Significant Bits

The official magazine of the BRISBUG PC USERS GROUP Inc.

General Secretary: PO Box 985 Toowong, Qld 4066

October 1992 — Volume 7 number 11 Price $3.00

In this issue...

Association of Personal Computer User Groups

APCUG

Meeting: Sunday 18 October 1992

10am — 5pm

Bardon Professional Centre

Simpsons Road, Bardon, Brisbane

Lunchtime Special (12:00)

Databoss - Applications generator

Main event (1:30) in the theatre:

Power Protection

Precision Power Pty Ltd

Foyer: OS/2 latest Beta version demonstration 10am - 1pm

Angus & Robertson Bookshop

10am - 4pm in Foyer

11am - 4pm	Software library & shop,
10:00 - 12:00	Training classes
12:00 - 3:00	Junior Club
12:00 - 1:00	Lunchtime Special (See above)
12:15 - 12:45	New members Orientation
1:00 - 1:30	General Business / Q & A session
1:30 - 3:00	Main Event (See above)
3:00 - 5:00	SIG meetings. (See signs)

BRISBUG PC USER GROUP Inc.

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

Significant Bits magazine

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Contributions always welcome and needed!
Preferably on disk (any sort), or modem upload to Brisbug BBS ("Stack Overflow" file area) or direct to the editor on (07)379-1747 (a/h).
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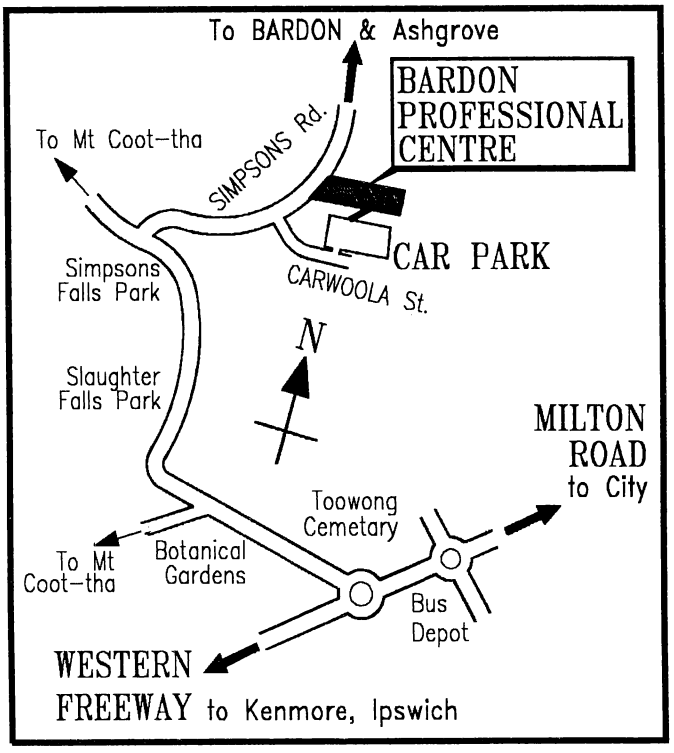
Meetings

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

BARDON PROFESSIONAL CENTRE
Simpsons Road, Bardon, Brisbane
10am to 5pm.

Brisbug occupies the main theatre and several other rooms. Please note that other groups are usually using the centre at the same time, and that **parking is totally prohibited around the buidings and driveways**, and the upper level car park is strictly reserved for staff and for exhibitors with specific prior permission. There is a large car park off Carwoola Street with a footbridge over the creek and a pathway to the centre.



From the Engine Room

Another Computer Show is (just) over, and once again Brisbug was the only computer User Group to put their money up to present themselves to the computing public. It was interesting to see the number of enquiries we got along the lines *"I am about to buy a computer ... what should I look for, and can I come to you to learn how to use it".*

The first part of the question implies that we are seen to be not only knowledgeable about computers, but also independent enough to give an honest opinion. This is personally pleasing to me after reading some of the "Mexican" comment on the BBS that dealers should be banned from User Groups.

The second part of the question points to the importance of educational services to our new user members. I hope the current increase in classes will reinforce our committment to assist our less experienced members.

I'd like to thank all those members who gave up their leisure time to "sell" Brisbug to the community. It was particularly pleasing that most of our stand personners were "ordinary", i.e. non-committee, people.

The plethora of "el cheapo" machines, and ignorant (purposely or otherwise) sales staff suggests that there is likely that demand for Brisbug services will increase rather than ebb.

From the Editor...

Well, if you're thinking of buying a new PC it looks like you'd be well advised to make the move soon. Prices really can't go any lower. The whole PC sales situation is becoming rather chaotic. Prices have reached levels where many dealers can't compete on price and make an adequate return to be worth doing the business, and can't afford to spend any time advising before purchase or supporting after the sale. I am seeing more and more reliability problems, mainly intermittent memory faults that are often impossible to resolve. This is because at the very high processor speeds now demanded, quality of motherboard manufacture is much more critical than it was at slower speeds. If the problem is caused by imprecise copper track etching there is virtually no solution other than a new board, and such problems are very hard to pin down. Still, people chase the very lowest price regardless of all else, even for business machines. There are quite a few very low price, reputable, reliable and well supported makes, as well as a host of suspect "el-cheapos". Those are actually not very much cheaper anyway, and much dearer in the long run.

So beware! Make sure it is a well-known make, locally supported by the distributor with full repair facilities in Brisbane. A very long warranty is not much use if it requires you to bear the cost of freighting to Melbourne every time any little thing goes wrong -- or if the firm folds up, changes its name or whatever.

The current issue of Reseller, the trade journal, had a good article on the current critical state of the PC sales arena. I tried to get permission to reprint but have had no reply yet. We can expect to see a lot of PC suppliers folding up or changing to selling other things. In Sydney and Melbourne many cheap retailers, seeking to gain an appeal over their rivals, have been supplying their PCs with lots of top software on the hard disk. Not shareware though -- pirate copies of the big name stuff! The software piracy agency has been having a ball, and a lot of sources have been put out of business through the penalties. There have been some actions here in Brisbane too. Don't forget, the purchaser is liable as the user of the illegal software as well as the supplier. You need to allow for software cost when budgeting for a computer.

Meanwhile, Apple have at last reduced their Mac prices to more reasonable levels. Quite possibly they could begin to take a larger share of desktop computer use, as they have in Europe and USA where there has not been such a disparity in price with PCs due to the exclusion of the Asian brands to a large extent. This is likely if the PC prices begin to rise again, which is a strong possibility if the PC price war subsides with the folding of many sources.

In America, computers and software is now almost entirely sold through very big supermarket style outlets. We will probably see a trend that way here too.

--- Geoff

ASSOCIATED CLUBS DIRECTORY

Many IBM-Compatible computer clubs have associated with Brisbug by joining as a member. If you live outside metro Brisbane, there is probably a local club in your area. Some of these are:

Club Name	Centred in	Telephone	Contact
Central Coast Computer Club	COFFS HARBOUR	066-462785	
Gold Coast SIG (of Brisbug)	BURLEIGH WATERS	075-930577	Carl Planting
Sunshine Coast Computer Users Group	CALOUNDRA	074-442711	Daz Picton
Noosa Hinterland PC User Group	COOROY	074-851052	Colin Sheehan
Caloola District Computer Club	GYMPIE	074-833881	Dorothy Ross
Fraser Coast Computer Club	HERVEY BAY	071-212397	
Gladstone QRI Computer Club	GLADSTONE	079- 723083	Dave Franklin
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Mackay Computer Users Group	MACKAY	079-573998	Gabriel Barbare
Burdekin Computer Club	AYR	077-834630	Rod McRae
Johnson Computer Club	INNISFAIL	070-613286	John Brennan
Cairns Computer Club	CAIRNS	070-613286	John Brennan

Would the Secretaries of TOWNSVILLE,DALBY, GLENDON, ROCKHAMPTON, BUNDABERG, and anyone else not listed who would like to be ,please contact one of the editors (phone numbers inside front cover) with details.

GOLD COAST SIG

COMING EVENTS

7th October - Bulletin Boards - Joe Walker

(Nugget BBS)

21st October- Corel Draw - Carey Court

(Ad Lib Words & Pictures)

4th November - Computer Books

Gavin Bruce - (Angus & Robertson)

MEETINGS EVERY SECOND WEDNESDAY 7-10PM

Burleigh Waters Community Centre

Christine Ave, Burleigh Waters

Noosa Hinterland PCUG

Meets the THIRD WEDNESDAY each month

7:30PM LAGUNA TRAVEL AGENCY

Emerald Street COOROY

Why isn't your meeting notice here??

THE OS/2 COLUMN

Really Useful OS/2 Shareware

Paul Marwick

Personally, I've become more than a little tired of reading endless reviews of Windows and Windows programs. So, this is my chance to get a bit of revenge....

There was already a good deal of OS/2 software available before OS/2 2.0 came out. Since the release of the full 32-bit version of OS/2, a great deal more has been released. There is already quite enough shareware OS/2 software to cause confusion. To help alleviate this confusion, I'm planning on presenting a number of mini-reviews of OS/2 software that members may find useful. All of the programs reviewed are either shareware or freeware, and all of them are available from Line 3 of the Brisbug BBS, or from the Software Library.

This first batch of reviews is mainly of utility type programs. Partially because everyone needs this type of program, and partially because they're fairly easy to review. The list is by no means exhaustive, and consists mainly of OS/2 programs which I have been able to try and have found to be useful. Next time, I'll try to cover some of the more substantial applications that are available for OS/2.

By necessity, I've assumed some prior knowledge of OS/2 and the various terms associated with its interface. I hope that will not lead to confusion.

A glossary is provided to help those who are unfamiliar with some of the terms used.

AV (Archive Viewer) V1.09

AV is an OS/2 PM program. Its main purpose is to provide a way to manipulate archived files from the OS/2 desktop. However, it has a number of other functions which may be useful.

In order to use AV, you will need to have OS/2 versions of the various archiving programs. Most are available, with the exception of ARJ and PAK. You will also need some other ancillary programs (a file viewer, an editor, a viewer for OS/2 .INF format hypertext files, etc.).

AV makes use of a text file to provide command information for manipulating archives. This file can be edited and placed either in the directory that AV will be started from, or anywhere in the DPATH variable declared in the OS/2 CONFIG.SYS. It also has a help file which must be either in the same directory, or in a directory set by the HELP variable.

In use, AV makes use of multiple windows. The initial window provides a drive and file selection function. Once a drive and directory have been chosen, the files in that directory are presented. Double-clicking on a file will start the viewing process, which will present the contents of the archive for viewing in a second window. Files within an archive can be selected by double-clicking on the file name, which will then start the program used for file viewing. In addition, selecting a file by clicking on it will then allow various functions selected from a menu to be executed on that file.

Once installed, AV is easy to use, and provides a simple method of manipulating archived files. It also understands associations, as used by the OS/2 2.0 Work Place Shell. Once an icon has been created for it, using the settings allows all archived files to be associated with AV. Once this is done, AV will be started any time an archive file is double-clicked on from something like the OS/2 drives object.

AV is shareware, and does not have all functions enabled in unregistered form. Also, in unregistered form, when it is started, it comes up with a logo box, which has to be clicked on to start it. However, it provides a useful, native OS/2 alternative to programs like Shez. It can even be used as a replacement for the OS/2 Work Place Shell, which might be useful for machines running OS/2 with limited memory.

Shareware. $US 25.00 for registration.

By the time you read this, the programs reviewed here will be available from the Brisbug library ... check the Noticeboard at the meeting for disk numbers

LstPM

LstPM is a file viewer. It provides similar functions to the DOS LIST.COM, but does so in a an OS/2 PM format. It does not provide the file management functions provided by some versions of LIST, but it does provide a very flexible method of selecting and viewing files. It also provides a wide range of configuration options to customise its colours and the fonts it uses to personal taste.

As well as viewing files, LstPM allows searching for keywords in files, using full regular expression matching. You can also view files in the form of a HEX dump.

There are two ways of starting LstPM. One is to have the program in the OS/2 path, and simply enter "LSTPM <filename>" from an OS/2 command prompt. This will start LstPM and load the designated file for viewing. When you exit from LSTPM, you will then be returned to the OS/2 prompt (as an alternative to this, entering 'start LstPM <filename> will start a new session with LSTPM).

The second method of starting LstPM is to define a program object for it. Using this method, if a * is entered in the parameters field for the program object, telling LSTPM to start in file selection mode, rather than to load with a file already loaded. File selection mode provides an easy method of moving about drives and directories to select files for viewing.

LstPM is free for personal use (though a contribution is requested). It makes a

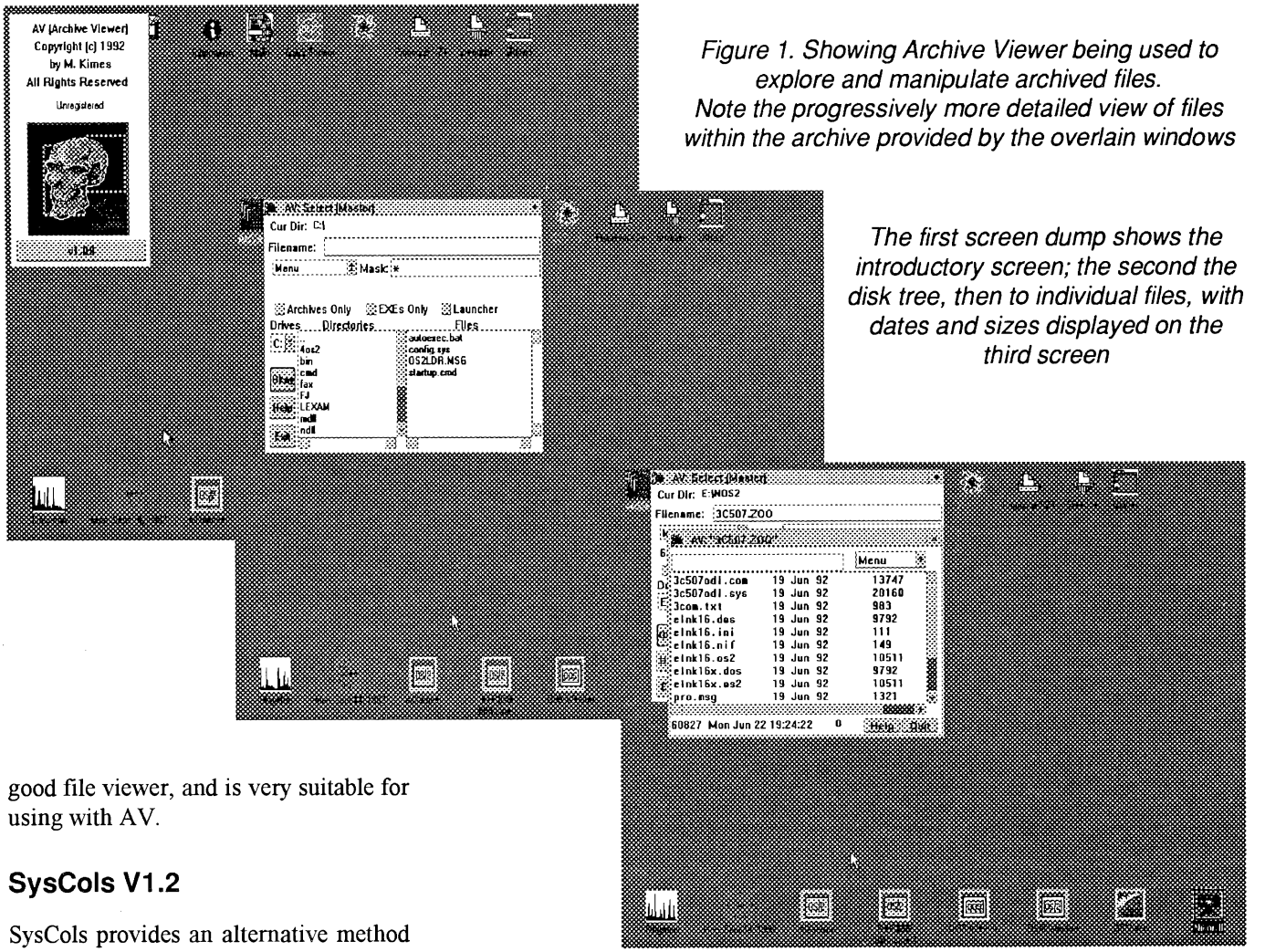


Figure 1. Showing Archive Viewer being used to explore and manipulate archived files. Note the progressively more detailed view of files within the archive provided by the overlain windows

The first screen dump shows the introductory screen; the second the disk tree, then to individual files, with dates and sizes displayed on the third screen

good file viewer, and is very suitable for using with AV.

SysCols V1.2

SysCols provides an alternative method for customising the colour layouts of the OS/2 desktop. While OS/2 itself has a tool to allow extensive customisation (the Scheme Palette tool), it is fairly difficult to use effectively. SysCols provides an alternative way of making your desktop unusable, not to mention an easy method of generating endless confusion for users.....

SysCols is an OS/2 PM program which allows you to load alternative colour schemes quickly and easily (for some reason, it is quite a bit faster at loading a colour scheme than the inbuilt Scheme Palette tool is). It also allows you to customise all the various parts of the desktop layout (use with caution - it is quite possible to generate something that is impossible to look at by playing around with the desktop colours too much...).

SysCols provides a number of different colour configurations, and allows modified colour layouts to be easily stored for later use.

In addition, SysCols can be run from an OS/2 batchfile to load predefined colour schemes. So it is quite possible to have a new colour scheme loaded every day.

Version 2 of SysCols knows about all the new definable objects that are offered by OS/2 2.0, but should also work with OS/2 1.3. A contribution of $US 15 is requested for registration.

File Commando

File Commando is a file manager for OS/2. It is a text mode rather than a PM application.

It is similar in appearance and function to the DOS Norton Commander. It provides a dual directory display, allowing movement between the two columns using the TAB key.

If you've used Norton Commander, File Commando will be easy to use. Commands can be entered either using the function keys, or as single alphabetic keystrokes (F3 or V to view a file, for example).

A TOOLS.INI file, which is a flat text file, can be used to set defaults for colours, the programs launched for editing, viewing, etc. It also allows setting default actions to take in response to particular file extensions.

File Commando provides all the normal file management functions. You can copy, move, delete or rename files, either in tagged groups or individually. It is able to detect the size of the screen on which it is running, and adopt the correct screen size on startup (so it will happily work in a 50-line OS/2 window, or a 34-line OS/2 window).

External programs are used for viewing and editing files. When the command is given to execute one of these functions, File Commando launches a new OS/2 task, leaving its own task open. This allows you to move back to the File Commando session while viewing or editing.

File Commando is simple to use, and operates efficiently and quickly. I don't like the fact that there is no way to specify the directories to view when starting File Commando (it starts in the default directory), and that, before any moving or copying operations are begun, you have to

"go" to the target directory (I keep forgetting to do this before tagging files, and when I use the go command to move to the target directory, I lose all the tags on files in the original directory).

File Commando also does not support HPFS. While it will happily work on an HPFS partition, it does not understand long filenames, which is a great pity.

These problems aside, File Commando is an effective file manager. *Freeware.*

WPSBackup V3.0

WPSBackup is an OS/2 PM application. It is reasonably simple to install, and once installed, offers the ability to save desktop set up information and reload it if the need arises.

If you've put some (or a lot) of work into customising the way the OS/2 desktop functions, the thought of having to reinstall OS/2 is not very appealing - you'll have to repeat all that customisation work all over again to get the desktop back to the way you want it. Or, if you have already customised the desktop and try something new which doesn't work, you may find that you have a lot of extra work to get back to where you were. WPSBackup offers an easy way of reloading an existing configuration for OS/2.

In operation, WPSBackup will automatically backup all the important OS/2 settings, storing the information where you tell it too (preferably on another hard drive partition). If the need arises, you can then use this information to recreate your favourite desktop settings (to do so, you need to boot from an OS/2 floppy boot disk and run the custom batch file that WPSBackup creates when it does the backup).

Its an effective tool to use. In unregistered form, it allows 15 trial uses, and will then refuse to work. My only complaint about it is that it modifies one of the OS/2 .ini files to store the information about how many times it has been used, and I have some doubts about anything that modifies the .ini files for this sort of purpose.

The only other questionable aspect of the program is the fact that it requires the OS/2 desktop to be running in order to create a backup. Not as bad as requiring the desktop to be running to do any restore work, but still a limitation on its flexibility. It also does not copy things like CONFIG.SYS, STARTUP.CMD or AUTOEXEC.BAT, which means that you must remember to back these up as well.

Shareware (crippleware?). Registration $US 15.00

Freetime

Freetime is a combination program. It provides a graph of CPU usage, and also, optionally, a method of blanking the screen. While OS/2 2.0 does provide its own inbuilt screen blanker, that blanker is tied to the "Lockup" security feature, and is a little annoying to use (there is no way to use it without specifying a password, and it insists on beeping when it first goes into lockup mode). Freetime provides an alternative, with the addition of a simple graphic monitor on the amount of use that is being made of the CPU.

When the screen blanker comes into effect, a (slightly bloodshot) eye moves about the screen, blinking every once in a while. Since the screen blanker is run as a low priority thread, it does not interfere with any programs which are running when it comes into effect (which can be an important consideration when you are running a multi-tasking system which may not be idle just because you are not using the keyboard).

Generally, Freetime is quite effective. I found that the update time to the CPU usage graph is a little too slow (it updates only once every 10 seconds). I also found that, when the screen was reactivated, even though a task appeared to be active, I would have to select another task and then go back to the first task before I could get any input, which I found distracting. Hopefully, these problems will be solved by an updated version. Certainly, having an alternative to the OS/2 Lockup feature would be useful.

Freeware

TinyEd

OS/2 2.0 provides two editors when you purchase the package. One is the System Editor, the second is the Enhanced Editor. Both are GUI style editors.

Given that you already have two editors available with OS/2 itself, why would you need another?

There's a simple answer to that question. Since both the System Editor and the Enhanced Editor are GUI programs, you can't run either of them in OS/2 text mode. Which may not be a problem, at least not until you have to do something like boot from floppy to do some repair work... Under those circumstances, having a text mode editor suddenly becomes very useful indeed.

TinyEd is provided in two versions, a DOS and an OS/2 version. Both are very small (under 10K for the executable), so they take up very little space. Both versions are quite powerful, providing a wide range of commands, plus the ability to load and edit multiple files. TinyEd is quite simple to use, and provides extensive on-line help.

Under OS/2, having both a DOS and an OS/2 version can be useful. It means that you have an identical tool to use either from a DOS command prompt or from an OS/2 command prompt. If you keep the OS/2 and DOS paths separate, it is quite possible to have the two versions named identically, and be able to edit files without having to think about which environment you are currently working in.

Many of the keystrokes required to execute commands can be customised, using a program supplied with the editor (this program is a "bound" application). In appearance, TinyEd is fairly similar to the Enhanced Editor. A sample keyboard definition file is also provided. About my only complaint regarding TinyEd is the fact that it does not understand wildcards for loading files. Given its small size and speed, this is a fairly minor grumble.

TinyEd was written by an IBM employee, and has been released under the EWS (Employee Written Software) scheme, which means it is freely available for use.

Alarmclk

OS/2 2.0 provides a system clock, which allows setting of time and date, and also provides simple alarm functions. In many ways, Alarmclk is similar to the OS/2 system clock. However, I've found the system clock to be somewhat ill-behaved on many systems, and I'm a bit wary of using it.

Alarmclk, as well as providing a customizable (is that a word?) time display, provides alarm services, and can be used as a task scheduler. In later versions, it is

smart enough to remember the state it was in when it was closed down, which means that if it was in minimised form, it will start up again in that form. When it is minimised to the desktop (NOT to the Minimised Icon Viewer), it will present an active time display, which is a useful thing to have in its own right.

It maintains a database of scheduled events, which can be edited from a dialog box that it produces. Events can range from a simple alarm to remind you that you have an appointment to starting applications at preselected times. These functions can be made regular or one-off.

There are two versions available from Line 3. I'm still using version 1.81, even though the later version 2.0 offers more capabilities, since I found that version 2.0 seemed to be defeating the inbuilt OS/2 lockup feature (which I use, since it provides both a screen blanker and a bit of protection against the cat walking over the keyboard...). Version 2 is a full 32-bit application.

Shareware. $US 25.00 for registration.

Rollball

I'm not much of a game player, so this may not be a very adequate review. Still, I've tried this game, and quite enjoy it.

Rollball is a PM game. It starts with a number of various coloured dots on its screen, and a red ball which bounces from side to side. The user is provided with a paddle type mechanism which can be used to deflect the bouncing ball. There are also random deflectors which appear at various points. Finally, there are a series of black squares which appear and disappear. These are effectively black holes - if the ball hits one, that's the end...

The game requires a fair degree of skill with a mouse (so others will probably be able to do better with it than I've managed). You might even be able to justify wasting time with it on the basis of improving your mouse skills (well, its an excuse, isn't it?).

I have two complaints about the game. First, on a fast machine, it is much too fast. On a 486-33, the only way I could run it effectively was to slow the machine down, which is something I don't much like doing, and haven't had to do for any other program. Second, it takes up far too much of the CPU's power while running. If its CPU usage and speed were cut back, it

An OS/2 Glossary

This is my brief introduction to IBMspeak. As such, its not going to be exhaustive, and may not be completely correct. But it will hopefully give you some idea of what people are talking about when things like HPFS, PM, etc come into the conversation.

HPFS - The High Performance File System.

OS/2 provides an alternative file system which offers substantial advantages compared to the normal DOS FAT (File Allocation Table) file system. HPFS provides the ability to use filenames much longer than the normal DOS 8.3 filenames (up to 255 characters long, though that length does also include path information). It is also much more resistant to file fragmentation than the DOS FAT system. It offers substantial speed advantages as well (though those advantages will not be realised on partitions of less than 60 megabytes).

PM - Presentation Manager

Presentation Manager was the name used for the user interface for earlier versions of OS/2, and is still the name used for OS/2 graphics-based programs. Any OS/2 prgram that is specified as being a PM application will require the full graphics mode of OS/2 to operate.

WPS - The Work Place Shell

The Workplace Shell is the name given to the new user interface found in OS/2 2.0. This is a windowed, icon based interface, which provides the oh-so-popular "point & click" operation that we're all supposed to need (do you get the feeling that I'm not all that fond of GUI interfaces?). As well as being a point and shoot style interface, the WPS is object orientated and allows extensive associations to be drawn between objects.

Text mode

As well as the graphics programs which are supported by the PM standard, OS/2 offers text mode programs. These look much like the original DOS interface, and work in a very similar manner.

Extended Attributes

DOS stores a number of bits of information about any file, normally called the files attributes. DOS file attributes cover an archive bit (which is usually used to determine whether that file has been backed up or not), a hidden attribute, a system attribute, and a read-only attribute.

If I remember correctly, there are also at least a couple of other attribute bits available for DOS systems which are not used. OS/2 understands those attributes, but also adds a number of others, which are covered by the "Extended Attribute" name. These extended attributes can be used for a number of things, including comments. On a FAT drive, they are stored in a file called EA DATA.SF (well, apparantly, they're not stored there, but that file provides a pointer to the location of each individual file's extended attribute set).

The Programs Reviewed

AV	Archive Viewer
LstPM	File Viewer
SysCols	Desktop colour customiser
File Commando	File manager
WPSBackup	Stores customised Desktop settings
Freetime	CPU usage monitor, screen blanker
TinyEd	Text mode editor
Alarmclk	Alarm clock and time display
Rollball	Game
Inimaint	Maintain .INI files
EPM-Spell	Spell checker for OS/2 Editor

could be a very entertaining game. It still can be, if you can afford to cut machine speed back and don't have other processing which might be interfered with by its level of CPU usage (not a good idea on a BBS machine - it would probably make BBS users wonder if the machine had died...).

TrashMan

Yes, really, another game. This is also a PM program. It is a logic problem. You must sweep piles of rubbish into trash bins, without allowing yourself to be blocked. As you advance through the levels (there are 50 of them!), the obstacles become more and more complex to dodge.

The game is very well written. It uses very little CPU power to drive it, and is very well behaved. However, be warned - its quite addictive and is one of the worst time wasters that I've ever encountered. Once you start, its difficult to stop....

It should be noted that the original version of the game had a partially defective data file. A corrected data file is available (I never noticed the problem, since it applies to one of the 40 or higher levels, and I've never got that far...).

Inimaint

This is a suite of PM programs designed to allow an OS/2 user to maintain OS/2 .ini files.

OS/2, unlike Windows, stores .ini files in binary format. This has a number of advantages.

First, it is much quicker and easier for programs to read them than would be the case if the program had to parse a text file.

Second, they are not prone to being messed up by a user attempting to modify them. However, this last point is also a disadvantage, since, if the need arises, there is no easy way for the user to modify them.

Inimaint provides a reasonably easy way for a user to modify items in the main OS/2 .ini files. It also provides an easy method of backing these files up.

It should be noted that using something like this can potentially do damage to your OS/2 setup. It should be used with caution, and only after ensuring that you have a backup of the files you wish to modify.

Shareware. $US 29.95 for registration.

EPM-Spell

This isn't really a program in its own right. This package adds spell checking facilities to the OS/2 Enhanced Editor. According to the notes that come with it, the original Enhanced Editor had an inbuilt spell checker which was not included when OS/2 2.0 was released. This package simply supplies the missing bits to enable spell checking.

The Enhanced Editor is a very powerful (though poorly documented) editor. Since it is a PM application, it provides multiple fonts and multiple attributes for those fonts. While it is lacking some of the features of a true word processor, it has a number of features that make it quite useable as a simple word processor.

It can also print in full WYSIWYG mode, which allows for quite acceptable document presentation. The addition of spell checking facilities makes it quite practical to use for simple word processing needs. If, like me, you don't need or want the power of something like Describe, the Enhanced Editor can offer a reasonable alternative (at least until someone comes out with a good, simple, word processor for OS/2).

The spell checker is easy to install. All that is required is to copy a .DLL file to somewhere in your LIBPATH, and copy the dictionary file to C:\LEXAM (this directory name must be used, since it is hard coded into the supplied .DLL file).

Once these steps have been followed, the Enhanced Editor will provide some extra functions from the Options menu.

Using the "Proof" command from that menu will allow you to invoke the spell checking functions. A path can also be supplied for an auxiliary dictionary. Naturally, given the source, the dictionary is American, which is a bit of a pain, but can be lived with. I'm trying to find out if there are any alternative dictionaries available.

Technical

Keyboard Problems

Geoff Harrod

Lately numerous people have reported experiencing odd keyboard behaviour in various circumstances. By far the most common situation is using WordPerfect 5.1, particularly on PCs that have AMI BIOS. It also occurs quite often with Lotus 123 I believe, and some other programs. It seems to be related to the way some BIOS ROMs are written, and to the combination of version of BIOS ROM, keybaord interface chip, and keyboard. I think it is confined to enhanced keyboards; that is, those with separate arrow keys.

The problem most often manifests as shift keys electronically "sticking down", or the enhanced keyboard's grey arrow keys acting like numeric keypad keys with NumLock on. If you know WordPerfect, you can appreciate the havoc this causes with WP's jungle of shifted function key controls!

In my own case, I have been unable to get any satisfaction from the supplier of the motherboard (ECI) mainly due to their inability to get any sensible response from the maker in Taiwan or from AMI, the BIOS maker. Various AMI BIOSes are well known to have bugs but they seem unwilling to admit it or do anything. There has been a very large volume of discourse on the subject on the Compuserve forums. Unfortunately, nearly all new PCs have AMI BIOS now. I think the latest versions are OK, but it was so bad that QUT banned AMI BIOS PCs from being purchased for use at the University. I have also heard of occasional similar problems with other BIOSes. My own initially extremely bad problem was 90% cured by substituting a newer keyboard, even though it was to all appearances identical. It is still a nuisance though.

WordPerfect know about the problem, and describe it as a bug in the AMI code, as does everyone else except AMI. WordPerfect issue a small resident program called BIOSFIX for users to load in AUTOEXEC. BIOSFIX should be on all but the earliest 5.1 disks. It presumably monitors the BIOS calls and massages them a bit. It helped a lot, but didn't fix my problem entirely. It still happens just occasionally, with no obvious trigger. For myself, I've never had any problem except with WordPerfect.

Recently it was drawn to my attention that the LANTASTIC network people have also encountered this problem and addressed it with some notes and fixup programs. I work on a Lantastic network and all our machines have AMI BIOSes, but we have not experienced any problems like this in using Lantastic. However, their notes and programs may help with other programs that are affected. Lantastic's notes on the subject are printed here following, but the programs are probably subject to copyright. If anyone has a need, enquire from *Digital Solutions*, Redcliffe. Here are their notes. They provide considerable technical detail.

Notes from LANtastic's Brisbane agents, Digital Solutions.

A problem involving incorrect keyboard data has been reported by several LANtastic users. When using enhanced (101-key) keyboards with NUM-lock on, a "Left-shift on" state occasionally becomes active when no shift key is depressed. The state can be cleared by pressing and releasing the left shift key. Also, on some machines, an enhanced key (Arrows, Insert, Delete, Home, End, PageUp, PageDown) are occassionally decoded as their numeric keypad NUMlocked equivalents, e.g. "2", "4", "6", etc.

The problem seems to stem from the fact that the enhanced keyboards send a string of scan codes (4 scan codes when NUMlock is on) for each press or release of the key. An E0 scan code precedes each of the others, to indicate that the following scan code is to be interpreted as "enhanced".

These four scan code are sent in rapid succession to the PC motherboard. As each is received, an IRQ1 is activated, which invokes the ISR for INT 09H. This ISR is initially set to the BIOS keyboard handler, although it is later re-hooked by resident drivers such as LANtastics's REDIR. One of the first things the AT-BIOS handler does is to inhibit the keyboard from sending further scan codes until processing of the one causing the interrupt is complete. Unfortunately, before it does this, AT-BIOS executes an STI intruction, allowing other interrupts (e.g., timer ticks) to interrupt the keyboard ISR.

Provided the interrupting timer tick ISR executes quickly, and control returns to the keyboard handler before the scan code is replaced by a new one, no harm is done. However, TSRs (such as REDIR) often hook into the timer (08H) interrupt and may prolong its service time by a substantial amount. If two scan codes come in quick succession (as with the enhanced keys, which send E0 followed by the keycode), then the first one (the E0 in this case) may be overwritten by the second and be lost. Thus, the next scan code is interpreted as a non-enhanced keystroke (a shift key or a numeric key).

This problem would never occur if the BIOS would inhibit the keyboard BEFORE it reenables interrupts. Unfortunately it doesn't, and the BIOS cannot be changed.

Four solutions to this problem have been written. The first, and by far the most preferable one, is KBFLOW.EXE. This TSR hooks INT9, and as its first action, inhibits the keyboard from sending more scan codes, BEFORE it passes control to the next INT9 handler. Obviously this TSR must be first in the chain of INT9 handlers to work effectively. To ensure that it is always first in the chain, even when after other programs hook INT9, it traps INT21h, functions 25h and 25h (get and set interrupt vector) so the hooks are installed AFTER KBFLOW's hooks. As a special case, to avoid interfering with the LANtastic SERVER's handling of <CTRL-ALT-DEL>, the keyboard is NOT inhibited when this code is received. KBFLOW takes ~350 bytes of resident RAM and will work in most situations.

An alternate, but less robust, solution is KBFIX.EXE. It should be run in AUTOEXEC.BAT before any TSRs which hook INT 9 are loaded. It searches through the MS-DOS INT 9 handler for DOS's hook into the BIOS keyboard handler. When it is found, the hook is modified to point just AFTER the offending STI instruction, thereby eliminating the possibility of interrupt preemption until after the keyboard is disabled. Unfortunately, it is necessary for a program of this nature to take advantage of specific characteristics of DOS and BIOS. It has been tried successfully on several 386 and 286 AT-BIOS implementations with no problems. The program is smart enough NOT to make the modification if a discrepancy is noted. Since the modification is made within DOS, the program does not need to TSR, and no additional memory is consumed. This solution is ineffective for lost scan codes due to INT9 hooks which are added after KBFIX.

If KBFIX.EXE cannot be used because INT9 is already hooked by a device driver in CONFIG.SYS or the MSDOS is not compatible, the same effect can be achieved by including KBDFIX.SYS as a device driver (ahead of any other device drivers which hook INT 9) in CONFIG.SYS. The patch will be applied directly to the BIOS INT 9 hook, and the driver will not remain resident (no memory will be consumed).

For specific BIOS implementations where KBFIX.EXE and KBDFIX.SYS will not work, the INT9FIX.EXE utility was written. It loads as a TSR (288 resident bytes) and hooks the keyboard (09h) interrupt. Before passing control to the BIOS keyboard handler, it masks IRQ0 (the timer) so the keyboard ISR cannot be interrupted. When BIOS returns, it restores the interrupt mask for IRQ0 to its original state. INT9FIX should normally be the FIRST TSR loaded which hooks INT9, so that timer interrupts are masked for as short a time as possible. Some ill effects from using this program have been noted -- since timer ticks are disabled, operation of the Print-Screen key, the INT15 scan-code translation hook, etc., may be affected in some software configurations. ❑

BOOK REVIEWS

For the Bookshelf

Voodoo Windows

Now you're cooking with gas!

Microsoft Windows is user friendly while it works as you expect. Sometimes it doesn't—is it broken or did you not understand why? Many Windows manuals attempt to tell you but you don't have the time to go through the padding found in some. You want the facts.

Voodoo Windows is Kay Yarborough Nelson's magic recipe for curing the Windows blues. Every subsection is labelled a "trick" or a "trap". Every aspect of the standard Windows 3.1 product is covered (These are not the exact chapter titles):

* Basics

This chapter is for the beginner, for the author doesn't assume anything about the reader other than basic knowledge about the way Windows has been installed on the PC. The first tip shows you how to bypass the startup screen so as to arrive directly at Program Manager. You can even bypass some programs' startup commands, such as opening a word processor document. It mentions the many ways to start programs, including the Macintosh-like dragging and dropping a document name with File Manager onto a minimised word processor icon.

* Customising

This chapter covers various ways you can give Windows that personalised look, including a hint on how you can make a colleague's setup invisible (or how to rescue yourself from that situation)! There were no surprises for me here.

* Running Programs

There are some good tips here—like putting names of Windows programs in the Properties dialog box than in the PATH variable; deleting a group that contains icons; assigning programs a startup key; putting documents in program groups; making read-only program groups, and the like. There is a detailed tip on making a group for the documents and programs you use daily, and which pops up like a button bar at the top of your screen when you start Windows.

* File Manager

File Manager in Windows 3.1 is far better than its predecessor but I don't intend to use it often (I find LIST faster for my purposes). The tips that appealed to me concerned file associations and changing the font for File Manager windows.

Is it broken, or did you just not understand why it didn't work ? Ask Kay!

* Printing

If you have a laptop and travel a lot, you should install several printers—you never know what printer you will find at your destination. Did you know you can drag a document name in Print Manager to change its order of printing? I need to use both True Type and Adobe Type Manager fonts in my work so I was grateful for some useful secrets there.

* Accessories

This chapter covers the little "applets" (little applications) that come with Windows, such as the calendar, Paintbrush, calculator, Cardfile, etc. Cardfile can dial a phone number for you but make sure you put the phone number on a card before the street number! That dumb applet just dials the first set of numbers it finds on a card. If you start a Notepad document with the text ".LOG" on the first line, the current date and time are appended to the end of the document each time you open it. There's a secret eraser in Paintbrush that only works on the work you just did.

* Other Tricks

These tips and tricks are covered in two chapters. One that was new to me was that we can change the font for DOS programs too (running from Windows). You can make a PIF file for PKUNZIP and then expand ZIP files by clicking on them through file manager. A nice tip concerns the secret WINSTART.BAT batch file you use for loading TSRs that are only needed by Windows programs, so your DOS environment gets more memory. If you are running a DOS communications program from windows then ensure its PIF file has Idle Time unchecked. Did you know you can cheat at Solitaire? Minesweeper has sound effects you didn't know existed. One tip I really appreciated was the /p switch in Setup, which rebuilds damaged groups.

This book made me realise that I use Windows merely as a platform for launching my Windows applications. I had not used many features on which Microsoft has probably spent millions of dollars, particularly those that would make my job easier. You will read this book from cover to cover. I heartily recommend this book.

Kay Yarborough Nelson: Voodoo Windows ISBN 1-56604-005-1 282 pages. Published by Ventana Press RRP US$19.95

Brisbug at the Computer Show

The Brisbug stall was bigger than last year, allowing the public to "walk on" and view our advertising material. This picture, taken before the show opened, shows the Thusday morning crew ready to go. The bright yellow shirts with Brisbug logo presented very professionally,and stood out amongst the sea of suits.

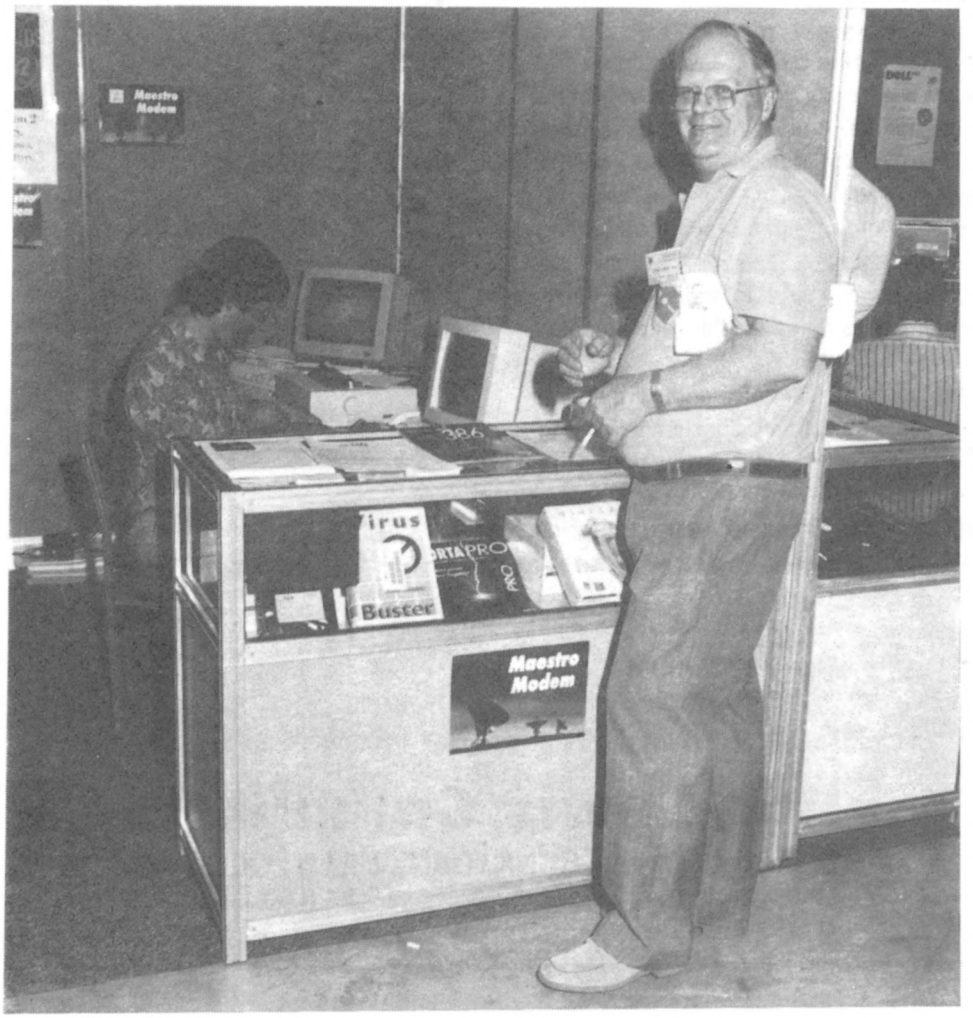
*Contrary to some suggestions Brisbug is not **all** grey-headed old blokes as this shot shows. Most teams contained at least one lady member, this one two*

Taking it to the Public

Brian Doyle, ably assisted by Gold Coast SIG identity, Neil McPherson points out some of the Brisbug services to a potential new member.

Preliminary figures indicate at least 40 new members joined at the show. Many current members renewed.

If previous years' experience is any guide there will be a big influx of visitors to our next meeting to "check us out". No doubt you'll make them welcome.



Checking out the "opposition".

Actually, Brisbug librarian, LLoyd Smith, is chatting to Mike Richardson, sometime Sysop of the Brisbug BBS, now an executive of HH & BW Services, who distribute Maestro modems in Queensland, and advertise regularly in SigBits

PHOTOS courtesy of

LaRob Photographers
Rob Gurney
Telephone 355 4982

also Genealogy programs and OS/2

Buying a PC is *easy* ...
with the right help

Whether you're buying your first computer for home, or a new computer for the office, you are most likely entering new territory, with an unfamiliar language, populated by natives of unknown trustworthiness.

Getting a reasonable deal is not hard. Every day you make purchasing decisions ... in the supermarket, in the furniture store. When buying a computer apply the same principles:

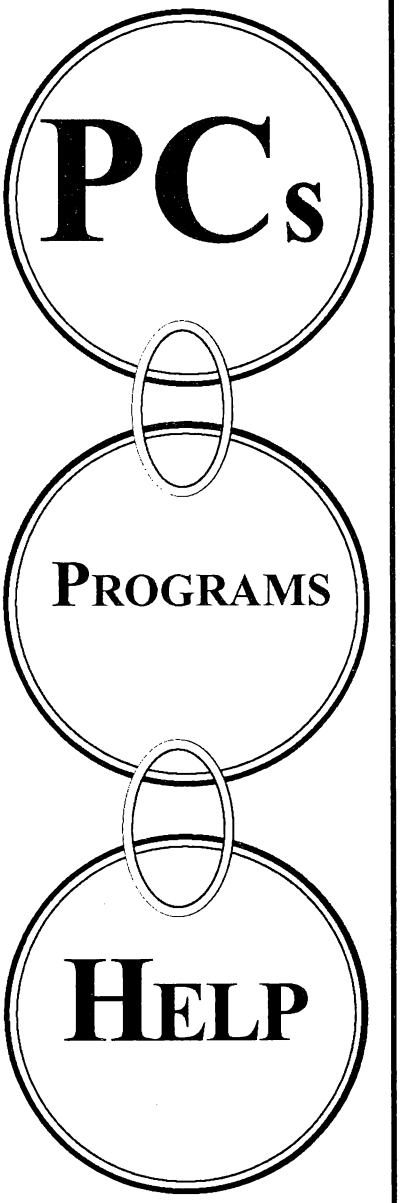
* **Compare, compare, compare**
  (REALLY do your homework first)
* **Choose a dealer you feel comfortable with**
* **Know your rights** *(and get them in writing)*
* **Remember price *alone* is *not* a good guide**
  (generally you get what you pay for)

Getting the *best* deal is not so easy. Fine tuning your specification to your application (that's computerese for "getting the right machine for the job") requires detailed knowledge of what's available and what does what best.

This is where your choice of supplier is critical. Just because the salesman can say the big words (mostly correctly) doesn't mean he knows what they mean to your application. In fact it takes more knowledge to be able to explain and demonstrate to you the implications of your choices in plain English. The real "experts" spend a considerable proportion of their time reading and trying out new equipment and programs just to keep up. Obviously the part-timer, teenage entrepreneur, or superstore discount "box-flogger" doesn't have the time or facilities for this investment.

At Ron Lewis Computers, we apply ten years experience as user, enthusiast, teacher, and five years as full-time consultant in trying to get you the BEST deal for your dollar (it will definitely not be the lowest price, but will be competitive).
The same experience can help you "fine-tune" your set-up, or recover from the inevitable little problems of operating a real computer.

We can also provide for your desk-top publishing needs.



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TUTORIAL SERIES

Learning QBASIC

DIRECT VIDEO WRITES
PORT STATUS CODES

Dan Bridges

I'm on the road a lot these days so it has become rather difficult to submit SigBits articles regularly (I'm currently lugging my large home computer around Central Queensland so I can research and write this). I'm still working on a QBASIC Loan Repayment program with a few bells and whistles. It looks like it may become too large for publication. If so, I'll discuss various aspects of the design in the magazine and make the full version available on the BBS.

One of the features will be the ability to send the final loan repayment schedule (with any variations you've made in the regular repayments) to the printer. Doing this is simple enough, but any practical design must be able to cope with common printer problems (eg. the printer is off-line).

This article shows you how to interpret the status codes that a parallel-port-connected printer returns to the computer. I find this particular topic rather interesting because the program is responding to a hardware device other than someone thumping away at the keyboard.

The second major topic covered in this article shows you how to perform direct writes to the video hardware. A handy video attributes program is presented.

Finally we work through a word-wrapping program that is fun to experiment with. In fact, all the programs presented this month should prove enjoyable in the sense that working through them should help you to come to grips with a number of programming concepts that can appear puzzling to novices. (Of course, "bashing your head against a brick wall" struggling with a programming problem isn't very enjoyable, but it's a relief when the bashing stops.)

The BIOS Data Area (BDA)

Near the bottom of Low Memory (1K from the bottom) is a memory region that holds data that the BIOS uses to perform its

Nibbles, Bits, Bytes, Words and Hex

A **Bit** is the atom of binary-state computing. It can only have two states: ON/HIGH/1 or OFF/LOW/0. The mathematical possibilities are expressed as 2^1 = 2 (0-1).

Although modern computers are 16 and 32-bit machines, the basic molecule of PCs is the **Byte**. It is made up of 8 bits so it can express 2^8 values = 256 (0-255).

2 bytes or 16 bits are required to make a **Word**. It has 2^16 values = 65,536 (0-65,535).

2 words form a **Double Word** which represents 2^32 values = 4,294,967,296.

Take a 2-digit decimal number. Mathematically its 2 digits can express 10^2 values = 100 (0-99). The digit in the 10's position represents more than the same digit in the unshifted position. Thus 52 = 5 * 10^1 + 2 * 10^0 (Any number raised to the power of zero = 1. In the Immediate Window try "? 7^0".)

Now imagine that we use digits that can express more than 10 possible values. Hexadecimal digits can represent 16 values (0-F) with the 6 highest values represented by letters (A-F). The hexadecimal number 52H = 5 * 16^1 + 2 * 16^0 = 82.

The maximum span that 2 hexadecimal digits can cover is 16^2 = 256 (0-255). This means that a 2-digit hex number can express all the values of a single byte. This can confuse novices. Why are 2 hex digits required to express 1 byte? The answer is that 1 byte itself represents 8 bits which can have 256 values. 1 hex digit, by itself, can only span 16 different values.

Sometimes we need to express only 4 bits. These can span 2^4 values = 16 (0-15). These 4 bits form a **Nibble** (half a byte) whose values can be represented by a single hex digit. So the byte 52H can be expressed as a combination of the value of the high nibble (5H * 16^1) + the value of the low nibble (2H * 16^0). When we come to poking video memory you will see an example of a byte (an attribute byte) best thought of as a combination of a high nibble (background colour) and a low nibble (foreground colour).

The standard ASCII character set requires 7 bits (7^2 = 128) to represent its 128 values (0-127). The 8th bit is necessary for the "high" ASCII characters (128-255). Wordstar uses the 8th bit for other purposes and a Wordstar document file can be converted to a straight ASCII text file by "stripping the 8th (or high) bit off".

Integers in QBASIC are signed so the highest bit is required to represent the sign of the integer. Single-precision integers use 2 bytes (16 bits) so they can have a maximum range of 65,336 values, but because of the retirement to indicate sign, the values range from -32,768 to +32,767 (remember that zero must be included).

To check this out in the Immediate Window type: "? &H7FFF". This positive value (+32,767) has the lower 15 bits set high and the 16th bit set low. Now try the next hex number: "? &H8000". The value shown is -32,768. This is generated by having the 16th set high and the other 15 bits set low. Finally try out the maximum 16 bit value (all bits set high): "? &HFFFF". You will see "-1". The way that negative numbers "ascend" towards -1 is due to the "Twos Complement" nature of computer subtraction. We will not consider it any further here.

Long Integers are also signed but use 4 bytes (2^32) to represent from -2,147,483,648 to +2,147,483,647.

functions. The location of the printer and COM ports, the number of seconds since midnight (used to determine the time by DOS), the current video mode, the keyboard status and the contents of the keyboard (type-ahead) buffer are just some of the information contained in this area.

I/O Ports

Ports are I/O (Input/Output) channels built into the design of the CPU. Ports have address locations ("port numbers"), but these address are different from normal memory address locations. Ports are used by the CPU to communicate with other computer components (except memory). There are 65,536 port address numbers (0000H-FFFFH).

Here we will focus on the printer ports. The BDA contains the port addresses for LPT1:, LPT2: and LPT3:. (There is a space for a LPT4: address but I believe that 3 LPTs are the maximum in normal circumstances.)

The port locations for up to 3 printer ports are shown by the first 3 words (6 bytes - See the box: "Nibbles, Bits, Bytes and Words") in the BDA. The next highest port number for each printer port is concerned with indicating the status of that particular printer.

For example, if LPT1's port number is 378H, data to be printed is sent to this port address while the port at 379H is inspected to see what is the status of the printer.

Checking the Printer's Status

The main program of PRNTEST.BAS (Fig.1) is being used here just to run the CheckLPT subprogram. The Row, Row2, Col and Col2 constants provide a convenient means of positioning the messages displayed on the screen. They are constants rather than variables since this is more efficient if the program is later compiled (with QuickBASIC's compiler) and constants defined in the main program are available globally (i.e. any subprogram can use their value).

QBASIC provides the INP(port_number) function to read I/O ports. The port number for LPT1: will occasionally vary from one PC to the next so we first need to determine its address on the current system. To do this, inspect (PEEK at) the word at offsets 9H (high byte) and 8H (low byte) of memory segment 40H (the BDA).

```
  1  'PRNTEST.BAS - Demonstrates how printer status can
                          be determined.
  2  DEFINT A-Z
  3  DECLARE SUB CheckLPT ()
  4  DECLARE SUB Disp (PrintString$)
  5  DECLARE SUB DecToBin (Decimal)

  6  CONST Row = 10, Col = 20
  7  CONST Row2 = Row + 2, Col2 = Col

  8  CALL CheckLPT

100  DEFINT A-Z
101  SUB CheckLPT
102  ' Makes sure the the printer is ready
103  DEF SEG = &H40

104  CLS

105  PrnPort% = PEEK(9) * 256 + PEEK(8)
106  'PRINT "LPT1 Port is: "; HEX$(PrnPort); "H"
107  PrnStatusPort = PrnPort + 1
108  DO
109  'LOCATE Row2, Col2 - 1: PRINT INP(PrnStatusPort);
110  'LOCATE Row2 + 1, Col2: PRINT "B7 B6 B5 B4 B3 B2 B1 B0"
111  'CALL DecToBin(INP(PrnStatusPort))

112  SELECT CASE INP(PrnStatusPort)
113  CASE 71:  CALL Disp("Printer is off-line...    ")
114  CASE 103: CALL Disp("Printer is off-line and is out of
                                    paper...")
115  CASE 127: CALL Disp("Printer cable not connected... ")
116  CASE 135: CALL Disp("Printer is not turned on...    ")
117  CASE 223: CALL Disp("Printer is ready     ")
118  LOCATE 24, 56: PRINT "Press any key to print...";
119  WHILE INKEY$ = "": WEND
120  EXIT DO
121  CASE 255: CALL Disp("Printer is on-line but is out of
                                     paper... ")
122  CASE ELSE: CALL Disp("Printer is not ready... ")
123  END SELECT
124  LOOP

125  END SUB

200  DEFINT A-Z
201  SUB Disp (PrintString$)
202  ' Displays message at Row, Col. Being constants, these
203  ' are global and do not need to be passed to this
          subprogram.
204  LOCATE Row, Col: PRINT PrintString$
205  END SUB

300  DEFINT A-Z
301  SUB DecToBin (Decimal)
302  'Converts a decimal number to its binary equivalent.
303  IF (Decimal AND 128) THEN B7 = 1
304  IF (Decimal AND 64) THEN B6 = 1
...  ........
310  IF (Decimal AND 1) THEN B0 = 1
311  LOCATE Row2 + 2, Col:
312  PRINT B7; B6; B5; B4; B3; B2; B1; B0;
313  END SUB
```

Fig.1 PRNTEST.BAS - Lines 113-118 and 121-2 are all the same length

```
LPT1 Port is: 3BCH [E]

     Printer is off-line and is out of paper...[A]

     103 [B]
     B7 B6 B5 B4 B3 B2 B1 B0 [C]
      0  1  1  0  0  1  1  1 [D]
```

[A] Port Address Message (line 106)
[B] Prn Status Message (112-123)
[C] Prn Status Numerial (109)
[D] Bit 7 - Bit 0 Labels (110)
[E] Binary Conversion of Status Numeral (312)

Fig. 2 PRNTEST.BAS screen display when technical details messages are enabled. Row and Col are set to 4.

Take the case of LPT1 being situated at port 378H. Examine the CheckLPT subprogram. Line 103 sets the segment under examination to &H40 (the "&H" prefix is QBASIC's way of indicating a hexadecimal number).

Line 105 PEEKs at the bytes at offset 8 and 9 into this segment (these numbers are decimals). Since the decimal value returned from PEEKing at the byte at offset 9 is for the high byte of the word it has a value 256 times greater than the decimal value of the low byte. In this example PEEKing at offset 9 returns a decimal value of 3 (03H), while PEEKing at offset 8 returns 120 (78H). (To see the decimal value of this hex number, jump to the Immediate Window and type "? &H78".) So the combined decimal value is (3 * 256) + 120 = 888. Temporarily unREM line 106 to see this address in hex format.

Line 107 adds 1 to this to determine LPT1's status port number.

Line 112 is situated inside a DO loop. It continually polls the port with the decimal port number of 889 (379H) until the printer is ready, in which case line 120 exits the loop.

Varying decimal values will be returned by INP(PrnStatusPort). I've listed the values returned by my printer (Panasonic KX-P1124). I believe these numbers will suit most printer. If yours does not return these numbers you can easily work out the correct values, as I did, by experimentation.

It isn't a good idea to include a CLS keyword inside a loop. To see why, temporarily add a CLS line between lines 108 & 109 and run the program.

Instead of a CLS command, the messages are all made the same length and, since they occur at the same screen location, cleanly overwrite previous status messages.

In normal use lines 117-119 would be omitted and a message would only be displayed if the printer was not ready for some reason.

To aid comprehension and experimentation, unREM line 109 and REM out lines 117-120. (To eventually exit this endless loop use Ctrl-Break.) Figure 2 shows the display with all additional information. Notice that, although both Col and Col2 are currently set to 20, it is necessary in line 109 to move the column one position to the left. This is because the number displayed is preceded by an extra space (reserved for the minus sign).

Decimal to Binary Conversion

The status number shown is generated by the status of each of the 8 bits that the printer sets. Consider the decimal value 103. This is generated by bits 6 (64), 5 (32), 2 (4), 1 (2) and 0 (1) being set high. 103 is the sum of these individual values. We'll now add a subprogram to convert a decimal to its 8-bit equivalent.

Here are 3 methods (in the following examples the value of the numeric variable Decimal is initially 103):

1. Greater Than or Equal To.

```
IF Decimal >=128 THEN
     B7 = 1
     Decimal = Decimal - 128
ENDIF

IF Decimal >=64
     THEN B6 = 1
     Decimal = Decimal - 64
ENDIF

IF Decimal = 1 THEN B0 =1
```

All the methods presented here assume that you will be using them in a subprogram so that the B7, B6 etc. variables will have an initial value of 0.

2. Integer Division.

Same layout as method 1 but an integer division (\) is performed.

For example: 6\4 = 1

```
IF Decimal \ 128 THEN
     B7 = 1
     Decimal = Decimal - 128
END IF
```

What is the condition IF is working with here? With normal mathematical operations we are used to the "=", "<", ">", and maybe "<>" (not equal to) operators. However an IF statement really acts on the outcome of a Boolean expression (ie. the RHS will execute if the expression LHS is TRUE (not equal to zero).

To test this out in the Immediate Window type:

```
CLS: ? 103\128
IF 103\128 THEN BEEP

CLS: ? 103\64
IF 103\64 THEN BEEP
```

3. ANDing two numbers.

```
IF (Decimal AND 128)
     THEN B7 = 1
IF (Decimal AND 64)
     THEN B6 = 1
     ....
IF (Decimal AND 1)
     THEN B0 = 1
```

AND works at the bit level. The result will only be high (1) if both the bits being ANDed are high.

Consider Decimal = 103.

```
Dec   128  64   32   16   8    4    2    1
Bit    B7  B6   B5   B4   B3   B2   B1   B0

103   0    1    1    0    0    1    1    1
AND
128   1    0    0    0    0    0    0    0
-------------------------------------------
 0    0    0    0    0    0    0    0    0

Dec   128  64   32   16   8    4    2    1

Bin    B7  B6   B5   B4   B3   B2   B1   B0
103    0   1    1    0    0    1    1    1
AND
64     0   1    0    0    0    0    0    0
-------------------------------------------
64     0   1    0    0    0    0    0    0
```

Since the outcome (64) of the second AND operation is not zero, "IF (103 AND 64) THEN B6 = 1" will set B6 to 1. If you want to check this out further in the Immediate Window try "? 103 AND 64". Try other powers-of-two in the RHS of this expression.

We've already unREMed line 109 to show the status number. Now unREM lines 110 and 111 as well and experiment with different printer conditions.

Extracting the Digit

As well as PEEKing into the contents of memory it is also possible to POKE values directly into memory locations. This technique is often used to speed up video performance. It is called "direct video writing".

The video buffer is a block of RAM on the video card that holds characters and colour bytes prior to display. On most colour systems in text mode there is a 32K memory address "window" to this RAM, located at B800H, while on mono systems there is a 4K address window at B000H.

The screen is "memory-mapped" i.e. each address in the display memory area directly corresponds to a different location on the screen. Each character has two bytes associated with it: the first byte contains the ASCII value for the character (e.g. ASCII 65 is "A") and the second byte determines the character's foreground/background colour and its intensity. There are also different "pages" (screens). This means that a full screen's details can be written to an alternate page to the one currently displaying and then the pages can be rapidly switched, leading to snappier displays. And there are also different palettes of available colour combinations.

Here we'll only consider the first page. The first character is written at the start of video text address range. Next comes its attribute (foreground and background colour, intensity and blinking) in the second byte from the start. Then comes two more bytes for the second character and its attribute and so on.

To see how this works, type in the Immediate Window:

```
DEF SEG = &HB800
' On mono systems use &HB000

POKE 0,65
' At offset 0 (the first position in the video buffer) place an "A" (its ASCII code is 65).

POKE 1, &H74
' The attribute for "A" is a red (&H4) foreground on a white (&H7) background.

' For a mono system use:

' POKE 1, &HF0
' The attribute for "A" is a blinking black character on a white background.

POKE 2, 66
POKE 4, 67
' Next two characters are "B" and "C". Don't alter current screen attributes.
```

Notice how characters occur at even offsets while attributes are at odd offsets.

How much faster is this compared with letting QBASIC handle it?
POKESCRN.BAS (Figure 3) is designed to investigate this. There will be no values assigned to B7, B6 etc. so they will display "0". This is unimportant in this context but you could later add the PokeToScreen subprogram to PRNTEST.BAS and replace lines 311 & 312 with just:

```
CALL PokeToScreen (B7, B6,
    B5, B4, B3, B2, B1, B0)
```

In POKESCRN.BAS line 17 calls the PokeToScreen subprogram. It is called from inside a FOR loop. Set the "x" variable in line 11 to a value appropriate to the situation and the speed of your machine.

	Inside the QBASIC Environment	Compiled with QuickBASIC
LOCATE & PRINT	.869ms	.704ms
POKE 8 Chars	.340ms	.045ms
POKE 48 Chars (spaces & attributes)	1.433ms	.118ms

Table 1 *Display Speed of a Line.*
The Line contains "0 0 0 0 0 0 0 0".

```
1   'POKESCRN.BAS - Demonstrates Poking to the Screen Buffer.
2   DEFINT A-Z
3   DECLARE SUB PokeToScreen (B7, B6, B5, B4, B3, B2, B1, B0)
4   DECLARE SUB AttributeAssistant ()
5   DECLARE SUB Disp1 (Colour, String1$, String2$)
6   DECLARE SUB Disp2 (BitLabel$, Bit, Description$)

7   CONST Row = 12, Col = 20
8   CONST StartPos = (Row + 1) * 160 + (Col) * 2

9   CLS
10  LOCATE Row + 1, Col: PRINT "B7 B6 B5 B4 B3 B2 B1 B0"

11   x = 3200     'Maximum of 32767.
12   'COLOR 0, 15
13   Start! = TIMER

14   FOR Count = 1 TO x
15    'LOCATE Row + 2, Col
16    'PRINT B7; B6; B5; B4; B3; B2; B1; B0;
17    CALL PokeToScreen(B7, B6, B5, B4, B3, B2, B1, B0)
18   NEXT Count

19   Elapsed! = TIMER - Start!
20   LOCATE 22, 7: PRINT USING "Total Time:###.#s"; Elapsed!
21   LOCATE 23, 4: PRINT USING "Time per loop:###.###ms";
                                   Elapsed! / (x / 1000)

100   DEFINT A-Z
101   SUB PokeToScreen (B7, B6, B5, B4, B3, B2, B1, B0)
102   ' Poke characters to predefined offsets from the
103   ' start of the video text buffer segment.

104   ' Start of color video text buffer.
105   DEF SEG = &HB800

106   ' Format is: Offset, Character.
107   ' Following offsets increment by 6 (3 char positions).
108   ' ASCII 48 is the "0" character so if B7=1 then
109   ' the character displayed = 1 + 48 = "1" (ASCII 49).
110   POKE StartPos, B7 + 48
111   POKE StartPos + 6, B6 + 48
112   POKE StartPos + 12, B5 + 48
...   .......
117   POKE StartPos + 42, B0 + 48

118   ' Reset current segment back to startup one.
119   DEF SEG

120   END SUB

200   DEFINT A-Z
201   SUB AttributeAssistant
202   ' Assists with determining the required video
          attribute values to POKE.

203   DEF SEG = &HB800

204   CLS
205   LOCATE 3, 55: PRINT "BITS TO TURN ON"
```

Continued over/

Figure 3. POKESCREEN.BAS - Write direct to the screen buffer

The total time for x iterations should be about 6 seconds to get results accurate to about 2%. 32000 iterations is the maximum possible in this simple design and will give the greatest accuracy. (The PC's clock ticks have a "granularity" of 55ms.)

Compare the POKE time with a standard LOCATE and PRINT coupling by REMing out line 17 and unREMing lines 15 & 16.

Table 1 shows that poking to the video buffer of my 386/25 system leads to moderate gains in run-time in the QBASIC environment and to significant speedups in compiled programs.

You may have noticed that we are not poking the same amount of info that we are including in the PRINT statement. PRINTed integers include a space on either side of the numeral. While there is no need to POKE space characters here, they should be included, if we want to keep the comparison fair. Furthermore, issuing a COLOR statement prior to commencing the loop (line 12) will have the PRINTed characters coming out in colour, whereas POKEd characters do not obey active COLOR settings. So it may also be necessary to poke attributes, as well, to achieve the same functionality.

If we POKE the same number of characters and include their attributes we end up with 6 times the data of our initial POKE. Even though this is slower in the environment than a COLOR and LOCATE/LOOP coupling, the compiled version is still quite a bit faster.

While the PRINT times reported here are not objectionable, we are only dealing with a relatively small amount of data. If we needed to put a lot of information on the screen of a slower machine, poking the screen might be worth the effort involved.

AttributeAssistant

Determining the correct screen attributes when you are poking coloured messages can be tiresome so I've added a subprogram to POKESCRN.BAS called AttributeAssistant to make the job easier. You use it by jumping to the Immediate Window and typing "CALL AttributeAssistant". Figure 4 shows what the screen looks like (minus colours).

Operation is relatively straightforward. You press any of the 0-7 numeric keys to toggle the respective bit in the attribute

```
206  LOCATE 5
207  ' Parameters are: Colour (of String1$), String1$,
          String2$
208  CALL Displ(7, "Black", "None")
209  CALL Displ(4, "Red", "2")
210  CALL Displ(2, "Green", "1")
211  CALL Displ(1, "Blue", "0")
212  CALL Displ(5, "Magenta", "2, 0")
213  CALL Displ(6, "Brown/Dark Yellow", "2, 1")
214  CALL Displ(3, "Cyan", "1, 0")
215  CALL Displ(7, "Light Grey/White", "2, 1, 0")
216  CALL Displ(8, "Dark Grey/Black", "3")
217  CALL Displ(12, "Light Red", "3, 2")
218  CALL Displ(10, "Light Green", "3, 1")
219  CALL Displ(9, "Light Blue", "3, 0")
220  CALL Displ(13, "Light Magenta", "3, 2, 0")
221  CALL Displ(14, "Bright Yellow", "3, 2, 1")
222  CALL Displ(11, "Light Cyan", "3, 1, 0")
223  CALL Displ(15, "Bright White", "3, 2, 1, 0")


224  'Toggles the attribute bits 0-7 high/low when you
          press the 0-7 number keys.
225  DO
226  COLOR 7, 0

227  SELECT CASE INKEY$
228  CASE CHR$(27)   'Esc key is pressed.
229  EXIT DO
230  CASE "7" : B7 = 1 - B7
231  CASE "6" : B6 = 1 - B6
...  ........
237  CASE "0" : B0 = 1 - B0
238  END SELECT

239  HighNibble = B7 * 8 + B6 * 4 + B5 * 2 + B4 * 1
240  LowNibble = B3 * 8 + B2 * 4 + B1 * 2 + B0 * 1
241  AttributeByte = HighNibble * 16 + LowNibble
242  FgColour = B7 * 16 + B3 * 8 + B2 * 4 + B1 * 2 + B0
243  BgColour = B6 * 4 + B5 * 2 + B4

244  LOCATE 3, 1: PRINT "Test Message    : ";
245  POKE 360, 65: POKE 361, AttributeByte:
               POKE 363, AttributeByte
246  POKE 364, 66: POKE 365, AttributeByte:
               POKE 367, AttributeByte
247  POKE 368, 67: POKE 369, AttributeByte

248  LOCATE 5, 1: PRINT "Attribute Byte  : ";
249  PRINT USING "### &&&"; AttributeByte;
                    "(&H"; HEX$(AttributeByte); ")   "

250  PRINT "Foreground Nibble: ";
251  PRINT USING "### &&&"; LowNibble;
                     "(&H"; HEX$(LowNibble); ")   "

252  PRINT "Background Nibble: ";
253  PRINT USING "### &&&"; HighNibble;
                    "(&H"; HEX$(HighNibble); ")   "

254  PRINT "QBASIC Equivalent: COLOR"; FgColour; ",";
          BgColour
```

Continued over/

Figure 3 (continued) - Direct write to screen buffer

bytes of the test message (lines 244-247). Initially no test message is displayed because the attribute byte being poked is 00H (Black on Black). Pressing the Esc key terminates the subprogram (lines 228-229).

One noteworthy aspect is the method used to toggle B0-B7 on and off. Take B6 - initially it is unset so its value is 0. The DO loop (lines 225-267) is continually looping and checking user input via line 227. You now press the "6" key. The INKEY$ function returns the character "6". The SELECT CASE test falls through to line 231 which becomes:

```
B6 = 1 - 0 = 1
```

When line 259 calls Disp2, the "on" status of B6 is transmitted as the second parameter. Line 402 detects this and causes line 403 to display the parameters from line 271 as Black on White. Since the White background includes spaces this gives the effect of an extended highlight bar.

Later you press "6" again and line 231 becomes:

```
B6 = 1 - 1 = 0
```

The strings in the calls to Disp2 are all made the same length, by padding with spaces, so that the highlight bars look neater.

Word Wrapping

In the QUIK_BAS echomail conference, I recently saw an interesting routine by John White (from the USA) to wrap a long string at a designated line length. However it split the string at exactly this point so that words were often split.

Figure 5 shows an improved version that doesn't split words. I've also added: a ruler line to show the current line length; a means to dynamically vary the line length (use the Grey Plus and Minus keys, and the Esc key to quit); upper and lower line length limits (max = 80 chars; min = length of biggest word in the string). See Figure 6 for an example of the screen display.

```
255  LOCATE 11, 1
256  ' Parameters are: BitLabel$, Bit, Description$.
257  CALL Disp2("B7", B7, "Blinking of foreground colour")

258  LOCATE 13, 1
259  CALL Disp2("B6", B6, "Red component of background
                colour     ")
260  CALL Disp2("B5", B5, "Green component of background
                colour     ")
261  CALL Disp2("B4", B4, "Blue component of background
                colour     ")
262  LOCATE 17, 1
263  CALL Disp2("B3", B3, "Intensity component of
                foreground colour")
264  CALL Disp2("B2", B2, "Red component of foreground
                colour     ")
265  CALL Disp2("B1", B1, "Green component of foreground
                colour     ")
266  CALL Disp2("B0", B0, "Blue component of foreground
                colour     ")
267  LOOP
268  DEF SEG
269  END SUB

300  DEFINT A-Z
301  SUB Disp1 (Colour, String1$, String2$)

302  COLOR Colour
303  LOCATE , 55: PRINT String1$;
304  COLOR 7, 0
305  PRINT " = "; String2$

306  END SUB

400  DEFINT A-Z
401  SUB Disp2 (BitLabel$, Bit, Description$)
402  IF Bit = 1 THEN COLOR 0, 7 ELSE COLOR 7, 0
403  PRINT USING "&  #    &"; BitLabel$; Bit; Description$;

404  END SUB
```

Fig.3 POKESCRN.BAS with the AttributeAssistant subprogram.

TRUE or FALSE

A common expression in BASIC programs is:

```
CONST False = 0, True = NOT False
```

This is used because anything that is not zero is "true". In the Immediate Window try:

```
IF -4 THEN BEEP
IF 100 THEN BEEP
IF 0 THEN BEEP
```

We can refer one constant to another as long as the referred-to constant is already defined. So, in the CONST statement above, True can be expressed as NOT False because False has just been defined (the line is read from left to right). It seems a little strange that QBASIC does not come with TRUE and FALSE as pre-defined constants.

True and False constants are often as "flags" to indicate that some operation has occurred or has been completed.

WrapLine

Let's work though a the operation of word-wrapping with a line length (StrLen) of 30. Here is part of the test string:

```
          1         2         3
12345678901234567890123456789012345
Having a fantastic time. Wishing
```

Line 104 sets Work$ to the full string and line 105 sets the "flag" variable Done to the constant False. (See the box: "TRUE or FALSE".)

Line 107 reads as "IF 42 > 30 THEN" so line 108 sets NumOfLines to 1. Line 109 sets WordPlus$ to the first 31 characters.

A decremental loop (lines 112-121) then steps backwards through WorkPlus$ looking for the first (last) space. On the first iteration the start position is 31 (the same position as the end of WorkPlus$), no space is found, and LastSpacePos is set to zero. Since this is "false", the IF structure in lines 114-120 does not execute, so the loop decrements to try again from a SearchStartPos of 30.

On the seventh iteration a space is found at position 25. LastSpacePos is set this value and the commands between lines 114-19 execute due to the "truth" of LastSpacePos. In line 115 the first 24 characters (25 before trimming) in Work$ (with the same content, at this stage, as StrIn$) are assigned to element(1) of the string array ParsedLines$().

Line 117 resets Work$ to the remainder of StrIn$ (from position 26 onwards) and line 119 then exits the FOR loop (lines 112-121) back into the DO loop which will continue looping until Done is TRUE in line 121.

In this example this occurs as soon as line 107 is executed again because the length of the new value in Work$ (22 - "Wishing you were here.") is now less than StrLen (30). So execution moves to line 122 and then line 123. Here Done is set to True, and, since True contains a non-zero value, this ends the DO loop at 125.

Lines 126 and 127 then sets ParsedLines$(2) to "Wishing you were here."

DisplayArray

This subprogram is completely straightforward. First it places a bright white ruler-line, of appropriate length, at the top of the screen. Then it PRINTs out the lines in the ParsedLines$() array.

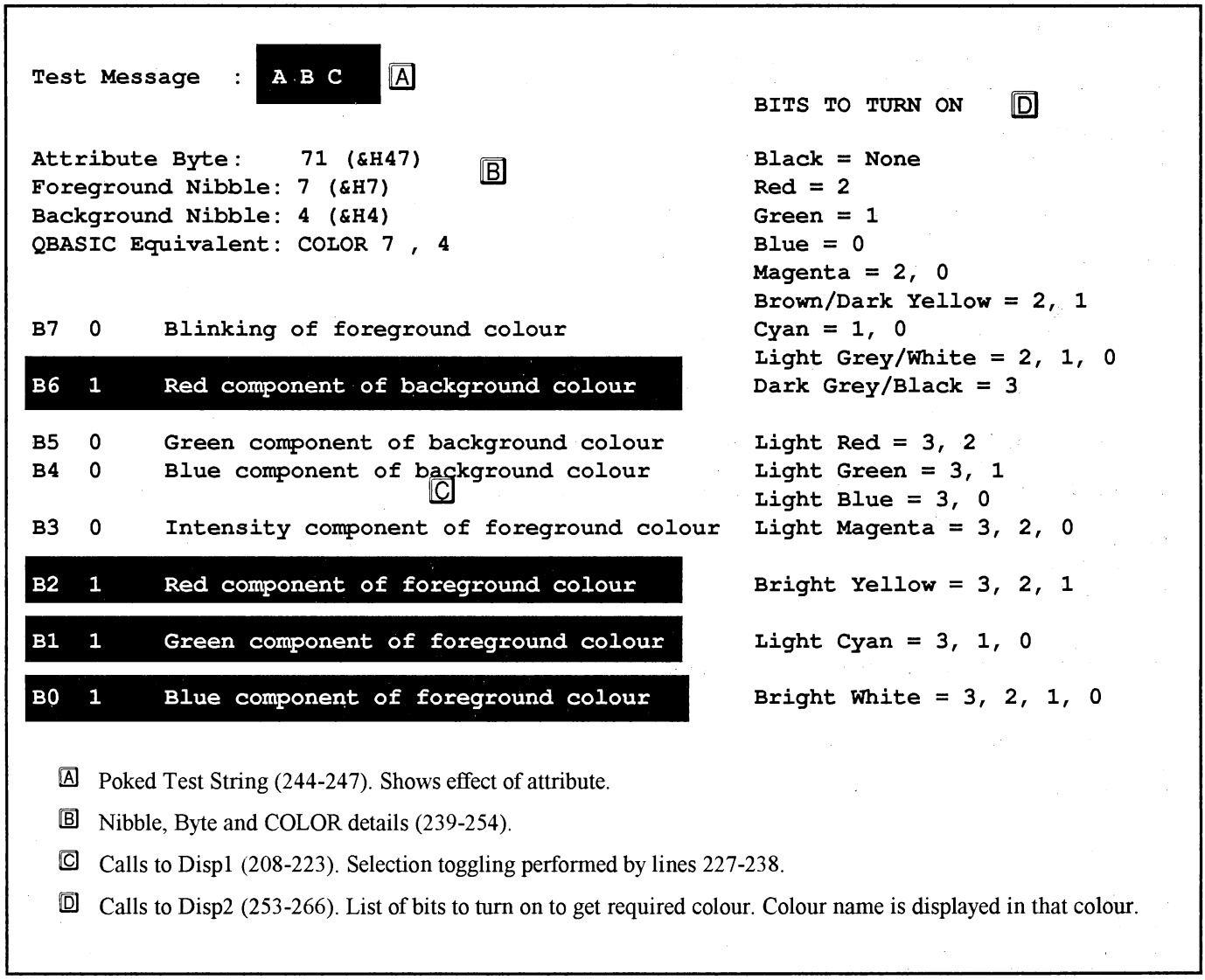


Fig.4 Screen Display from AttributeAssistant subprogram. Colour combination selected is White on Red.

VaryLineLength

This is another straightforward subprogram. The INKEY$ function is continually analysed in an endless DO loop. Accepted keys are "+", "-" and Esc.

If you press the "-" key, execution continues to line 305 where the current values of StrLen is inspected to see if it has reached the minimum allowable. If it hasn't, line 313 decrements StrLen. If it has, a warning message is displayed and no decrease occurs.

The "+" key (to increase the margin) is processed similarly and 80 chars/line is the maximum allowed. The Esc key exits the SUB and thus terminates the endless DO loop.

MaxWordLength

The longest word length is determined by the MaxWordLen function. Any leading and trailing spaces are removed in line 402. Lines 403-406 check for the presence of any "internal" spaces in the test string. If not, the string must only contain one word so the max word length is the length of the whole string.

```
          1
1234567890123456789
Having a fantastic
```

Our test string does have internal spaces though, so line 408 sets Space2 to 7. (INSTR returns the first occurrence of the required string, inside another string, after the optional starting point.)

Operation continues on to line 412 where WordLen is set to 6. Since this is the first runthrough, line 415 also sets TempMaxLen to 6.

Space1 is set to 7 in line 415. Line 416 will return to line 407 as long as Space2 is not zero.

This time through the loop line 408 starts looking for a space from position 8 and sets Space2 to 9. Line 412 becomes 9 - 7 - 1 = 1 (the length of "a"). Because this is smaller than 6, TempMaxLen remains set to 6.

On the third pass through the DO loop, the maximum value is attained when line 412

becomes 19 - 9 - 1 = 9.

```
      3         4
67890123456789012345678
Wishing you were here.
```

On the eighth pass the last word is examined. Line 408 starts the search from position 43 and does not find a space.

(Remember that any trailing spaces were trimmed in line 402.) So Space2 is set to 0 and line 410 becomes 47 - 42 = 5.

Again this does not alter TempMaxLen. Line 416 quits the loop because of the zero value of String2.

Finally, as befits a user-defined function, in line 417 the function name is set to the value to be returned to the invoking expression. In this example, line 20 uses this function to set GoNoLower to 9.

```
....■....1....■....2....■....3....■.
This is a very, very, long string
and it seems that it will never end.
Then again: it eventually must.
```

Fig.6 Display from WRAPLINE.BAS. Test string (StrIn$) is 102 chars long. Max line length (StrLen) is set to 36.

Conclusion

This month we've covered a variety of topics. Next month we return to the BIOS data and look at a program that decodes many of it mysteries. The program introduces the concept of keyboard scan codes.

```
  1  ' WRAPLINE.BAS, Public Domain, John
            White 1:3636/2, 09-09-92
  2  ' With additions by Dan Bridges 3:640/
        820.2 @Fidonet, 20-Sep-92
  3  ' StrLen =  Maximum length of each line
  4  ' StrIn$ = The string to parse
  5  ' Work$  = Temp variable for parsing
  6  ' WorkPlus$ = Used to ensure that words
        aren't split
  7  ' ParsedLines$() = Array holding the
        parsed strings
  8  ' NumOfLines = Maximum number of parsed
        strings in ParsedLines$()
  9  ' GoNoLower = Ensures that line length
        is bigger than biggest word

 10  DEFINT A-Z
 11  DECLARE FUNCTION MaxWordLen (StrIn$)
 12  DECLARE SUB WrapLine (StrLen, StrIn$,
        ParsedLines$(), NumOfLines)
 13  DECLARE SUB DisplayArray
     (ParsedLines$(), NumOfLines, StrLen)
 14  DECLARE SUB VaryLineLength (GoNoLower,
        StrLen, StrIn$, ParsedLines$(),
        NumOfLines)

 15  StrLen = 30
 16  DIM ParsedLines$(255)
 17  CONST False = 0, True = NOT False
 18  StrIn$ = "Having a fantastic time.
            Wishing you were here."
 19  GoNoLower = MaxWordLen(StrIn$)
 20  CLS

 21  CALL WrapLine(StrLen, StrIn$,
        ParsedLines$(), NumOfLines)
 22  CALL DisplayArray(ParsedLines$(),
        NumOfLines, StrLen)
 23  CALL VaryLineLength(GoNoLower, StrLen,
        StrIn$, ParsedLines$(), NumOfLines)

100  DEFINT A-Z
101  SUB WrapLine (StrLen, StrIn$,
        ParsedLines$(), NumOfLines)

102  IF StrIn$ = "" THEN NumOfLines = 0:
            EXIT SUB
103  'If string to split is nothing, exit.
104  Work$ = StrIn$  'Keep original value in
            StrIn$
105  Done = False    'Reset flag

106  DO
107  IF LEN(Work$) > StrLen THEN
108  NumOfLines = NumOfLines + 1
            'Increment index to array
109  WorkPlus$ = LEFT$(Work$, StrLen + 1)
110  'WorkPlus$ is used to see if there is
111  'a space immediately after the
        requested split point so we do not
        split a word.

112  FOR SearchStartPos = StrLen TO 1STEP -1
113  LastSpacePos = INSTR(SearchStartPos,
        WorkPlus$, " ")
114  IF LastSpacePos THEN
115  'Put left (StrLen) chars in array.
116  ParsedLines$(NumOfLines) =
        LTRIM$(RTRIM$(LEFT$(Work$,
            LastSpacePos)))
117  'Remove parsed segment from Work$
118  Work$ = MID$(Work$, SearchStartPos + 1)
119  EXIT FOR
120  END IF
121  NEXT SearchStartPos

122  ELSE
123  Done = True
124  END IF
125  LOOP UNTIL Done
```

Continued over/

```
126  NumOfLines = NumOfLines + 1
          'Save remainder of StrIn$
127  ParsedLines$(NumOfLines) =
          LTRIM$(Work$)

128  END SUB


200  DEFINT A-Z
201  SUB DisplayArray (ParsedLines$(),
          NumOfLines, StrLen)

202  CLS
203  IF NumOfLines = 0 THEN PRINT "No
          Data in StrIn$": END
204  COLOR 15, 0
205  PRINT LEFT$("....n....1....n....2
     ....n....3....n....4....n....5....n
     ....6....n....7....n....8", StrLen)
206  COLOR 7, 0

207  FOR LineNum = 1 TO NumOfLines
208  PRINT ParsedLines$(LineNum)
209  NEXT

210  NumOfLines = 0

211  END SUB

300  DEFINT A-Z
301  SUB VaryLineLength (GoNoLower,
          StrLen, StrIn$, ParsedLines$(),
          NumOfLines)

302  DO
303  SELECT CASE INKEY$

304  CASE "-"   'Action if Gray Minus Key is
                     pressed
305  IF StrLen = GoNoLower THEN
306  LOCATE 24, 9: BEEP
307  PRINT "Requested Right Margin is less
               than the length of the
                         longest word. ";
308  LOCATE 25, 9
309  PRINT "Margin reduction command ignored!
          Press any key to clear this
               message...";
310  DO: LOOP WHILE INKEY$ = ""
311  CLS
312  ELSE
313  StrLen = StrLen - 1
314  END IF
315  CALL WrapLine(StrLen, StrIn$,
          ParsedLines$(), NumOfLines)
316  CALL DisplayArray(ParsedLines$(),
          NumOfLines, StrLen)

317  CASE "+"   'Action if Plus Key is
                     pressed
318  IF StrLen = 80 THEN
319  LOCATE 24, 9: BEEP
320  PRINT "Requested Right Margin is
               greater than 80 characters.";
321  LOCATE 25, 9
322  PRINT "Margin expansion command
               ignored! Press any key to
               clear this message...";
323  DO: LOOP WHILE INKEY$ = ""
324  CLS
325  ELSE
326  StrLen = StrLen + 1
327  END IF
328  CALL WrapLine(StrLen, StrIn$,
          ParsedLines$(), NumOfLines)
329  CALL DisplayArray(ParsedLines$(),
          NumOfLines, StrLen)

330  CASE CHR$(27)   'Action if Esc Key is
          pressed
331  EXIT SUB

332  END SELECT
333  LOOP

334  END SUB

400  DEFINT A-Z
401  FUNCTION MaxWordLen (StrIn$)

402  StrIn$ = LTRIM$(RTRIM$(StrIn$))

403  IF INSTR(StrIn$, " ") = 0 THEN
404  MaxWordLen = LEN(StrIn$)
405  EXIT FUNCTION
406  END IF

407  Space1 = INSTR(StrIn$, " ")

408  DO
409  Space2 =
            INSTR(Space1 + 1, StrIn$, " ")

410  IF Space2 = 0 THEN
411  WordLen = LEN(StrIn$) - Space1
412  ELSE
413  WordLen = Space2 - Space1 - 1
414  END IF

415  IF WordLen > TempMaxLen THEN
          TempMaxLen = WordLen
416  Space1 = Space2
417  LOOP WHILE Space2

418  MaxWordLen = TempMaxLen

419  END FUNCTION
```

Fig.5 WRAPLINE.BAS - An example of string manipulation techniques.

M O K E --

& Computing in Japanese

Geoff Harrod

A look at the use of computers with languages other than English --particularly Japanese, and a review of a public domain Japanese text editor, MOKE. The author has a computer science degree and a degree in Japanese in which he specialised in technical translation.

A recent addition to the *Brisbug* library is MOKE -- a public domain Japanese text editor that will run on a standard PC. Before reviewing it, it seems necessary to explain at some length the problems of applying computing to the Japanese language, and to do that, to explain a bit about the language. This is an appropriate point in time to look at these issues, as there is currently a concerted push to standardise international language support in computers and programming systems, so I will first look at the issues involved in using various languages in computers. If you know enough about Japanese and just want to read the review of MOKE, skip to the MOKE subheading, but you may still find something of interest in the introduction to languages in general.

English - the international technological language

The vast majority of us here in *Brisbug* are native speakers of English, and few of us ever think about it, or realise our good fortune, at least so far as computing and technology is concerned. Every race is naturally somewhat proud of its own culture and language, and rightly so, but there are some purely pragmatic reasons why English speakers can feel favoured. All efforts to devise international languages that do not belong to any one nation have failed to gain acceptance. The only language that is in any way international is English.

The thing that has mainly contributed to this situation is the fact that it was largely the English-speaking countries that pioneered technology, particularly in electronics and aviation. Today English is the standard language of air traffic control and international communications. The same is true in computing. A German computer scientist told me that the main reason his English was good was that you had to study computer science in English in Germany. Now that's an admission for a German! Another instance: I met a family in Surabaya, Java, whose eldest son was studying Engineering. Although the lectures were in Bahasa Indonesia the textbooks were in English! You see what I mean?

Character sets

Since computing grew up in an English (or American) environment, many of its assumptions about text rely on the use of English. The English language is fairly unusual in not making use of diacritical marks, or accents. Several European languages add a few more letters, and they all add some or many accent marks. Greek, Russian and Georgian of course use a completely different alphabet, but they are of similar size and also have the upper/lower case concept.

Outside Europe, the differences in character sets are more marked. Some have writing features that are difficult to handle by mechanical typewriter methods or by electronic media other than graphic. Arabic for instance, not only writes right-to-left but makes extensive use of letters whose shape changes depending on their neighbors, and have protrusions that wrap around adjacent letters. Cambodian, and several Indian languages have two baselines, so that vowel marks and consonant marks are placed one above the other. But when we come to Chinese we are faced with a huge set of complex pictograms. Japanese uses a large proportion of the Chinese characters and also adds two sets of its own phonetic characters.

MS-DOS & the ASCII code

The MS-DOS operating system has some built-in support for languages other than English, but is virtually confined to European languages. The SET COUNTRY=??? facility in conjunction with the CODEPAGE switching system allows character sets to be loaded into RAM to replace the English screen character definitions built into the BIOS ROM. It also supports remapping the keyboard to suit the key caps applied in other countries. This all works of course within the constraints of the existing keyboard and the ASCII character encoding scheme, so it cannot accommodate languages that have much larger character sets, or non-regular character spacing. Basically it provides for selling PCs in Europe. (I was amazed to find an Amstrad PC displayed at Myers for the public to play with had been set up in German!)

The ASCII code (American Standard Code for Information Interchange) is as its name says, American, and assumes the English language. It defines 128 codes in a data word of 7 bits. If an 8-bit data word is used, the extra bit doubles the possible number of codes to 256, but the additional 128 are not part of the ASCII standard and their allocations are subject the numerous variations, particularly by printer makers.

There is now a standard that uses them for all the European characters and accented letters, and that is what the MS-DOS Codepage system uses.

Encoding Chinese & Japanese characters

The 256 codes available in the extended ASCII coding are obviously inadequate for Chinese or Japanese, where we have to handle several thousand characters. The most obvious solution is to use a wider data word. If a 16-bit word is used (a typical "integer", or 2 bytes), up to 65,536 codes are available which should suffice! This

solution is called the "wide character" method. The only problem then is to standardise on a mapping of codes to characters. The absence of any one standard sequence for listing Chinese characters renders it a bit difficult to achieve universal agreement upon a coding sequence.

There is also the problem of forming the characters on screen. In computers used in China and Japan, that is handled by special hardware --essentially much larger ROMs and high resolution video systems. It is the main reason why Japanese PCs are incompatible with the international "standard" PC. Unfortunately, they are also incompatible between makes in Japan too, because each maker solved the challenges independently. It is also the reason why the Japanese made good high-res colour graphics on PCs long before IBM introduced the EGA, and why the NEC APC-III was popular in Australia for CAD before EGA, despite its incompatibility with the IBM-PC.

There are problems with adopting a 16-bit character code to entirely replace ASCII. All countries will want to use existing, typically American, programs with local language modifications. Program source code depends upon text that, while far from being intelligible plain English, is very dependent on English for its code-names etc. Programming languages also make extensive use of English punctuation marks and brackets etc. If all that was converted to 16-bit codes the files would all be twice the size, and most of it would be empty bytes. It would also make the use of existing standard code editors and development environments impossible. So we need another method.

The alternative is the "multi-byte character" method. Here we retain the traditional byte-organised text stream, but where necessary for coding big characters we treat two successive bytes as one 16-bit code. There are two basic methods of doing this. The first is to have codes that signal the start and end of a multibyte stream. The processing system has to keep a record of whether the current state is single or multibyte, and treat the bytes appropriately, and the method is therefore called the "state method". The other method is called the "shift method", and uses an "escape code" to signal that the following two bytes are to be treated as one code. If several 2-byte codes follow in succession each pair must have their own escape code prefix.

The Japanese have been great technical innovators but have generally been poor at standardisation. Mostly everything has been done at the company level. Consequently there have been several coding schemes. In recent times, however, it has become more standardised, and there is now a JIC (Japan Industry Committee) standard on the subject of character encoding. The JIC standard also specifies shift and state code conventions, so is applicable to all three methods. The wide character system is generally used within memory while a program executes, as the constant code width simplifies processing. The 2-byte coding is used in files and external data streams. The shift code is used where compatibility with English text files is needed or where the file has Japanese text strings embedded in program code. The state coding is used in files for purely Japanese text. There are still other codes than JIC in use, notably EUC --Extended Unix Code.

ANSI 'C' and ISO

At the present time the recently promulgated ANSI standard 'C' programming language is before the ISO (International Standards Organisation) for adoption. ANSI (American National Standards Institute) has published the ANSI 'C' standard after several years hard slog to reach industry agreement, but it is an American standard, and assumes English without question. The ANSI 'C' workers who thought they had eventually fulfilled their task, were somewhat dismayed when Japan, backed by the Europeans at ISO, vetoed any language standard that did not have support for large character-set text. So they reconvened and added that support, and the augmented ANSI 'C' standard will be re-issued shortly. They have added support for both wide and multibyte codings, and shifted multibyte strings embedded within ASCII strings, all in a way that causes no impact on programmers working in English or similar.

The user's angle

So much for the programming aspects; what about the situation from the users' viewpoint? Do the the Japanese use special enlarged keyboards to type their thousands of characters? No -- if they did they would be like Wurlitzer organ consoles! The Japanese use essentially the same keyboard as we do, with no more changes than are used on the European ones. That is, different key caps and extra shift keys in lieu of some other keys. To explain how you can type Japanese on such a keyboard, I will have to first explain how Japanese is written and a bit about the syntax of the language.

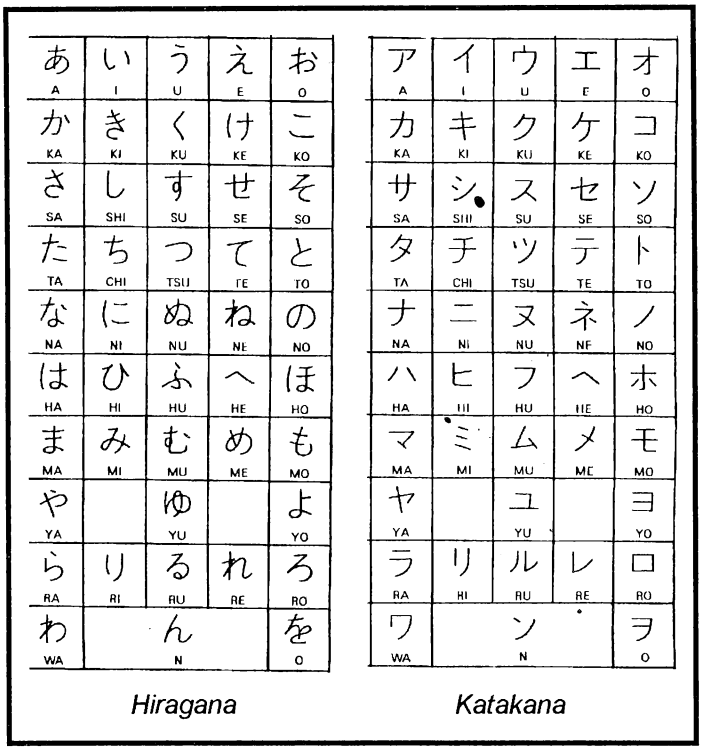


FIG 1. The two KANA phonetic character sets

How Japanese is written

It is possible to write Japanese in a transliterated phonetic form using English letters, as in *Natsu-yasumi boku-wa Nihon-ni ikimashita*. It is called "Romaji" (Roman characters), but is generally unacceptable in Japan. Most Japanese can read it, but find it difficult because the use of separate consonant and vowel symbols for syllables is a very strange to them. Also, being purely phonetic, Romaji can be rather ambiguous, because of the large number of same-sounding words in Japanese. In conversation, the context, body language, intonation and opportunity for interactive dialog resolves any ambiguity. In writing it is virtually essential to use the

Chinese characters to clarify the meaning of the words.

This is more true for Japanese than for Chinese, because, even though Chinese also has many homophonous words, they distinguish them in speaking by tonal variations and the Romanised writing methods for Chinese, of which there are several, incorporate means for indicating the tones, usually by accent marks.

Japanese writing uses three types of characters, not counting the occasional use of European letters and numerals embedded in the text.

KANJI

First there are the Chinese characters which they call *Kanji*. The *Kan-* character is an ancient name for China, now only used in compounds. The *-ji* character means "character". So *Kanji* just means *Chinese Characters*. Kanji exist for their meaning and do not in themselves have anything at all to do with the pronunciation of the language. In Chinese they are the common element between all the Chinese languages. Speakers of different Chinese languages, such as Mandarin and Cantonese, cannot understand each other when speaking, but they can in writing.

Kanji are *pictograms* that depict a concept. They originated in about 1300 BC in China, and gradually evolved into more and more abstract or formalised symbols, so that you generally have to learn them rather than recognise the pictures. (Fig 3) They are built up from a reasonably small set of basic symbols -- the 214 historic *radicals* -- and a larger set of elements built upon those radicals. The elements retain their basic meanings and combine to build up more complex characters. All characters are square and the same size, and their elements get squashed or made very small as they are combined in various patterns. In ancient Chinese almost all words were represented by a single character, some of great complexity. In more recent times the total number of characters has been reduced greatly by mainly using two or occasionally more characters to represent a word. That still requires familiarity with several thousand.

In modern times in Japan, the Education Department has taken on the role of language standardisation and specifies the characters to be learned at school and the order of their learning. These are called the 881 *essential characters*. They also specify a larger set of *general-use characters* (Touyou-kanji) to which all new writing should be restricted. This adds up to 1,850 Kanji used in modern books and newspapers. If publishing or quoting classic literature however, many more Kanji may be needed, and a typical figure is about 4,000, similar to the set used in China.

The system is not such an overwhelming learning hurdle as many English speakers imagine. Frequency of use declines rapidly as you proceed through the official list, and the first 300 or so account for 70% to 80% of modern text. Teachers of speed or remedial reading in English know that the main obstacle to progress is the habit of mentally sounding the words, and they teach the recognition of whole words, which is much

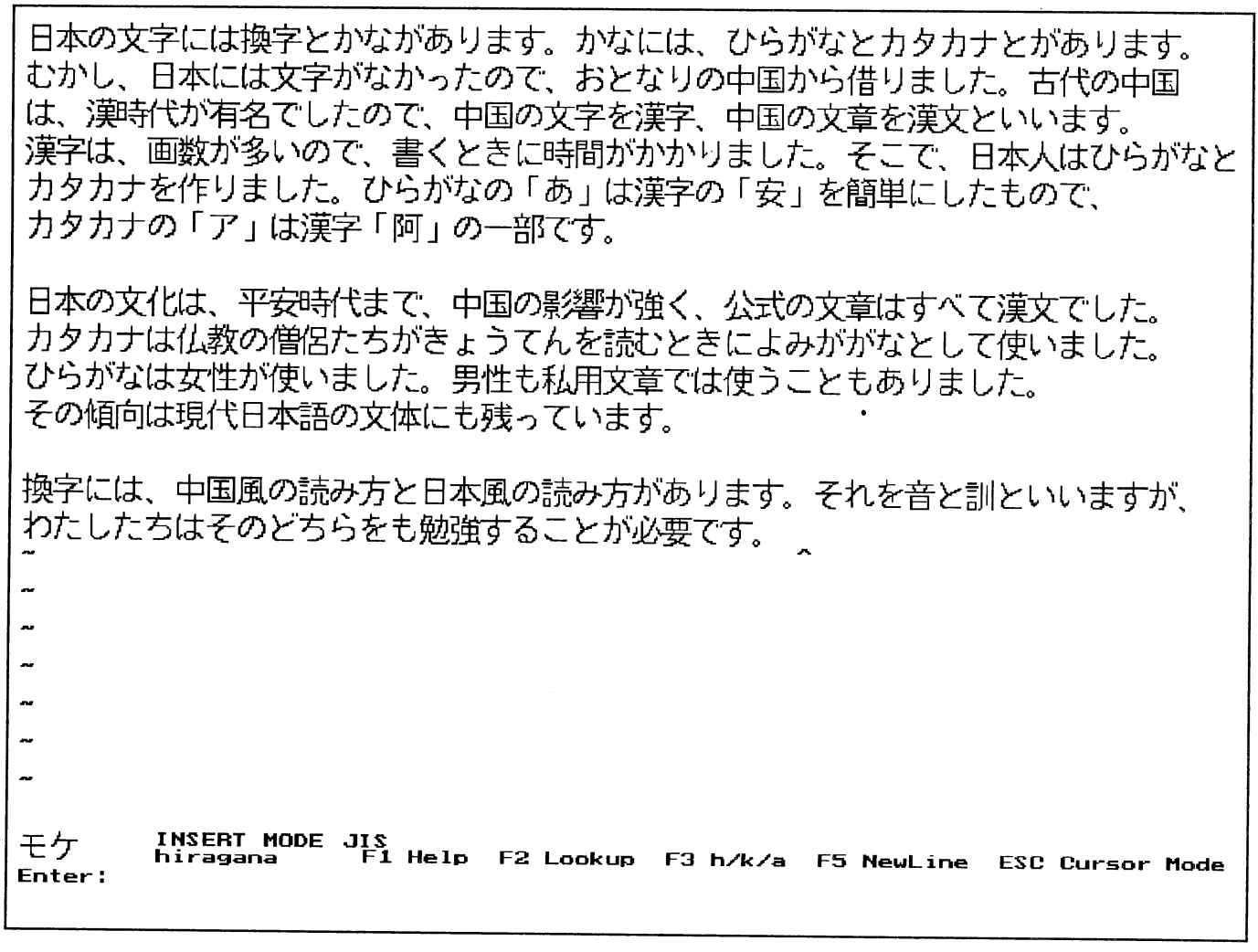


FIG 2: The editing screen of MOKE

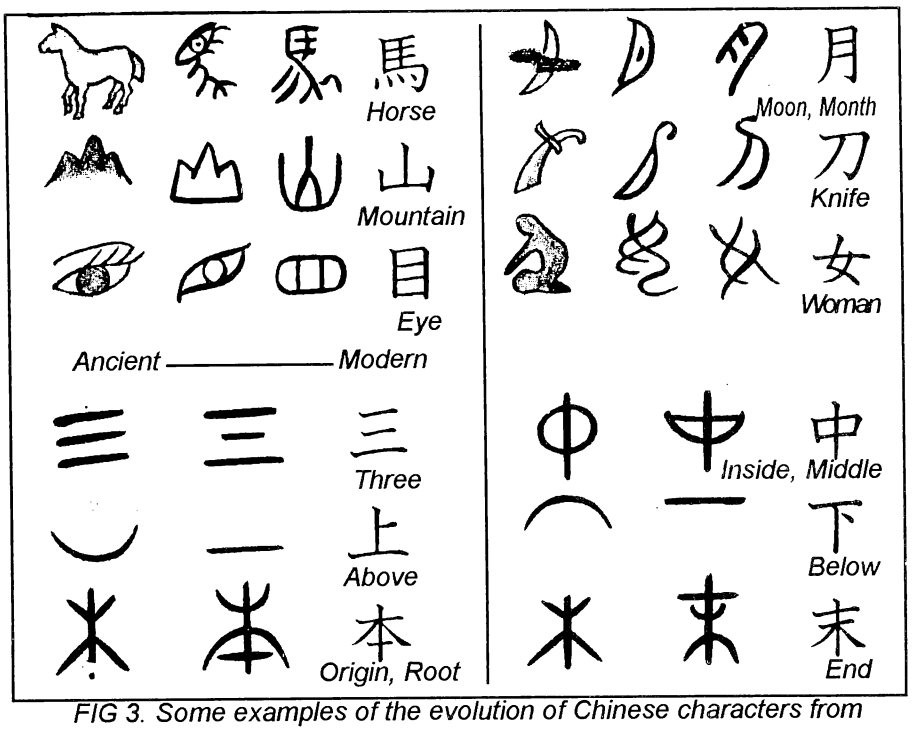


FIG 3. Some examples of the evolution of Chinese characters from early pictograms

the same as recognising characters. Because there is no phonetic indication in Kanji there is no tendency to mentally vocalise, and Japanese readers are notably fast.

The Chinese languages have very little grammatical inflection, even less than English. Like English, they depend for meaning on word order, and in fact use a very similar order. Japanese on the other hand depends heavily on inflections, or grammatical endings, and, as in German, the endings determine meaning rather than word order. So while Chinese needs nothing other than the pictograms, Japanese needs phonetic symbols for the endings, and these are called KANA.

The Two Kanas

There are two sets of phonetic symbols, which serve a little like our Roman and Italic fonts. The most common one is HIRAGANA which is a flowing style, and is used for all the grammatical endings and preposition-like particles. The other set, called KATAKANA, is an angular style, and is used mainly for transliterating foreign words, writing foreign words that have been adopted into the language, for meaningless business names, or occasionally for emphasis.

There are a lot of foreign-derived words today, particularly in technology. Many modern words are taken from English such as "Computer": kon-pyuu-ta

コンピュータ However, in technical literature, most scientific terms are constructed similarly to the compounds of Greek roots used in English, but using Kanji roots, for example:

振動片周波計

Shinduhen-shyuuhakei "vibrating-reed frequency meter".

The Kana symbols represent syllables, either simple vowels or a consonant-vowel combination. The set represent all syllable sounds found in Japanese, but cannot accurately represent all English or other foreign words. We all know the famous RI / LI confusion. There are 46 basic Kana in each set, but 77 including those modified by extra marks or compounded with reduced sized Kana to indicate slurred sounds. See the table of Kana in Fig-1.

It is of course possible to write entirely in Kana but a bit ambiguously, and it is not acceptable except for young children and traditionally between women.

Pronunciation of Kanji

The Kanji do not indicate any sound, so the reader has to know how to read them aloud. A serious complication is that the same Kanji can have several pronunciations depending on context. There are usually two main "readings" for any one Kanji, but often more.

Originally the Japanese had no written language. Then Chinese characters were adopted for their meaning to represent the native Japanese spoken words. These words survive as mostly multi-syllable words written by a single Kanji, such as KURUMA which originally meant a cart, and now means a car. It is written as 車 which might be seen as a plan view of a two-wheeled cart. In most Chinese languages that is pronounced like SHA or SHAW, as in Rickshaw.

Later, the Japanese enriched their language by adopting words from Chinese, rather the way we did from Latin. These imported words were usually written by two or occasionally three Kanji, and the original Chinese pronunciation was adopted, or something like it. An example is Ji-dou-sha 自動車 in which the three Kanji mean "Self-Moving-Vehicle", or Automobile -- a more "educated" word than Kuruma.

Many Kanji have several readings due to different words that make use of the same Kanji having been adopted at periods of history when the prevailing influence was from different regions of China. This is a source of much confusion and difficulty. Also many Kanji have the same sound, sometimes for the same reason, but often because the Chinese same-sounding words were distinguished by tones which are not used in Japanese. This variation of sound and shared sounds is a complication that the computer must handle when converting phonetically typed words into Kanji.

Combining Kanji and Kana

Nouns are mostly one or more Kanji except for a few words that are written in Hiragana, and foreign-derived words that are written in Katakana. Almost always they have a grammatical particle suffixed to indicate whether the word is object, subject, etc., or as a preposition like "to", "in" etc. These particles are written in Hiragana, and are frequently a single syllable. Dictionaries list nouns without any particle suffixed.

Verbs

Verbs can get quite complicated. The grammatical endings for tense etc. are all basically similar, but there are several groups of verbs that use different ways of joining the endings onto the stem part. There are two basic groups. One simply adds the suffixes, the other mutates the syllable that leads into the suffix. There are also a few irregulars. The stem, which conveys the root meaning, such as "eat", is almost always in Kanji. The endings are in Hiragana. The complication that affects data entry is that the dictionary listings show verbs in their "plain present" form

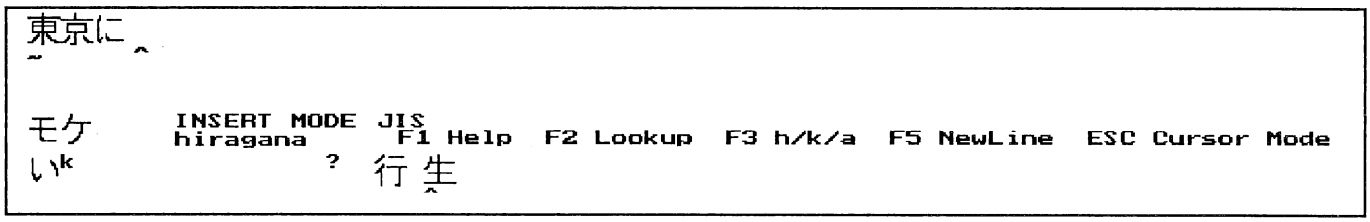


FIG 4: Entering verbs. "iK" has been entered as indicated at left of the bottom entry line. There are two possible Kanji for "i" when followed by a K ending in a verb as in IKU.

FIG 5: In contrast to the verb-ending indication of Fig 2, this is the choice of Kanji offered when only "i" is entered.

that ends with a "U" sound, and that ending is written in Hiragana, but usually has some consonant sound prefixed to it. For example, The plain present of "See" is `MIru` where the `MI` is a single Kanji and the `ru` is Hiragana, thus: 見る. Other forms of this type of verb simply change the RU part, so the polite present is `MImasu:` 見ます and the plain past is `MInai:` 見ない For the stem-changing types of verbs we need to know the rules for the stem changes. For example, "Buy" is listed as `KAu` and written as 買う but the polite present is `KAimasu,` 買います and the plain past is `KAwanai:` 買わない.

I am explaining this because it affects the way verbs are entered on the keyboard. Adjectives are similar to verbs and in fact have an inbuilt "being" verbal meaning, and have tenses like verbs, so their keyboard entry is similar.

Page layout

In Japanese, words are not separated by spaces. There are equivalents of full stops, as little circles, and of commas and quote marks. Since all characters are the same size squares and there are no inter-word spaces and there is no concern about breaking words at the ends of lines, there is no equivalent of justification. You just break to the next line (or column) regardless.

Traditionally Japanese is written vertically, beginning at the top right corner of the page. Books open so that page one is what we would consider the last page. Today, Japanese is also often written horizontally in the same way as English in books opening like ours. Newspapers, correspondence and fiction is usually vertical, while technical text is usually horizontal. Word processors must be able to do both forms.

The most common keyboard entry method is to type phonetically and have the computer look up the corresponding characters. Because of the variety of forms and the alternative Kanji for the same sounds, there are complications with this, and these are resolved in various ways. Japanese computers have keys that have Katakana as well as Roman letters on the key caps and the Katakana option is generally used for phonetic entry. It has the advantage over Romaji that each syllable is one key instead of two.

Review of MOKE

"MOKE" stands for "Mark's Own Kanji Editor". It makes no pretence to being a full word processor, but is a minimal system which can be likened to a very simple text editor such as DOS-5's EDIT. It was written by Mark Edwards at the University of Wisconsin, Madison, USA, in 1990. Mark has a Japanese wife and is a systems programmer at the university. It was written for the challenge of adapting a standard PC to the task.

Unlike English full screen editors, MOKE uses a separate entry line because of the two-step process of generating words. You type the sound of a word in English letters (Romaji) and then press a key to convert it to the form you want. You can set several conversion modes or select them as you go. I found it best to stay in Hiragana mode normally. This way whenever you press *enter* what you have entered gets converted to Hiragana if it can be. Alternatively if you press F2 it is converted to Kanji. If the entry text is enclosed with bars, `|xxxx|` . it is converted to Katakana.

Successful conversion depends on you adhering to certain conventions in the phonetic entry. If it cannot figure out a conversion it just does nothing. An annoying feature is the use of *enter* to end entry of a word, which means something else has to be used for a new line, and that is F5.

When entering words as Hiragana there are usually no problems. MOKE's vocabulary seems quite good (it certainly matches my limited vocabulary anyway!).

Transliterating names into Katakana is more of a problem. It can handle `California` and quite a lot of other American names, but just blinks with `Brisbane`, so you have to enter it syllable by syllable, typing the Japanese pronunciation of it; `bu-ri-zu-ba-n:` ブリズバン with *Enter* between each syllable. That means you have to know the rather odd rules for converting foreign names, but you would have to if you were writing them by hand anyway.

Entering Kanji

The real test of course is the Kanji conversion. For nouns this is quite simple. You just type the Romaji and press F2 instead of Enter. MOKE then looks up the phonetic-to-Kanji dictionary and if it finds only one entry for that sound-group it puts it in your document. So for example, if you type `jidousha` it immediately places 自動車 in the text. If it finds more than one possibility it shows all the options on the entry line and you select the one you want by moving the cursor and pressing Enter. In the event that none of those shown is what you intended you pick the ? shown and can try again. Presumably you either entered it wrongly, or MOKE doesn't know the word, in which case the only available option is to enter it as Hiragana. It sounds slow and involved but is actually quite quick after a little practice.

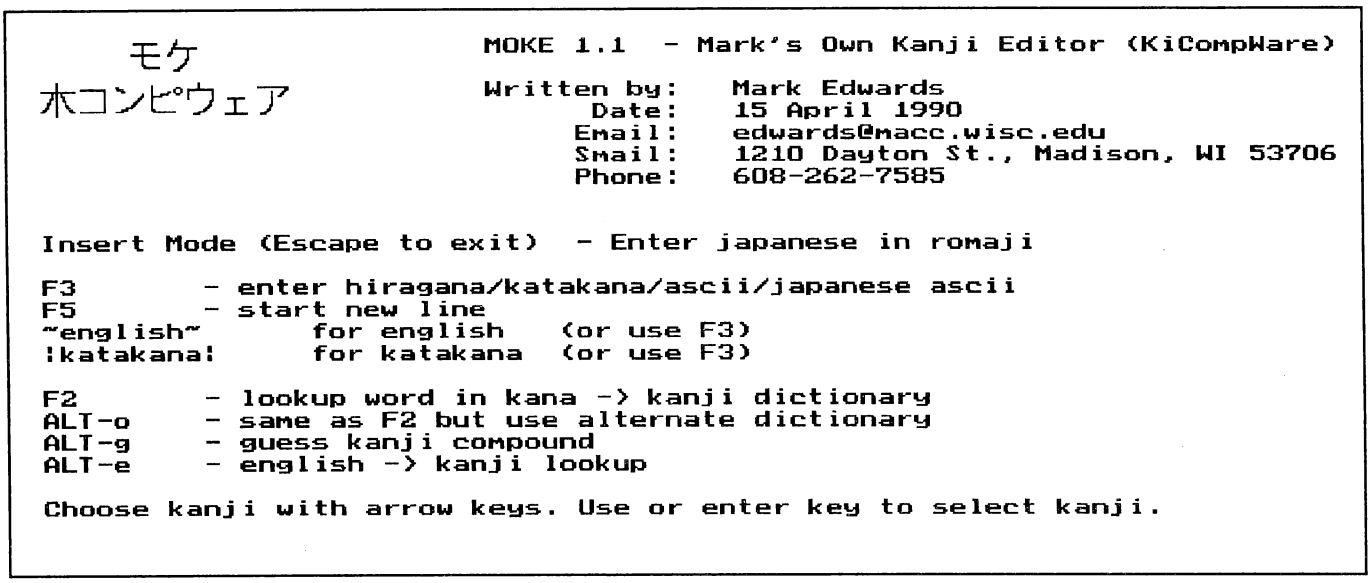


FIG 6: MOKE's help screen

In the sample text shown here, there was just one word that was not in MOKE's Kanji dictionary, and I had no option but to enter it as hiragana. I tried to enter its individual kanji separately but the ones I needed did not show up. The word is *Kyouten* きょうてん on screen line 8, which means "sutras" or Buddhist scriptures -- not an especially obscure word. It should be written as 経典.

Entering verbs

Verbs are more complicated. You normally enter Romaji in lower case. Upper case is reserved for special purposes as in verbs. Here, you enter the stem phonetically in lower case, but type the first letter of the ending as a capital. This tells MOKE that it is the dictionary-form ending of a verb, so that when you press F2 it only converts the lower case part to Kanji, but takes into account the following ending sound. This helps by greatly restricting the selection of Kanji that match the stem sound, which might otherwise be excessive. It means you must know the dictionary or plain present form regardless of what ending you are using, but you would have to know that anyway. Examples should make this clearer. To be more concise, I will indicate a press of the Enter key by ` and of the F2 key by ^

If you want to enter "bought" as *kaimashita*, you must enter kaU^ as the dictionary form with the U as the plain present ending. MOKE immediately shows 買 and you then proceed to enter imashita` to get the hiragana ending. The U ending did not get converted or used, but just served to avoid offering all Kanji that match KA which are numerous. This sounds very complex when described but soon becomes quite natural as long as you know your verbs.

See the screen capture example of entering *ikimasu* "I go". The first screen is after entering iK and pressing F2. Note the いK at the left representing what was entered; the i sound and the non-converted K to indicate the start of the ending. The two possible kanji can be seen. The second screen shows the selection of Kanji that appear if you just enter i without the K. You can see that the stem-entering system greatly reduces the spurious options. In this example, 行 does not occur as an i sound except in verbs, so does not show up at all. (FIG 4 & 5)

One complication is the "glottal stopped" syllables. Some words are distinguished from others with otherwise the same sounds by a hiatus before one syllable. In conventional Romaji this is shown by a double consonant but MOKE does not understand that. Instead it requires an entry similar to the way it is shown in Hiragana. There the hiatus is indicated by a small-sized *TSU* kana っ before the syllable. In MOKE, the equivalent is *t-*, so instead of typing shippai you have to type shit-pai to get しっぱい

Many verbs have this hiatus in their stem changes. To enter "please go", *Itekudasai*, we have to type: iK^tekudasai` (since the dictionary form of ite is IKU) and get 行てください.

For "please speak slowly" *yukuri itte kudasai* (a very useful phrase!) we must type: yukuri'iU^t-tekudasai' (since the dictionary form of itte is IU) and get ゆくり言ってください.

The very common WA "topic" particle is written in hiragana as HA は and must be entered in MOKE as ha. Similarly the object particle O is written by the hiragana WO を and must be entered in MOKE as wo.

The other non-standard Romaji entry for MOKE is for doubled O syllables which are very common. There are two main Romaji methods here. The most common in print is to put a bar over the lengthened vowel. For typewriters and suchlike the vowel is doubled. For instance Tokyo actually has doubled vowels so in the latter convention is written as Tōkyō, & Kyoto as *Kyooto*. Similarly with other sounds: "mother" is written as *okaasan*. In Hiragana, a non-consonanted vowel syllable is put after the lengthened syllable, as O-KA-A-SA-N or おかあさん. However, in the case of an O sound, the Hiragana symbol for U う is used instead of お, so Tokyo becomes like TO-U-KYO-U as とうきょう. MOKE requires the same convention as in Hiragana, so you must type toukyou^ to get 東京 Entering tookyoo^ gets no response.

All those peculiarities may seem a real bugbear, but actually it's all quite logical and straightforward as long as you know your Japanese, and I found it quite easy after only a little practice.

Fig-2 shows the layout of the editing screen with some sample text typed in. Note the help line between the text area and the entry

line. You have to toggle from entry mode to cursor mode by ESC to move the cursor back through the text Then F4 switches back to entry mode to insert text at the cursor. Fig-4 shows just the bottom of the screen during verb entry, and Fig-5 shows the large number of Kanji offered when the verb ending is not indicated.

MOKE also has a limited ability to look up Kanji when you type English words instead of Romaji. This can save having to refer to a dictionary. Although recognising a lot of Kanji is not such a monumental accomplishment when reading, recalling exactly how to write them all is much more difficult. So although the complex entry techniques are not all that quick, the fact that you don't have to remember how to write all the Kanji is a great help, and an enormous time saver. Although I can write Japanese very quickly and clearly by hand as long as I know all the Kanji, in fact I usually have to look up a lot of them, and that makes it a very slow process, and using MOKE would be much quicker. For a Japanese person, the entry method based on Romaji would probably be very frustrating, but acceptable in the absence of a Japanese PC.

Finally...

There is a fully fledged Japanese word processor produced in Queensland which is very well reputed, and I would very much like to try it out, but for the very limited use it would get with me, I cannot justify its cost. You don't normally write in your foreign language, but confine yourself to translating into your own. Only truly bilingual people with feet firmly in both cultures can get away with the former without risk of writing stuff which will make native readers giggle. I'm sure you know the effect in English texts written in Japan, Taiwan or Germany!

All text in MOKE is in graphic mode of course, and the Kanji are quite well formed on a VGA. Display scrolling is pathetically slow by normal PC standards. This sort of thing would benefit from Windows programming, and would probably be faster. The dictionary lookups are quite quick on my 16 MHz 386SX at home. I hardly notice any delay. I think it would work quite acceptably on a 10 MHz 286. MOKE can handle either JIS or EUC coded files. Unfortunately it does not support vertical writing, which is a sad lack. Also it does not support the use of *furigana*, the tiny hiragana often written above or beside uncommon kanji to show the pronunciation.

To print a saved file the only utility provided in this version is JPRINT.EXE, which is severely limited. It can only drive an Epson 9-pin printer in graphics mode, so the quality of its Kanji is pretty poor, even on my laser emulating Epson. A 24-pin or Laserjet printer driver is sorely needed. I have included a sample printout "life" size to show you what it produces.

The author in his README file says he has a newer, better version on his own BBS in Wisconsin, so I will try to get it, but even as is, MOKE is a quite useable tool for writing Japanese, and could also be quite useful in improving one's knowledge of the language I think. If you know any Japanese and are interested in learning to read and write it, MOKE could be a help, and is certainly interesting to play with. At the nil cost, other than the cost of copying five disks, it's worth getting, provided you know some Japanese. I found it quite fascinating.

❑

日本の文字には漢字とかながあります。かなには、ひらがなとカタカナとがあります。
むかし、日本には文字がなかったので、おとなりの中国から借りました。古代の中国
は、漢時代が有名でしたので、中国の文字を漢字、中国の文章を漢文といいます。
漢字は、画数が多いので、書くときに時間がかかりました。そこで、日本人はひらがなと
カタカナを作りました。ひらがなの「あ」は漢字の「安」を簡単にしたもので、
カタカナの「ア」は漢字「阿」の一部です。
日本の文化は、平安時代まで、中国の影響が強く、公式の文章はすべて漢文でした。
カタカナは仏教の僧侶たちがきょうてんを読むときによみがながとして使いました。
ひらがなは女性が使いました。男性も私用文章では使うこともありました。
その傾向は現代日本語の文体にも残っています。
換字には、中国風の読み方と日本風の読み方があります。それを音と訓といいますが、
わたしたちはそのどちらをも勉強することが必要です。

FIG 7. SAMPLE PRINTOUT FROM JPRINT

The Brisbug Chain of Command ?

In the beginning was THE PLAN

And then came the assumptions

And the assumptions were without form

And the plan was completely without substance

And the darkness fell upon the face of the members

And they spake unto their SIG-leader saying:

"It is a crock of shit, and it stinketh".

And the SIG-Leader went unto his SIG Co-ordinator and sayeth:

"It is a pail of dung, and none may abide the odour thereof"

And the SIG Co-ordinator went unto his Librarian and sayeth

"It is a container of excrement, and it is very strong, such that none here may abide it"

And the Librarian went unto his Vice Presidentand sayeth unto him

"It is a vessel of fertiliser and no-one can abide its strength"

And the Vice President went unto the General Secretary and sayeth

"It contains that which aids plant growth, and it is very strong"

And the General Secretary went to the Treasurer and sayeth unto him

"It promoteth growth, and it is very powerful"

And the Treasurer went unto the President and sayeth unto him

"This powerful new plan will actively promote growth and efficiency of the Club ... and the SIGs in particular"

And the President looked upon the plan and saw it was good

And in time, the plan became policy

AUSTRALIAN SHOWCASE

Advance Australia Fare

Ash Nallawalla, Reviews Editor

Welcome to a new occasional column, where we will present Australian computer industry information and news. We will not get too hung up on whether a company is fully Aussie owned, whether some of the profits leave the country, whether the writer is a fifth-generation Australian etc. The basic criterion will be that there is something inherently "Australian" about the item.

This is not really an additional activity for Significant Bits but a reorganisation of reviews and news items that would otherwise be scattered about these pages.

Dynamo House

The first company to get a mention here is Dynamo House Pty Ltd. It produces a colourful range of Australiana in the form of stationery, games, greeting cards, and now software.

Somewhere between the paperback book and traditional software there is something that Dynamo House calls the "Softback". To kick off this new product category, the company launched 3 PC-based examples:

* **INITIATION**, a combination of fine art on the screen by computer artist Kim Lynch, with a shuffle-the-pieces puzzle facility, topped off with some fascinating and insightful text by the renowned Australian author from way back, John Hepworth.

* **UFO RESEARCH**, is a direct analogy of the paper-based book but on disk. This is a 90,000 word collection of carefully gathered and researched material on UFOs, with SEARCH and PRINT options.

* Goschnick's **OCTADIAL**, by master programmer Steve Goschnick, is closer to the traditional computer puzzle/logic game but enhanced with sky-high screen art by Kim Lynch.

Dynamo House is no newcomer to the publishing, manufacturing and distribution of unique Australian products. Over a 16 year period it has built up a 300-item catalogue of its goods. If you have ever received a Michael Leunig card, drunk from a Leunig coffee mug, read one of John Hepworth's "Colonial Capers" books, or have a Food Additive Decoder, chances are it has "Dynamo House" stamped on it somewhere.

UFO Research in Australia and New Zealand

UFO Research in Australia & New Zealand (UFO Research) is described as a "digital book". It has a rather basic user interface and is full of typos and grammatical oddities but its contents make fascinating reading.

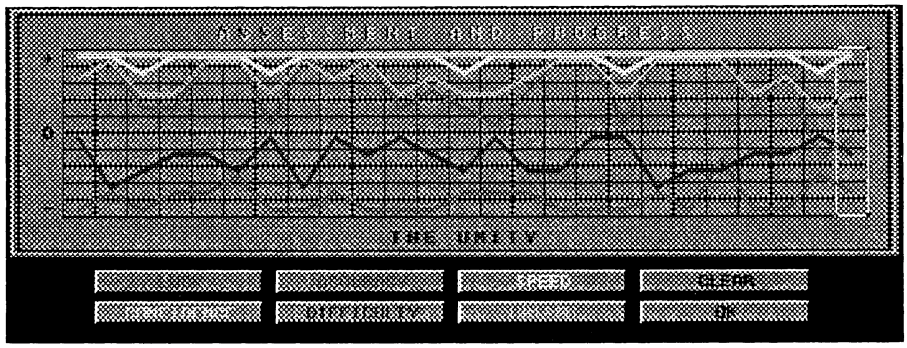
UFO Research impartially presents the most provocative case material of its contributors, all of whom are leading field researchers with a wealth of experience behind them. Thus the book does not promote an answer to UFO phenomena. Readers are intentionally left to draw their own conclusions.

Input for this book has come from investigators who have contributed to the UFO Research Australia Newsletter (UFORAN) since its inception at the beginning of 1980. UFORAN is a magazine that features the work of prominent Australian and overseas researchers.

The UFO Research Australia Newsletter is not a magazine for believers or sceptics. It takes the middle path of objectivity by promoting the work of thorough investigators who seek the truth, rather than the reinforcement of any belief either in or against the existence of UFOs.

How Products Will be Selected

All things being equal,we will give preference to our advertisers. It is up to anyone interested to chase us, not the otherway around (as a general rule). Sending us press releases will not necessarily attract our attention - make sure you refer to this column, and do everything possible to help us to help you. This column can include locally written shareware and public domain software.



Initiation assessment screen

An image from Graphic Gallery

For more information, write to

UFO Research Australia Newsletter

PO Box 229

Prospect SA 5082

The online work covers some 300 topics, ranging from the aboriginal Wandjina myths to various UFO sightings in Australia and New Zealand over the past hundred years. The package includes a booklet (a real paper one!) with full colour photographs and line drawings to illustrate the text.

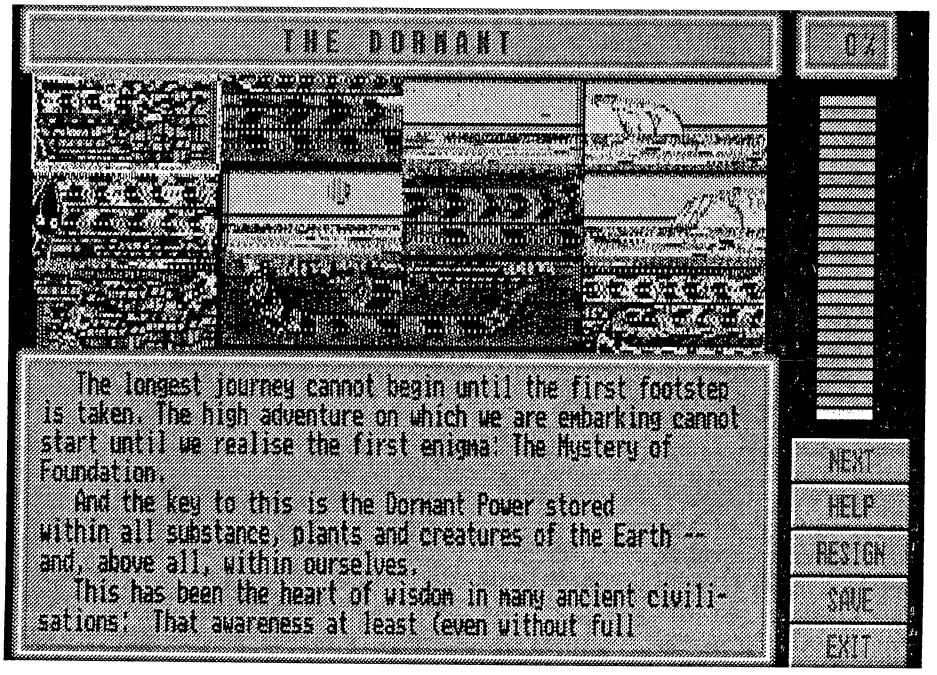
I have only a casual interest in the subject but the detailed account by Bill Chalker of the RAAF's attitude to the subject was of special significance to me. He was given access to the RAAF's unclassified and declassified files and he was reasonably convinced that there is no official conspiracy to hush up the subject. The government simply does not spend money on this subject other than make it a rather inor secondary duty for one officer. The RAAF will probably not scramble a few jets based on a reported sighting.

Some years ago I was at a party and was buttonholed by a person who didn't believe my protestations that the RAAF has no interest in alien UFOs (as opposed to unidentified aerial objects originating on earth). I can confirm that during my period of active service in the RAAF we would take down the details of any reported incident but refer the caller to the nearest UFO research organisation. The situation is probably unchanged today.

Here is an extract from the work:

"The object in the paddock was described as a very large top shape with a light, similar to a car's headlight, on its apex. This light rotated and projected a yellowish-white beam which illuminated the paddock, house and garden, as it swept around. The object itself glowed red and gold and showed a surface pattern like that of a camouflaged tank. It gave out a continuous low pitched buzzing sound. The whole structure was about 5 metres across and 1.3 metres high. A 35cm lighted strip ran around the object and looked like a panoramic window. There were no supports, landing gear or other protrusions.

"The being was described as 105-120cm tall with body proportions normal by our standards. The mannerism and appearance were also normal. The entity seemed to be dressed in an olive-green, skin tight suit of dull material. This suit, which lacked fastenings, had a helmet of the same material with a face plate of non-transparent, orange coloured, plastic-like substance. The being's hands were not clearly seen, but appeared to be covered with gloves of olive-green colour. The



Unsolved Initiation puzzle (Uluru and the Rainbow Serpent theme)

boots were white-grey and looked like basketball shoes.

"The whole experience lasted some 15 minutes and, after the first shock, the witness remained acutely aware of all that happened. She kept the event unreported for years for fear of ridicule but finally revealed the story to UFO Research (NSW). December 2, 1977."

Anyone interested in this subject would get a lot of enjoyment by buying this $49 (plus $5 postage) product. Both 5.25-inch and 3.5-inch disks are provided.

Initiation—A Puzzle

I was quite impressed at the high quality of the packaging of this game. Initiation is basically a slide-the-tiles puzzle that is both mouse and keyboard driven. It has been embellished by great graphics and some descriptive text that uses some impressive language that might be beyond the grasp of most young readers. The pictures are from ancient, mystical themes and make the game more interesting.

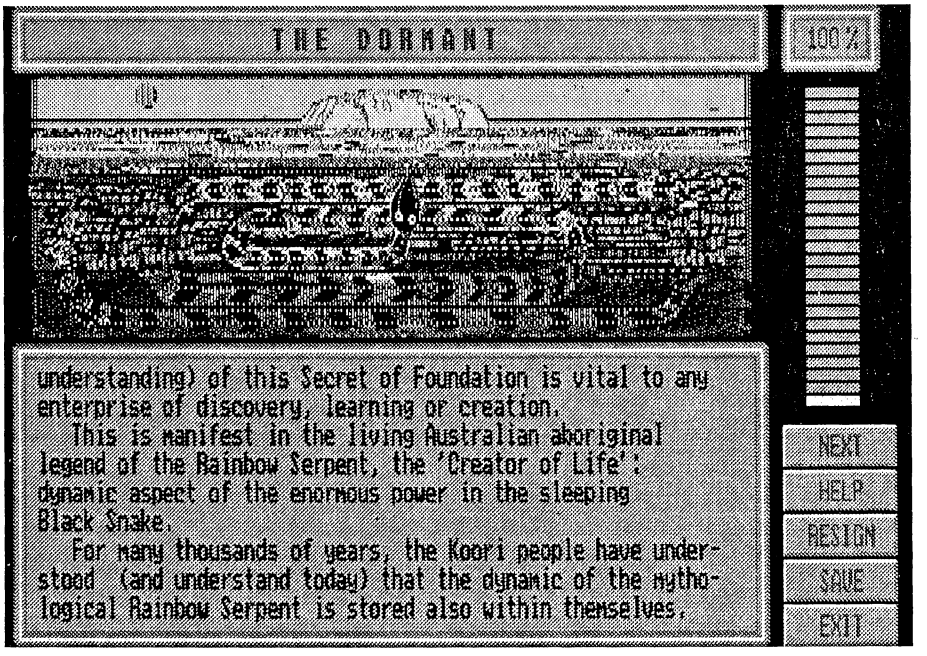
The game starts with a simple protection technique that requires you to turn three cardboard wheels on the diskette box. I must confess the decoding instructions had me stumped for a while. The game instructions also are scattered across the jacket but that is not a problem. You'll soon be busy playing the 25 puzzles. There are two levels of difficulty. After every five puzzles you get an assessment of your prowess. Certainly worth a look and would make a good gift. Price is $49 (plus $5 postage). Both 5.25-inch and 3.5-inch disks are provided.

Graphic Gallery

Graphic Gallery is a collection of some 156 examples of mostly Australiana images in the form of Windows wallpaper. Unusual packaging is again in evidence—two large colour posters show the images and their reference numbers. You use a supplied utility called Curator to extract only the images you want on your hard disk. Curator is also useful for deleting BMP files you no longer want on your hard disk.

The images include wildlife, birds, famous works of art, dynamic patterns, star signs, sports (including rugby and footy teams) and cartoons. Site licences are also available, in which case a company can have its logo reproduced on a wallpaper image free of charge. The price is $69 (plus $5 postage). My copy came on a 3.5-inch disk. It would make a nice gift, especially for an overseas recipient.

For further information, contact Dynamo House Pty Ltd., 38a Murphy Street, Richmond, VIC 3121. Phone (03) 427 0955, Fax (03) 429 8036.



Solved Initiation puzzle

Microsoft Developers Seminar

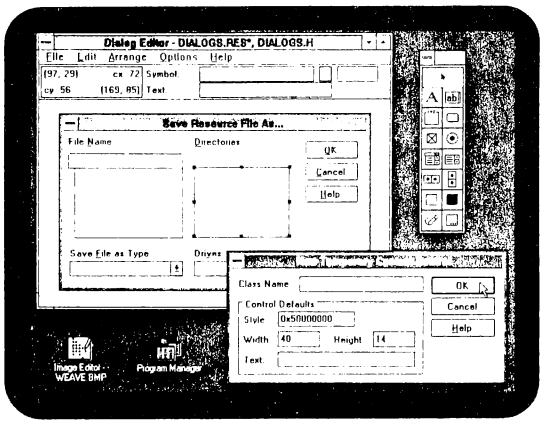
QUT Gardens Point, Brisbane, 16 Sep 1992

Geoff Harrod

I attended this all day seminar and met several friends there including several I had not seen for a long time. I was a bit dubious as to whether it was going to prove a waste of my rather hard-pressed time. I wondered whether it would be just a sell job on their products or for their $2000 a time training courses. Well, happily, not so. I found it a very worthwhile day.

The morning session dealt with the general approach to program development including the choice of type or level of development tools, and issues to do with planning for future computer types. Inevitably a lot of this focussed on development for Windows, not simply because of Microsoft's obvious interest there but because of the huge interest in the developer community. I think the large attendances at this nationwide (plus NZ) series has been mainly driven by the interest in development for Windows.

The various levels of Windows development tools were surveyed and their strengths and weaknesses for various classes of work clarified. These ranged from Visual Basic (super fast-to-develop but limited in scope and run speed) through Quick-C for Windows to C/C++ 7.0 with Foundation classes (maximum run-time efficiency and large complex applications but longest development time and the most skill needed).



C/C++'s Dialog editor

Only Microsoft products were examined in detail of course, but the speakers did not ignore alternative products by Borland, Watcom, etc., and frequently used examples of integrating rival applications using MS products, if only to show that the integration tools provided by Windows do not limit you to the one source. Other development paths that Microsoft do not compete in were also very briefly mentioned such as Eiffel and Smalltalk.

There was no coverage of Macintosh development, which I thought was surprising, given that Microsoft have always been a major source of Mac software, and that producing parallel products for Windows and Mac is now a big thing. It's odd that Microsoft have never got into producing development tools for the Mac to any extent. This seminar focussed on developing for Windows and for graphic workstations so far as Windows-NT is concerned, and to a lesser extent on DOS. A rather vague bit of info was given out about the prospect of a system for running Windows applications on the Mac.

Windows-NT

A lot of the discussion was naturally concerned with Windows-NT. The Win32 SDK (Software Development Kit) is now available as a CD-ROM, and includes the Win32 API (Application Programming Interface), a 32-bit version of C/C++ 7.0 for 386/486 chips, and two pre-release versions of NT; one for PCs and one for MIPS workstations. The pre-release NT already has full functionality but quite a lot of bugs of course. So much for the IBM story of NT being vapourware! There will be three free update reissues of the CD leading up to the product release intended for the first quarter of next year assuming no major setbacks. Having got it to the stage it is at now, that shouldn't be unrealistic.

They stressed that the NT in this package was solely for the use of developers to test their work on, and not for public demonstration of NT as it has too many bugs at present. I note that since then it has in fact been used to demonstrate NT at the computer show, which has only served to give a poor impression and please the OS/2 protagonists.

It turns out NT is largely what was originally to have been OS/2 ver 3, but with Windows as its interface and system services vehicle. It uses the M.I.T. generic OS kernel that is used as the basis for most recent flavours of Unix. This multi-shelled design is what makes it so easy and quick to port to radically differing host systems, and to take full advantage of any special capabilities such as parallel processing. Some examples were described of Windows 3.1 applications being ported successfully to the current NT on workstation platforms without code changes.

APIs

The confusion surrounding "Win16", "Win32", "Windows 3.1" and "Windows NT" was clarified. "Win16" is the name of the 16-bit based API (Applications Programming Interface) used at present for Windows 3.1 programming. The API is a toolkit comprising a C library of system call functions used by programmers to invoke Windows services. "Win32" is the name of the corresponding 32-bit based API intended mainly for Windows NT, which is a fully 32-bit operating system.

There will also soon be a "Win32-S" API which will work with both NT and 3.1 and enable the one application to compile for both hosts. There was some discussion on "Thunking", which is the process of converting between 32-bit and 16-bit environments, when part of the system runs in one mode and part in the other. The flow of system action in OS/2 ver 2.0 was explained, showing how the repeated need for thunking, because of its mixture of 16-bit and 32-bit parts, slows things down. The Win32-S API is designed to provide a system that will run applications with almost no thunking on NT (only to and from the PC BIOS) and with the need for thunking on Windows 3.1+DOS organised so as to maximise execution speed.

New for DOS

Contrary to the impression I had gained

that Microsoft were totally turning their back on DOS, it turns out they will be releasing new products for DOS development, to allow easy upgrading of DOS programs to a more modern style of user interface, and to simplify producing parallel versions of programs for Windows and DOS. They say they recognise the huge base of DOS-only equipment out there that is not going to get discarded overnight.

Visual Basic for DOS, to replace QuickBasic 4.5, is being released next month. This was demonstrated, and it operates almost identically to Visual Basic for Windows, and produces character-graphic based windowed user interfaces that mimic all the standard Windows controls. Of course, it cannot incorporate OLE and DLL externally linked programs, as those powerful facilities are provided by Windows.

OLE, DDE & DDL

OLE is "Object Linking & Embedding", and is rendered vocally as "Ole!" as in Spanish. This is the technology that allows a Windows program to embed the visual output of another Windows program in its display, and to run that other program within itself to manipulate the displayed data, so that the host program seems to have much more capability. MS Works accesses MS Draw as an OLE server so that you can edit pictures embedded within a Works document without leaving Works. We were shown how quick and easy it is to write a very small Visual Basic program that calls on the services of an already written program to provide some of its functions. In the example it called Excel to provide extensive data organising and graphing within the very trivial VB program.

DDE (Dynamic Data Exchange) is also a link to an external program, but DDE exchanges data between running programs whereas OLE imports the entire server program's functionality. In both cases the programs have to be written so as to support these capabilities, but that support is generic to the Windows system; not specific to any one client program.

DDL (Dynamic Link Libraries) are a common element in most recent Windows programs. A *.DDL program file gets linked into the running program to become part of it at run-time. It means the program doesn't have to load elements into memory that it will not use, and also that the DLL program can serve several different client programs that require a similar facility. Unlike an OLE server program, a DLL program module cannot be run on its own, and the linkages have to be agreed upon by client and server when they are written.

Making use of these facilities, you can use Visual Basic to very quickly write custom programs making use of various other powerful systems. An example shown was a VB program to interrogate a big MS SQL-Server personnel database across a LAN-Manager network, and display or edit the extracted data, including a colour photograph of the person, their signature and voice. This technique of using existing complete programs as much as possible and linking them together to produce the desired custom results is a prime way of satisfying the demand for rapid development. It may not produce an efficient result in terms of execution speed or resource utilisation, but it gets the function provided at a cost that the client can afford, and within the time frame demanded. Providing lots of memory and disk space is very cheap compared to paying by the hour for protracted special programming.

Macro Manager

Microsoft obviously want to be in the forefront with the provision of tools for this type of development, and are well placed for that. Their major Windows programs all have a largely common macro language that provides for programming their actions. This can be used when they are called as servers by an OLE client program, or by a purely batch-type program that controls and coordinates several programs to produce customised results. There are such Windows macro systems already available, including some as shareware, and in systems like Norton Desktop, but Microsoft will release their own next year, called Macro Manager. The action of these macro systems are not limited to using programs by the one developer such as Microsoft, provided they support a text based macro language. I will write about a powerful use of this technique in a future issue, showing how easy it is to contruct "new" Windows applications, or extend the capability of existing ones.

WOSA

Another program integration system outlined at the seminar was WOSA --Windows Open Services Architecture. This is aimed more at enabling Windows based applications to interact with other systems completely outside Windows or the PC. Its main application is in providing Windows interfaces to mainframe database systems. It uses DLL programs specific to each type of database. The interface program handles all the translation of requests from the Windows user interface into a form appropriate to the particular database and operating system, and masages the data from the other system into a common form for the Windows system to display. Interface program modules are available for all the commonly used mainframe and mini systems and also the common PC database systems.

A case study was presented by AOTC (ie: Telecom) which showed how they used Visual Basic to create a Windows-hosted system for accessing several different databases on different mainframes and minis, and integrating the transfer of data between those systems. It is called Drifter, and is now being sold to other communications authorities.

Rash of releases

Next year will see a rash of new Microsoft releases. Besides Visual Basic for DOS there will be Visual C++ to replace QuickC for Windows and Visual C++ Professional to replace C/C++ 7.0 and provide full 32-bit support for NT. Visual Basic 2.0 will introduce the capability of creating OLE server applications in VB. The present ver 1.0 can create OLE client actions but not make the program itself a server for others to call.

There will also be Visual Fortran! Don't laugh -- it enables existing Fortran programs to be transmuted into slick Windows interface sytems. There are an immense number of powerful scientific and engineering programs in Fortran, most with absolutely awful user-hostile mainframe-style user interfaces. Besides giving them a friendlier, easier to use interface, it paves the way to link them into custom systems through the services Windows provides.

Visual Basic Professional will take over from Professional Basic 6.0.

Databases

FoxPro 2.5 for Windows and for DOS will replace FoxPro 2.0. The DOS version user interface mimics the Windows version with character-based window controls, so a user could jump between FoxPro systems running on either host without difficulty. I have always preferred to use Fox products for dBase-like (now called xBase) systems, and Fox's take-over by Microsoft should ensure their continued development. Microsoft's venture with R:Base did not prove successful, and they now seem to have come to the same conclusion as myself; that standardisation is the key, and there is only room for at most two standards.

On PCs the defacto standard is xBase without question, and on bigger systems it is SQL. They have now acquired the top performing xBase system and have done a deal with Sybase to adapt their mini-based SQL system as **Microsoft SQL-Server** for PC networks. For large PC networks and large and critical data volumes, a client-server database system offers great advantages over running a network version of a PC DBMS. The MS SQL-Server gives all the standard mainframe SQL security and recovery features. With the system integration tools we have seen it becomes easy to use the scale of DBMS appropriate to the task and to blend them for the users where they overlap.

Microsoft have evntually come to accept the reality of Novell's dominance of the PC network arena, and are now supporting integration with it in all their products rather than trying to make it impossible. MS LAN Manager has its advantages but, unless some drastic changes are made to it, can never take over from Novell as long as there are lots of XT workstations in use on networks, or ATs with little memory. There are too many of those to go away in a hurry.

We also saw **Microsoft Access,** a new database access system for non-programmed customising in rather the same manner as building Visual Basic screens. Access should prove very popular, and is scheduled for release later this year.

Trends

I felt quite pleased that most of my thoughts on future trends that I had written about here (*The Crystal is becoming Cloudy*) have been corroborated so far as Microsoft issues are concerned by their statements issued after I wrote that item, and by information given out at this conference.

Information given out at this conference proved me wrong on one matter, and I was pleased that it did. It seems Microsoft are not so bent on forgetting plain DOS as I had thought, even though they do seem to be totally forsaking DOS in their own application programs such as Word. The new development products for DOS will help keep the older machines in action, ease the task of providing upgrades for them, and facilitate making applications similar to use on both DOS and Windows. That is a great boon to places that have a mixture or to the typical existing DOS networks.

❑

Lindsay's Letter

Thank you to those who rang me while I was "off the air" and especially for the expressions of thanks for the HOT and WOW series over the years. Be assured your calls are never wasted: it's only your feed-back that keeps regular contributors of Sig. Bits churning out their offerings.

Lindsay Bates

Can you keep up with the continual changes in the world of computers? Not easy, is it? New hardware, new software, new directions in Operating Systems, and so it goes. We talk with a lot of people helping them to upgrade their computer - and hardware is just one part of the changes that continually face us all. One of the good things about the industry is that prices just keep coming down and down. So while the system you bought a couple of years back for $3,000 is now

only worth $1,200, the new system you want to upgrade to is only a few hundred more! So the good news is that the upgrade doesn't cost much at all.

Many readers will remember the times that I gave a big plug to the 386DX-40, labelling it as an exceptionally fast computer (if you configure, and buy right) and excellent value. I first said this when one of the large wholesale firms here in Brisbane was thinking of fazing it out! At less than 2 grand today to set it up well, it's now one of the biggest local sellers!

You may have noticed that Microsoft are continuing their campaign to take over the PC world. For example, they're now licensing computer manufacturers to be able to state that their computer is a-okay to run Windows! Amazing, eh.

Readers know that I've done my share of criticising Microsoft, and will continue to do this whenever they need it. Nonetheless, I believe we're all profiting from Microsoft's ambitions regarding our PC, because the software giant seems to have become much more customer-aware in recent time. Hope they keep it up. And few others could well take a leaf out of MS's book.

New Users

Got some friends going into computers for the first time? It's always hard to know how to help them, isn't it? They need advice on hardware; they need advice on software; they need a lot of help in just learning to *use* the blankedy thing. User-friendly? - forget it! (but the computer world IS working on the problem, if still miles too slowly - see *Lindsay's Soapbox* below).

Here are some tips that will help them.

1. The best favour you can do them is to advise NOT buying the cheapest computer they can find round the place - well, not unless they love trauma and drama, anyway (the latest I heard was about a brand-name computer from possibly the largest computer outlet in Brissy - it was totally out of commission for an unbelievable 12 weeks, from new! Oh, yeah, really good gear!)

If you want to know a couple of brands to actually *buy*, get yourself a copy of APC of July this year, where you can read which computer fared best in their Reader Survey - it clearly shows that many brand names are NOT good computers, and also that you don't have to spend a lot of money to get yourself a good computer.

2. Second is to give them some specs on a computer that's going to do a good job for them for some time to come (depending on their budget, the 386DX-40 mentioned above would be a good place to start).

3. Third, get them into Windows (3.1 not 3.0) with DOS 5.0 . Even if you don't use Windows yourself, you'll be doing them another favour to suggest this (should cost less than $100 with a new system). Why Windows? - simply because it's the EASIEST way to learn computing; plus it gives them easy entry to the current PC world (where virtually all new software is Windows-based).

4. Some good software to start? - like a Word-processor, Spreadsheet and Database? That's easy, too. Microsoft Works for Windows 2.0 will do all this and more - AND it has a fabulous inbuilt Tutorial, AND the Tutorial also teaches them *how to use a computer* (saving you having to do it!), AND it should only add $130 or so to the price of their computer!

5. They probably need a printer as well (unless the computer will be used solely to play games). If they're on a budget, a 24-pin dot-matrix will do the job. They print great from Windows, PLUS, once you've set up the printer for Windows, ALL Windows applications will then print from it, no problem!

Unlike computers themselves, most of the common brands are fine. More of our customers seem to choose the Fujitsu DL900 (or 1100 for colour) than any other; interestingly, that's the brand that topped the APC survey as well.

6. They need to join Brisbug, and go to meetings and new user groups, and regularly get *Sig. Bits* - but you already knew that, didn't you...

Hardware Review - *Bit Blitzer* Fax Modem

Since giving myself all that free time by stopping the HOT and WOW series (free time, wot free time??), I've treated myself to checking out a couple of Fax Modems, one costing just $299.

I confess it's been a ton of fun accessing

Bulletin Boards again - last time I did this was via an Acoustic Coupler!! (some Members over 105 will probably just be able to remember them. Anyway, here's what I discovered about one of the Fax Modems.

We need to be able to send and receive faxes as part of our business: it sure can be handy to instantly send details of a computer to someone who calls. In the past month, I've looked at two modern Fax Modems to do this job, both made here in Oz. The first that I had a play with was the Bit Blitzer XM Series (External) Fax Modem from Banksia Information Technology.

Specs are about what you'd expect in this price range (see below) - 2400 baud for the Modem, and the inbuilt Fax facility is Send and Receive, Class 1 and 2 (Group III). It's a package that all seems to go together and work really well.

So what do you get for the money? Well, to use a Modem or Fax Modem means getting the right hardware - then having the right software to drive it. Both are important.

So, as to hardware, the B.B. Fax Modem is a tidy unit with all the required lights up front.

As to software, the Quick Link II Fax supplied with the Bit Blitzer has a lot going for it. First, you can use it in DOS, and in Windows, and in full-screen DOS within Windows. Impressive! Second, you can use the same phone lists in both DOS and Windows. Third, it's programmed to be as friendly as possible - to get the new user up and running in short order.

If you've not had experience with Modems, you'll likely find it rather amazing to watch your computer talking to someone else's computer - across the city, or across the state!

DOS AND WINDOWS

Much software available for Modems and Fax Modems will work only under DOS. While there are numbers of Members who've stuck to DOS for their everyday computer use, buying such software does lock you into just DOS use, which makes it hard in the event of deciding to try Windows at some time.

For, in the case of sending or especially *receiving* a Fax, if you currently happened to be in Windows, you'd have to unload it and return to DOS - by which time the incoming Fax may well have aborted. Quick Link II Fax is excellent in giving you the *option* of using either Windows or DOS or both.

This makes the package excellent value for many buyers (and, quite frankly, it's good enough in DOS to buy it just for that anyway).

USING THE MODEM

There will be those who buy the Fax Modem for modem use alone. Even for this the unit is good value. The plus here is that *the Modem software and the Fax software are combined:* one of the Menu Bar options is Connect (full access to Modem facilities) while the one right beside it is Fax (full access to Fax facilities).

After a few hiccups (which may have been my lack of expertise or maybe some random 240V power or phone line glitches) I found the Quick Link II Fax software quite easy to use in Modem mode.

The software and hardware package comes pretty-well configured for you, ready to

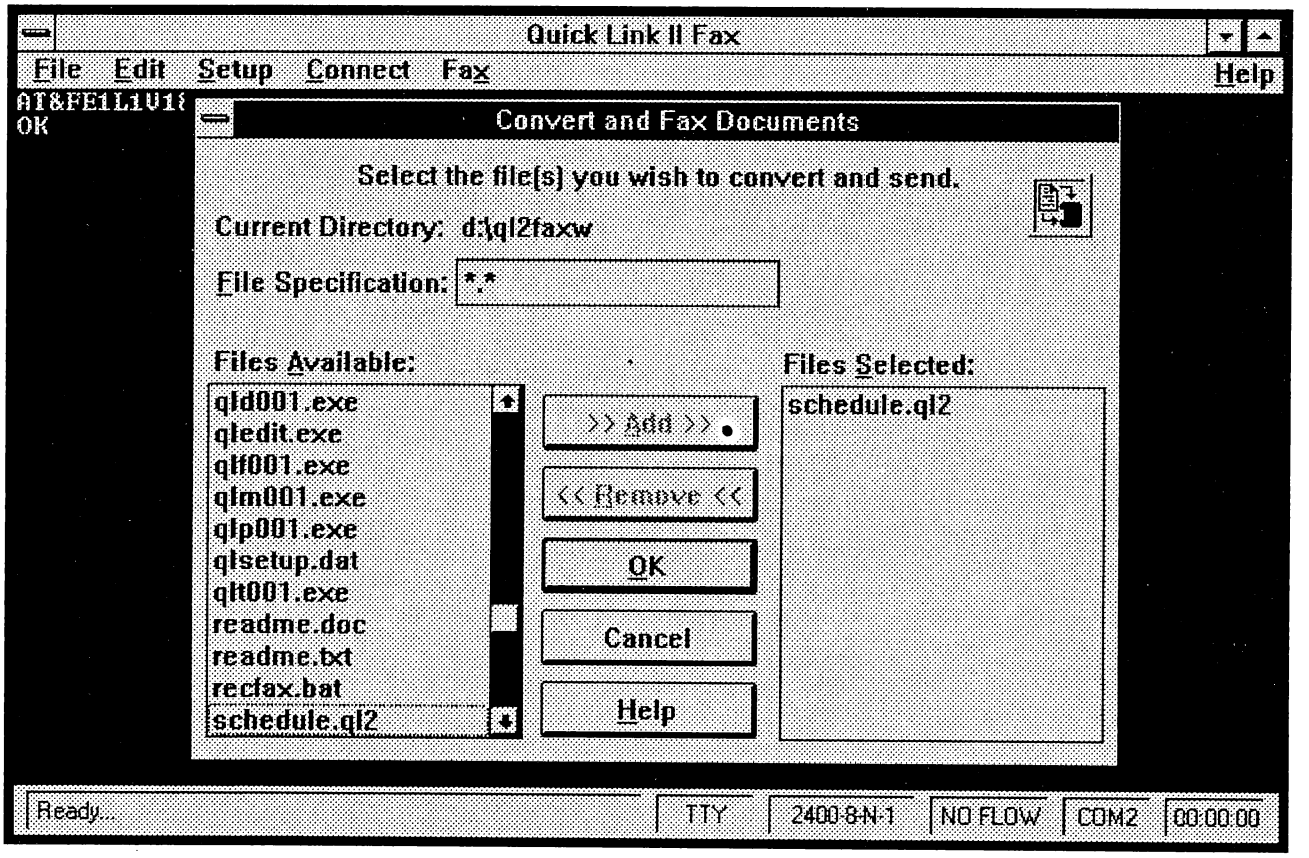


Fig. 1 Using a modern Fax Modem is easy in Windows, but is quick and easy to use in DOS also. Just a couple of clicks here, and the fax is away.

use. All you need is to type in your favourite Bulletin Board number, check that it's ANSI rather than TTY, and you're ready to go!

The software then dials the number for you, redials automatically if it's busy (but please check Paul Marwick's BBS article, *Sig. Bits*, June 92), and does the full connection automatically when the number is free.

So are there advantages to being able to connect to a Bulletin Board (BBS)? Yes! Be assured that Paul and his team don't do all that great work on three Brisbug BBS lines just to pass the time.

For example, you can place messages on the board and get answers from other people (often from around the world), upload and download software programs, read all sorts of info., and more. It's a new world and, for many, can be quite exciting. The Modem or Fax Modem makes it all possible.

THE FAX

First of all let's look at how to create a Fax to send. Just do this in your favourite word-processor (or the inbuilt editor). In the case of DOS you will need to save the file in ASCII, but, so long as your word-processor can type them, you can still include boxes, lines and special symbols that are in the extended IBM set. And if you'd like to send graphics, that's possible as well.

In the case of Windows, the sky's the limit - your fax can be as fancy as your word-processor can produce! Here it's true WYSIWYG, in that you can do full graphics, circles, fancy text, whatever -

Want to send a fax to someone, anywhere in the world? It really is easy.

and it can all be faxed exactly as you see it on screen. This also means that you can fax from ANY application - for if you can print it in Windows, you can fax it!

Now we look at actually sending your fax. For both DOS and Windows, the software will convert it to fax format for you and off it will go to the phone number you specify.

You can Mark (tag) in your Fax Phone List all the phone numbers to send the fax to. You can also Group numbers so that faxes are sent to all members of that group, plus you can schedule the time that any fax will be sent. Pretty versatile, eh.

In DOS scheduling is possible by running the software in background mode. In Windows, it's even easier still, being just a matter of ensuring that the QL2FAXW program is running - and you can set it to auto load when you enter Windows, even to take full control of the CPU when a fax is coming in!

RECEIVING A FAX

Receiving a fax is just as easy: provided you have the Fax Receive program running, Quick Link II Fax will answer the phone for you and receive the fax, all automatically. You can then view it using the Viewer, and print it as a hard copy as well (or you can set the fax to print automatically as it's received).

In addition, you can edit the received fax, then fax it back. Received faxes are saved to disk as a .REC file. These can be converted to a common graphics format like .PCX and then edited (.e.g, using Paintbrush in Windows).

Lindsay's SOAP BOX

...I really couldn't believe it. But there was one of the well-known names in IBM compatible computers advertising how User-Friendly their computers are!

Anyone who's actually got to use a computer can only laugh at such foolishness. Because they aren't yet friendly, even though the PC world IS working on it. As for me, I just wish they'd work a whole lot faster.

Sure, with the advent of GUI's like Windows, it most definitely IS easier for someone new to computers, at least to be able to do *something* with their New Baby. And it's certainly easier for me to teach them *how* to get it up and running. But it still ain't easy.

Which is a pity. Because we DO already have pen-based computers, and pen-based Operating Systems. So it could be a whole lot easier if these were freely available.

Why pen-based? Probably because it IS a much more intuitive way to use a computer (it's to do with how we interface with the computer, and the "order" that we do things during this interfacing).

For example, when people ring me about a computer problem, or wanting info. on buying a computer, or whatever, *I scribble down details on a bit of paper.* That's the way I do it - because it's the easiest way. Later, if the data is important, I transcribe it to the computer and keep it in a database.

Which is all pretty silly if you think about it. A computer sits right there at my elbow, doing exactly nothing while I scribble on a bit of paper! I then have to do it all again later to get it into the database. *With a pen-based system, properly set up, I could scribble the bits and pieces directly into the computer.* After all, they ARE supposed to save me time and make me more efficient...

So how soon will we have a computer that's actually EASY TO USE? Well I, for one, won't be holding my breath. Yup, I think that Apple's up-coming Newton, and the offerings from other manufacturers of hand-held computer-based management tools are all steps in the right direction.

But they're still not there - primarily because it just is NOT simple, OR easy, OR efficient for most people to interface with any computer via a keyboard, or keys or any sort. And I know there'll be a pile of readers who can't help but agree.

So I dunno if they can get a pen-based system to do what I - and countless others around the world - need it to do, but, because I believe that mankind can do just about anything they put their mind to, I truly reckon they can. Whether they will, I guess, is a totally different question.

User-Friendly?... No, definitely not yet. But keep at it, guys!

If you buy a fax machine, mostly you'll put in a separate line to connect the fax to. It's possible to share a line for outgoing faxes, but a bit messy to share for incoming: if your fax is connected and someone rings to *speak* with you, they're going to be greeted with a dreadful noise as your fax tries to connect to another fax - and no doubt hang up pretty promptly!

The Fax Modem is no different, and it's my belief that most people would look to using a separate phone line to actually *receive* faxes (or maybe tell people to send faxes to them in the wee hours). The documentation does state that the software can be set to answer an incoming call as fax, data or voice, but I can still see no way round the voice caller "getting an ear full".

Mind you, Modem users do tend to get onto BBS's for long periods - and in so doing tie up the phone to both incoming and outgoing calls. Thus a second line permanently connected to the computer for Fax would be great for Modem use, too (yup, wish we could afford it...)

IN WINDOWS

So is the Fax Modem easier to use in Windows? Yes, it is. The fact that Windows is a GUI is nearly always going to make it easier to run applications within it, and Quick Link II Fax is no exception. Having said that, however, is must be stated that the DOS part of the software is ridiculously easy to use, and DOS users are going to be impressed by its simplicity.

PRICE

You should be able to get this Fax Modem for somewhere between $325 and $395 - and that's hundreds of dollars less than you'd pay for a stand-alone fax unit, plus you've got a Modem thrown in as well!

As well as the Fax Modem itself, you'll need a Serial Port (commonly COM 1 or COM 2) to connect it to, and a Serial Cable.

You need to consider that the Fax Modem will tie up a Serial Port on your computer. The B.B. is good in that it will function on COM 1, 2, 3 or 4. If you ever get to considering an internal Fax Modem Card (instead of an external unit), be aware that this will NOT save you a COM port: it's likely that it will still use one up, despite looking like it won't.

If you have any queries about the Bit Blitzer I'm happy to help if I can (phone no. at end of article). Should you choose to buy a Fax Modem - and let's face it, the price today IS very attractive - I can pretty-well promise that you'll have a ton a fun, find the Modem quite addictive, and wonder how on earth you ever did without the Fax!

Next month I hope to review an even cheaper unit, the NetComm Pocket Fax Modem, a snazzy little item that you can actually fit in your pocket (to send those Faxes from New York)!

BRISBUG BBS

Before I leave the question of Modems, I want to comment on the wonderful facilities provided by our Club and operated by indefatigable Sysop, Paul Marwick. Two computers, 3 lines, and an awful lot of (constant) work is what's involved, as Paul maintains a facility that enables you and I to enjoy all the things a good BBS provides.

Thanks, Paul!

OPCOP - a Warning

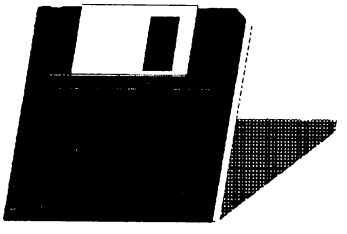
I wrote about the disk-copying program OPCOP in HOT-18. I now have a serious warning about using it.

I used OPCOP (my version is 1.16) to copy files from one 360K floppy to another 360K disk which happened to have 5120K bad sectors. In my case, OPCOP apparently merrily copied straight over the top of the bad sectors, in the process un-marking them as being bad (i.e., CHKDSK no longer found them as bad).

So if you have no disks with bad sectors, OPCOP may still be fine to use. But I'm afraid I'll never use it again: to me, copy programs HAVE to be reliable. Pity - till now I thought it was a great program.

'Bye till next time. Meantime, have a terrific month!

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



PRINTER UTILITY

PrintCache 3.0

Ash Nallawalla, Reviews Editor

LaserTools Corporation has released PrintCache 3.0, (PC3) a program that gives you control of your PC sooner than do traditional methods. If you use Microsoft Windows, you probably rely on its Print Manager to spool the printing task. Although Print Manager in Windows 3.1 is not as slow as its predecessor, you probably will get tired of waiting to use the PC. PC3 solves that problem.

System Requirements

PC3 will install on any old PC, XT, AT or better, with DOS 2.1 or later, with 6-17 kB DOS memory, and 360 kB free disk space. The type of printer or its brand is immaterial.

How PC3 Works

PC3 creates a hidden buffer file in memory, which can be a hard disk or a RAM disk. This can be any size you choose, up to 32 MB. If you choose a hard disk, a hidden file of the given size is created on your drive. When you issue the print command, the print job is intercepted by PC3 and sent to the buffer. While you regain control of your PC, PC3 is sending the buffered data to the printer in the fastest possible way.

You can choose to have a pop-up menu either in DOS or in Windows (both are provided). They display the progress of the buffering and enable you to control its activity.

PCs equipped with PC3 can talk to serial printers at 115.2 kbps, not 9.6 kbps as constrained by DOS. For parallel printers, PC3's drivers have been optimised to match specific models. If you have four printers all hooked up to your PC, you can legally run four copies of PC3 at once to handle print jobs for each of them at the same time.

HP LaserJets Optimised

PC3 provides two time-saving features for Hewlett-Packard LaserJets:

* For IIP and IIIx printers, Mode 2 Compression provides the ability to reduce the file size and, therefore, print time by 30 percent.

* For LaserJet Plus and later models with minimal memory (say 512 kB), the White Space Optimisation (WSO) method overcomes the problem of printing jobs that would require more memory. This only works if there is a fair amount of white in the print job—scanned images probably would not come into this category.

What PC3 Cannot Do

* PC3 will not make your application program produce the print job any faster—it only means that the printer appears to take the job as fast as it is presented to it.

* The actual printing time is not changed.

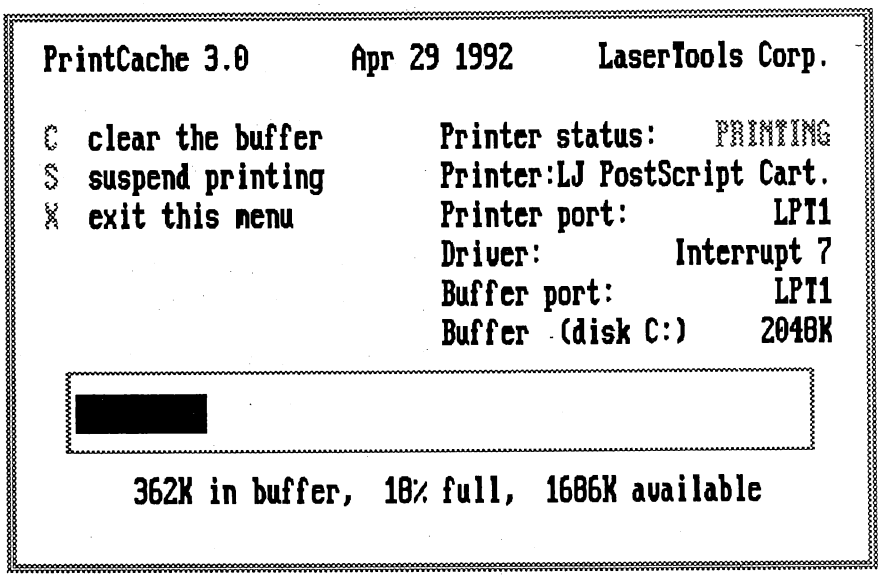
* WSO will not work on some jobs that are already optimised by the application software.

Speed Tricks

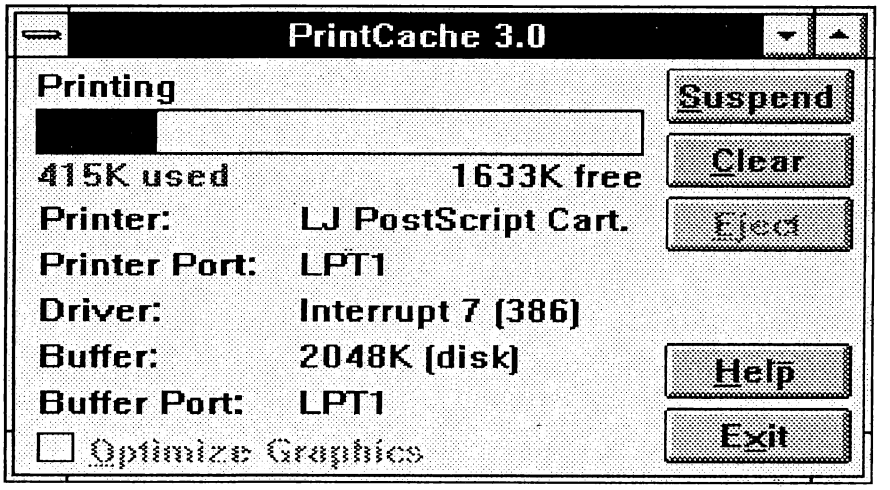
The product works well straight out of the box, but you can increase available memory by 7.5 kB by choosing not to have a pop-up menu. Doing without optimisation (say, if you have enough RAM in the printer) will save another 5 kB. You can then allocate 12 kB to speeding up the disk buffer by playing with the block size values.

Printing to a file called LPT1.PRN (instead of the printer port) does a little trick and speeds up printing even further. This is because most software will send one character at a time to the printer port but will send larger chunks if writing a file. This is intercepted by PC3, and sent to the printer. Suspending the buffer gives a further increase in buffering speed, although nothing will print until you resume the buffer. If you don't have a pop-up menu then switching off the printer achieves the same effect as suspending the buffer.

LaserTools supplies its own optimised version of Adobe's DOWNLOAD.EXE, so that font loading is incredibly faster. You also don't have to enter all the silly underscore characters in the file names, e.g. NGBO____.PFB to download with



PrintCache3 for DOS's status display



Printcache3's Windows display

this utility. A new PRINT.COM replaces the equivalent supplied with DOS.

Old XTs and Clones

The original PC and its clones (reportedly some modern machines too) had a design error in its parallel port that will not let you use PC3, unless you buy a little adapter that overcomes this problem. The adapter can be built easily by joining a male and female DB25 connector using a 25-wire ribbon or similar. Join all but pin 10 to the same pin number at the other end. At the printer end (female), join wires 10 and 11 coming from the other end to pin 11. This means that pin 10 at the printer end is not used.

Is PrintCache for You?

PC3 certainly saves you keyboard-return time on a modern 386 or faster computer. I didn't bother digging up a stopwatch because I have used a previous version of PrintCache and know it works well. I have a slow personal laser (IIP with Pacific Page PE cartridge) and have a graphics-intensive job that usually takes a painful duration to get back the keyboard. With PC3 I got it back much faster—a matter of 20 seconds versus almost 20 minutes.

To determine if you need PC3 you need to convince yourself that your printer is the time bottleneck, not your software or your PC. Graphics and database software are slower at producing print jobs than are, say, word processors. This is not a hard and fast rule, because it depends on many variables; for example, the use of soft fonts and graphics in a word processed document will place it in the graphics category. An old XT or slow AT will also slow down most software and negate the benefit of PC3.

In short, most people in a business situation will benefit greatly from the use of a utility such as PC3 (I have not tested other competitive products.)

Availability

Logo Computer Centre—(02) 905-1844—is the Australian distributor and can advise the name of your nearest dealer. Local RRP is $169.

The review copy was kindly supplied by LaserTools Corporation, 125045th Street, Suite 100, Emeryville, CA 94608, U.S.A. Fax: (510) 420-1150.

The Ten Commandments of Computer Use

People who have a computer at home generally use it to play games, learn something, or even control their finances. Few plan anything dastardly. But the few that do cause a lot of problems. They design and write Virus programs, illegally copy software, and link into the phone system to hack other peoples computer programs. Naturally these sins have attracted a bunch of 'Do-Gooders' which have broughtdown the "Ten Commandments of Computer Ethics". Playing Moses and GOD combined is the US Computer Ethics Institute, a collection of theologians, educators, business people and public servants, who believe they should provide ethical guidance for PC users.

The Commandments are as follows:

1. Thou shalt not use a computer to harm other people.
2. Thou shall not interfere with other people's computer work.
3. Thou shalt not snoop around other people's computer files.
4. Thou shall not use a computer to steal.
5. Thou shall not use a computer to bare false witness.
6. Thou shalt not copy or use proprietory software for which you have not paid.
7. Thou shalt not use other people's computer resources without authorisation or proper compensation.
8. Thou shalt not appropriate other people's intellectual output.
9. Thou shalt think about the social consequences of the program you are writing or the system you are designing.
10. Thou shalt always use a computer in ways that ensure consideration and respect for your fellow humans.

IMPORTING LOTUS 123 FILES INTO AutoCAD DRAWINGS

(and other spreadsheet data, and data bases too)

When you have spent several hours in LOTUS setting up spread sheet data, it seems a waste of effort to have to type it all into AutoCad's TEXT command if you want that same data as a table in a drawing, doesn't it? Well, you don't have to! You can import text files into AutoCad drawings, and you can generate a suitable text file from your spreadsheet.

AutoCad comes with a LISP program ASCTEXT.LSP on the bonus disk, which will perform this task. Read about it in the AutoLISP Programmers' reference Manual. The back section of that manual details several programs that are supplied ready-made, but many users never find out about them because they don't think to look at that manual as they are not programmers. It also explains how to load them and run them.

Users of AutoSYS and its add-ons, however, have the facility already built in and accessible from the menus. Just pick External Commands and then IMPORT. Then follow the prompts for filename to import and the usual TEXT options like insertion point, rotation etc.

The thing is .... to generate the text file for you to import! That must be "plain ASCII text", ie: just printable characters. You can't use a spreadsheet data file such as a WK1 file -- or a word processor file either for that matter. But all spreadsheets, word processors and database systems can generate plain text files as well as their normal SAVE format.

Word processors all have some special command for "ASCII" or "Plain Text" or similar. For database and spreadsheet systems the most satisfactory method is usually to generate a PRINT FILE. That is, print to a filename instead of to a printer port. If the program provides for being configured for various fancy printers, you must set it for the simplest possible "draft" or TTY or "unspecified" printer, and not use any condensed print etc. If possible it is best to turn off page breaks, page numbers, headers and margins. If necessary, you can clean up the generated print file with a simple text editor, to remove any headers etc. Use Q-EDIT that comes with AutoSYS, or DOS-5's EDIT or the editor in XTREE, etc. It is much easier to sort out the text file before importing into AutoCad.

In the case of LOTUS 123 the process is as follows:

1. In LOTUS print the section of the spreadsheet to a file, using the /PF command, set the appropriate Range, and give a filename. Use the /PFO (Options) menu to turn off margins etc, and make sure there is nothing setup for "Printer Initialisation" such as condensed print. When all set write the file by the Go menu option.

2. Once the file has been written it can be edited using a normal text editor (like Q-EDIT). The layout can probably be modified much easier in a text editor that in AutoCad.

3. Pull up AutoCad and enter the drawing you wish to insert the LOTUS file.

4. Create a text style that uses a non-proportional spaced (fixed-width) text font, such as MONOTXT. This is done using the command 'STYLE', following the prompts as they appear. Most are self explanatory and require no explanation here. If in doubt, read the reference manual page 140.

5. The file can now be inserted, either using the ASCTEXT.LSP program supplied with AutoCad or if you are using AutoSYS, select external commands from the tablet. This will display a screen menu from which you select IMPORT. Then just follow the prompts. No problems, eh !

NOTE! It is important that a non-proportional font is used for the text otherwise the columns will not line up. MONOTXT is always available with AutoCad, but looks pretty awful (same crude jerky form as TXT). Release-11 in Australia was supplied with a monospaced version of the ISO font, called MONOISO.SHX, which looks much better. It is on the Australia & New Zealand supplement disk. Alternatively there are monospaced fonts available in the AUSFONT set. ❑

Some AutoCAD Benchtest Results

COMPUTER COMPARISON Running Autocad R11/386

Machine	memory	smartdrive	ramdrive	screen driver	speed
386-20/SX	4Mb	512	0	VGA	319
386-20/DX	4Mb	512	0	VGA	252
386-25/DX	4Mb	512	0	VGA	250
386-33/DX	4Mb	512	0	VGA	204
486-33/DX	4Mb	512	0	VGA	145

SCREEN DRIVER COMPARISON Running Autocad R11/386

Machine	memory	smartdrive	ramdrive	screen driver	speed
386-25/DX	5Mb	512	1024	VGA	242
386-25/DX	5Mb	512	1024	LZ 1024	439
386-25/DX	5Mb	512	1024	LZ 800	467
386-25/DX	5Mb	512	1024	PA 1024	367
386-25/DX	5Mb	512	1024	PA 800	336
386-25/DX	5Mb	512	1024	SVADI 1024	280
386-25/DX	5Mb	512	1024	SVADI 800	250

LZ stands for lightning zoom
PA stands for panacea
SVADI is the standard ADI driver supplied with AutoCAD
VGA is the standard VGA driver supplied with AutoCAD

MEMORY COMPARISON Running Autocad R11/386

Machine	memory	smartdrive	ramdrive	screen driver	speed
386-25/DX	2Mb	0	0	VGA	265
386-25/DX	4Mb	0	0	VGA	265
386-25/DX	4Mb	512	0	VGA	250
386-25/DX	5Mb	512	1024	VGA	242
386-25/DX	8Mb	1024	1024	VGA	229

MEMORY COMPARISON Running Autocad R11/286

Machine	memory	smartdrive	ramdrive	screen driver	speed
386-25/DX	640k	0	0	VGA	343
386-25/DX	4Mb	0	0	VGA	297
386-25/DX	4Mb	512	0	VGA	282
386-25/DX	8Mb	1024	1024	VGA	281
386-25/DX	8Mb	1024	2048	VGA	260

The 1024 ram contains lisp and menu files only
The 2048 ram contains all the AutoCAD .EXE and .OVL files as well as lisp and menu files only

AUTOCAD COMPARISON

Machine 1	memory	smartdrive	ramdrive	screen driver
386-25/DX	4Mb	512	0	VGA
Version		*Speed*		
AUTOCAD R10-286		277		
AUTOCAD R11-286		282		
AUTOCAD R11-386		250		
Machine 2	*memory*	*smartdrive*	*ramdrive*	*screen driver*
286-16	640	0	0	VGA
Version		*Speed*		
AUTOCAD R11-286		1311		
Machine 4	*memory*	*smartdrive*	*ramdrive*	*screen driver*
386-20/DX	2Mb	0	0	VGA
Version		*Speed*		
AUTOCAD R10-286		282		

DTP - A first look at CorelDraw 3.0

by Ralph De Vries

CorelDraw! Version 3.0

New Features

Ability to edit in preview mode. CorelDRAW! still provides the option of working in wireframe mode.

.ATM and TrueType support

Powerful layer control

On-screen text editing for artistic and paragraph text. New features includes colour control over individual characters, spellchecker, thesaurus, and a hyphenation option

Interface improvements: rollup menus, direct manipulation, streamlined menus and dialog boxes

Performance enhancements: file open, screen redraw, printing

Comprehensive snap-to options

Improved import and export (including colour bitmaps)

Enhancements to blend, fit text to path, and extrusion

Connectivity - CorelDRAW! acts as an OLE client and server

CorelDRAW! now comes with three extra programs: CorelCHART, CorelPHOTOPAINT and CorelSHOW.

CorelCHART

CorelCHART is designed to build charts that can simply and powerfully express complex ideas.

CorelCHART is a powerful and versatile data-driven charting program. It offers true three dimensional charting with powerful options. It gives you the power and ease of use that you've come to expect from CorelDRAW!. Over 100 different chart types are included, ranging from three dimensional, to colourful and convincing pictographs. It acts as a client for DDE (Dynamic Data Exchange), and as an OLE server.

CorelPHOTO-PAINT

CorelPHOTO-PAINT combines impressive painting tools, with powerful photo retouching capabilities in one easy to use Windows application. Producing photo-realistic images for all your presentations, brochures and documents is now possible. With CorelPHOTO-PAINT, even a novice can achieve professional results.

CorelPHOTO-PAINT excels at both creating bitmapped objects and photo editing. It contains tools that allow you to sharpen, blend, smudge, smear, tint, clone and brighten. You also have the ability to create special effects such as emboss, motion blur, tile pattern and mosaic.

CorelSHOW

This has got to be the most versatile presentation package available. Its ability to pull elements from several applications including CorelDRAW, CorelCHART, CorelPHOTO-PAINT, and other OLE servers, into single multi-page presentations, and slide shows, completes the Corel concept of DRAW IT, CHART IT, PAINT IT, SHOW IT. The CorelSHOW program has access to libraries of professionally created backgrounds, and animation sequences. Its connectivity, as an OLE client, allows files to be inserted through embedding or linking.

Mosaic

As well as these 3 new programs included in CorelDRAW version 3, MOSAIC visual file manager has been vastly improved on its predecessor. MOSAIC now supports BMP, Windows DIB, EPS, GIF, PCX and TIFF file formats.

CorelTRACE

CorelTRACE is Corel's powerful tracing utility that converts black and white bitmapped images into smooth vector form graphics. Images traced in CorelTRACE can be imported and edited directly in CorelDRAW!.

Other Features

CorelDRAW version 3 also includes 153 hinted TRUETYPE fonts and over 4,600 symbol and clipart images. Each package includes a CD-ROM version of its software. The CD-ROM bonus will feature the entire clipart library (over 14,000 images), over 100 animations in Autodesk flic (FLI) format, an additional 100 fonts in TrueType format as well as CorelDRAW's complete font library in Adobe Type 1 format.

Enhanced Features in version 3.0

Extrusion

With the enhancement in version 3 special effects, extruding takes on a dynamic change when creating 3D objects. You can actually manipulate text and objects after you have applied the extrude command. Extruding is now performed via the new look Extrude roll-up menu Each of the 4 options on the left of the rollup menu control a certain aspect of your image. The top tool, once selected, controls the extrusion depth, and the second tool the rotation. A new feature is the ability to position a "light source" wherever you choose. To activate the light source, simply "turn on the light". What could be easier. The last symbol activates the colour fill palette.

Blending

The CorelDRAW! blend feature has been enhanced in version 3 in several ways. Blending two objects can be performed along a predetermined path, (either closed or open), rather then the most direct path (which was how blends were performed in the past). You can also assign a blend through the full spectrum HSB colour wheel, not simply from one colour to another. Since the entire Blend group is dynamically related (or linked), altering any of the objects or the path will cause the blend to incorporate your new changes. This holds true whether you rotate, scale, skew, node edit, envelope or change colours of the edited object.

What are the new Import and Export filters?

CorelDRAW 3, in addition to the previous import filters, now supports Windows Metafile (WMF), Compuserve GIF and Targa (TGA). The new export filters include Adobe Type 1 font (PFB), TTE, BMP, GIF and TGA. Exporting greyscale and colour bitmaps is now supported with user definable resolution.

What are the Import and Export filters provided with CorelCHART?

You can import data from a wide variety of formats including Excel, Lotus 123, Harvard Graphics and Dbse. Formats also supported are PCX, TIFF, BMP, DXF, AI (EPS), GEM, PIC, HPGL, CGM, PIF (GDF), PICT, WMF, GIF, Targa TGA.

Exporting formats include EPS, WMF, PCX, TIFF, DXF. CGM. PIF (GDF). GEM. HPGL, AI, PICT, SCODL, WPG, PFB, TTF, BMP, GIF, TGA.

It is also possible to export objects as symbol sets or fonts to be used in other applications. Colour and greyscale bitmap export filters are also supported in CorelCHART.

-ooOoo-

So far the official press release. I have just received my upgrade ($220 + $15 Postage), which consists of ten 3,5" H.D. disks, a CD Rom disk, a User's Manual, a Clipart Guide which also covers Symbols and Fonts, and several other charts. Depending on what you install, it will take somewhere between 20 to 30 Megabytes, which is probably too much of a good thing for most of us.

It's probably a very good marketing ploy by Corel to include a CD Rom disk, but how many users are going to spend another $600 to $1000 on a CD Rom drive and interface? As it stands, the users of version 3.0 are worse off than with version 2.0, because very little clipart is included with the new version. If you want more, then you have to get it off the CD Rom, somehow.... The same goes for the extra 100 True Type fonts. As you have probably read, CorelDraw's fonts are now in TrueType format, rather than in their proprietary .WFN format, which means that they can now also be accessed by other Windows applications; a decided improvement. As in version 2.0, 153 fonts are supplied with the program (these are the same fonts), but the CD Rom has another 100 odd TrueType fonts, and has a copy of all these 250 fonts in *Adobe Type Manager* format.

(It should be pointed out here that the average CorelDraw TrueType font file is appr. 30 000 bytes in size, compared with an average 60 000 bytes for the TrueType fonts supplied by Microsoft. This seems to prove that the latter are better defined (i.e. with proper kerning pairs etc.), which, in turn, means that these better defined fonts will give us better output in a wider range of sizes. It's my intention to run some tests in the near future.)

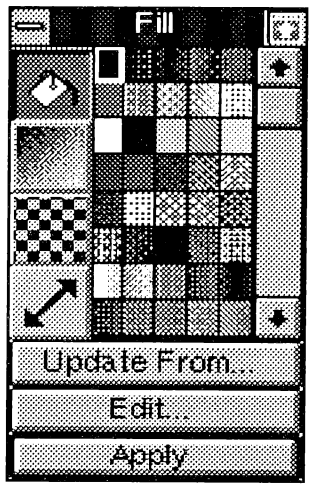
But what about the program itself? To put it in a nutshell, if you are using version 2.0 and you are happy with it, don't bother to upgrade, because, at this stage, I don't think that the improvements in version 3.0 are worth $235.

Of course there's the new *PhotoPaint!* program, another reincarnation of ZSoft's PhotoFinish, and quite a good program it is too, because it comes with a manual this time! (See my review of the Scanjet in the July issue.) As for the other new modules, the Charting program seems hardly to belong in an art package, and the Show module (from Autodesk) is very badly documented. The clipart management program *Mosaic* has dropped the facility to make a slideshow out of your CorelDraw artwork or clipart, and *CorelTrace!* (bitmap to vector conversion) often crashes or locks up when you try to re-save the same file under a new name. The font conversion program *WFNBoss* is no longer supplied with CorelDraw, presumably because their fonts are now supplied in both TrueType and ATM format.

Most of the new bits in CorelDraw are purely cosmetic. The menus are now 'standard' Windows 3.1 menus, and a *Help* facility is now supplied. Mind you, the CorelDraw program itself is now about 1,5 Megabyte in size!

It's now possible to work in either wireframe mode (as in the previous version), or in the new editable preview mode. This last mode is easier on the eye, but screen refresh is quite a bit slower. Text can now also be entered directly on the screen, and then edited afterwards. The strange thing is that some of CorelDraw's features (such as fountain fills) appear to be faster, but text entry and editing, as well as several other features are now decidedly slower.

Also new are the "roll-up windows", or "roll-ups" (see illustration), which are cute and to a certain extent improve the performance of CorelDraw.



A ROLL-UP Window

Some Other Changes

Basically the Tool Menu Items haven't changed, but a few refinements have been added. For example, the Pencil Tool offers the choice between Freehand and Bezier curve drawing. The Text Tool has several new options, including the possibility of entering text directly on the screen. In conjunction with a new menu and a 'roll-up', this is a decided improvement on the earlier version. Similarly, the Ouline Pen Tool and the Fill Tool, have been upgraded with new 'roll-up' windows, as well as several new options. These are all valuable improvements compared with earlier versions.

The *normal* menus have also been changed and/or updated. This is particularly noticeable on the Effects Menu, where both the Blend 'roll-up' and the Extrude 'roll-up' offer some nice new options. The Text Menu has a very useful roll-up for Fitting Text to a path, which offers greater flexibility compared with Version 2.0. Oh, yes, there's now also the obligatory spell checker and thesaurus.

Summing up, CorelDraw 3.0, has aquired some very nice new features, but the bugs need squashing badly. No doubt in six months from now Version 3.0 will be working very smoothly indeed.

-ooOoo-

SIG Reports

SIGs convenor: Bernard Speight. (07)349-6677

SIGs are Special Interest groups. Most of them meet at the main Sunday meeting at 3pm, but others meet at other times and other places. Phone the relevant contacts shown if you are interested, or the SIGs convenor for general enquiries.

SIG Contacts

Genealogy - Robert Gurney 355-4982

Windows - Bernard Speight 349-6677

OS/2 - Ryck Anderson 268-1441

Comms - Graeme Darroch 209-1999

Graphics - Alan Hart 288-3384

ProSIG (programers) Peter Grimes 881-0205

Juniors - Les Cathcart. 274-4108

Northside - Robert Gurney 355-4982

Southside - Linton Holroyd 343-3705

Windows SIG

Thanks to SIG member, Mark Wibaux for an interesting presentation on Microsoft Works for Windows at the September meeting.

Mark made the point that while some of the facilities of the Microsoft Office components had been omitted, as a student, he found that the word processor, spreadsheet and database of Works met his requirements nicely - and the three components integrate well. Furthermore, the price is certainly right. Thanks Mark, for a well-prepared and well-presented demonstration.

The October meeting will be dedicated to interactive question and answer. However, instead of just verbal replies, wherever possible, the various members of the organising committee will hold themselves ready to demonstrate the replies on the big screen. So, come along with your problems. We can't promise to be able to solve them all, but we shall certainly try.

In November, in anticipation of the Christmas break, Mark Wibaux and/or Peter Akers will be presenting some Windows games.

The organising committee meets every two months at a member's home on the Tuesday before the main meeting. We have decided to expand the terms of reference of this group. The organisation of SIG activities has always taken up only a small part of the evening, and the remainder has been given over to discussion of topics of interest to the members, all of whom have a fair degree of computing experience, in one way or another. Many have a number of industry contacts as well.

Accordingly, it has been decided to rename this group the Experienced Windows Users' Sub-Group. The format will continue much as before, with a little time devoted to organisation, and a lot to discussion and, where appropriate, demonstration. The next meeting will be at Brian Bere-Streeter's home, at 9 Stanford Street, Robertson. It will be at 7.30 pm on 10 November 1992. All are welcome to come along and participate. If you plan to come, give Brian a call on 349 4696.

Remember, if you want to hear it first, join the EWUs!

Bernard Speight 349 6677

Now... 2 Windows SIGs!

As well as the regular Windows SIG meetings at Bardon, which will continue to provide for new Windows users, and cover topics of everyday Windows operation, there will also be a meeting for more experienced users or those with a technical interest. It will meet at various homes on the Tuesday before the Bardon meeting. See the Windows SIG report for details.

BRISBUG strives to cater for all!

SouthSide SIG

Twelve memberes attended the September meeting of South Side SIG at Linton Holroyd's home on September 1st. Demonstrations of the commercial CAD programs Autocad and Schema were shown along with plotter setup and use.

Members kept the demonstrator on his toes by requesting ever more powerful functions of these powerful CAD packages. New techniques and functions were wrung out of these capable programs. A discussion of less powerful CAD packages ensued.

Ray Halladay demonstrated his new front end formatting program and gave members copies to beta test. RFORMAT and RFONT will take the confusion out of DOS FORMAT. We hope Ray will place this useful program in the Library and bulletin board upon completion.

A short discussion about software hard disk doubler programs and supper finnished off another top Southside SIG meeting. Next meeting at :- Rex Ramsey 114 Forestdale Drive Forestdale Phone 8004827 5 October 1992

November meeting will be on 2 November at the home of Paul Kelly-Taylor, 8 Portia St, Kingston, Tel: 208-0745

Linton Holroyd (07)343-3705

Comms SIG

The following is one month out of date, but got omitted from the last issue due to my fault. Since I also mucked up Graeme's report the previous month, I thought I'd better print this one even if late, and publicly appologise — Editor.

August meeting.

Several Members attended and were of varying degrees of competency in communications. The subject for discussion was the MODEN INIT string, and my apologies to the member who was attending trying to get some new (No Modem) experience, as this subject tends to be one of the most complicated that the average user comes accross.

One point that I must make here is this. One member was surprised that I did not mention such and such a modem and certain dificulties that may be experienced when using this modem, let me say this here and now I AM NO EXPERT, I am someone who has used several modems and run a BBS for a period of a couple of years, but definitly am no expert.

Our lttle Special interest group is a SELF HELP GROUP, and as such if someone knows of a dificulty with a modem, they have used, that I have not used, and says nothing then the group will never work. The group relies on input from ALL.

As such we are also not an equipment testing service, I took a phonecall from someone who was having difficulties in getting their modem to work, the suggestion was to bring their modem and computer to the next meeting where we would all have a look and see if we could help, this was met with the statement that they were not keen on that as their machine was to big to bring along. Tell me about it! I do it almost every meeting, and so do many of the other helpers that the club relies on, the member then suggested we could use one of the machines that were brought in for library duties to test it, what a cheek, they cant be bothered bringing their machine but are happy to use one that someone has brought in for a totally different and important reason. Anyway what I am saying is that yes we will help anyone who is having difficulties with modems or comms, in fact someone brought a machine and we were able to help him with his modem/PC combination, and that is what it is all about. But we are not there to be used by anyone, if you want to contibute that is fine but dont expect to be able to take for long without giving some effort to the group.

Anyway soapbox mode off. Next month (ie: that's September, now gone - Ed.) we will be looking at off line mail readers, mainly SLMR and OFFLINE. So if anyone has been thinking about using one of these programs please come along and we will haev a look at them together.

Graeme Darroch 209 1999

Genealogy SIG

During September we went to the Queensland Genealogical Society at Woolloongabba, about 25 turned up and Most seemed to find something there to pique their curiosity and no doubt some of our members will also join them as well.

The types of information held there were a lot of information on Queensland graves, particularly most if not all in and around Brisbane, plus a lot of wills and information about early legal matters of the colony of NSW. There was also a host of other information that would fill this page, and only two librarians to cope with our visit and the normal membership arrivals.

As I have been so busy I have not yet arranged an outing for October but will get one to the State Library for late November.

Check out Hey Cuz for the names you are looking for It really works. Cheers for now

Rob Gurney 07-355-4982

Northside SIG

Well we had another interesting evening discussing all sorts of things mostly not related to computers would you believe.

For those who have a hard time remembering when our meeting is it is the Monday week after the normal meeting. ie: 8 days after the monthly meeting.

The next meeting we will be discussing what we will do for Christmas among many other topics and perhaps even try to do a machine to machine transfer again with some other software. You really have to be there to get something out of it and we do try not to go too late.

The next meeting is at 94 Laurel Street Enoggera at 7 pm on the 26th of this month. This is 8 days after the 18th. If you have some problem and would like a one on one help then you should come along.

Robert Gurney 07-355-4982

Hey Cuz !

This section is really starting to generate phone calls and queries re connections or possible connections, Well it has now got to the stage where I have not had the time to make a new data base for all of the entries I have for the queries I get so here are the names I have recieved information for and have been unable to find the originator.

Please contact the following people for Information :-

DODD Mrs. Thrupp 07-390-3918
ROSS Mr. Dennis Ross 07-294-6240
BIRD Mrs. A. J. Carseldine 07-205-5165

For further information contact Rob Gurney 07-355-4982 or leave a message in the members echo for me.

The surnames are as follows:-

Alexander Arthur Austin Barroh Bellas Bird Brownie Burgdorf Busch Cartwright Christensen Collis Connelly Copelund Cracknell Crane Crawford Crilly Davy Farley Finch Fischer Ford Foster Freedignare Frewin Galletty Garske Gates Golding Goulding Gray Green Gurney Haddock Haley Hammond Hannthan Hargraves Harris Heffernan Hodgkins Hodgson Holland Holtzuever Hunt Hyam Kiss Leckie Libbe Lockwood Lovis Lowson Ludlow Mc Casslin Mac Gregor Mc Grath Mc Intosh Mc Kay Mc Namara Matthews Mensforth Middleton Morgan Neighbour Norris Paget Pageudorf Pearson Perdeaux Pheonix Phillips Pie Price Purdnam Robinson Ross Rowles Rungert Ryan Schmid Scott Seymoure Shea Siiankoski Simpson Smith Steindl Stringer Sully Svier Thompson Thrupp Thurlow Timbray Turnbull Ussher Van Beek Waite Walters Welsh Whitmarsh Wilkins Wilson Woodforth

Review

Microsoft Golf for Windows 1.0

by Ash Nallawalla

Microsoft Golf for Windows (MGW) 1.0 is a new game from Microsoft.

The literature makes no secret that many other companies participated in its making, notably Access Software.

Requirements

MGW runs on 80286 (AT) machines with 2 MB RAM, Windows 3.0, a hard disk, and a VGA graphics setup, although an 80386SX with 4 MB RAM, sound system, mouse, 256-colour Super VGA, and Windows 3.1 is recommended for realism. [*Aside*: Isn't it refreshing to note that you don't need a 386 for some software these days? I was even more surprised to see that Microsoft has released something that will run on an XT—the new Visual Basic for DOS.]

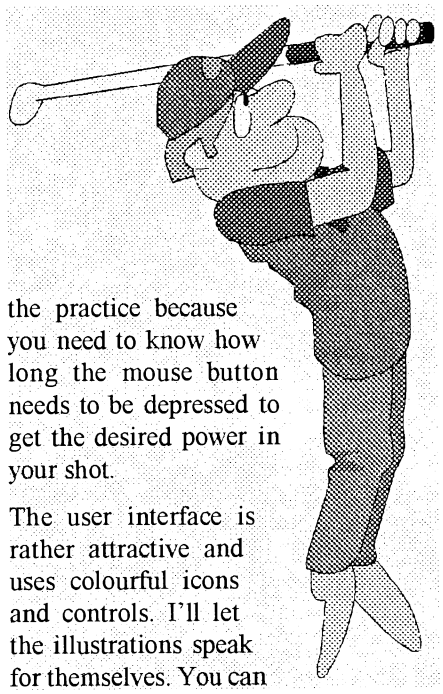
Contents

The package mainly consists of the 49-page Player's Guide and two 3.5-inch 1.44 MB disks. The manual is adequate to the task and is supplemented by online help.

In Use

Setup is quick and easy—something that is becoming the norm these days. You need to know nothing about the game because the manual and online help will help you with the rules and the jargon. You can choose to allow "gimmies" and "mulligans", create players, and check their settings (say, set yourself up as a Pro and your opponent as a Beginner!) MGW is an equal opportunity product—men and women players have equal strength!

You can view the course, the hole, and each player's shot from several angles. You have tremendous control over the shot and the player's aim. You can practice, or save a game and restore it. You do need



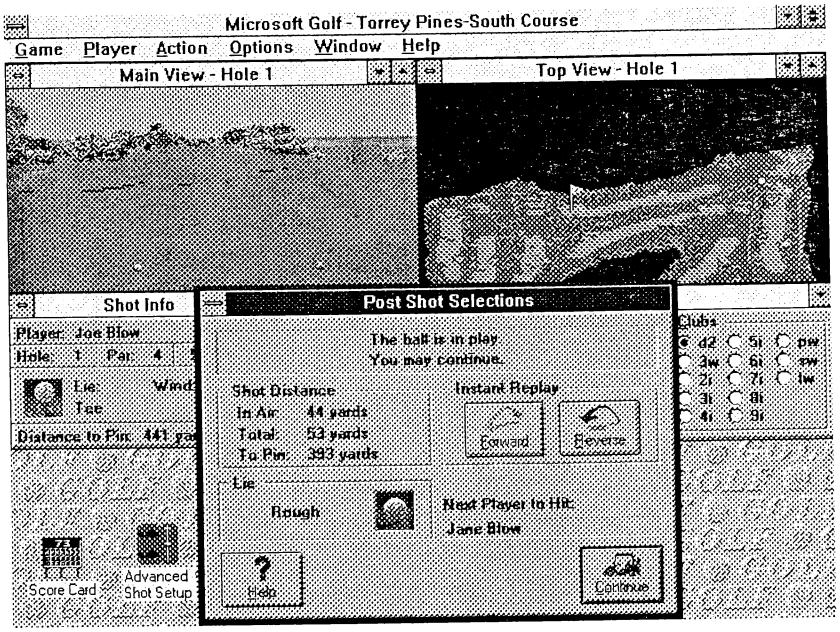
the practice because you need to know how long the mouse button needs to be depressed to get the desired power in your shot.

The user interface is rather attractive and uses colourful icons and controls. I'll let the illustrations speak for themselves. You can choose how detailed the display should be, because more detail means less screen-drawing speed.

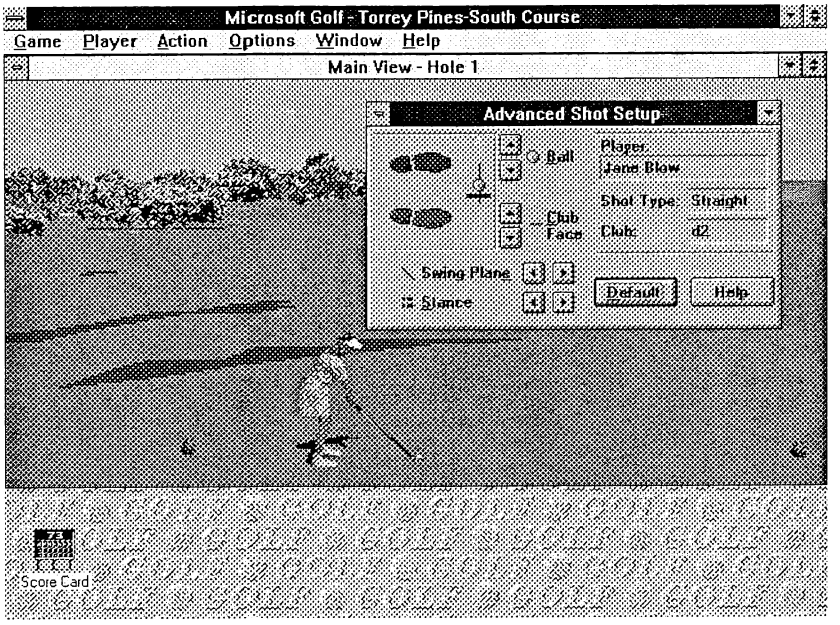
Making yourself a Pro has its down side.

Yes, you get more distance but your shots have to be more accurate, and the wind definitely affects your play. Although you can choose your clubs, MGW's "Caddie Wizard" can do it for you. You even get "instant replay" and the statistics for each shot.

My budget only went as far as a Disney Sound Source worth about US$30 and not a super-duper Soundblaster. Luckily you can get a Windows driver that supports this device, which gives quite realistic sound. The driver that supports your internal speaker is also quite good. Both drivers are to be found on the better BBSs around town. There are numerous sounds, such as birds, splashes, hitting noises, and human voices. A drawback with the sound is that you are locked out momentarily while a bird chirps, so you can choose to turn off the "nature" sounds and leave on



Serious golfers can consider their shots carefully from all angles - then analyse where they went wrong



Golf-for-Windows contains plenty of options for the technically minded

just the human commentary. My graphics setup is just an old 16-colour VGA card, so I took the documentation's word that the scenery is "photo-realistic."

MGW will appeal to a golf lover or someone who wants to learn the game. It demands patience, because you have to learn how to play the game on a PC. It is a simulation after all, so even though you can master the computer game you will have to start all over again on the real golf course.

Optional Extras

Only one golf course, Torrey Pines in La Jolla, California, is provided. Other courses that can be ordered from Access Software include the following:

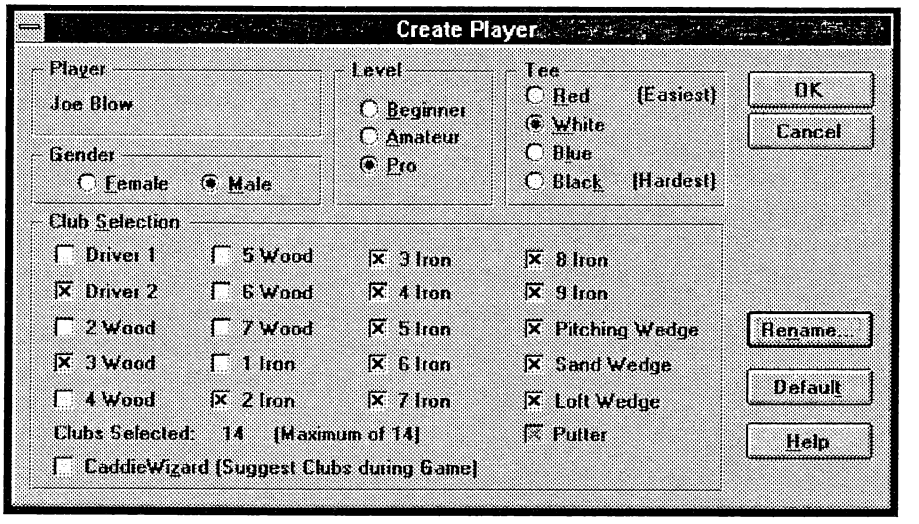
* Bountiful—Bountiful, Utah
* Firestone—Akron, Ohio
* Bay Hill—Orlando, Florida
* Pinehurst—Pinehurst, North Carolina
* Dorado Beach—Dorado, Puerto Rico
* Barton Creek—Austin, Texas
* Troon North—Scottsdale, Arizona
* Werribee—Victoria

Couldn't resist that. Sorry, Werribee missed out.

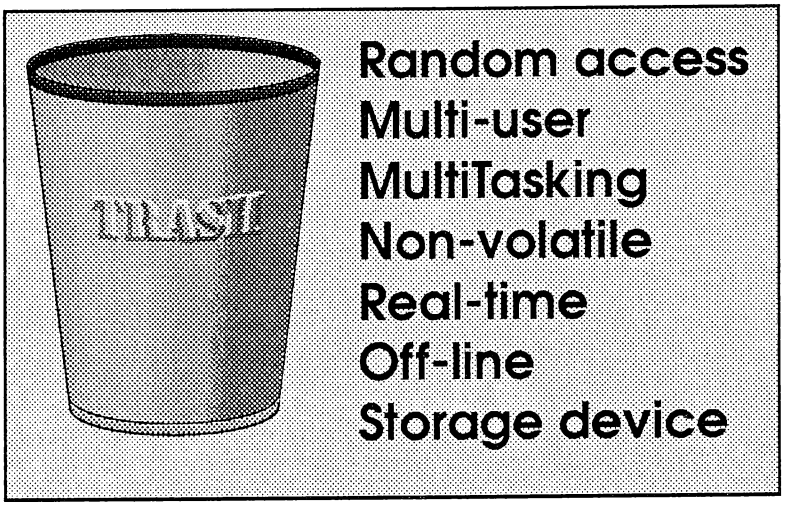
The manual provides ordering details for the above courses. Perhaps they will cover other famous courses in the future, such as Pebble Beach and St Andrews.

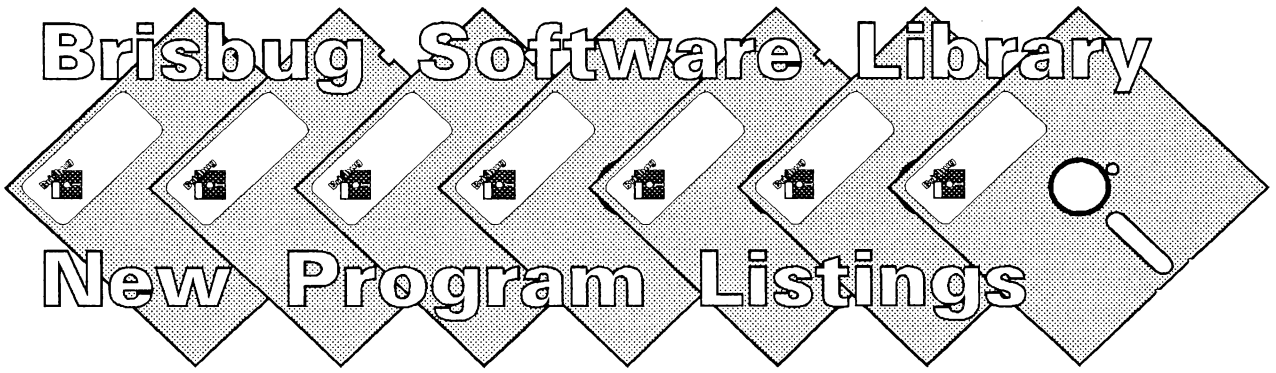
Availability

MGW is available from all Microsoft resellers, including our own advertisers. Review copy courtesy of Macro Communication, Sydney.



Decisions ... decisions ... what happened to just walking out and slogging away?





BBUG 2638 MARXMENU Version 4/91

*CLASSIFICATION * Menu * Hard Disk*

MARXMENU is not just another fill-in-the-blank menu system. It is a menu programming language and job control language. It gives you total freedom to do whatever you want, but total freedom has a price. You will need to know and understand how to use a text editor. This isn't difficult if you are familiar with using a word processor. And you will need to have a basic understanding of DOS and how batch files work.

MARXMENU gives you complete screen control, supports conditional menu options, supports math and string functions, lets you design professional looking exploding and shadowed windows, and uses no RAM! MARXMENU is especially good on networks.

With a text editor you can create a menu file which is a text file with an MNU extension. Or, you can copy and then modify the sample menu text file which displays the menus you see when MARXMENU is executed. This text file contains a set of instructions for MARXMENU to follow. MARXMENU will then read your menu file and run the instructions.

MARXMENU certainly isn't the easiest menu program around, but it is one of the most powerful.

BBUG 2639 DOS TOOLBOX Version 2.0

*CLASSIFICATION * Utilities * Hard Disk * Printer*

The DOS TOOLBOX contains powerful and simple to use utilities. Some of the programs are written for beginners, others for intermediate and advanced users. The DOS TOOLBOX programs come with help screens and on-line documentation which give quick proficiency with each program.

DIRECTORY MASTER is a powerful hard disk managment utility. It brings up your hard disk files and allows you to mark selected files so you can copy, delete, or move them.

It also allows you to rename files, change dates, and change attributes. You can run programs or set up your function keys to run programs on selected files.

DOLIST makes the DOS prompt an easier place to work. It gives you full line editing, like a word processor, for your commands. It also stores commands so that you can re-execute them.

It remembers subdirectories and allows you to go back to them by pressing the TAB key. It offers programmable function keys, DOS extensions, multiple execution, and many more features DOS users need.

PICK DIRECTORY allows you to move through the directory system by displaying a graphic tree and letting you use your arrow keys to move around. It also lets you create, delete, rename, and hide directories.

TEDIT is a powerful, easy-to-use full screen editor.

MARXTSR is a set of memory and TSR management utilities that lets you load and unload TSRs (terminate and stay resident programs) from memory.

Utilities to list memory allocation are also included in this package.

Also included is

D (a fancy directory listing program), **WHEREIS** (for finding stuff on your hard disk),

SORT, MOVE, FIND, FREE, PIPEDIR, VERSION,

and many more.

BBUG 2640 ANIMATED SHAPES Version 8/90

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

Teach your child to identify shapes and colours with ANIMATED SHAPES. The colorful menu system is designed for children pre-school through the first grade. Each shape correctly identified combines with other shapes to create a picture. When complete, the picture becomes an entertaining cartoon.

BBUG 2644 ANIMATED MATH Version 1.0

*CLASSIFICATION * Educational * Hard Disk * EGA/VGA * Mouse optional*

Just the program to compliment Animated Shapes. ANIMATED MATH teaches counting, addition, and subtraction to children from pre-school through the first grade. Each right answer is rewarded with colorful animation sequences that bring math to life. Not just a game, ANIMATED MATH provides a highly interactive and friendly environment for improving mathematics skills.

There are a number of different learning aids included - dinosaur connect-the-dot games, color games, a build-your-own-rocket game, an animated piano game, and a mouse game. ANIMATED MATH uses over 100 animated sequences.

BBUG 2646 MERCURY Version 2.0

*CLASSIFICATION * Mathematical/Utilities * Hard Disk * Graphics Monitor * Modem (for DIALTHAT)*

MERCURY is a program for solving equations similar to Borland's Eureka. It is easy to use, interactive, and powerful, MERCURY evaluates mathematical expressions, solves for the roots of an equation, solves a system of equations, and maximizes or minimizes a function, with or without constraints. In addition, you can evaluate derivatives and definite integrals, plot one or more functions, and print a report or a graph.

MERCURY has a built-in editor, pull-down menus, online help, and all the conveniences necessary to make it accessible to computer novices.

Also contained on this disk is a handy dialling utility - **DIALTHAT** Version 1.01. How often do you look up a telephone number on your PC screen, and then manually dial it on your telephone? If so, you can automate the process with DIALTHAT. DIALTHAT is a resident program to read phone numbers on the screen and dial them thru a modem.

BBUG 2647 MORAFF'S ENTRAP Version 2.0

*CLASSIFICATION * Games * Floppy Disk * Graphics Card*

MORAFF'S ENTRAP is a game of mental skill to entrap the enemy robots which block your path. The player is provided with a spectacular three dimensional view of the maze-like playing field guarded by enemy robots that are programmed to capture you. Your object is to reach the far end of the pathway and avoid capture.

BBUG 2648 MORAFF'S SUPER BLAST Version 1.1

*CLASSSIFICATION * Games * Floppy Disk * Graphics Monitor*

Here is the sequel to the ultimate bricks and paddles game. SUPER BLAST has 34 levels and up to 17 simultaneous balls. The game contains many special bricks that do things like move, multiply, eat balls, and explode into eight balls. Also included are one way bricks, tunnels to other levels, and paddle expansion and contraction bricks.

BBUG 2650 BLANK-IT, PIK and BOTHSIDES

*CLASSIFICATION * Utilities * Hard Disk * Printer*

Three useful utilities - a screen blanker, a file selector and a printing program to print on both sides of the paper.

BLANK-IT, Version 4.1A, is designed to black out the computer monitor display after a certain "timeout" period to prevent screen burning. "Burn-in," not an uncommon problem, results from allowing a computer screen to display the same image for long periods of time, and can ruin a monitor. As long as the computer keyboard is in use, there's no evidence that BLANK-IT is even running.

However, if the keyboard is left untouched for several minutes then the screen will automatically blank. When the space bar is pressed, the screen will reappear and the user will be right where he or she left off. BLANK-IT contains several advanced features, such as a quick-blank "hot key" ("Boss Key"), and the ability to enable/disable BLANK-IT while it's loaded. It uses only 528 bytes of memory, works during high speed communication, and has added support for graphics mode.

PIK, Versiom 1.20, is a useful little 32K utility which allows you to pick files from the standard DOS "DIR" display to mark for Deleting, Copying, Moving or Zipping into a Zip format compressed file. How many times have you typed "DIR" to examine the contents of a directory and seen several files which should be moved, deleted, or stored for later use in ZIP format. Typing the commands necessary to accomplish the task could take some time. By typing "PIK," you can select the files upon which to perform the necessary operation right from the display left behind by the "DIR" command. Once the files have been marked, you just press ENTER and you are on your way to keeping your files updated.

BOTHSIDES, Version 3.5, formats text files of any pagination method so they can be printed to both sides of your printer paper. The program can send your file directly to the printer. First it prints the odd numbered pages, then stops to let you turn the paper over and prints the even numbered pages. It can also format your text files by paginating them and printing a footer containing title line and page number at the bottom of every page.

BBUG 2651 PERSONAL ORACOMM BBS Version 5.0

*CLASSIFICATION * BBS * Hard Disk * Modem*

PERSONAL ORACOMM BBS is a 1-line/1-user system. There is no limit to the number of user accounts or messages. PERSONAL ORACOMM BBS is easy to use. Commands such as R for "read", E to "enter a message", D to "download" make it easy and logical for new users. The space bar to control screen scrolling, ESC to return to the main menu from anywhere, and Immediate Commands can be entered while the menu is displayed.

PERSONAL ORACOMM BBS does not provide network features, but on registration this featue becomes available. Two utility programs are available, TOFIDO and FROMFIDO, allow you to extract messages and create FIDO-style files which can be transmitted with other FIDO mailers.

Upload and download commands support xmodem protocol. Each sub-board has it's own upload/download directory to distribute files according to subject. Directories can be access level protected, and individual files can be access level, password, or account protected. A "download database" maintains up to 9000 byte description of each file, the date of last download, and number of times it was downloaded. The file management system makes it easy for the sysop to add, move, copy to/from floppy, or delete files on the system while other users are online.

All menus, help files, questionnaires, and prompts are changeable by the sysop. Menus have both an ASCII and an ANSI form. Users calling with color monitors can view ORACOMM with color and graphics. All system management, customization, and installation commands can be done online with simple menus while ORACOMM is running, so it can be operated remotely. The PERSONAL ORACOMM BBS comes with an abbreviated sysop manual to allow it to fit on one disk.

BBUG 2652 PAINLESS EVENT PROCESSOR Ver 3/91

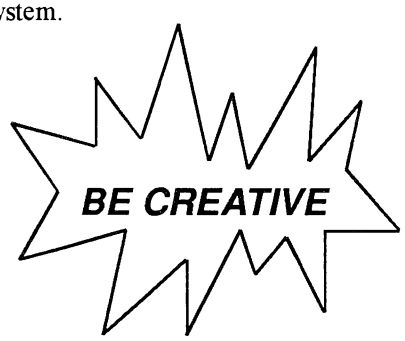
*CLASSIFICATION * Utilities * Hard Disk*

The **PAINLESS EVENT PROCESSOR** allows your computer to work 24 hours a day. You simply tell the event processor

when to execute programs, batch files, tasks, utilities, etc., and at the specified time the keystrokes will be entered into your computer as if you were sitting at the keyboard yourself.

The PAINLESS EVENT PROCESSOR sits in memory (using only 10K) waiting for the real-time clock to trigger an event. You can schedule upto eight events at one time. The PAINLESS EVENT PROCESSOR also comes with a Keystroke Caputuring System. So, you can simply load the keystroke caputuring program and start running your tasks. When your tasks are complete the keystrokes are automatically saved to a file, ready to be scheduled at anytime.

No matter if your task is a one-time, daily, weekly, monthly, annual, or even an erratic event, the PAINLESS EVENT PROCESSOR will handle it. Specify a delay from 1 second to 255 minutes, or have the PAINLESS EVENT PROCESSOR perform a reboot on your system.



BBUG 2653 FINGER VGA Version 1.0

*CLASSIFICATION * General/Desktop * Hard/Floppy Disk * VGA * Mouse*

How creative are you? Use FINGER VGA to create and animate your next master-piece. FINGER VGA is a color image processing, painting, and animation program that works in VGA graphics mode (320X200 256 colors). Files are loaded and saved in PCX format and can be printed on a LaserJet in 300 dots per inch density.

Image editing features include cut, copy, paste, inverse, rotate, flip horizontally/ vertically, and scaling to enlarge or reduce the selected image.

The drawing toolbox includes freehand drawing, line, rectangle, triangle, brush, spray, eraser, flush, dupArea, dupPoint, fill an enclosed region, and draw 3D

Software Library News

SOFTWARE ORDERS

Orders for software may be lodged by mail or by telephone. Please allow at least 14 days for processing and delivery.

If you are intending to pay for these orders by credit card, please remember that the minimum charge is $25.00 which must include postage.

Mail orders MUST be addressed to 95 Station Road, Booval QLD 4304 and not to the Post Office Box at Toowong. Orders sent to the post office box may be delayed even further.

Orders can also be placed by telephoning 281 6503 between 9am and 1pm or 2pm and 4pm Monday to Friday.

NEW HUGO KIT

A new kit of the HUGO TILOGY has been included in our catalog. This kit comprises the three Hugo games - Haunted House of Horrors, Whodunit? and Jungle of Doom!, the latest in the Hugo adventures. The games require EGA or VGA and can only be run from a hard disk drive.

Order Now .... $12.00 per kit.

DR DOS 6.0

Are you tired of using old Dos and would like to change to a later version? Would you like to increase the size of file space available on your hard disk without spending large amounts of money?

Brisbug has supplies of DR DOS 6.0 for only $99.00. *Upgrade now.*

PASCAL

Orders can be placed for Borland Pascal Version 6.0 with the Treasurer at meetings or through the Software Library by mail or phone.

Prices:

Borland Pascal Version 6.0	$99.00
Turbo Pascal Version 6.0 Professional	$199.00
Packing and Postage	$10.00 extra.

These are Educational Prices and you must be enrolled in the Pascal Course to qualify. Payment must be made in advance as we have to order specific quantities from the supplier.

LIBRARY VOLUNTEERS

The Software Library is always on the lookout for new assistants in the Software Library, especially at meetings. Copiers, order selectors and helpers are needed on the meeting Sunday. If you are interseted in helping and are prepared to spend part of your day doing something for your club, talk to Terry Tuttle or one of the staff about helping in the Library.

We provide the copying machines, so you don't have to lug your own computer along (unless you want to).

Spend a few hours in the Library and still attend the meeting or classes and give the regular assistants a break to enjoy Brisbug.

pyramid. The curve drawing tools include bezier curves, circle, ellipse, arc, arrow, thick line and text with 4 different scalable fonts.

Text entry can be written either horizontally or vertically. There are 9 fill patterns which can be used to fill rectangle, circle, ellipse, pie, and plygon with up to 200 vertices. The screen zoom-in feature (fat bit) is also proved to work on individual pixel at 16x or 64x level.

Color image to grayscale conversion is also supported. There are 256 colors available for drawing and background.

BBUG 2654 LQMATRIX Version 4.3

CLASSIFICATION * Printer Utility * Hard/Floppy Disk * 24-pin Printer

LQMATRIX is an editor for user-made characters known as "soft fonts" for Epson LQ 24-pin dot matrix printers and compatibles. It comes with the editor, a downloader, LQ.EXE, and over 40 complete fonts including a wide variety of common fonts, serif, script, etc., as well as old English, Gothic, two Cyrillic fonts, and classical Greek.

LQMATRIX and fonts are designed to use the text mode for printing user-made fonts. In contrast to graphics, this mode is as fast as using the default letters and thus is useful for printing long texts. In the text mode, the printers accept a "soft or RAM" font into memory and use it rather than the built-in "hard or ROM" font. In fact, when so instructed, it can switch back and forth between the two. Thus, if you have written a paper in English but wish to cite examples in the Greek alphabet, you can "download" (send to the printer) the Greek font and use it when necessary.

If you wish to use the various ready-made fonts for different purposes (or just for variety), all you need is the LQ program. With it, any of the premade fonts can be downloaded to the printer. For those users who wish to create their own fonts, modify those already supplied, or create a small number of special characters for a specific task, LQMATRIX provides just the environment you need. It's an easy-to-use matrix program with many features that permit the user to create characters, store them in a file, and download them to the Epson LQ family of 24-dot matrix printers. With it, you can design Draft, NLQ (10 cpi), and proportional characters.

BBUG 2655 CALENDAR KEEPER Version 3.0

*CLASSIFICATION * General * L/Floppy/ Hard Disk * Printer*

Keeping track of events, appointments, reminders, etc. requires you to constantly write memos to yourself and where possible write notes on your wall calendar. Now there is an even simpler way. **CALENDAR KEEPER** is an easy, yet elegant way to remind yourself or up-coming events.

It draws wall calendars, weekly, monthly or yearly "at-a-glance" calendars, and includes the events you want to remember. You can maintain up to 10 different calendar databases so you don't get things disorganised. Entry of information of permanent, casual and repetitive events is easy, and the program provides printer drivers for any type of printer. Context sensitive help and pop-up calendars are always available.

Keep your home, business or club's shedule of events always visable with **CALENDAR KEEPER.**

Chekk yore speling!

BBUG 2656 THE SPELLBOUND! SPELLING TUTOR Version 2.00

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

THE SPELLBOUND! SPELLING TUTOR helps you improve your spelling skills, no matter what your school level. It can even assist adults learn to spell difficult words from a specialised field like law or medicine. For children, there are optional animated "Smileys" who cheer the child on when a word is spelled properly, but shed tears when a word is misspelled.

THE SPELLBOUND! SPELLING TUTOR features word list creation, editing, viewing, and maintenance functions as well as a full battery of teaching tools like automatic grading and report generation.

As the program teaches spelling, a personal "difficult word" list is created for each student. An impressively simple user interface makes THE SPELLBOUND! SPELLING TUTOR a wise choice among even the most popular commercial programs.

BBUG 2658 WINCHECK Version 2.2A

*CLASSIFICATION * Accounting * Hard Disk * Windows * Printer*

WINCHECK is an easy-to-use and attractive Windows 3.0 chequebook balancing program. Its purpose is to assist in balancing a personal cheque and savings account. It can also print cheques on virtually any pre-printed cheque form — both dot matrix and laser cheques are supported. All data entered into the program can be exported into EXCEL compatible files for more sophisticated analysis and taxation computations.

WINCHECK has an exceptionally attractive and easy-to-use interface. cheques and other transactions appear as 3-D dialog boxes with bitmapped backgrounds. Standard operations, such as writing a cheque or making a deposit, are performed by clicking on a 3-D iconic toolbox.

BBUG 2660 PRINT PARTNER Version 1.1

*CLASSIFICATION * Desktop Publishing * Hard/L/Floppy Disk * Printer*

Finally, an excellent alternative to the popular graphics program Print Shop. Now you can create your own banners, posters, calendars and print them with either a dot-matrix or laser printer.

PRINT PARTNER supplies 11 fonts and 75 clip art pictures. Banners can have a graphic on either end and use any font you select. PRINT PARTNER will attempt to smooth the text and graphics to make them look better. Two graphics can be placed anywhere on the page. Options include multiple copies of each piece of clip art, in one of three different sizes. Each line of text can be a different font and may be sized to your specifications.

PRINT PARTNER comes with a picture editor to change the existing graphics or create your own masterpieces. Also included is a conversion program to take picture files from Print Shop and convert them to use in PRINT PARTNER. You can find more clip art pictures to use with PRINTPARTNER on the Cooper Graphics disks, BBUG #2100 to #2117. Each disk contains 100 individual clip art graphics.

BBUG 2662 ACCOUNT + PLUS Version 7.54

*CLASSIFICATION * Accounting * Hard/ 2/Floppy Disk * Printer*

Do you need an integrated accounting management system for your business? ACCOUNT + PLUS is an ideal choice, and can provide everything a small business needs in one package.

ACCOUNT + PLUS consists of seven independent individual modules: payroll, bookkeeping, inventory, chequebook, accounts receivable, accounts payable, and provides full report generation.

The payroll module handles all types of employee payroll. Deductions include all taxes, insurance, and pension. Earning may be by hour, week, month, or commission.

The bookkeeping module operates as a general ledger, keeping track of all of your income and expenses. It will also write the cheques you need to issue in paying your bills.

The inventory module lets you maintain an inventory database with add, delete, and change record functions. Many report generation options are available here.

The chequebook module is a complete chequebook management system. It will keep track of your deposits, your withdrawals, your checks, balancing of your chequebook, and several report printing options.

ACCOUNT + PLUS is menu driven with an on-line help facility that does away with the need to constantly refer to printed documentation. No small business should be without ACCOUNT + PLUS, the integrated accounting management system.

BBUG 2663 CHESS FOR WINDOWS Version 1.01

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

CHESS FOR WINDOWS - Just what the Windows user wanted - a simple attractive chess program to tempt your skills as a chess master. CHESS FOR WINDOWS features four skill levels and although there is no on-line help, a hint feature has been included which can suggest the next move for you to try.

CHESS FOR WINDOWS appeals to both the experienced and beginning players. But it's also for the novice C programmer. Source code is included, and if you so desire you can modify the program.

BBUG 2664 PILOT Version 1.1

*CLASSIFICATION * Communications * Hard Disk * Modem*

PILOT is a fully funtional communcation program. With it you can call other PC's, BBSs, information services, or main frames to upload and download files. PILOT also allows you to have your PC receive calls.

Some of the many features contained in PILOT include: Full on-screen help features, with on-screen function keys definition. ANSI Terminal Emulation. Upload and Download file capabilities. Supports the major file transfer protocols including XModem, XModem 1K, YModem, YModem-g, YModem-g Batch, and Kermit. Supports Baud Rates from 150 to 38.4k. The option to operate under a TSR (Terminate Stay Resident). Complete Host and Remote capabilities. Ability to emulate a BBS and receive calls. Supports up to 9 serial ports (1 at a time). And much more...

BBUG 2665 EXTEND-A-NAME Version 2.12 (Disk 1 of 2, also 2666)

BBUG 2666 EXTEND-A-NAME Version 2.12 (Disk 2 of 2, also 2665)

*CLASSIFICATION * Utilities * Hard Disk*

No matter what programs you use, DOS filenames can present a problem. DOS limits your filename to eight characters and quite often this can be a problem when you wish to identify your files. Wouldn't it be more convenient to be able to describe a file with a longer word, maybe a phrase, or even a whole sentence? Now you can, if you use EXTEND-A-NAME, the 60-character filename utility.

EXTEND-A-NAME is a memory-resident utility giving you the freedom to describe, organize, find, manage, and retrieve files in ways you never thought possible. The original DOS filenames don't get changed. The descriptive filenames are stored in a hidden file linked to the real DOS filenames. When your application requests

a file, the EXTEND-A-NAME window pops-up and you can choose an appropriate 60-character file with a scroll bar menu.

You can select one of six configurations based on the number of files in your largest subdirectory. The five conventional memory configurations range in size from 40K to 65K. The sixth configuration uses Expanded Memory and requires only 3K of lower memory.

EXTEND-A-NAME has automatic installation for the following programs: Agenda, Microsoft Word, PFS Write, AutoCAD, Microsoft Works, Q & A DisplayWrite, Multimate Adv, Quattro, Enable, PC Write, Samma Lotus 1-2-3, Sprint, Symphony, Volkswriter WordPerfect, WordStar, XyWrite and more.

BBUG 2669 BRANDON'S BIG LUNCHBOX Version 1.0

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

The entire BRANDON'S LUNCHBOX series on one diskette! 18 fun educational modules for children ages 3 to 7.

Beginning and pre-readers learn keyboard skills, drill on upper/lower case alphabet, number sequences (greater than/less than), counting, problem solving, memory games, simple arithmetic, sight word drills with 184 different "sight" words — you can create your own custom word lists! Practice counting by two's or fives, learn US geography, watch your little ones discover deductive reasoning! Plenty of flashy colors, wild sounds, and fun rewards like dancing bears Mardi Gras parades!

BBUG 2670 CARR'S GAMES

*CLASSIFICATION * Games * Floppy Disk * VGA * Joystick*

MINELAYER Version 1.2. A colorful fast-scrolling arcade game with on-line documentation. Your high speed minelayer can move in eight directions across a huge 24-screen ocean. Your mission: destroy (by ramming) all of the enemy bases. Your only defense against the enemy rammer ships are the mines you deploy. The advanced version has many variations that will keep you challenged, busy, and addicted for a long, long time.

If you liked Tetris, you'll love **MIX AND MATCH** Version 1.2. In Tetris, the goal is to arrange the blocks in the time allowed. In MIX AND MATCH, the goal is to match the random color in the fewest tries. Match the color by choosing the correct intensity of the three primary colors of light (red, green, blue). A game the whole family will love! You'll also learn something useful — how the colors of light are made. A great 640 by 480 high-res VGA game!

ISLANDS OF DANGER Version 3.1. Your mission — Take your killer hovercraft, pass the Twenty Islands of Danger (and their missile launchers), and rescue Jean. Sound easy? Guess again, Rambo! Control your ship's path with one hand and shoot missiles with the other. Dodge enemy missiles and attack their launchers. The game can be played at different speeds for different abilities and also supports a joystick. Arcade fun at home!

BBUG 2673 EGL_RISE Version 6/91

*CLASSIFICATION * Games * Floppy Disk * Graphics Monitor*

EGL_RISE comes is made up of two large games. Twenty game levels are similar to other arcade games such as Pac-Man, Donkey Kong, and Space Invaders. Each level is different enough to be a game in itself. The 25-level adventure series is called the "Rise & Fall of the Human Race".

Both games offer excellent graphics

On each level you have a different objective to accomplish — collect all the treasures or objects, find your way to a certain destination, destroy all the monsters, defuse a bomb, etc. The level ends when you are hit by a monster or trapped so that you cannot escape. Some levels have a timer and you must complete the level before the time runs out. Some games are played like an arcade game, but in others you must take your time in order to plan your strategy.

BBUG 2676 EGA COLORING BOOK Version 2.1 (Disk 2 of 2, also 2233)

FOR THE SCRIPTURE ENTHUSIAST

BBUG 2679 BIBLE COMPANION Version 3.4

*CLASSIFICATION * Religion * Floppy Disk * Graphics Monitor*

BIBLE COMPANION is just that — a companion to assist you in your study of the Bible. The program provides a variety of methods to help you to relate to the setting and context of the passages. When you start the program, two Bible reading references will appear on the screen based upon the current date. Using your Bible or a Bible-on-disk version, you may study the passages highlited.

If you use BIBLE COMPANION on a daily basis you will be able to read both the Old and New Testament within a year. Choices of visual aids include three different maps, chronology charts, the Jewish calendar, a summary of the Gospel, and a dictionary for the King James translation's many archaic and obscure words. BIBLE COMPANION is a great way to understanding the Bible better.

BBUG 2680 SCRIPTURE QUEST Version 4.0

*CLASSIFICATION * Religion * Floppy Disk * Printer*

SCRIPTURE QUEST was written for the purpose of testing one's knowledge of the Bible. SCRIPTURE QUEST has available over 1600 different Bible questions. These questions will be selected at random by your computer. The user does, however, have the choice of determining the general category from which these questions will be chosen. Your choices are either Old Testament, New Testament, or Both Testaments. Questions dealing with Bible word meanings, doctrines, prophecies, commandments, history, biography, and geography are some of the types of questions that will be found within this program. Print-out quizzes, pop-up windows, referenced answers, and a "Top Ten" score chart are among its features. Play by yourself, or make it a group game for up to nine people! Play against the clock for better scores!

BBUG 2683 HXED Version 2.00

*CLASSIFICATION * Editor * Hard/ Floppy Disk*

HXED is a fast and easy-to-use editor for binary files that can be customized for your video and processing preferences. By using disk and memory very efficiently, HXED consumes less than 30K of memory and it can edit files of up to two megabytes in less than 100K of memory.

HXED uses the popular hexadecimal dump display, with address on the left, hexadecimal representation in the middle and character representation on the right. The current location in the file is marked by a pair of cursors, one for the hexadecimal representation and one for the character representation. The arrow keys, page up, page down, home and end select the current location in the file. There is also a goto command to select a specific address.

HXED makes an ideal binary file pager. The search and goto commands, and current address display field, let you quickly locate an address without having to count bytes.

HXED provides on-screen Help, always available with a single keystroke. Complete source code is provided.

FROM THE BBS

From : Dave Freeman

To : Paul Edwards

Subj : Re: where do balloons go?

In a message , Paul Edwards wrote:

PE> *Wow. Someone gets to track balloons with a radar.*
PE> *That must be a great novelty at least to start with.*
PE> *And the ones that don't burst, do they gradually come*
PE> *down to earth? If so, how long do they take?*

Most of the balloons that we do not track to burst are either beyond the effective range of our radars (generally around 200Km) or are affected by icing in clouds etc. A balloon that is affected by icing will lose it's ice coating sooner or later and start rising again, it will then reach such a height that it will burst. Icing is generally a problem in very thick. moist cloud types such as Cumulonimbus and Nimbostratus but can be experienced in other cloud types also. In general, the only reason that we do not track a balloon to burst is either out of range or insufficient time to spend tracking a balloon that has slowed it's ascent rate. There are other higher priority tasks that must also be done during any shift.

PE> *You must have pretty sensitive radar that can track a balloon!*

Pretty reasonable, we actually cheat by attaching a pyramid shaped target made of styrofoam covered in alfoil and track that instead.

PE> *Do they go above the clouds?*

On average, the smaller balloon size we use will rise to an altitude of around 15-20Km and the larger size will often exceed 25Km. Most clouds are in a range of about 1000M to about 10Km or so. So, yes, they do go above the clouds. Personally I have tracked balloons to heights of about 30Km and distances (ranges) of about 200Km on a number of occasions. Such figures are not uncommon.

BBUG 2684 SHERLOCK Version 1.1

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

SHERLOCK is a game of deduction. It is your task, based upon the information available in provided clues, to determine the locations of 36 blocks. Every puzzle can be solved by using the clues to eliminate possibilities until the location of a specific block can be determined. SHERLOCK may be played by a SINGLE person, or a TOURNAMENT may be set up, with each person in the TOURNAMENT attempting to solve the same puzzle as quickly as possible.

BBUG 2688 WALLMAC Version 07/90

*CLASSIFICATION * Screen Utilities * Windows*

If you are tired of the wallpaper files that come with Windows, check out these two new background screens that you can use to customize your desktop with, and even impress Mac users. You get the original monochrome Macintosh background screen, and the newer color Mac II, to use instead of the ribbons, paper, and other backgrounds that Windows offers you. These two BMP screens "look so realistic that you will find yourself reaching for the pull-down menus!"

BBUG 2689 PCFDIAL Version 1.01

*CLASSIFICATION * Communications * Floppy Disk * Modem*

PCFDIAL is a 7K swapping TSR, which dials phone numbers displayed by other programs (such as databases). It can dial "special" numbers like 800-IBM-DISK, keep a log of calls, and display the local time for any area code.

After you have been on the phone for some time, PCFDIAL pops up at regular intervals to let you know how long you've been connected, which can be especially useful when using out-of-state bulletin boards or to salespeople who must "finalise the deal" in a certain length of time. Context-sensitive Help is available.

BBUG 2690 WINPOST Version 3.0B

*CLASSIFICATION * Utilities * Windows*

Are you one of those people who write notes to yourself and the stick them on your computer to remind you? WINPOST provides an easy-to-use facility for managing reminder notes for WINDOWS environment.

Up to 100 "notes" can be in use at ny given time. WINPOST will save the state of all notes upon program termination, so next time the program is started, the notes will look exactly the same as when the program was exited. Some of the numerous features include: Full print facility, Easy Search and edit, Alarm notes and WINPOST

provides a large number of configuration parameters. Notes can be manipulated very easily. Move, Delete, Hide, or Display notes with a single keystroke or mouse operation.

BBUG 2691 T-ZERO Version 1.02

*CLASSIFICATION * Games * Floppy Disk*

T-ZERO is Time Travel - a text adventure in the grand style, mixing elements of fantasy and science fiction while exploring the nature of time. Scenes take place in a rustic but disturbing present, a bustling prehistoric era, and a damaged, bureaucratic future. Your task is to locate six round objects scattered across eras and landscapes, transport them to progressively future time-zones, and manipulate them in a fashion that will right the troubled times.

This game is dedicated to all gamers saddened by the premature death toll sounded for text adventures.

BBUG 2692 BATCHMAKER PLUS Version 2.44 (Disk 1 of 2, also 2693)

BBUG 2693 BATCHMAKER PLUS Version 2.44 (Disk 2 of 2, also 2692)

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

BATCHMAKER PLUS has the convenience and versatility you've been looking for in a hard disk management system. This action-packed software includes a menu-driven full screen editor for building and changing batch files. Cut and paste (even to and from other files) and perform text searches.

If you need to write batch files to make your programs run, and you have difficulty, BATCHMAKER PLUS will make this task simple and using just three DOS commands in your batch file will run most of your programs.

BATCHMAKER PLUS provides a complete DOS utility function with a double directory menu display. Manage your hard disk with the press of a button — Copy, Rename, Move, Erase, MkDir, and RmDir. Select and execute programs from the directory listing as well as change a file's attributes, view text and binary files, and display system information. Disk functions can be selected from the menu — Format, Chkdsk, Diskcopy, and Diskcomp. There's even a pop-up DOS Quick Reference so you never need to refer to the manuals. An added program for calculating loans and savings is included. Figure a loan by payment or by loan amount. Calculate the amount needed to pay off a loan or plan for your future savings needs. A pop-up calculator is ready to help you with any calculations.

BBUG 2695 C COMMUNICATIONS LIBRARY Version 1.0

*CLASSIFICATION * Programming/ Communications * C Compiler * Modem*

The C COMMUNICATIONS LIBRARY is an asynchronous communications library designed for experienced software developers programming in Microsoft C or Turbo C. Sixteen communications functions as well as six support functions are provided including: Set Baud Rate and supports COM1, COM2, COM3 and COM4, CTRL-BREAK error exit, Allows 2 ports to run concurrently, Complete modem control and status ...and much more.

The source code for a simple terminal emulator program is provided as an example of the use of the library functions. This sample program can be used to call up bulletin board services and mainframe computers, or even to build a specialized communications interface for your application.

BBUG 2696 CGA SCREEN DESIGNER Version 09/90

*CLASSIFICATION * Graphics * Floppy/ Hard Disk * CGA * Printer*

CGA SCREEN DESIGNER allows you to create eight different graph styles from data you type at the keyboard and even draw your own pictures using graphics primitives such as lines circles and boxes. Use the numeric keypad or mouse to draw or move the cursor around the screen and save your pictures and graphs to disk for future editing, as well as print your pictures and graphs on any Epson-compatible dot-matrix printer.

CGA SCREEN DESIGNER supports all printers that emulate the FX/LX/MX/LQ series of Epson printers. This includes most of the dot-matrix printers on the market, and a few laser printers. Choose to print in Portrait, Landscape, or Oversize Portrait mode.

BBUG 2697 EGA SCREEN DESIGNER Version 10/90

*CLASSIFICATION * Graphics * Floppy/ Hard Disk * EGA * Printer*

EGA SCREEN DESIGNER allows you to create eight different graph styles from data you type at the keyboard and even draw your own pictures using graphics primitives such as lines circles and boxes. Use the numeric keypad or mouse to draw or move the cursor around the screen and save your pictures and graphs to disk for future editing, as well as print your pictures and graphs on any Epson-compatible dot-matrix printer.

Use the menu system or the Quick Command keys to operate EGA SCREEN DESIGNER. The Pen menu items include: Move, Draw, Erase, Pattern, or Pen Width (which can be 1, 3, or 5 pixels). Select the Shapes menu for options such as: Circle, Rectangle, Ellipse, Curve, or Line. Create eight different graphs. Choose from two types each of horizontal bar, vertical bar, and line graphs as well as three-dimensional bar graphs and pie charts.

EGA SCREEN DESIGNER supports all printers that emulate the FX/LX/MX/LQ series of Epson printers. This includes most of the dot-matrix printers on the market, and a few laser printers. Choose to print in Portrait, Landscape, or Oversize Portrait mode.

EGA SCREEN DESIGNER also includes a Pattern Editor Program, which can be used to change the patterns used by EGA SCREEN DESIGNER for filling in graphics images. The pattern is displayed in an eight-by-eight box, and you can change the color of each individual pixel by simply pressing the space bar.

BBUG 2698 XREF Version 1.40A

*CLASSIFICATION * Database Utility * Hard Disk*

XREF is a data dictionary utility to provide both online and printed documentation of your DBF databases and indexes. It also

gives you the ability to add and update short descriptions for each database field, an invaluable documentation tool. With the cross reference function, you can examine the relationships between the databases and indexes. XREF works with both NTX and NDX type indexes. XREF is network-aware and can be used while your databases and indices are in use on other workstations. Multiple workstations may run XREF at the same time.

GAME OF THE MONTH

VGA Graphics

Sound Card Support

Rapid action

BBUG 8955 JILL OF THE JUNGLE Version 1.0

*CLASSIFICATION * Games * Hard Disk * CGA/EGA/VGA * Sound Card optional * 80286 or faster processor recommended*

JILL OF THE JUNGLE is the hottest shareware game release ever! Epic MegaGames brings you a new era in computer entertainment with this 256-color VGA arcade-adventure game which is up to par with the top Sega Genesis and Super Nintendo hits. Features digital sound effects and a musical soundtrack for the Sound Blaster and compatible cards!

Guide the beautiful Jill through sixteen huge smooth-scrolling levels, each filled with vivid new scenery and animated creatures. Not only can Jill run, jump, and use objects — she can also magically transform into other creatures such as birds, fish, and frogs. In fact, you will do quite a bit of hopping, flying, and swimming to solve this game.

Jill also supports CGA and EGA cards, but the real thrill of this game is the spectacular 256-color VGA artwork and animation.

In fact, games like Duke Nukum could learn a few tricks from the smoothly-animated Jill.

FROM THE BBS TECH ECHO (?)

Echo Moderators sometimes have a difficult job deciding what's "on topic" and what's irrelevant. This exchange appeared in the Tech Echo, usually reserved for erudite discussion of obscure hardware features:

From : Peter Kerwin 3:800/851 Tue 22 Sep 92 03:41

To : Paul Edwards Fri 25 Sep 92 21:24

Subj : Re: Chook a la Wave

*** Quoting a message from Paul Edwards to Bill Hely ***

PE> *As for being weird, do you think that concerns me? Have you*
PE> *forgotten already that I cook ants in my microwave? Until I*
PE> *discovered surface spray, anyway. :-)*

In the tropics without a reliable food supply, we occasionally would be forced to use packets of rice with weevils running about in it. Having not gone totally Tropo at that time, I'd just sieve and wash the rice before cooking. Their running about while you tried to separate them was a nuisance, so I figured if they were already subdued I could do the job better. I put the packet of rice in the microwave (radar-oven :) and zapped it for a minute or so. I couldn't see any running about anymore, so I figured they were tummy-up and opened the packet. However, they'd all run into the very centre where the heat hadn't yet penetrated (I know it cooks inside out, but not this far inside in 60 seconds). Of course they were very p***ed off and ran all over the place. I think that's when we started eating weevils with our rice.

From : Paul Edwards 3:712/211 Fri 25 Sep 92 11:39

To : Peter Kerwin Sun 27 Sep 92 07:57 Subj :

Re: Chook a la Wave

PK> *tummy-up and opened the packet. However, they'd all run into the*
PK> *very centre where the heat hadn't yet penetrated (I know it cooks*
PK> *inside out, but not this far inside in 60 seconds).*

Hmmmm, I see you also have problems with insects not dying properly. Perhaps the rice absorbed most of the microwaves? I have cooked an ant for 3 minutes+ without it dying. That is when I had a glass of water in the microwave at the same time. (The glass of water BOILS rather than kill the ant!). However, when I take the glass of water out, the ants only last about 3 seconds. They can survive about 1 or 2 seconds, but after that you have dead ants, dead ants, deadant deadant deadant deadant, dananan. BFN. Paul.

From : Peter Kerwin 3:800/869 Sun 27 Sep 92 08:22

To : Paul Edwards Wed 30 Sep 92 19:32

Subj : Re: chook a la wave

PE> *Hmmmm, I see you also have problems with insects not dying*
PE> *properly. They can survive about 1 or 2 seconds,*

I'm surprised there are any common insects left in the world, assuming most kids (and others?) have endurance tested all known backyard wildlife. A couple of things I discovered before age 12 was that ants don't like magnifying glasses focused on the sun above them and that wasps last up to 3 days in a solid block of ice -assuming you defrost them fairly gently, but without drowning them in melted ice :|

Slightly frozen blowies could be shanghied into tug duty. Glue a short length of cotton thread to their back with a narrow bit of streamer (part of the Chrissy decorations) attached, and you had a nifty tug plane complete with banner flying around your yard.

This sort of experimently lasted only a short while - my mum used a 'wasped' ice cube for her tea and in the confusion let the flies defrost.

BRISBUG HELP LINES

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

New offers of help are always welcome, and there are some topics absent from the list.

Subject	Name	Phone	Days & times
4DOS	Chris Raisin	379-1415	Any time
	Dan Bridges	345-9298	Anytime
Accounting	Ian Haly	870-1463	After 5:30 & W/Ends
As-Easy-As	Dan Bridges	345-9298	Anytime
	Dan Emerson	288-6070	
Assembly	Paul Gear	263-5269	After-hours
	Scott Hendry	245-1330	After-hours
AutoCad	Geoff Harrod	378-8534	Evenings,W/E
C language	Paul Gear	263-5269	After-hours
	Danny Thomas	371-7938	Mon-Fri 6pm-9 & W/E
	Ian Haly	870-1463	After 5:30 & W/E
Clarion	Ray Creighton	354-1107	eve & W/E
Clipper	Chris Raisin	379-1415	Evenings
	Don Andersen	881-2432	after 7pm & W/E
	Dan Emerson	288-6070	
	Mike Theocharous	824-1450	Anytime
CodeBase	Ian Haly	870-1463	After 5:30 & W/E
Communications	Ron Lewis	273-8946	9am-9pm
Corel Draw	Scott Hendry	245-1330	After-hours
Dataflex	Tony Obermeit	2875534	Mon-Sat A/Hrs & Sun
dBase	Ian Haly	870-1463	After 5:30 & W/E
	Mike Theocharous	824-1450	Anytime
	Sylvia willie	393-3388	Evenings
	Bob Boon	208-8088	M-F 8am-5pm
	Chris Raisin	379-1415	Any time
	Dan Emerson	288-6070	
DBXL	Ian Haly	870-1463	After 5:30 & W/E
DisplayWrite 4	Mike Lester	274-4144	(343-5703 a/hrs)
DOS	Dan Bridges	345-9298	Anytime
Excel	Peter Akers	265-4411	Mon-Wed 6-9pm
First Choice	Bruce McNamara	369-5563	Sundays
Forth	Danny Thomas	371-7938	M-F 5-9, W/E
Fortran	Cec Chardon	870-1812	Evenings
	Rob Andamson	266-8353	Evenings
Fox/Fox-Pro	Geoff Tolputt	016-783111	M-F 9-6
Genealogy	Rob Adamson	266-8353	Evenings
	Colin Cunningham	263-3005	9-9 all days
	Bob Gurney	355-4982	Mon-Sat 8-8
	Bruce McNamara	369-5563	Sundays

Hardware	Chris Ossowski	274-4144	9-9 all days
Help!	Dan Bridges	345-9298	Anytime
	Scott Hendry	245-1330	After-hrs
Meta 5	David Shaw	870-3633	9-9 all days
MS Word	Chris Raisin	379-1415	Any time
	Ron Lewis	273-8946	9-9 all days
Multimate	Frank Mehr	397-3984	Anytime
Multi-user DOS	David Shaw	870-3633	9am-9pm
Novell Netware	Dan Emerson	288-6070	
Open access 2	Cec Chardon	870-1812	Evenings
PostScript	Danny Thomas	371-7938	M-F 5-9 & W/E
PowerBase	Mike Lester	274-4144	(343-5703 A/hrs)
Project Management & planning	Brian Doyle	355-1328	9am - 9pm all days
Quick-BASIC 4.5	Harry Strybos	288-5145	4pm-7pm Weekdays
Q&A	Dan Bridges	345-9298	Anytime
Q-Edit	Dan Bridges	345-9298	Anytime
Quattro	Bruce McNamara	369-5563	Sundays
Quicksilver	Ian Haly	870-1463	M-F after 5:30 & W/E
R-Base	Tony Luck	818-0099	9-9 all days
Reflex	Ron Lewis	273-8946	9-9 all days
Spreadsheets	Sylvia Willie	393-3388	Evenings
SQL	Cec Chardon	870-1812	Evenings
System Manager	David Shaw	870-3633	9-9 all days
True-Basic	Bob Gurney	355-4982	Mon-Sat 8-8
Unix	Paul Watts	892-2226	Mon-Sat a/hrs & Sun
Virus problems	Dan Bridges	345-9298	Any time
Windows	Peter Akers	265-4411	Mon-Wed 6pm-9pm
	Bernard Speight	349-6677	6pm-9pm
Word for Windows	Peter Akers	265-4411	Mon-Wed 6-9pm
WordPerfect	Geoff Tolputt	016-783111	Mon-Fri 9-6
Wordstar (all ver)	Neil McPherson	075-971240	A/hrs
Wordstar-2000/4	Bob Boon	208-8088	
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