Planting said that there was an article on club development on page 42 of this month's magazine. He told members that assistance was being sought from members with expertise on market research, public relations, graphic design and marketing and promotion. He said that helpers were also needed to set up school databases. In addition contributors of monthly articles and helpline volunteers were being sought.

Carl said a lot of these things would be one-offs and he sought assistance and feedback from members on what they wanted from the club. If you can assist the club in any of these ways please contact Carl on the number listed in the front of this magazine.

Sysop Paul Marwick said that the Brisbug BBS PC is not working properly at the moment. Good news is that Lines 3 and 4 are now running at 28800 baud capability.

Magazine wins Award

The President reported that Brisbug had won an award at the Intergalactic User Groups Conference at New York. Lloyd said that this was due to the efforts to Ron Lewis.

Brisbug won the award for the Best Feature Articles and he congratulated Ron for his efforts in achieving this award.

Lloyd reminded members that the closing date for the August magazine 31st July.

Visit to Bundaberg

The President said the Club would be visiting the Bundaberg Club on that weekend and he invited any interest members to attend.

Lloyd thanked members for their presence and closed the meeting at 1.35 pm.

MEMBERSHIP DRIVE WINNERS

Robin Burns with his copy of Paradox
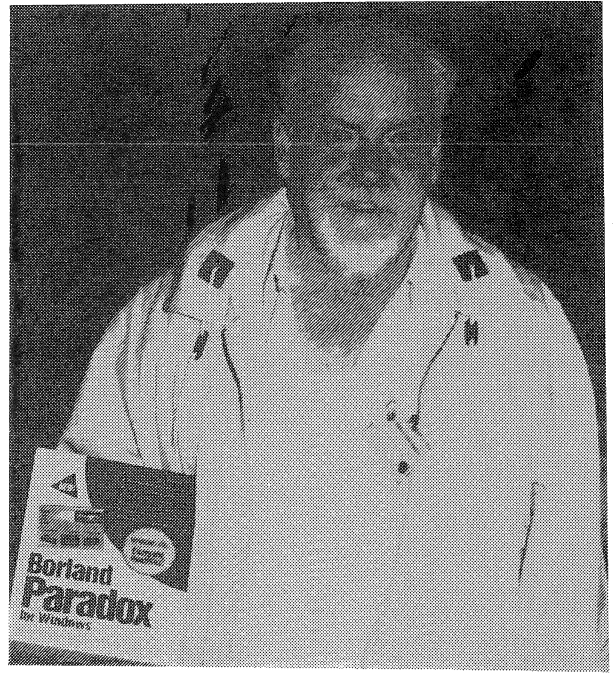
Brad Angie, representing Sunshine Coast User Group was another lucky winner

New Member, Tony Kinsman was the Lucky winner for the day

Membership Drive Winners for July were:

Sunshine Coast User Group - Paradox for Dos
Peter Jones - Paradox for Dos
Geoff King - WordPerfect
Robin Burns - Paradox for Windows
Noel Wharton - Paradox for Windows

New Member Winner:
Tony Kinsman - Paradox for Dos

Doctor DEBUG

Just a delivery boy

MaldeMere and I arrived in Key West early the next morning. The ride had been uneventful with no sign of police or other pursuit. My companion insisted on driving the entire way, and for the last few hours had driven me to distraction by singing WW II era German drinking songs.

We agreed to inspect Number 5's motel room for clues, and in no time we pulled up to a charming place called the "Do Drop Dead", a name which I though quite fitting. The proprietor was one of those class of Hispanics who think they speak English, but sadly cannot. After several hours of gestures, pantomimes, and charades he finally let us see Henri's room.

The room had been professionally worked over. Furniture was shattered, the rug was torn up, and the water was running. In a corner was what was left of Henri's Toshiba portable. It seemed that whatever information #5 might have left in his room had been quickly removed. With mild despair, I turned to leave the ruined room. "Vat do you make of Zis, Herr Doktor?"

MalDeMere broke my reverie with his question. I turned to see the German holding a long thin strip of paper. I grabbed it from him and smiled. Henri had left a clue, one which the goons who had worked over his motel room were too stupid to realize. They had never seen paper tape.

Racing out to the car, I fired up the Zenith, thankful that I had installed the Bleene MJ304 Mr. Paper Tape reader the day before I left. With MalDeMere looking intently over my shoulder, the contents of the paper tape showed on the sickly blue screen of the portable.
"Calabasa Wharf, Dock 15, Leaves 22:00 Wed", it said.

This was the clue we were looking for! A quick check of a map showed there was a Calabasa wharf nearby, and as the day was Wednesday, whatever was there obviously left tonight. Quickly we jumped back in the old car and were heading for the wharf.

It was mid afternoon and very sunny when we sauntered nonchalantly through the seedy wharf area, where many small cargo ships were docked. Soon we came to a small cutter with Bahamian markings tied to dock 15. It seemed unmanned at the present, so I suggested we take a quick look inside. MaldeMere agreed and we walked purposefully up the sloping gangplank and into the dank, smelly boat. This cutter had been modified to have one large cargo section under, and more still to the topside rear. All of this area was filled with unmarked crates. Picking up a crowbar which happened to be lying nearby, I pried open one of the crates, and the full implication of what I was mixed up in hit me.

The crate was filled with computer memory parts. But not for just any computer - the Doctor recognized them as part of a Cray YMP supercomputer. "Hans, do you know what this means! Only one country could arrange for a deception of this scale! These parts are destined for - Russia!"

"Cuba first, actually," said MalDeMere evenly. I turned and was looking into the wrong end of a .357 magnum. "And now the package is complete."

Why does this always happen to me?

JUNIOR GROUP NEWS

Reported by Annette Bulmer

SPILT MILK.

We have a new rule about keeping food and drinks from our home computer. Someone left a small glass of milk next to the keyboard and then someone else bumped it. A few drops of milk splashed onto the keyboard, so we cleaned it all out and it worked just the same.

A week later it started to smell and the next week it did funny things when we pressed "ENTER". All we got was an "R" on our screen. We took it to the Computer centre where we bought it and they found little bits of mould which they could not clean out properly.

We are waiting for a replacement keyboard from Melbourne and now know that you never, ever let food or drinks come near your computer.

JENNY SOWDEN 3287.

This is just a short note to let you know what the juniors are doing. As usual the time has run out for me. I can understand why people want more than 24 hours in their days. It is now getting into the later part of the year and we have packed alot into this time. Les has again worked hard and it was good to see him get his just reward. The only regret is that I was away on holidays when they presented it to him. So from the Juniors we say thank you for a job well done.

Also a big thank you must go to Jenny Sowden for her articles. The bit about the key board should be a timely reminder for every one. It seems the adults are more than likely to take things near them like coffee and smokes than children are. See Juniors it is not so hard so some of the other Juniors could also see what they can do.

We have some things lined up for the this meeting. Paul Marwick will give us some of his valuable time at 10 am. Then we will have Word Perfect from 11-1, Wendy Bell will be taking this session.

All are welcome to come along and join in the fun, for an action packed day.

Doctor Debug continued...

"Why does this always happen to me?" I moaned.

"Hans, we were both on the same side! I know you couldn't have organized this yourself - who is behind it? How did they turn you?"

"I am just a 'delivery boy', as you say. I am sorry, Herr Doktor, for I really did like you. However, I am getting a great deal of money for zis work. I need it to pay off my son's huge Nintendo debt, if you must know."

I was slowly moving away from him, and he jerked the gun suddenly to my face. "I vill kill you if I must, Doktor, although it will cut down on my reward."

"I deserve to know who set this up, MalDeMere," I commanded. "You didn't answer me."

"You will meet him in Cuba. In two veeks you and the Cray vill be safely in Moscow." He smiled slightly. "I am not sure which they vant worse. You have made enemies, Ya?"

Slowly he walked to another crate which he opened. "In, Herr Doktor." He commanded. Realizing that I was going to get no further information, I complied. My betrayer quickly left the scene.

The large crate was very dark, and the floor was covered with a foot and a half of some packing material. I sat down and started to think. A Cray in the hands of the Russians would be more dangerous than a 100 megaton H-bomb. The imbalance of power in computer technology would be shifted, and Uncle Sam would come out the loser. At least my mind was clear on one thing - the Russians were not going to get it while I lived.

As I felt the boat pull out of the dock a few hours later, I wondered how long that might be.

Watch for the exciting conclusion in next months issue..

CHICAGO

The Auditorium was filled to capacity. All eyes were fixed on the giant screen. The presenter spoke to a hushed crowd, anticipating the moment of unveiling. Here at last - in all it's glory, was a preview of the the new WINDOWS 4.

First look was provided by Microsoft's Brisbane representative Craig Spender. The auditorium was packed to capacity. Every eye eagerly watching the big screen as Chicago's interface unfolded. However due to not being able to disclose a great deal, our appetites were only whetted more for the final release.

Dialog Box for screen settings

The one liner was "Unfortunately I didn't bring 500 nondisclosure agreements. I could show you but then I'd have to shoot you afterwards!"

Sans OS/2

At first glance the interface is similar to OS/2 (Sorry Paul). Being object oriented all things can be treated as a separate item. Unlike Win3.11 they can be placed directly on the desktop to be used and manipulated there. This allows control and customization of individual pieces of information as desired. The difference is you are not tied to groups that contain one level of icons and display only programs.

The stand out feature is the inclusion of a control bar that is used to display the familiar group and icons in a menu structure. For the novice user, all that needs to be done is to click once on the start button and follow the menu to your program. Clicking once, or was that twice? brings it to life. As Craig explained this is a usability feature introduced for the first time and novice user.

Object Oriented concept

Once the concept of *OO* (Object Oriented) is understood, I would imagine that being able to play around with everything will entice users to the desktop. The bar also doubles as a task manager for visual display of running and minimized programs.

As was shown, all the familiar tools are included. Most people have hankered after,features that make computers less intimidating. For instance, to change the resolution you have to know about display drivers and then reboot windows before it comes into effect. Now you have a graphical representation of

Start your Exploring Here!

a monitor that shows in easy steps what needs to be done.

To change the colour depth, select the appropriate one from a list box. To change resolution, just slide the pointer. When satisfied click apply and *"voila"*. Simple and no fuss. That's how life should be.

Bye-Bye Program Manager - Hello Explorer

Say good-bye to Program and File manager and say hello to the new Explorer. We now have an icon that brings all files and devices together. These can be manipulated to your heart's content. First glance shows a hierarchical display of folders and files.

To display a program icon that was not created by an install routine, find the appropriate folder and drag the program file onto the desktop.

And now for the right Mouse Button

I should mention the use of the right mouse button will become standard fare. When using Explorer (or anything for that matter) if you highlight a file clicking the right button will display a menu. From here you can manipulate, copy, move, link and display the properties of any object.

Not just files but programs and devices connected to the computer. Working this way means it's the information that is important not what created it. If the object supports OLE 2 then it would also display a thumbnail of the contents of the object.

How did it run?

Bill Gates has stated that it will run in 4MB of RAM . After seeing it run quite happily on a DX2 - 66 with heaps of memory all I can say is don't hold your breath. The mini APPS. included would be fine but today's mega-suite's probably would be too much. Get ready to upgrade the hardware at the same time.

With all this new fangled OO, what happens to the good old ways? Later this year Microsoft will upgrade it's programs to a 32bit level. The programs themselves won't change (as they recently have) but the underlying structures will. This will give them a massive head start when Chicago is released.

Small Developers - Watch out

Unfortunately I can see the small or slow software developers being steamrollered by the Chicago giant. All is not bad news as there is 85 million Windows users out there.

A large percentage wont be able, or don't want to switch immediately to a foreign way of computing. Big enterprise networks being one. Just look at the struggle OS/2 has had.
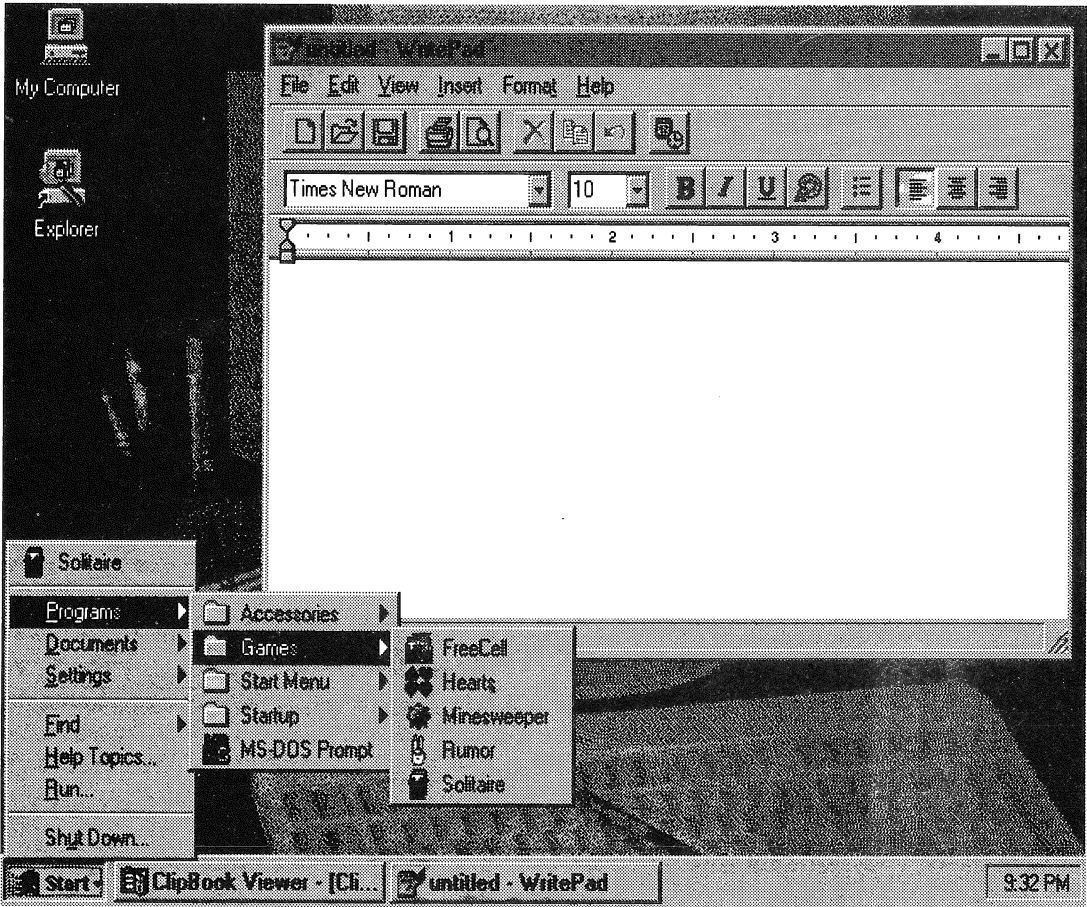
The elements of Chicago - Task Bar - Menu - Write Pad

When will you get to play with it?

With everything is stamped Top Secret. Getting an in depth look at all Chicago's glory is impossible. There has been lots of snippets in the popular press both here and overseas. One will have to wait till next year before the final product is released.
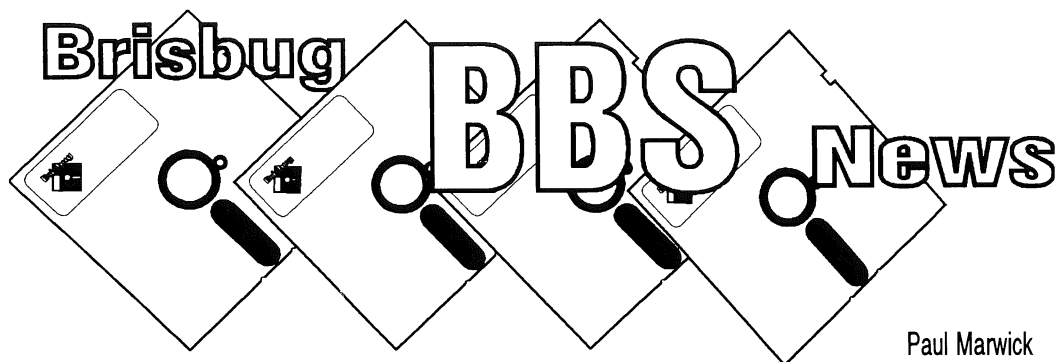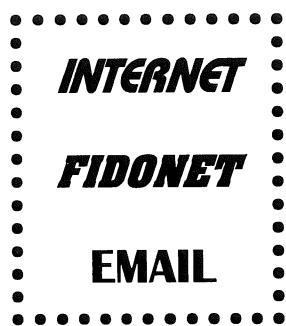
Most of this should have appeared last month, but it seems that Pagemaker took a dislike to it and ate it instead... So I guess we'll have to try it again.

MODEM CHANGES

The modems on Lines 3 and 4 have now been replaced with new Microcom Deskporte Fast modems. These modems are capable of 1200, 2400, 9600, 14400 and 28800 bps. As a result of this change, PEP is no longer available from either Line 3 or Line 4.

It was my intention to move my Worldblazer to Line 1, and move its current TR250 to Line 2, since that would provide an overall upgrade. However, that has had to be delayed due to a few problems. If it is done, it will be a temporary upgrade in any case, since I will be looking for a buyer for the WorldBlazer (while its still worth anything at all..).

MORE ON INTERNET

In the last BBS News that appeared, I mentioned that Internet addressing was similar in nature, but different in detail to Fidonet addressing. I will now attempt to cover some of the details of Internet addressing.

A Fidonet (or Fidonet-technology) address consists of a zone, a net and a node portion (and possibly a point number), in the form 3:640/821 (which is the Fidonet address for Line 1 of the Brisbug systems. In some instances, with a Fidonet address, you will also find a domain name being specified (for example, 3:640/821@fidonet is the Line 1 address complete with domain name).

An Internet address is somewhat similar, in that it also contains a node portion and a domain portion. However, Interent addresses also include a user name as an integral part of the address.
To illustrate:
paul@madhouse.brisnet.org.au

The above is my Internet address. First comes my user name, then the node name (madhouse), then the domain (brisnet.org). The final element of the address (.au) indicates Australia.

Apart from the fact that the Internet address contains the user name as well as the rest of the addressing information, Internet addresses are organised in reverse order to Fidonet style addresses (where the zone number is the closest element to the .au in the Internet address.

In exactly the same way that you need to know a Fidonet address before you can send a netmail message to someone on another Fidonet system, you need to know an internet address before you can send an Internet Email message. Without an address of the sort illustrated above, the message will go nowhere (or will simply be bounced back at you).

DETAILS OF INTERNET ACCESS

Internet access for Brisbug members who elect to take up the option currently being offered should be fully in place by the time this reaches you. Some details of how it is organised would probably be useful.

First, Newsgroups will appear much like normal Fidonet echomail. One thing which distinguishes them from Fidonet echomail is that all messages are always addressed to "All". This makes it somewhat more difficult to follow reply chains than it does with Fidonet echomail, but is something that is imposed by the way the gating software works. This may change at a later stage, but for the moment, the linking of replies in Interent Newsgroup areas will be somewhat less than optimum. Some of the areas available will be read-only (since they are moderated Newsgroups, if you wish to submit an article to those that Newsgroup, it must be sent by Email to the moderator of the area). This applies to areas used to announce new products, and a number of other areas.

Some areas will provide both read and write access. In these areas, users will be able to enter mail in much the same way that they would in an echomail area. One problem with this type of entry is that when Newsgroup mail is remapped on export, the To: name is replaced by "All". In order to distinguish who a message is to, there are what are commonly called attribution lines. An example of a typical attribution line is below:
James A. Dahl (dahl@cs.UND.NoDak.Edu) wrote:

Unfortunately, none of the editors currently available through the BBS (nor for that matter, any QWK reader that I am

---

aware of) will automatically insert this type of attribution line. So it will be up to users to manually (or through a macro) insert such information if they want it to appear in the final message.

EMAIL

Internet Email has been set up to work somewhat differently. I have provided a separate area for Interent Email, mainly in the hope of making its usage reasonably transparent to users, both online and using QWK mail readers.

In the Email area, messages can be entered using the full internet address of the recipient. So, I can go to that area, begin to enter a message, and when I get the To: prompt can enter something like this:

davidn@csource.au

When the message is exported and packed, the address will be modified to suit the packing software so that it can then be sent to the local internet hub.

There is one problem with this approach. If someone replies to a message, they will have to be careful to change the name that it is sent to from (for instance) David Nugent to davidn@csource.au. When a message is received, the name will be mapped so that the message will come from David Nugent (or whoever), but it cannot be sent out in the same manner. Users will have to take care to ensure that they modify the To: line to reflect the internet user name and address.

This approach is somewhat simpler for QWK users than sending normal Fidonet netmail using QWK, since there is no need for a To: <address> line to be added to the message body as there is in using QWK to send normal Fidonet netmail.

POSSIBLE FUTURE DEVELOPMENTS FOR INTERNET ACCESS

There are a number of possible future developments for Internet access. As mentioned last month, this access currently only allows Email, Newsgroups and some ftpmail. If there is sufficient interest (and sufficient funds forthcoming), this may be extended to more direct access. To implement this, a permanent SLIP link to the Internet host will be required. This involves (at least) two new modems plus a new phone line (not to mention a significantly higher cost in terms of fees paid to the internet host), so it will not be happening in the immediate future.

Adding a permanent SLIP connection would allow direct FTP access to callers, which would certainly be easier and more effective to use than ftpmail. It would also allow for much faster turnaround for Internet mail, since it would then be flowing continuously, instead of depending on when the systems can get through to the Internet host to send and receive mail.

MESSAGE AREA REORGANISATION

As callers to Lines 3 and 4 will have discovered by now, the message areas have now been modified to use the same multi-level selection menu that has been used for files for a little while now. When the Internet access is fully enabled, those who have this access will find an "Int" group of message areas which will contain both the new Email area and the various Newsgroup areas.

Time permitting, the same changes to both message and file areas may have taken place on Lines 1 & 2 by the time this reaches you. If not, they will be occurring fairly soon.

One problem to which there is no easy solution is that when changes are made to the message areas, all areas that a user may have tagged for QWK download have to be retagged. Also, any mail which is uploaded (at least until the changes are reflected in the user's QWK setup) will be in invalid areas, so such messages will have to be manually sent to the correct area. This is particularly important, since messages can otherwise end up in inappropriate areas very easily.

Figures 1, 2 and 3 show aspects of the new message area organisation on Lines 3 & 4, at least as they are currently implemented. As with any thing else regarding the BBSs, these are NOT static, and will continue to change and evolve over time. The Internet area for instance is currently very sparse, since I've only just begun to add Internet Newsgroups to the system.

```
Message Areas :
 *Net              ... Netmail Area
  Loc              ... Local Message Areas
  N640             ... Local (Net 640) Echomail Areas
  Z3               ... General Zone 3 Echomail Areas
  Comm             ... Communications Related Areas
  IGen             ... General International Echo Areas
  OS2              ... OS/2 Echo Areas
  Prog             ... Programming Areas
  Int              ... Internet Areas
Message area [Area #, "["=Prior, "]"=Next, "?"=List]:
```

Figure 1 - The new top level message area menu on Lines 3 & 4

```
Message Areas :
  *Int.Em              ... Internet Email
  *Int.IN1             ... OS/2 Advocacy
  *Int.IN2             ... New OS/2 Announcements
Type ".." to go up one level. Type "/" for the top-level menu.

Message area [Area #, "["=Prior, "]"=Next, "?"=List]:
```

Figure 2 - The Internet Subdivision message area menu in its very early stages.

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Our customers also benefit from our company-wide environmental policies, such as the elimination of CFCs in manufacturing, as well as our total commitment to energy efficient products.

Mind you, our efforts haven't exactly gone unrewarded.

Since our inception in 1982, we have become the world's leading supplier of portable PCs and PC servers (source: Dataquest, IDC). The sticker on the box is simply the icing on the cake. You don't want a compromise. You want a Compaq. **COMPAQ**

Quality Endorsed Company AS 3902 Lic 2828

```
Message Areas :
*N640.Auto          ... Auto Echo
*N640.Debate        ... Debates Echo
*N640.Bris          ... Brisbane BBS User's Echo
*N640.Joke          ... Jokes Echo
*N640.Stir          ... Stirrer's echo
*N640.Trade         ... Trading Echo

Type ".." to go up one level. Type "/" for the
top-level menu.
Message area [Area #, "["=Prior,"]"=Next, ?"=List]
```

Figure 3 - Queensland Echomail message area menu

No attack dialling - or else!
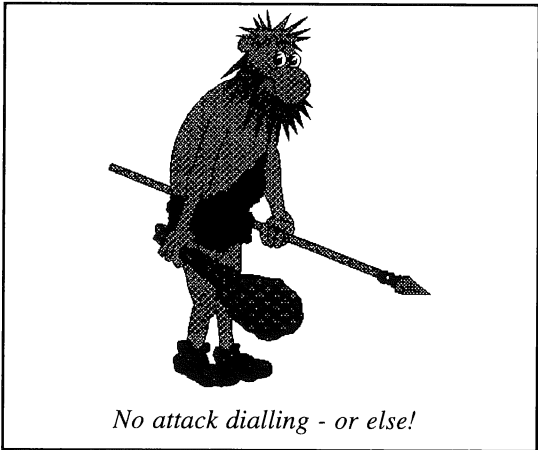
More next month....

GOLD DISCOUNT CARD

Following discussions with Draco Pacific at PC94, I am pleased to announce the issue of a GOLD DISCOUNT CARD for each member which has been included with this issue of Significant Bits magazine.

This card entitles the member to 5% discount on any CD-ROM they purchase, and 10% on purchases over $250. These discounts apply to new CD's and represent a good saving, considering Draco's prices are already competitive.

I hope members use this card and look forward to arranging further discounts as they can be negotiated.

You will find the discount card inside this months magazine, so please keep it and whenever you wish to take advantage of this offer, please make sure you take your card along to:
Draco Pacific,
Level 1, 316 Evans Road,
Salisbury, Qld 4107   Phone (07) 274 3060

Graeme Darroch
Vice President.

BBS INFORMATION

Line 1: Phone number 871-0298.
Availability:
No human use permitted between 00:00 and 01:00 am (outgoing mail calls).
No human use permitted between 04:00 and 05:00 am (Fidonet Zone Mail Hour).
Supports PEP, V32, 2400 and 1200

Line 2: Phone number 871-0304.
Availability:
No human use permitted between 00:00 and 00:15 am (maintenance).
No human use permitted between 04:00 and 05:00 am (Fidonet Zone Mail Hour).
Supports PEP, 2400 and 1200

Line 3: Phone number 870-2972.
Availability:
No human use permitted between 00:00 and 00:30 am (outgoing mail calls).
No human use permitted between 04:00 and 06:30 am (Fidonet Zone Mail Hour plus incoming mail calls).
No human use permitted between 22:00 and 22:30 pm (outgoing mail calls).
Supports V.Fc, V32bis, V32, 2400 and 1200

Line 4: Phone number 870-0653.
Availability:
No human use permitted between 00:00 and 00:30 am (outgoing mail calls).
No human use permitted between 04:00 and 05:00 am (Fidonet Zone Mail Hour).
Supports V.Fc, V32bis, V32, 2400 and 1200

Line 5: Phone number 209-4980
Availability:
No human use permitted between 00:30 and 01:00 am (incoming mail calls).
No human use permitted between 02:30 and 03:00 am (incoming mail calls).
No human use permitted between 04:00 and 05:00 am (Fidonet Zone Mail Hour).
Supports V32bis, V32, 2400, 1200.

Note: All of the systems have a short period for maintenance which starts at midnight. Since coordination between the lines is important, this overrides any human access.

Paul Marwick - Brisbug Sysop
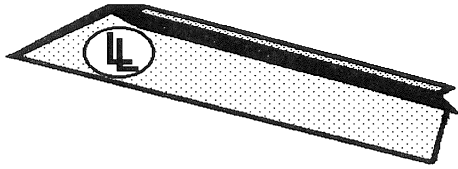
Practical Computing for Established and New Computer Users

*L*ike money, the computer is amoral. It's neither good nor bad. But also like money, it can be used for either good or ill. Without question there are unbelievable benefits to be had from the age of computer technology. There are also unbelievable dangers.

One is smart cards, tiny credit-card sized cards already in use in numbers of countries around the world, where a computer chip has the capacity to hold and process figures. Smart cards, or something similar to smart cards, can totally replace cash, and ultimately usher in the cashless society.

Like any new technological revolution in society there will be winners and losers to this. With the smart card, amongst other benefits, the winner will be: sheer convenience. The loser: our personal privacy.

And that's a pity, for the smart card could be relatively anonymous, just as is cash. Or it can be totally intrusive, recording everything you do and have done, and ever will do, with money.

If this should occur, then the central computer will have a record of every purchase you've made, when and where, how much you've got - to the cent - and how much you owe. It will know what you eat, and wear, where you are and where you've been, and all about your mortgage and income. This information will be available to others, for there's no way of ever making computer data secure. And you can be certain that governments and government agencies will have the widest access to everything about our lives.

Smart cards - a new revolution - brought about totally by the advent of the computer. But at what cost? What's most scary is to observe how the average person in countries around the world is tacitly accepting the slow but inexorable incursion by Big Brother into our private lives.

It's almost like our brains - and spirits - have plain gone to sleep.

Computer World

* HOT CHIPS

The ABC looks to be on a winner with their Wednesday evening, 8pm program HOT CHIPS.

It's very slick, informative, interesting, and more professionally put together than the SBS offering THE BIG BYTE.
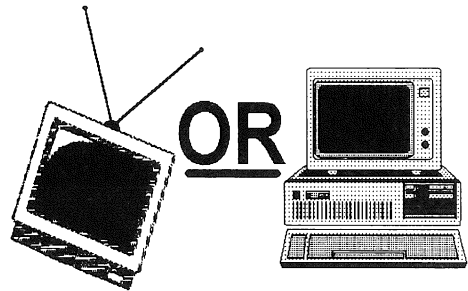
For the computer buff, HOT CHIPS could be considered something close to essential viewing.

* WILL DOUBLESPACE BE BACK?

It's rather fascinating to watch the larger software and hardware firms of the PC world getting in and out of bed with each other. We recently saw Microsoft and IBM so cosy together till they had a disagreement. As a result, IBM just popped across and got in with Apple!

The latest example of this again concerns Microsoft, where Stac and the software giant took each other to court over disk compression utilities. Microsoft had a resounding loss over the issue, and had to take DoubleSpace out of DOS 6.2, reissuing it as DOS 6.21 sans DoubleSpace compression.

(Editors note - DoubleSpace now re-issued in DOS 6.21)

But now MS and Stac have kissed and made up (should we all say: "Ahhhhhh, isn't that nice?") and entered into cross-agreements to - hopefully - keep them friends for some years to come.

Does this mean that when Windows 4/Chicago is finally released (supposedly) early next year that it will include disk compression?

* HOME PC OR TV - WHICH WILL TAKE THE HONOURS?

It will be interesting to see if the TV will absorb our home computer in time to come, or whether our PC will incorporate the TV. To date I've seen little to indicate that our home computer could win out against the giant strides TV is making towards running our lives at home.

Let's face it, the box already takes up hours of every day. And there's a pile already in the pipeline to make it THE information tool of the future.

But not if Intel has its way. The giant chip-maker has serious intentions of making the PC the way of the future. If they succeed, then the TV will be incorporated into it, including all the facilities TV will soon bring into our homes.

Like I said, it will be interesting to watch how this unfolds.

* MICROSOFT TOO

But it's not just Intel who are putting money into the task of making the computer the centre of our home life in the year 2000. Microsoft are also working on the concept of a hybrid PC and television to bring interactive TV to our lounge-rooms.

One of the things that's surprised me for some time is how slow the computer world has been to get onto this particular band-wagon.

It's long looked to hold an awful lot of promise - including very nice bottom-line profits to those who manage to do it first.

* MORE AND MORE POWER

Power with a capital P is certainly the way the PC industry is currently heading. On the desktop we've got everything up to a dual Pentium 100, while high-end 486s like the DX4-100 are now going into notebooks as well.

Power does cost money, of course, and many of us will continue to have to settle for lesser offerings, not quite matching the speed of the power machines. Nonetheless, incredibly power and speed is available today if you want it - and can afford it.

* COMPUTER SECURITY

As the world becomes more and more interconnected via computers, security is looming large as one of the major challenges to our ultimate well-being on the planet. We've long heard of hackers breaking into places like NASA.
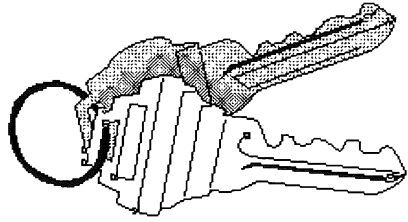
But increasingly these anti-social mis-fits are breaking into more local computer systems, doing things like changing a patients diagnosis or drug dosage. That such things can be, at worst, life-threatening, give a lead to how important the question of computer security is, and is going to be, at all levels of our society.

And I, for one, don't have a lot of faith in how good that security is likely to be.

* WHAT WILL HAPPEN TO THE INFORMATION SUPER-HIGHWAY?

We've hardly even got started on the info. super-highway, and already cracks are starting to show.

The misfits, the cranks, the crooks, those dedicated to greed - these and more are already getting into the act of making it difficult for us all to be connected via computer to the rest of the world. Which really is ironic.
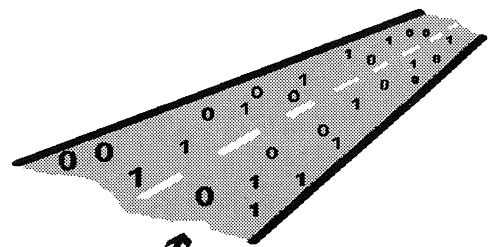
This way to the I S-H!!

Here we have this incredible technology that will allow us to look up just about anything, read just about anything and see just about anything, from any age, anywhere in the world - and already the bad-guys are threatening it!

One of their favourite sports is connecting in to business - and just about anyone else - illicitly getting information, and utilising it illegally, as well as spreading false information.

This is fast becoming so serious, that maybe it will come to be called the Information Snoopers Highway.

To date, the answer to this problem appears to be quite elusive.

* DOS 6.3?

I've found more than a few people confused about what DOS is what these days. And no wonder. If you buy a new computer, likely as not it will have MS-DOS 6.21 on it. Because of the earlier fracas between Stac and Microsoft, 6.21 does not include DoubleSpace.

Meantime, DOS 6.3 is out. But this is PC-DOS 6.3 from IBM, rather than the regular MS-DOS that most folks use. If you wish to have DoubleSpace, it's still possible to buy MS-DOS 6.2, or to upgrade to 6.2 from 6.0 (something you should do).

(Ed. Why upgrade backwards? PC-DOS 6.3 has quite a lot to offer, even without DoubleSpace.)

The Market

HOW TO BUY A NEW COMPUTER

John thought quality should be okay no matter who he bought from - until a motherboard cracked in two when installing a peripheral card.

Jim thought the company he bought from would be there to help him afterwards (in fact they promised they would!) - until he had to call them with a problem. He soon discovered they didn't want to know him.

Tom thought warranty meant you'd get your computer fixed if a fault developed -until he had to take the floppy-drive back 7 times, and still it wasn't fixed.

What sort of computer purchaser are you?

The stories above are unusual? Sadly, they're not. So how can you "get it right" when purchasing your new computer? Here are a few pointers that may help.

DECIDE WHAT SORT OF CUSTOMER YOU ARE

New computer buyers can be put into a couple of simple categories. Checking which of these fits YOUR needs should help you when next you buy.

1. THE PERSON WHO BUYS ON PRICE

This person is probably the commonest PC shopper. They will shop around and compare prices until they have what they consider the best price. PCs at the low end of the price range are roughly equivalent to used cars. He may get away with purchasing the cheapest of computers, but he may not. This buyer pays his money and he sure takes his chances!

2. THE PERSON WHO WANTS OR NEEDS REASONABLE QUALITY

But everyone wants decent quality, don't they? Yes, probably they do. But many don't want to pay for it, as in 1. above - a definite case of being penny-wise but pound-foolish. If you want quality, you have to pay for it. In almost every case cheap price quite simply means - cheap components.

This person is shopping around, not to get "the best deal", but to find the firm to whom quality really is important. So how do you find such firms?
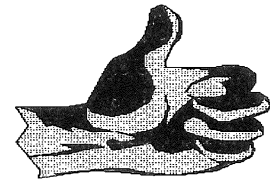
The answer to that is as clear as it is simple: ask someone who works in the computer industry and who's opinion you trust.

Check the consumer reliability surveys - the quality firms invariably show up near the top; the cheapies at or near the bottom. The wise person will steer clear of them like the plague.

3. THE PERSON WHO WANTS/ NEEDS AFTER-SALES SUPPORT

This person must NOT buy on price. The PC industry really is very cut-throat. Firms selling at the bottom of the scale are NOT making a lot of profit from your purchase. So even if they wished to, they just cannot support you afterwards. It's as simple as that.

So where do you go to ensure you get support after your purchase? Some of the bigger brand-names have after-sales phone support. The cost of this is included in what you originally pay for your computer, and in some cases this may help this sort of customer.

Others offer on-site warranty (usually you pay something extra for this). On-site means your PC will be fixed at home and that can be a real boon for many. But it is NOT support in the broad sense.

For the fullest after-sales support, in my opinion, you cannot go past the sole-trader who is selling a quality product. Some of these operate from home, others from a shop.

They can and will help you get a quality computer system, and will be there for you afterwards. (In this area, beware, of course, the "backyard operator" who sells cheap, sells junk, and is likely to be gone next month.)

4. THE PERSON LOOKING FOR A PACKAGE DEAL

We seem to be offered the package deal more and more these days. The sort of thing I mean here is the total system - including multi-media and a deal of software. Often its a known brand-name packaged this way, and pricing looks keen. So it this good value?

It depends. Many times such a package is retailed via the supermarket type operation. If you don't need any after-sales service, then in some cases this may be good value. If you need support afterwards - and good advice for the purchase itself - then you'll probably want to give them a miss.

Once again the good sole-trader will be there for you, both before and after sale. But can he put together the package deal? Yes, mostly he will do this for you without problem.

Q & A

But isn't the sole-trader likely to go out of business? I doubt the good ones are any more likely to go out of business than big computer firms are. Let's face it, we live in an uncertain world these days. In any case, it you choose wisely, the sole-trader who closes down is likely to transfer support to a colleague.

But I'll lose warranty in this case, won't I? Warranty is usually covered by the original manufacturer. The good brand will still honour the warranty in this event.

SUMMARY

1. Work out what sort of computer buyer you are.

2. If you need quality, make sure you pay to get it. Likewise, if you need support.

3. Ask questions of the right people, listen to their advice, and make sure you buy what you really need.
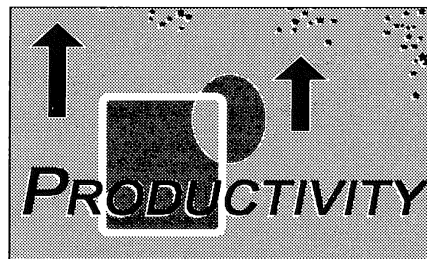
FAST FILE FINDER

As our disks get larger and larger, the task of finding that lost file is becoming more and more of a consideration. There are numbers of programs that will do the job, but many are slow, and often they scan just one Drive at a time.

FFF - Fast File Finder overcomes both of the above problems, is easy to use, and has an enviable range of options. Best of all, it's FAST. In the old days I would have preferred WIZ over FFF for speed. These days they're possibly about even, but FFF has a decided edge on useability and friendliness.

To save you hunting through the docco to figure out what switches to use, just extract FFF44.EXE from FFF.EXE, and put it into a directory in PATH.

This command line will then find a file you think is SMITHJ01.DOC:
```
fff /e c: smith
```

You'll end up with a nice friendly display of all the SMITH files FFF finds. You can then do many operations on these, not the least of which is actually run any executables found! If you have more than just Drive C, replace the C: with, say, CDE:. FFF will search network drives for you as well.

RATING: 8 out of 10.

AVAILABILITY: I've put FFF on Brisbug 8609 which you may get from the library.

MAKE A BOOTDISK!!

It's amazing how many computer users haven't made themselves a bootdisk. You need this in case something goes wrong on your hard-drive, or you have an accident with your important bootup files in the root of Drive C. The bootdisk enables you to still get into your computer, thence to find, and hopefully remedy, the problem or problems.

So making a bootdisk is definitely a DO IT NOW task.

Get a floppy-disk that's new or you're certain has nothing important on it. It has to be one that you'd normally put into A Drive (you CANNOT boot from B Drive).
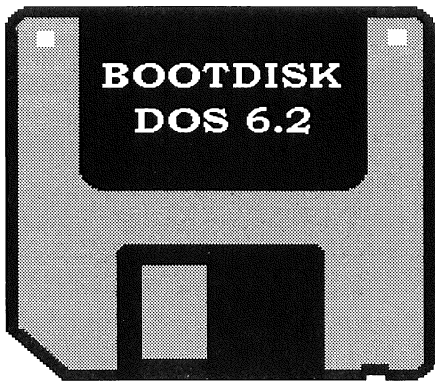
We'll now format this disk and make it bootable at the same time. In DOS you can type:

FORMAT A: /S

to do the job (this applies to later DOS versions; if it doesn't work for yours, you'll have to consult your DOS Manual.)

In Windows, the way to go is to follow the instruction on formatting a disk as above, plus the extra step of clicking on Make System Disk. Note that when a bootdisk is completed the figure shown for Available on disk will be LESS than Disk space.
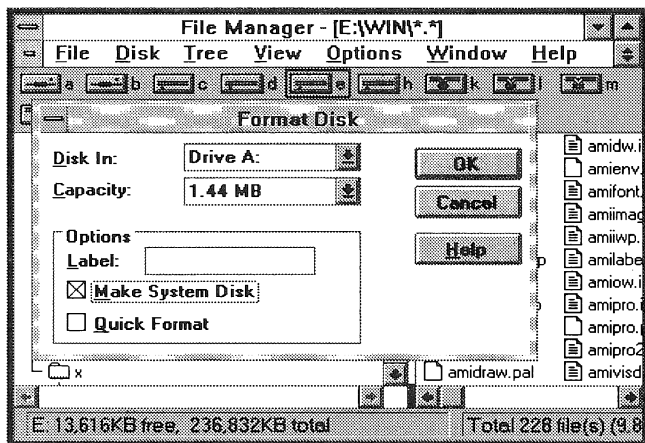
It's easy to create a boot-disk using the Windows File Manager.

LABEL YOUR BOOTDISK

Label the disk as a bootdisk. If it's a 3 1/2" disk use a biro to move the tag on the back of the disk from Write to Protected. This disk now cannot be overwritten (until you move the tag back again). Put it in a safe place.

As a final task, if you know what DOS version you're using, write that on your bootdisk also (different DOS versions do NOT mix, so it's important info. you've just written).

If you're not sure, in DOS just type VER then tap Enter to have DOS tell you what version you're using. Oh, and if you've upgraded your DOS at some point, do make a bootdisk for the DOS you're now using (ESPECIALLY if you use DoubleSpace).

TEST YOUR BOOTDISK

Finally, do test your bootdisk. Put it in Drive A, and reboot the computer. When that's done, type C: and tap Enter. If your DOS files are in C:\DOS type CD\DOS and tap Enter, then DIR and tap Enter. You should see a list of your DOS files. If all looks okay, take the bootdisk out of Drive A, and reboot normally.

MAKING A DOUBLESPACE BOOTDISK

As mentioned above - and in last month's LL - if you've put DoubleSpace on your HD, you need to remake your bootdisk. And if you choose to do this via Windows 3.1, you have an extra job to do. W31 doesn't seem to put DBLSPACE.BIN on your bootdisk. Without this file, your bootdisk will give you NO access to your DoubleSpaced drive! So you must copy it there by hand.

If you don't know how to do this, then best is to format your disk in DOS (because DOS does put DBLSPACE.BIN on the bootdisk!) Click on the MS-DOS Icon to go to DOS, and with your floppy in Drive A, type:

FORMAT A: /S

When you've finished, type EXIT and tap Enter to return to Windows.

Don't forget to test your bootdisk following the test procedures in Make A Bootdisk above. That should ensure that DoubleSpace really is on line. The bottom line to this is to make CERTAIN that you have a current bootdisk, that will bootup into DoubleSpace.

DOS GRAPHICS PROGRAMS WITHIN WINDOWS

Regular readers will remember my complaints about a DOS box within Windows -that it is NOT correctly proportioned, cannot BE correctly proportioned, and cannot be made to fill the screen.

I also said I hope these things will be properly addressed in Windows 4/Chicago when it finally arrives next year - so the millions of people who still run DOS programs around the world do not continue to be so disadvantaged.

But there are two other matters that need urgent attention, too. The first is that a lot of games won't run in a DOS box - either full screen or within Windows.

When we get Windows 4, piles of people will continue to want to run their current games. Will they still have to exit Windows to do so? That's presuming there'll still be an exit to DOS, seeing the new Windows will have the DOS integrated within its code.

The second concerns graphics screens. Currently many of these simply will not run in a DOS box, full-screen or no. Once again you have to totally unload Windows to run such graphics.

Will these things be addressed in Chicago? I sincerely hope they will.

Smile Awhile
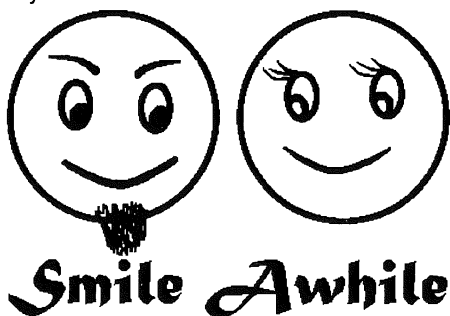
LINDSAY'S COMPUTER DEFINITIONS

bit - you dismantled the computer and this was what was left after you put it together again.
byte - The Great Australian . . .
gigabyte - dance done after biting lip really hard
motherboard - Mum badly needs a change
daughterboard - so does daughter
hardware - too much starch in the knickers again!
software - ahh, that's better!
software house - where you go to buy the very softest of knickers.
hard-drive - very rough trip in off-road vehicle
floppy-drive - drunk-driving
high memory - everything you can recall after the tough climb to the top of Mt Kosciusko
upper memory - everything you can recall from the way up
base memory - can't remember a blessed thing: never even started the climb!
Operating System - procedure followed at the operating table during your heart surgery
Disk Operating System - procedure followed to fix your slipped disk
floppy-disk - the reason you originally needed the above operation
virtual memory - a sort of Clayton's memory
virtual disk memory - all you can remember of your slipped-disk operation

(Continued next month)

HINTS & TIPS
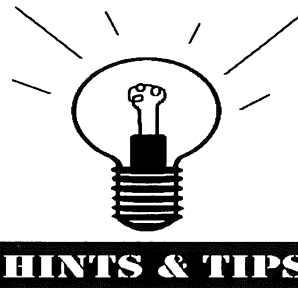
1. SAVE SPACE WITH DIFFERENT GRAPHIC FORMATS.

There are many different graphics formats in today's graphic-orientated world. But they are not all created equal - not by a long shot.

If you're having hard-disk space problems - and who isn't these days? - then it may pay to use a format that takes up least space. Take Windows .BMP files for example. In Paint-brush you can save as .BMP (the default, unfortunately) or .PCX. Save the same file in both formats some time and check the difference -I've seen .BMPs using up to an unbelievable 10 times the amount over the .PCX!

If you use DoubleSpace, however, you won't gain anything like as much by going to - for example - .PCX. This is because the larger files tend to be large because of piles of internal empty space - which DoubleSpace will immediately compress anyway.To ensure you understand what's happening here, a DoubleSpaced .BMP (or .TIF) will still show its size as, say, 200K against a .PCX of perhaps 30K. So it still looks larger - and in fact it is larger. It's just that when physically saved to disk by DoubleSpace, the amount of HD space actually used may be quite similar.

2. DOUBLESPACE, PKZIP AND OTHERS

Many of us have zipped or archived our files for years and years, in order to save disk space. We've done it especially on floppies, because you can store nearly twice as much if you use PKZIP, or LHA to zip the files first. Or we've even done it to compress stuff on our HDs when space was at a premium.

But in these days of DoubleSpace, Stacker and the like, no longer are those .ZIP, .LZH and .ARC files so important. Why? Because DoubleSpace-type compression does a similar job - and does it with an awful lot less fuss than PKZIP and the others!

3. STORE UNUSED MATERIAL ONTO FLOPPIES

Make more precious HD space available by moving those seldom used data and program files onto floppy. You can fit more onto the floppy by zipping the files first, as mentioned above.

If you use DoubleSpace you can double-space your floppies to maybe double the amount you can fit on them. Just be aware that your floppies can then only be read on other PCs which DoubleSpace their floppies.

IN THE WORKSHOP

1. USING SCANDISK

The Excel file was clearly faulty. Excel wouldn't read it, and it was a quite large and important file. We tried CHKDSK on it, and it found no problems. That was probably to be expected, and is why Microsoft have now provided SCANDISK to use instead.

SCANDISK did find a problem, reporting that the cluster with the problem was being used by the Excel file. It further said that data would be LOST, but it would fix the cluster, moving files/directories to safe locations on the drive.

This it all did as promised. The file WAS totally lost (this is exactly why backups of important data-files are so crucial). In the end, everything ended up back in ship-shape condition, and it didn't even have to mark a bad sector in the process.

3. DEFRAG

I know I do shift a lot of big files round on my DoubleSpaced Drive E, but I still don't really know why my DoubleSpaced E Drive keeps getting so fragmented.

Recently I went to copy a 360K file to E - which had a reported 2.7Mb free -and the copy failed because of lack of disk space! It's important to recognise that DoubleSpace doesn't always accurately report the correct amount of space left, but that wasn't the problem this time.

Just in case there was a disk problem, I ran CHKDSK, then DOS 6.2s SCANDISK. There wasn't. (When I ran SCANDISK on Drive E, I told it to check Drive H first, but I didn't do a disk scan. I then told it to do the Next Disk.) SCANDISK did kindly inform me that Drive E was badly fragmented (again!), and recommended that I run DEFRAG E: from the command line.

It also told me why the file wouldn't copy: the bad fragmentation of E meant that free space wasn't being made available. As soon as I could find time to do it (I knew defrag would take an age!) I ran:
    defrag /h /q e:
from the command line.

It took about an hour and a half to complete. At the end of that time I had retrieved an amazing extra 5Mb+ of disk space.

3. MAGNETIC SCREWDRIVERS AND FLOPPY-DISKS
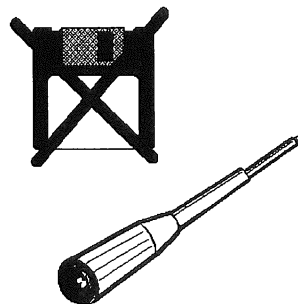
It's very convenient to use a magnetic screw-driver when doing jobs on your PC. Nettie gave me one for my birthday some time back, and it's been worth it's weight in gold! But it's just too easy to put the drive down - straight on top of a floppy-disk on the desk!

We all know floppies store all their data magnetically - a magnetic tipped screwdriver is NOT what's needed here. I was lucky. I only clobbered one disk before I figured out what was happening. So watch out if your partner decides on such a gift for your next 21st!

Undocumented feature: it's a bug. (We know it's a bug, but we still haven't a clue how to fix it.)

Under the most carefully controlled conditions of best computer, right program, efficient operator and correct keypress - the *@#%? thing is still likely to do as it pleases.

"We don't merely believe in miracles - we rely on 'em!" Have a really terrific month!

- *Lindsay K. Bates Ph: (07) 808 9441 after 10am*

The OS/2 Column

Paul Marwick

This month, we're going to continue building the procedure to call the Telecom time service and set system time using information gathered from it.

In doing so, we'll be looking at several new things.

First, to do the required job, we need a couple of things that are not part of base level REXX. To obtain these extended services, we will need to load the utility functions that IBM have provided with the standard REXX interpreter. There are many other extensions available for REXX, and the load sequence that we're going to use can be applied to any of them as well.

Second, we need to take all the information that we gathered in the first part of this procedure (whether it used the command line or the menu-driven version of the routine) and convert it to a form usable to address the modem.

GETTING THE CORRECT DATE AND TIME

Third, we need to retrieve the information sent by the Telecom service and convert it to a form which can be used to be fed to the DATE and TIME commands to set the system time.

There should also be another part of this, which is checking for and handling any errors encountered in addressing the modem. Unfortunately, there is something of a problem in this area, so that will not be fully possible at the moment.

The problem is the routine I was using to test the availability of the selected serial port. In a multitasking system, it is quite possible that some other session may already be using the serial port and modem (for instance, on my office machine, I normally have FAX software waiting to receive any incoming calls, and, since it is not visible when idle, it is quite possible to forget to exit it before starting the time checking routine).

To avoid this type of problem, I have been using the REXX command to open the port, and checking the return value from that command. Which works fine with OS/2's native COM.SYS serial driver, or with several other alternate serial drivers (including the XALL.SYS driver used for the DigiBoard which I use on my BBS machine). However, it does not work with SIO.SYS, which is a very popular replacement serial driver.

SIO returns the wrong value when the port is opened, which results in the original test routine failing, even though it has opened the port.

I have not had sufficient time to find a way around this problem (and I really shouldn't have to do so either, since the return code that I am trying to get is the correct one). The author of SIO has promised to fix the problem, but as yet there is no sign of a version of the driver which has fixed the problem.

USING THE OS/2 MODE COMMAND

One work-around which I did try was to see if the OS/2 mode command (which we have to use anyway, to set the communications parameters for the port) would return an error when it was run on a serial port already in use. However, it seems to be broken in that regard - not only does it not return an error, it also seems to be able to set the communications parameters even though the port is in use by another session. Not very good behaviour under a multitasking operating system. It looks as though IBM needs to do some work on the MODE command as well...

As a result, for the moment at least, we're going to have to skip that part of the testing routine, and simply assume that the port and modem are available. If I find a way round the problem, or if a fixed version of SIO becomes available, we can add that extra bit of checking back in later.

GETTING STARTED

The first thing we need to do is load the utility functions that we're going to need. REXX provides a standard method for loading extensions, and that is what we'll use. See figure 1 for the basic format of the command.

Figure 1 - Loading the REXX utility functions.

```
call rxfuncadd 'sysloadfuncs','rexxutil','sysloadfuncs'
call sysloadfuncs
```

The REXX utility functions are loaded globally. Once they are registered, they are available to any session. As a result, there is no need to load them if they have already been loaded. So we can extend the first routine to do a check to see if they are loaded, and only load them if they have not already been loaded. See figure 2 for the routine needed to do this.

Figure 2 - Checking to see whether the REXX utility functions are loaded and loading them if they're not already loaded.

```
if rxfuncquery(sysloadfuncs) \= 0 then
  do
      call rxfuncadd 'sysloadfuncs','rexxutil','sysloadfuncs'
      call sysloadfuncs
  end
```

The same sequence can be used to load other REXX function extensions, and the same testing sequence can also be used to check whether or not they're already loaded.

If you intend to make frequent use of REXX, and want the extensions to be available without having to test for them in every routine which may make use of them, it might be a good idea to create a STARTUP.CMD which goes through the basic load procedure, and put it in the root directory of your boot drive. Since OS/2 will always run a STARTUP.CMD if it finds one, this will mean that you can safely assume that the utility functions will be available at all times. The only thing to be a bit careful of in this instance is that it is possible to unload the functions after use, and if you use someone else's REXX code, they may load any unload the functions in their code.

Having made sure that the utility functions are loaded so they'll be available when we need them, we can start working with the data that is been collected.

DATA CONVERSION

There are a number of items of data which were collected by the TSET.CMD or the MTSET.CMD which were built last month. These are the serial port to use, modem speed, city to call, whether to use tone or pulse dial, as well as optional modem initialisation strings and optional STD codes to use.

Figure 3 - Converting the contents of the CITY variable to the correct number to dial, as well as defining a new variable to allow us to send a CR/LF at the end of strings sent to the modem.

```
      CrLf = X2C("0D0A")

      if city = ADELAIDE  then num = 4100143
      if city = BRISBANE  then num = 2217033
      if city = DARWIN    then num = 413423
      if city = HOBART    then num = 241905
      if city = MELBOURNE then num = 6001641
      if city = PERTH     then num = 2215457
      if city = SYDNEY    then num = 2674648
```

In most instances, this data can be directly applied. The exception to this is the 'city' field. In this instance, we've taken a word value, but we will now have to convert that into a set of digits, which are the phone numbers for the cities. The code could have been made a little simpler by having the user specify the phone number to dial, but that would make life more difficult when it comes to using the routine. So we now need to take the data stored in the 'city' variable and convert it to the correct phone number. The code needed to do that is shown in Figure 3. Since we've already performed error checking to ensure that the CITY variable is valid, we can safely assume that we have a valid name to use and not do any further error checking here. This part of the routine uses the data stored in the CITY variable to create a new variable (NUM) in which the correct phone number is inserted.

There is also another variable that we need to set. When we start sending strings of data to the modem, we will have to ensure that the strings are terminated by a carriage return. In addition, since we want to be able to move down a line once we have sent the carriage return, we want to add a line-feed as well. REXX allows us to send literal strings, but it would be something of a pain to have to keep sending the ASCII codes for CR/LF every time we need to terminate a string sent to the serial port. So we'll define a CRLF variable which can be used to simplify that process. Figure 3 also sets the CRLF variable for us.

USING THE VARIABLES

At this stage, we're (finally!) ready to start talking to the modem. Figure 4 (next page) shows the basic steps involved in setting up the modem and sending it the necessary data to dial the number.

In order to do so, we must first ensure that the serial port is open. To do this, the STREAM() function is used (which is one of the reasons that we needed to load the REXX utility functions). Figure 4 (next page) illustrates using STREAM() to open the port.

Having opened the port, we need to set the serial parameters to a suitable value to talk to the modem, which is done by passing a mode command to OS/2 for execution. We use the various bits of data already collected (PORT and SPEED) to complete the mode command. Here, we use the double pipe (II) to concatenate the data stored in the PORT and SPEED variables with the rest of the data that we need to use with the MODE command.

A test is performed on the contents of the INIT variable. This test works by testing to see whether the contents of the variable is greater than or less than zero. If there is a string in the variable, it will test as true. If the test shows that INIT has some contents, the string stored in INIT is then sent to the modem using the REXX LINEOUT function. Since most modems need a short period to settle after being intialised, that is followed by

exist' (for which REXX has no direct function). We'll have plenty of other uses for the STREAM() function in the future.

Fuller details of the function can be obtained from the REXX online reference (from which I've borrowed the contents of Figure 5).

In the time setting routine, STREAM has been used to set a variable (STATE is the variable that has been used) when it opens the serial port. In my original version of the routine, I was testing the contents of that variable to determine whether the serial port was ready for operation. Unfortunately, this is where the problem with the SIO driver appears. If SIO is being used, the STATE variable will report NOTREADY (which is an error condition) and the routine would fail, even though the serial port was in fact being opened. Hopefully this can be fixed by SIOs author.

calling the SYSSLEEP function (which is also part of the REXX utility functions) to pause for a second.

Once that is done, we are ready to send the dial string to the modem, again using the LINEOUT function. Again, concatenation is used to combine the modem commands with the variable data already collected (PORT, DIAL, STD, NUM) and followed by the CRLF variable. You will notice that here, we are simply assuming that there is something in the STD variable, even though this was an optional variable during the intial data collection phase. If this is empty, it should simply send a null in that part of the string, which doesn't upset any of the modems that I've tried it on, so should hopefully work without needing to test to see if the variable is set or not (however, that may vary a bit depending on the modem concerned, so your mileage may vary...).

It should be noted that, when using the double pipe to concatenate strings, REXX will strip blank spaces. So, for all that there are spaces between the concatenation commands and the variable names in the samples, these are there simply to make it easier to read the code, and have no effect when the final string is sent to the modem.

Rather than attempt to complete the routine this month (we've still got a fair way to go yet...), I will leave the final part of the procedure until next month, and close with a brief examination of some of the new functions that are being used in the routine.

NEW FUNCTIONS

STREAM (see Figure 5) is a very useful function. It allows us to manipulate a files and file handles (OS/2 treats a serial port in the same way that it treats a file handle), and provides a powerful tool for manipulating files. Using STREAM is it possible to build an equivalent of the batch command 'if

STREAM returns a string describing the state of, or the result of an operation upon, the character stream name. This function is used to request information on the state of an input or output stream, or to carry out some specific operation on the stream.

The first argument, name, specifies the stream to be accessed. The second argument can be one of the following strings (of which only the first letter is needed) which describes the action to be carried out:

Figure 5. Syntax for STREAM function

LINEOUT (see Figure 6, also borrowed from the REXX online reference) is another very useful REXX function. It allows strings to be written to the screen, to files, to the serial ports (basically to any character output device). As such, it can be used to automate file modifications, generate log entries, and send commands to peripheral devices such as modems. It will return the count of characters remaining once it has completed its write operation, which provides a means of checking whether it has succeeded or not (which I'm hoping may provide me with another method of checking that the modem is responding to commands, rather than relying on the return from the STREAM() function).

As one final note before closing, I'm now in the process of converting the batch files that run the BBS systems to REXX. In some instances, this doesn't offer any great benefits in terms of functionality (the majority of the BBS operations require calling programs of one sort or another, which can be just as easily (if not more easily) done using batch files as it can be done using REXX procedures. I'm doing this conversion so that I can make fuller use of some of the internal REXX functions, and did not really expect to see any marked gains from using REXX in place of simple batch files.

BRISBUG PC USER GROUP INC.

P.O. BOX 5000 BRASSALL QLD 4305

Phone (07) 841 5511

MEMBERSHIP APPLICATION FORM

Name: _____
Please Print

Address: _____

Suburb/City: _____

State: _____ Post Code: _____ Phone (Home): _____ (Work): _____

Type of User: Business ☐   Educational ☐   Hobby ☐   Other_____

Type of Computer: XT ☐   AT ☐   386 ☐   486 ☐   Other_____

Modem: Yes ☐   No ☐   Disk Size Preferred: 5¼ ☐   3½ ☐

Special Interests: _____

Membership Type: Individual / Family ☐   Educational ☐   Corporate/Associate Club ☐

Individual/Family/Educational Fees   Joining: $ 45.00   Renewal: $ 40.00

Corporate/Associate Club Fees   Joining: $110.00   Renewal: $100.00

Introduced by: _____   Membership No.: _____
Please Print Members Name

If payment of Membership Fees are to be made by Credit Card please complete details.

Tick Box

| bankcard ☐ | MasterCard ☐ | **VISA** ☐ | | Expiry Date: _____ / _____ |

CARD NUMBER				

CARDHOLDERS NAME: _____
Please Print

CARDHOLDER'S SIGNATURE _____

I / We hereby apply for Membership of BRISBUG and agree to abide by its rules.

Signature: _____   Date: _____

OFFICE USE ONLY				
Membership No.	Date Received	Receipt No.	Date Processed	Date Memb.Card/Catalogs Sent

Membership Drive
Competition

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

What you can win

Thousands of dollars worth of prizes can be yours simply introducing a new member to Brisbug.

The major prize you can win is a Compaq 486 Laptop Computer valued at $5050. Other prizes including Microsoft Office Professional, Lotus 1-2-3, AMI-Pro, Q & A for Windows, Nortons Utilities, Borland C++, Paradox, Wordperfect and many others will be won by lucky members each month.

The new members introduced by you are not forgotten. The major prize for new members is a BytePro 486 Desktop computer complete with Multi-Media facilities valued at $5000. Also new members will be eligible to win valuable software prizes.

When do I win?

Each month during the competition, the names of both lucky members and new members will be chosen to receive a prize from the great range of software available.

To enter, simply introduce a new member to Brisbug using the membership form provided in this magazine, or obtain a form from the Membership Secretary or Librarian and you will become eligible to win a prize in the month the new member joins our club.

The new member will also be eligible to win a prize in the same month.

The Grand Finale...

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

And Gand Finale 2

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

There is no limit to the number of times you can enter - for each new member you introduce you receive an additional chance. So if you introduce 10 members, you get 10 chances, 30 members - 30 chances, and so on.
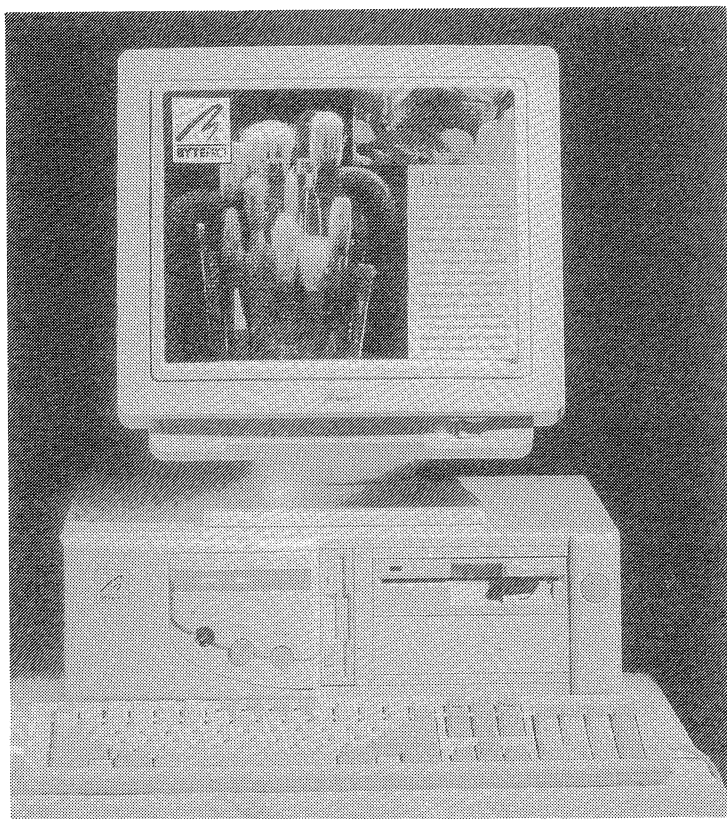
Each month, at the General meeting, a draw for lucky winners will take place for the entries submitted in that month, for both existing and new members. If you can't get to the meeting, your prize will be forwarded to you. The names of the winners will be published in the succeeding months edition of Significant Bits.

The closing dates are:

Intermediate Win Competitions:

18th August 1994
15th September 1994.

Main Competition -

13th October 1994.

The rules of the competition are:

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

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

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

The membership application must be in the hands of the Membership Secretary by 5pm on the closing dates listed. Aplications received after the closng date will be carried forward to the next month, but applications received after the expiration of the contest (13th October 1994) will not be considered.

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

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

BRISBUG MEMBERSHIP DRIVE PROMOTION

CONDITIONS OF ENTRY

1. Information on how to enter and prizes form part of these conditions of entry.

2. Employees of L. & L. Electronics, the Brisbug Software Librarian, the Brisbug Membership Secretary, the agencies or suppliers of prizes associated with this promotion and their immediate families are ineligible to enter.

3. Entries close 5pm 13th October, 1994.

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

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

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

4. Each month during the promotion, intermediate draws for prizes will be conducted. The closing dates for each intermediate draw will be 5pm on the following dates:

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

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

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

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

5. During the period of the Membership Drive Promotion, all financial members of Brisbug with the exceptions as listed in condition 2, as above shall be eligible to enter the competition.

6. The following shall be the conditions of entry to the Membership Drive Promotion:

(a) During the continuance of this promotion, every financial member of Brisbug who intro-duces a new member who joins Brisbug shall be eligible to participate in the monthly draw for intermediate win prizes for that month.

(b) The new members so introduced who join Brisbug shall also be eligible to participate in the monthly draw for intermediate win prizes for that month.

(c) The new member must not have been a financial member of Brisbug during the 12 months previous to the commencement of this competition.

(d) All entries shall be on the Membership Application Form available for the duration of this promotion.

(e) At the conclusion of the Membership Promotion, the winners of the major prizes shall be selected from the names of all introducing members in the draw for the major prizes to be conducted on the 16th October 1994.

(f) On the 20th November 1994 the winners of the major prizes for all the new members who have been introduced and have joined Brisbug shall be drawn.

(g) The prizes allocated for each intermediate win draw shall be decided by the Management Committee of Brisbug and such prizes cannot be exchanged for alternate prizes.

(h) The winners of each intermediate draw for prizes shall be eligible for the major prize in each category.

7. The promoter is L. & L. Electronics of 95 Station Road, Booval, QLD 4304.

Consultant's Notepad

Geoff Harrod

You can't afford to get to careless about computer use. Things usually work so well and reliably there's a tendancy to get complacent.
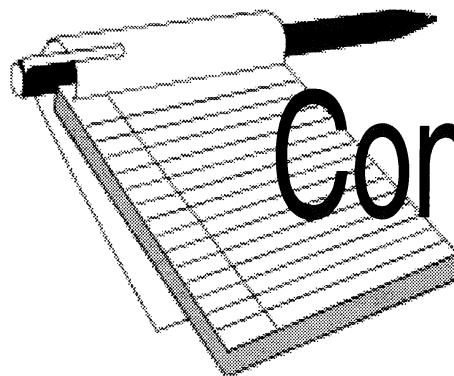
We know there are recommendations not to place floppy disks near loudspeakers and on top of monitors and in sunny places but when we've done that a number of times with no harm we begin to think it doesn't matter.

Then one day, we do get a disk made unreadable. Similarly we know you're warned not to move a machine while it's running in case the hard drive's heads crash, but it never happens, does it? Well, it happened to me, and I thought it would be a valuable warning to others, so here's the sad story. It also serves to stress the importance of adequate back-ups.

Overcrowding

My office at home has become excessively crowded. Since I moved from a rented office, I've been meaning to build a decent office under the house but it hasn't happened yet and I keep getting more and more stuff to test and whatever. I have three PCs and a laser printer side by side with an unbelievable tangle of wires behind them One is the Multi-CAD Magazine Bulletin Board machine that runs continuously, one is my Source 486 that I have been using for most work, and the third is a new BytePro Pentium machine mainly for testing peripherals and software for review and running DOS and Windows-NT CAD programs. They are all floor standing tower types, under the desk. The 486 has, or had, two IDE disks, drive C was a Quantum LPS 260Mb and the later drive D was a Seagate 260Mb. I had it organised with DOS and Windows 3.11 on drive C and a few programs but mostly my own data

files. Drive D had most of the program files.

I had a Samsung and two Sony monitors and an Epson inkjet printer to review, and was rearranging the equipment to accommodate an extra monitor. Normally, due to space limitations, I use my rather bulky NEC 5FG monitor for both the 486 and the Pentium, but I was putting the laser printer on the floor so I could put a Sony monitor in its place. This was being connected to the Pentium, but the other two machines were both running. In the process of wrestling with the tangle of cables and getting those confounded protruding thumb-screws of the DB plugs repeatedly snagged on other cables, I must have jolted the 486 machine, or momentarily dislodged its power connector, or both together. When I got back to it, it was complaining of read errors on drive C.

Hard Disk Damage

It would not reboot. After rebooting from a floppy disk, I found the entire \UTIL directory had gone and several files elsewhere were either unreadable or corrupted. Norton Utilities Disk Doctor revealed corrupted and non-correctable file allocation tables, and it could not get started on a surface scan. Evidently the heads had hit the disk and damaged it.

In case you don't realise it, a hard drive's heads fly a few microns above the disk surface rotating at 3000 rpm. It has been likened to flying a 747 at an altitude of about 100mm! They are kept flying by aerodynamic effects from the rotating disk. A sharp jolt can interfere

with the "lift" and bring the heads into contact with the surface, which at that rotational speed inevitably gouges it a bit if only because of the heating effect of the friction. Normally when power is cut off, the heads fly back to the park position on their springs before the speed drops enough to bring the heads in contact, and things are designed so that when contact does occur the speed is low enough not to overheat the surface. Momentary power interruption can upset that system and so can a sharp jolt.

Saved by a Backup

Three things were in my favour. One: I had a full backup tape about a month old and a couple of subsequent update backup tape volumes about a week old; two: I could still access a lot of the drive by booting from a floppy; three: I had an unaffected drive D. I copied all the data files that I had recently been working on and any others I thought might not have made it to the last backup onto a tape and also onto the good D drive. A few wouldn't copy however.

I then thought about how to reorganise my programs to fit on a single 260M drive and decided which programs I could put "off-line". I find it is handy to have major program installations, which these days are usually each of several megabytes with several subdirectories, saved onto tape as individual volumes. So as well as my regular full and incremental backup tapes, I have a couple of cartridges holding several volumes, each being one program installation. So any of the

programs that I decided to put "off-line" that were not already on tape as separate volumes got copied to tape, and deleted from the D drive.

With all data now secure, I then tried to see if drive C could be recovered as the boot drive. Having booted from a floppy, a SYS C: command to replace the DOS system on drive C didn't complain, but rebooting from C did not work. So I tried reformatting it, but FORMAT refused to get going and hung the machine.

Rebooting from the floppy, I used FDISK, deleted the partition on C and then created it anew and made it active. FORMAT then worked, rather slowly locking out many bad sectors. Again I used SYS C:, but again it would not boot. So I removed the two drives, changed their jumpers to swap the master and slave, reinstalled them, swapped the CMOS setup drive specs, rebooted from the floppy, used SYS C: again (now of course C was the undamaged Seagate drive), and it booted OK from the hard drive. Phew!

Restoring the Data

I then restored data from the tapes in the new arrangement I had worked out. I proceeded to make rather tentative use of the damaged Quantum drive, now drive D, for non- critical data. However, within a day or so, it started causing long interruptions to normal operations with error messages. These were mainly due to D being included in Smartdrive's caching, so I un-cached it. But it was obviously not reliable.

Next day I found the CD-ROM was drive D instead of E and FDISK didn't have a "select drive" option. So it had died completely. The whole episode caused me a lot of anxiety and wasted time, but I hate to think of the drama if I had not had a tape drive and done regular backups! In the end I had lost hardly anything that mattered.

My real worry was a major job of writing a manual for a client in Pagemaker with megabytes of screen capture illustrations. It was getting

urgent to finish it and I had done a lot of work on it since the last tape backup. Fortunately, none of the corrupted or disappeared files included those, and I was able to copy them off to tape and drive D before reformatting.

So, be warned: Don't knock the box. Don't fiddle with tangles of cables while a machine that uses some of them is running. Don't neglect to do backups.

And realise that $600 or so for a tape drive is cheap insurance for important business data. Apart from the fact that floppy backups just won't get done often enough with today's big drives, the saving in floppy disk costs will go a long way to paying for the tape machine, not to mention the cost of someone's time to do floppy backups. As they say... Just do it.
9408

OS/2 Column Continued from page 30

LINEOUT returns the count of lines remaining after attempting to write string to the character output stream name. The count is either 0 (meaning the line was successfully written) or 1 (meaning that an error occurred while writing the line). string can be the null string, in which case only the action associated with completing a line is taken. LINEOUT adds a line-feed and a carriage-return character to the end of string.

The form of the name is implementation dependent. If name is omitted, the line is written to the default output stream, STDOUT: (normally the display) in OS/2.

Figure 6 Syntax for the LINEOUT function

However, there have been several unexpected benefits derived from this conversion (which is currently a long way from complete). The first one that I noticed was after I had converted the batch file which controls spawning the BBS from the Mailer software: the REXX version of this procedure runs noticeably faster than the original batch file did, even though it includes extra processing.

2 WAY ADVANTAGE

This advantage is derived in two ways. First, OS/2, like DOS, reads batch files one line at a time, returning to read the next line after it has executed a command. While OS/2 is significantly faster handling batch files than DOS is, it still has the limitation of treating a batch file as multiple single line commands. On the other hand, a REXX procedure is tokenised during its first execution. Subsequently, the REXX interpreter will read the tokenised form, and will read all of it into memory, resulting in an increase in execution speed. In some cases, the increase in

execution speed is quite significant.

It also has another benefit. I've been caught a number of times by accidentally modifying a batch file which was executing (its not all that hard to do in a multitasking environment...). The results of doing this are normally not very useful - when the command interpreter comes back to the batch file to execute the next instruction, it will often lose its place if the batch file has been modified while it was executing one of the instructions. Which can have very unpredictable results. With a REXX procedure, because all of the procedure is stored in memory, it is quite safe to modify the procedure, even while it is executing in another session. The modifications will have no effect until the next time the procedure is executed, but there is not the danger of unpredictable behaviour that there is with a conventional batch file.

Next month we'll (hopefully) complete the procedure for calling the time service and setting system time.

Learning Assembler using DEBUG

Dan Bridges

Part 5: The Boot-Sector (2)

Last month we examined the boot-sector's operation. In that article the concentration was mainly on a text description and a heavily commented disassembly of the boot-sector. It's my contention that it's easier to understand the boot-sector's operation if you can trace through it as it operates. So this time we'll focus on hacking the code so it can be run within DEBUG. Along the way we'll look at manipulating the Stack in more detail.

A Hacking We Shall Go...

Start by working with FD's rather than HDs, until you have gained enough experience. (The only reason I can see for working with HD boot-sectors is if the drive is greater than 32Mb, in which case you can check out the handling of Big DOS values.) Place a boot floppy in A: and change to it.

The boot-sector can either be loaded via the Master Boot Record (refer to the last line in Figure 3, "The Boot Process - Examining the Master Boot Record", SigBits, April 94) if it's a HD boot or via the System BIOS if it's a FD boot. In the former case the load segment is 0000h. This also appears to be the segment specified by the BIOS for a FD boot. However neither the MBR nor the boot-sector makes that assumption. (I can only assume that some BIOSes specify 07C0:0h instead of 0:7C00h - the same absolute address.) So the boot-sector sets DS to 0000h after the instruction at offset 7C5Ch (see Figure 12, last month. Any further references to figures less than "13" refer to last month's article.)

Now this is just peachy during the real boot process since CS and DS will be the same (0000h). However when we are tracing the routine afterwards we need to modify the code so DS again is the same as CS. (DEBUG is now operating somewhere in the 0980-1400h memory segment region.) Luckily with some minor changes to this section we can switch to the correct segment in the same code space. Figure 13 shows how to load an unmodified boot sector off A: and compares the original contents of this section with the hacked version.

Start up DEBUG and undertake the modifications documented in Figure 13, being sure to use the segment value of where your copy of DEBUG is working.

The second (and final) hack region occurs at offsets 7C68-7C6Eh where the 1Eh entry in the Interrupt Vector Table is altered to point to 0000:7C3Eh. This needs to be altered to point to Current_Segment:7C3Eh. Unfortunately there isn't enough space to slip in a segment override prefix, so a different approach from the first hack has to be taken. There is plenty of space available at the end of the loaded sector so we place

whatever code we need there and detour to it first, before continuing.

The detour can either be performed by an unconditional jump or by a call to it as a subroutine. Jumping is fine but you need to specify the return address whereas a call takes care of that automatically by storing the return offset (in the case of a near call - if it was a far call then both the return segment and the return address would need to be stored) on the stack. Using a call means that any extra pushes on the stack, that were performed by the code in the subroutine, will have to be popped before the subroutine returns (otherwise the RET instruction won't find the correct return address on the stack). Figure 14 presents both methods.

Now you have runable boot-sector code written to a binary files called BOOTSEC.JMP and BOOTSEC.CAL. To load one of these back into DEBUG you could use:

```
DEBUG BOOTSEC.JMP
    ;DEBUG, by default loads at 0100h
-M100 L200 7C00h
    ;Copy 512 bytes from 0100h to 7C00h.
-T7C00 ;Start tracing from the new
            loading position.
```

The problem here is that DEBUG adjusts most, but not all, offsets for the new memory location, namely the JMP location used in the instruction at 7C00h which is still "1C3E" rather than "7C3E" and the JMP location specified at 7D55h which is still "0180" rather than "7D80". To prevent this, use:

```
DEBUG
-NBOOTSEC.JMP
    ;Name of file to load or write.
-L7C00
    ;Load named file at offset 7C00h.
```

By the way, CX is not the only register used by DEBUG to indicate the size of the file to load or write. BX:CX is used to contain the dword that indicates the filesize. (DEBUG uses free low memory. On a well setup system you should be able to load a file of 585Kb or more). But if you've been executing code you could have BX set to a nonzero value. So if this is the

case you would need to RBX first and set BX to zero. (DEBUG can write monster files. For example, by setting BX to FF you can write a file that is almost 16Mb, although only the first MB or so will have anything in it..]

Another Method of Accessing Stack Memory

It was mentioned earlier that pushes performed in a subroutine would need to popped off so RET could find the proper return address. However it is possible to use Stack memory to bidirectionally communicate between the main

```
DEBUG

-L7C00 0 0 1 ;Load at offset 7C00h, from A:
  ; (A = 0,C = 2,H = 7), starting from sector 0, 1 sector.

-U7C3E 7C5C
0980:7C3E  CLI
0980:7C3F  XOR AX,AX      ;AX = 0
0980:7C41  MOV SS,AX      ;SS = 0
0980:7C43  MOV SP,7C00    ;SP = 7C00h

  ;The first hack will modify the following 8 bytes.
0980:7C46  PUSH SS
0980:7C47  POP ES         ;ES = 0
0980:7C48  MOV BX,0078    ;BX = 0078h. IVT entry 1Eh.
0980:7C4B  SS:            ;SS = 0 = IVT segment.
0980:7C4C  LDS SI,[BX]    ;Load the Seg:Offset address of
  ; the contents of IVT entry 1Eh (SS:[BX])into DS:SI.
  ; In the real bootup situation DS:SI = F000:EFC7h.
  ; Tracing after DOS has loaded DS:SI = 0000:0522h.
  ;End of the first hack section.

0980:7C4E  PUSH DS        ;Save these registers.
0980:7C4F  PUSH SI
0980:7C50  PUSH SS
0980:7C51  PUSH BX
0980:7C52  MOV DI,7C3E
0980:7C55  MOV CX,000B
0980:7C58  CLD
0980:7C59  REPZ    ;Copy 11 bytes from DS:SI -> ES:DI.
0980:7C5A  MOVSB           ;i.e. F000:EFC7 -> 0:7C3E.
0980:7C5B  PUSH ES
0980:7C5C  POP DS         ;DS = ES = SS = CS = 0000h.

  ;The first hack.
-A7C46      ;Overwrite existing code with the following.
0980:7C46 MOV BX,78
0980:7C49 SS:
0980:7C4A LDS SI,[BX]
0980:7C4C PUSH ES       ;ES is current segment = 0980h.
0980:7C4D POP SS        ;SS = 0980h.
0980:7C4E      ;A blank line terminates assembler mode.
  ;End of the first hack

  ;After the first hack the MOVSB at 7C5Ah copies
                  ; F000:EFC7 -> 0980:7C3E
  ; since ES holds the destination segment.

  ;Similarly the push/pop at 7C5B-7C5C sets DS to 0980h.
  ; So DS = ES = SS = CS = 0980h.


-U7C3E       ;Unassemble to check alterations.
             ; Disassembly display not shown.
-NBOOTSEC.TMP ;Name of file to be written.
-RCX         ;Set CX (size of file to be written)
CX 0000      ; to 200h (512 bytes = 1 sector).
:200

-W7C00       ;Write now from offset 7C00h to file.
Writing 00200 bytes
-Q           ;Quit
```

Figure 13. How to load the original boot-sector; the contents near the first hack section; performing the first hack; writing the changed code to a new file.

```
DEBUG

-NBOOTSEC.TMP    ;Name of file to load or write.
-L7C00           ;Load it at offset 7C00h.

-U7C68 7C6F      ;Unassemble 2nd hack site.

  ;Start of 2nd hack section. 7 bytes of code space.
0980:7C68  MOV [BX+02],AX
0980:7C6B  MOV WORD PTR [BX],7C3E
  ;End of 2nd hack section
0980:7C6F  STI      ;1st command after hack.

-A7C68
0980:7C68 JMP 7E00 ;Detour to new section. DEBUG will
0980:7C6B ; perform a near jump. Detour is to 7E00h since
  ; the copy of the boot-sector is loaded from 7C00-7DFFh.

-A7E00           ;Code for new section.
0980:7E00 PUSH DS ;DS was 0980h.
0980:7E01 PUSH AX ;AX is 0000h.
0980:7E02 POP DS  ;Now DS is 0000h.
  ;Remember that, unless a specific Seg override prefix is
  ; used, the next line actually means "MOV DS:[BX+2],ES".
0980:7E03 MOV [BX+2],ES ;ES is still 0980h. BX = 0078h.
0980:7E06 MOV WORD PTR [BX],7C3E
                  ;IVT 1Eh is now 0980:7C3Eh.
0980:7E0A POP DS  ;DS is again 0980h.
0980:7E0B JMP 7C6F ;Jump back to next instruction.
0980:7E0E

-NBOOTSEC.JMP    ;Name for file with runable code.
-RCX
CX 0200
:20E             ;Size including the extra section.

-W7C00
Writing 0020E bytes

-A7C68           ;We now alter the loaded code again.
0980:7C68 CALL 7E00
0980:7C6B NOP     ;"No Operation" instructions. Used as
0980:7C6C NOP     ; filler code. Not needed with the JMP
0980:7C6D NOP     ; method since we bypassed this area.
0980:7C6E NOP     ; The CALL will return to 7C5Bh.
0980:7C6F

-A7E0B           ;Modify the new section to return
0980:7E0B RET     ; rather than jump.
0980:7E0C

-NBOOTSEC.CAL    ;Name of this version.
-RCX
CX 020E
:20C             ;File is 2 bytes smaller than JMP version.

-W7C00
Writing 0020C bytes
-Q
```

Figure 14. Reloading a saved file into DEBUG and creating two new versions that incorporate the second hack. These new versions can be run with DEBUG.

program and a subroutine. (Next month you will see that a high-level language uses this method to pass parameters to and from an assembly language module.) This can be quite handy since you can find yourself running out of registers to pass initial values or results.

The register we will be using to read/write Stack memory is BP (Base Pointer). Unlike SP (Stack Point), BP can be used with indirect addressing. Once a number of items have been stacked it is possible to accessed these as fixed offsets from BP. (BP's value is usually set to some fixed value and then the stacked items will always be at the same offset from BP.)

Last month you were introduced to indirect addressing modes were a computed address can be up to 3 components:

* A Base Offset derived either from the Base register (BX) or the Base Pointer register (BP);
* An Index Offset derived from either the Source Index register (SI) or the Destination Index register (DI);
* A constant memory offset e.g. 20h.

We need to examine indirect addressing further. Memory offsets when using BX, SI or DI are usually relative to the DS. However if BP is used then the computed offset will be relative to SS. When you think about it, this makes sense: BP, being concerned with stack address offsets, would be clumsy to use if it was relative to DS. Figure 15 shows that DEBUG's display is aware of when to use SS in indirect addressing.

```
DEBUG

-A100
xxxx:0100 NOP ;DEBUG's Trace shows next
; command to execute so use NOP as 1st command.
xxxx:0101 MOV AX,[BX]
xxxx:0103 MOV BX,[SI]
xxxx:0105 MOV AX,[BX+SI]
xxxx:0107 MOV AX,[BP]
xxxx:010A MOV AX,[BP+SI]
xxxx:010C

-T=100 5      ;Perform 5 Traces from 100h.
;Only indirect address decoding is shown below.

xxxx:0101  MOV AX,[BX]        DS:xxxx=xxxx

xxxx:0103  MOV BX,[SI]        DS:xxxx=xxxx

xxxx:0105  MOV AX,[BX+SI]     DS:xxxx=xxxx

xxxx:0107  MOV AX,[BP+00]     SS:xxxx=xxxx

xxxx:010A  MOV AX,[BP+SI]     SS:xxxx=xxxx
```

Figure 15. Demonstrating that the indirect address offset will be relative to SS if BP is used.

Now that we've covered that, let's look at an example of using BP to communicate with a subroutine by burrowing around in the Stack. Figure 16 contains the program while Figure 17 presents the contents of the Stack and the BP's offsets into it. Note that the Stack grows downwards so the values to be passed back & forth are "above" BP. Thus the displacements to them are positive e.g. [BP+8]. Regardless of how much we later piled on to the Stack within the subroutine we could always access the original value of SI with [BP-2]. Note that the displacement here is negative because it is located "below" BP. Normally SP will change as further pushes and pops occur while BP will remain set as a fixed reference point.

At start	Before the execution of 0120h instruction	Continuing execution until just before offset 0139h
FFEE -->		
	0010 ;Values to be	BP+8 FFEC 0100 ;Returned values.
	0020 ; converted.	BP+6 FFEA 0200
	0030	BP+4 FFE8 0300
	FFE6 --> 0115 ;Offset for	BP+2 FFE6 0115 ;Return offset.
	; near return.	BP FFE4 --> 0200 ;Original BP.
		SP FFE2 --> 0300 ;Original SI.

Figure 17. Stack contents, pointers and offsets into the Stack. Unless indicated otherwise, the pointer shown is SP.

```
DEBUG

-A100                          ;Start assembling.
xxxx:0100  MOV  AX,0010         ;Values in AX, BX & CX
xxxx:0103  MOV  BX,0020         ; will be converted.
xxxx:0106  MOV  CX,0030
xxxx:0109  PUSH AX              ;Place these values on
xxxx:010A  PUSH BX              ; the Stack.
xxxx:010B  PUSH CX

xxxx:010C  MOV  BP,0200         ;Place some values in BP & SI
xxxx:010F  MOV  SI,0300         ; for demonstration purposes.

xxxx:0112  CALL 0120            ;Call to conversion routine.
xxxx:0115  POP  CX              ;Place results in registers.
xxxx:0116  POP  BX
xxxx:0117  POP  AX
xxxx:0118                       ;Press Enter to end assembling.


-A120                          ;Create conversion routine.
xxxx:0120  PUSH BP              ;Save current value of BP.
xxxx:0121  MOV  BP,SP           ;BP is set to SP's value.
xxxx:0123  PUSH SI              ;Save current SI.
xxxx:0124  XOR  SI,SI           ;Now zero it.
xxxx:0126  MOV  BX,[SP+SI+04]   ;SP can't be used with
                      ^ Error   ; indirect addressing.
xxxx:0126  MOV  BX,[BP+SI+04] ; That's why we use BP.
           ; Copy value from orig position in the Stack to BX.
xxxx:0129  MOV  CL,04           ;We move the bits in BX
xxxx:012B  SHL  BX,CL           ; 4 places to the left.
                                ; i.e. Multiply BX by 2^4 (16).
xxxx:012D  MOV  [BP+SI+04],BX ;Copy result to original
                                ; position in the Stack.
xxxx:0130  CMP  SI,+04          ;After 3rd loop (SI = 00, 02, 04).
xxxx:0133  JZ   0139            ;Jump if this was the 3rd loop.
xxxx:0135  INC  SI              ;Otherwise, increase SI by 2.
xxxx:0136  INC  SI
xxxx:0137  JMP  0126            ;Loop back for another value.
xxxx:0139  POP  SI              ;Restore original SI value.
xxxx:013A  POP  BP              ;Restore original BP value.
xxxx:013B  RET                  ;Return execution to 10Fh.
xxxx:013C                       ;Stop assembling.


-G=100 118   ;Complete execution. Results shown.
AX=0100  BX=0200  CX=0300  SP=FFEE


-G=100 120   ;Execution to start of conversion routine.
AX=0010  BX=0020  CX=0030  SP=FFE6
1156:0120  PUSH BP   ;Next instruction to be executed.

-DFFE6 FFED ;Show what's on the stack at this point.
1156:FFE6   0F 01 30 00 20 00 10 00

;Various further Traces not shown.
```

Figure 16. A session that uses BP to access stack memory to communicate with a conversion routine.
(The conversion routine multiplies a value by 16).

Boot-Sector Tracing Exercises

First, a brief word on appropriate DEBUG execution commands. Use Proceed unless you want to Trace into a subroutine or perform multiple Traces around a loop. Once you've investigated a subroutine you'll probably want to ignore it from then on, so Proceed past it. The Go command will be appropriate when you want to bypass a lot of earlier code that you've assimilated. For example "G 7C00 7CEB" would jump to the test for whether or not IO.SYS and MSDOS.SYS were the first root directory entries.

If you want to follow the execution of your HD's boot-sector you should use the native boot disk. So if you were using DblSpace disk compression to completely compress C:, in the DEBUG session in Figure 13, you would use "L7C00 7 0 1" since H: is the remapped drive letter for the original C:.

At some stage you should try working with a non-boot disk in A: to investigate the error message display, the Stack before rebooting and interrupt 19h rebooting. When you trace into the Display_Message loop, after an iteration or two you'll want to quickly get out again. (There are a lot of characters in the "Non-system disk..." message so many iterations will occur before the 00h character at the end of the string is found and 7D55h breaks out of the loop.) To get out, use "G 7D80". If you Proceed through interrupt 19h you will see how quick the reboot is. When it occurs DEBUG looses tracing control i.e. normal operation resumes.

AH	Meaning	If Media Specific
00h	No error occurred	
01h	Bad command	
02h	Address mark not found	
03h	Tried to write to W/P floppy	(FD)
04h	Sector not found	
05h	Reset failed	(HD)
06h	FD removed or changed	(FD)
07h	Bad parameter table	(HD)
08h	DMA overrun	
09h	DMA across 64K boundary	
0Ah	Bad sector occurred	(HD)
0Bh	Bad track occurred	(HD)
0Ch	Unknown media type	(FD)
0Dh	Invalid # of sectors on format	(HD)
0Eh	Control data address mark detected	(HD)
0Fh	DMA arbitration level out of range	(HD)
10h	Bad CRC/ECC occurred while reading	
11h	ECC corrected data error	(HD)
20h	Controller failure	
40h	Seek failed	
80h	Timeout	(HD)
or	FD not ready	(FD)
AAh	HD not ready	(HD)
BBh	Undefined error	(HD)
CCh	Fault occurred while writing to HD	(HD)
E0h	Status error	(HD)
FFh	Sense operation failed	(HD)

Figure 18. Status values that AH can hold after an Interrupt 13h operation.

With a boot disk in A: get to the JB Error_Message instruction in the Read_A_Sector_ From_IO_SYS (after performing the manual hack, use "G 7D30"). You've now read the first sector from IO.SYS. The NC (No Carry) flag will be showing since you've not had an error.

This time issue "G 7D9B" so you loop back to arrive just before the second sector read operation. Now open the FDD latch to create an error condition. Proceed through the Interrupt. Notice: (i) DEBUG or Interrupt 13h does not protest at the not-ready FDD; (ii) The Carry flag is set (CY). DEBUG's unassembler decodes the machine code of 72h as JB. In the places of its occurrence in the boot-sector's code it is better represented by the alternative JC mnemonic. (iii) AX now contains 80xxh. Ignore AL. AH holds the error status code. "80h" indicates that the FD was not ready.

If you are using a FDD that is other than 360Kb, then it should have changeline support. Let's check this out. First we need to clear the Carry flag or we won't get a chance to loop again. Issue "RF" to the display/alter the Flags register and enter "NC". Close the FDD latch again. Issue "G 7D9B". This time, when you Proceed through the interrupt, AH should end up with 06h. The FDD has signalled the System BIOS that you've had the FDD door open at some stage and that you may have changed the FD. In a more sophisticated version it would then be up to the programmer to come up with a further test to see if the FD in the drive was actually different.

However, in the boot-sector' code there is not enough space available to accommodate more specific error messages than "Non-system disk...". Figure 18 lists the status codes for Interrupt 13h operations.

Conclusion

Again we've covered a lot of ground. If you've worked through the boot-sector's code and have a fair understanding of its operation then you should have some sense of accomplishment. If you've had a problem with some section then give me a ring and I'll see if I can help.

Next month we'll look at integrating an assembler routine into a high-level language program. It provides a dramatic speedup for a QuickBASIC directory sorting routine. You should find it informative.

Windows Watch
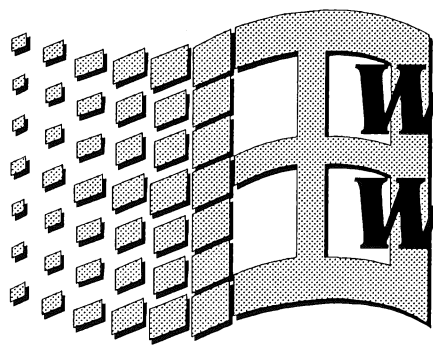
An Occasional Column, compiled by Ralph De Vries

The Windows SIG

It has been said by some members that Brisbug doesn't need a Windows Special Interest Group, as most of our main meetings presentations are Windows based anyhow. Very true, of course, as this reflects, probably fairly accurately, in which direction the computer market is moving. So where does that leave our Windows SIG?

Despite the fact that Windows is supposedly so 'user-friendly', many new users and (this has to be stressed) some more experienced users as well, still manage to get them selves into all sorts of scrapes. With the forthcoming introduction of the 32 bit version of Windows (currently being developed under the name 'Chicago') we can look forward to a more mature and stable product, but I don't believe for one minute that it will be totally goof-proof.

Does this mean that our SIG should function first and foremost as an extension of the Windows user manual, i.e. become an 'introductory' Windows group only? Or do you see it more as a 'Question and Answer' type SIG? Do we show off the latest in Windows shareware, or do we talk about our individual experiences with certain types of commercial Windows software and/or hardware? Or do we continue with a mixture of all of the above???

The simple fact is that we would like *your ideas* about the Windows SIG. If you would like to make your ideas and/or suggestions known to me, I shall be pleased to forward them to the Windows SIG Coordinator. You can reach me by phone at (07) 300 3477 (fax 300 4831), or drop me a line by writing to:

Ralph De Vries
P.O. Box 31
The Gap, Qld, 4061.

Magazines

The new Oz edition of *Windows Sources* magazine is a decided improvement on the now defunct Windows World. There have been several introductory subscription offers for this magazine, which make it a relatively cheap read. If you haven't tried it yet, give it a go, as it has some interesting material within its covers.

If you are 'into CAD', you probably are already a subscriber to *Multi-Cad Magazine,* produced and printed right here in Queensland. The magazine covers both CAD and Multimedia, but is not computer specific, hence you can read about DOS, Windows and Mac products, etc. etc. It also proves once and for all, that PCs and Windows (software) are perfectly capable of producing a first rate colour magazine, as none other than our own Geoff Harrod has a fair bit to do with its production.

Info files

In the USA, Microsoft has uploaded some substantial information files on Chicago (Windows 4?), which, purportedly, give us factual information, rather than mere gossip. Let's hope that we'll soon see them here as well.

Corel 5

On the 24th June I received my Corel 5 upgrade notice in the mail (a 'mere' $345.00 to upgrade from version 4.0).

Coincidentally the *PC Week* issue of the 29th June '94 carries a list of bugs which have been found in this latest version of Corel; a bugfix is already in the works. So what's new?

Sorry Corel, but no upgrade for me at this point in time - I've been caught with buggy versions 3 and 4, and this time I'll wait at least six months till you have sorted out your act.

Quicken 3.0

As mentioned in an earlier edition of this column, we have a new Windows version of Quicken. The upgrade cost me $39.00, which is reasonable, if you consider that you get 500 pages of documentation with the new version. I find the differences between the two versions largely cosmetic, but this is a program which in virtually every review has been given top billing in its price range. For home or a small business this has to be the best value financial package around, considering that it's cheap ($69.00 for new buyers), and it's set up for Australian conditions - it knows all about the Australian Taxation system categories. My only gripe is that the budgetting module can
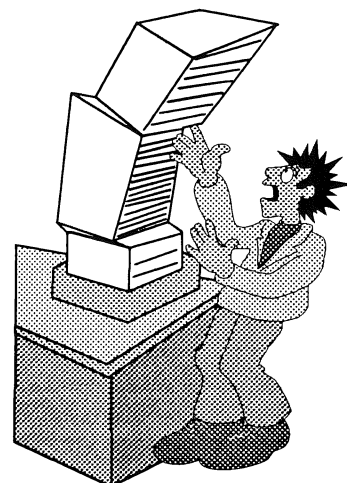
My, this Quicken generates a lot of Reports!

only be set up for the period January to December, whereas I want to be able to budget for the financial year period of July to June. Hopefully we'll be given an option to this effect in a future version.

Publisher 2.0

In past issues of Windows Watch, I've waxed lyrically about what great value *Publisher 2.0.* represents amongst DTP packages. Well, I've cooled off a bit in my enthusiasm about this program, so read on.....

Two of my relatives have been writing a series of Keyboard Instruction books, consisting of text and musical examples.
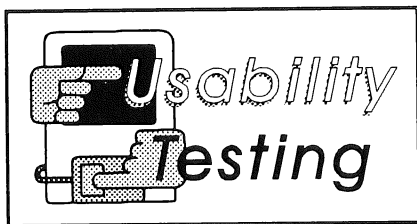
The musical examples have been typeset, and in the first two books in the series these examples were pasted into the text, and then printed. I suggested that for further volumes in the series it would be better and faster to import the text into a desktop publishing package, and scan the musical examples (black & white line drawings only) from the original directly into the text. Publisher 2.0 was the package to do all this for us, or so I thought.

We had no problems importing the text from *Works* into *Publisher*, thus so far so good. As Publisher has a direct scanning option (using the *Acquire* option in conjunction with the *Twain* driver), I had no trouble scanning the musical examples directly into Publisher either, but for a minor catch.... the scanned in image was four times as large as the original image!

No fear, I just scale it down, and Bob is your uncle. Regrettably I had to kick uncle Bob in the backside, as the scaled down image was beautifully jaggy when printed out. The only solution I had, was to scan all the musical examples in, and save them out as PCX files. When these were then imported, they did appear in the right size, and, what's more important, they printed out without the jaggies.

On the face of it, I was home and hosed, except that I had reckoned without the vagaries of screen redrawing in Publisher. As long as my musical examples were only the equivalent of one line of piano score, screen redrawing was reasonably quick, but when the musical examples were larger, screen refresh and redrawing became painfully slow, to the extent that I was ready to do all sorts of unmentionable things to my equipment, while I was waiting and waiting and waiting for the image to re-draw.

As Publisher does not support interruptable screen redraws either (although graphics can be made temporarily 'invisible', but than they don't print either!), the program bogs down totally with large graphics files, hence I must seriously

caution against its use if your publications require the insertion of very large graphic bitmap files.

PageMaker Classic

Presumably because of the success of *Publisher*, Aldus decided to re-release Pagemaker 4 under the new name of *PageMaker Classic*. This is not a worldwide release, as the package originates in the United Kingdom. No matter - at $199.00 it is approximately one fifth the price of its big brother *Pagemaker 5.0*.

It must be understood that this version has the same limitations as the original version 4.0, i.e. the *Font* option on the Type Menu still only shows as many fonts as will fit on the screen - you have to go to the *Type Specs* option to get the com-

plete listing. And don't expect text import filters for the latest versions of Word or WordPerfect, because there ain't any (I think that this is a bad oversight on Aldus's part).

What else can one say about this program? I do know it reasonably well, and find it quite easy to use. The importation of a large .PCX file (132 Kb) caused no problems at all, with virtual immediate screen - redraws, thus avoiding the problems I encountered with Publisher. A decided advantage is to have a built-in text editor, but this is offset by not having OLE capabilities.

On the other hand, certain nice features of Publisher are not to be found in this version of Pagemaker, i.e, the ability of

joining a variety of page elements into a permanent group, text- and graphics rotation in small increments (only 45° increments are possible in PageMaker Classic), or text wrap around irregularly shaped graphics. However some of these special effects can be 'faked', using a drawing package or a special program such as TypeTwister. Last, but not least, the program does not import Pagemaker 5.0 files, although the reverse (Pagemaker Classic files imported into Pagemaker 5.0) is possible, I believe.

In passing I would like to mention another low priced DTP package, namely *Page-Plus 2.0* by Serif ($149.00), which has been very well received in *Windows Magazine* and other publications. It's obviously based on Pagemaker design, but scores in certain areas, such as colour support,

text rotation, etc. However it has, what I consider, a fatal flaw, namely it does not offer automatic page numbering - this would knock it out of court for me, but you, dear reader, may not find this missing feature a real drawback.

As all three programs are under $200.00 at present, they all represent pretty good value for money. If you don't do much with large graphics and do only black and white work, I'd still go with *Publisher*. However if you expect to use Pagemaker 5.0 at some stage in the future, *Pagemaker Classic* would be an excellent choice to get started. If you are on a tight budget, and automatic page numbering isn't very importan to yout, *PagePlus 2.0* should fit the bill nicely.

-ooOoo-

Upgrading

Not so long ago I was asked to test out a new Windows utility program (it shall remain nameless) which would not work properly with Windows for Workgroups 3.11, but apparently works fine under Windows 3.1. It's pretty obvious that the programmers had not tested it out under this latest version of Windows.

Quite a few Windows users are asking themselves if something similar will happen to their current software library if they intend to upgrade to the new 32-bit version of Windows (Temporary name 'Chicago', but will probably be called 'Windows 4.0') in six to nine months time.

In their documentation on Chicago, Microsoft has assured us that most of our current Windows software should work normally, at roughly the same speeds as they are doing right now. As for DOS applications, well..... let's wait and see.

To get the maximum benefit out of the new 32 bit operating system, you need to run *32 bit versions* of your software. Most, if not all, current upgrades are still *16 bit versions*, which means that you will notice very little or no improvement in performance compared with the version of Windows which you are using right now.

In fact, most major players in the software game are now hard at work readying those 32 bit versions of their most popular applications. So, start saving up now, because you will not only have to buy that new operating system, but you will be upgrading most of your applications as well - let's face it, we've got to keep up with the Joneses!

Also do remember that quite a few Windows Shells and other Utility programs will be antiquated under Windows 4.0, as it has a totally new front end; at present called 'Explorer', which is an amalgam of Program Manager and File manager. Buy these utilities by all means, if you intend to stick with Windows 3.1, 3.11, or WfWG 3.11., but if you do intend to buy Windows 4.0, you'd better save your money for new utilities, which will surely follow soon after the official release of Windows 4.0.

I sincerely hope that in twelve months time we can all say that the latest 32 bit version of Windows and Windows software has resulted in a substantially better performance all round, but somehow I think that we will be in for another round of hardware upgrades to get the best out of the new system. Oh Ralph, you are a sarcastic old bastard!

CD-Roms

A friend rang me the other day, to tell me that he had bought a Panasonic double speed CD-Rom drive with a 16 bit Soundcard for $400.00. He was only gloating, because it's less than two years ago when I bought my *single speed* CD-Rom unit for $500, but without a soundcard!

If this trend continues, I should be able to buy a quadruple speed CD-Rom drive with a 32-bit soundcard for $200.00 in two years from now, and then it will be my turn to ring him about the bargain I picked up!
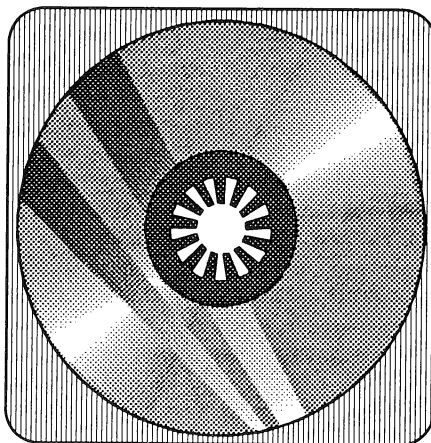
At my local newsagent I saw an English PC magazine which had a 3,5" diskette on the frontcover (as most English PC magazines have these days), as well as a CD-Rom with a selection of games demos, and all this for a mere ten dollars. As CDs can now be manufactured for a couple of dollars, we can look forward to a lot more sample CDs appearing with computer magazines.

If this downward pricing spiral continues, we may well see Brisbug offering *Significant Bits* on CD-Rom. in a couple of years' time, because it will be cheaper than printing the magazine! Just think of the implications - after an opening fanfare (the 'Brisbug' Fanfare, written by a prominent local composer) we have an introductory talk by the incumbent President, followed by a Scottish gentleman, who will tell us all about forthcoming meetings (his words will simultaneously scroll along the bottom of the screen for those of us who have trouble with his Scottish pronounciation!).

This is followed by the Software Librarian's Game Selection, which you can install on your own computer, as well as all of Dan Bridge's assembly language routines, which you don't have to type in

anymore, thus avoiding many painful hours of debugging. Of course, there will be a Beginners Corner, with lots of visual examples, as well as 'teaser versions' of the latest software, etc. etc.

Come to think about it, as a CD Rom holds as much information as a whole encyclopaedia, we might be able to get away with producing only one CD Rom for twelve months' activities. Can you imagine the smile on the Treasurer's face, because of all the money we are saving?

But on a more serious note, it has been forecast that, by the end of this year, half of all new PC sales will include a CD-Rom and a Soundcard. This, in turn, will mean that quite a few of the larger applications will be supplied either with a CD-Rom or on 3,5" disks to install the program. One or two Windows programs already offer this option, and you will find that the CD-Rom version will be the cheaper of the two, as it's cheaper to duplicate 1 CD-Rom than, for example, ten 3,5" diskettes.

Those of us who have used CD-Roms to install software, can attest that it's a lot easier and faster than the 'old' way.

The other half

This has nothing to do with Windows really, but I regularly read the Fido Net messages of the International Windows area. Like so many other computer activities, this is totally dominated by males, but there are at least three regular women contributors. Their contributions stand out, because they only write about the things they understand, and aren't afraid to ask questions about those aspects of Windows which they don't understand. Contrast this with a portion of male contributors who are past masters at the art of spreading wrong or even false information on the net.

I totally disagree with a certain feminist who claims that "the reason why women avoid computers is because computers have a masculine design" (*PC User*. Page 10, July '94). Wow! Does that mean that Microwave ovens have a feminine design? And what about video recorders - neither male nor females can operate those things; designed by a gorilla?

I really don't have the answer why there aren't more women amongst computer users, but as far as I am concerned they are very welcome in our Windows SIG, even if they want to decorate their Windows with a lace curtain!

Ralph

SNIPPETS CORNER...

Rita Copeland

PRINTING FRACTIONS NOT SHOWN ON KEYBOARD

(My example from WordPerfect 5.1 for DOS)

Would you like to be more ambitious than typing 1/2 for "a half"? The Compose Character gets you there. Either Control-2 or Control-V are what put you in this mode. Then you call on one of the many Character Sets available in WordPerfect. Some of these Character Sets contain foreign language alphabets, some mathematical or scientific symbols. Let's go for the fractions to get you started. You'll find these in Character Set number 4. You quote the Character Set, type a comma, then type the number in that Character Set that represents the fraction you want. The "half" sign is number 17, so to get that, your keystrokes are

Ctrl-V4,17<cr>

If you don't immediately see that reflected on your screen, it may be that your video card can't handle graphics characters. Your view mode will. Hop into Print View (Shft-F7,6) and you will be able to see if it turned out all right. If your printer can handle the graphics you'll be right.

I'll give you the numbers for the other fractions while I'm here but will not attempt to print them out (I'm saving this article to a DOS file, remember, to send to Significant Bits to retrieve with Pagemaker and DOS mode does not save the special Character codes).

Half 17; quarter 18; three quarters 25; one third 64; two thirds 65; one eighth 66; three eighths 67; five eighth 68; seven ninths 69.

These all belong to Character Set 4 so use my keystroke instruction above and just change the last number for the fraction you want.

When you get used to that you might like to see what other goodies there are in Compose Characters. Look up your manual and try them out. (Or try typing Ctrl-V F3, read the screen, then press 1 to read the next screen, just to see what can be done in this area).

Another area you might want to check in the Reference part of the manual is Print Quality. You may be able to get Draft quality text on the page for greater speed, then put the page back into the printer to print only the Compose Characters in High Quality graphics. You won't be able to print two different qualities in the one pass in the one document.

For people using other wordprocessor programs - check through what your program can do in this vein. You might have a whole lot of goodies there hidden away under slightly different names in your reference manual. Go looking!

SPREADSHEETS

New to Spreadsheets? And easily baulked by the set example worksheets in tutorial programs? leave them to the desk-workers who are familiar with ledger books and the like. Start with your own personal budget so that the items, amounts and when you have to do something with them mean something to you.

List the different items down the left hand column - Rates, Electricity, Gas, Insurance, Food, Fares, etc. Across the top line you enter headings for the periods of time - months bills are due, for instance.

Didn't leave a blank top line when we started? Hop your cursor to the top line now and insert a row. (I am using Quattro Pro 3 for DOS but other versions and spreadsheets have similar ways of going about it). /Edit|Insert|Row is my version's instruction. (I could have made more than one line insertion there by pressing the down arrow the number of times I wanted and watching the screen highlight showing me what space would be inserted).

So we now have space for the top row of the spreadsheet. Write "ITEM" over the column of types of bills, move into the next cell to the right and type something like JAN or JAN94 and so enter all the months of the year or however you want to set out your budget.

LOCKING THE TITLES

Now you enter in the amounts in the correct cells. By the time you have filled in the screen, your columns of titles will have scrolled off the screen. Try this trick of holding the titles steady on the screen no matter where you are on the spreadsheet.

Move your cursor to just under and to the right of the headings you have entered - somewhere like cell B2 it will be. My commands are /Windows|Options|Locked Titles|Both. The titles will be highlighted and stay there.

TSR Applications

In this article, I'll guide you through the step by step process of coding

David Reilly

Terminate-Stay-Resident applications.

If you've had some experience with Pascal before, it will be simple to make the transition to TSR programming. For those who have never written a TSR before, I'll briefly cover the basics of what a TSR is and how to code one.

A TSR is really no different from any other procedure. In a Pascal program we have our main code which calls procedures or functions. For a TSR application, we'll design a procedure, and then have the computer call this code from within other applications. In this manner, we can write useful tools that are independent of the application in which they are running.

Our first example will be a simple alarm program, which will be able to be heard regardless of what application is running, regardless of whether in DOS or Windows. To make graphical applications is much harder, so we'll use the simple CRT command, sound.

Our procedure, named Timer, is defined in a special way that allows it to function as an interrupt handler.

Procedure Timer

```
(Flags,CS,IP,AX,BX,CX,DX,SI,DI,DS,ES,BP:Word);Interrupt;
```

We nominate this procedure as an interrupt, which means Turbo Pascal will treat it in a special way. This procedure will contain the actual code that will be activated as a TSR. It contains an inline statement representing the command, CLI. This prevents other maskable interrupts from occurring while our application is processing.

Our Timer procedure will be executed approximately 18.2 times a second. In order to maintain a reasonable idea of the time, we have a counter (timecount) which, when multiplied by 18.2 gives us the number of seconds elapsed since installation. When this value is greater than the number of seconds we must wait, the alarm will become active. We reset the timecount variable to zero, and set WaitSecs to 30 so that a reminder is given every thirty seconds.

The final part of our procedure includes a second inline statement, this time representing STI. This will allow normal interrupt processing to resume. We must pass control to the previous Int 8 handler to ensure system stability, and we use the call procedure to do this. Call is simply another collection of inline statements which jump to the previous handler.

The main program deals with installation of the TSR and processing of the command line parameters. If there are no parameters, then a help screen is displayed. Otherwise, the numeric value is extracted from the parameter, and gives us the number of minutes until the alarm is set to go off.

The address of the current Int 8 handler is stored as a pointer, using the GetIntVec command. We use SetIntVec to set the new address to that of our Timer procedure. The final command, keep(0) sets the errorlevel to zero and makes the application memory resident. This program, while simple, does give an idea of the basics of TSR programming from Pascal.

Important Concepts

There are some important things to remember when coding interrupt handler routines from Turbo Pascal that may not be apparent from the example.

Firstly, avoid invoking Dos from inside a TSR. This includes direct calls to Int 21h, and using Pascal commands that read or write from the disk. When Dos was first created, it was not designed to be executed while still active - and when a TSR calls Dos, there will be incompatabilities that halt execution.

Secondly, never write comments to the screen from inside a TSR with the Writeln command. Your program will not function properly - always use the Write command instead. This is because the writeln command will use Dos (which is not re-entrant) to display text, rather than the ROM BIOS or writing direct to video memory.

Thirdly, TSR's need not be limited to hooking only the timer interrupt (Int 8). Hooking Int 9, the keyboard interrupt will allow you to create TSR's that are active upon keystrokes. For an example, search the Turbo Pascal on-line help for the Keep example, KEYCLICK.

By using the example source code as a TSR shell, you should be able to adapt it to fit your needs. The points I have discussed so far should allow you to explore the world of TSR's. The power and versatility of this branch of programming is enormous, and only limited by your imagination. Debugging an interrupt handler can be extremely frustrating, but the satisfaction derived from seeing the finished product, is well worth it.

Pascal Source Code - REMIND.PAS

```pascal
{$M 1100,0,0} {$R-,S-,I-,D+,F+,V-,B-,N-,L+} Program Reminder;
uses Dos, Crt;

var

  regs: registers;              { simulate registers with
regs variable }

  WaitSecs : integer;           { number of seconds for TSR
to wait

                                  until alarm becomes active
}

  WaitMins : integer;           { parameter input of minutes
to wait    }

  OldTimerRoutine : Pointer;    { Pointer to previous time
handler     }

  Length : integer;             { Length of parameter input
}


const
      TimeCount : word = 0;
{ Call - used to call the previous interrupt handler }
procedure Call(Sub:Pointer); begin
    Inline ($9C/$FF/$5E/$06);   {pushf   jmp far [  :  ]}
end;
{ Timer - new int 8  timer handler to trigger alarm after n
minutes}

Procedure Timer(Flags,CS,IP,AX,BX,CX,DX,SI,DI,DS,ES,BP:Word);
Interrupt; var i : integer; begin

    inline ($FA);
{ CLI }

    inc (timecount);            { increase counter to
mark time }


{ Since the timer interrupt is called approximatly 18.2 times
per

  second, we must multiply the counter by 18.2 to find the
number

  of seconds we have waited }
        if timecount > trunc(WaitSecs * 18.2) then
            begin
                timecount := 0;        { reset counter to
zero once active }

                waitsecs := 30; { set seconds to wait to thirty
as a reminder }

                for i:=1 to 15 do begin
                            sound (500);            {
do alarm sounds }

                            delay (15);
                            sound (1200);
                            delay (15);
                    end;
                nosound;                        { turn off
previous noise }

            end;
{ In order to maintain system integrity, after our tasks are
complete

  we must pass control back to the previous timer handler }
```

```pascal
    inline ($FB); {STI}
    Call (OldTimerRoutine);
end;
{ main program and installation will begin here }
begin
    Writeln ('Remind-ME! V1.0');
    Writeln ('A Terminate Stay Resident Application by
David Reilly 1994');

    Writeln;
    if paramcount = 0 then    { if no command line
parameters exist,

                                        display help }
        begin
            writeln ('Syntax <REMIND mins>');
            writeln ('where mins is number of minutes before
audio reminder');

            Halt(1);             { exit application -
                                    dos errorlevel 1 set to
true   }

        end;
    Val(ParamStr(1), WaitMins, Length);  { convert
parameter to value in

                                        WaitMins }
    WaitSecs := WaitMins*60;      { Waitsecs = no.
of minutes x sixty

                                    secs       }
    timecount := 0;               { initialise our
counter to zero }

    GetIntVec ($8,OldTimerRoutine);     { Get pointer to
previous int 8

                                    handler   }
    SetIntVec ($8,@Timer);        { Set our
procedure to int 8

                                    address   }
    Writeln ('Remind-ME! V1 sucessfully installed');
    Keep(0);                      { Make application
resident,

                                    no errors    }
end.
```

Phar Lap FrontRunner

The best of DOS and Windows, all-in-one!

Report by Geoff Harrod
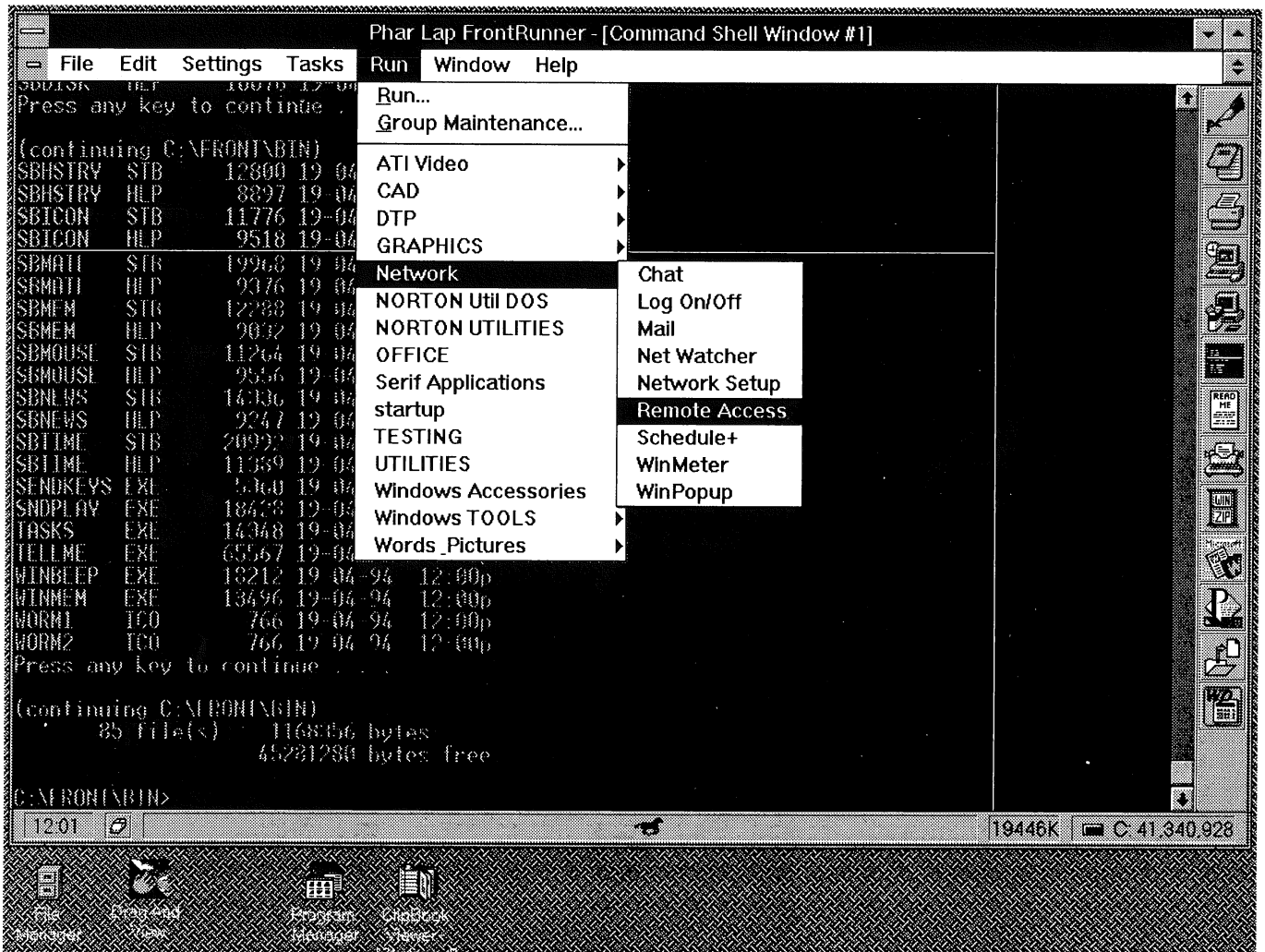
Although it is a fact that most PC users now run Windows, at least some of the time, many "old hands" still prefer to go to the DOS prompt for system tasks, and many others use a mixture of DOS and Windows programs.

You can stay in Windows for just about all utility tasks with the facilities provided in 3.1 or 3.11, and once having adjusted to the different way of doing things, most tasks are nearly as quick as from DOS, or in some cases a lot faster (neglecting such DOS helpers as Xtree).

If you use the computer for work tasks rather than as a "computing person", most DOS-based programs that you still use can be run very effectively from Windows. In fact, I know some people who use Windows more as a multi-tasking environment for DOS programs, than for running Windows programs! However, programmers and other people for whom the PC is a part of their work as well as a tool in their work, have often complained that the DOS prompt facilities within Windows were not very good. Although it provides some clipboard cut and paste facilties that DOS lacks, they are quite restricted.

With Windows-NT the command prompt facilties are much better. You can't really call it a "DOS Prompt" in NT, as it is NT's own text-mode command prompt facility, and can be used for typing most DOS commands, NT's own commands, network commands and possibly some Unix and TCP/IP commands depending on what is connected. Anyway, unlike the Windows DOS prompt, NT's prompt can also start up Windows programs by name, and you can set it to buffer many more lines than 25, so that you can recall things that scroll off the top.

FrontRunner is a Windows 3.1 command shell alternative to Program Manager that brings similar text prompt facilities to NT's and more besides. It was designed to appeal primarily to programmers who develop for DOS, Extended-DOS and Windows, or who use some DOS command-line tools while writing Windows programs. However, it will also appeal to many "power users" who like the directness of command-line operation alongside their Windows use.

FrontRunner is produced by Phar Lap Software of Cambridge Massachusets, the pioneers of the DOS-Extender technology that allowed major CAD and Engineering software to migrate from Unix to 386 PCs with plenty of extended memory. The use of DOS-extenders is now declining as more big programs move to NT or to Windows 3.1, which is itself really a DOS-extender with the added advantage of its own standardised graphics system. It's not surprising that the DOS-extender producers are looking for new markets for their programming skills!

FrontRunner Layout

In the illustration, you can see FrontRunner occupying most of the desktop, with a single command shell text window occupying all of its own application space (ie, as a maximised document window), and with a single column of program launch icon buttons at the right. You can see I have several Windows progams iconised also — File Manager, Drag-&-View (multi-format text & graphics viewer), Program Manager, Clipbook, and Pagemaker.

The bottom status bar shows the time, a button to toggle the mouse to work either in FrontRunner or the DOS program being run in it, a message area, amount of free memory, and free space on the current disk drive. The message space is used as a runway for a galloping horse when it has nothing else to show! It's odd that an American firm (not even in Kentucky) chose to use an Australian race horse (from New Zealand) as its emblem and name!

Launch Icons

The launch icons are user-defined and there can be more, in multiple columns or along the top, or as a floating palette. It sets itself up with Write, Notepad, Print Manager, Control Panel, Windows Setup, Command Shell, and Read.Me, which I have left as the top seven. I added Q-Edit , WinZip, Word, Pagemaker, Text-window and WordPerfect, in order downwards.

Q-Edit and WordPerfect 5.1 are DOS programs set up to run in windows by PIF files, and with icons taken from the \WINDOWS\MORICONS.DDL file. Incidently, WordPerfect also temporarily loads a TSR TrueType printing module (TrueType for WordPerfect from LaserTools) that accesses all the Windows fonts.

Text Windows

Text-window, is a FrontRunner facility that serves as text file viewer and editor. That in itself is a worthwhile feature for Windows users as it overcomes the chronic limitations of Notepad. You can drag a filename onto the icon from File Manager to pop up a text window with it ready to edit. You can open multiple text windows.

Command Shell

The command shell window is labelled #1, and you can run up to six. The vertical and horizontal lines within it show where the normal DOS 80x25 screen would cut off. If any text data extends wider than 80 columns it crosses the vertical line and if more than the window edge, a horizontal scroll bar appears. The text above the horizontal line is that normally lost forever in DOS off the top of the screen. FrontRunner's command windows store up to 16,000 lines as a temporary file and the vertical scroll bar allows you to go back over any of it and to copy any part or all of it to the clipboard, a file or a printer. You can also paste any part of it onto the current prompt line and use it as a command, with alterations if desired. I liked this feature on the Apollo and HP workstations and it's really good to have it here now.

In the FrontRunner command shell window, you can type all the normal DOS commands, but can also run Windows programs just the same as DOS programs, by typing their filename! You need to know their names of course, which most Windows users don't as it is hidden away in the Program Manager icon definitions. You can also add parameters just like DOS, so if you type WORD TEST.XLS you will launch Word for Windows and load it with an Excel spreadsheet file called TEST converted into Word table format as an untitled document, assuming WORD.EXE is listed on the PATH.

FrontRunner also comes with extra batch language commands. Actually they are small executable programs that can be run from a normal DOS batch file, which pop up various standard Window utility facilities such as Open-File dialog boxes. With these you can build a quite slick custom facility as easily as writing a common old BAT file.

The top menu bar provides for opening text windows and files, searching text files for given text, configuring FrontRunner, and switching between frontRunner windows and Windows tasks.

Simple Run Menu

The Run menu provides another way of runing Windows programs, and is the main replacement for Program Manager's icons. It simply lists the names of all Program Manager Groups, and fly-out menus list the programs within them. Some users may prefer this very orderly and direct method to Program manager's. Certainly, many users get their Program Manager display into an awful muddle!

I quite like FrontRunner, as it suits my ways of working, and relates very well to NT's facilities on the other machine. It certainly won't appeal to everyone of course. I wouldn't suggest it to people who have no need for typing commands or do not use DOS other than running some DOS programs from Windows icons. For the more technically inclined and for programmers, it's great, and seems very reliable. It has been on offer at an introductory price of US$99 direct from Phar Lap. That came to A$170 including delivery. Their contact details are:

Phar Lap Software Inc. 60 Aberdeen Avenue, Cambridge MA 02138 USA, Tel: 0011-1-617-661-1510 Fax: 0011-1-617-876-2972.

Computers, Bulletin Boards and Genealogy

By Peter Dunn

Buy a computer and you have acquired a perfect mechanism for storing and retrieving your Family Tree data. This can be in the form of text stored in a Word Processor such as Wordperfect or data stored in a Genealogy Database program such as Personal Ancestral File (PAF) or Brother's Keeper.

Buy a modem and you've got the world at your finger tips!

A modem will allow you to connect to a local Bulletin Board System or BBS. You will then be able to send and receive messages from all over the world, or alternatively upload and download genealogy software and data. You can also connect to the online Oracle database at the Queensland State Library (07- 8464019, set Comms program to E,7,1).

A BBS is a computer run by a System Operator or Sysop The BBS computer is generally always switched on and permanently connected to the outside world by a modem waiting for someone like you to log in.

The Sysop installs various Bulletins, Message Areas and Fie Areas on this computer and allows other compter users to read the Bulletins, read and write messages in one of the many Message Areas, or download programs or data from the BBS or alternatively upload programs or data to the BBS.

Accessing the BBS . . .

Anyone wishing to access the BBS, rings the BBS phone number using a modem in combination with a Communications package such as Telix (a shareware program). When the BBS answers, it makes a connection via the modems and the user is asked their name and password if they are already a registered user of that BBS.

If they are using the BBS for the first time they will be asked their personal details to allow them to be registered. They will then be asked to select a suitable password to allow them continued access to the BBS. Once you are logged on to the BBS you can write messages in Echo Message areas.

On BBS's devoted to Genealogy you can find Message Areas such as:-

Australian Genealogy
New Zealand Genealogy
Ireland and UK Genealogy
European Genealogy
Spanish Genealogy
Italian Genealogy
Genealogy Software
Personal Ancestral File

Ahhh. . . the world !!!

You can read and send messages in any of these areas. When you send a message it is saved onto the BBS computer and overnight your message is sent from this BBS via a network to all other participating BBS's in Australia. The messages are also transmitted to New Zealand, UK, USA, Canada, South Africa and some European countries such as Denmark and Germany.

Who can read my message?

So someone in one of these countries could read your message and send you a reply. Or similarly you could read a message originating from the UK and then send a reply. It is possible to send a message to the UK and receive a message back in 3-4 days.

Because of this quick turnaround of messages, BBS users refer to conventional mail systems such as Australia Post as "Snail Mail". As many messages as you like can be sent during one 25 cent phone call. This assumes that the

BBS is in the same city as yourself. Similarly you can download all the messages that have arrived for you from all over the world during that same one 25 cent phone call.

Eventually you can get to know who has what Genealogy microfiche or CD-Roms at home. e.g. If you are chasing the address of people in USA with the name Caplice you would send a message to Sally in Melbourne and ask her to do a search on her computerised USA Phone List. Within a day or two she will have sent you a message with a list of names, and addresses. Similarly you could ask Rosemary in the UK to do a UK Phone Base search for you. Or if you were after some information from the Victorian Pioneer Index 1837 - 1888, you could send a message to Ted in New Zealand.

If you are researching Danish ancestors you could link up with someone like Kenneth who lives in Aalborg, Denmark. With the message areas you can send a message to "ALL" and request help with a specific ancestor or any problem at all. Many people have linked up with "cousins" via the Bulletin Board Network. I have made contact with a Carl Dunn in Iowa, USA whose Dunn ancestors come from the same area in Devon. He has claimed me as "Cousin Peter" but we have not quite confirmed a positive link.

There are also many genealogy files and programs available on BBS's which can be readily downloaded. Files such as the Westminster Poll Tax for 1747. It is a text file which is over 700kB long. There are numerous indexes available. The 2% sample of the 1851 Census for UK is also available on most genealogy BBS's.

A group of professors years ago were undertaking some statistical research. They entered every fiftieth census book onto a computer. If you copy the whole of the 2% 1851 Census Sample on to your hard disk it will take up approximately 32 MB of space in unarchived format.

Brothers Keeper Version 5.2

The latest version of Brother's Keeper, now version 5.2, can be downloaded from a Genealogy BBS. Brother's Keeper is a Shareware program. Many other Shareware programs are held on BBS's. It is illegal for Bulletin Boards to keep Commercial programs in their file areas. (*Ed. Also available from the Brisbug Software Library.*)

At present there are only a few specialty Genealogy BBS's in Australia. One is Heritage Oz which is located in Melbourne and another is Custom-Built located in Sydney. There are hundreds of Bulletin Boards in south east Queensland.

DEAD PERSONS HAUNT SOFT-TECH BBS!

Soft-Tech Bulletin Board (07-8691131) in Brisbane run by Alwyn Smith, supports Genealogy and has a group of approximately 63 Genealogists who operate on the Bulletin Board. They call themselves the Dead Persons Society (DPS). For more information on the Dead Persons Society contact Peter DUNN on 07-3452685.

DPS Members regularly help each other out with their research problems. Three of our DPS members are librarians at Church of Latter Day Saints libraries and their advice is a very valuable addition to the group. Members regularly correspond with other researchers from all parts of the world. The use of modems for Genealogy opens up a whole new source of information for your research.

Soft-Tech Bulletin Board offers many other message and file areas on topics other than Genealogy. Topics range from Cooking to Cycling to the Red Dwarf (TV show) to Medical discussion. There are areas specializing in Disabilities and message networks for school children such as the K12 school network. Access to Internet is also now available on Soft-Tech.

SUBMITTED BY:- Peter DUNN, the Co-ordinator of the DPS on Soft-Tech Bulletin Board.

... SHIPS - Yongala, Tinonee, Kate, Royal Dane, Silver Eagle — Blue Wave/Max v2.12

* Origin: Soft-Tech/ GCSBBS +61-7-869-1131 (3:640/201)

Care and Feeding of High Speed Modems.

Paul Marwick

High speed modems **have recently become quite affordable (it is now possible to buy a 14400 V32bis modem for less than I paid for the first 2400 bps modem that I ever owned).**

With this reduction in cost for high speed modems, a great number of people have gone out and purchased units of this type. I ran a statistical program on usage of one of the BBS lines for a week, just to get a feel for how that usage has changed over the last few months. Results of that survey are presented in Figure 1.

There are a couple of different conclusions that can be drawn from this. First, the club needs to upgrade the modems on Lines 1 and 2 as soon as possible, to meet the requirements of users. The second conclusion isn't visible from the statistics, but is certainly visible from watching callers. That is that many of the people with nice new high speed modems don't know how to make optimum use of them.

A matter of budget

Addressing the first conclusion becomes a matter of budget. While there would be a good case for adding another line to the systems, upgrading the existing lines so that all of them are at least 14400 bps capable will almost certainly provide better value and is of more immediate concern than adding another line. If nothing else, callers at high speed are usually less likely to use their full on-line time, since they can download files and mail much more quickly than callers at 2400 or lower can, thus helping improve the availability of the existing lines.

I hope to address the second conclusion here, with a simple guide to getting the best results from a high speed modem.

First, choosing a high speed modem.

There are a large number of high speed modems to chose from, at prices that seem to be ever more competitive. So, what do you chose?

Speed. At this stage, it hardly seems worth buying a 9600 bps modem. The price difference between a 9600 and a 14400 bps modem is now pretty small, and with V32terbo, V.Fc and V.34 modems about to be released in quantity, there seems little point in purchasing less than a 14400.

It may be a little early to purchase a V.Fc modem, unless you can get reasonably clear information about upgrades to V34. While the new V.Fc modems are extremely fast, there is little point in buying something which will be obsolete in a matter of months. At least, not unless you can get a cheap or free upgrade to V34 when the V34 models become available.

Error correction. Any high speed modem should have error correction. At the very least, MNP1-4. Preferably any modem you chose should have V42 error correction, and also MNP5 and V42bis data compression. But, if it doesn't have at least MNP up to level 4, I would advise not looking at it at all. Without error correction, using a modem at 144000 is liable to be frustrating at best, disastrous at worst.

```
┌──────────────────────────────────────────────────────────────────┐
│                            SUMMARY                                 │
├──────────────────────────────────────────────────────────────────┤
│ BBS Callers at 14400  = 139  │ Message Bytes Transferred = 72,500,424 │
│                9600   =  32  │ File Bytes Transferred    = 62,942,647 │
│                2400   =  66  │ TOTAL Bytes Transferred   =135,443,071 │
│                1200   =  12  ├────────────────────────────────────────┤
│                Other  =  11  │ Message Connect Time       =    12.5   │
│ TOTAL BBS Callers     = 260  │ File Transfer Connect Time =    10.3   │
│                              │ TOTAL Connect Time [Hours] =    22.8   │
│ Net Password Errors   =   0  │ TOTAL Network Session Costs = $ 45.00  │
│ Net Nusiance Callers  =   0  ├────────────────────────────────────────┤
│                              │ Unsuccessful Connect Attempts=     33   │
└──────────────────────────────────────────────────────────────────┘
```

Figure 1: A seven day summary of BBS and mailer activity for Line 3. This shows the number of BBS calls and the speed of those calls. You should note that the "Other" number (with 11 calls marked against it is 28.8K bps calls, which brings the total of calls at over 2400 to 182.

MNP class 5 is a data compression protocol which will be commonly found in high speed modems. Its use is NOT recommended if you are likely to be transferring compressed files (such as archived files from a BBS). The compression algorithm used is not terribly smart, and it will waste time and processing power attempting to compress a file which has already been compressed far more effectively than it could hope to manage. If you are going to be doing general BBS work, the ability to disable MNP5 without disabling V42bis is a very useful option.

V42bis is also a data compression protocol. However, the algorithm used for V42bis is considerably more advanced than the one used for MNP5. It will not attempt to compress already compressed files, which means that use of V42bis will not interfere with high speed transfers of compressed files, but will provide a substantial advantage when it comes to normal screen output and the occasional uncompressed files that you may want to transfer.

A number of newer modems are now coming out with MNP10 error correction. At present, I'm far from sure how valuable this may be for normal modem use. Its primary intent would seem to be allowing better use of limited bandwidth channels such as cellular phones. So it is not an especially desirable feature to have for general modem use.

Connectivity. This is one of the most critical aspects of any modem purchase. Its not much use having a modem with every possible feature if it has difficulty connecting to other modems. And given the number of modem brands available, its getting fairly difficult to determine what will connect to what. But, before making a final purchase decision, you would do well to ensure that the modem you are going to buy is able to connect to as many different brands of modem as possible.

I'm not going to give specific advice about purchasing a high speed modem. I can give some general guidelines, but beyond that, potential buyers will have to make up their own minds.

Buy AUSTEL Approved!

First, I would STRONGLY advise that you ensure whatever you buy is Austel approved. While there is a good chance that you will never have legal problems through purchasing a non-approved modem, the risks are simply not worth the saving. Especially when you consider that there is a very good chance that the supplier of non-approved modems will not provide much if any support, and may well have vanished by the time you need to get the modem repaired or upgraded. Australian law in regard to non-Austel approved modems is more than a little strange. It is not illegal for a supplier to sell a non-approved modem, nor is it illegal for you to buy a non-approved modem.

However, it IS illegal for you to connect your non-approved modem to the phone line. And if you get caught doing

so, you are liable for a $12,000 fine. So, take the simple way out - ensure that the modem you buy IS Austel approved.

One other item that should be mentioned in regard to Austel approval. Austel is not even vaguely concerned about the quality of the modem. Their only concern is to avoid possible damage to the phone system. So it is theoretically quite possible to get an Austel approved modem which doesn't do a very good job as a modem.

Second, given the speed with which modem technology is changing, getting a modem which has "Flash EEPROM" firmware is a good idea. This means that as upgrades or fixes are made, you have the ability to upgrade your modem by uploading a new revision of firmware to it, rather than having to take it in for service. There are several modems which offer this ability. The newer Netcomm modems, and the Microcom modems both have flash EEPROM fitted. Others will probably have this feature shortly.

It's your decision

Once you have made your purchase decision, you will soon have a shiny new toy to play with. If you've never used a high speed modem before, there are a number of things that you need to do to ensure that you get the best results from it. And a number of things which work differently with high speed modems than they do with a conventional 1200 or 2400 bps modem.

First, cables (I'm assuming an external modem, given that my normal recommendation would be to buy an external unless you have a pressing need for an internal modem). With a high speed modem, you may well find that you need a new cable to connect it to your PC. 1200 or 2400 bps modems can work without problems with only a few of the leads in a serial cable connected. This is not going to be the case with a high speed modem.

For best results, you are going to need what is commonly known as hardware flow control. Hardware flow control depends on use of a number of the signals in a standard RS232 serial cable - CTS (Clear To Send) and RTS (Request To Send) especially. Older cables may not have those connections, so you are much better off getting a cable that you can be sure is fully connected. If you don't, you may well have problems which will be difficult to trace.

I've already mentioned error correction. While you may be able to connect to other modems at high speed without error correction, the results are going to be at best, well below optimum. Line noise becomes a significant problem at 9600 bps and above. Without error correction, you are going to be at the mercy of telephone line quality. Since you followed my advice and made sure that you purchased a modem which includes error correction, there are a few things that you will need to do to make the best use of that error correction, not only to ensure that you stay connected through bursts of line

noise, but also to ensure that you get the best performance gains from your modem.

In order to do this, you will want the modem to operate at a fixed DTE (Date Terminal Equipment) speed. In other words, you will want the link speed between your computer and your modem to stay at a fixed rate. And you will want that fixed rate to be higher than the highest connect speed that you are likely to see.

All high speed modems that I'm aware of will offer this sort of facility. You will find that common speeds are 19200, 38400 or 57600 bps. Which of those speed you chose depends to some degree on the type of work that you intend to do with your modem, and to some degree on the capabilities of your PC and its serial ports.

BBS USE

For BBS use, where most of the files are almost certainly going to be compressed, a port speed of 19200 is probably going to be adequate However, if you are going to be doing a lot of browsing (reading messages online, or something of that nature), or if you have purchased one of the new Vsomething modems which is capable of connecting at speeds above 19200, you will need to use at least 38400, if not higher.

Use of link speeds of 38400 or higher is liable to put extra strain on your PC and its serial ports. While modern PCs are generally powerful enough to handle high speed communications without too many problems, at speeds much above 19200, you are likely to find that your serial ports need assistance to avoid character loss and buffer overrun. If you are operating in a multi-tasking environment (such as DESQview or OS/2), other overheads on the system will lead to the same sort of problem at lower speeds.

Unfortunately, the majority of PCs currently being sold use multi-I/O cards which combine hard drive controller, floppy drive controller, serial, parallel and games ports on a single card. As a result, few of them are upgradeable to use the more advanced, buffered UARTs that you will need. If you have a machine like this, you have few choices - you can either live with the character loss, replace the existing card with a separate hard/floppy drive controller card and separate I/O card (one which either includes 16550 UARTs or is socketed so that they can be fitted), or disable the serial ports on the multi-

I/O card and fit an extra serial card with buffered UARTs. Any of these options are almost certain to cost you extra money.

One further option is to get a multi-I/O card which already has buffered UARTs fitted. These are not exactly common, but are liable to become more readily available in the future. One of my suppliers is already offering such a card, at a not unreasonable price. Hopefully, more will become available as suppliers realise that the standard serial ports fitted to most PCs are inadequate to cope with with modern high speed modems.

Multi I/O cards

There is also one other item that should be mentioned in relation to serial ports to be used with high speed modems. While almost all multi-I/O cards offer the option of disabling some or all of their components, there is no guarantee that this will work effectively. I've encountered a number of such cards that have jumpers which allow the serial ports to be disabled, but which will still cause conflicts when this is done. There aren't very many good options in this case, except replacing the offending card with something of better quality.

Having got the hardware side of your new modem sorted out, next step is to make sure that the software is working optimally for it as well.

I'm not going to recommend a particular communications package. There are so many available that it would be foolish to try. However, there are several things that you need to have in you chosen software to make it work effectively.

Choosing the right Software

The software will need to support a number of different terminal speed settings. Common ones have already been mentioned above. It will also need to support hardware flow control (which some packages will refer to as RTS/CTS flow control). It will need to be smart enough not to attempt to change the terminal speed when a connection is established at a speed other than the speed set as the default terminal speed.

To take a commonly used package, if you chose to use something like Telix, you will need to enable hardware flow control, disable software flow control, and disable autobaud (while you're in there, it would also be a good idea to disable auto CompuServe-B, since that will cause problems with some
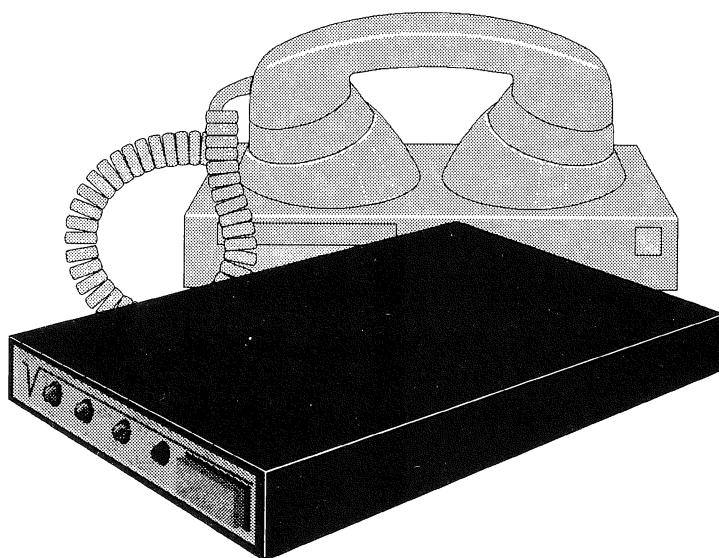
ANSI screen sequences that you are likely to encounter on almost any BBS).

When you set up a dialing directory for a package like Telix, set the speed for each entry to the speed that you have chosen as your fixed link speed. Do this even if you know that the modem you will be dialing for a particular entry is only capable of 2400 bps. The speed change is something that the two modems can work out for themselves -you want the link between your modem and your computer to remain constant, so as to give you the best results from high speed and error correction.

If you ever use a host mode so that you can have other people dial into your machine, you may well need to reconfigure the host mode in your communications package. Most communications software will attempt to use the speed of the connect to set the terminal speed, both when dialing out and when receiving an incoming call. I've already mentioned disabling autobaud for Telix. In addition, in the default Telix host script, you will need to tell the package to operate at a locked speed. If you don't, any incoming caller will get nothing but garbage on their screens once they connect.

File Transfer Protocol

There is one other item which should be mentioned as well. That is choice of a file transfer protocol. To some degree, that choice is going to be dependant on what is offered by whatever service you are calling. However, given that most BBSs offer a number of different protocols, you have a choice to make.

In general, choosing a streaming protocol such as zmodem is going to give you the best results, This is true for both high speed and low speed modems, but the difference is going to be much more marked at high speeds than it is at low speeds. If you are connected at 14400 bps and chose to use Xmodem, you will almost certainly get even worse efficiency than you would if you were using Xmodem at 2400 bps. Chose a streaming protocol if at all possible. If that isn't an option, Xmodem-1K (which sends 1024 byte blocks instead of 128 byte blocks) is at least somewhat better than standard Xmodem. SEALink or Ymodem are also preferable, though neither will give you the same efficiency as Zmodem will.

One final choice that you may be offered is Ymodem-G. This is potentially the fastest of the commonly available protocols. However, it gets its speed by including NO error correction, and depending on an error-corrected link to provide the protection it doesn't. This may work, but it is very fragile, and even error-corrected links are prone to some errors.

If such an error gets past the hardware error correction in the modem, you are liable to have your file transfer abort, and quite possibly to lose carrier as well. So, unless you are very confident of the quality of the line in use (which is not just your line, but also the line and exchange between you and whoever you are calling), Ymodem-G is generally not a good choice. If you do not have an error-corrected link, don't even consider using Ymodem-G.

Summary

This was intended to be a quick set of hints for new users of high speed modems. It has got a bit more involved than I expected. So it might be a good idea to summarise the main points again, so you have a quick checklist to use.

1. When making a purchase decision regarding a high speed modem, chose a modem with good error correction facilities and a proven ability to connect to other makes of modems. With emphasis on other MAKES - there is not much use in a modem that connects perfectly to others from the same manufacturer but won't connect to modems made by another firm.

2. Having got your modem, make sure that the cable you are using to connect it to the computer is adequate and includes all hardware-handshake lines.

3. Select a fixed link speed between your modem and the computer.

4. Be sure that the serial ports fitted to your computer are adequate to handle the high speed modem. If you experience character drop outs or frequent errors during file transfers (especially when receiving files) you may well need to upgrade your serial port to a port fitted with a buffered UART (16550 or equivalent).

If you're running under DOS and experience such errors, check to make sure that you don't have any TSRs loaded, since some will cause problems. If you're running under Windows, you may need to replace the standard Windows serial drivers (amongst other things - Windows is not a good environment for high speed communications).

5. When setting up your communications software, select the link speed as the default terminal speed, enable hardware flow control and set all the dial directory entries to the fixed link speed that you have selected.

6, Chose a suitable file transfer protocol. Preference going to a streaming protocol such as Zmodem (since it involves the least overheads while offering the best error correction).

You may notice that I have not suggested modem initialisation strings to use with your high speed modem. This is because the original Hayes compatible AT command set was produced well before there were high speed modems, and extensions to it to cover such beasts are not standardised across the industry by any means. So I can't simply give you an initialisation string which will work for any and all modems.

Care and Feeding of High Speed Modems - continued

Setting up Modem Initialisation

When setting up your modem initialisation, there are several things to take note of. First, almost all the newer modems available, high speed or otherwise, will have some form of non-volatile memory. So, in most instances, most of the necessary parameters can be stored in the modem, and the software need have little more than an ATZ<carriage return> as its initialisation.

Setting up the modem itself is a little more complex. Many of the newer modems will come with defaults that are quite sufficient for your needs, but there are several parameters that you should check.

Data Carrier Detect handling (usually &Dx). This should be set to follow the true state of carrier detect, rather than being forced true. In most Hayes compatible modems, &D2 or &D3 is the setting to use.

Flow Control should be set to hardware (sometimes &K3, but check your manual...). If there is an option for secondary flow control, disable it. Secondary flow control is always going to be software flow control and software flow control can interfere with the operation of streaming protocols such as zmodem.

Performance

Finally, having talked about getting optimum performance from high speed modems, it would probably be a good idea to give you an idea of what optimum performance for a high speed modem is.

For a 9600 bps modem, given a clean line and an error-corrected connection, a zmodem file transfer should give between 1050 and 1150 characters per second.

For a 14400 bps modem, under the same conditions, a zmodem file transfer should give between 1580 and 1660 characters per second.

For a 28.8K modem under the same conditions, a zmodem file transfer should give between 3220 and 3360 characters per second (this one is a little more variable, since a 28.8 modem can connect at a number of different speeds depending on line conditions during the initial negotiation, and is more likely to retrain as line conditions change).

Continuing - Snippets Corner from page 43

To clear them to edit them at any time repeat the commands and choose the Clear menu choice at the end eg / Windows|Options|Locked Titles|Clear.

HIGHLIGHTING WORDS

The LOOKFOR program issued on our club catalog disks is excellent for this but if you have some document on your wordprocessor and just want to skim through it looking for particular things try this.

Use the Replace function (my WordPerfect 5.1 for DOS instructions follow but use the principle and extrapolate to your own wordprocessor).
AltF2 y <your keyword> AltF2 F6<your keyword>F6 AltF2.
In effect, this is saying Replace, yes, confirm each find of the keyword, now you type in your keyword, Replace, Bold <your keyword again> unbold it, go ahead and do it.

The search function will stop at each occurrence of the keyword and ask you to confirm that you want that word dealt with. A tap on the "y" key confirms it, the word is bolded as you requested, and the search continues. The search will go no further than the last word so keep your eyes open for when it seems to not be doing anything anymore.

You may devise other ways of highlighting - underline, capitalisation, italic or a combination of them. Just use the same principle of replacing the keyword with some embellished form.

This document can now be scanned on screen or printed out, retaining the highlights for quick visual reading.

(In WordPerfect 6.0 for Windows the starting word is "Find" rather than "Replace" and you then select options from its dialogue box.)

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

New Library Additions

New Listings for August

BBUG NO 3341 AUTOEXEC.BAT-CONFIG.SYS FILE MANAGER Version 1.0

*CLASSIFICATION * Utilities * Hard and Floppy Disk*

A safe and reliable file manager for AUTOEXEC.BAT and CONFIG.SYS files. Save, edit, view, etc.up to 25 files each. Copying can be to and from boot files. Other copies can be made. For safety, booting is manual and only when needed. Program is not ram resident.

BBUG NO 3342 FLIP-N-DROP Version 1.0

*CLASSIFICATION * Games * Floppy/Hard Disk * EGA/VGA*

FLIP-N-DROP is yet another Tetris-clone game where you must fit a variety of shapes together in a limited time period to form complete rows of blocks. The shapes in FLIP-N-DROP are for the most part the same as the original Tetris game, but some are slightly different.

When you first begin the game you can choose between 6 levels of speed to start, and the game will keep track of the top ten scores.

BBUG NO 3343 FVRS - FLEET VEHICLE RECORD SYSTEM Version 1.0

*CLASSIFICATION * Business * Hard Disk*

A series of integrated menu driven program modules which are designed to help you track expenses for all of your vehicles. With it you will be able to determine and analyse costs for any period of time. Vehicles can be grouped together for fleet-wide reporting. Fleet reports can be run for groups of vehicles or for individual vehicles.

The FVRS can be used to remind you when to service your vehicles. It will tell you what maintenance operations need to be done, when they need to be done and which ones are overdue.

The FVRS Plus tracks vehicles by odometers or by hours. Boats, private planes or other vehicles with an accumulative hour meter can be tracked. Field headings, dates and numeric formats can be customized for use in many different countries.

Fleet Operations include modules for bulk fuel purchases, drivers, vendors, and system access. These modules contain information that can be shared by different logs and vehicles.

BBUG NO 3344 SCOOT-A-LONG Version 1.0

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

SCOOT-A-LONG is a game for 2-4 players which is similar to the board game Parcheesi. Each player has four tokens, which must be moved around the board to reach home. The first player to have all four tokens reach home first wins the game.

SCOOT-A-LONG does have an element of chance, for the computer rolls two dice to determine how far you may move a token in each turn. SCOOT-A-LONG is easy to learn and fun to play, making it a good game for young children.

BBUG NO 3345 KRISKROS Version 1.5B

*CLASSIFICATION * Games * HardDisk * 286/386/486 * EGA/VGA * Mouse*

KRISKROS is a game for one to four players. The object of the game is to form words by placing letter tiles on a grid (similar to a crossword puzzle). Some patterns are more difficult than others, and the number of points awarded for completion of a pattern will vary from 10 (easy) to 25 (difficult).

A player is allotted 90 seconds per turn. During a turn, the player may attempt to complete more than one pattern. However, if the player fails to complete the current pattern before the time expires, then the points awarded for all previous patterns completed on this turn will be forfeited. The game is over when one player reaches 500 points.

KRISKROS comes with a dictionary of over 7,000 words.

BBUG NO 3346 CROSWRD Version 2.6

*CLASSIFICATION * Games * Floppy/Hard Disk * Printer*

CROSWRD helps you solve and compose crossword puzzles, and the built-in help gives you all the explanations you need. Each puzzle you create can be printed on a printer which supports the IBM character set, and sample puzzles are included on disk.

BBUG NO 3347 POKER DICE Version 1.0

*CLASSIFICATION * Games * Floppy/Hard Disk * EGA*

POKER DICE is is a slot machine game based on the principal of Draw Poker. After each pull you can select which slots to hold before pulling again to obtain the best poker hand. The game has ASCII based graphics and a few sound effects.

The game allows you to set the graphics display to your system speed and provides a Top Ten Score Board that can be cleared at any time.

BBUG NO 3348 AMS - ADVANCED MENU SYSTEM Version 1.0

*CLASSIFICATION * Network Utilities * Hard Disk * Novell Network*

AMS is a Plug in And Play Novell Menu Script File Compatible menu system designed to be as easy as possible to use with Syscon like operation, yet incorporating some new very powerful features to help both beginners and Network Users.

Beginners will appreciate the Automatic Configuration option which automatically adds applications to the menu. Adding and Editing of menu options can be done with the help of the built in editor, which allows for line by line execution of menu options (Check the menu lines as you write them !), and which provides context sensitive help on any DOS you can think of (Or Can't).

Other users will appreciate the zero memory overhead during application execution (Freeing more than 14K if you're using Novell's Current menu). Also the screen saver function with re-entrant password security, and the ability to load multiple menus concurrently, allowing menus to be created and automatically loaded for different Users, Workgroups or Everyone. The program allows use of a user audit trail, multiple parameter files and user access restrictions.

For Novell users there's an easy to use front end to CAPTURE and NDIR. For Netware Lite users, each user can have an individual login script. All temporary files can be stored in a single directory on the server.

The program also features automatic disk space checking on all drives, a Calculator, Calendar and Notepad, Mouse awareness, Interactive input, single directory storage of temporary files, standard menus for Netware Lite and DOS and comprehensive on line help. In short, AMS is for all PC users, and ideal for network users, especially Netware and Netware Lite. If you're using Novell's Menu, you have to look at this!

Script File Compatible menu system designed to be as easy as possible to use with Sy like operation, with built in powerful features such as Automatic Applic Scan & Menu Configuration and an in-built menu option editor allowing li line execution of menu options and giving on line DOS help.

BBUG NO 3349 2CONVERT Version 1.10

*CLASSIFICATION * Business *Hard/Floppy*

All the conversion factors you'll ever need, ready for when you need them. 2CONVERT allows conversion between over 500 standard units; Currency exchanges, temperature conversions, Number base conversions and Dimensionless analysis.

Utilizing an easy to use mouse aware, Novell style interface, several defaults can be set to tailor the software for maximum efficiency. Conversion rates are accurate to at least eight significant digits, and the program has an integral pop up calculator, and full function expression evaluators.

A customized conversion option allows the user to create thousands more "Compound Unit" conversion rates based on standard rates in the program, ensuring that the user can generate virtually every conversion rate they ever require. Currency exchange rates can be updated, and the program has full context-sensitive help.

One day you'll need this program, so get it now! A program nobody should be without.

BBUG NO 3350   IGO Version 1.0

*CLASSIFICATION * Games * Hard Disk * Graphic Monitor * Mouse supported*

IGO is a computer board game for people who want to know more about the oriental game of "Go" or for beginner "Go" players. The game IGO has 4 levels of play, and also includes a tutorial.

The tutorial has a simple example "Go" game demo and an advanced "Go" game demo, which shows each move in succession with an explanation of the strategy behind each move. The tutorial also has an overview of the elements of the game of "Go" and a listing of the rules.

IGO is designed as a teaching facility for the complex game of "Go", and it should be noted that the playing board of IGO is a grid of 9 by 9 whereas the game "Go" has a playing grid of 19 by 19. IGO is thus a smaller version of the game which follows all of the rules for "Go". It has excellent graphics and can be played with the keyboard or mouse.

BBUG NO 3351   SUPERSHOW III Version 1.0

*CLASSIFICATION * Graphics * Hard/L/ Floppy Disk * CGA/EGA/VGA*

SUPERSHOW III is a highly stylized multi-media presentation program. It allows users to create customized screen presentations using images, saved or captured in the GIF and PCX format. SUPERSHOW III features include multiple screen fades and transitions, kaleidoscope screen effects, special effects, circle and box drawing, support of digitized voice and midi music with the SoundBlaster and compatible sound cards, PC Speaker music and sound, text display using customized and computer fonts, border and screen clearing effects and more.

New in SUPERSHOW III is support for viewing and manipulating images saved in the GIF format. GIF has become an extremely popular file format due to its device independence and has one of the highest compression ratios of any graphics file format.

SUPERSHOW III works by creating a script consisting of one or two word script commands that tells the program what and how you want your files, text and drawings to be displayed.

Also included is ShowPrep, a script generator. ShowPrep features pull-down menus containing all script commands and will automatically write those commands for you.

BBUG NO 3352 FILE VIEWING AND PRINTING UTILITIES

*CLASSIFICATION * Utilities * Floppy/Hard Disk * Printer * Mouse*

support

SEE, Version 3.0 is a file viewer from MicroFox Company. Scroll any file in any direction. With mouse support and on-line help. Can freeze top rows and left columns while the rest of the screen scrolls.

VIEW Version 1.0 is a Public Domain file view utility.

PLIST, Version 1.0, is an ASCII file printing utility, designed to facilitate printing of program source code, documentation files and the like. The lines are counted and page breaks are automatically issued. The pages are numbered and the run date and file name are listed at the top of the first page.

PLIST takes the name of the file and has on optional parameter, the column specifier. There are four available column specifiers, with the syntax being: PList filespec.ext [80 / 137 / 132 / 238]

Column specifiers 80 and 137 can be specified when using standard 80-column paper. If you are using the wider, 132 column paper, you may specify 132 or 238 columns. 80 and 132 print in standard text, while 137 and 238 print in compressed text.

AUTOREAD, Version 1.06, is a program that allows easy reading of large text files on a computer. It works very much like LIST, but it allows you to progressively establish landmarks in the text and to go instantly to them.

BBUG NO 3353   LADDER MAN Version 1.0

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

LADDER MAN is a problem solving puzzle game where you must use ladders 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, and a demo puzzle is included to show you how the game works.

There are balls that you can push around to create steps for you to climb up on. There are Multi Blocks, Four Ball Holders, Gondolas, Fire Hydrants and more objects which will help you achieve the solution to the puzzle. Hazards that must be avoided include fire, pools of water and other devious traps. Each player has their own score card.

BBUG NO 3354   FORZEE AND WOWZEE

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

FORZEE, Version 4.0, is a combination of Yahtzee and Poker. Instead of rolling dice you are dealt five cards, and you must keep or hold cards to maximize the number of points on your score card. The graphics are smooth and happy tunes occasionally sound off during the game.

WOWZEE, Version 1.0, is a combination of a pyramid solitaire card game and the dice game of Yahtzee. The object of the game is to pull five cards of a pyramid pile of cards to form a poker hand or a collection of cards of the same rank. After a hand is selected you can choose from the score board how you want the hand to be scored, just like the game

Yahtzee. The strategy of this game is to pull cards off the pyramid in the proper order to maximize your points.

BBUG NO 3355 GAPS Version 1.0

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

GAPS is a solitaire card game where cards are mixed up on a square grid, and the objective is to arrange the cards in sequential order, with a different suit on each row. GAPS is more of a puzzle game, since you can only move a card into a gap area.

GAPS allows you to set up your own boards. There are 5, 6, 7 and 8 card versions of the game.

Requires VBRUN100.DLL - BBUG # 9169

BBUG NO 3356 LEONG, DOMINOZE and JOUST

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

LEONG, Version 1.0, is played on a square board, with 25 grid squares on a side. You start off with 50 pieces in the bottom two rows. In the middle of the top row is the goal, five squares wide. The object of the game is to get one of your pieces into the goal, which can only be moved to a square that is adjacent to another piece. You lose when you have no more moveable pieces. There are hidden pitfalls in the board, and if you move a piece into a pitfall square, then that piece is eliminated. Each game is different since on each board the pitfalls will be hidden in different places.

DOMINOZE Version 1.01, is a tutorial and game of dominoes, where you may play against three computer players.

In JOUST VGA, you get to fly on an ostrich and knock other gladiators off their ostriches. Every time a gladiator is knocked off it mutates into an egg, which will hatch into another gladiator and be picked up by an ostrich unless you step on it in time. You control the ostrich by hitting one key to constantly flap its wings, and two other keys to move left and right. Each succeeding level is more difficult with more gladiators and other opponents, including a pterodactyl which can only be killed by aiming your lance exactly in its mouth. Every five levels there is a bonus level where you must try to pick up all the eggs before they hatch into gladiators.

BBUG NO 3357 BIG2 Version 1.10

*CLASSIFICATION * Games * Floppy Disk * EGA/VGA * Mouse*

BIG2 is a popular four player card game, and in this computer version one player can play against three computer players. The player who has the lead can play a singleton, a pair, a triplet or one of several poker hands. The next player must play the same number of cards of a higher rank or pass. Twos are ranked high, thus the game is called BIG2.

The object of the game is to be the first player to give up all thirteen cards, and points are scored against each player based upon the
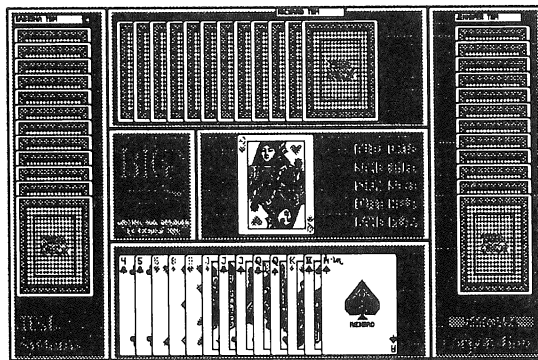
BBUG 3357 - Big 2

number of cards they still hold in their hand. Strategy comes into play by knowing which cards to hold onto and knowing the proper moment when to play them.

BBUG NO 3358 GOGAME Version 4.2

*CLASSIFICATION * Games * Hard/Floppy Disk * Mouse optional*

GOGAME is the ancient Chinese board game of "Go," which can be played by two players, one player against the computer, or by the computer against itself. The object of the game is to surround the most amount of territory on a 19 by 19 board and capture your opponents pieces. All games can be saved to a file which can be replayed at a later time, making GOGAME an excellent system for recording matches between two players for analysis and learning. A set of recorded games is included.

Playing against the computer is also a good way for beginners to learn "Go," and the number of look ahead moves that the computer analyzes before deciding on a play can be specified before each game. You can adjust the board from a 9 by 9 grid to a 19 by 19 grid to allow play on smaller boards and for quicker games. A problem solving section is also included, where you can set up board problems and the number of lookahead moves to see if the computer can solve them.

BBUG NO 3359 DARNIT Version 12.0

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

DARNIT is a solitaire card game played on a four by four grid. The objective is to place all the face cards in a certain order on the outer edge of the square. Pairs of cards that add up to 10 can be removed from the playing area to free up squares on the grid.

DARNIT is similar to "Kings Corner" solitaire, and it is very hard to complete the pattern of face cards. Different rule levels give an easy and advanced version of play.

BBUG NO 3360 AMAZING FLAG MACHINE Version 1.1

*CLASSIFICATION * Games * Floppy/Hard Disk * EGA/VGA * Mouse supported*

AMAZING FLAG MACHINE or AMFLAM, is similar to the solitaire card game of DARNIT except that you deal with a selection of flags of countries from around the world. The objective is to place all the island countries

on the outer edges of a four by four grid. If any two other flags on the board represent countries that are adjacent to each other, then they can be removed to make room for the island countries.

AMFLAM is an excellent education game for geography, but is limited to only 78 countries.

BBUG NO 3361 WORDS OF JESUS Version 1092

*CLASSIFICATION * Religion/ Games * 386/486 * Hard Disk * VGA * Mouse (HIGH DENSITY DISK ONLY)*

WORDS OF JESUS is a high quality arcade game that has detailed VGA graphics and background music and sound effects. WORDS OF JESUS is perhaps one of the most entertaining ways to learn and memorize verses from the New Testament on the computer.

With the mouse you move a man with a white robe and gold ring over his head across several levels to find portions of a verse which must be collected in sequential order. As the words are collected the verse is displayed at the top of the screen. Each word or phrase is held up on a sign by a figure from the Bible, and when the sign is selected the figure will float up or down depending upon whether he was good or evil.

The object of the game is to collect all the words in the shortest amount of time possible. There are "up" and "down" teleporters which move across the floor which can be used to transfer between different levels. Once all the words have been collected and the verse is completed, you must then find a key to open a door to go on to a new game with a different verse. Pictures of Biblical scenes by famous artists appear on the walls as the game is played.

BBUG NO 3362 NOTEWARE Version 1.3

*CLASSIFICATION * Wordprocessing * Hard/ Floppy Disk*

NOTEWARE is the perfect TSR Notepad. Occupies less than 16K. Creates, edits and retrieves up to 99 screensize notes. Automatically saves notes to disk. Captures any text screen for later review and editing. Features word wrap, text search, ASCII file loading and saving. "Load-high" option frees up conventional memory.

BBUG NO 3363 SYDEX SAMPLERS Version 3.02 (Disk 1 of 2, also 3364)

*CLASSIFICATION * Utilities * Hard Disk*

CopyQM - A diskette duplicating machine. Formats, verifies and copies all in one pass. Up to four drives supported at once, features color icon-type interface, drive-status sensing (no keyboard entries). Record/playback image files from hard disk, serialize copies, even copy non-DOS formats in "Blind Copy", mode. All formats supported.

Con>Format - A "Pop-Up" diskette formatter

that allows you to format diskettes while doing more productive things. Has received rave reviews from our users and some very nice words in the press. One of our all-time most popular programs.

FormatQM - A diskette formatter in the same "no hands" tradition of CopyQm. Formats AND VERIFIES faster than anything else around. Supports all standard DOS formats, up to four drives at a time.

AnaDisk - A complete diskette utility - scan, edit, repair and copy just about any kind of diskette. Latest release supports secondary diskette controllers, FAT editing, sector dump to file.

22DISK - Converts, formats and manipulates diskettes in over 100 CP/M 2.2 formats to/ from DOS files.

22NICE - This is a companion product to 22DISK. 22NICE emulates the CP/M 2.2 operating system and permits most CP/M programs to run under DOS. Once installed, the DOS=CP/M integration is seamless. Will make use of NEC V20 or V30 CPU chip if present. Emulates most terminals and provides a keyboard-remapping function to obtain the best operation using PC's keyboard.

RainDOS - is a DOS device driver which provides an absolutely transparent way to read, write and format DEC Rainbow 100 DOS diskettes. Supports all DOS functions.

HP150 - is a DOS device driver which provides an absolutely transparent way to read, write and format Hewlett Packard HP150 (including Series II) diskettes. Supports all DOS functions.

BBUG NO 3364   SYDEX SAMPLERS Version 3.02   (Disk 2 of 2, also 3363)

BBUG NO 3365   ACES OF THE ENO Version 1.0

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

ACES OF THE ENO (AOTE), is a solitaire card game where you must try to get all four aces to the tops of four separate columns of cards. Any 2 cards that are of the same suit can be discarded from the columns, and any card can be moved to an empty column. The cards are dealt to the columns four at a time, and when you have all four aces showing you have one the game.

BBUG NO 3366   ALMANAC FOR WINDOWS Version 3.0H   (Disk 1 of 2, also 3367)

*CLASSIFICATION * Business/Personal * Windows * Hard Disk*

ALMANAC is a calendar/scheduler/ information utility for Microsoft Windows. It provides traditional calendar displays in month and year format, as well as a popup desk set for day-to-day notes and schedules. Configuration files and overlays allow you to customize calendars for your business and personal needs.

An overlay is a set of data which provides ALMANAC with the information it needs to calculate the days events will occur on. The types of events ALMANAC will calculate include weekly, monthly, and annual events by day or date, as well as birthday, wedding anniversaries, and others. Up to ten overlays may be specified in a configuration file, and included are three sample files which define holidays for the United States, Canada, and Sweden.

In addition to specifying overlay files, ALMANAC auto-load modules allow you to configure options for calculating religious holidays (Christian and/or Jewish), phases of the moon, and calendar mode (Gregorian/ Jewish). A built in database is used to determine your location so you can calculate the time and azimuth of the sunrise and sunset.

BBUG NO 3367   ALMANAC FOR WINDOWS Version 3.0H   (Disk 2 of 2, also 3366)

BBUG NO 3368   UNICOM Version 3.1C   (Disk 1 of 2, also 3369)

*CLASSIFICATION * BBS * Windows * Hard Disk * Modem*

A communications program for Windows. UNICOM performs data communication tasks in the background while other applications are running. UNICOM can even transfer Windows-unique data formats between computers, such as the contents of Window's Clipboard from one PC directly into the Clipboard of another.

UNICOM includes the following features:

X/Y/ZMODEM, Kermit, CompuServe B, Quick B and ASCII file transfer protocols

ANSI-BBS, VT52 and TTY terminal emulation

Directory-assisted batch dialing for users with Hayes compatible modems

An on-line help system

Ability to record mouse and keyboard operations for later playback

Script file processing for automatic logon to

remote host systems

Keyboard macros, file logging, file paste, and print screen.

UNICOM can transfer Windows-unique data formats between computers, such as the contents of Window's Clipboard from one PC directly into the Clipboard of another.

Operate your computer in a multi-user mode with UNICOM's Host mode. A built-in command processor lets a validated remote user examine or transfer files on a designated disk drive while remaining completely transparent to any user who may be at the keyboard operating other Window applications.

BBUG NO 3369   UNICOM   Version 3.1C (Disk 2 of 2, also 3368)

BBUG NO 3370   MOVIES TO GO! Version 1.4   (Disk 1 of 2, also 3371)

*CLASSIFICATION * Entertainment * Hard Disk * EGA/VGA * Mouse*

MOVIES TO GO! contains information on 1,000 movies. You can search for favorite categories (comedies, drama, sports, family, etc.), actors, directors, MPAA rating, key words, year, and more. Many movies have detailed reviews including the setting, characters, possible objectionable contents music, and box office gross. You can even search for other special categories, such as Dog Movies, World War II, Family Relationships, Robin Hood, Knights, Halloween, Disney Movies, Horses, etc. Has both a text and graphics interface.

Stunning graphics interface has animated icons, 3-D buttons, and graphic menus. For example, the actor menu is displayed on a video tape, the main menu is a TV set, and the search menu is displayed on a movie ticket. Graphics version requires an EGA/VGA monitor, and a 386 class computer is recommended, but not required to run it.

BBUG NO 3371   MOVIES TO GO! Version 1.4   (Disk 2 of 2, also 3370)

BBUG NO 3372   WIZ FORMAT Version 1.0   (Disk 1 of 2, also 3373)

*CLASSIFICATION * Utilities * Windows * Hard Disk*

WIZ FORMAT is a floppy disk formatting program. It provides all the key features needed to format any floppy disk. It's easy to use 3D visual effects, colorful progress indicators along with on-line help allow you to remain in Windows while formatting a disk.

This program is well thought out and organized in such a way that you won't ever need the on-line help. For everyone from beginners to the most advanced users, this program is a nice "tool box" accessory.

BBUG NO 3373   WIZ FORMAT Version 1.0   (Disk 2 of 2, also 3372)

BBUG NO 3374   FONT MONSTER Version 3.3

*CLASSIFICATION * Printer Utilities * Windows * Hard Disk*
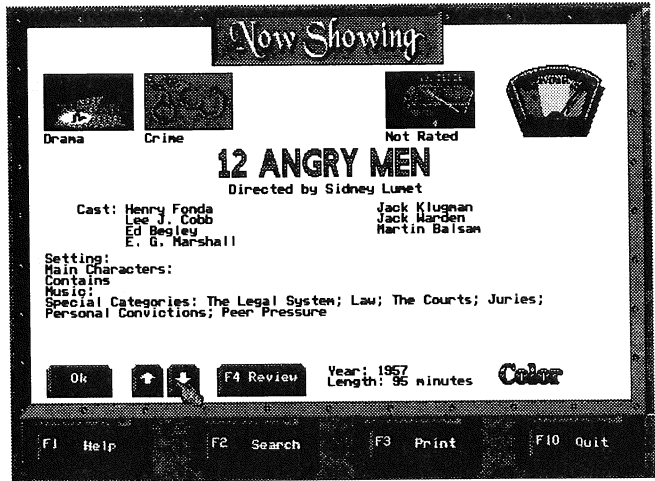
BBUG 3370 - Movies to GO!

A TrueType & TrueType1 font multi-utility. Rename any font, edit other miscellaneous data. Preview TrueType fonts before installation. Create font groups which you can install by clicking on their Program Manager icon.

Sound too good to be true? Try it out!

Requires VBRUN300.DLL - BBUG # 9170

BBUG NO 3375   BLOXIT Version 1.0

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

The objective is to beat the computer at placing ten different shaped puzzle pieces onto the game boards so they cover all of the red areas. Sounds kind of easy, huh? Think again! This game is maddeningly simple, but instead of being aggravating, it is intellectually stimulating (to say the least).

Just when you think you've got BLOXIT figured out, you discover that out of the 30 available puzzles, there are more than enough challenges to last a lifetime. Once you've selected a puzzle to play, you will see a red pattern appear on the game board. Around the edges of the game board are ten

differently shaped tiles. You pick up tiles by pointing to one and clicking the mouse button. Then it's just a matter of seeing if you can beat the computer at placing the tiles in the proper places.

On-line instructions are included for BLOXIT, just in case. You can turn off the sound if you wish, but it really does add to the fun. It must be mentioned that this game has a way of growing on you, even to the point of causing you to consider strategies when you should be doing other things (like talking to people or concentrating on work).

BBUG NO 3376   CHEXO Version 1.0

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

If you like board games of pure strategy and the kind of logic that would stump even Mr. Spock, then CHEXO is for you. Anyone who has played Checkers will know the object of this game, yet there are many added twists in CHEXO. Try to jump and capture your opponents chips so that he is left with only one on the game board.

The computer is green and you play red. Pieces can only move forward on diagonals by jumping either your own chip or an opponents. If you jump over an opponent's piece, it will then be captured and thus removed from the board. Each player takes turns moving only once per move, not multiple jumps. At first play seems quite simple, that is, until the computer has beat you over and over again. Come up with a good carefully planned strategy and you'll trounce the computer.

BBUG NO 3377 MICE MEN Version 1.1

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

MICE MEN is a fun-filled game of strategy and logic where the main characters are charming little mice. Your job is to move all of your mice from one side of the screen to other, while the computer attempts to do just the opposite. It's not as easy as it sounds and after you've tried it a few times you learn that even though it initially looks like you're going to whip the computer, the strategy is all in long term planning to get and keep every mouse across the screen.

The obstacles in your way in MICE MEN are columns of cheese blocks which you must push or pull out of the way, one opening at a time. As horizontal passageways appear in front of your mice, mice can move across the screen until they hit another cheese column. At vertical drops the mice pop open umbrellas as they drift down looking for more horizontal openings. When a mouse does finally make it to the other side of the board, it carefully lets itself gently drop down right into where the score is totalled.

The game is easy to learn and fast to play. Each of you has 12 MICE MEN to move.

The delightful part of MICE MEN is the graphics as those little mice do all sorts of cute things. This is a great game for kids, too, because it will help sharpen their skills of strategy and logic. When the game starts you have your choice of setting the difficulty level to hard, medium, or easy. HINT: Stick with the easy level to begin with. If you need to interrupt a game, you can save it to disk until you have time to finish it.

BBUG NO 3378 QUATO Version 1.1

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

If QUATO were just a strategy word puzzle game, that would be enough. However, to "put the squeeze on you" even more so, this game includes the element of working under the pressure of a time limit. The objective is to push letter tiles around a 5x5 game grid to spell as many words as you can in less than three minutes. QUATO has a built-in 80,000 word dictionary against which it checks all of your words.

This is an easy game to play, though frustrating because time runs out so quickly. It will seem like all you have is 30 seconds, but it really does give you three full minutes (we actually timed it to be sure!). At the start of each game there will be one black space on the game grid. Using your arrow keys on the numeric keypad you then move the letters adjacent to the black space until you start creating words. Oh, by the way, only four- or five-letter words count. None of this two- and three-letter words stuff. When a word is spelled, the program briefly highlights it and then the game continues.

Points are awarded for each word spelled. A word can only be used once during a single round. The scoring is based upon the letters the word contains and the length of the word. The letters Q, X, and Z are worth three points.
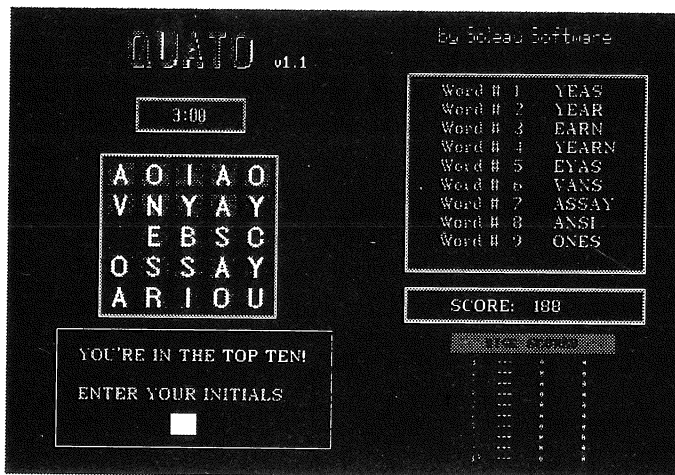
BBUG 3378 - Quato

The letters B, C, F, G, H, J, K, P, V, and Y are worth two points and all other letters are worth one point. The total for the letters of each word are then multiplied by the total number of letters in the word for your score.

The key to QUATO is to stay calm. Panic will only cause mental blocks, so don't even look at the clock (which ticks away prominently at the top of the screen). At the start of each round there is a bonus word which is shown below the game grid. Arrange the letter tiles to spell that word and you get a triple score. If you manage to use all of the letters displayed in the grid, you'll also get a bonus of 100 points. Be forewarned that this game has a seductive way of becoming a regular part of your daily work routine.

BBUG NO 3379 GALACTA I - THE BATTLE FOR SATURN Version 1.0

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

Welcome to a space shoot-em-up in 256 colors (if you have VGA). A joystick is recommended for this one that is sure to challenge to best of the best space jocks. This game gives you the feel of an arcade game —it's that good!

If you take Galaga, 1942, and few other arcade games, well, you get GALACTA I - The Battle for Saturn. The sound effects for this game are amazing on your regular PC speaker. The keyboard commands make sense in this game, so don't feel bad if you don't have a joystick. The colors

and sound bind this game together, while the challenge will definitely keep you on your toes. While playing this game you can almost hear someone behind you saying, "Gooooo fer it, dude!"

BBUG NO 3380 STARFIRE Version 1.4

*CLASSIFICATION * Games * Hard Disk * VGA * Joystick/Mouse supported*

The earth is under threat from an evil, yet cowardly, race of beings called the Sloboids who are sending a huge mother destructor craft towards earth. All of mankind, of course, is endangered! Your job is to make it all go away by blasting, firing, shooting, bombing, and doing anything else you have to do to that destructor craft to save the earth. Fail in your efforts and the screen will display a message "a short while later" followed by a graphic view of the earth exploding to bits!

You can use a joystick, mouse, or the keyboard to control this game. The joystick is strongly recommended (not to mention that it definitely saves your keyboard). The program automatically detects which devices you have on your system (including the Sound Blaster).
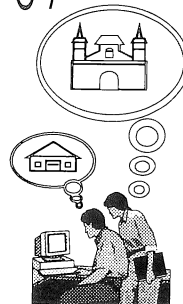
Designed to be played by one or two players, STARFIRE delivers on never-a-dull-minute excitement. You had better be on your toes for this one, because it's nonstop action. Let up on your guard for just a second or two and you're dead (along with mankind, the earth, and so on).

You only get four lives in each game you play, so keep your eyes open. The objective is to destroy the alien motherships (yes, there is more than one!). Along the way you need to watch out for heat-seeking missiles, gun turrets, and enemy fighters. Some fighters don't fire back, but you never know which ones won't, so destroy them all. Oh, and, watch out for various structures and pipes which protrude from the deck of the ship because you're instantly dead if you strike them.

More New Listings
Next Month....
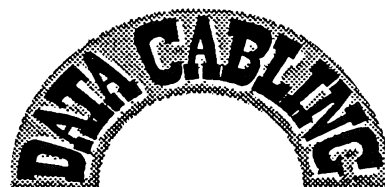
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Games Review

Corpsegrinder

COMANCHE MISSION DISK ONE

Requires : original Comanche game,
8Meg hard disk space.

This is the first expansion set for NovaLogic's Comanche flight simulator. Essentially, you get thirty new missions plus an update to the main Comanche program.

The new missions are, on the whole, more entertaining but less realistic than the original twenty. There are new terrains to explore and new enemies to fight, such as Hind gunships, SCUD launchers, armoured troop carriers and HQ tents. You are sometimes required to lead a troop of three Comanches into battle, and keeping your fellow pilots out of danger requires a lot of fancy flying. One of the troop is your old wingman, who still requires you to target and fire his missiles for him, but the other two pilots can handle themselves.

The new terrains feature the occasional tree, which, in keeping with the spirit of realism of the game, explodes when shot.

The most significant update is to the artificial intelligence of the enemy units. They're now much quicker to spot you and much deadlier. Also, heavily-armoured choppers like the Hind can take up to three missile hits before dieing!

Normally I don't care much for expansion sets but this one is well worth getting. The original missions get a new lease on life with the increased challenge this upgrade offers. Available for the rather steep price of sixty dollars at your local games shop.

In a word : good.

COMANCHE - OVER THE EDGE

Requires : original Comanche game,
8Meg hard disk space.

This is the second expansion set for NovaLogic's Comanche. As expansions go, this one is fairly substantial.

You get forty new missions and an update to the main Comanche program, including a new terrain-rendering engine and extra flight control options. There's now weather effects such as snow and wind, which don't seem to do much. The artificial intelligence is upgraded again, but not nearly as much as the first mission disk upgraded from the original game. One delight is that your wingman will now fire for himself, but only in self-defence, otherwise it's business as usual. Also, the 20mm cannon now sounds like the real thing.

The new enemies are impressive : patrol boats, enormous armoured hovercraft, and small-but-fast-and-deadly Defender choppers. The missions are well designed, too.

Special mention must be made of the graphics. Superb. The four new terrains are inspiring, especially the aquatic world with huge desert-style mesas rising straight from the waters, often with missile emplacements on top. There is now haze in the distance, and reflections of clouds and vehicles upon the water, which you can still land on by the way. Lastly, there is now a missile-cam option for the cockpit screens, which shows the closing view as your Stingers and Hellfires chase their targets. Excellent.

This mission disk is a must-have, if you thought the original game showed promise. Mission disk one is not required to install this. Available now for around sixty dollars.

NovaLogic have recently released a CD-ROM version of the original Comanche game, selling for around fifty dollars, and will they will also be producing a compilation CD-ROM package featuring all three disk sets (total ninety missions) and an extra ten missions exclusive to the CD edition. The price is estimated at ninety dollars.

In a word : great.

Active

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

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C	Geoff Baker	290 0974	6-90pm Weekdays
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	Danny Thomas	371 7938	6-9 pm and Weekends
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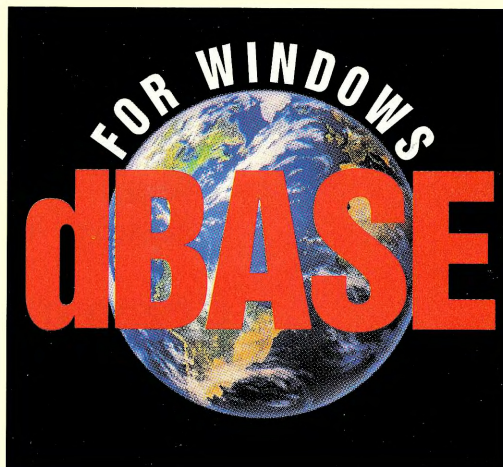
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